acuiti management intelligence

SPECIAL REPORT

Margin management for hedge funds:

An increasingly complex calculation

Commissioned by:

CASSINI systems

CALCULATE. ANALYSE. REDUCE

Contents

Margin management for hedge funds: An increasingly complex calculation

Executive summary

Acuiti was commissioned by Cassini Systems to conduct a study of how hedge funds were managing margin and collateral in the face of UMR, heightened volatility and increased scrutiny of risk from prime brokers.

Some of the key findings in this report are:

• There remains significant uncertainty among hedge funds over whether they will be in scope for UMR Phase 6. This emanates to a large extent from the impact volatility is having on exposures but also from doubts as to whether actions taken such as switching into cleared instruments or spreading exposures between counterparties will be sufficient to remain out of scope

• This uncertainty is creating a risk for hedge funds that they could be caught out late by coming into scope for UMR without sufficient preparation for compliance

• The collapse of Archegos Capital Management has resulted in much stricter enforcement of margin calls from prime brokers (PB) and changes in margin policies such as the introduction of intra-day calls

• Just under a third of respondents had seen a reduction in the number of PB relationships they have over the past three years with offboarding by one or more of their providers given as the dominant reason

• Hedge funds are becoming more sophisticated in terms of how they manage margin and collateral but there is a long way to go still:

  » Just 13% aggregate and analyse margin requirements intra-day
  » 78% of respondents consider margin when deciding where to trade but most of these only do so some of the time
  » 30% of respondents said they had a view of margin implications available to traders pre-trade
  » Funds are taking steps to optimise margin efficiency: More than half had renegotiated counterparty relationships, 44% shifted some trading to listed or cleared instruments and a fifth had invested in optimisation software

• Funds reported that they had been forced to take negative steps that reduce fund performance such as holding back cash or assets to meet margin calls (50% of respondents) or reducing high-margin strategies (38%)

• The top challenge reported by respondents with regards to collateral management was predicting the collateral required in advance followed by getting a holistic view of available collateral and conducting "what if" analyses to select the best to deliver

• Over two thirds of respondents said margin requirements had increased over the past three years with a third reporting a significant increase

With the final phase of the Uncleared Margin Rules (UMR) due later this year, many hedge fund managers are facing a major overhaul in the way that they manage and process margin. These new regulations will affect firms' operations, infrastructure, and collateral management procedures, with knock-on effects on their ability to generate alpha and optimise trading strategies.

From September 1st 2022, the 6th and final phase of UMR will come into force. Under Phase 6, any firm with more than $/€8bn of notional exposure on their bilateral derivatives positions will have to comply with these rules. This will mean posting Initial Margin (IM) alongside Variation Margin (VM), which has already been phased in for all uncleared derivatives users.

UMR has been in the pipeline for 13 years but as they reach smaller firms, significant uncertainty persists and many hedge funds remain unsure of whether they will be caught in the UMR net.

The introduction of Phase 6 of UMR comes at a time when hedge funds are facing multiple pressures on collateral efficiency emanating from significant increases in margin requirements. Several factors are driving this trend.

Hedge fund risk has come under intense scrutiny across the sell-side following the collapse of the family office Archegos Capital Management in March 2021. The event was caused in part by some prime brokers' failures to apply appropriate margin on long-dated equity swaps, which was exposed by a Wall Street sell-off in equities and resulted in losses of around $5.5bn at Credit Suisse and billions more at other prime brokers across the street.

The fallout from those losses has spurred stricter enforcement of margin policy from prime brokers, now under greater scrutiny from other counterparties, regulators, and their own risk committees. The frequency of margin calls has also increased for many hedge funds with several reporting intra-day calls.

A further factor increasing margin requirements for hedge funds is the scale of market volatility experienced over the past two years. Both the initial spread of Covid-19 and Russia's invasion of Ukraine have led to sharp market moves, breaking apart historical correlations and resulting in massive margin calls, with the volatility then embedded into IM calculations.

At the same time, central banks are looking to withdraw stimulus and raise interest rates to fight inflation. This promises the likelihood of more sustained volatility as well as changing calculations of what collateral to deliver.

To understand how hedge funds are adapting collateral operations to the introduction of UMR, increased scrutiny from prime brokers and the unprecedented market volatility, Cassini Systems commissioned Acuiti to run a study looking into attitudes and challenges for hedge funds. This report presents the findings of that study, which is based on a survey and series of interviews with 48 hedge funds for whom derivatives are a core part of their strategy.

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Uncertain Margin Rules

Phase 6, the final stage of UMR, will bring over 700 firms into scope according to estimates by trade body the International Swaps and Derivatives Association (ISDA).

These funds are facing not only stricter requirements for posting margin but a complete overhaul in the way they have traditionally exchanged margin with their dealers. This will require significant investment in both operational capacity and collateral management technology.

Phases 1 to 4 of the IM roll-out affected fewer than 60 counterparties. These were market heavyweights – the dealers and large buy-side firms that have the resources to deploy staff and technology to meet the challenge.

The picture is set to be radically different in the last phase of the UMR roll-out. There remains significant uncertainty among firms as to whether they are in scope, or if they can take actions to reduce their exposure to avoid UMR.

Of those firms surveyed for this report, around a fifth were unsure as to whether they would be in scope for Phase 6. For most of these firms, the uncertainty emanated from their derivatives exposures being volatile and/or whether they would be able to reduce exposures below the UMR threshold by switching trading to cleared or listed derivatives or spreading exposures across entities and counterparties.

Moving into cleared or listed instruments is easier for some strategies than for others. In several markets, uncleared products still have better liquidity than cleared or listed alternatives. At this stage, there are still other ways of avoiding UMR. Fund managers can seek to manage their positions below thresholds or split exposures across different entities. However, this requires sophisticated pre-trade analytical capabilities to execute and does not fully mitigate the risk of coming in to scope further down the line.

This uncertainty presents a major risk to funds. Of those respondents who said they were definitely in scope for UMR, over half were mid-way through implementation ahead of the September deadline. Firms that realise later on that they will be caught could face going into September under-prepared and find themselves unable to trade in certain instruments.

Moving into cleared or listed instruments is easier for some strategies than for others. In several instruments uncleared products still have better liquidity than cleared alternatives

Managing relationships

Managing prime brokerage relationships could also be complicated by a general reduction in counterparty lines, following the retreat of some dealers from the market. Credit Suisse's large-scale withdrawal from the market after Archegos was the most high-profile example (see boxout) although several major prime brokers are reducing exposures to hedge funds, particularly smaller ones.

The impact of Archegos

The collapse of hedge fund Archegos Capital Management in March 2021 sent alarm bells ringing across the industry. That a relatively small fund had experienced losses reported to have been between $8bn and $20bn in 10 days and caused losses at banks of up to $10bn was seen as a major failure of risk management across the market. This study found that prime brokers had responded by stricter enforcement of margin calls and changing margin policies such as the introduction of intra-day calls. Some funds also reported that fees had increased and levels of leverage had been reduced.

Following the collapse of Archegos, have your Prime brokers taken any of the following actions?

- **54%** Stricter enforcement of margin calls
- **46%** Changed margin policies
- **27%** Increased fees
- **9%** Reduced available leverage

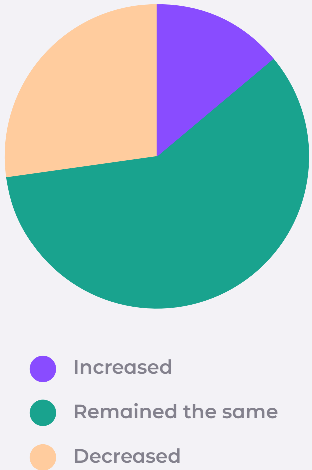
Indeed, in several hedge fund activities, leverage has become harder to come by for smaller firms. Interviews for this report showed that hedge funds using the repo markets for fixed income shorting strategies were already finding their pool of dealers shrinking and the amount and variety of leverage on offer diminishing.

This has come as dealers increase their modelling of volatility and focus their lending lines on larger customers and in fewer asset classes, leaving smaller firms with fewer options for counterparty relationships. Of those firms surveyed, just under a third had experienced a reduction in the number of active prime broker relationships they have over the past three years.

The most common reason for the reduction in prime brokers was that the fund was offboarded by their provider followed by a strategic decision by the fund to reduce PB relationships to achieve better margin and financing. Several firms also said that they reduced the number of relationships owing to the withdrawal of one or more of their providers from the market.

To stay on top of their counterparty relationships and work to stay under the thresholds set out by UMR, firms will have to monitor the Average Aggregate Notional Amount (AANA) of their uncleared derivatives positions on a regular basis. This process will be more laborious for funds that form part of a wider investment group and must account for this set-up in their calculations.

Over the past three years, how has the number of Prime brokers that you have an active relationship with changed?



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Calculating risk

Another major challenge facing hedge fund managers will be calculating IM itself. Market participants are restricted to two methods for doing this: the Grid model, or ISDA's Standard Initial Margin Model; commonly referred to as the SIMM methodology.

The most popular model to date has been ISDA's SIMM. SIMM is considered more appropriate for a diversified portfolio, given its allowance for offsetting risks within product classes, while Grid can be more suitable for directional portfolios or firms that want a simpler calculation.

While SIMM is currently the most obvious choice for market participants considering the risk-based methodology, they will either have to obtain an ISDA license to build in-house or work with a licensed vendor.

The IM calculation is essential to UMR, owing to the fact that firms can delay their legal documentation and operational agreements if they don't exceed a $50m threshold. A firm's IM can be reduced by moving trades to a cleared or listed environment. Again, however, firms will need to increase monitoring and real-time capabilities to ensure that they are aware when the threshold approaches, particularly in volatile markets.

As with AANA, this will require a new technology-build for most firms. These problems have already been confronted in Phases 1 to 5, with many banks and large buy-side firms choosing to work with vendors rather than develop their own in-house builds.

Building out the capabilities

Having the right systems in place to run these calculations and measure exposures will require a significant technological lift for most firms. This study found that hedge funds were taking an increasingly sophisticated approach to margin optimisation but that there was still a lot of room for further innovation.

When it came to the analysis of margin requirements to optimise margin efficiency, 69% of firms did so at the end of the day. Around a fifth of firms did not currently aggregate and analyse margin but planned to do so soon. Significantly though, just 13% of respondents aggregated and analysed margin intra-day.

Respondents were also increasingly making decisions on where to trade and with which counterparties taking into account margin requirements. Again, there was some way to go in this respect with just 28% of respondents always factoring in margin requirements to trading decisions, and half only taking them into account some of the time.

In addition to putting in place better monitoring and optimisation tools, hedge funds are also taking a more proactive approach with their prime broker relationships and considering margin requirements across their operations.

Just under half of respondents said they query the accuracy of margin requests from prime brokers either very frequently (17%) or quite frequently (28%) and only 11% never did so. Developing internal margin prediction and analysis software increases funds' ability to spot and address high margin calls.

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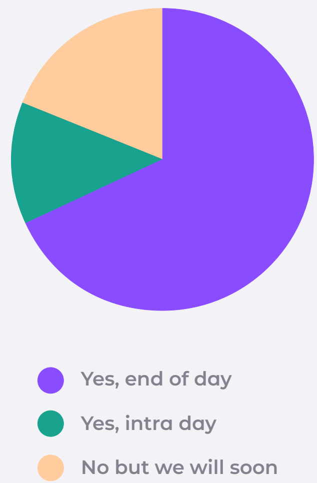
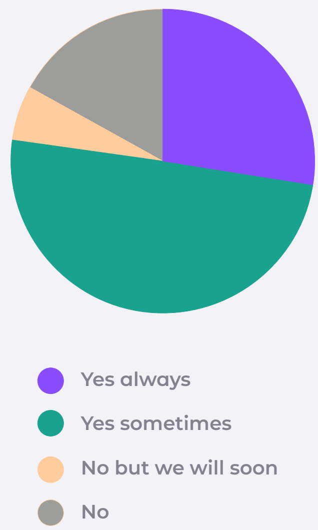
Do you currently aggregate and analyse your margin requirements to optimise margin efficiency?



Do you make decisions on where and what to trade and who with to optimise margin requirements?



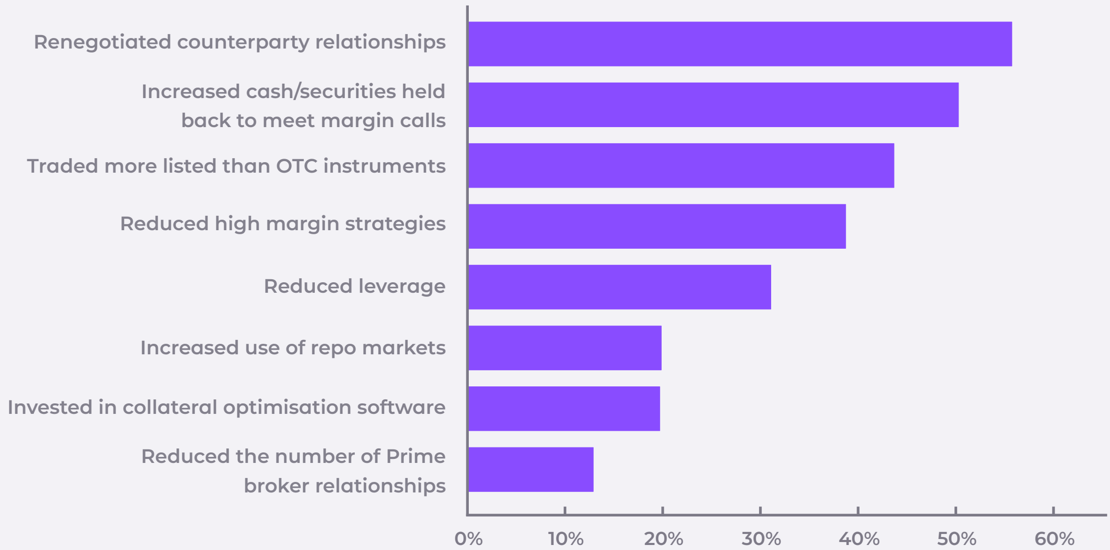
In terms of the actions taken to optimise margin efficiency, more than half of respondents had renegotiated counterparty relationships, 44% shifted to listed instruments and a fifth had invested in optimisation software.

However, significant percentages of respondents had been forced to take actions that reduce fund performance such as holding back more cash or assets to meet margin calls, reducing high margin strategies, or cutting leverage.

The process of posting margin under UMR will not just be a more strictly mandated form of the old methods of posting collateral with dealer counterparties (many of whom would then rehypothecate that collateral).

Instead, the rules mandate for margin to be posted in third-party segregated accounts. This then obliges market participants to choose between third-party or tri-party models of collateral segregation.

Which of the following actions have you taken to optimise margin efficiency?



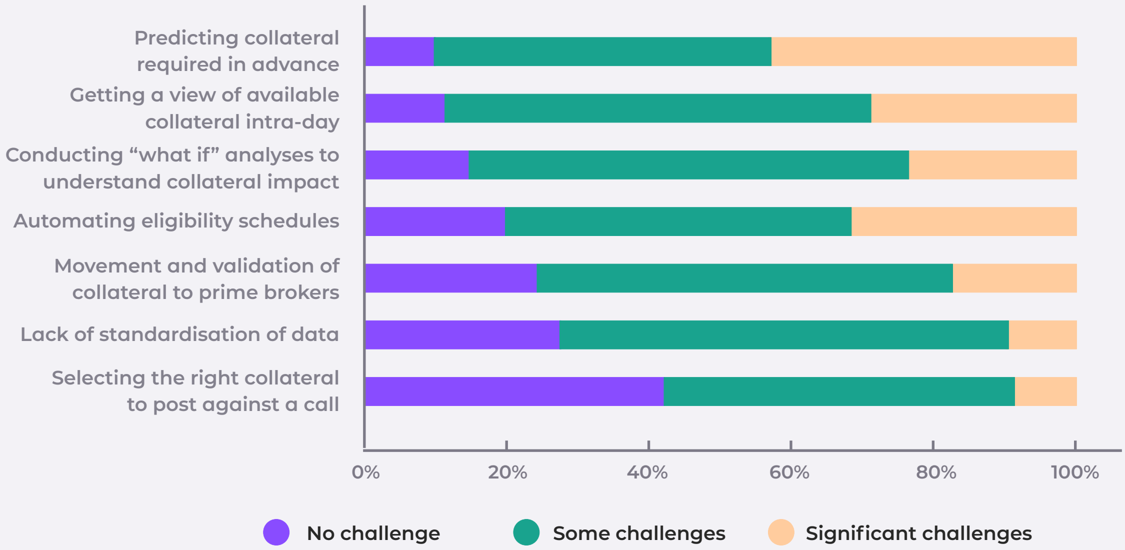
Collateral management challenges

While there have been significant advances in the sophistication of hedge funds in their collateral management processes, several major challenges remain for firms.

The top challenge reported by respondents was predicting the collateral required in advance followed by getting a holistic view of available collateral and conducting "what if" analyses to select the best to deliver.

These three challenges can have a significant impact on performance resulting as they do in firms being forced to hold back cash or securities to meet unexpected calls or posting less efficient collateral against each position.

How important is cloud-based delivery of market data software to your business?



Whichever model they chose, collateral management will come to the fore like never before for firms. It will also necessitate more complex collateral management, with what constitutes eligible collateral varying by jurisdiction and counterparty. The list can include sovereign debt, money market funds, corporate bonds and equities.

While US managers can post cash as collateral, this depends on the infrastructure of their custodians and so it is not guaranteed that this will be accepted. This means that hedge funds need to access eligible assets to post as IM and therefore develop the capabilities to identify which collateral can be posted on different schedules, all the while optimising the most efficient securities to post.

Conclusion: Rethinking margin optimisation

Whether or not a fund is in scope for Phase 6 of UMR, firms are facing significant increases in collateral requirements. More than two-thirds of respondents said that margin requirements had increased over the past three years with a third saying that they had increased significantly.

Increased market volatility has put pressure on firms' collateral management. 80% of respondents said that their operations came under pressure to meet margin requirements during the volatility of February and March 2020 with 15% saying that the pressure was significant.

The increase in margin requirements is having an impact on fund performance. Over half of respondents estimated a drag on their performance of between 50 and 200bps from the additional margin requirements experienced over the past three years.

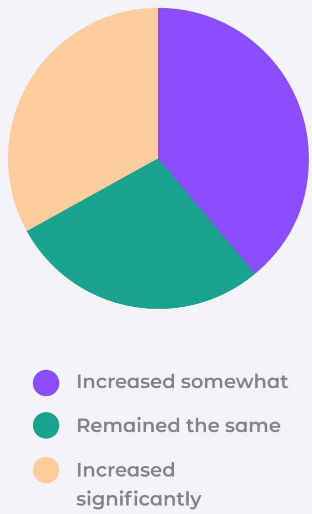
Margin management should therefore be thought of as an extension of a trading strategy. If an element of an algorithm or layer of a trade was thought to be producing a drag on the performance of 50-200 bps, a fund would act quickly to rectify it. This calculation should be no different to margin.

To fully optimise, margin requirements need to be understood and embedded at pre-trade and in real-time. This enables funds to trade with the optimal counterparty in the optimal way to increase margin efficiency and reduce performance drag.

Predictive analytics also need to be built to reduce requirements to hold back cash or assets or be forced to swap trade or repo securities in order to meet margin requirements at short notice.

Most firms will look to third-party software vendors for collateral optimisation software. Over the past decade, vendors have significantly increased the sophistication of their offerings building capabilities around firms as demands for collateral increase. Leveraging the expertise of a third-party vendor rather than building in-house will make sense for small and large firms alike.

Overall, how have your margin requirements changed over the past three years?



"This report makes it crystal clear that hedge funds should be taking urgent steps to implement margin and collateral transparency and resilience across the trade lifecycle. Tools like these can provide a clear picture of current exposures but also enable firms to prepare for future market events while reducing margin exposure and carry cost."

Liam Huxley, CEO and founder, Cassini

About Cassini

Cassini Systems offers an award-winning derivatives margin analytical platform that provides the industry's only front-to-back margin and cost analysis across the entire lifecycle of a trade. Cassini users can calculate any margin on any cleared or uncleared derivatives asset; analyze drivers and movement in margin exposure; reduce Initial Margin levels; and maximize margin efficiency with the firm's industry-leading, advanced algorithms. Cassini services have a proven track record of enhancing portfolio returns at every point in the daily business cycle, empowering traders, and portfolio managers with the ability to analyze instantly in the pre-trade stage the all-in, lifetime cost of a transaction. Top-tier hedge funds, asset managers and Tier 1 banks rely on Cassini for powerful, flexible, automated tools to manage their portfolios of over the counter and exchange-traded derivatives products. Cassini was named Best UMR Service of the Year in the Risk Markets Technology Awards 2022. For more information, visit www.cassinisystems.com.

About Acuiti

Acuiti is a management intelligence platform designed to provide senior executives with unparalleled insight into business operations and industry-wide performance. Acuiti helps identify market trends, enhance decision-making and benchmark company performance. The platform anonymises and aggregates information from its exclusive network of senior industry figures to provide insightful in-depth analysis.