

Margin Management and the Rise of Self-Clearing

How proprietary trading firms and hedge funds are
taking greater control of clearing and margining

Commissioned by:

FIS



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Introduction



The cleared derivatives markets in the post-Global Financial Crisis period have been marked by two interlinked trends, one taking place on the sell-side and the other on the buy-side. Sell-side firms have had to contend with an ever-increasing regulatory burden and capital regime that has obliged them to be more selective about the business lines and clients that they pursue.

Meanwhile, some hedge funds and proprietary trading firms have accumulated huge financial firepower, influence and resources and have stepped in to fill the spaces left by capital constrained banks.

At the same time, across the wider market, firms across the buy-side and proprietary trading community have taken more responsibility for investment in - and oversight of - their internal workflows, processes and operations.

Functions that were traditionally outsourced to sell-side partners are increasingly being brought in-house. Hedge funds, asset managers and proprietary trading firms have taken significantly more responsibility for sourcing and developing technology stacks across a range of workflows, from the front-office to post-trade.

This trend has in part been enabled by the growth of cloud-based technology delivery,

which has brought down the cost and operational challenge of bringing control of workflows inhouse. Regulation and market opportunity have also been key drivers.

Some of the larger proprietary trading firms and hedge funds have gone further and taken on independent clearing memberships to manage their clearing operations externally as well as internally. This trend is likely to be accelerated by the incoming SEC mandate to clear US Treasury cash and repo transactions.

To understand how hedge funds, asset managers and proprietary trading firms are investing in margin management and approaching self-clearing, Acuiti, in partnership with FIS, has conducted a survey and series of interviews with senior executives at 64 hedge funds, asset managers and proprietary trading firms that are heavily active in derivatives markets.

We start the report with an in-depth investigation of the demands and challenges of margin management, before examining the growing demand for self-clearing and how that is likely to evolve.

Then in the report's third and fourth sections, we look at the technology that can be used to power margin optimisation and self-clearing, as well as broader clearing operations and more broadly, the trade lifecycle.

The key findings in this report are:

- 69% of survey respondents reported having taken greater control over margin calculation and payment over the last five years, with a further 10% saying they plan to do so
- Margin optimisation is becoming an increasingly important factor in firms' decision on where they trade, with 74% of surveyed respondents saying it was an influence
- Self-clearing is a model that 44% of respondents said they were exploring or interested in, while 12% of respondents had already become a clearing member
- 75% of survey respondents cited the US SEC Treasury clearing mandate and related cross-margining schemes as a key driver of demand for self-clearing and a driver to become a clearing member
- Survey respondents reported that third-party platforms are increasingly being used for building buy-side and proprietary trading clearing tech stacks as firms seek to reduce the operational burden of self-clearing



Navigating margin in modern markets



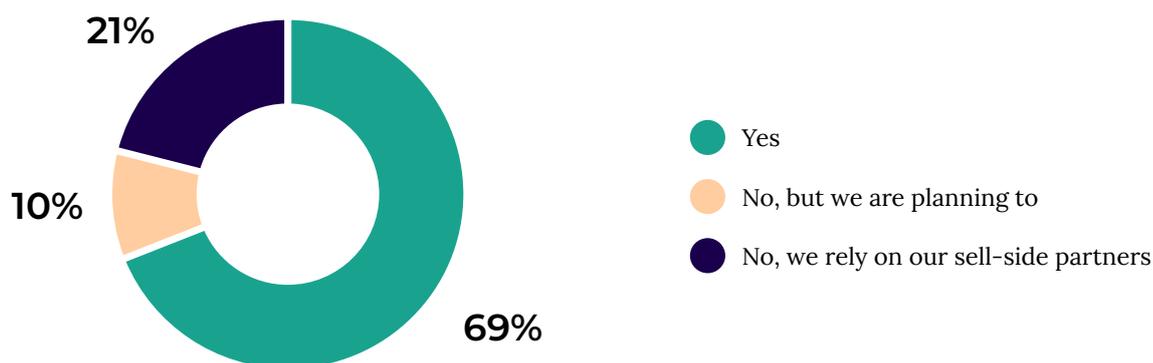
The sophistication of margin analysis in modern derivatives markets has been growing for many years. Uncleared margin rules have embedded the practice in OTC derivatives markets, while in listed derivatives markets regulators are making new pushes to increase the transparency of margin calculations.

At the same time, periods of intense volatility over the past five years have caused significant

spikes in margin calls and ongoing initial margin requirements. As a result, firms across the market have invested in modelling and predicting margin calls.

This has resulted in a trend across the buy-side for firms to take greater control over the margin process. A majority of survey respondents said that they had taken more control of margin calculation and payment over the last five years.

Over the past five years, have you taken more control over margin calculation and payment?



This trend has developed in a variety of ways, spanning from demands for greater transparency and insight into the margin calculation process from clearinghouses and FCMs to creating dedicated margin optimisation desks driven by technology investment.

At its broadest and most basic level, margin optimisation requires dialogue between buy-side firms and their FCMs that ultimately mitigates unexpected margin calls as much as possible.

This is an issue that can wax and wane with market conditions but one that has gained in prominence in the wake of the volatility of 2020 and 2022, when markets were hit by the external shocks of the initial outbreak of the Covid-19 pandemic and Russia's invasion of Ukraine.

However, it is also an issue that manifests in sometimes obscure charges such as concentration and volume risk add-ons. Calculated by CCPs, how these add-ons are calculated is still opaque for many FCMs and the clients who they pass the costs onto.

Reconciliations, fees and commissions

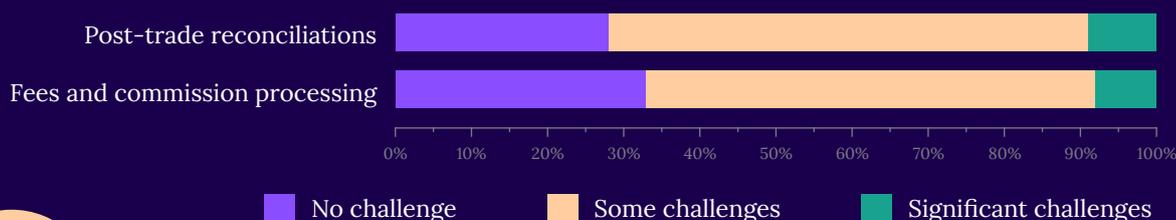
Clearing clients are already involved in the clearing process to a large extent and have to engage in back-office practices such as reconciliations on a daily basis.

Despite a focused effort by market participants to improve functions like post-trade reconciliations and fees and commission

processing, these are still areas that can throw up challenges.

For both functions, the majority of survey respondents reported slight challenges, but only a small proportion said they suffered significant challenges.

How challenging do you find the following processes and workflows when it comes to derivatives trading?



Greater transparency in this respect is fundamental to effective margin management as it ultimately produces the data that underlies effective margin modelling.

However, margin optimisation can go well beyond this type of interaction. Treasury and margin optimisation desks at the larger hedge

funds now focus on a variety of processes to increase margin efficiency.

These include management of encumbered and unencumbered assets, optimisation of both collateral and notional through techniques like portfolio compression, as well as IMN date-trading with swaps.

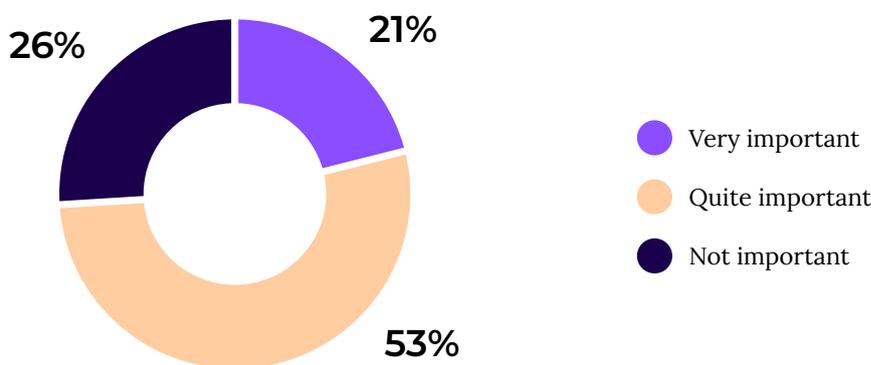
Even among those firms whose interest in margin optimisation is more seasonal, there is an ongoing interest in technological upgrades that can improve functions related to margin optimisation, in particular the real-time data feeds that are becoming essential across front, middle and back-office functions.

Survey results indicate a trend towards margin optimisation efforts among surveyed buy-side and electronic liquidity providers.

However, the extent and manner in which it is playing out will depend greatly on whether the market participant is a proprietary trading firm, hedge fund or asset manager, and its assets under management (in the case of the latter two firm types).

Macro funds, for example, are typically hungry for margin optimisation, as any savings they achieve can be used to maximise their leverage.

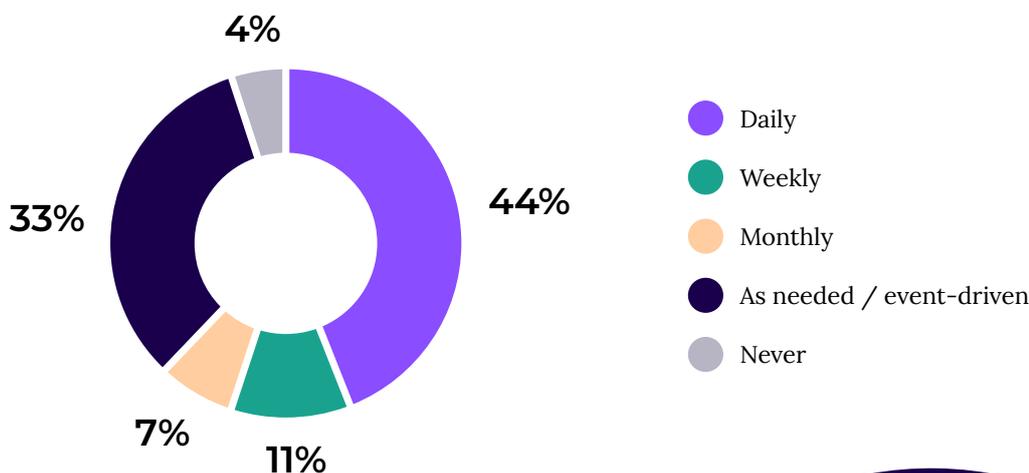
How important is margin optimisation on your decision on where and what to trade?



One area where this variance in approaches can be seen is stress tests, and how frequently buy-side firms run them on their derivatives portfolios. Proprietary trading firms were much more likely to stress test their portfolios on a daily basis. Asset managers were much less frequent stress testers, with a majority

only stress testing on an event-driven basis, or never. Stress testing across hedge funds was bifurcated – around half of hedge funds surveyed stress tested margin requirements on their derivatives portfolios on an as needed basis, while the other half ran stress tests on a daily or weekly basis.

How frequently do you perform stress tests/what-if scenarios on your derivatives portfolios in terms of calculating margin requirements?



The rise of self-clearing



Self-clearing—where hedge funds or proprietary trading firms become direct members of a CCP while continuing to use FCMs for broader market access—is gaining momentum, particularly among proprietary trading firms in the US.

Indeed, the member lists of some clearinghouses include multiple proprietary trading firms and electronic liquidity providers. Citadel Securities, DRW, Jump Trading, Optiver, Eagle Market Makers and Gelber Group are CME members.

FICC's government securities division also hosts a suite of proprietary trading firms comprising Aardvark Securities, Citadel Securities, DRW and DV Securities. Hedge fund Millenium's subsidiary MFI Funding is also a member of this FICC division.

The trend towards self-clearing is gaining traction - a trend that some survey respondents attribute to the incoming SEC

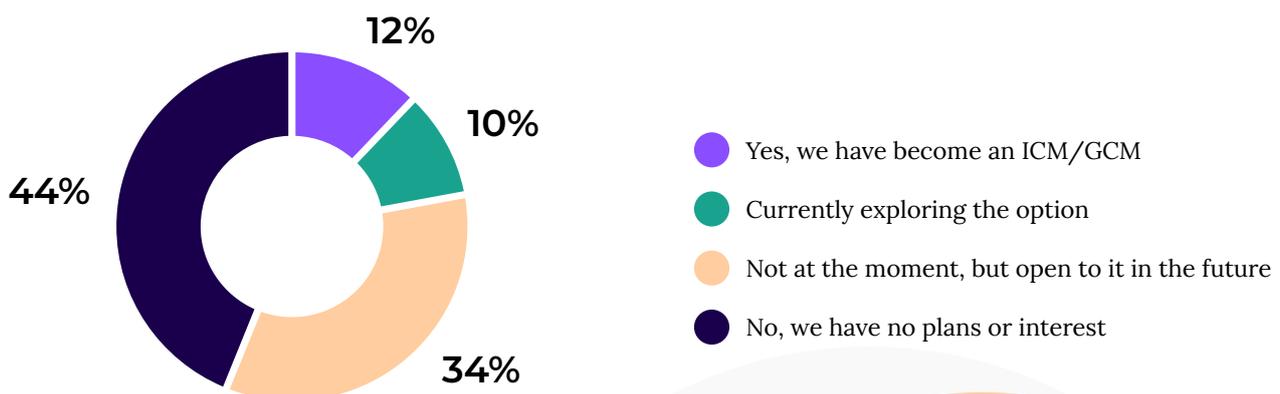
clearing mandate for US Treasury cash and repo clearing.

Currently, the cleared repo market operates under a done-with, also known as sponsored, clearing model. However, the vast increase in market participation that the SEC mandate will bring has created strong demand for done-away models like those that are commonplace in listed derivatives markets.

While CCPs are developing such models, there is still much uncertainty about their final structure.

Amid the uncertainty, some large hedge funds that are major players in the Treasury basis trade and other proprietary trading firms have been examining the possibility of self-clearing. Among the respondents to this survey, 12% had already become an individual clearing member, while 10% were currently exploring the option and a further 34% were open to considering it in the future.

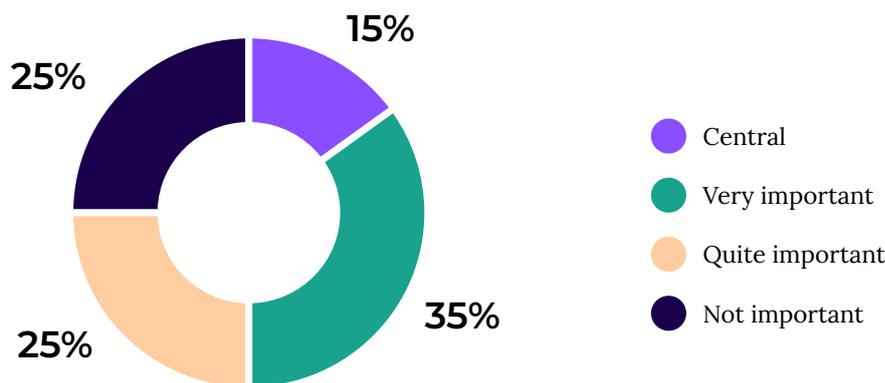
Are you considering becoming or have you already become a direct clearing member of one or more derivatives exchanges?



For those firms that were already a clearing member, the main drivers to have become one were cost reduction and competitive advantage. One future factor to also consider is the rise of cross-margining offerings at CCPs. These are being offered on an increasing variety of products and even

between CCPs, as is the case with CME and FICC. Half of firms considering becoming a clearing member or already a clearing member said that the Treasury clearing mandate and associated cross-margin schemes were either very important or central to their decision.

How much of a factor is the treasury clearing mandate and treasury cross-margin schemes in your decision to become a clearing member?



While there are advantages to self-clearing, the model does also create challenges for the buy-side. For many, the FCM relationship is

a much more efficient and scalable model to access multiple markets.

What are the main drivers of your becoming a clearing member?

- C1** Cost reduction
- C2** Competitive advantage
- C3** Improving operational efficiency



By far the most significant challenge cited by firms that had become clearing members was understanding and complying with regulatory requirements.

On the other hand, CCP default management and guarantee fund obligations were said to be less of a challenge. Survey respondents with a clearing membership were also mainly sanguine about the capital costs involved with initial and ongoing membership requirements. Three-quarters said the cost of capital associated with a clearing membership was a moderate challenge, however no firms said that it presented no challenges.



Building a tech stack for a shifting market structure



Margin optimisation

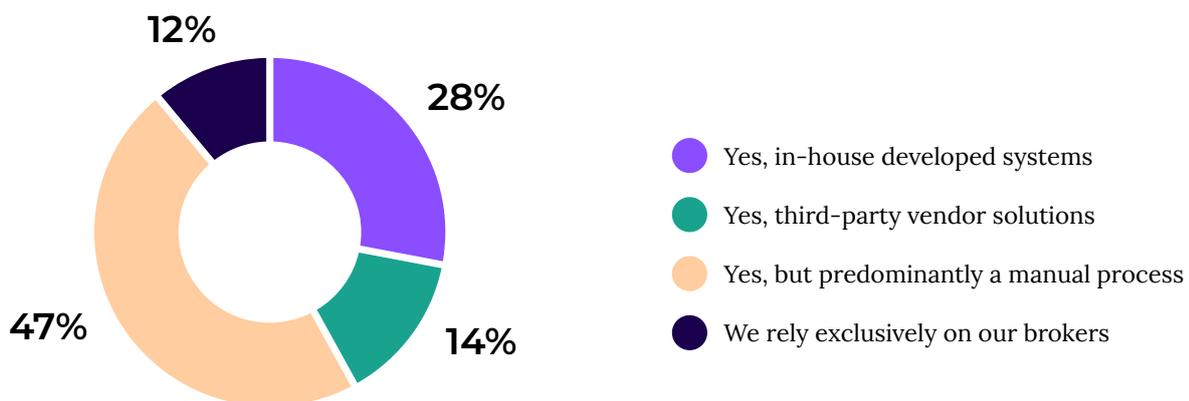
As outlined above, increasing numbers of proprietary trading firms, hedge funds and asset managers are looking to optimise margin and their overall clearing operations. For most, the first question to address in the process is how to achieve this efficiently and the technology investment required.

Despite the rise in firms taking greater control

over the margin process, advanced margin optimisation still remains concentrated in a relatively small number of firms, with over half deploying a predominantly manual process.

Among those who did use tools or services, most had developed their own in-house systems to do so, rather than rely on third-party vendor solutions.

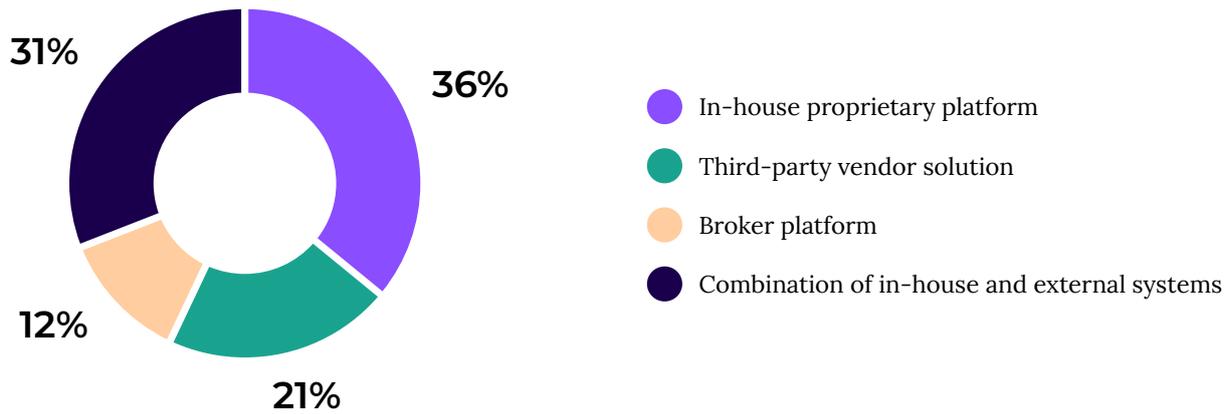
Do you use any margin optimisation tools or services?



For margin calculations, there was also a tendency towards in-house systems, with 36% saying that they used in-house platforms to calculate their margins and 31% saying that they used a combination of inhouse and external systems. There has historically been a

reluctance among the buy-side to use broker-provided or third-party platforms that they see as influenced by the sell-side to calculate margin. This is due to a perception that these platforms' calculations would tend to favour sell-side counterparties.

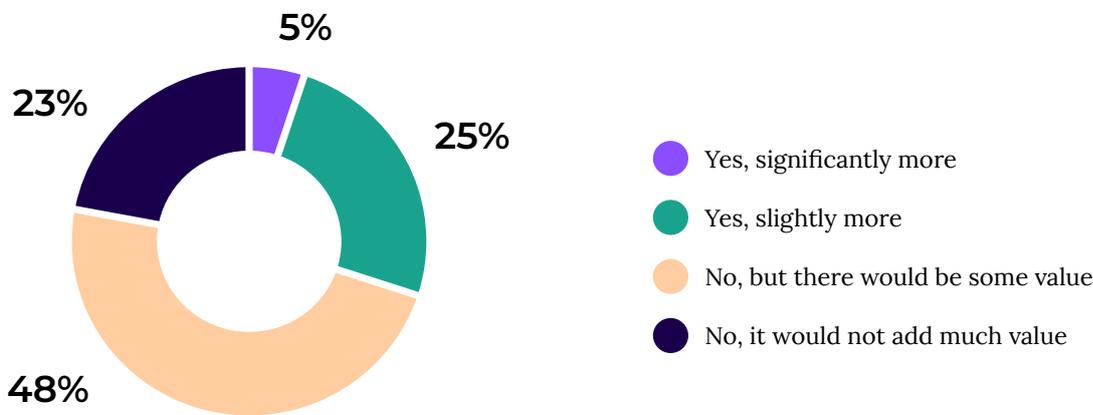
Which systems or platforms do you use for margin calculations?



Similarly, while 77% of survey respondents saw value in receiving a real-time view of margin requirements from their sell-side providers, most were not prepared to pay for such a service. Given that such an offering

would fall outside of the basic FCM revenue streams of commission and interest income, development is unlikely to be driven by these providers. In this case, a third-party solution may be more viable.

Would you be prepared to pay more to your sell-side providers for a real time view on margin requirements?



Self-clearing

For those firms looking to self-clear in specific markets, technology investment will also be a necessity in order to adopt new processes and workflows associated with clearing.

Perhaps given the relatively nascent stage of this trend, development for self-clearing tech

in particular has been predominantly inhouse, with 75% of those who self-cleared having taken this route.

This likely indicates the size and sophistication of market participants who have chosen this route so far, which have the resources to develop proprietary technologies.

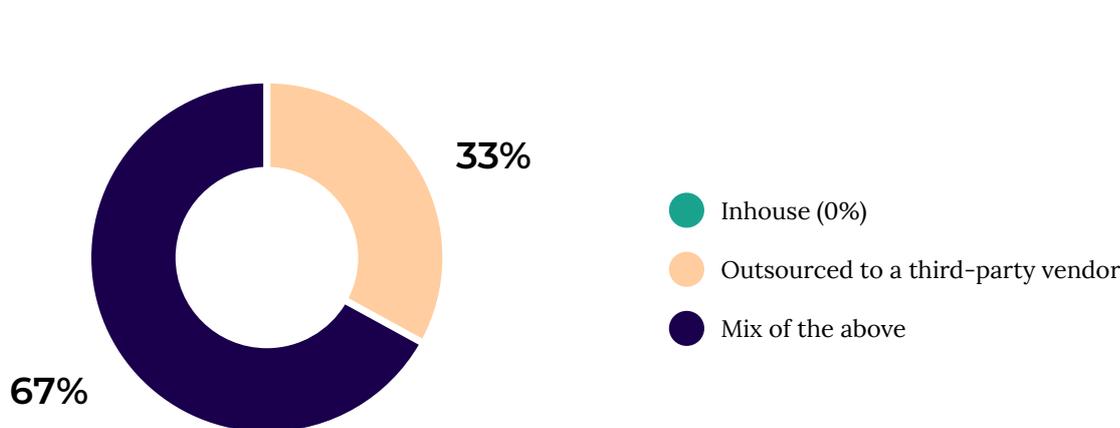
However, half of such respondents were open to outsourcing on a business-as-a-process service (BPaaS) model to support their clearing operations – a lower percentage than those looking to start self-clearing (see below) but still significant.

Firms that had already secured clearing memberships reported that the challenges involved in developing workflows and technology to meet margin calls were relatively low compared to developing the required post-trade and CCP connectivity technology and

finding the staff with required expertise.

These challenges can also be overcome with third-party outsourced offerings with clearing infrastructure and dedicated support staff that focus purely on clearing operations. Among those firms that were starting to build clearing technology, there was a much greater preference for third-party platforms. While the majority were using a mixture of inhouse and vendor technology to build their stacks, a third were doing so solely with a third-party and no firm was doing so purely inhouse.

How are you building the technology required to start clearing?



How challenging do you expect the following to be in the process of becoming a clearing member?

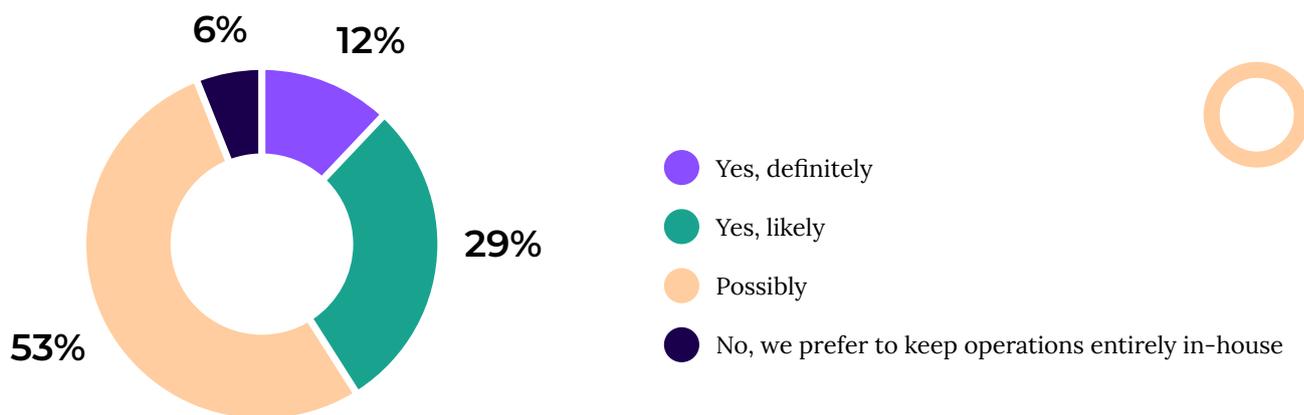
- C1** Meeting the capital requirements for membership
- C2** Developing the required post-trade/ CCP connectivity technology
- C3** Understanding and complying with regulatory requirements
- C4** Finding the staff with the required expertise
- C5** Developing workflows and technology to meet margin calls



These firms were also far more open to third-party outsourcing for clearing operations. To varying degrees, 94% were open to the idea of

working with a third-party to fully outsource their clearing operations on a BPaaS basis.

Would you consider third-party outsourcing on a business-process-as-a-service basis to support your clearing operations?



Cloud adoption

Market structure and regulatory needs are, according to survey respondents, creating greater demand for visibility across the trade cycle, and for ever more real-time data sets to help improve operational and trading efficiency.

While still in a transition phase, cloud capacity is becoming crucial to meeting these demands, with its ability to create near instantaneous increases in capacity becoming essential in a world in which nearly all firms need to process

high volumes of data for almost all functions. The cloud is also cost-effective and for many firms, now seen as secure.

Among survey respondents, operational resilience, scalability and cost-efficiency were all cited as the main advantages of cloud adoption. Some also said that the cloud made it easier to store data and functions in one place, as opposed to scattered across different computers.

What are the main benefits from your adoption of the cloud?

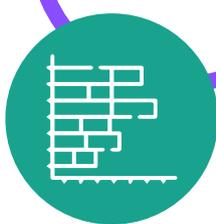
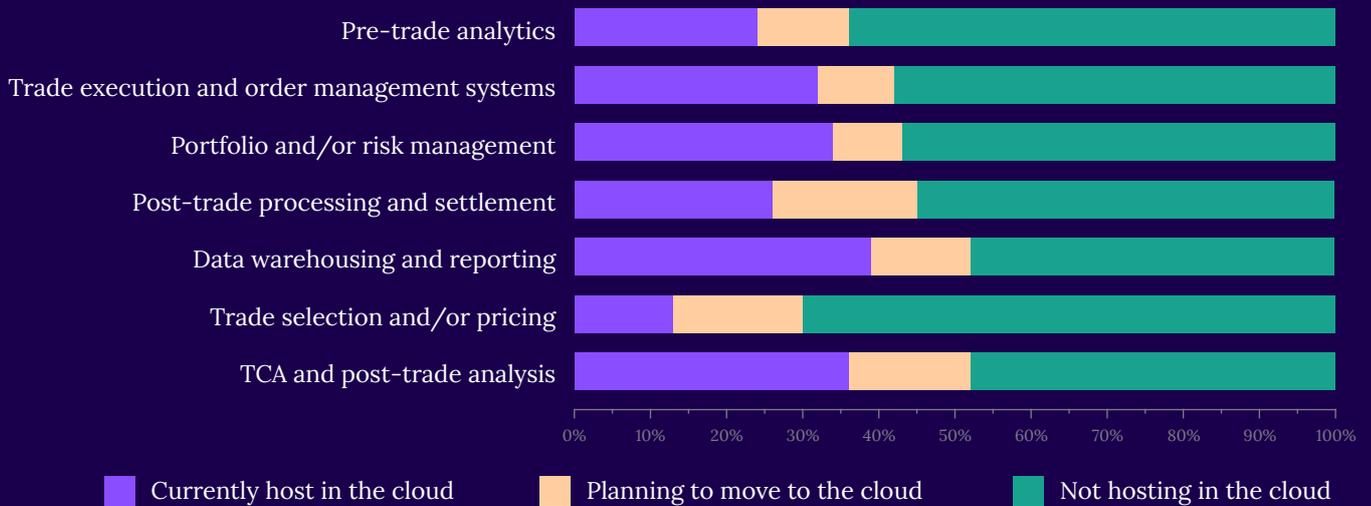
- 1 Improved operational resilience
- 2 Ability to scale up or down compute resources
- 3 Cost efficiency
- 4 Faster time to market for new offerings
- 5 Improved data analytic functionality



However, while many now see the path to cloud as inexorable, the transition has been uneven, with some functions more advanced than others. The most cloud-hosted function among the network was data warehousing and reporting, in line with the scalability strengths

of the cloud that play well into high volume data storage. TCA and post-trade analysis, both functions which require extensive data consumption, were also commonly hosted in the cloud, as were portfolio and risk management.

Which of the following functions do you currently host in the cloud, or are you planning to move to the cloud?



Conclusion

Over the past five years, several key trends have resulted in hedge funds, asset managers and proprietary trading firms operational in derivatives markets seeking to gain more control and oversight over their margin and clearing management.

Margin optimisation has become a key operational consideration in the clearing ecosystem. While some firms invest significantly more resources to push the function to a highly sophisticated level, for many firms, manual processes are still the go-to option for margin optimisation.

However, given the increasing speed and growing volumes of modern derivatives markets as well as the increasing complexity of margin management, adoption of automated and technology-driven processes is likely to increase.

While in-house development of margin optimisation systems is a viable option for the large and deep-pocketed, for other firms it represents a significant cost, both in time for hiring and development dollars. For these

firms, third-party solutions may be a more efficient route to margin efficiency.

A related and increasingly significant trend shaping the future of derivatives market structure is the rise of self-clearing, which this report finds could lead to a significant number of firms seeking clearing memberships.

According to survey respondents, the incoming US Treasury clearing mandate may be an accelerator of this trend, but it is one that is already gaining pace in the US and will likely take hold in other markets in the near future.

Among those surveyed firms that are currently planning or considering self-clearing, several said they are considering third-party vendors to provide solutions that reduce the operational complexity and ongoing costs of become a clearing member. This may enable them both to mitigate the challenges that have been raised in this report and enter the market more efficiently and with less risk and upfront operational cost.





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