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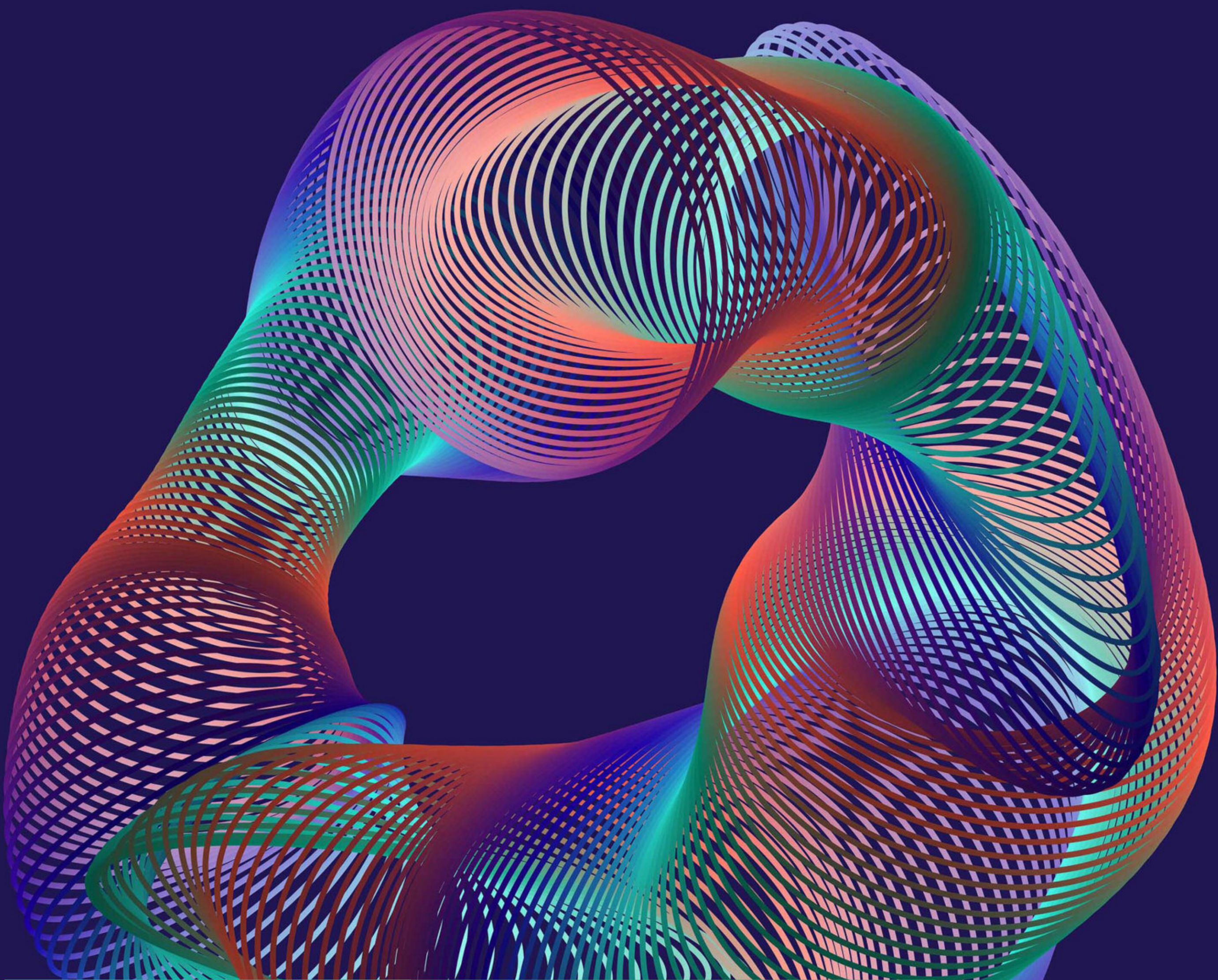

Industry trends in derivatives

Key takeaways from the Derivatives Forum Frankfurt 2025

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Welcome remarks


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Introduction

Welcome to the Derivatives Forum 2025 Whitepaper, a compendium of the key insights and dialogues that defined Europe's leading trading and clearing conference. This year's Forum, our seventh, achieved new heights, convening a record number of attendees and over **150 distinguished speakers**. The collaboration with over **50 sponsors**, media partners, and industry associations highlighted Frankfurt's prominent role as a global financial hub for the derivatives community.

Amidst a backdrop of geopolitical complexities, macroeconomic headwinds, and rapid technological advancements, the imperative for robust risk management and strategic industry partnerships is undeniable. These are the foundational elements of resilience in a dynamic environment where the very ground upon which we operate is in constant flux, demanding adaptability and strategic foresight.

The Forum served as a critical platform for forging essential coalitions to address the evolving challenges facing our industry. Over two intensive days, we engaged with the most pressing issues: sustaining and enhancing liquidity within increasingly fragmented markets, optimizing efficiencies across the clearing value chain, and harnessing the transformative power of technology to redefine not only how we trade, but the very architecture of the markets themselves.

This whitepaper encapsulates the key takeaways from over 40 keynote addresses and expert panel discussions, offering a comprehensive overview of the trading and clearing ecosystem. The dialogues encompassed critical areas including listed and OTC markets, the emergence of digital assets, and the growing importance of sustainable investing.

We extend our sincere appreciation to our sponsors, particularly our prime sponsors – Deutsche Bank, Goldman Sachs, J.P. Morgan, and STOXX – for their invaluable contributions to shaping the agenda and enriching the discussions. We also acknowledge the support of our co-sponsors – Barclays, BNP Paribas, LBBW, and Optiver – and our valued partners and media sponsors for their integral role in the event's success.

Reflecting upon conversations with clients across Asia, Europe, and the United States throughout the year, it is evident that Eurex has cemented its position as a preeminent global marketplace. The significant international participation at this year's Forum underscores the strength and vitality of this community.

We invite you to explore the insights presented in this whitepaper, and we look forward to welcoming you to Frankfurt for the 8th Derivatives Forum on 25–26 February 2026.

Robbert Booij, CEO, Eurex Frankfurt AG

Markets & regulation

A new phase of geopolitical uncertainty, technological transformation, and shifting global capital flows is testing the resilience of the post-2008 regulatory architecture. At the same time, the United States appears poised for another deregulatory cycle under a second Trump presidency.

For Europe, this divergence is both a risk and an opportunity. The region must grapple with how to modernize its regulatory frameworks, foster innovation and attract international capital, all the while preserving market stability and systemic integrity. Fragmentation remains a persistent hurdle, particularly in derivatives trading and clearing, where overlapping regulations, siloed infrastructure, and slow product approval timelines continue to weigh on competitiveness.

This section explores how Europe is positioning itself in this new financial order. From adapting to potential deregulatory headwinds abroad, to tackling internal inefficiencies in its own capital markets, we examine the forces shaping the future of European derivatives markets. We also consider how regulation can evolve to support next-generation technologies like AI and how market infrastructure must adapt to new forms of risk, including cyber threats and rapidly evolving geopolitical tensions.

The near future of EU derivatives trading in the context of a second Trump term

Given the new US administration's clear deregulatory goals, the global consensus that has governed finance during much of the post-2008 period is more uncertain than ever.

For Europe, this shift raises several questions about how best to balance effective financial governance with enough flexibility to foster innovation and competition.

Global liquidity has increasingly gravitated toward the US over the past decade. However, the unpredictability of the new administration in the US is creating an opportunity for Europe. Amid the turbulence, Europe must find ways to accelerate product approvals, harmonize market structures, and streamline reporting obligations to attract more capital and further grow its vibrant capital markets.

A Transatlantic divide

The first Trump administration rolled back several financial regulations, including elements of Dodd-Frank. However, expectations for his second term are that the deregulatory agenda will go further than before. Key to this mission will be identifying cumbersome regulations that create market inefficiencies.

"What is very clear is that there is a mandate to promote economic growth and American competitiveness," says Caroline Pham, acting chair of the US Commodity Futures Trading Commission (CFTC). "Key to that is a number of initiatives to rethink regulations implemented over the last administration, and even those going back a decade, to identify where there are any overly burdensome requirements that are a drag on economic growth."

> **"The secret to our success has been simplicity. We don't need a Dodd-Frank for crypto or overly complex derivatives rules that limit market flexibility.**
>
> Caroline Pham
> Acting Chairman, Commodity Futures Trading Commission

The Trump administration issued an executive order mandating that ten old regulations must be cut for every new regulation introduced. However, the continued evolution of new markets, such as digital assets, means that cutting cannot be the sole mandate. Enacting and enforcing smart regulations will also be necessary.

The establishment of the President's Working Group on Digital Asset Markets has highlighted the new government's importance to digital assets. There are signs that regulations emerging from these consultations will be light.

“In the US, we take a technology-neutral approach to regulation,” says Pham. “The secret to our success has been simplicity. We don't need a Dodd-Frank for crypto or overly complex derivatives rules that limit market flexibility.”

In Europe, there is no significant sign of imminent change to the regulatory framework that was built after the 2008 financial crisis. While extensive in its requirements, the stability that European regulation offers could become increasingly attractive at a time of uncertainty. Nevertheless, market incentives must also form part of any new regulatory mandate.

“With the US at a crossroads on regulatory policy, Europe is balancing a bid for increased strategic autonomy with a renewed focus on boosting global competitiveness in the cleared derivatives marketplace,” says Helen Hartwell, global head of exchange-traded derivatives client consulting at UBS.

Unleashing EU competitiveness

Beyond regulatory divergence, market fragmentation remains a significant hurdle for European derivatives trading. Unlike the US, which has a more fungible and unified exchange and clearing structure for equity options trading, Europe is highly fragmented, with greater barriers between exchanges, multiple clearinghouses, and multiple regulatory frameworks across its different member states.

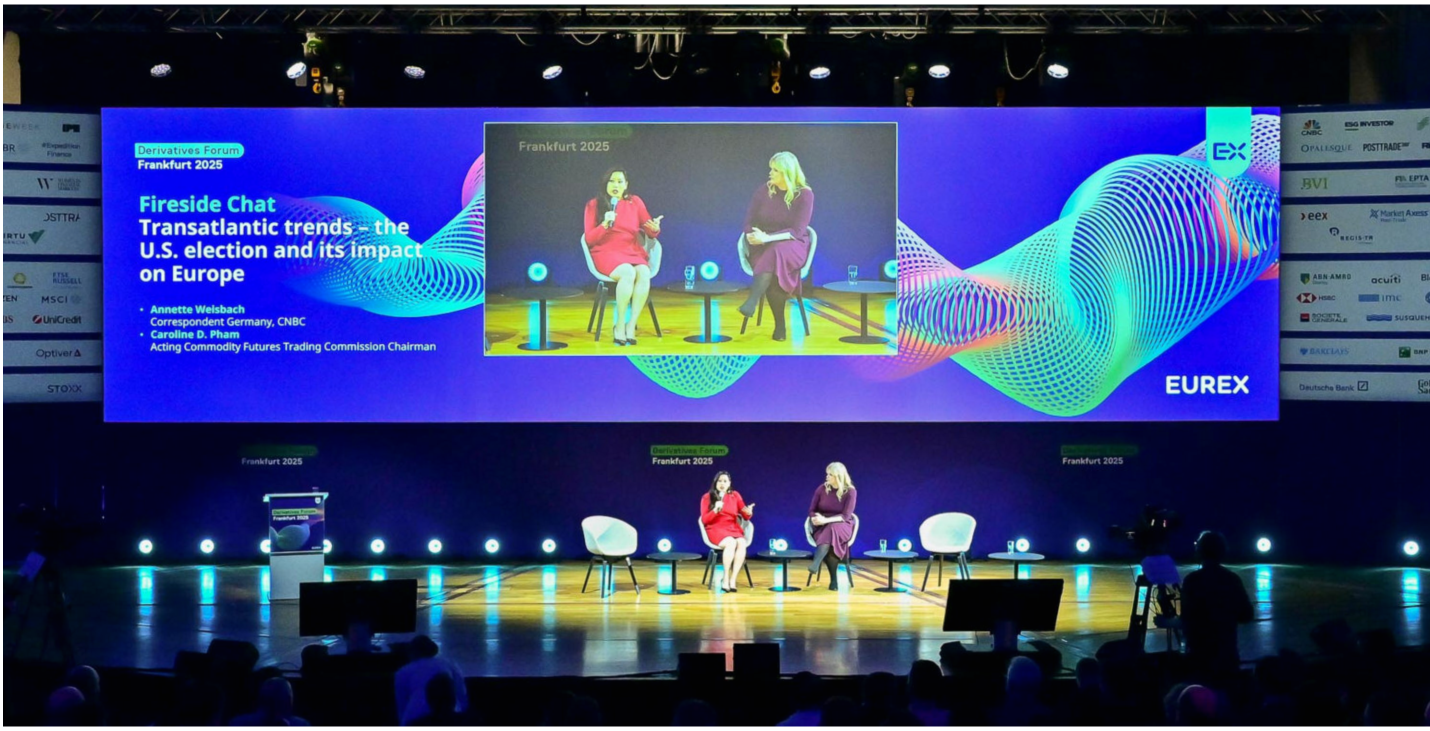
The phenomenal growth of US market participation is highlighted by the 575% growth of the S&P 500 index over the past 15 years, a period when the EURO STOXX® 50 grew by 150%.

In addition, Europe's product innovation cycle is much slower than the US, partly due to regulatory approval processes. The overall process, including preparation before the actual process starts, can take over two years for a new derivatives product to be approved in Europe. In contrast, the same product can go to market in the US in just ten days.

“How do we want to be innovative and successful when a new product takes significantly longer in Europe from concept to market, while in the US, the process takes significantly less? This reality makes it very difficult to compete on a global scale,” Quiram, Global Head of Sales & Marketing at Eurex, said.

Despite these challenges, innovations have occurred in European market infrastructure, with improvements in exchange pre-trade risk controls and Eurex's early adoption of margin innovations as examples of an ongoing transformation in the area.

> **“ For Europe to remain competitive, we need harmonization. Fragmentation across locations, regional laws, and therefore for exchanges and clearing houses remains a major issue, and solving it is essential for long-term growth.**
>
> **Jens Quiram**
> **Global Head of Sales & Marketing, Eurex**



Keeping it liquid

Although the US has attracted substantial investment in its markets, Europe has also achieved success in cultivating liquidity.

Futurization, the shift of over-the-counter (OTC) derivatives liquidity into listed futures, has heralded the transformation of the dividend derivatives and total return futures markets. Momentum is now also picking up in credit and FX futures.

However, building on this success and expanding liquidity in other products, such as options, requires greater interoperability between regions and firms.

Quiram pointed out that Europe's clearing ecosystem must evolve to stay competitive. Addressing these gaps requires a more streamlined and integrated approach to market infrastructure.

"For Europe to remain competitive, we need harmonization. Fragmentation across locations, regional laws, and therefore for exchanges and clearing houses remains a major issue, and solving it is essential for long-term growth," Quiram added.

As this mission is pursued, it is important to remember that regulation is not always a barrier. While many firms grapple with regulatory complexity, it has driven others to innovate.

Europe's regulatory frameworks have pushed many to adopt more systematic and scalable solutions that improve transparency and risk management.

This could develop to encompass further advances in automation and algorithmic execution, which support trade execution and reduce operational bottlenecks.

"Regulatory obligations are forcing us to be more innovative. They push us toward more systematic approaches and multi-layered execution strategies, ultimately benefiting clients by improving efficiency," says Sylvain Maly, head of prime product – electronic trading offering at Société Générale.

Risk management in an uncertain world

In a world characterized by geopolitical tensions, regulatory changes, market volatility, and rapid technological advancements, effective risk management strategies are more important than ever for navigating uncertainty and ensuring the stability and resilience of derivatives markets.

As market participants progress through 2025, they face multiple risks and require staying alert on many fronts.

"Market participants must remain vigilant about shifts in monetary policy, inflationary pressures, and potential supply chain disruptions that could lead to liquidity constraints and heightened market stress," says Teo Floor, CEO of CCP Global.

Many of the risks currently threatening political and economic stability across the globe represent a rupture from the global consensus that has governed the rules of engagement between countries for decades. However, for clearing houses, the tools for managing this turbulence and its effects on markets are well-established.

"The environment is changing, and we as CCPs continue to fulfill risk management services to the markets," says Dmitrij Senko, chief risk officer at Eurex Clearing. "There are some constant things in all of that, namely, bread-and-butter CCP risk management."

"So, constant focus on margins, on stress tests, default funds. These are the topics that, if you go back 10 years, 15 years ago, these discussions were there. They are still there."

However, new risks sometimes raise new considerations. The interconnected nature of markets means that any major sanctions event could extend beyond the targeted entity, affecting clearing members, margin calls, and collateral flows. A sanctioned institution's inability to meet its obligations can trigger a chain reaction of exposures within the clearing ecosystem,requiring rapid intervention to maintain market stability. Managing these parameters remains a fine balancing act.

Trading events

For traders, geopolitics have also significantly influenced recent market conditions and risk management practices. Last year, activity around the French elections exemplified this. Positioning around the election drove a rapid increase in VSTOXX® volumes, as many traders successfully structured trades that rode the market movements.

"We mostly recommended 1×2 put ratio spread trades because the vol of vol was so high," says Davide Silvestrini, head of EMEA equity derivatives strategy at JP Morgan. "They worked as a defensive way to fade the volatility spike and also take advantage of that very elevated vol of vol."

> "The environment is changing, and we as CCPs continue to fulfill risk management services to the markets.
>
> **Dmitrij Senko**
> **Chief Risk Officer, Eurex Clearing**

“These are quite common structures, but to use them successfully, timing is extremely important. You can't just do it randomly – execution needs to be very well timed around the buildup of an excessive risk premium, which is what we saw leading up to the French election.”

Market volatility will likely be a persistent theme this year, with trade wars already proving a major risk factor. As ever, market participants will also have to contend with the chance of unexpected shocks, such as last year’s August 5 sell-off.

A combination of factors drove the shock, including weak US payroll data and unwinds of the Yen carry trade, which triggered a sharp sell-off across global markets. These factors were exacerbated by the summer effect of senior traders being on holiday, with less experienced desks and thinner liquidity, making markets more vulnerable to sudden swings.

However, the event also encapsulated other features of current-day derivatives markets, such as where risk is held and the investor profiles of different regions. Although the VIX surged from 15 to 35 in a matter of hours, the event was short-lived, with markets stabilizing quickly.

What began as a dramatic move in APAC time zones reverberated through Europe but was already beginning to fade by the time US markets were opening. Some experts argue that this sequencing was a fundamental driver of the sell-off, which would have been less sudden and severe if it had started when US markets were open.

Rapid repricing of risk is also an effect of the post-2008 regulatory environment, with banks no longer able to hold as much risk as they could previously. Consequently, hedge funds and asset managers have taken the role of risk-holders, fundamentally changing how risk is absorbed across the market.

“That’s why we see rapid repricing when major events hit; risk must be recycled quickly, often at distorted prices,” says Côme Legal, derivatives dislocation portfolio manager at Adapt Investment Managers. “This has created a new market dynamic where liquidity disappears faster than before.”

As demonstrated by the significant volatility events of 2024, the skillset for protecting against and profiting from these periods ranges from structuring to agility.

Knowledge of market structure also gives certain traders an edge. Short-term dislocations in derivatives pricing can often arise from large institutional flows rather than fundamental market shifts.

Listed openings

For those who have spotted an opportunity, listed derivatives are increasingly useful tools for taking advantage. The success of VSTOXX® trades during the French elections demonstrated this.

“Last year saw numerous volatility events, including the August sell-off and political elections across Europe and the US,” says Silvestrini.

“Some of these events led to compelling trading opportunities to monetize the elevated risk premium priced into the volatility markets, which can be done in a protected way using VSTOXX® options.”

While OTC instruments can offer flexibility to investors, the rise of regulations that favor listed instruments is building greater liquidity in these markets. As liquidity begets liquidity, the size of these markets and the number of participants can be expected to grow. The measures Eurex takes to improve market functioning accelerate this transition.

"We've seen an increase in demand for VSTOXX options and futures, particularly from investors looking to hedge against potential volatility spikes," says Sophie Granchi, equity and index sales, EMEA, at Eurex. "We've also been working to improve market liquidity to get better visibility on screen and attract more customers."

Regulation in risk management

In the clearing industry, regulation also continues to have effects. In the US, CCPs are working to update access models in anticipation of the SEC cash Treasury and repo clearing mandate, while in Europe, they are working with market participants to implement EMIR 3.0.

More new rules are also appearing in the form of Basel-IOSCO proposals on margin transparency. These aim to enhance risk transparency and financial stability and will impose greater scrutiny on CCPs' margin models, stress testing methodologies, and liquidity risk frameworks.

While transparency is crucial in well-functioning markets, it is equally important to ensure that regulatory requirements remain practical and do not inadvertently increase pro-cyclicality. This could occur through market stress amplification, liquidity constraints, or forcing firms to raise capital to meet margin calls.

"The introduction of more standardized margin calculators and scenario analysis tools will aid market participants in better understanding their risk exposures," says David Horner, chief risk officer at LCH. "However, clearing members and their clients must take full advantage of these tools to ensure proper liquidity preparedness."

Besides regulation, clearers also continue to grapple with the relatively new theme of cyber risk. This is gaining new complexity with the rise of AI-driven trading and cloud-based risk management solutions. Both are opportunities but will also require that firms adopt cybersecurity frameworks that are flexible and robust enough to adapt to sudden shifts or innovations.

> **"Some of these events led to compelling trading opportunities to monetize the elevated risk premium priced into the volatility markets, which can be done in a protected way using VSTOXX® options.**
>
> Davide Silvestrini
> Head of EMEA equity derivatives strategy, JP Morgan

Navigating the future of banking

With changing investor needs, deep economic shifts, and the rise of AI, the banking sector faces a period of major change and opportunity. Since the 2008 financial crisis, banks have been on a long path to reform. At the same time, they also adapted to changing economic and market conditions and are now in a strong position to serve the needs of the European economy.

"As an industry, particularly post-COVID, we've positioned banking at the heart of society again," says David Feldmann, Head of Institutional Sales EMEA & Head of Markets for DACH at Deutsche Bank.

"Developing new savings products and mobilizing private capital is key to addressing the transformational challenges of Europe's real economies – and core to Investment Banking."

Investment banking saw a resurgence in dealmaking toward the end of 2024, particularly in Europe, thanks to improved macro conditions and greater confidence following elections. M&A is expected to stay strong in 2025, driven by high equity valuations and growing optimism. However, the shadow of geopolitical uncertainty casts a significant risk over this bullish outlook.

Geopolitical instability is causing financial markets to be more unpredictable, leading investors to prefer shorter maturities in various fixed-income instruments and increase their hedging activity.

However, the effects of uncertainty vary depending on the asset class. FX markets have seen increased trading volumes. However, other markets, such as commodities, have experienced disruption. Geopolitical instability creates uncertainty in commodity markets, leading to supply constraints, price volatility, and logistical challenges. Unlike FX markets, which can benefit from increased volumes during uncertain periods, commodities are directly impacted by real-world supply and demand disruptions.

Against this backdrop, banks face two major societal challenges in the coming years: pension reform and financing economic transitions. Demographic changes are forcing policymakers to rethink pension systems, thanks to aging populations and low fertility rates (meaning fewer taxpayers), and banks will play a crucial role in capitalizing these systems. At the same time, banks must also support the financing of the real economy and ongoing transitions in energy, digitalization, and defense sectors.

Feldmann acknowledged that banks also face mounting regulatory requirements and increasing investor demands for higher returns. This shift has contributed to the popularity of "originate-to-distribute" models, where banks facilitate funding but transfer some of the risk to capital markets and institutional investors.

One positive aspect of the financing environment is the increased political stability in the eurozone, following the recent elections in France and Germany. The latter event, in particular, is expected to serve as a launching pad for further growth activity.

"The German election was effectively a referendum on fiscal reform," says Michael Schmitz, co-head of FICC and equities for Germany and Austria at Goldman Sachs. "The clarity on the political landscape and the potential for structural reform benefit the broader German equity market."

> **If we want to deepen market integration across the EU, we need to build an ecosystem based on high liquidity, clear rules, and regulatory harmonization. Now is the time for political will and execution.**

Michael Schmitz
Co-head of FICC and equities for Germany and Austria, Goldman Sachs

Regulatory reforms, particularly those aimed at reducing compliance costs for mid-cap firms, could provide substantial tailwinds for the banking sector. Reforms could stimulate loan demand, enhance fee-based revenue, lower operational costs, and improve market liquidity. All of those developments would create positive tailwinds for the banking sector. Meanwhile, corporate tax reductions could further support German businesses.

One persistent challenge facing European banks is regulatory fragmentation. While US financial institutions benefit from a more unified regulatory environment, European banks face a more complex framework that varies between nations.

While the pace of change in European regulation is inherently gradual and considered, with multiple rounds of negotiations between member states, there are signals that future priorities will be to foster opportunities for banking and investment.

The long-discussed European Capital Markets Union (CMU) continues to be a work in progress but would provide a significant boost to the region. Encouragingly, there is growing momentum to accelerate its implementation. The European Commission's recent proposals to streamline tax regimes, promote long-term savings, and strengthen capital markets are all steps in the right direction.

"If we want to deepen market integration across the EU, we need to build an ecosystem based on high liquidity, clear rules, and regulatory harmonization," Schmitz says. "Now is the time for political will and execution."

Generational AI

One rapidly developing opportunity is artificial intelligence, which banks are already integrating into their operations.

Goldman Sachs has a three-pillar strategy for AI adoption: enhancing client experience, improving developer productivity, and increasing operational efficiency. Generative AI is already improving productivity by 10% to 40% in some areas at the firm, with its internal AI-powered platform assisting with document summarization, email drafting, and research analysis. Commerzbank is also rolling out AI-powered tools to help traders with pricing models, client interactions, and risk assessments.

However, innovation is not limited to AI. Banking also sees a blending of traditional banking models with those of asset managers, insurance companies, and private equity firms. There is an ongoing shift where asset managers and insurance firms engage more in origination while banks adapt their models to focus more narrowly on distribution.

Private equity, once solely a client of investment banks, has now become both a partner and a competitor, with some firms developing consumer credit businesses and playing a more active role in financing deals.

The evolution of indices

From the early days of simple market cap weighted benchmarks to today's highly customizable solutions, index development has been a story of constant evolution to meet the demands of both institutional and retail investors.

The rise of passive investing has been a dominant theme in financial markets for years. However, for ETFs, an important driver of that trend, the lay of the land is a little more nuanced. While passive investments have gained prominence, active ETFs and options have partially boosted the ETF ecosystem, with hundreds of ETFs launched last year.

"There's a huge pickup in active ETFs, which is good for the overall ecosystem. However, it's important to remember that ETFs are just a distribution wrapper, not an investment strategy in themselves," says Axel Lomholt, senior managing director and general manager at STOXX.

Active ETFs diversify the investment landscape, giving investors more options to tailor their portfolios. Fund managers have also lent into developing new products and strategies to meet these needs, which has been a major driver in the adoption of ETF options.

George Harrington, global head of fixed income & derivatives at MSCI, highlights the growing popularity of these strategies. "Investors are looking for ways to enhance yield, and option-based strategies built on benchmark indices are becoming increasingly popular."

Another major development in indexing is the increasing demand for customization. Active ETFs are adding to the tools available to do this by allowing fund managers to implement more tailored investment strategies.

More broadly, the demand for indexes that reflect investors' strategic objectives continues to rise. Investors are no longer satisfied with one-size-fits-all benchmarks. Katya Nelyudova, head of index investments group, EMEA, at FTSE Russell, under-scores this shift: "Customization is driven by the need for specific outcomes, whether it's climate transition objectives, income generation, or thematic exposures."

However, customization comes with challenges, particularly around liquidity and scalability. While bespoke indices can be valuable, they require a critical mass of assets to be truly impactful. Standardized solutions can drive economies of scale, making a broader impact, especially in areas like climate transition. Customization can also lead to liquidity challenges and a dilution of economies of scale. In Europe, demand for tailored index solutions is far greater than in the US, a market dominated by large-scale flagship indices.

"Customization is driven by the need for specific outcomes, whether it's climate transition objectives, income generation, or thematic exposures.

Katya Nelyudova
Head of index investments group, EMEA, FTSE Russell

For index providers, track record counts. Established index providers have a competitive advantage in customization due to their strong flagship benchmarks. Customization is also easier for providers with a deep back book of indexes, as the trend requires a significant investment in technology, one supported by flagship products. This ability to balance innovation with core benchmarks remains a key differentiator in the market.

AI in indexing

While AI has yet to play a central role in index selection, its application in data processing and analytics is expanding. The technology has the potential to revolutionize index construction, enhancing efficiency by processing vast amounts of unstructured data, improving classification, and developing new data sets. The potential of these capabilities is generating particular excitement in fixed income. There, a vast universe of securities exists where data and analysis capabilities can be greatly enhanced.

Beyond index creation, AI systems could also be harnessed for execution and compliance functions. In addition, the AI theme will likely be a popular one in ETF baskets.

Regulatory considerations also play a role in AI adoption, as indexing is built on rules-based transparency. Ensuring that AI-driven indices remain compliant with regulatory standards will be critical in this area.

ESG Evolution

The Environmental, Social, and Governance (ESG) landscape is another area where indexes have substantially evolved, particularly in response to regulatory and political shifts. While ESG was once a catch-all term, today's discussions are more nuanced, with the focus shifting to specific themes like climate transition, biodiversity, and sustainable fixed income.

Despite the noise, the fundamentals remain unchanged – many investors want climate-conscious investment strategies. Fixed income is also playing an increasing role in ESG investing, with more than half of last year's net inflows into sustainable investments going into fixed income solutions rather than equities. However, while thematic investing in areas like biodiversity and clean energy is gaining traction, the lack of standardized data sets remains a major challenge for index providers.

The rise of active ETFs, increasing customization, AI-driven efficiencies, and the evolving ESG landscape are all reshaping how investors engage with indexes.

"We are at a tipping point. The ability to innovate while maintaining strong flagship benchmarks will determine who thrives in the next phase of indexing," says Lomholt.

Market Movers: Exchange leaders' perspective on the future of derivatives exchanges

Derivatives markets worldwide are experiencing record-breaking volumes. One paradox of the derivatives landscape over the past few years has been the simultaneous existence of record-high volumes and relatively low market volatility.

Robbert Booij, CEO of Eurex Frankfurt AG, notes this trend is particularly striking in Europe. "We are seeing quite high volumes on the back of relatively low volatility. This is somewhat surprising but also the result of our structural growth initiatives."

Despite subdued volatility in 2024, Eurex recorded substantial growth across its fixed income and equity index businesses. This shift reflects how firms manage risk, with increasing reliance on futures and regulated markets over OTC bilateral arrangements. Products such as total return futures, which offer an exchange-traded alternative to swaps, are gaining traction adding to overall volume growth.

Meanwhile, a different set of factors is fueling market expansion in India, with demographic trends and economic growth playing a significant role.

"The median age of the Indian population is 29, and a significantly large number of foreign investments are coming in," says Sundararaman Ramamurthy, CEO of BSE. "Additionally, household savings channeled into equities and debentures has risen from 2% to 7% in the last decade."

There is also increasing involvement from residents in the country's tier-three and tier-four cities (with populations between 10,000 and 50,000), which is reshaping India's derivatives markets. Although recent regulatory interventions have complicated the country's famous strength of retail participation, BSE itself has remained on a growth trajectory, with volumes continuing to climb.

However, despite these promising figures, challenges are emerging. Fragmentation and regionalization have become increasingly relevant themes in recent years.

Shifting geopolitical realities, such as changes in US-EU trade relations and increasing defense expenditures in Europe, are reshaping market structures. Fragmentation, trade restrictions,

> **"We are shaping the markets with our customers and are continuously extending the range of negotiation and execution methods in our toolbox to provide best-in-class execution results.**

Robbert Booij
CEO, Eurex Frankfurt AG

and shifting regulatory environments have created new arbitrage opportunities but also increased risks.

In the wake of these factors, the core function of exchanges remains vital. Exchanges provide essential price transparency and risk management, even as alternative trading venues such as bulletin boards and off-exchange liquidity pools gain traction.

“We are shaping the markets with our customers and are continuously extending the range of negotiation and execution methods in our toolbox to provide best-in-class execution results. Beyond that, wherever the trade takes place, it will always need to be reported as a regulated market trade and centrally cleared to benefit from capital and risk management methods,” says Booij.

Regulatory tightrope

Regulation continues to shape derivatives markets, with different regions adopting varying approaches to market governance. Recent developments have seen Europe introducing EMIR 3.0 for its clearing requirements, while in India, regulatory intervention has targeted retail-driven speculative trading.

One unifying topic across the globe is the role of cryptocurrency derivatives, which remains a contentious issue for all regulators. While some exchanges, including B3, have embraced crypto futures with notable success, Indian regulators have not yet provided a clear framework for crypto as an asset class. In Brazil, Bitcoin futures are trading in healthy clips, and B3 plans to introduce Ethereum and Solana futures.

Embracing new technology is essential to exchange management, and many are leveraging AI for market surveillance, product development, and customer support. While AI-driven surveillance is fast becoming an established tool, newer applications, such as AI-assisted regulatory impact analysis and automated customer support, are gaining traction.

However, institutions remain cautious about fully deploying generative AI, particularly due to regulatory concerns and the need for stringent oversight. At Eurex, AI is, for example, helping teams analyze documents and improve client analytics, as well as in IPO processing and regulatory back-testing.

While off-exchange liquidity pools and alternative trading venues challenge traditional models, exchanges will continue to serve as the backbone of market transparency and risk management.

“Guaranteeing fairness in access to markets is crucial. If too much volume moves off-exchange, we risk removing the very players that ensure liquidity,” Ramamurthy says.

Ultimately, wherever the trade is taking place, it must be structured to ensure price discovery and risk mitigation.

Reporting in 2025

There has been a substantial amount of regulatory change over the past twelve months. The EMIR Refit go-live in the EU and UK, coupled with parallel reporting updates in G20 jurisdictions, has pressured firms to update systems, validate new reporting fields, and navigate an increasingly fragmented global reporting landscape.

While improvements have been made in validation rules and regulatory interpretations, the EMIR Refit implementation process has introduced complexities that firms are still navigating. Regulators such as ESMA and the FCA have rolled out significant updates, including 300 pages of additional guidelines, making compliance a continuous challenge.

“The approach at the outset was to standardize the reporting rules and try to bring harmonization,” says John Graham, Senior Director of Regulation at the FIA, “but what we ended up seeing was a whole host of new fields, an updated reporting format that moved to XML, and increased reconciliation demands.”

Despite attempts at harmonization, regulatory differences across jurisdictions continue to create operational headaches. While adopting ISO 20022 and common data fields represents progress, different regulators are implementing changes in their own ways, leading to differences that increase compliance costs and operational risks.

The differences in how EMIR Refit was executed across multiple regions in 2024, for example, created substantial resource strain on reporting firms.

Another critical issue is data quality. While regulators increasingly scrutinize reported data, firms often struggle to reconcile reporting discrepancies. Many are only now beginning to fully identify and rectify systemic errors nearly a year after implementing their new reporting frameworks.

The complexity of prior UTI mismatches, expiration date inconsistencies, and incorrect transaction classifications also continues to challenge firms attempting to streamline their reporting obligations. Despite an increase in the required reporting fields, now exceeding 200, reconciliation rates have not shown significant improvement.

Given all this, there are lessons to be learned from EMIR Refit. Early engagement is critical. While regulators provided an extended runway for implementation, many firms did not begin testing until the final months, leading to bottlenecks. Greater coordination between regulators is also needed. Format changes should also be separated from data changes. For example, the transition to XML and ISO 20022, while beneficial in the long run, compounded the complexity of data reporting.

Derivatives & portfolio management

As boosting investment in Europe becomes an imperative for policymakers, all aspects of financial markets are currently under review for improvement. With a rush to mobilize savings and boost Europe's capital markets, listed derivatives markets will play a vital role both in encouraging participation in investment trends and providing the tools to properly risk manage that participation.

Innovation is needed to achieve this though and the topic is explored in depth in this stream. Futures markets in particular have been undergoing a quiet revolution across asset classes in recent years. As the full weight of regulations such as the uncleared margin rules come into force, the need for listed alternatives to OTC markets is rising. However, the way in which futurization has played out has varied, a trajectory explored at length in our article on innovation. As well as looking at the markets where new futures products are being launched, such as credit, we also explore the successes of the dividend derivatives and total return futures markets, where the trend began.

Elsewhere in this stream, we also analyze how the listed derivatives environment, in particular options, could be leveraged to fulfill the hedging needs of insurance companies, a key institutional investor base. We also examine the other side of the investor profile – retail traders – and the successes and challenges in increasing their presence in European listed markets. Assessing the range of strategies now available for investors, we also take stock of the QIS market and how it might increasingly interact with listed derivatives activity.

Innovation in European listed derivatives markets

The imperative to innovate in European listed markets is stronger than ever, with an urgent need to direct the continent's substantial savings towards investments that enhance its resilience and economic vibrancy. A crucial part of this effort is an efficient financial market that encourages investment and provides sophisticated risk management tools for market participants.

"Europe has a unique advantage, which is its savings rate," says Vincent Mortier, Deputy CEO & Group Chief Investment Officer at Amundi AM.

"This is one of the highest in the world, ranging from 15–20% depending on the country. We have €40tr in savings, but this money is in bank deposits, which is good for banks, short-term money market products, life insurance, and foreign assets."

"Every year, European savers invest €250bn outside Europe, essentially in the US. The question is how to mobilize this money towards European innovation."

While this challenge is beyond the derivatives markets alone to solve, they have a crucial role to play in building the liquidity and risk management capabilities of European capital markets. Efficient and sophisticated listed derivatives markets can help channel investment quickly and effectively to the sectors that can support Europe's economic growth in the coming years.

Futurizing Europe

Thankfully, listed derivatives market participants have been innovating for some years now. European innovation has a distinct tone compared to other regions – one that flourishes through collaboration between a wide range of market participants and authorities. That means progress can sometimes be unappreciated. However, growing liquidity in FX and credit index futures, as well as rapid technological advances in equity derivatives markets, are testament to the progress that has already been made.

But more is needed. European member states are currently debating a significant step-up in funding needs. The issues of mutualized debt and liquidity in all corners of the fixed income complex, including futures, are only set to grow in relevance.

This expansion of the futures universe is rooted in the long-running integration of post-2008 regulatory reform in derivatives market structures. With those reforms finalizing and fully integrating into firms' operational considerations, the calculation of trading various instruments has shifted.

> **"Europe has a unique advantage, which is its savings rate.**
>
> Vincent Mortier
> Deputy CEO & Group Chief Investment Officer, Amundi AM

However, the impact of these reforms on derivatives markets has been less straightforward than many anticipated. Many market participants had expected that the cumulative effect of Basel III capital requirements, uncleared margin rules and SA-CCR would instigate a blunt liquidity shift from OTC derivatives markets onto listed venues.

That big bang moment has not happened uniformly across markets (although it has been the case in some markets, such as dividend derivatives and total return futures). In many asset classes, regulatory changes have led to a nuanced market structure where futures are used in an variety of innovative ways. This has, at times, involved reimagining the function of futures and new models of collaboration between different market participants.

“If you go back five to ten years ago, exchanges and banks directly competed with each other to provide liquidity in derivatives products,” says Joseph Nehorai MD, Global Co-Head, Futures and Options at Goldman Sachs.

“Banks provided liquidity in OTC derivatives, while the exchanges offered listed derivatives. Regulatory and capital reform, in particular the Dodd-Frank mandate for clearing and the global framework of uncleared margin rules, has meant the ecosystem has evolved in such a way that banks and exchanges are collaborating much more closely.”

While much of the initial focus of collaboration was designing capital efficient products for bank hedging desks, the futurization project has since spread to a wider user base of end users.

“Many futures products have become something of a wrapper, similar to ETFs or swaps, with the liquidity driven by the underlying assets, rather than having their own intrinsic liquidity,” adds Nehorai.

“That is a critical shift as we think about futurization of the wider derivatives landscape and that partnership between exchanges and banks, which proves the two can co-exist, because banks now commit their balance sheet to providing liquidity in futures markets, whereas in the past, they would commit that predominantly to OTC markets.”

Credit tools expand

The rise of credit index futures encapsulates this trend, with the products entering a market that ETFs have already revolutionized. Eurex’s credit index futures are similar to ETFs in the indexes to which they offer exposure to. However, their introduction has now provided users with instruments that allow for leveraged positioning (ETF positions are fully funded) and greater flexibility to go short.

The Eurex product suite of credit index futures currently comprises six global fixed income benchmarks, covering euro and US dollar-deno-

> **For the last decade, central banks absorbed a lot of the flow in debt markets, which reduced credit spreads.**

Patrick Barbe
Managing Director, European Senior Portfolio Manager
Neuberger Berman Asset Management

minated investment grade and high yield indexes, as well as dollar-denominated emerging market sovereign exposure.

Clients' adoption of Eurex credit index futures continues to grow at a rapid pace within buy-side users, with activity concentrated in the euro IG and HY products, which were launched first.

At its peak (outside the roll period), the EUR IG futures market has seen volumes of above €400 mn a day, while EUR HY has seen more than €150 mn.

Dan Philip, Institutional Sales & Trading at Jane Street, believes that the market's capacity is much higher however, with the ability to print trades at ease given the scale of trading in the cash bonds and the comparable ETFs – trades of €500 mn are regularly quoted.

A recent parallel is the success of bond portfolio trading, which in the space of five years has grown from nothing to account for 25% of US fixed income trading and 9–11% of European activity.

"The volume growth in Credit ETFs and Portfolio trades, which see individual trades of more than €1bn of risk transferring, illustrates how quickly protocols can grow," adds Philip.

"Liquidity in the same size is structurally much easier to deliver than the same size in the underlying cash bonds as the dealer has more options about how to risk manage a broad futures trade vs. the need to deliver exact quantities of specific lines when trading bonds. Once these products get through the initial 'admin' phase of new product approval committees and adoption by portfolio management systems we expect to see usage accelerating materially."

Accelerating growth

The first wave of adoption has mainly been driven by a few pioneering large asset management firms, looking for more efficient ways to trade credit exposure, and small and mid-sized asset managers, which couldn't access OTC instruments such as Credit Default Swaps (CDSs) and the related indices, and Total Return Swaps (TRSs).

Before the launch of credit index futures, market participants would have to rely on OTC Credit products, or on imperfect hedge in the listed markets such as equity index futures to manage their credit exposure.

As cash-settled futures on financial indexes, credit index futures offer a flexible, liquid and transparent solution to gain exposure to the global credit markets, and can be easily integrated within front-offices trading workflows already in place for other Eurex products.

Global investment houses have found many applications so far for Credit Index Futures: as an efficient hedging tool against adverse market moves in credit; as a way to build quick and efficient beta exposure when launching new funds; as a way to better manage liquidity and fund outflows in distressed markets. The list goes on and will keep expanding as additional and more diverse users discover this market.

Current market conditions are now ripe for momentum to accelerate, as more firms face the need to develop hedging strategies in highly volatile market regimes.

"For the last decade, central banks absorbed a lot of the flow in debt markets, which reduced credit spreads," says Patrick Barbe, Managing Director, European Senior Portfolio Manager at Neuberger Berman Asset Management.

"That meant that hedging was generally not a good strategy while the market performed very well. Now spreads have normalized, so we can expect more need to hedge. This will increase demand for credit index futures."

"Another attraction of the product is the ease of integration, we can onboard these futures into our internal systems pretty straightforwardly. The only change we have to make is our risk management inputs, because you have to compute this including duration and monthly rebalancing."

"What we are trying to educate our clients on is the attraction of the cost of the transaction. Yes, the market has not yet fully developed liquidity, but if you include all the transaction costs you are making it is clearly a good opportunity."

Expanding trading strategies

Another key element of credit index futures' appeal is their capacity to be integrated in trading strategies with other credit derivatives, including OTC instruments.

These opportunities are broadening futures' appeal to firms that run more sophisticated strategies, such as relative value investing. These could include trading the basis between the credit premium return of a corporate bond index (as expressed through a leveraged position with the futures) and credit spread returns accessible with iTraxx indices. Investors can also trade the basis between the credit futures implied funding rate and actual funding rate, realized with cash investment on fixed income ETFs). Basis trades can also be identified between the futures and total return swaps.

This comingling of the listed and OTC markets points to a larger characteristic of the innovation involved in driving greater listed adoption. While regulatory mandates at first seemed set to simply push OTC activity into listed venues, the transition has played out in a much more nuanced and rich way in asset classes like credit.

New futures products are now often used in conjunction with OTC trading. This has helped market participants to keep as broad a liquidity profile as possible, while also accessing the capital and workflow efficiencies of the exchange-traded format.

This flexible approach has extended to execution methods – a model that has kept the products appeal broad and driven adoption by multi-asset firms as well as fixed income specialists.

"When taking a product or an asset that trades mostly OTC onto an exchange, we cannot expect that from one day to another, this will only trade in the order book," says Davide Masi, FIC ETD Product Design at Eurex.

"Our approach with Credit Index Futures has been to support a hybrid model of electronic trading that does not only look at the order book as a venue, but also at RFQ platforms and voice trading as alternative ways to access the liquidity pool."

"This is a model that we've not only seen in credit index futures but also in other "futurized" asset classes that are offered at Eurex. Order book trading is important for us, and we want members to use it, but above all what we want is our clients to have the best possible experience when trading our products. If the liquidity that they're looking for is not in the order book, but available off book and from trading directly with dealers and market makers, then we tend to encourage that trading model too."

Increasing automation in EQD

Interaction with the order book is not a theme limited to markets like credit, where futures are entering a derivatives market with a dominant OTC presence.

In equity derivatives markets, participants also grapple with questions around execution models. In this instance, the challenge centers more on an increasing sophistication and variety of algorithms, analytics and trading protocols.

For exchanges, this has led to the development of platforms such as Eurex EnLight, an RFQ protocol that preserves traders' access to off-book liquidity, while opening up the efficiencies of the on-screen format.

EnLight was introduced as an answer to the high proportion of block trading in equity derivatives markets, and the information asymmetries that can create – a challenge to servicing clients' increasing demand for analytical tools.

"We see a strong trend in electronification and one trading protocol alone will not do the trick," says André Eue, Head of Market Development & Pricing at Eurex.

"As a venue, we therefore need to be open minded and diversify ourselves beyond the order book. We basically need to cater for our customers' needs in order to get them onto our platform. That also means collecting the data that informs their trading decisions with analytics."

Collaboration between exchanges and the buy and sell sides is crucial for fostering greater innovation and automation in execution and pricing capabilities. However, internal coordination within firms is equally important.

This is not always the easiest process and traders have been known to resist moves to automate pricing. However, with the increasing speed at which modern markets are processing volumes, technological innovation is essential to achieving the scale to meet those needs.

"If you want to build scale and volumes that means that you need to invest in technology, you need to invest in people and you need to invest in the skill-sets," says Gurpreet Kharaud, Global Head of Equities Digital Markets at J.P. Morgan.

"The traders that we employ today have an immense amount of knowledge. A lot of that has been stored up over many years of experience, so partnering them with technically proficient individuals within our quantitative research teams gives them access to be able to employ new strategies and rules, and then relentlessly test that. The more and more you make people feel part of the journey and part of the process, the more that they feel bought in."

"If we hadn't made those investments over the previous years, we wouldn't be able to attract and process the volumes we do today. That is relevant both for our sales people answering quotes, but also for having the fast-pricing capabilities. It's just not possible for humans to take care of all of that process alone."

EU rates liquidity stirs

Different asset classes requiring different paths is a recurring innovation theme. Automation and trading protocols have been the focus of innovation in equity derivatives. In rates, innovation is needed to support Europe's government bond markets in service of the continent's increased spending needs.

This has raised the prospect of significant changes in fixed income markets, with potentially era-defining shifts in debt issuance.

"If the political environment is demanding these governments spend significantly more on defense, there is a big financial question to answer on how that will be funded," says Thilo Rossberg, Head of Traded Markets at LBBW.

"Will it have to be done as joint European issuance? That would mean slowly but steadily moving closer towards a common European bond program. Ten years ago, that was almost taboo, but it is now creeping into the market, step by step."

"That may well be a good thing. It is bringing a new force to the table, which is potentially big enough to match US Treasuries at some point."

"There is still a long way to go before we get there, but the market's appetite for this new asset class is clear. Just a discussion about including EU bonds in indices gave the market belief that this might happen and was very beneficial for spreads and liquidity."

"In the same vein, moving EU bonds onto MTS, and then making it compulsory for dealers to quote on MTS was a big step closer to being regarded as a government bond."

Since 2020, the EU's presence as an issuer in bond markets has ramped up under the NextGen EU program. The level of electronic trading in its notes has increased, with improving secondary market liquidity. Eurex is also expected to launch an EU bond future later this year. There are also clear signs that EU bonds are starting to form an important part of institutional investors' portfolios.

"We have seen investors switching out of French government bonds and into EU bonds," says Sören Kretschmar, Director, Head Bond Derivatives Trading at Deutsche Bank.

"That is because people wanted to diversify, especially core European investors such as insurance companies, which are typically heavily invested in more core names like France and Germany. EU bonds are also being used more often in collateralized swap agreements and generally getting more and more relevant."

"Also in terms of opportunities, bonds look very attractive. So, we are seeing a lot of demand for getting unfunded and leveraged exposure at these rates."

These developments build on an often-underappreciated improvement in the liquidity profile of Europe's government bond markets. Market commentary frequently emphasizes US fixed income markets' superiority compared to the rest of the world. However, the experience of those trading in European markets on a day-to-day basis presents a much more complex picture.

"There's this perception that the US credit market is more liquid than the European one," says Michaël Soued, Head of Aggregate and Multi Asset Total Return at Ostrum Asset Management.

"However, on many metrics, both high yield and investment grade liquidity is better in Europe than in the US nowadays. While you can probably trade in larger sizes in the US than in Europe, at the longer end of the curve you can more reliably get a price in European than US markets."

"Meanwhile, the listed derivatives market is really, really liquid, as are the iTraxx indexes. Overall, the situation is really improving."

Shifts in trader behavior may also be forming misperceptions of European liquidity. This is certainly the case in Bund futures markets, where traders can execute orders in considerable size.

"We are seeing much more liquidity in the futures market at the moment," says Lee Bartholomew, Global Head of FIC ETD Product Design at Eurex.

"Presently, we see much less intraday volatility in the CTD basket, if compared to 18 months ago, which increases predictability of the bonds that will be delivered at the expiry of fixed income futures. As a result, we are seeing now a more directional positioning, as traders are actively looking for opportunities and engaging with the market."

"We have seen investors switching out of French government bonds and into EU bonds.

Sören Kretschmar
Director, Head Bond Derivatives Trading, Deutsche Bank

Derivatives in insurance

Expanding the investor base is crucial to invigorating Europe's listed derivatives markets. In recent years, significant attention has been directed towards introducing new sources of flow into exchanges, with a primary focus on retail traders. Less discussed, but equally important, are the opportunities that listed derivatives offer to institutional investors, as they look to boost returns by expanding into new asset classes.

A prime example is insurance companies. Many of these firms' assets are held on balance sheets, and many are illiquid. Their investment model, therefore, requires either liabilities to match those assets or hedging of the assets.

Under EMIR, as well as Solvency I and Solvency II requirements, these firms' ability to hold equity on balance sheets has become more challenging. Given the asset class's ability to generate profitable returns over the long term, there is a huge opportunity that many insurance companies are missing out on.

However, under current regulatory regimes, any equity investments must be hedged. This situation is complicated by the asset class's historically high volatility compared to fixed income, but also the selection of products available for hedging.

"The hedges that are beneficial in this regard – lookback puts, forward strike puts (i.e., path-dependent options), and similar products, are all OTC," says Sushil Krishan, Executive Director at Goldman Sachs.

"In the fixed income, or even credit market, all of the most commonly used hedges have been moved into clearing houses, such as Eurex. There has been a transformation in those markets which has alleviated stresses on booking and potential risk modeling within insurance companies. Meanwhile, the equity derivatives world, especially exotic derivative products which are interesting for insurance companies, is still exclusively OTC."

"This ties into the second challenge facing insurance companies, which is that it's hard for them to book and model options that would suit their needs. One solution that could improve access and liquidity is moving these products into a listed and cleared world, which may make it easier for booking purposes."

In addition to booking and modeling advantages, exchanges also offer easier access to many investors, particularly smaller firms. The exchange-traded format bypasses the lengthy process of obtaining ISDA documentation needed for OTC trading. Standardization reduces the need to analyze term sheets for each transaction.

However, for many, the advantages of booking and modeling alone make listed derivatives a vastly superior format, if the products are available.

"A lot of this comes down to valuation – how you can make sure that the exotic OTC product is valued in the right way," says Kai Wallbaum, MD, Head of Asset-Life Business, Allianz Global Investors. "This is debated internally but also with auditors and regulators. If the product is listed directly, it's a totally different discussion."

However, many of the non-vanilla derivatives that insurance companies would need to hedge their equity exposures are not listed. Ironically, more listing of such products (mainly options) could open the door to participation in other innovations in the futures ecosystem.

“ If a structure is listed, it's much easier for us to invest in it and trade it.

Cristian Lentfer
Signal Iduna Asset Management

“If a structure is listed, it’s much easier for us to invest in it and trade it,” says Cristian Lentfer, Signal Iduna Asset Management.

“On exchange, it would be really good to see more specialized puts, like restriking puts or lookback puts. For new products, like TRFs or volatility derivatives, we have to look at the risk carefully as our systems are not designed for innovative products.”

“However, in the future we need to consider and be open minded about trading such contracts. It is just that it is much better for us to when those products are on exchange, as we can assess the risk properly and integrate the products into our systems. Because of that, OTC products are very difficult for us right now.”

Ultimately, the benefits of an increase in the listing of derivatives could spread beyond more participation in public equity markets. Many insurance companies have been active in private markets in recent years, with some suffering from the lack of the right tools to properly hedge their exposures.

In the case of Allianz, such challenges ultimately led to innovation.

“In our general accounts, we frequently used fixed income derivatives, to match duration,” says Wallbaum. “Over the last 10 to 15 years, we heavily increased our exposure to private markets. This also allowed us to think about different ways to leverage our private market asset pools.”

“So, we created a private market-linked derivative. It is a total return swap between a fund and the general account to manage private market risks in a new way. We use the total return swap to manage our exposure on the general account side, but we also use the swap in a fund vehicle to provide access to private markets in a very new and efficient way, which also helps to manage liquidity risks in an evergreen structure. It is a new chapter on how derivatives can play a role in the interplay of asset management and insurance.”

For the insurance industry as a whole, the path forward entails harnessing such examples of innovation and increasing their tradability and widespread use as hedging tools. Exchanges will be a key partner in achieving that.

Harnessing listed derivatives in quantitative investment strategies

QIS (Quantitative Investment Strategies) has experienced powerful growth in recent years. According to some estimates, the notional linked to QIS has roughly doubled over the last three to four years as a wider range of investors buy into the strategies.

Growing adoption has been driven by the increasing sophistication of strategies, which can now rebalance on a daily or intraday basis, as opposed to the quarterly frequency that was standard when QIS first started being offered to clients some two decades ago.

QIS has also benefited from its closeness to the wider growth in passive investment. Going forward, the market's participants are dealing with its continuing maturity, which incorporates elements such as the increasing use of derivatives and a new focus on execution.

These developments are coming alongside a shift in approach to QIS from end investors, with many realizing that participation in the market requires a more active approach than before.

"Investors who adopted a buy and hold approach previously often came to realize that the carefully optimized portfolios they were holding weren't performing as expected," says Frederik Middelhoff, Investment Manager at Resonanz Capital. "That is still an issue that remains, so you have to take more of an active approach, which is something we are seeing from institutions."

"The biggest issue for investors now is how to access exposure, because not all of these institutions can do it directly, they need a fiduciary or they can't do swaps. Some of them can only do fund investments. So, the conversation has changed more recently to how do I access these strategies, and less the case that people are saying 'I'm not going to touch this anymore'."

Broadening access

The issue of access and, in particular, execution is set to increase in pertinence. For many investors interested in QIS, practical considerations such as access across time zones can be a barrier to adoption. Not all funds for whom QIS would make sense from a return perspective have the infrastructure to manage the strategies in-house. Maintaining trading desks in the US, European and APAC time zones is one costly example. This opens up conversations around execution outsourcing and other participation models.

"Execution will grow in importance for QIS strategies," says Daniel Krause, Head of Portfolio Management at finccam Investment. "In recent years, market participants focused a lot on different strategies. I think this trend will slow down now, because there are only so many sustainable risk premiums that can be harvested. Now, discussion will center much more on execution and pricing."

While the production of strategies may be slowing, there are still new innovations in the themes that investors can access, such as zero-day options trading. On the execution side, innovation is also taking place around access to strategies such as high frequency trading.

The role of derivatives

These developments also play into discussions around the role of derivatives in QIS. Derivatives already play a key role in access to these strategies. However, they also play an important role in the construction of QIS. Given that one of the fundamental pitches for QIS adoption is the clear and transparent rulebooks they use, the relevance of listed derivatives is almost automatically elevated in these discussions.

"The delivery mechanism for the majority of our QIS strategies is in a derivative," says Deepak Maharaj, Head of Equity & Cross Asset QIS Structuring at J.P. Morgan. "However, the QIS strategy itself is often built by incorporating derivatives, whether it's listed futures, listed options, OTC transactions or in some cases, FX forwards."

"One of the key premises of QIS, is that the strategies need to be liquid and transparent. And obviously using listed derivatives really enhances and facilitates that process, not just in the construction stage, but also for reporting or trade servicing, where clients get position reports. The listed format makes it very clear what they are holding, which is great for transparency."

Going forward, the listed derivatives markets could be integrated even further with QIS. The futurization trend has already caused a re-imagining of the use cases for futures in the traditional asset classes. The demand for a listed link to more sophisticated exposures will grow as it spreads. This is already taking place for some aspects of insurance balance sheet management (*see article 2: Derivatives in insurance*).

"I don't think we are too far away from talking about the futurization of QIS," says Mikhail Krayzler, Lead Portfolio Manager, Director at Allianz Global Investors.

"We are already seeing attempts to futurize equity baskets and could even get to a point where futures will be available for some of the more simple quantitative strategies."

> **"The delivery mechanism for the majority of our QIS strategies is in a derivative. However, the QIS strategy itself is often built by incorporating derivatives, whether it's listed futures, listed options, OTC transactions or in some cases, FX forwards.**
>
> **Deepak Maharaj**
> **Head of Equity & Cross Asset QIS Structuring, J.P. Morgan**

Futurization: listed alternatives – trading Dividend Derivatives & Total Return Futures

As the futurization trend spreads through asset classes, taking different forms depending on the market structure it is entering, it can be easy to forget the two markets where it first started.

Dividend futures were first launched in 2008 and have since grown as a market to incorporate index and single-stock futures, as well as options. Total return futures came later, launching in 2016, and have also expanded notably since, with contracts referencing EURO STOXX®, FTSE and MSCI indexes and the launch of Equity and Basket TRFs (ETRFs and BTRFs).

While futurization in FX and credit has so far been a story of coexistence with OTC instruments, in the cases of dividends and TRFs, the narrative was more in line with the original aim of futurization – a straightforward transfer of OTC liquidity into listed markets.

“At its core our objective was to create a listed version of the existing OTC products,” says Lorena Dishnica, Product Design, Equity & Index at Eurex. “The idea was not to create a product to co-exist with the OTC market, but to shift that business from OTC to the listed version.”

“In the case of TRFs, we initially approached the dealer community about a cleared version of the total return swap. We had massive support from the banks from the beginning, as well as in the design and implementation phases later on.”

“As work progressed, we thought that while the cleared product fitted the bank’s need for hedging their implied repo risk, further down the road a listed version of the product would also be sustainable for the buy-side. Since launching the first TRFs in 2016, we have built on that infrastructure to launch ETRFs and BTRFs, expanding the ecosystem even further.”

Both listed dividend derivatives and TRFs arose from OTC markets that mainly circulated around interdealer trading, with the participation of some hedge funds. In the case of TRFs, the shift was driven by the increased cost base of trading total return swaps, stemming from the Uncleared Margin Rules. The rise of Dividend futures preceded those rules, with a need for greater standardization of the hedging flows that came from banks’ structured product issuance.

Building liquidity

However, in both cases, standardization opened up access to a broader range of investors. This creates new demands, while also diversifying the liquidity profile of each market as more new entrants spot opportunities.

“While dividend index futures have sufficient liquidity, among the single stock dividend futures liquidity is sparser,” says Peter Bieri, Chief Investment Officer at Survista. “As an asset manager,

“ You cannot simply define the success of a product by its on-screen liquidity. Total return futures are, not just from a European perspective, but globally, the best example of that.

Lorenzo Longo
Equity Portfolio Manager, Kedalion Capital

however, we like to focus on the single stock dividend futures because of the structural dislocation caused by the structured product market.”

“These products mainly comprise autocallables and reverse convertibles and create big exposures on investment banks’ balance sheets. They need to recycle that risk, which creates an imbalance between supply and demand and offers great discounts when entering into a single stock dividend futures trade.”

The question of liquidity is becoming an increasingly nuanced one. Whereas traditional opinion defines the success of a listed product by the level of on-screen liquidity that it attracts, for an increasing portion of the market, it's becoming a less urgent issue. An increasing number of investors are looking to the liquidity of a future’s underlying assets as a more important metric. In some cases, these investors are now comfortable trading billions of dollars of risk through futures with very limited on-screen liquidity.

“You cannot simply define the success of a product by its on-screen liquidity,” says Lorenzo Longo, Equity Portfolio Manager at Kedalion Capital. “Total return futures are, not just from a European perspective, but globally, the best example of that.”

“There is very limited TRF activity on-screen; however, if you look at the percentage of open interest that actually tracks the EURO STOXX 50® or FTSE 100 through listed futures, the amount that is done through TRFs is going up and up. People still rely on the traditional price return contract that needs -and has- good on-screen liquidity to trade their deltas. But it doesn’t then follow that it’s where they ultimately warehouse the position.”

That is not to say that on-screen liquidity’s importance has diminished in its relevance for many market participants, nor that it cannot build in listed derivatives where it is currently limited. As the trajectory of dividend derivatives has shown, futures markets that begin life dominated by block trading can then evolve into more liquid on-screen activity.

Indexing the market

The other key ingredient to the success of these markets is index provision. In the TRF ecosystem, there are now well-developed markets in EURO STOXX 50® and FTSE 100 contracts, with liquidity also building on MSCI indexes. More recently, Eurex has also launched STOXX® Europe 600 TRFs. Going forward, index creation and maintenance challenges are expected to become more nuanced as providers keep in step with the market.

“As these markets develop their own ecosystem over time, it becomes harder to make changes to the methodology,” says Serkan Batir, Managing Director, Global Head of Product Development at STOXX®.

“That is not a challenge that should be underestimated, and as index providers, we really need to look at the interests of that whole ecosystem and evaluate how our products are facilitating trading activity, risk hedging and repo activity.”

Retail participation in EU markets

The desire to increase retail participation in the European listed derivatives market is well-established. With the efforts of Eurex and retail brokerages, participation from this investor segment is increasing. However, the task at hand still requires patience on many fronts.

Perhaps the most important tool for increasing Europe's retail participation is education. This is a slow-burning process, but ultimately a worthwhile one – both for the retail traders that are ultimately putting on risk positions in the market, and for exchanges like Eurex. The latter still want to apply discretion to the market participants that they accept on the platform.

"Education is key," says Randolf Roth, Executive Board Member at Eurex. "At Eurex, we don't want to have a high churn rate of retail market participants. One advantage that we have currently is we only get the most sophisticated retail flow. These are traders who already have experience trading stocks, warrants and knockout options. Eventually, they graduate and start engaging in more sophisticated strategies."

"These are the retail traders that we want to work with and educate further. Retail is missing out on so much return by keeping money in a saving account. But the key point is, traders have to learn to deal with the risk and take appropriate risks."

Of course, education alone cannot be the only pull factor for retail. To this end, Eurex and the brokers that deal with retail have seen noticeable participation on the back of features such as mini-contracts and accessible market data feeds.

"The downsizing of contract sizes has been a major step towards increasing retail participation," says Jan Heyder, International Sales Manager at CapTrader. "The mini DAX future is already in our top ten traded products. The other boost has been the reasonable pricing of live market data, which was the second major step towards increasing our interactions with retail traders."

Also of crucial importance is the encouragement of on-screen liquidity. The variety of workflows and strategies used by Eurex's sophisticated institutional membership has meant that on-screen trading is no longer the only definition of a listed marketplace's success. Market participants now choose from a range of trading protocols, with some very successful listed products primarily driven by block trading activity.

However, for retail the screen remains the most important model for execution.

"It is key to have liquidity provision frameworks that are beneficial to on-screen trading," says Carl-Johan Munch-Jensen, Head of Trading at Swissquote Bank. "Because the fact is retail trading always happens on-screen, and is hardly ever subject to block size optionality."

"So, it's important to make sure that the framework is balanced between aiming to have very healthy and consistent on-screen quotes, but at the same time not having too broad requirements for market makers that would make the rules unrealistic to adhere to."

There are also broader questions of what constitutes retail participation in a region where most citizens' interaction with derivatives markets is channeled through their pension fund. In this respect, even institutional investors have historically found their access to listed derivatives complicated by regulatory frameworks. The Dutch pension act, introduced in 2023 with a five-year implementation period, could mark a sea-change in this respect, driving greater listed derivatives adoption.

“Dutch pension funds are among the largest asset managers globally, yet they currently have minimal participation in trading listed options,” says Paul van der Meer, DCP Execution & Sales Lead at IMC.

“Typically, their derivatives activities are executed primarily through futures. The recent Dutch pension act presents a significant change in the status quo, as it could allow pension funds to enrich their hedging activities potentially leading to better risk-return for the pension holders.”

“In Europe, we often emphasize retail investor participation. However, in practice, much of Europe's retail investment occurs indirectly through pension funds. Unlike in the United States, where individuals manage their pension investments personally, European pension management is highly structured and institutionalized. As a result, pension funds in Europe frequently miss out on strategic opportunities offered by listed derivatives markets.”

Following the more common definition of retail participation, however, the journey also continues. More than anything, increasing the presence of this investor profile requires constant monitoring, given its dynamic needs and sharply shifting demands.

“It is important that our retail clients know how to trade on the exchange via our platform,” says Robin van Rijn, Executive Director Brokerage Europe at flatexDEGIRO Bank.

“That means having the right tools, accessible screens and market data in place. It also means for instance offering the right underlyings, and contracts with lower sizes for high value shares. It is a matter of constantly monitoring what’s out there, what our clients’ needs are, and where can we improve for them. That’s what we will be doing on a continuous basis.”

> **“ Typically, their derivatives activities are executed primarily through futures. The recent Dutch pension act presents a significant change in the status quo, as it could allow pension funds to enrich their hedging activities potentially leading to better risk-return for the pension holders.**
>
> Paul van der Meer
> Head of European Derivatives Sales, IMC

Liquidity & collateral management

With a landmark regulatory framework almost resolved, the European clearing market is on a sure footing to expand and innovate. The passage of EMIR 3.0 has been long and arduous, but with market participants now only awaiting a finalized RTS from ESMA, clearing members are looking forward to a period of regulatory certainty. We examine the final structure of EMIR 3.0 in detail in this section, looking at the active account requirements, but also other aspects that have perhaps been underappreciated and represent support for boosting competitivity in the continent.

We also analyze the status of repo in Europe and how it might be affected by the incoming US mandate for repo clearing. The equity options market also comes under our lens, as we consider how its liquidity could be improved and the differing needs of on-screen and block markets best balanced. We also visit the multi-asset trading trend on the buy-side and how it has developed recently.

EMIR 3.0: Reshaping the European clearing landscape

It won't be long before the active account regime of EMIR 3.0 finally becomes a part of the European clearing industry's realities. The journey to this point has been a long one, but with ESMA due to deliver its long-awaited final Regulatory Technical Standards (RTS) in a matter of months, market participants are well and truly reaching the end-game for implementation.

Much market focus therefore remains on the technical details of the active account requirement, and the operational demands that it will create for market participants. However, with the final details on the rules being released soon, space has been created for market participants to recognize other features of EMIR 3.0, such as those which will enhance competitiveness in the clearing industry.

"Co-legislators have given ESMA a 'Christmas present' with EMIR 3.0 entering into force on 24 December last year," says Klaus Löber, Chair of the CCP Supervisory Committee, European Securities and Markets Authority (ESMA).

"This package comprised a quite significant amount of work for ESMA and the community of regulators. The very specific expectations for implementing technical standards to support EMIR 3.0 will have to be met, with some very ambitious deadlines. Some of the measures must be implemented within six months, leaving little time for the preparation."

"ESMA will have to make sure that the full package helps to ensure not only the smooth and effective rollout of EMIR 3.0, but also supports a resilient, attractive and competitive EU clearing ecosystem."

Among the measures drafted to enhance Europe's competitiveness are shortened timelines for opinions and validations on new products and an expanded list of eligible collateral that banks can provide, including letters of credit. In addition, UCITS funds will no longer have to count cleared derivatives in their counterparty risk limits.

Although less discussed than the active account requirement, these are nonetheless features that market participants believe can significantly enhance the efficiency and vibrancy of European markets, and ones they have been demanding for some time.

> **"I think one element that often gets overlooked in conversations around active accounts is that a lot of the reforms have been done to speed up approvals and to expand eligible collateral.**
>
> **Scott O'Malia**
> **CEO, ISDA**

"I think one element that often gets overlooked in conversations around active accounts is that a lot of the reforms have been done to speed up approvals and to expand eligible collateral," says Scott O'Malia, CEO at ISDA.

"We have been asking for those policies and the Commission and ESMA have responded. So, we are grateful to have them in place. In addition, when you think about what could be in scope and some of the decisions made by ESMA, they did not take a maximalist approach, which is appropriate."

In addition to introducing new market-supportive measures, EMIR 3.0 also preserves clearers' access to global CCPs and affirms clearing banks' ability to service their clients without constraint. Its implementation further tones down the long-running debate around EU-UK CCP equivalence, a trajectory that was supported by the European Commission's extension of equivalence at the beginning of year. The arrangement will last until 30 June 2028.

"It is not a big surprise that the EU-UK equivalence was extended, as if it suddenly disappeared the active account requirements wouldn't make any sense," says Matthias Graulich, Executive Board Member at Eurex Clearing.

"Whether we will see permanent equivalence at some point depends firstly on whether UK rules remain equivalent with the EU's. The second consideration is the review period for whether EMIR 3.0 and the active account requirement have done a good job in moving exposures into the EU. That is a determinant that will influence any future decision on if and when and how long equivalence will be prolonged."

"It's good that we finally have some clarity.

Jasper Valstar
Senior Portfolio Manager
Achmea Investment Management

Actively preparing

Active account requirements remain an inescapable part of any conversation around EMIR 3.0. While the market now understands these rules' central premise, many participants are still working out how to integrate them into their operations.

There are still plenty of doubts to work through, and there is no one-size-fits-all approach that market participants can adopt. However, ESMA's draft RTS has already given firms a welcome increase in the amount of information they can work with as they journey towards compliance.

"It's good that we finally have some clarity," says Jasper Valstar, Senior Portfolio Manager at Achmea Investment Management.

"It has been uncertain what was being requested from us for this topic for quite a number of years. So, it's good that we now have at least 95% of what we need to do to clear. I think it's also good that the restrictions imposed on smaller clients are very easy to meet. However, on the reporting side, there needs to be a way to implement that doesn't create a whole new operational burden on us or banks to comply with."

Regulatory reporting requirements have been a persistent feature of derivatives markets for much of the last decade, most recently arriving on desks in the form of EMIR Refit last year. These rules have often been complex and resource intensive to apply, with market participants keen to avoid any unnecessary additional operational burdens. For clearers, an EMIR 3.0 framework that leverages existing rules and information and prioritizes efficiency is much desired.

> **We are seeing more onboarding requests from hedge funds, and some have already also started to clear quite a few trades with us.**

Francesca Dell'Era
Head of FIC Sales Central & Southern Europe, Eurex

Impact so far

While many firms are still adjusting to the framework, EMIR 3.0 and its objective to bring more derivatives clearing to the continent is already having some early observable effects. Eurex has seen engagement with its OTC Clearing services pick up since the end of last year, with onboarding requests from various market participants.

"We are seeing more onboarding requests from hedge funds, and some have already also started to clear quite a few trades with us," says Francesca Dell'Era, Head of FIC Sales Central & Southern Europe at Eurex.

"We also have interest from UK asset managers who would like to be ready to access the liquidity pool in Europe and some PTGs as well. We expect that this trend will continue to grow in the coming months, thereby creating a good balance of diverse clients that can help to further increase the momentum on volumes."

Moving more volumes into EU CCPs is one way for market participants to avoid EMIR 3.0's operational requirements and reporting obligations, with those firms clearing more than 85% of their derivatives on the continent exempt from the demands. While some firms consider this as a strategy, it is too early to tell how strong an incentive it is.

"Market participants are still mostly in the design phase," says Gaspard Bonin, Deputy Global Head of Derivatives Execution & Clearing at BNP Paribas.

"Some are looking at the 85% threshold and considering clearing all their business at Eurex going forward, although it raises some non-trivial questions on best execution."

"Some of the largest market participants are looking at the Eurex-LCH basis, how it will evolve and how it will create opportunities. The effects of EMIR 3.0 are compounded by the Dutch Pensions reform, which has also impacted the basis recently."

"In general, I wouldn't say a shift of activity has started yet, but it does not mean EMIR 3.0 is a status quo situation in terms of its impact on the market."

How will repo and treasury clearing in the US impact European markets?

Substantial changes are taking place in repo markets. Mandatory repo clearing is a measure only being introduced in the US for now. However, most market participants expect that, as with T+1 settlement, Europe will eventually follow the path being set on the other side of the Atlantic. Yet while regulation is set to dominate discourse in the coming years, market participants are also undergoing other significant shifts in market structure.

While the SEC's mandate for repo clearing has been delayed by twelve months, many market participants see its passage into their working lives as inevitable. Anticipation is high that Europe will eventually follow the US's footsteps and introduce a repo clearing mandate of its own.

However, firms could find themselves pulled towards the cleared repo market ahead of any mandate, partly due to another regulation. T+1 settlement is now in place in the US, and EU and UK regulators are currently working towards 2027 adoption in their jurisdictions. As firms update systems to comply, moving to a cleared repo operation would help with that objective and bring other advantages.

"Around 50% of the European repo market is cleared already," says Frank Odendall, Head of Securities Funding & Financing Product & Business Development at Eurex.

"Market participants have voluntarily chosen to clear because of the obvious risk mitigation benefits. However, another reason that firms give for clearing is settlement efficiency. In the cleared environment, everything is STP. While bilateral repo trading has improved significantly in many respects in Europe, its settlement infrastructure is still highly fragmented, creating friction.

"In CCP land, efficient settlement has been established for decades. You can click and settle in a process that takes 20 minutes. Consequently, we see a lot more overnight transactions here than you ever would in the non-cleared market. The banks appreciate that 99% settlement reliability very much, as well as settlement and balance sheet netting and other very important features."

While half of the European market is cleared, its structure centers around interdealer activity. This differs from the US, which has a much higher proportion of buy-to-sell-side trading. However, with faster settlement times coming on top of the strict enforcement of variation margin in OTC and listed markets, the calculus may change for many firms currently relying on bilateral repo trading relationships.

"For the buy-side, settlement is equally as big an issue, especially in this new world of collateralized margin requirements," adds Odendall. "There are strict timelines to meet margin requirements in CCP cleared and non-CCP cleared products now. You cannot wait for your custodian to settle, eventually – you need to have the money fast, reliably. That's where the CCP has strengths – electronification has always been the main item in the CCP value chain."

On a broader level, the electronification of repo markets is picking up pace. As the market grows in volume, this has been a necessity. Repo traders can no longer rely on spreadsheets and chat-negotiated reconciliations in a market worth over

$11 tr at most recent count. Greater automation, data and analysis functionality and liquidity access tools are needed to keep pace.

Recent enhancements in vendor offerings are allowing dealers to access more clients and liquidity. This has all contributed to encouraging signs around the electronification of dealer-client trading relationships.

"The electronification of the repo markets is a trend that has also been seen in other markets," says Nina Suhaib-Wolf, Director, Market Practice & Regulatory Policy at ICMA.

"It's probably fair to say that the repo market has historically been perceived as lagging behind on this. However, it is also an area where we have lately seen some really interesting trends."

"Our latest ICMA repo survey shows that total outstanding repo volume as per June 2024 was over $11 tr. And the survey also showed a strong growth in the dealer-to-client business via electronic trading platforms."

Growing electronification dovetails with clearing, as more market participants look towards what has been termed the "holy trinity" of exchange trading, clearing and easy risk management. Ultimately, these attractions are pushing more buy-side firms to consider clearing their repo activity.

The task for the sell-side, and if expectations are proved right, regulators, is how to smooth the hurdles that institutional investors currently face in doing so. Besides the normal issues of onboarding costs and fees, the particularities of European market structure also represent a challenge to adoption of repo and the imposition of a mandate.

For example, in contrast to the US, European repo traders use a variety of government bonds as collateral, with 27 EU member states with varying fiscal situations issuing debt. Money market funds are also less of a presence in Europe compared to the US, where they perform a key cash provision role.

However, despite those challenges, the incentives to clear repo are already strong enough to be attracting firms, regardless of any challenges in implementation.

Cleared repo will not make sense for every financial institution's treasurer. Those with daily liquidity management needs in the €10–100 m range can mostly rely on credit lines or security financing arrangements. For those with needs above €100m, bilateral repo markets make more sense. However, once those needs go above €200 m, the operational burden of UMR compliance and managing margin with multiple counterparties starts to make the process inefficient and expensive. At this stage, cleared repo comes into play.

"What we see now is that more and more financial institutions are looking into how they can access the cleared repo market," says Alexander Jacobs, Head of OTC Clearing at ABN AMRO Clearing Bank.

"Going back to the Holy Trinity, it's a relatively standardized, traded product. It's collateral versus cash or the other way around. It's traded on an exchange. It is CCP cleared already, and multiple CCPs are offering the clearing of repos. It is also relatively easy to manage the risk, so all the ingredients are there to clear it."

"The next step is, how do you make it accessible so (the market) will come? Not tomorrow, not next year, but eventually, have it there. You already see that happen as the invisible hand drives the market towards looking into this."

" The electronification of the repo markets is a trend that has also been seen in other markets.

Nina Suhaib-Wolf
Director, Market Practice & Regulatory Policy, ICMA

Trends in multi-asset trading

The rise of multi-asset trading at buy-side firms continues to increase, and the trend is developing benefits beyond the drive for efficiency. While a shift toward generalizm is occurring, for many firms the narrative is a more nuanced one of uniting specialists and comingling expertise. Furthermore, multi-asset structures increasingly interact with parallel trends, such as the growing need for technology on trading desks.

The drive to multi-asset trading on the buy side was principally driven by a need to streamline trading operations. By bringing multi-asset expertise together in one room, or even desk, firms can create a single point of execution with their dealer relationships. At the same time, the teams benefit from the knowledge absorption that comes from mixing deep knowledge of different markets.

This can be a vital asset during market stress, helping both to understand how to hedge volatile market conditions and to keep cool in the face of dropping asset prices.

“Our one specialism is that we are not specialized,” says Harold de Boer, Managing Director at Transtrend. “And we are able to not be very specialized by being really diversified which includes doing all our trading in one room, by one group of people. That is very, very important.”

Russia’s invasion of Ukraine hit many asset classes hard, causing a stressful few days on many trading desks. The Transtrend team’s portfolio had long positions in commodities such as base metals and European energy markets, which surged on the back of the news.

However, those growing profits were offset by long positions in Eastern European currencies, which were falling. The traders observing the sliding FX positions didn't feel any panic as they saw that the profit from commodities more than offset the currency losses – exactly what is aimed for in a diversified approach.

“A specialized currency trading team in that positions would have probably felt it necessary to size down their positions,” adds de Boer, “liquidating them, and by doing so contributing to the wider sell-off in those currencies.”

“In our team there was no urge to do so. We were in the great position of not having to do anything. The best position you can have when investing is that you don't have to do anything, but are potentially willing to do anything, for instance in this situation, to sell the rising commodities.”

Many firms have seized these advantages by using the cross-pollination of expertise across asset classes and derivatives to build dynamic and diverse trading teams. The benefits of this information sharing extend beyond market knowledge. They can also incorporate the adoption of new trading protocols and workflow technologies. It has become almost routine to say that nowadays, traders must be coders as well, but some firms are actually bringing developers onto trading desks to help achieve that aim.

These strategies are not without challenges, such as managing the cultural interaction between IT and trading. But, if executed right, they can help foster innovation. Over time, equity options traders notice a feature of fixed income technology that helps their colleagues' PnL and vice versa.

Growing automation

Automation has been the key element of the trading technology story in recent years. However, there is still an ongoing debate at many buy-side firms regarding how far it should go. Especially at firms running strategies across multiple asset classes, there is often a reluctance to fully entrust responsibility to the algo. Nonetheless, regarding trade size, there is significantly greater acceptance of the argument for algorithmic trading execution.

"Automation is one of the key tasks for any trading desk, and we always look to automate," says Tobias Windecker, European Head Equity Trading at Allianz Global Investors. "Not in everything we do, but in everything that makes sense."

"Around 80% of our futures flow consists of small-size orders, so economically, it doesn't make sense for a trader to handle those tickets. That is something that a machine can do faster, and a human won't have a meaningful PnL impact on it. If you have optimization in place, it gives your traders time to do what a human being can do much better."

Ultimately, the same pressures that contributed to the rise of multi-asset trading will continue to drive the need for new efficiencies. The burden that regulations impose on daily trading activities is ever-present and creates a constant need for cost savings. However, its influence isn't as straightforwardly negative as some portray it and can even contribute to innovation in the long term.

"Regulatory requirements necessitate innovation within organizations," says Elke Wenzler, Head of Trading at MEAG.

"While compliance may not directly enhance your impact on PnL, it remains an essential obligation that can strain available resources. This situation can prompt companies to adopt new strategies and improve operational efficiency."

"Moreover, the need to meet these regulations can act as a catalyst for innovation within teams, driving creative solutions out of necessity. Embracing this challenge can ultimately lead to enhanced performance and a more agile organization."

> **"Regulatory requirements necessitate innovation within organizations.**
>
> Elke Wenzler,
> Head of Trading, MEAG

Accessing liquidity in European single stock markets

The European single stock options market and its liquidity profile have been the subject of considerable debate in recent years. Much of this conversation has centered on encouraging greater retail participation and addressing longstanding fragmentation issues.

Analysis of fragmentation has mainly focused on market structures. Europe's multiple exchanges, complex post-trade structure, and lack of fungibility in contracts between exchanges have created a challenging environment to navigate.

However, other factors also complicate the market's liquidity profile, such as the prevalence of block trading across the continent. This feature of European options markets serves a vital purpose for many traders but also reduces on-screen liquidity.

For sell-side providers and exchanges, it highlights the growing challenge of meeting the rising demand for multiple trading protocols across asset classes.

Growing options for traders

European option markets are required to impose minimum thresholds for pre-trade transparency based on the liquidity of the underlying asset. This can reduce traders' flexibility in executing options. However, it also safeguards volumes for on-screen liquidity – a situation that many view as essential for the long-term health of Europe's listed markets.

"We basically have two markets in European options – the on-screen market and the off-book market," says Philipp Schultze, Head Equity & Index Sales EMEA at Eurex.

"Both are needed and used in Europe. And what we do as an exchange is make sure that, for on-screen, liquidity providers feel comfortable showing their best price and volume, while for the off-book market, the task is about reducing the barriers that are there."

Measures to support on-screen trading include defining correct tick sizes and matching models. With its passive liquidity protection program, Eurex has also ensured an on-screen environment where all liquidity providers can prosper, not just the fastest.

This has broadened the range of on-screen market makers, a feature further boosted by liquidity provision incentives such as stipends, revenue sharing and rebates. If successful, upcoming incentives for EURO STOXX® options that reward market-makers who are top of the book, consistently show their best price and also get passively executed could be expanded to single stock options.

However, off-screen markets also have an important function for options traders, meaning measures must also be taken to improve efficiency in this space.

“ As a screen market-maker and a block facilitator, we think about block trading in two ways.

Robert Switzer
European Head of Derivatives Sales, Susquehanna

“What is very important for exotics traders is to trade volatility itself, and not outright delta like when you just trade a put on the market,” says Florian LaFuite, Head Investment Solution Markets Europe at Bank Vontobel.

“That's why we trade more off-screen, as we want to exchange the delta and trade delta-hedged options. On-screen, our options are very limited. We have recently started to use delta hedge embedded algos that put a limit on the package or even put a limit on the vol we want to trade. The algo then goes to the exchange to execute the delta for us. It works well and creates good access to liquidity when the minimum block size is quite high.”

Ultimately, getting the balance right is a difficult task, and it is unlikely that everyone can be kept happy. Until further innovation comes through, it may be that the optimal situation is one of gradual improvements on both sides of the book.

“As a screen market-maker and a block facilitator, we think about block trading in two ways,” says Robert Switzer, European Head of Derivatives Sales at Susquehanna. “For the screen trading business, they want block sizes as high as possible, driving most of the order flow to the screen. Meanwhile, for the block trading desk, they would want to interact with as much flow as possible, so smaller block sizes help.”

“In terms of what's beneficial for the market, we genuinely feel that higher block sizes are better for driving liquidity onto the screens and to incentivize market makers to maintain tighter spreads on screen. And if liquidity providers are incentivized to continuously provide good quotes to the on-screen market, it will incentivize larger trades elsewhere. We believe it’s just generally good for the ecosystem.”

Technology & digital assets

Financial markets are undergoing substantial structural transformation, driven by a convergence of cutting-edge technologies and shifting regulatory paradigms. Artificial intelligence is no longer a futuristic trend but an operational reality, reshaping how trades are generated, executed and risk managed. Simultaneously, digital assets are evolving from speculative instruments to key components of the financial ecosystem, with regulatory frameworks beginning to catch up.

This stream explores how these twin forces – AI and digital assets – redefine capital markets from the inside out. In derivatives, AI agents are making portfolio decisions with zero human intervention, while execution desks are becoming command centers for algorithmic orchestration rather than manual trade flow. The rise of large language models promises to unlock new frontiers for strategy development, including domains like global macro and thematic investing, long considered too qualitative for machines to master.

Meanwhile, momentum is accelerating in the world of digital assets. Regulatory harmonization in Europe via MiCA, product breakthroughs such as spot ETFs in the US, and the increasing sophistication of index construction and valuation methodologies propel crypto into a new maturity phase. Innovations in staking, perpetuals, and decentralized finance gradually reshape the infrastructure of value transfer.

From the operational scaling of tokenized markets and AI co-pilots in execution to integrating OTC and listed FX via automated EFPs, the future is being built through the layered convergence of intelligence, infrastructure and regulation.

AI in Derivatives

Today, growing numbers of firms deploy AI not just to support trading decisions but to drive them entirely. Some hedge funds now operate with zero human portfolio managers, relying exclusively on machine-driven systems to analyze data, generate signals, build portfolios and execute trades. These systems are developed and trained over multiple years, using internal simulation environments that mimic real-world market conditions.

AI agents undergo thorough evaluations before being permitted to engage in live capital trading, and their performance is subject to ongoing supervision. If their predictive accuracy drops below a threshold, they are removed.

This kind of fully autonomous trading was inconceivable a decade ago but is now being implemented at scale, particularly by new entrants who have built their infrastructure from the ground up without the burden of legacy systems. These firms tend to employ reinforcement learning models that adapt and evolve within structured simulators. The result is a new class of investment management, one that is systematic, scalable and increasingly decoupled from human intuition.

“AI has already delivered on its promise for us,” says Borno Janekovic, whose firm Omphalos Fund runs a fully autonomous, machine-managed portfolio. The fund, live for over three years, executes around 5,000 trades a month with no human portfolio managers.

> “AI has already delivered on its promise for us.
>
> **Borno Janekovic**
> **CEO, Omphalos Fund**

His team spent seven years developing the infrastructure from scratch. The firm uses reinforcement learning to train “artificial portfolio managers” in a simulator before allowing them to manage real assets.

“If a human PM has a good year, they get a bonus. In our system, we remove them – they probably just got lucky.”

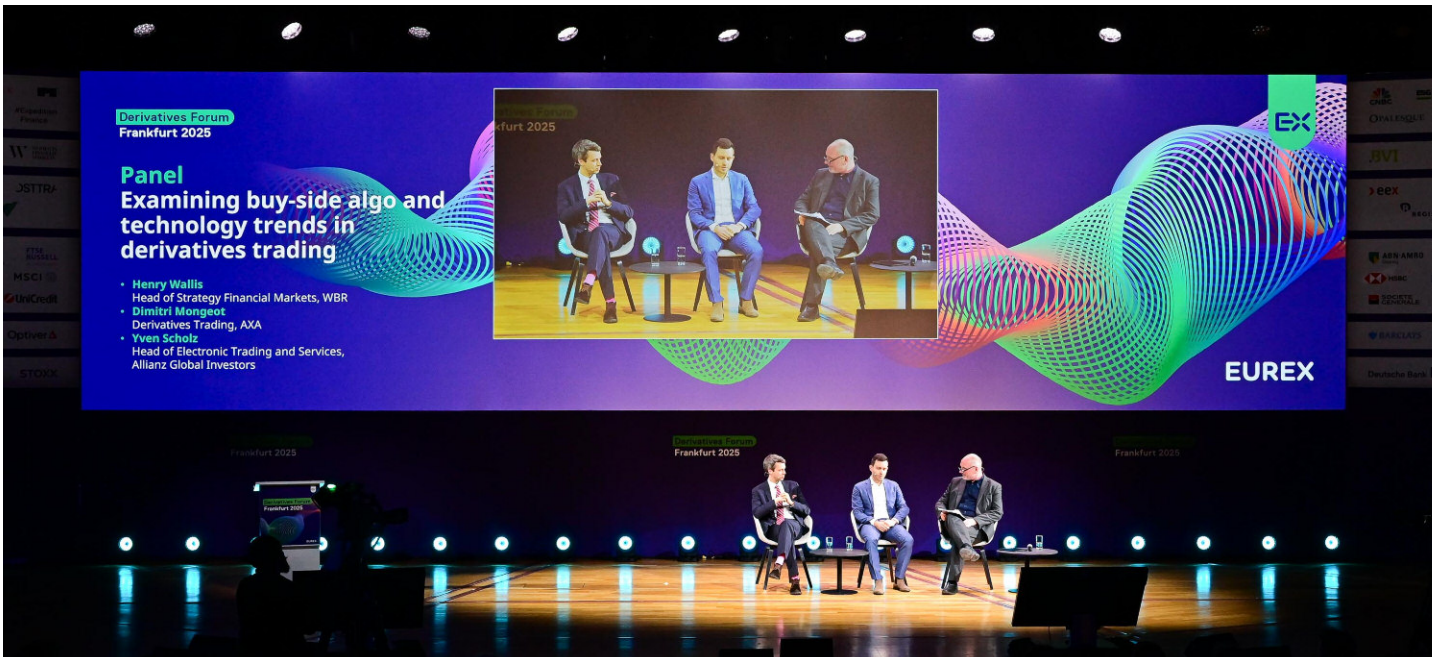
AI in execution

Traditionally, traders manually supervised the execution of orders, optimizing their fills using predefined strategies. Now, with the application of AI, the trader’s role is shifting from operator to overseer.

Instead of manually selecting execution algorithms, traders are beginning to rely on AI-powered co-pilots that recommend execution strategies in real time, based on market context, trade history and microstructure signals. These systems continuously monitor performance, suggesting mid-course adjustments if market conditions change. For example, an AI system might initiate a passive strategy in a stable market, but if volatility increases or liquidity dries up, it will recommend a more aggressive execution approach.

This transition is turning the trader into a manager of agents, a human coordinating a network of machine tools, rather than making granular decisions manually. The shift not only improves execution efficiency but frees up time for client engagement, deeper strategic planning and product innovation.

The speed at which AI systems are developed and deployed has increased significantly. Projects that once took a year to build are now going live in as little as three months. This is partly due to the rise of pre-trained foundation models and off-the-shelf toolkits that allow firms to shortcut the traditional machine learning pipeline. The emergence of user-friendly development environments, large-scale open models and improved access to high-quality datasets has democratized AI development, allowing even mid-sized firms to build sophisticated tools.



Additionally, prompt engineering and natural language interfaces have lowered the barrier to entry for non-technical users. Professional staff in trading, risk and operations can now interact with AI systems directly, tweaking their behavior and extracting insights without the need for deep programming skills. Much like the early days of the internet, when web browsers brought access to information to a mass audience, generative AI enables broader interaction with financial data and models.

Arms race

This ease of access to AI has also led to a commoditization of traditional machine learning techniques. What was once a competitive edge – the ability to build and train non-linear models to detect complex signals – is now widely available. Many firms use similar datasets, libraries and frameworks, leading to convergence around the same patterns and signals. As a result, once successful strategies often degrade over time as more participants adopt them.

"Machine learning has become a commodity," says Erk Subasi, Senior Portfolio Manager, ED, GAM Investments. "Everyone has access to the same tooling, data and methods. It's an arms race now."

As alpha becomes compressed, success increasingly depends on execution quality, infrastructure and speed. Firms with superior simulation environments, faster data pipelines and better tuning capabilities are more likely to outperform. The barrier to entry is no longer just intellectual – it is increasingly about operational scale and capital investment.

One of the most significant developments in the last two years has been the emergence of reasoning-capable models, particularly large language models (LLMs). Unlike traditional machine learning, which relies on recognizing statistical patterns in structured data, LLMs can ingest and interpret unstructured information, reason across multiple variables and generate novel solutions to complex problems.

Language models can compress vast quantities of information, whether that is economic reports, policy statements, earnings calls or research documents, into usable, human-friendly formats. This allows them to build abstract models that capture relationships, context and causal dynamics. For the first time, machines can approximate a high-level understanding of global macroeconomics, policy shifts and qualitative drivers that were previously the exclusive domain of human analysts.

"Language was the missing key," says Subasi. "Language models are proving to be an extremely efficient way of compressing information about the world. With that, we now have a way to reason about things – not just recognize patterns."

Subasi likens earlier machine learning to Israeli-American psychologist Daniel Kahneman's System 1 thinking – fast, intuitive and statistical. But new models, he argues, represent System 2 thinking: slower, deliberate, and able to plan.

"Things quants couldn't touch – like global macro – are going to become table stakes in five years," he says.

This has major implications for strategy development. Previously, quantitative strategies were constrained to areas with stable data distributions and high data density, such as equity factors or statistical arbitrage. Global macro, credit and thematic strategies were largely off-limits due to lack of data and complexity. However reasoning models can now tackle these domains by synthesizing and interpreting information rather than purely fitting statistical curves.

Limitations and challenges

Despite these advances, significant barriers remain to the widespread adoption of advanced AI in derivatives markets.

First, there is a talent shortage. Roles that require deep expertise in AI and financial engineering take significantly longer to fill than traditional quant or trading positions. While tools have become more accessible, building robust systems still demands experienced practitioners who can navigate both the mathematical and regulatory dimensions of trading.

Second, the need for simulation and testing infrastructure is acute. AI-driven execution and alpha generation systems must be tested under a wide range of market conditions, including tail events and 'black swan' events. Firms must develop or procure environments that can realistically replicate market dynamics, including bid/ask behavior, latency, slippage and impact.

Third, the black box problem. Particularly in regulated environments, firms must be able to articulate why a model made a certain decision. Traditional machine learning systems are at least 'back testable', even if opaque. However, non-deterministic systems, such as LLMs that can produce different outputs for the same input, pose new challenges for governance, compliance and client trust.

Finally, regulatory scrutiny is increasing. Agencies such as the US Securities and Exchange Commission (SEC) and Commodity Futures Trading Commission (CFTC) are beginning to focus on algorithmic transparency and model governance. A growing share of enforcement actions now involves questions around explainability and model behaviors. As AI usage grows, so too will expectations around documentation, oversight and auditability.

Market structure, redefined

As reasoning models become more capable, the distinction between quantitative and fundamental investing may erode. Areas once considered inaccessible to machines, such as thematic investing, discretionary macro and qualitative research, may become increasingly automated.

Under this new paradigm, trading desks may consist of a handful of human overseers managing fleets of AI agents, each specializing in a narrow domain but collectively able to handle multi-asset portfolios. The focus will shift from trade selection to model coordination, risk alignment and infrastructure optimization.

New entrants will likely continue to push the boundaries, while incumbents wrestle with legacy systems and organizational inertia. Firms that build scalable, interpretable and adaptive AI ecosystems will be best positioned to thrive. Others may be caught in a race to the bottom, competing over saturated patterns and undifferentiated tooling.

AI is not merely adding efficiency to trading. It redefines the boundaries of what is tradable, who can trade, and how decisions are made. Derivatives trading – long considered a domain of human sophistication, intuition and nuance – is now becoming a test bed for the next generation of intelligent systems. "Some of the things that weren't imaginable for quants will become standard," Subasi predicts.

Innovation Imperative

As tokenization, distributed ledger technology (DLT) and digital cash move from the pilot phase to early adoption, financial institutions and regulators are turning their attention to a central question: how to enable innovation at scale while safeguarding the stability and integrity of financial markets.

Initiatives such as the DLT-based collateral mobility project involving J.P. Morgan, Eurex, Clearstream and HQLAx demonstrate how new technologies can be introduced within existing frameworks, enabling operational efficiency without disrupting core processes. These early use cases focus on specific, well-contained functions, such as improving the management of cleared initial margin, while laying the groundwork for more transformative changes over time.

The operational benefits of DLT in these scenarios – faster, near real-time settlement updates, reduced manual processing and enhanced collateral mobilization – are already evident. These developments also open up longer-term possibilities, such as extended or even continuous clearing cycles. However, any such evolution will require a hybrid model in the interim, one that allows traditional and digital systems to operate in parallel.

Public sector trials

Recent exploratory work by the European Central Bank (ECB) has provided valuable insight into the challenges and opportunities of adopting DLT for wholesale financial transactions. Over a six-month period, the ECB coordinated 28 trials and 30 experiments, involving more than 60 market participants and covering both real and simulated settlement activity.

These trials highlight the potential of a shared data infrastructure to enhance efficiency, automation and transparency. However, they also underscored the risk of legal and regulatory fragmentation. National frameworks for DLT-based securities remain inconsistent across Europe, and without greater harmonization, the scalability of these technologies will be limited.

"The big promise of DLT is that if all relevant parties work on one database – a single source of truth – automation, programmability and efficiency will increase," says Holger Neuhaus, Head of Market Innovation and Integration Division, at the European Central Bank.

"The more harmonized the rules are, the more likely we are to have a common efficient eco-system. Fragmentation in legal frameworks adds complexity and friction, limiting the potential benefits of DLT."

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“However, introducing a CCP, such as Eurex Clearing, within a decentralized environment unlocks significant multilateral netting efficiencies. This, in turn, mitigates liquidity requirements, optimizes settlement efficiency, and ultimately reduces costs.

Efthimia Kefalea
Director, Head of Derivatives Clearing Development, Eurex Clearing

From the ECB’s perspective, the next step is to address this fragmentation directly. This includes reviewing the DLT Pilot Regime, assessing broader legal reforms and supporting initiatives such as the proposed European Code of Business Law and the FASTER Directive. These efforts aim to provide greater legal certainty and support the development of a consistent regulatory environment that can accommodate new technologies without compromising market integrity.

On the regulatory side, authorities are beginning to shift their approach to reflect the emergence of DLT as a foundational infrastructure layer rather than simply a new product delivery method. At BaFin, supervision has evolved over the past several years to address specific characteristics of DLT-based systems. The focus is now not just on the services being delivered but on the architecture that supports them.

This shift in perspective raises questions about how supervision should be structured, and which tools might be appropriate in a more decentralized environment. However, regulators remain clear that responsibility for risk management continues to rest with market participants. Technology may change operational models, but it does not change accountability.

Market infrastructure

Despite early speculation that decentralized systems might reduce the need for central market infrastructure such as CCPs or CSDs, recent experience has suggested the opposite.

“Instant settlement in a DLT environment necessitates pre-funding of transactions. This leads to higher liquidity demands and operating costs,” says Efthimia Kefalea, Director, Head of Derivatives Clearing Development, at Eurex Clearing.

“However, introducing a CCP, such as Eurex Clearing, within a decentralized environment unlocks significant multilateral netting efficiencies. This, in turn, mitigates liquidity requirements, optimizes settlement efficiency, and ultimately reduces costs.”

Rather than being displaced, CCPs are increasingly positioned as bridges between centralized and decentralized finance. Their ability to integrate DLT-based workflows into existing systems will help ensure that innovations are introduced in a controlled, phased manner. In doing so, they contribute to the trust and resilience that financial markets depend on.

This collaborative approach is reflected in initiatives such as the ECB's exploratory work and BaFin's non-objection to DLT-based collateral mobilization, examples of how infrastructure providers and regulators can collaborate to manage change.

At an international level, efforts are underway to develop more integrated approaches to wholesale payments and settlement. The BIS Innovation Hub's Project Agorá is one such initiative, bringing together central banks and private institutions to test the viability of unified ledgers combining central and commercial bank money. The project is exploring whether features like atomic settlement, programmability and composability can be achieved on a scalable basis across jurisdictions.

These experiments reflect a growing awareness that technical interoperability will be just as important as regulatory alignment. In global derivatives markets, firms already operate under a patchwork of regulatory regimes. While complete harmonization may not be realistic, shared data standards and technical frameworks can help bridge jurisdictional gaps and enable network effects.

Market infrastructure is adapting — not by replacing existing systems overnight, but by layering in new capabilities, strengthening existing processes and enabling new operating models. The result will likely be a more flexible, automated and responsive ecosystem.

If current trajectories hold, the coming decade will see further integration of DLT and tokenization into mainstream financial market infrastructure. At the same time, regulators will continue refining their supervisory approaches, balancing innovation with security. Ultimately, the sector's ability to evolve will depend on its willingness to maintain open dialogue, share insights and adapt at pace.

Bridging OTC and ETD in FX

The FX market is undergoing a structural transformation, as traditionally separate OTC and exchange-traded markets move steadily towards greater interoperability and integration. While there has long been skepticism about whether listed FX products could ever meaningfully rival OTC markets, particularly given the depth, customization, and anonymity of OTC liquidity, market perception has shifted with the innovative new use cases that are being presented for futures.

Increasing volumes in FX futures, and growing buy-side interest, suggest that listed FX is no longer seen as a niche opportunity, but rather as a viable complement, and sometimes alternative, to OTC trading.

Holger Bang, Head of Portfolio Management at 7orca, describes 7orca's cost-based decision-making framework for choosing between futures and forwards. Especially for smaller portfolios, they found listed FX instruments to be more efficient than relying on OTC FX markets.

The firm uses Exchange for Physicals (EFPs) to take full advantage of OTC liquidity while also capturing the operational efficiencies of futures. Bang sees automation and software to deliver RFQ-style trading as the critical next step in channeling liquidity into FX futures markets.

"We don't want to do manual trading… our hope is that we get RFQ-based EFP and block workflows very soon," Bang says.

Mechanisms such as EFPs and block trades allow market participants to access OTC liquidity while converting those trades into centrally cleared futures positions. As a result, firms can benefit from the liquidity of OTC markets while accessing the margin, capital and operational benefits associated with listed markets.

Tobias Rank, Product Sales FX, Eurex has observed a shift in perception from skepticism to strong market interest in FX futures. He notes the rise in Eurex FX volumes – from 10 bn to 120 bn in a few years – driven by the adoption of blocks and EFPs.

Rank outlined Eurex's strategy: Strengthen bilateral trading models in listed FX markets, build a transparent, liquid order book as shopping window; expand currency pairs, particularly in Euro-centric and Eastern European FX; collaborate with platforms like 360T to develop EFP order books; and enable cross-margining and collateral efficiencies across asset classes.

"We went from doubters to believers to evangelists when it comes to listed FX – the market is uniting around blocks and EFPs," Rank says.

> **"The OTC and listed FX markets, which have historically been very separate, are coming together from a number of angles.**
>
> **David Holcombe**
> **Head of Product, FX Futures & Clearing, 360T**

Platforms like 360T are now integrating both OTC and exchange-listed FX access into a single workflow, allowing clients to view and interact with streaming OTC prices alongside futures order books. And execution tools traditionally used in OTC (e.g., RFQ, and aggregation engines) are now being repurposed for listed FX. This convergence is reshaping how market participants source liquidity and manage risk – gradually blurring the lines between OTC and ETD (Exchange Traded Derivatives).

"The OTC and listed FX markets, which have historically been very separate, are coming together from a number of angles," says David Holcombe, Head of Product, FX Futures & Clearing, 360T.

Regulatory catalyst

Regulatory pressures, especially the implementation of Uncleared Margin Rules (UMR) and the Standardized Approach for Counterparty Credit Risk (SA-CCR), have played a significant role in driving interest toward cleared FX products. For many asset managers, the cost of maintaining bilateral credit lines with multiple counterparties, as well as managing collateral requirements across a fragmented OTC network, has become prohibitive. Clearing FX positions provides a consolidated and capital-efficient alternative. In addition, centrally cleared products allow for more streamlined margining.

Exchanges are increasingly exploring cross-margining opportunities across asset classes, enabling participants to reduce their margin obligations by offsetting FX futures against fixed income positions, for example. This is particularly attractive to institutions managing multi-asset portfolios and looking for holistic risk and capital optimization.

A critical part of this transformation is the move toward greater automation. Historically, executing an EFP required coordination between multiple desks and systems within a bank; futures traders, OTC spot and derivatives desks, operations, and compliance teams all needed to be involved. This complexity made EFPs cumbersome and limited their scalability.

Now, some institutions have begun to automate these processes end-to-end. Sophisticated execution management systems (EMS) and algorithmic trading solutions enable clients to submit orders that are executed using OTC liquidity, with the resulting positions automatically converted and cleared as futures contracts. These innovations not only reduce operational risk and manual intervention but also enable scalability and auditability.

Clients can now initiate trades through familiar interfaces, such as EMS platforms, single-dealer portals and multi-dealer systems, with the system managing the workflow behind the scenes.

Trading platforms are also evolving to support this convergence. Traditionally serving either OTC or listed markets, more platforms are now working to enable clients to interact with both within a unified interface. This includes features like aggregated views of OTC pricing alongside futures order books, direct access to RFQ tools for block trading and the ability to toggle between venues to capture the best execution.

New tools are also being built to facilitate off-exchange execution for futures products. An example is the development of dedicated order books for EFPs, allowing participants to discover prices and execute trades related to OTC positions in a more transparent and standardized manner. This helps bridge workflows and brings the transparency and efficiency of the exchange environment to the FX Swaps market.

Buy-side perspective

On the buy-side, decision-making is still largely driven by cost efficiency, simplicity of onboarding and the ability to prove best execution. Asset managers are not necessarily looking to overhaul their entire infrastructure. Instead, they seek incremental improvements that allow them to reduce execution costs, create operational efficiencies and meet regulatory requirements while maintaining the quality of execution.

Futures are increasingly being used for passive hedging and overlays, particularly for mandates below a certain notional threshold, where the economics favor the listed model.

Both block trades and EFPs are seen as particularly valuable for implementing strategies in less liquid currency pairs, where on-screen order books may not provide sufficient depth. By sourcing liquidity through longstanding OTC relationships and clearing the resulting positions, asset managers can improve execution quality while meeting compliance obligations.

> **Everything has to be done at scale… it has to be fully electronic… if you want to make this into a real business and make it attractive to the buy-side.**

Yannick Marchal,
Managing Director, Head of Autobahn Maestro, Deutsche Bank

Representing the sell-side OTC perspective, Yannick Marchal – Managing Director, Head of Autobahn Maestro, Deutsche Bank, identifies two key drivers: regulatory capital pressure, requiring optimization across OTC cleared and listed products; and access to deeper liquidity pools for hedging and pricing.

"Everything has to be done at scale… it has to be fully electronic… if you want to make this into a real business and make it attractive to the buy side," Marchal says.

However, while futures trading has become increasingly electronic, EFPs and block trades can still rely on manual negotiation and confirmation, for example over chat platforms. For buy-side firms seeking best execution documentation and system integration, this is a challenge. Following a strong demand for electronic RFQ workflows to be applied to EFPs and block trades, exchanges intensify their collaboration with multi-dealer platforms in the FX space. Such cooperations allow for greater competition, automation and auditability, a need to which trading platforms are catering.

A futures-native view

From the futures-native side, systematic CTAs and trend-following managers emphasize the fact that listed FX markets offer a preferred environment for execution strategy design, particularly for firms that rely on transparency, passive execution and participation in the central limit order book. These firms welcome the electronification of EFPs and block trades because it allows them to extend futures-style workflows into less niche areas of the FX universe, without compromising operational efficiency or execution control.

Such managers actively toggle between OTC and listed liquidity, choosing the best venue depending on price, liquidity and trade urgency. In this model, EFPs serve as a flexible bridge, helping firms secure OTC pricing while maintaining clearing and reporting consistency with their futures trading strategy.

Marc Putter, Head of Trading, Transtrend, supports the push toward electronification of EFPs and block trades to re-enable efficient hybrid trading.

"We're excited about EFPs because they let us bridge the gap – get OTC liquidity, clear it, and stay in our futures-native workflow," Putter says.

Looking ahead, the next phase of integration may come in listed FX options. The infrastructure developed for delta-one products is largely transferable, and many institutions are already engaging in early pilots to explore listed FX options with block-style workflows. These additions to the listed market will add further flexibility, particularly in managing event risk or constructing volatility-sensitive strategies, and their central clearing also offers potential margin benefits.

> **We're excited about EFPs because they let us bridge the gap – get OTC liquidity, clear it, and stay in our futures-native workflow.**

Marc Putter
Head of Trading, Transtrend

What now for crypto?

As digital assets evolve beyond their speculative origins, a more mature and institutionally focused era emerges. Regulatory clarity is improving – particularly in Europe – while the success of spot ETFs n the US has catalyzed a new wave of product innovation. At the same time, infrastructure developments in decentralized finance, staking, and tokenization reshape how value is exchanged and captured. Against this backdrop, key players across finance are reassessing crypto's role – not as a fringe experiment, but as a structural shift with lasting implications for markets.

Europe, with the introduction of the Markets in Crypto-Assets Regulation (MiCAR), has moved toward a unified regulatory framework that governs custody, asset issuance, stablecoins and virtual asset service providers across the EU. This harmonization gives European institutions more clarity and confidence in engaging with crypto products and service providers.

By contrast, although the US is showing signs of a more favorable regulatory climate under the auspices of Trump 2.0, its overall framework remains fragmented. However, US firms are moving quickly to capitalize on the momentum by launching new single-asset crypto ETFs, exploring staking-enabled funds and preparing for in-kind transfer mechanisms. Further expansion of ETF capabilities, including basket ETFs and yield-generating vehicles, as US regulation continues to evolve, is expected.

Institutional innovation

There has also been a rapid diversification of digital asset products. In the US, the approval of spot Bitcoin and Ethereum ETFs has unlocked a wave of innovation, with asset managers exploring additional tokens, thematic baskets and hybrid asset classes such as Bitcoin-gold ETFs. Despite the recognition that future products may not achieve the same levels of adoption as Bitcoin and Ethereum ETFs, the cost of entry is still considered worthwhile by many for long-term positioning.

Europe, on the other hand, already hosts a wide range of available crypto ETP offerings, with single-asset crypto ETPs beyond just bitcoin and ether, as well as basket ETPs, all with in-kind creation. Xetra is the leading European listing platform, with over 100 ETPs, from 15 issuers, covering 20 digital assets, like Bitcoin, Ethereum, Solana, XRP and Cardano.

Additionally, Eurex, provides futures and options on Bitcoin and Ethereum in both USD and EUR denominations. Options on the first European BlackRock Bitcoin ETP are also available to trade in EUR and USD denominations. These products collectively allow institutional investors to take directional positions, hedge existing exposure or earn yield through options strategies.

Index providers such as FTSE Russell are also evolving, developing methodologies for baskets of digital assets, momentum strategies and fundamentally weighted indices. Of particular interest is the use of alternative data sets, such as developer activity (e.g., GitHub commits), to build indices that better reflect the strength and evolution of blockchain ecosystems.

A significant barrier to broader institutional participation is the lack of standardized valuation models for crypto assets. Unlike traditional financial instruments, digital assets often lack conventional balance sheets, earnings reports or consistent cash flow models. As a result, asset owners, particularly fiduciary investors, remain cautious in adoption.

Various approaches to derive intrinsic value from on-chain data are on the table. These include gas fees as a proxy for revenue, token burns analogs to share buybacks, and staking rewards as equivalents to dividend yields. While blockchain data is abundant and transparent, the challenge lies in organizing it into coherent, reliable frameworks that institutions can interpret and trust.

Index and data providers are working to make this information more accessible, aiming to bridge the gap between raw blockchain analytics and traditional investment decision-making processes. The eventual goal is to equip asset managers with the metrics they need to responsibly allocate client capital to digital assets.

FTSE Russell is working to translate raw blockchain data (such as gas fees, developer activity and token burns) into digestible metrics that can support institutional-grade investment decisions.

"We're sitting on a ton of blockchain data. The challenge is putting it into a framework asset owners can trust," says Kristen Mierzwa, Head of Digital Assets, Index Investing Group at FTSE Russell.

DEXs and infrastructure

Decentralized exchanges (DEXs) are becoming increasingly important in the crypto trading ecosystem. DEXs operate on smart contracts, with no intermediaries or centralized control and have appealing features such as 24/7 trading and instant settlement.

"DEXs are probably the single most important topic that nobody in traditional finance is talking about," says Niccolò Bardoscia, Head of Digital Assets Trading & Investments, Intesa Sanpaolo.

While DEXs have primarily been used for crypto-native assets, their benefits could extend to traditional securities in the future, including bonds and equities. The frictionless, permissionless architecture of DEXs could be considered a structural improvement over the current market infrastructure, though challenges around compliance, transparency and institutional readiness remain.

At the same time, centralized exchanges still dominate institutional trading due to features like KYC, central counterparty clearing (CCP), and regulatory oversight. These platforms offer faster execution speeds-, and higher governance standards, and are considered safer by many professional investors. As such, both models are likely to coexist, serving different user bases and use cases.

While most institutional clients prefer the structure of traditional hours, Eurex expects around-the-clock markets to gain relevance as digital assets mature.

"There isn't much demand today for 24/7 trading from institutions – but it's a long-term trend we're watching," says Rafael Zanatta, Equity Index Sales, Eurex.

Index providers are increasingly considering integrating DEX data, not necessarily for institutional price benchmarks, but to gain insights into trading activity, liquidity trends and new token performance. The availability of 24/7 data and real-time volume metrics on DEXs adds an important dimension to market surveillance and index development.

Liquidity, staking, yield and perps

Liquidity in digital assets remains widely misunderstood, particularly among traditional investors. Bitcoin and Ethereum exhibit strong daily trading volumes, even when measured conservatively across vetted exchanges.

The derivatives segment is especially active, which underlines the scale and maturity that the market has already reached, contradicting the perception that it is still niche or inaccessible to institutions.

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> Head of Digital Assets Trading & Investments, Intesa Sanpaolo

> **There isn’t much demand today for 24/7 trading from institutions – but it’s a long-term trend we’re watching.**
>
> **Rafael Zanatta**
> **Equity Index Sales, Eurex**

“Monthly derivatives traded volume across all crypto exchanges is around $3–4 trillion. This is not a niche market anymore,” Zanatta says.

Metrics compiled by index providers further support this view. For example, liquidity screens used by FTSE Russell show that many digital assets in their top 50 index are more liquid than a significant portion of stocks in traditional small-cap indices, such as the Russell 2000.

Liquidity is one driver. Staking and perpetual futures are also proving important in building momentum for adoption. Staking is a key feature of proof-of-stake (PoS) networks, offering yield in return for helping secure and validate blockchain transactions. For institutional investors, staking introduces a potential income stream that parallels dividends in equity markets.

Staking rewards are typically paid in the native token and vary by protocol, ranging from a few percentage points to double-digit yields. This component is becoming increasingly important in fund design, index construction and investor education. Enabling staking within ETFs and other vehicles is considered a crucial next step to unlocking further investor interest.

Another is the growth of perpetual futures. Perps are one of the most popular derivatives among retail traders, offering high leverage and around-the-clock access. Despite their simplicity in structure – no expiry dates – they carry risks such as funding rate imbalances and liquidity traps during volatile periods.

While these instruments are widely used in decentralized and offshore venues, institutions have yet to embrace them in full. However, perps could gain institutional relevance as regulatory frameworks mature and risk controls improve.

Futures and options listed on regulated exchanges, like those offered by Eurex, continue to be the preferred route for institutions due to their lower operational complexity and absence of custody requirements. These instruments allow firms to gain exposure to price movements without holding the underlying assets directly, reducing legal and technical barriers.

“If you just want price exposure, futures are the cheapest and safest way. You don’t need to deal with custody, and the associated technology and theft risk,” Zanatta says.

AI and crypto

AI agents are already beginning to participate in the crypto ecosystem, whether that is trading assets, managing wallets, or executing cross-chain transactions. While still early, this convergence suggests a future where AI-driven market participation becomes common.

AI and crypto could be seen as philosophically opposite but functionally synergistic: AI centralizes and generates abundance, while the most famous example of crypto, Bitcoin, decentralizes and enforces scarcity and verification, with blockchain acting as a verification tool that could offset AI’s risks. This tension could drive new innovations in asset management, risk modelling and market behavior, particularly as AI agents begin participating in financial markets. “They need each other,” Bardoscia says.

Sustainability & carbon

ESG investing is under pressure from several factors, including the new US administration and increased defense spending in Europe.

However, despite the naysayers, the sector continues to innovate and deliver tangible benefits to investors seeking to mitigate the financial risks arising from climate change and other threats that the market for ESG products has spent the past two decades trying to address.

Tough times foster innovation and ESG practitioners are responding to the pressures. In this section, we explore some of the areas in which the ESG sector is rising to the challenges from the US and the economic headwinds it faces today.

From the growth of products such as catastrophe bonds to the increased sophistication of European energy derivatives markets and their impact on improving the availability of funding for real-world projects, ESG is showing its maturity and value.

At the same time, Europe's regulatory framework to foster further growth in ESG investing continues to take shape. The final article in this section examines the impact of the EU sustainable fund naming guidelines on index construction.

Innovation is the key to the future growth of sustainable finance

Once on a seemingly unstoppable drive upward, Environmental, Social and Governance (ESG) investing has come under significant pressure over the past three years. Today, facing strong geopolitical headwinds, innovation in ESG is more important than ever.

These are challenging times for sustainable finance. The rise in energy prices in 2022, geopolitical dynamics, and massive increases in defense spending in Europe have led to assertions in some corners of the market that the growth in ESG investing is over.

However, Christina Sell, Chief Sustainability Officer, Trading & Clearing at Deutsche Börse, says that ESG is here to stay despite the challenges.

“The driving factors of ESG – financial risks driven by environmental, social and governance risk – have not gone away and are still of crucial relevance for investors,” she says.

Trading volumes in ESG-based derivatives on Eurex reflect this positive sentiment.

“2024 was a very good year for ESG index derivatives on Eurex - we reached the notional volume figures seen in 2023 by the end of September 2024. This year has also started off very positively,” says Sell.

However, current pressures force ESG-focused executives to innovate and prove their value. To reflect this need for innovation, at the 2025 Derivatives Forum Frankfurt, Eurex hosted an ESG Innovation Lab, bringing together a diverse range of market participants approaching innovation from different angles.

Elizabeth Regan, Director, Clearing Design & Delivery at Eurex, who organized and moderated the Lab, says: “The Innovation Lab brought people together to share ideas around opportunities in ESG in an innovative and interactive discussion format.”

Quantifying the challenge

Opening the Innovation Lab, Stephan Kippe, Head of ESG Research at Commerzbank, discussed the challenges ESG faces today.

He pointed to several factors demonstrating how ESG was falling behind as a focus for European corporate executives. For example, the frequency

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> Chief Sustainability Officer, Trading & Clearing, Deutsche Börse

of sustainability topics mentioned in corporate presentations and earnings reports has dropped sharply over the past twelve months to levels not seen since Q1 2019.

The performance of the top 50% of ESG-rated stocks vs. the bottom 50% in the STOXX® 600 index has also markedly outperformed the lower-rated ESG stocks since Russia's full-scale invasion of Ukraine in February 2022.

Other factors also point to a decline in the focus on ESG, such as the issuance of sustainability-linked loans and bonds, which, having peaked in Q3 2021, have fallen away sharply.

At the same time, however, Kippe highlighted data showing that the risks posed by climate change have continued to increase. The frequency of major disasters in the US is rising, with the number of weather events resulting in losses of more than $1 bn hitting record highs in 2023 of 27, double the number in 2013.

"We can't close our eyes to the headwinds that sustainable investment is facing," says Kippe. "The momentum of investment is down in both the US and Europe. However, the risks of climate change are continuing to rise. Sustainability risk is financial risk. Insurance companies and energy producers alike face financial risks from climate change that need to be managed."

Responding to the challenge

The good news is that financial markets continue to innovate to develop products that embed ESG considerations, with one aim being to mitigate the financial risks stemming from climate and environmental factors.

Kristell Herbault, Head of Sustainability for Global Markets at Societe Generale, used the Innovation Lab to further explore how to scale up the market for solutions with ESG-screened collateral.

Discussions about the impact of ESG factors on the collateralized financing market began about five years ago when the associations ISLA and ICMA started to formally engage with their respective members.

Although significant enhancements have been made in recent years, Herbault says there is still potential for the market to develop further.

Another area of innovation and growth is managing catastrophe risks. Currently, instruments such as catastrophe bonds transfer catastrophic insurance risk to investors. According to investment bank Jefferies, issuance is expected to grow to $200 bn by 2032.

At the Innovation Lab, Mariia Bodryantseva, an analyst in ESG Strategy at Deutsche Börse, highlighted the growing protection gap between insured economic losses related to natural catastrophes and the frequency and severity of such instances in the EU.

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“As climate-related events are expected to increase, insurance companies are also expected to adjust their premiums accordingly,” she says. “Financial mechanisms can be used to mitigate risk, but there are only a few available on the market today.”

However, Bodryantseva says catastrophe bond issuance is currently limited in Europe, in contrast to the significant growth seen in Asia and the existing market in the Americas. She added that ongoing discussions at EIOPA and the European Central Bank suggested that additional measures aimed at reducing the existing gap might be considered. She concluded that Europe needs to do more to protect itself against the risk of climate-related financial losses.

New concepts to drive ESG’s resurgence

Elsewhere, more innovative approaches are being taken to bring products to market that leverage new technology to mitigate climate-related threats. At the Innovation Lab, Johannes Eisenbach and Stephan Eisenbach presented their concept of deploying tokens on distributed ledger technology to finance the 5-year cultivating period of a high-yield, plant-based fertilizer. Holders are then able to redeem the tokens for humus soil.

Another innovation suggested at the Innovation Lab was the potential development of an investment vehicle for impact investing in a blended finance model. Pauline Engelberts, Global COO and Chief Sustainability Officer at ABN Amro Clearing, proposed the concept, highlighting the funding gap for smaller companies developing sustainable products.

She suggested a model in which an exchange sets up a trading platform to raise capital for smaller companies in the form of a Special Purpose Acquisition Vehicle that would then seek investments. This would provide much-needed capital for early-stage sustainability projects. This, in turn, can help these companies grow and become feeders to the Exchange.

ESG and sustainable investing are facing significant headwinds, but they will emerge as stronger and more resilient industries from today's challenges. The Eurex ESG Innovation Lab held at the Derivatives Forum Frankfurt showed that ESG is alive and kicking. The innovation being seeded today will grow into the fruits of the future market for ESG.

“ Sustainability risk is financial risk. Insurance companies and energy producers alike face financial risks from climate change that need to be managed.

Stephan Kippe
Head of ESG Research, Commerzbank

Increasing energy market sophistication paves the way to greater investment

European power volumes on the European Energy Exchange (EEX) more than tripled between 2022 and 2024, as global volatility brought record volumes and new market participants to the market. Now, as the market becomes more sophisticated, its impact is being felt across a wide range of areas, from financing renewable power plants to developing new battery technologies.

The growth of EEX over the past five years reflects the market it serves. A decade ago, Europe's power market was highly fragmented, requiring investors to connect to multiple exchanges to trade the power markets of various European countries. In some instances, they had to access different exchanges to trade spot and derivatives within the same country.

The regional European power market has become increasingly interconnected over the past decade, while EEX has consolidated regional exchanges through mergers and acquisitions to create a pan-European trading venue.

A second key trend has been the move to a cleared market. Previously, energy was predominantly a bilateral, non-cleared market. Today, almost 80% of the European power market is cleared at EEX, creating greater market transparency and efficiency.

Christoph Gardlo, CCO and co-founder of ESFORIN, which offers asset-backed trading as a service to clients in electricity and natural gas markets, says: "There have been significant strides in bringing down barriers to market access over the past decade."

"When we started our company in 2015, we had to go to multiple exchanges through multiple clearing firms. Having the ability to trade energy across Europe on one screen via one market has created a lot of efficiencies and enabled us to scale up with one membership fee and one technical approach."

> **"Having the ability to trade energy across Europe on one screen via one market has created a lot of efficiencies and enabled us to scale up with one membership fee and one technical approach.**
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> Christoph Gardlo
> CCO and co-founder, ESFORIN

“We have seen a new member base come into the market from outside the energy markets with different business models, bringing more liquidity and greater depth to our markets.

Steffen Köhler
COO, EEX

This market efficiency has driven volumes from the OTC market onto EEX and increased volumes, particularly in the derivatives market. As a result, the market's makeup has changed, with new participants coming in, bringing greater liquidity and creating a virtuous circle of growth.

Steffen Köhler, COO at EEX, says: “The composition and size of our member base have changed significantly over the past five to ten years. We have seen a new member base come into the market from outside the energy markets with different business models, bringing more liquidity and greater depth to our markets.”

Electronic liquidity providers, hedge funds, and other algorithmic trading firms entering the market have been a key component of this new member base.

Financing investment

The growth of the derivatives market has an impact far beyond the trading screens and volumes on EEX. Increased liquidity is key in growing the market for financing renewable energy projects, enabling lenders and borrowers to hedge with specificity and lock in future returns.

One of the key challenges in renewable energy markets today is energy storage. As more European companies invest in renewable energy, the problem of how to store excess energy, such as that generated by solar panels in the summer, becomes more pronounced. Finding the solution requires significant investment in battery storage technology and battery plants.

“In order to get the assets on the ground for projects such as battery plants, you need external financing, which is aided by security on the revenue side,” says Gardlo.

“This is where the derivatives market will play a key role, for example, by providing standardized hedges for battery investments. This would not only give banks more comfort when financing these projects but would also further foster and strengthen liquidity.”

Eckert adds: “The risk premium (of investing in renewable energy projects) has been reduced by the growth of the derivatives market, which makes big projects financeable to an extent that they haven’t been previously. This creates a virtuous circle of greater liquidity and more participants.”

Index construction and the ESMA fund naming guidelines

The European Securities and Markets Authority (ESMA) has introduced new guidelines to ensure that investment funds using ESG or sustainability-related terms in their names accurately reflect their underlying investments.

These rules are designed to combat greenwashing and require funds with labels like 'sustainable,' 'green,' or 'ESG' to meet strict criteria. In addition, funds labeled as 'ESG' must exclude companies involved in harmful activities such as fossil fuels, tobacco, or weapons.

The guidelines for new products have been in place since November 2024. Existing products have a transition timeline until May 2025.

The ESMA fund naming conventions represent an important step in market evolution regarding greenwashing, as they provide greater transparency and create a level playing field for investors.

However, implementing the guidelines has not been without challenges. Index providers, for example, needed to incorporate the guidelines into their methodologies.

Veronika Kylburg, Executive Director at STOXX, says: "One of the challenges for us in implementing the ESMA fund naming guideline lies in the fact that an index must follow a clear and transparent, quantitative strategy in its methodology."

"So, we first had to analyze which requirements we can put into quantifiable measures and then implement them into the index methodologies."

Kylburg says there were several significant areas of impact for STOXX when it came to implementing the guidelines. Firstly, the guidelines require that 80% of a fund's assets must follow social or environmental characteristics or sustainable investment objectives if it carries ESG or sustainability-related terms in its name.

"One of the challenges for us in implementing the ESMA fund naming guideline lies in the fact that an index must follow a clear and transparent, quantitative strategy in its methodology.

Veronika Kylburg
Executive Director, STOXX

Additionally, two requirements mandate minimum exclusion characteristics. Depending on the respective sustainability-related term the fund carries in its name, it must follow established protocols such as the minimum exclusion screens for Paris-aligned benchmarks or those for climate transition benchmarks.

While other, stricter sustainability index versions of the STOXX® Europe 600, like the STOXX® Europe 600 SRI, were already compliant with the new requirements set by ESMA, some of the key ESG indices compiled by STOXX had to be amended.

For example, some of the ESG versions of commonly traded indices, such as the STOXX® Europe 600 ESG-X index, were not fully compatible with the Paris-aligned benchmark minimum exclusion screens. Hence, they had to be amended, resulting in the exclusion of 27 additional companies.

Christina Sell, Chief Sustainability Officer, Trading & Clearing at Deutsche Börse, says Eurex had to undergo a similar process.

“For some products, the methodology of the underlying index was changed. For others, it was a case of changing the product's name,” she says. “For all these changes, we had to work closely with index providers and clients to find the best way to move forward together.”

The underlying drivers of ESG are not going away. The financial risk of climate change continues to build. Meeting the challenges requires continual innovation from exchanges and index providers alike.

“We are developing new indices around the transition, such as the ISS STOXX®, a new concept focused on biodiversity, and the ISS STOXX® Net Zero Transition index, which focuses on companies that are reducing their carbon footprint and investing in the transition to a low-carbon economy,” says Kylburg.

See you next year!

25–26 February 2026

[Derivatives Forum Frankfurt 2025 – Sessions]

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