SPECIAL REPORT

Derivatives markets after the Covid-19 crisis

A review of the Digital Derivatives Forum

acuiti

In partnership with

eurex

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The crisis we witnessed in the financial markets this year was unprecedented. It came as a surprise, and it hit hard and fast – on a global scale. Covid-19 turned out to be the black swan event that became a real-life stress test for the derivatives industry.

Overall, the industry coped well with record volumes and volatile markets. The crisis has tested our limits and we have discovered that those limits are further out than we would have thought.

For me, there are three key takeaways from our experience during the crisis. First, rather than Covid-19 slowing innovation down, it has accelerated the pace of change. From working from home to industry events, the pace of innovation and technology change is increasing. In a digital world, technology will be the key success factor. Companies across the market will have to step up their investments to replace legacy infrastructure in order to respond to some of the limitations experienced during the crisis.

Second, I believe that the key drivers of the industry going into the crisis remain unchanged.

For Eurex, these are to support the shift from OTC onto central infrastructures in clearing and risk management, and to provide the industry with safe margining and greater efficiencies in collateral management. But it is also to respond to the changes in investment behaviour. The rise of the buy-side and passive investments, as well as new products relating to ESG and global index families, will continue to drive our innovation. During the crisis, we have been very encouraged to see the growth in volumes from Asia, as well as in relatively new products such as Total Return Futures, and we expect this growth to continue.

Finally, I think this stress test is a unique opportunity for us all to question ourselves and to learn the lessons it has taught us. Where can we improve how we do business? When should regulators intervene in markets? And what lessons can we learn for product development, margining methodologies and a whole host of other processes that have come into focus during the crisis?

This whitepaper features analyses of the discussions that were held at the inaugural Digital Derivatives Forum. The fact that it was held as a virtual event, rather than in person, shows how innovation has been the solution to the challenges posed by Covid-19.

Innovation and adaptation are key themes throughout this whitepaper. The industry rose to the challenges posed by the virus, dealing with record volumes as it shifted operations to a home environment, and has thus learned lessons that will drive innovation and resilience for years to come.

Thomas Book, CEO, Eurex

SECTION ONE

Clearing and margining

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Covid-19 volatility forces evaluation of margin processes

One of the most challenging impacts of the volatility experienced as the coronavirus crisis spread was the huge spikes in both variation and initial margin calls. In the opening panel of the Digital Derivatives Forum, Julia Schieffer, founder of DerivSource, led a panel of experts to discuss how clearing and margining performed during the crisis and what lessons have been learned.

As market volatility soared between the end of February and early April, margin requirements increased substantially across the market. The volume of variation margin calls rose sharply and initial margins levels spiked as the volatility was incorporated into CCP margin models.

Extreme market moves necessitated an extraordinary volume of intraday margin calls. Phil Simons, global head of sales, fixed income derivatives funding & financing at Eurex, said that the average number at the peak of the crisis was 51 compared to 17 at the same time in 2019 and the average amount collected per day was over €4bn compared with €500m in 2019.

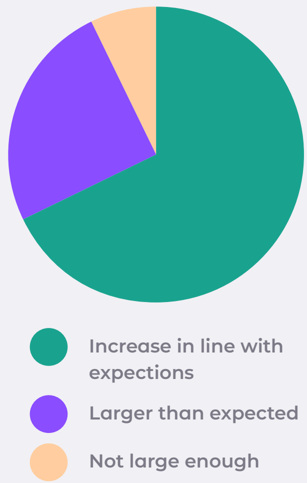
The volatility was truly unprecedented. Of the top ten record volume days in Eurex's history, five of them occured in March. This resulted in total margin collateral requirements at Eurex Clearing rising from €60bn pre-crisis to €110bn at the height of the volatility. While that has now declined, it is still at a level 80% higher than the same time last year.

Initial margin spikes in listed derivatives were seen particularly sharply in equity derivatives where levels on products such as Eurex's flagship EURO STOXX 50 went up from 7% to 17%. However, Simons said that, since Eurex Clearing uses a 3-day rather than a 2 or 1-day period of risk for its margin calculations and includes a series of margin and stress floors in its methodology, the increases were lower than those on other markets.

A poll during the event of the audience of predominantly Eurex market participants found that 68% of respondents thought that margin increases were in line with their expectations with just 25% saying they were larger than expected.

"From our perspective, the Prisma margin model performed exactly as we expected it to perform," said Simons.

Did the level of increases in margin called during the recent volatility surprise you?



Source: Audience poll

> **"From our perspective, the Prisma margin model performed exactly as we expected it to perform"**

Operational challenges

An Acuiti survey ahead of the event found that 55% of respondents reported slight or significant strains on operations emanating from margin calls during the crisis with brokerages and hedge funds most likely to report issues.

However, Max Verheijen, director of financial markets at Cardano, which advises pension funds and insurance companies on clearing and margining, said that his clients performed well during the crisis.

"The first major move as the crisis hit was that interest rates were lowered by Central Banks. For institutions like pension funds and insurance companies this represented a right-way risk and they were receiving a lot of collateral," he said.

In addition, he said that pension funds have become a lot more advanced in how they manage their margin processes over the past decade. Technology has automated traditionally manual processes, which significantly eased the challenges posed by the high volatility.

But while the interest rates cuts and bond buying programmes from Central Banks insulated the markets from some of the worst potential impacts of the crisis and proved a boost to pension funds, it provided a further squeeze on sell-side clearing firms (FCMs).

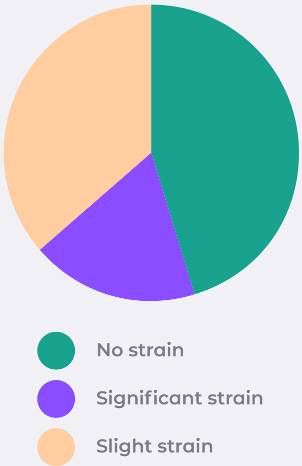
Simons said that US clearing firms were most impacted as deposits of US dollars as margin began to be subject to negative interest rates at certain CCPs. FCMs had to swallow that cost or pass it on to clients. Negative rates have been set in Japanese Yen and Euros at CCPs for some time, but it was a new experience for dollars, which make up the majority of cash posted as margin.

Simons said that the continuation of the negative rate environment will likely result in FCMs having to reprice their services as was seen in the 2010s after the introduction of the Leverage Ratio.

Alexander Jacobs, head of OTC clearing, ABN AMRO Clearing, also cautioned that higher margins would inevitably have an impact on liquidity.

"There's always someone that needs to put up the collateral to pay for initial margin and increases will result in lower liquidity in the market," he said. "Variation margin levels also have to be looked at. In volatile markets, variation margin is much higher and this also drains liquidity. So, while higher margin solves one side of the challenge it creates issues elsewhere."

How much strain did margin calls place on your operations during periods of extreme volatility?



Source: Audience poll

"There's always someone that needs to put up the collateral to pay for initial margin and increases will result in lower liquidity in the market"

Change around the margins

Jacob's view represents one side of an ongoing debate among clearing members and CCPs as to the levels of margin floors and how far CCPs should go towards ensuring lower spikes in margin requirements during periods of market stress. For clients as well, there is a focus on the lessons learned from their experience.

Acuiti's poll ahead of the event found that 71% and 65% of respondents planned to change how they manage variation margin and initial margin respectively. While it was to be expected that 43% would hold more cash against variation margin, the panel expressed surprise that 15% planned to hold more cash for initial margin, where securities are widely accepted.

Jacobs concluded that this was likely due to the barriers some firms face in accessing collateral transformation and optimisation tools as well as reflecting the fact that cash payments in initial margin spiked at the onset of the crisis.

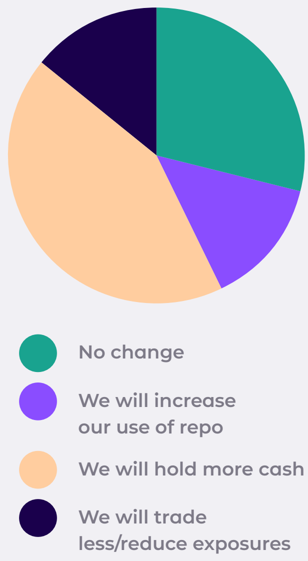
Cross-margining between OTC and listed instruments has also come into renewed focus following the Covid crisis and all panellists reported increased interest from clients in these services.

Margin levels across the board went up significantly but firms posting margin for listed and OTC products with separate counterparties faced significantly larger increases, said Simons.

He cited the example of cross-margining listed Euro rates contracts against Euro interest rate swaps. On a standalone basis, margin requirements for each of these went up by around 20-25%. Investors margining these separately with clearing firms would have experienced increases of 40-50% in margin requirements, whereas if they were both cleared at Eurex, that increase would have been around 5%.

"Margin optimisation is very high on the agenda for many funds after their recent experience," Simons said.

What impact will the Covid-19 crisis have on the way you manage variation margin?



Source: Audience poll

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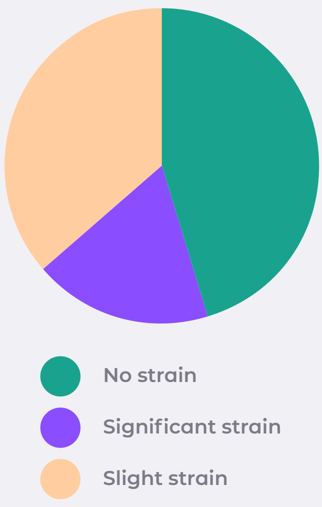

Source: Audience poll

"Margin optimisation is very high on the agenda for many funds after their recent experience"

Regulatory change

While the Covid-19 crisis has dominated the industry over the past four months, the busy regulatory agenda that previously blocked-up the agendas of operations executives did not go away.

In terms of clearing, the past decade since the financial crisis has been defined by regulatory change in response to the G20 mandate to address the structural flaws exposed in 2008. The Uncleared Margin Rules (UMR) have been a central plank of this regulatory change.

The final two phases of UMR are due to come into force in 2021 and 2022 covering thousands of firms with OTC exposures exceeding $50bn and $8bn respectively.

The sheer scale of firms coming into scope for margining uncleared OTC positions raises ongoing concerns over the availability of cash in the system to meet the demand for variation margin. This has led to calls for the European Central Bank to be a lender of last resort for firms seeking to raise cash to post margin against uncleared trades.

As Verheijen noted, when the market rates moved downwards during the crisis, pension funds had right way risk exposure. However, as rates move back up this trend will reverse, further squeezing liquidity for funds that are required to pay margin on their uncleared trades.

Repo markets will pay a central role in easing the challenge. Currently, pension fund participation in repo markets in Europe, however, remains muted, especially when compared to the US.

While one major pension fund has joined Eurex's repo market under the ISA Direct model, Simons said that the Fixed Income Clearing Corporation in the US offers models that more easily facilitate direct access for buy-side firms, resulting in far greater participation levels in cleared repo and suggested a similar model would improve access in the EU.

Another ongoing regulatory change is the move away from Libor and onto new benchmark rates. In Europe this is manifested in the Eonia to €str transition, due to be completed by the end of 2021.

The spread of the coronavirus has put significant pressure on this timeline. In April, Eurex Clearing and other CCPs announced they would delay the switch to the €str discounting and price aligned interest on cash by five weeks to the 27 July. However, the overall timeline has not moved and the market, distracted by the coronavirus, will have lost time in its preparations.

As markets and broader society slowly returns to normal after the impact of the coronavirus, issues that dominated the agenda will come to the fore once more.

What was already shaping up to be a busy year will now see a frantic final six months. Firms need to prepare for the introduction of Phase 5 of UMR, a possible no-deal Brexit at the end of the year and the ongoing transition away from Libor, while living with the threat of a potential second wave of Covid-19.

PART TWO

Responsible investing

Watch the panel

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ESG debate shifts as fixed income growth looms

Interest and investments in environmental, social and governance-orientated (ESG) strategies have grown exponentially in recent times. As the industry matures, questions of definition and future expansion are coming to the fore.

By whatever metric you use, ESG-based investment has countered the wider-malaise in the asset management sector. According to data provider EPFR, ESG-focused equity funds grew their AUM by $70bn in 2019 while traditionally equity funds saw outflows of $200bn.

The full impact of the coronavirus crisis on ESG-investing has yet to be fully understood. However, almost half of respondents to an audience poll at the Digital Derivatives Forum said that the crisis had made ESG investing more important with just 6% saying it was less important.

As the market for ESG evolves so does the complexity of the debate around what constitutes responsible investing. As a panel at the Forum discussed, the question of investor behaviour in an ESG context came to the fore during the market volatility of March and April.

As markets fell sharply, numerous jurisdictions introduced short-selling bans and many frontier and emerging economies closed their markets in a bid to stem the falls in asset prices.

Harold de Boer, managing director of Dutch hedge fund Transtrend, said that justifications for short-selling bans were misguided.

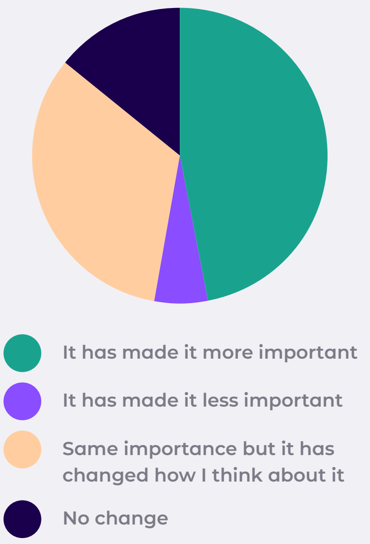
"The role of an exchange is to ensure a mechanism for reliable price formation that cannot be abused by market participants," he said. "To provide that mechanism, the exchange needs to remain open unimpeded."

He said, however, that investors have a responsibility to ensure orderly markets and that this is increasingly becoming a focus of the responsible investing debate.

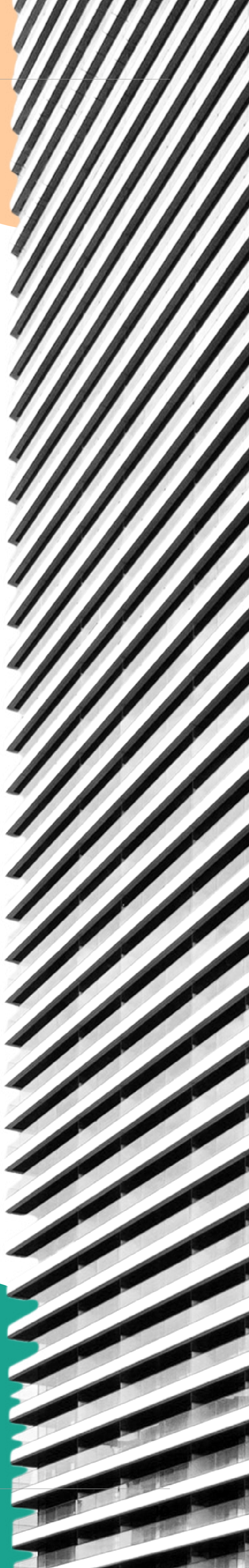
"The role of investors is to bear risk and bearing risk is a responsibility. If investors take more risk than they are willing or able to bear and then have to dump stocks during market volatility, that is irresponsible investing," he argued.

The build-up of moral hazard in the market has exacerbated this risk. "Why did stocks rise so much before the current crisis? In part it is because a group of investors went so sizably long with the view that if something goes wrong, the government will jump in to save that company."

Has the coronavirus made ESG investing more or less important?



Source: Audience poll



Promoting the markets

The overall role of the derivatives market has once again come to the fore during this crisis but in a markedly different way to the Global Financial Crisis of 2007/08.

Back in 2008, OTC derivatives were largely a catalyst for the crisis and the behaviour of certain segments of the industry justifiably became the target for public anger in the wake of the crisis.

The industry to date has performed well in this crisis, allowing investors to transfer risk effectively and providing liquid and functioning markets during severe financial stress.

William Bryant, a partner at Albourne, said the market should promote its role in ensuring financial stability but also in funding vital services within society to improve its ESG-credentials.

“Hedge funds and asset managers have been able to step-up to be providers of capital and liquidity to markets after banks were forced to scale back their proprietary trading operations in the wake of the Financial Crisis,” he said.

ESG and the drive for responsible investing is a key part of the financial sector’s move to improve its image and promote the benefits it brings.

Financial services are driving the move to greater transparency in corporate responsibility. The increased focus on responsible investing brings huge swathes of data to help the public understand the impact companies and sectors are having on the world around them.

However, Bryant said that the financial industry still has a long way to go in terms of achieving greater diversity and that this is the next big challenge for investors and companies to address.

Constructing ESG indices

One of the issues that has been much discussed in the ESG debate is the differing evaluation methodologies and approaches to index construction.

The market for ESG products today is highly heterogeneous in nature with over 70 ratings providers globally said Zubin Ramdarshan, head of equity and index product research and development at Eurex.

While this is rapidly consolidating, there remain significant differences in how methodologies are calculated, resulting in a frequent lack of correlation between different rating providers reviewing the same company.

“There simply isn’t a consensus,” said Ramdarshan. “When we speak to end-users we see three things they are trying to achieve: they are trying to do good from a sustainability and ESG perspective; they are looking to not increase risk and they are looking to not deviate too much from the benchmark.”

Achieving these results while minimising tracking errors is particularly challenging said Ramdarshan. Index construction is central to realising the aims of investors. The methodology used, selection universe, rebalancing, inclusion and exclusion under fast exit rules are all elements that have to be clearly understood and evaluated by the end customer.

There is an ongoing evolution towards the development of global norms and increasing areas of consensus such as the exclusion of tobacco and controversial weapons. However, as you get further into the weeds major differences of approach and opinion remain.

Harold de Boer said that the very concept of an index for ESG poses risks to the whole movement and to financial stability. He drew a parallel with the trading in Collateralised Debt Obligations in the run up to the credit crisis.

He argued that CDOs were popular among banks because they were triple-A-rated, which lulled people into a false sense of security. He said that people are investing in ESG indexes “without thinking about what they are investing in” and therefore making the same mistake as were made prior to the financial crisis with CDOs.

“The starting point for all investments should be that investors take responsibility and know what they are investing in,” said De Boer. “Investors should be going to AGMs and forcing companies to make changes and investment managers should be able and willing to explain the choices they make themselves rather than hiding behind an index.”

“When we speak to end-users we see three things they are trying to achieve: they are trying to do good from a sustainability and ESG perspective; they are looking to not increase risk and they are looking to not deviate too much from the benchmark.”

"Integration in ESG is as important in fixed income as it is in equities. Equities are further down the evolutionary path but ESG is increasingly a necessary cornerstone of fixed income investing."

Expanding beyond equities

ESG is now well established in equity investment and has growing adoption in other asset classes such as fixed income and FX.

Research by MSCI consistently shows that issuers with higher ESG exposure in their fixed income portfolios report more resilient excess returns.

This trend came to the fore in Q1 2020 when issuers with higher MSCI ESG ratings outperformed others, evidenced by the MSCI IG ESG Leaders Corporate Bond Index outperforming its parent index (which incorporates bonds regardless of ESG factors) by 1.29% in excess returns during the quarter.

The provision of infrastructure and products to facilitate ESG-based investing in fixed income is catching up with demand. However, there is still some way to go.

A poll of the audience at the Digital Derivatives Forum found that 38% of respondents consider ESG factors while investing in fixed income or FX but don't apply a formal methodology.

Ramdarshan said: "Integration in ESG is as important in fixed income as it is in equities. Equities are further down the evolutionary path but ESG is increasingly a necessary cornerstone of fixed income investing."

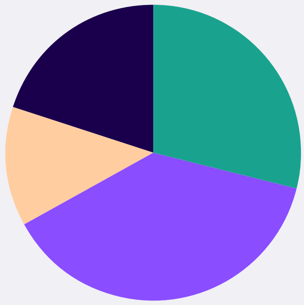
He added that whereas in equities ESG principles are mainly based around generating alpha, in fixed income the focus is on whether the principal will be returned and that coupon payments are made. ESG therefore plays an important part in mitigating downside risk in fixed income portfolios.

Eurex is currently in consultation with its members, the buy-side and the wider market to develop ESG listed derivatives in the fixed income market.

A poll on the day found that 32% of respondents would trade listed derivatives on a fixed income index but, with 62% of respondents unsure, there is a long educational process ahead.

ESG investment has become a dominant theme in equity investment. As it is expanded into other asset classes, new challenges will emerge. At the same time, more focus is likely to come on how firms trade the market as well as the principles they employ in what they trade.

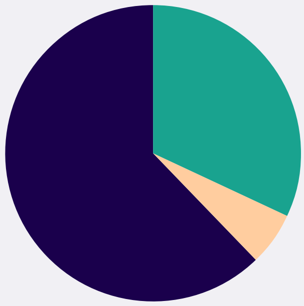
Do you consider ESG factors when investing in fixed income or FX?



- Yes we apply a formal methodology
- Yes we consider ESG factors but don't apply a formal methodology
- No we only apply ESG to equities
- No we don't consider ESG when investing

Source: Audience poll

If there was a fixed income index, would you trade it?



- Yes
- No, there is no demand for that
- No, we don't trade fixed income
- Don't know

Source: Audience poll

PART THREE

Equity derivatives volatility

3

Watch the panel

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Equity derivatives volatility fuels focus on models

Equity derivatives were at the epicentre of the volatility in March and April. Across the world, markets experienced near record drops on multiple days as the scale of the threat that the spread of Covid-19 posed the world became clear.

At the Digital Derivatives Forum, a panel of experts from across the industry discussed the impact that the volatility had on their operations, trading strategies and the wider market.

The seemingly unstoppable rise of equity markets peaked on the 19 February and, by the end of the month, major benchmarks had already lost 15%. That was just a taste of things to come as markets plummeted in March accelerating to a low on the 18 March in what was the fastest correction on international markets in history.

Randolf Roth, a member of the executive board at Eurex, recalled that the weekend before the March expiry was a particularly challenging time for Eurex as rumours circulated that the exchange would be forced by regulators to close.

For market participants this was the major concern. Italy, Spain and France were all being hit hard by the virus and were implementing strict lockdowns to prevent its spread.

Roth said that, while there was never any discussion about Eurex closing its doors, a shutdown in Italy, France or Spain would have had a major impact on the EURO STOXX 50 futures contracts that were due to expire that Friday.

"We were being asked how the final settlement price would be determined if markets were closed. Of course, there are rules around this but there are also various views on how it should be handled," he said.

Then the question of dividends emerged.

At this stage, annual shareholder meetings were being cancelled or delayed so there was no mechanism to approve dividend schedules. This was swiftly solved by regulatory initiatives and technology solutions. However, by then the economic impact of the virus on dividend payments was becoming clear, even companies that had announced dividends were cancelling payments.

"We were being asked how the final settlement price would be determined if markets were closed."

Simultaneously, short selling bans were being introduced across Europe. First in Spain; then Italy, France, Austria and Belgium followed.

A rumour that this meant Eurex would have to halt trading in the EURO STOXX sent its shares tumbling by 10%. This was untrue but in an uncertain market, the rumour was enough to rattle investors.

The volatility also drew comparisons with the experience that was termed "Volmageddon" in February 2018 when the VIX index jumped by 20 points, then its highest single day increase in history.

Tobias Hekster, co-CIO at True Partner Capital USA, said that the market makers continued to their jobs and provide liquidity during both outbreaks of volatility.

"The longer-dated listed contracts and OTC options became illiquid but the shorter-dated options, where market makers operate, remained liquid both in February 2018 and in Q1 2020," he said.

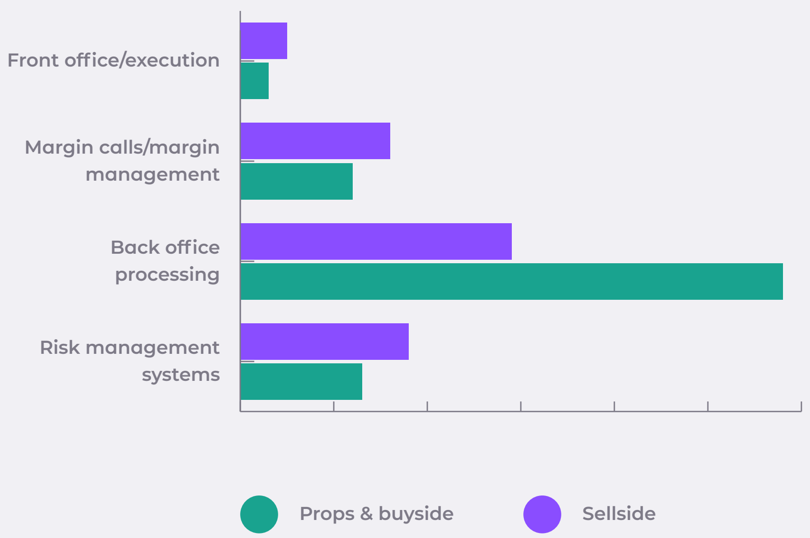
While the industry performed well overall, inevitably there were areas of strain. According to a survey conducted by Acuiti ahead of the event, pressure was felt most sharply by the sell-side as backoffices came under strain from the high volumes.

The survey also found that 28% of respondents were planning to change risk management processes based on their experience of the crisis. However, 40% of respondents said they did not plan to make any changes to operations as a result of their experience.

How will the experience of March and April change how your business operates?

Source: Acuiti survey

Where did your organisation experience major operational pressures during the period of heightened volatility and volumes



Source: Acuiti survey

Understanding asymmetry

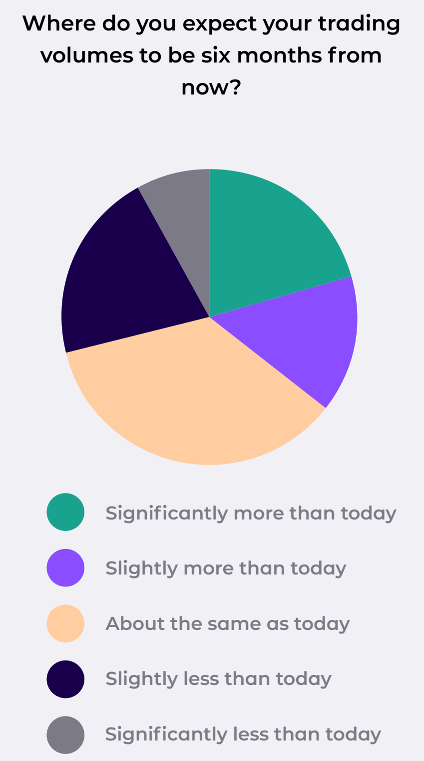
While the impact of Volmageddon had changed how volatility was priced and the understanding of risk, volatility indices were very low as the crisis began to hit. On 19 February the EURO STOXX Volatility index was at around 12 where it had been all month despite the growing evidence of the scale of the potential crisis. By 18 March it had reached 84.8.

For Thibaut Herens, a partner at Optiver, the tail risk of the spread of Covid-19 was not being priced effectively into volatility indices in mid-February.

"I think there is an argument that the market was not considering scenarios effectively enough and knowing what they were getting into by entering certain positions. For me, that is why the market reacted so aggressively – the tail risk wasn't taken fully into account and we had accentuated moves on the way down," he said.

In February 2018, issues stemmed from the fact that a lot of investors were over-leveraged in short VIX futures as that trade had been "the gift that kept on giving" according to Hekster. As that trade was unwound, traders were forced to pay high prices to get out only for the market to rebound shortly afterward. Their position was simply too big to sustain.

Hekster said that there was evidence in the market that traders had learned from the experience of 2018 and sought to sustain their exposures through the volatility. A consequence of this was their constant requirement to delta hedge, which he said exacerbated movement on the way up and the way down.



Source: Audience poll

Lessons learned

Andreas Schmidt, equity derivatives application specialist at Bloomberg, said that during the volatility, sell-side issuers of structured products started selling 2020 dividend futures aiming to hedge the upcoming cancellations of dividends.

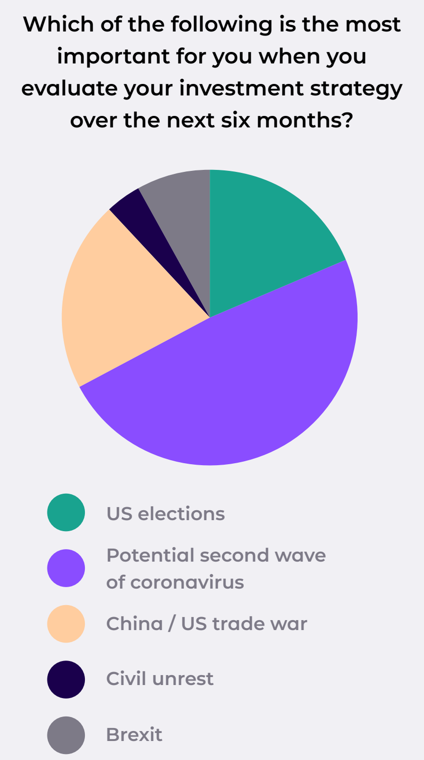
"What might be debated now," he said, "is whether to hedge dividend risk, even if the dividend payment is already announced."

Dividend futures are a product with a lot of natural sellers in terms of people wanting to hedge their exposures and buyers had been enticed by a steady yield. One lesson from the experience is likely to be a greater appreciation of the risks of these steady income streams and their potential to decouple rapidly and inflict large losses.

There is also a greater understanding of the impact that widespread volatility selling has on the performance of benchmark indexes during periods of sharp movements.

Ultimately the key lesson for market participants will be learning how to live with the virus. This involves executing more risk scenario analyses in evaluating strategies and embedding the lessons of the crisis into those strategies. But it also is about changing working practices with the move to working from home.

The immediate impact of the coronavirus crisis has passed but the lessons and its legacy on the market will remain for some time to come.



Source: Audience poll

PART FOUR

Total return futures

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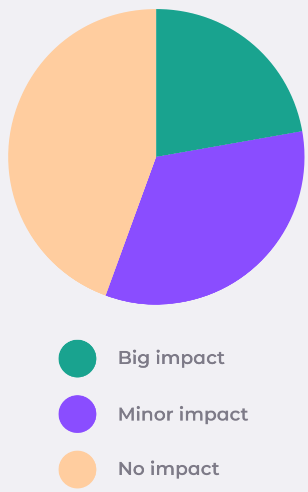
Total return futures and the Covid-19 dividend crisis

Eurex launched Total Return Futures in December 2016 to provide market participants with a new instrument to hedge repo risk and gain directional exposure to the EURO STOXX 50 index while optimising financing conditions. The contracts provide a futurised, cleared version of total return swaps representing the total theoretical exposure of the EURO STOXX 50 index. Volumes have grown strongly since launch but accelerated during the Covid-19 crisis. At the Digital Derivatives Forum, Julia Schieffer of Derivsource talked to Eurex's Stuart Heath about the growth and significance of the product and how clients managed the abrupt change in outlook for dividends.

How big an impact did the postponement of AGMs and cut or cancellations of dividends have on your business?



Source: Acuiti survey

How did the Covid-19 spread impact dividends?

Before the crisis hit, things looked fairly certain in terms of dividends. At the beginning of February, a lot of companies had already announced their earnings for 2019 and the bulk of dividends were due to be paid in Q2.

Then came Covid-19, which impacted dividends in three ways. Firstly, the ban on mass gatherings meant that Annual General Meetings were either cancelled or postponed, often with no future date. As a result, the timing of dividend payments suddenly became very uncertain.

Secondly, there was the immediate economic impact of lockdowns. Companies across Europe were expecting to have ongoing operations and ongoing cash flows, and all of a sudden those cash flows were completely uncertain. This forced companies to retain cash to meet the challenges and dividends were the obvious place to get the cash. Airbus, for example, cancelled its dividend within five weeks of announcing it.

Finally, regulators "strongly recommended" that banks and insurance companies didn't pay dividends.

So, in a few weeks, the market went from 'normal' Q2 dividend expectations to a complete unknown as to 'what' and 'when' dividends would be paid.

What were the major challenges that this posed to clients?

The major issues were seen in the run-up to the March to June roll. At the time, there were worries about exchanges staying open, but also there were major concerns about the pricing of that roll. We would expect, going into February, that most of the dividends for that quarter would be incorporated into the forward pricing of the roll. The dividend uncertainty caused major issues in pricing the roll in the EURO STOXX futures.

What's the current volume in TRFs today and how do you expect that to change?

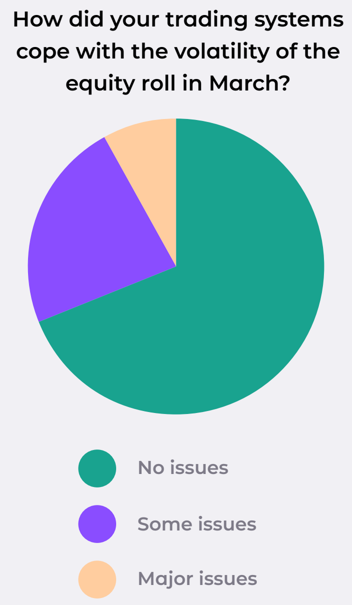
We started the year fairly well in terms of volumes but saw a significant spike in March in line with other contracts. As of now, we have already traded more this year than we did in the whole of last year, over five million contracts, and we have seen significant growth in open interest, which is currently at €72bn in notional terms.

Interestingly, we have seen a lot of activity in the December 20 expiry, where we're at over €22bn notional in open interest currently. This is a direct response to the dividend uncertainty seen over the last roll and the fact that the uncertainty is now going out to the end of the year as it remains unclear when dividends will return and in what form.

TRFs allow a degree of dividend neutrality as you receive what is paid over the life of a contract, which is one of the key reasons behind their growth during the crisis.

Another reason for introducing the TRF was to enable issuers of structured products to hedge exposures to the repo element of the EURO STOXX 50, which can be volatile owing to the limited number of participants.

We have also seen more buy-side firms entering the market because of the growing liquidity, particularly in the December 20 contract.



Source: Audience poll

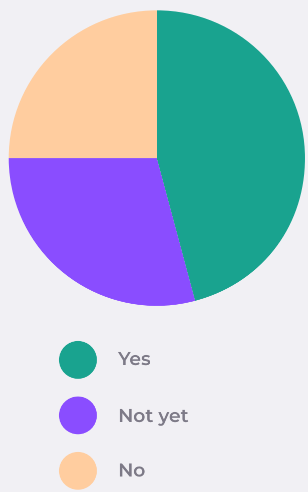
Can you explain a bit more about the dividend neutrality?

The best way to look at the TRF is that you are trading the repo spread over the funding rate to term, which is analogous to a total return swap. Therefore, what you effectively have is a synthetic cash position.

The benefit of that is that you don't have to price in expected dividends as you will receive the dividends that are paid on a gross basis through the daily margining process. So, if you buy today and hold for term, you will receive the value of the price index plus the gross dividends as they are paid through to expiry.

Whether dividends are paid or not is, of course, a macro-economic issue, but trading TRFs means you don't get hit by the pricing issues within this product.

Is you firm set up to trade total return futures?



Source: Acuiti survey

What is next for TRFs?

We expect more participants to join the market as uncleared margin requirements come in and investors seek a listed alternative to OTC swaps.

In addition, total return swaps are capital intensive and are not a big margin business for banks. So now the product is established among the large global broker-dealers we are looking at other areas where they would have traditionally used total return swaps.

One of the obvious areas here is synthetic equity financing. We've already launched a suite of 255 single equity TRFs in European names. But on top of that, we've added functionality so that you can trade these in one basket.

We also have other products coming on stream. Just before the crisis, we launched a TRF on the Collateral Index, a representation of what might be used in collateral baskets.

Looking ahead, what are the plans for the future?

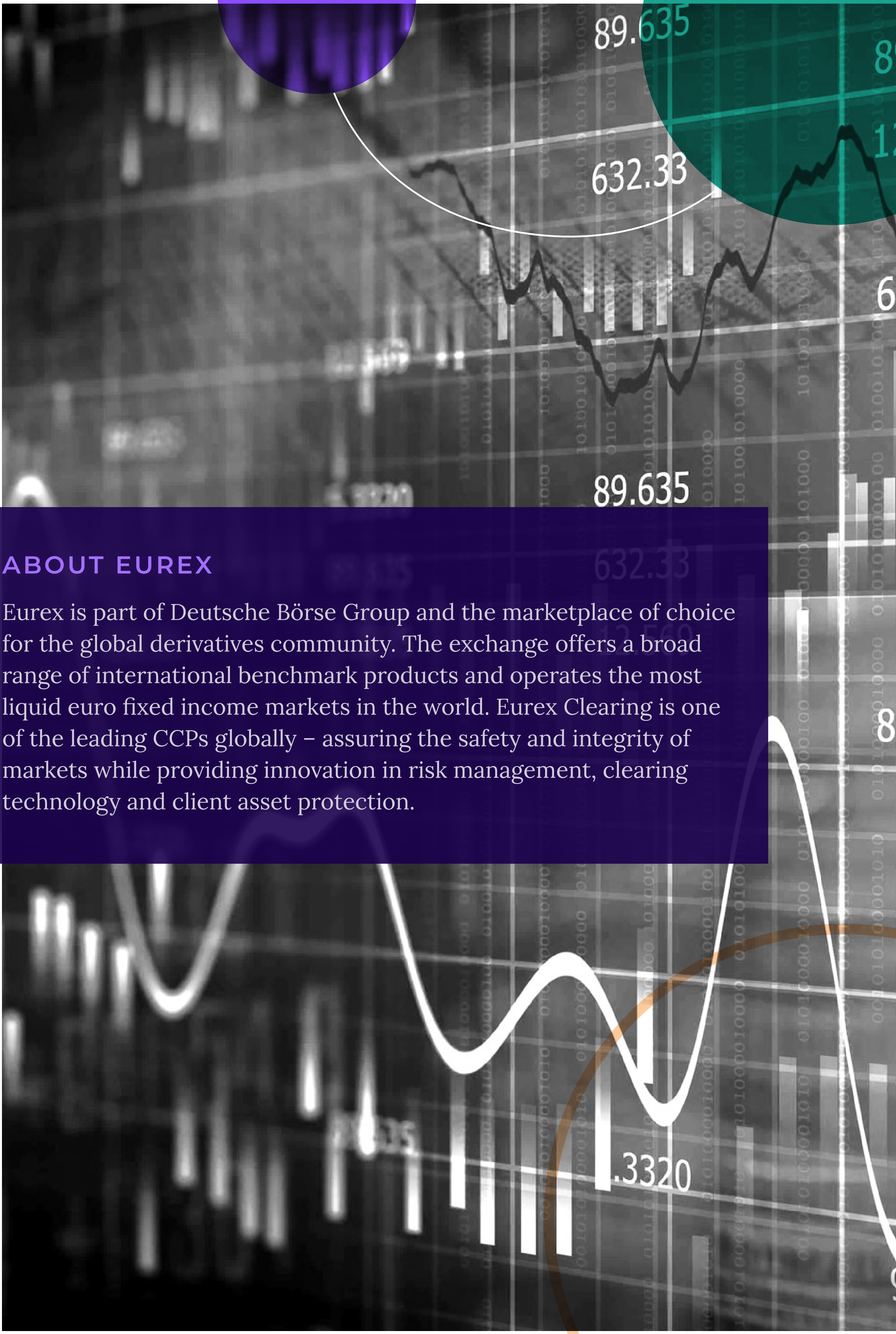
There are benefits in having a listed alternative to an OTC swap, particularly with uncleared margin requirements coming in. We are getting feedback that institutions will look to pay margin to one central counterparty rather than across many different bilateral counterparties.

In addition, total return swaps are quite capital intensive and are not necessarily big margin business for the banks. So now the product is established among the large global broker dealers we are looking at areas where they would use total return swaps for product development.

One of the obvious areas here is synthetic equity financing. We've already launched a suite of 255 single equity, total return futures in European names. But on top of that, we've added functionality so that you can trade these in a basket. The basket gives you the benefit of having the substitutability that is generally undertaken with those basket equity financing.

So we're aiming at that business as it is capital intensive and the uncleared margin requirements will make it become less cost effective but it's still a vital part of supporting the Delta one business.

We have other products coming on stream. Just before the crisis we launched a total return feature on the Collateral Index, a representation of what might be used in collateral baskets.



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