FMSB
FINANCIAL MARKETS STANDARDS BOARD

Uncleared Margin for OTC Derivatives

Spotlight Review

May 2025

About us

Financial Markets Standards Board

Financial Markets Standards Board Limited (FMSB) is a private sector, market-led organisation created in light of the recommendations in the Fair and Effective Markets Review (FEMR) Final Report in 2015.

One of the central recommendations of FEMR was that participants in the wholesale markets should take more responsibility for raising standards of behaviour and improving the quality, clarity and market- wide understanding of trading practices. Producing guidelines, practical case studies and other materials that promote the delivery of transparent, fair and effective trading practices will help increase trust in wholesale markets.

FMSB brings together people at senior levels from a broad cross-section of global and domestic market participants and end-users.

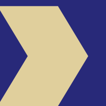
In committees and working groups, industry experts debate issues and develop FMSB Standards and Statements of Good Practice and undertake Spotlight Reviews - like this one - that are made available to the global community of financial market participants and regulatory authorities.

Spotlight Reviews

Spotlight Reviews encompass a broad range of publications used by FMSB to illuminate important emerging issues in financial markets. Drawing on the insight of Members and industry experts, they provide a way for FMSB to surface challenges market participants face and may inform topics for future work.

Spotlight Reviews will often include references to existing law, regulation and business practices. However, they are not intended to set or define any new precedents or standards of business practice applicable to market participants.

Find out more about the Financial Markets Standards Board at **fmsb.com**



Foreword

With this Spotlight Review, FMSB has delivered on the third and final topic our Members were asked to take forward by the Bank of England and Financial Conduct Authority, after the Post Trade Task Force published its recommendations in 2022.

In many ways, this topic has been the most challenging. After several years of regulatory change impacting the Uncleared Margin Rules (UMR), it is clear that there remains room for further improvements to operational efficiency. However, this goal has to be balanced against each market participant's view of risk, and without sacrificing the attributes of the product that make it attractive.

These differences of opinion on the scale of particular inefficiencies, and the attractiveness of their solutions, have been headwinds to further progress. Through surveying our Members, this paper attempts to quantify the extent of commonality, to allow the market to focus on achievable next steps. Some of the results are as expected, others surprising, but are promising indicators of the ability to find common solutions in the future.

We hope you find these insights helpful.

ISDA welcomes the work of FMSB to support post-trade efficiencies, including margin calculation and communication, collateral settlement and portfolio reconciliation processes. Streamlining these workflows will further mitigate operational, counterparty and liquidity risks, supporting safe and efficient markets.

By spotlighting these topics and measuring the current resourcing and efficiency of our members, we can identify areas of collective investment and interest. ISDA can support the implementation of mutualized solutions and workflow automation, including the ISDA Standard Initial Margin Model, our suggested operational practices for portfolio reconciliation and collateral management, and the Common Domain Model, which has been deployed to bring greater efficiency and automation to collateral management.

We encourage the industry to access the resources available on the margin section of ISDA's website, and we look forward to continuing to work with FMSB in the future.

Introduction

The aim of post-trade is to complete any contractual processes after a transaction as accurately and efficiently as possible. For simpler financial instruments, this generally means increasing automation, and minimising settlement fails, but the picture is more complex with OTC derivative trades:

1. The nature of bilateral trades means more bespoke trade parameters, making it more challenging for counterparties to automate due to less standardisation of terms.
2. Derivative trades create ongoing exposure: while counterparties' obligations for settling securities versus cash will usually end a few days after trade (at the point of settlement), for derivative contracts, counterparties can remain exposed to each other for much longer periods – where netting is applied, it may be for the duration of a commercial relationship.
3. Conflicting aims: operational efficiency must be balanced against risk management. In the cash security example above, the short-dated exposure between the counterparties mean that these aims do not create noticeable conflict. For longer-dated OTC derivative relationships, these potential tensions become more visible.

However, there are many reasons why OTC markets remain preferred over exchange traded derivatives by volume. While this means that a baseline level of manual handing and dispute resolution should be expected, there remain areas of inefficiency which are not subjective – for example, non-reconciled portfolios.

While new technologies such as DLT and the creation of digital assets have been mooted as potential game changers (either "native", where the asset itself is on a blockchain, or "twinned", where a real-life asset is represented on a chain), in practice, they solve predominantly for settlements, and do not address all the frictions identifiable today, some of which require behavioural changes.

Recent episodes of market stress have subjected financial markets to real-world resilience tests, which have further highlighted the risks and frictions these inefficiencies cause in both firms' individual systems and processes, and at a market level.

Purpose of this Review

In April 2022, the Bank of England's Post-Trade Task Force, consisting of a cross-section of market practitioners in operations, identified multiple inefficiencies including in the OTC derivatives market, which were outlined in *Charting the Future of Post trade* (April 2022). The Bank of England and FCA approached FMSB to continue the work begun by the Task Force.

This Spotlight Review documents the findings of the successor working group created under FMSB's governance structure. The working group specifically focused on uncleared margin practices for bilaterally negotiated Over-the-Counter (OTC) traded derivatives, where clearing and settlement is also carried out non-centrally between the two parties.

While the working group generally agreed on the drivers of inefficiencies, there were differences of opinion on the scale of these problems, and their potential solutions and viability. This would be particularly challenging for the many potential solutions which require a critical mass of market adoption to succeed – as there is a perception of first mover disadvantage for adoption.

The group decided that the most meaningful next step would be to survey members on a range of topics, in order to draw out the scale of consensus, or differences of opinion, on particular issues, to emphasise the specific topics which the industry may have the most success in taking forward in the future. In the course of the survey, several meaningful actions which firms could take unilaterally were also identified.

Structure

- For summary conclusions, please go to page 5 and page 13
- For background to uncleared margin and the derivative market structure, please go to page 6
- For the full survey results, showing current market structure, problems and potential solutions, please go to page 12 and 14
- For final recommendations, please go to page 22

Summary Conclusions

FMSB's working group meetings and Member survey highlight the extent to which frictions in the functioning of OTC derivative markets create risks, delays, and inefficiencies. These frictions include both industry-wide and internal processes for trade reconciliation, margin calculation, communication regarding margin payments, resolution of disputes over margin amounts, collateral movement, eligible collateral data and settlement practices. Consequently, exceptions are common, and disputes require often extensive bilateral communication between counterparties. Common causes for many of the frictions are the absence of standardisation, digitisation and automation.

However, the working group's view is that certain parts of the trade cycle, in particular the margin call process, are already mature, and/or have causes of and solutions to frictions that are fragmented, leading to low marginal gains for the effort expended, to tackle the residual. A level of non-standardisation must be expected in a bespoke market such as OTC derivative markets – for example, the desire to maintain autonomy over valuation models and inputs.

Decreasing the time taken to determine the cause of disputes was therefore identified as an area of opportunity, with both workflow improvements and the use of new technology noted as potential future initiatives. Additionally, in other areas, the FMSB Member survey has identified several solutions which can be unanimously applied by firms, and widespread or even unanimous support for other initiatives requiring market adoption for success.

Full details can be found from section 5.

Background

Initial and Variation Margin: A Regulatory Shift

As part of an effort to improve transparency following the financial crisis that began in 2007, global regulators implemented a series of regulations to limit risk taking and mitigate counterparty credit risk posed by uncleared OTC derivative transactions. A key reform of the Uncleared Margin Rules (UMR) determined that uncleared derivative contracts should be subject to initial margin (IM), variation margin (VM) with standardised legal, collateral eligibility and operational parameters. This was introduced in six waves, with the first six waves implemented from 2016 to 2022 and additional annual implementations and additional jurisdictions still coming online.

Firms with an aggregate average notional amount (AANA) of uncleared derivatives exceeding EUR €8 billion are subject to the 'initial margin requirements', as stated in the Basel Committee on Banking Supervision (BCBS) and the International Organisation of Securities Commission (IOSCO) Initial Margin Standards document[1]. The move to two-way posting of initial margin requirements represented a change in market practice for non-cleared derivatives, which previously involved either no initial margin or at most a one-way posting of collateral.

While the Uncleared Margin Rules were successful in improving risk mitigation, there has been less focus on the efficiency of the operational processes behind collateral movements.

There is a widely acknowledged necessity to streamline Variation Margin (VM) processes across both centrally cleared and non-centrally cleared markets. Identifying best practices for VM collections and distribution is crucial, along with fostering market participants' readiness for above-average VM calls through efficient collection and distribution of VM, among other means. The BCBS and IOSCO have released four policy recommendations to address this in January 2025[2] with national implementation pending.

What is Margin?

Where counterparties have ongoing exposure to each other, margin serves as a protective measure, encompassing both cash and non-cash collateral, which is collected to mitigate potential risks stemming from fluctuations in market prices or counterparty default. If a party defaults, the collateral can be sold to recover the losses.

There are two types of margin:

1. **Initial Margin (IM)** is used to mitigate counterparty risk. It involves the posting of collateral to protect counterparties against default of their counterparty, covering losses until the survivor can replace or hedge the trade.
2. **Variation Margin (VM)** is used to mitigate market risk. It involves the daily transfer of funds to collateralise existing exposures arising from fluctuations in market prices.

What is Uncleared Margin?

Uncleared margin means margin with respect to bilateral OTC derivative contracts that are not cleared through a centralised clearing system and instead rely on bi-lateral collateral exchange and margining to mitigate risks associated with uncleared trades.

These over-the-counter (OTC) transactions typically are conducted under the International Swaps and Derivatives Association (ISDA) Master Agreement. However, customised Credit Support Annex (CSA) and Account Control Agreement (ACA) terms often diverge widely.

1. MarginRequirements for Non-Centrally Cleared Derivatives
2. Streamlining variation margin processes and initial margin responsiveness of margin models in non-centrally cleared markets

Background continued

Derivative Market Structure – Trading

Over-the-Counter Derivative Market (OTC)

(focus of this review)

An OTC market is a decentralised market in which market participants trade financial instruments directly between two parties electronically, without a central exchange or broker. They are known as dealer networks or markets. Dealers act as market-makers by quoting prices at which they will buy and sell and then investors make offers for it, bidding against each other.

Generally, OTC markets are less transparent than exchanges and subject to fewer regulations since a transaction can be executed in an OTC market without others being aware of the price. As a consequence, liquidity in the OTC market may come at a premium and the value of the security may vary widely depending on the market.

There are two main types of OTC markets. Firstly, the inter-dealer market, whereby trading takes place between different dealers. To hedge against risks prices are negotiated. Secondly customer market, trading between a dealer and a customer. A dealer provides the customer with prices for buying and selling derivatives.

OTC markets are subject to counter-party risk, that is the risk that one party in the transaction will default prior to the completion of the transaction or will not make the current and future payments required of them by the contract.

Exchange Traded Derivative Market (ETD)

An ETD is a derivative contract that is listed on an exchange, offering a regulated environment for trading. Key benefits include standardisation, liquidity, and ability to be traded on the secondary market. Futures and Options form the vast majority of listings.

Exchange traded derivatives are listed and traded on regulated exchanges such as the Chicago Mercantile Exchange (CME), International Securities Exchange (ISE) and the Intercontinental Exchange (ICE).

An exchange features standardised terms and specifications for each derivative contract, making it more convenient for investors to determine essential information. However, the standardised nature of contracts means that ETDs cannot be tailored and therefore make the market less flexible when compared to the OTC market.

Exchange Traded Derivatives are centrally cleared, rather than bilaterally settled.

Background continued

Derivative Market Structure – Clearing, Collateral and Settlement

Bilaterally cleared and settled[1] (focus of this review)

For OTC-traded derivatives, clearing and settlement traditionally remains bilateral between the two trading counterparties. A custodian structure can also be utilised:

Tri-party structure: *"the parties agree to the initial margin amount and a required value (RQV) is sent to the triparty provider to fulfil the collateral requirement".*[2] The triparty provider engages in various tasks, which encompass the automated transfer of collateral from the pledgor's own account, known as the "longbox," to the segregated account. These activities also include collateral valuation, optimization, substitutions, validation of eligibility, monitoring concentration limits, application of haircuts, and the generation of reports.

Third-party structure: *"the pledgor, its manager, or an administrator values the collateral, selects the collateral to be pledged along with confirming eligibility and concentration limits, attributes necessary haircuts and provides settlement instructions to the custodian. The custodian only provides settlement, segregation, and reporting services".* [2]

Recently, hybrid models have also been offered which provide a middle ground between these two traditional model types. Firms are required to conduct an internal cost assessment to understand whether services can be conducted internally or whether a third party provides a better alternative. Whichever arrangement is chosen, firms remain accountable for the terms agreed upon with their counterparties and are responsible for any necessary enhancements to their risk.

Centrally cleared and settled

ETD transactions, and OTC contracts where the counterparties have elected to do so, are submitted to a Central Counterparty clearing house (CCP).

Since the CCP itself acts as the counterparty for each transaction, the risk of counterparty to the derivative transaction defaulting on its obligations is eliminated. This contributes to the reduction of counterparty risk as CCPs can net on a multilateral basis, significantly reducing gross notional exposures.

The use of CCPs also simplifies the management of counterparty risk and collateral management, as bilateral exposures are replaced by a single exposure to the CCP. They further feature mark-to-market whereby gains and losses on every derivative contract are calculated on a daily basis.

The risk capacity of a CCP, like any other counterparty, is determined by its capital position, collecting margin, and its efficacy at marking to market. If a trader fails to meet margin requirements, the clearing house may liquidate securities or unwind the derivative position to restore the account.

1. Note that some OTC-traded derivatives can be centrally cleared, and certain types of OTC derivatives, in jurisdictions which have implemented the G-20 clearing obligations (2009), must be centrally cleared.
2. Triparty-vs.-Third-Party-11.7.19.pdf (isda.org)

Background continued

Derivative Market Structure – Issues in Current Practice

Following trade execution, the OTC bilateral / uncleared derivative collateral management process can be broadly divided into the following categories:

Calculation of Margin call

- **Trade capture** – the executed trade and its parameters are assigned to the portfolio netting set for the corresponding collateral agreement / CSA, which drives the trade population for margin calculation.
- **Exposure and Margin Calculation** – both counterparties value their portfolios, their exposure to each other, and the collateral amounts required to be transferred – the calculations performed as per the collateral agreement / CSA on the trade population.

Fulfilment of Margin call:

- **Collateral Management and Asset Selection** – the counterpartie(s) required to post collateral select eligible securities and/or cash to transfer.
- **Settlement** – collateral is posted / received.

A master agreement and associated Credit Support Annex, negotiated before the first trades are executed, will outline the transactions and product types eligible to be executed under the agreement, and various other parameters for the trading relationship, including inputs into the calculations, how to calculate the margin amounts, and eligible collateral.

Disputes over Margin Amounts

In an idealised example, both counterparties will agree on the margin call calculation. However, in a significant number of cases (~45% according to the FMSB Survey – see p.18) counterparties do not agree. These disagreements result in “disputes”, as they seek to investigate the disparity, which are both resource-intensive to investigate and which expose the counterparties to risk for as long as they are open.

Disputes can be caused by one or both of two main drivers:

- A mistake in a matter of fact, such as an incorrectly captured trade on one side: this is usually corrected, and/or
- A difference in a matter of opinion (on either the inputs, model, or timing): the parties may agree to disagree and note the difference on their internal records.

These differences in opinion occur as the master agreements may not have sufficient granularity on some of the inputs to the calculations, or indeed agree on the model to use for the calculation at all. In some instances, this is because the counterparties wish to maintain control over their calculation of risk and therefore must agree to disagree; in others, there may be a willingness in principle to agree a more precise definition, but it has not been negotiated in advance.

Automation, where properly implemented, is a key component in reducing “mistakes in fact”, not only removing human error but ensuring trades flow into the calculation on a timely basis – avoiding, for example, a trade being incorrectly excluded from the calculation due to only being processed in time for the next day’s calculation. It also assists in determining the drivers of the dispute, saving counterparties time in deciding how to react to the discrepancies.

Background continued

Derivative Market Structure – Issues in Current Practice continued

Settlement and Collateral Management Issues

Similarly, in an idealised example, the sending counterparty selects securities to post that are both acceptable to the recipient and which the recipient values to be equal to the collateral call, and receives such collateral without issues.

However, there can be uncertainties in collateral selection – for example, the definition of eligible collateral within the CSA or other collateralised product documentation may leave room for ambiguity. Market-wide structural issues also exist - no existing straight-through connectivity between counterparties and third-party custodians can lead to difficulty in recalling rehypothecated securities, especially in periods of volatility.

The OTC derivative market is also not immune from endemic issues with settlement, with settlement fails often due to SSI mismanagement or lack of agreement on settlement venues in advance.

Impact of existing automation solutions

While there are effective automated solutions available, they suffer from fragmentation, with limited take-up among smaller market participants. Reasons may include high-cost barriers and lack of perceived incentives, and limited awareness of solutions available. Concerns about data security on platforms also arise - some firms are reluctant to share proprietary risk or position data due to concerns about disintermediation, trading against and jurisdictional or regulatory sensitivities related to operational risks associated with data sharing. Additionally, automated solutions still may not work efficiently due to a lack of standardisation and interoperability between competing providers.

Strategies should be explored to enhance existing solutions, increase awareness, and promote their broader adoption. Some of these are considered in the FMSB Survey in Section 5 onwards.

Background continued

Derivative Market Structure – Issues in Current Practice continued

Desirability of Further standardisation:

The absence of prior agreement, as noted, can result in both disputes and settlement issues, and hinders digitisation and automation. For some items, counterparties may be able to bilaterally agree at the contract negotiation stage, but others rely on a critical mass of adoption to be viable – meaning standardisation.

Significant existing work in this area include the ISDA Common Domain Model (CDM) aim to standardise data inputs and digitise various aspects, others, like the ISDA Standard Initial Margin Model or ISDA SIMM® (SIMM), focus on standardising margin calculation methodologies.

There is not always appetite to agree in advance or standardise. Two major examples include non-agreement on FX snap times as inputs into valuation models – sometimes due to different geographical locations and end of days of counterparties – and non-agreement on the valuation model to be used as firms prefer to choose the one which best reflects their view of risk.

However, it is worth noting that standardisation may be used as a guide, rather than definitive. For example, a "Central Valuation Agent Lite" approach, where counterparties use a common model but are not bound by its results. This can nevertheless highlight whether the driver of the dispute was a factual discrepancy.

The FMSB Survey has sought to find the degree of consensus to standardise major drivers of disputes and highlight any which may be worth taking forward. Attitudes may also change over time – for example, in future the balance may tip further in favour of automation versus risk management in periods of high volatility.

The impact of volatility on collateral management

The lack of transparency in OTC markets can amplify problems associated with periods of peak volatility, such as shortages of collateral, further complicating matters with the presence of general wrong-way risk.

A number of recent global events have highlighted some of these challenges:

In September 2022, an unprecedented surge in gilt yields led to a significant decline in the net asset value (NAV) of Liability-Driven Investment (LDI) funds utilised by defined benefit (DB) pension funds for hedging pension liabilities. These funds faced substantial margin and collateral calls on their repo and derivative positions due to the increasing interest rates. To address this, funds were compelled to sell gilts to reduce leverage and raise cash, thereby improving their balance sheet. The ensuing selling pressure on gilt markets created a negative feedback loop, causing lower prices, additional margin calls and significant operational pressure on their processing.

In the commodity markets of 2022, heightened geopolitical events led to significant rises in margin requirements. Many commodity firms found themselves lacking in easily tradable collateral and faced challenges in promptly providing the required liquidity to their counterparties and clearing intermediaries. Consequently, banks were compelled to extend extra credit to these firms, and, in certain instances, authorities had to intervene to address the challenges confronted by these commodity entities.

Background continued

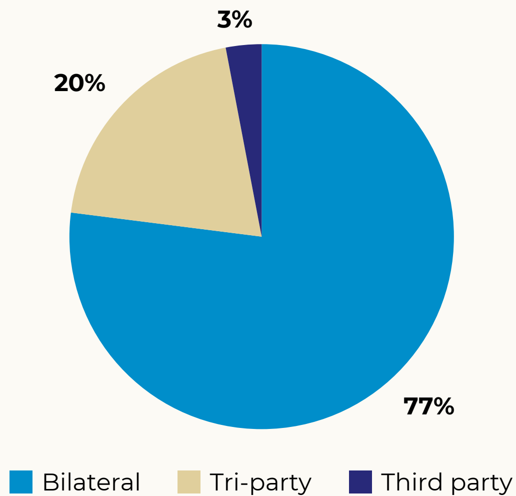
Derivative Market Structure – Why Continue to Trade and Settle Over-the-Counter?

Despite the frictions highlighted previously, the OTC market continues to be the predominant market used for derivative transactions for many reasons.

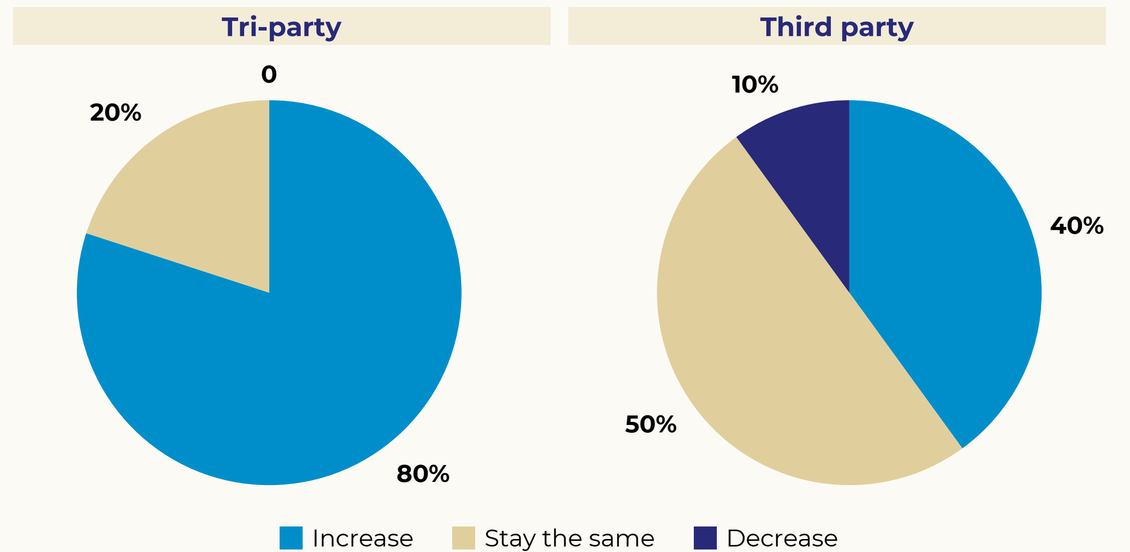
Current clearing and settlement methods: With the exception of one, all firms settle the majority of their OTC derivative activity bilaterally (based on the collateral settlement amount), averaging 77%.

Anticipated custodian clearing and settlement trends: Most firms expect tri-party settlement to increase. Most firms expect third party settlement to stay the same.

Distribution of Clearing and Settlement Methods Chosen by Firms:



Anticipated Change in Custodian Clearing and Settlement Methods:



For trading, the lack of standardisation is also a draw as OTC contracts are highly customisable between parties and almost all terms can be negotiated to create a bespoke product. OTC derivatives are also more diverse than exchange-traded derivatives, which are mostly limited to stock or equity, index, currency, commodities, or interest rate derivatives. Should a desired product not exist on exchange, it is significantly cheaper to enter into a bilateral contract.

Even if an ETD covers a counterparty's requirements, they may not be members of the exchange, and would need to transact through a broker to act as their agent.

For settlement, the lack of access is also a factor. One or both sides of the contract may not be a member of the CCP, or the product itself is not eligible for clearing. Even when this is not the case, the counterparties may choose not to clear – for example, they may wish to maintain ownership over the risk management of the position.

FMSB Uncleared Margin Survey Results – Key Themes

The working group and associated survey produced valuable insight into the current challenges faced in uncleared margin. In many areas, there was more agreement than anticipated on current problems and causes and potential solutions, with almost unanimous consensus and support for improved practices within the market. Some of the proposed solutions can also be implemented unilaterally by firms.

We would like to highlight five key themes:

1 Strong support for digitalisation of legal agreements earlier in the trade lifecycle

Automation can be implemented in many areas to reduce manual handling, but the take-up of new solutions in the pre-trade stage remain low, despite unanimous support for the use of digital negotiation and agreement reconciliation tools in principle.

The use of these automated solutions, together with greater data standardisation, can additionally help reduce ambiguities that may emerge later in the trade lifecycle.

2 Divergent views on valuation model standardisation, but support for their use in determining the cause of disputes

The survey responses showed that insufficient agreement on inputs and valuation models had the highest impact rating to firms compared to all other end-to-end trade lifecycle processes. While there is generic support to agree some of the triggers for disputes up front, survey responses show that the current adoption of this practice is very low, and there are split views on the two biggest drivers – FX snap rates and the use of common valuation models.

However, the use of CCP central valuation “lite”, where a common model is used indicatively, received widespread support. Such usage would allow counterparties to determine whether differences in output are due to inputs, or differences in methodology, and save time in resolving disputes.

3 Settlement fails are overwhelmingly driven by issues which have mature, existing solutions

The survey highlighted that settlement fails in the OTC derivative space are usually connected to much simpler processes. Over 50% of the survey responses relating to settlement fails are due to the lack of adhesion to best practice for SSIs, which were deemed to have the second highest impact to firms compared to other problems seen in the end-to-end trade lifecycle. Firms should ensure that counterparties share all relevant accounts including back-up cash collateral accounts in advance. Internally, firms must ensure that the SSIs they receive are clearly labelled in their reference data.

4 There is further capacity to “get own houses in order”

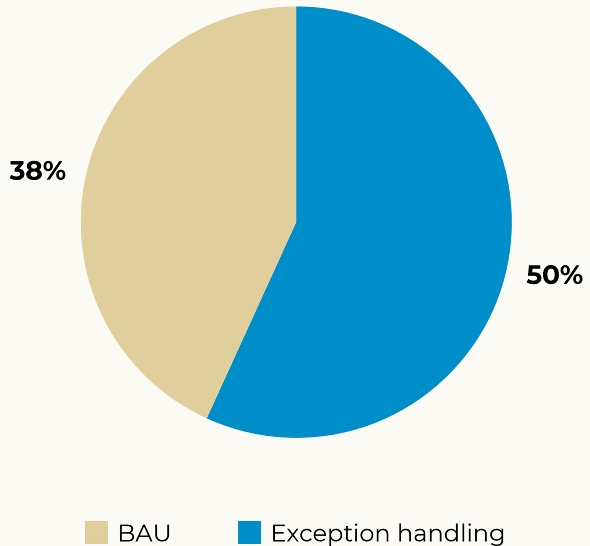
Firms must carry out their internal processes and practices as efficiently as possible. There are unilateral opportunities for firms to improve their own processes, with 60% of FMSB survey responses believing their own processes are the greatest area for improvement during dispute resolution. Over 50% of firms reported problems with the transposition of agreements into internal systems and the accuracy of feeds from agreement to collateral management systems.

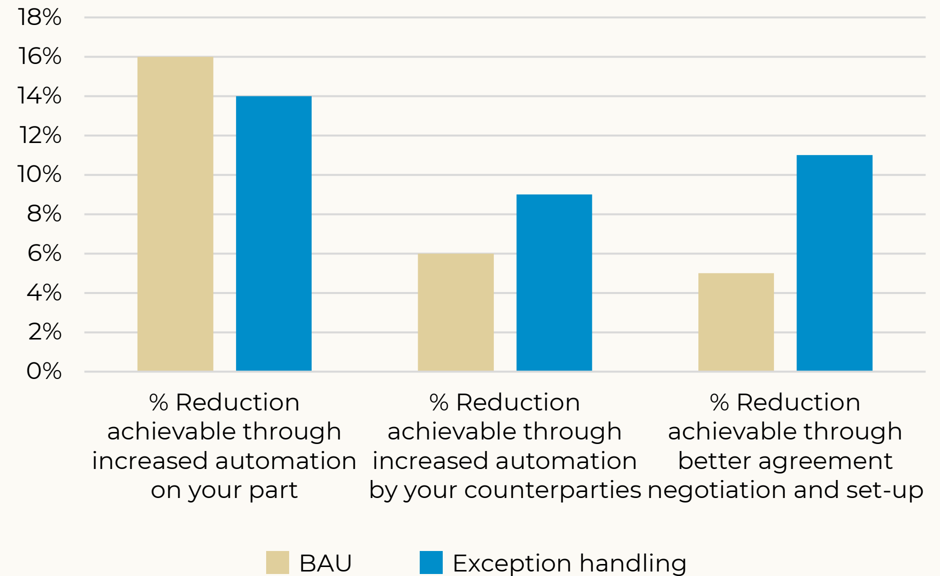
5 Strong support in principle for solutions to collateral management issues

While there were some divergent views, the survey responses also showed a desire from firms to standardise various practices in the end-to-end trade lifecycle that will assist settlement, such as the use of collateral eligibility checkers, negotiating eligibility schedules and clearly defining settlement timings in Agreement Negotiation stage, and creating dedicated nostro accounts for collateral.

FMSB Uncleared Margin Survey Results – Resourcing and Efficiency

Resource Allocation





Uncleared margin process activity

There is a wide variance between firms on what activities their resource is allocated to, but the majority lies with exception handling (breaks in STP, disputes, settlement fails, reconciliations etc.).

Anticipated time reductions

It is anticipated that the resource required for BAU activities and exception handling could be reduced predominantly via **increased automation on a firm's own part**. Average estimated resource reduction achievable is 16% and 14%, respectively.

FMSB Uncleared Margin Survey Results – Resourcing and Efficiency

Non-STP effort

Manual effort required

The highest manual effort required in the uncleared margin trade lifecycle is during trade capture and portfolio reconciliation, followed by call matching / agreement.

Automation levels

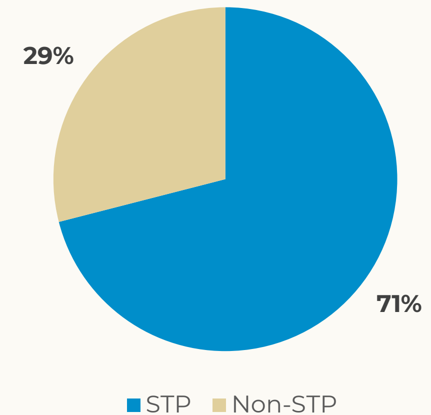
Most firms are already highly automated across the trade lifecycle, with between 75 – 100% the most common response except for trade capture and portfolio reconciliation, with the majority response being 50-75%.

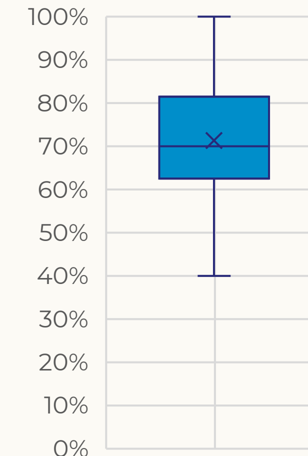
Causes of manual handling

Despite the high existing levels of automation, firms responded that non-automation remains the biggest cause of manual handling, with non-automation on the firm's side and the counterparty's side broadly equal.

	Manual Effort to manage STP Breaks			
Trade Lifecycle	High	Medium	Low	Most problematic area
Trade Capture & Portfolio Reconciliation	27%	53%	20%	Counterparty non-automation
Exposure & Margin Calculation	0%	13%	87%	Counterparty non-automation
Call Issuance	0%	13%	87%	Counterparty non-automation
Call Matching /Agreement	13%	33%	53%	Counterparty non-automation
Collateral Asset Selection	7%	29%	64%	Own non-automation
Collateral Move Booking	7%	27%	67%	Own non-automation
Settlement /Fails Management	13%	27%	60%	Own non-automation

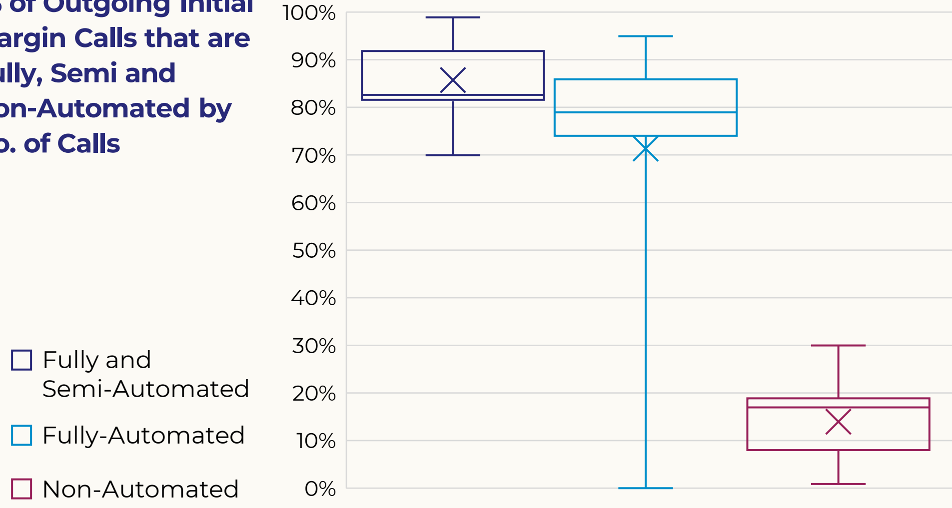
Average overall end-to-end processing STP percentages[1]

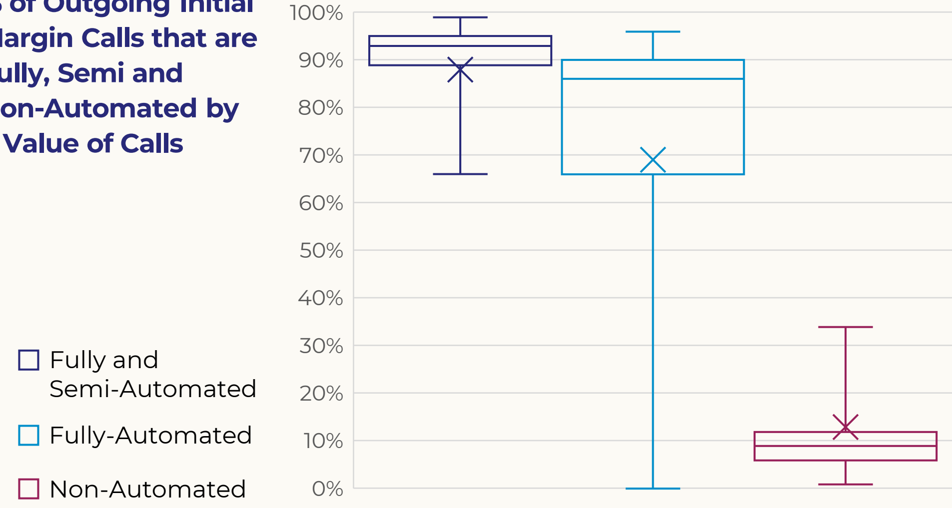


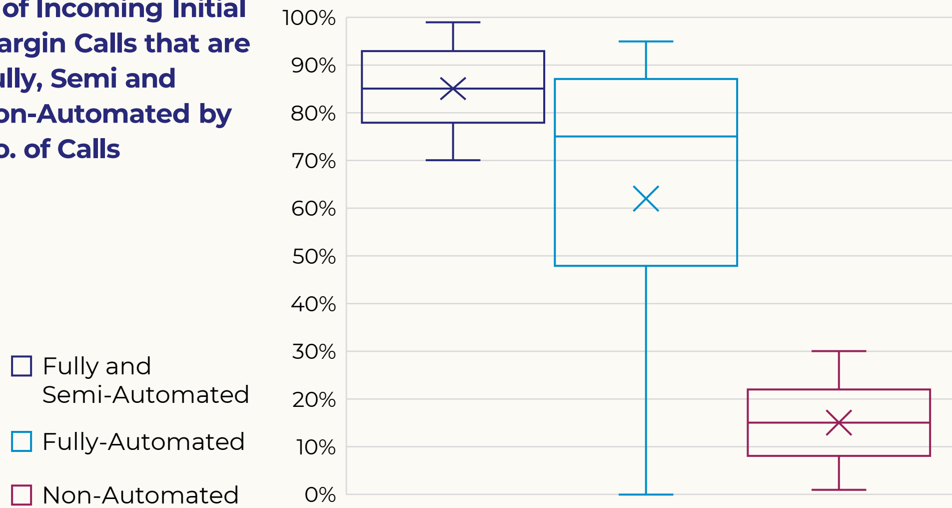


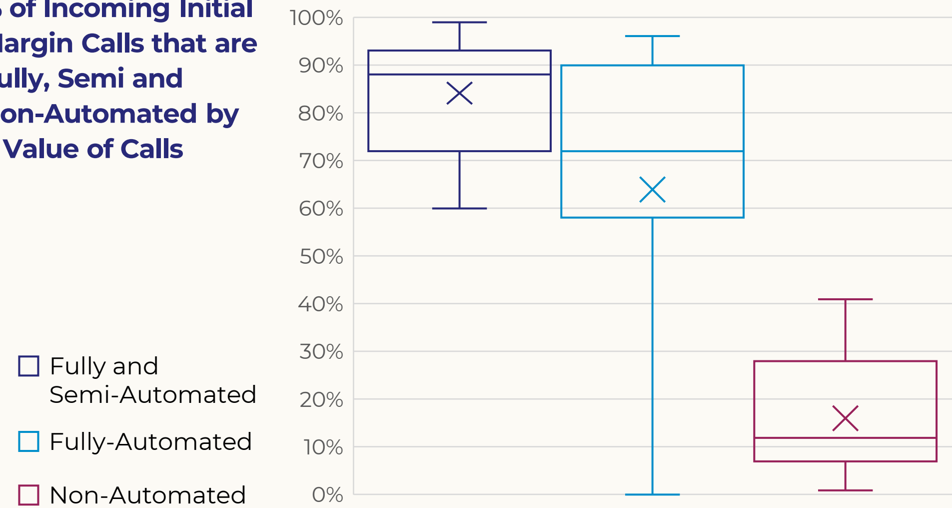
1. The lines and boxes in these diagrams represent the range, quartiles, and median of responses. The cross marks the arithmetic mean.

FMSB Uncleared Margin Survey Results – Initial Margin Call Automation[1]





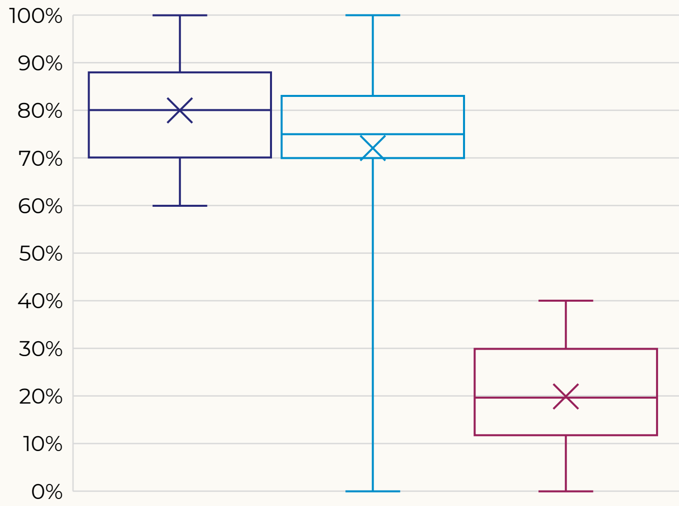




1. The lines and boxes in these diagrams represent the range, quartiles, and median of responses. The cross marks the arithmetic mean.

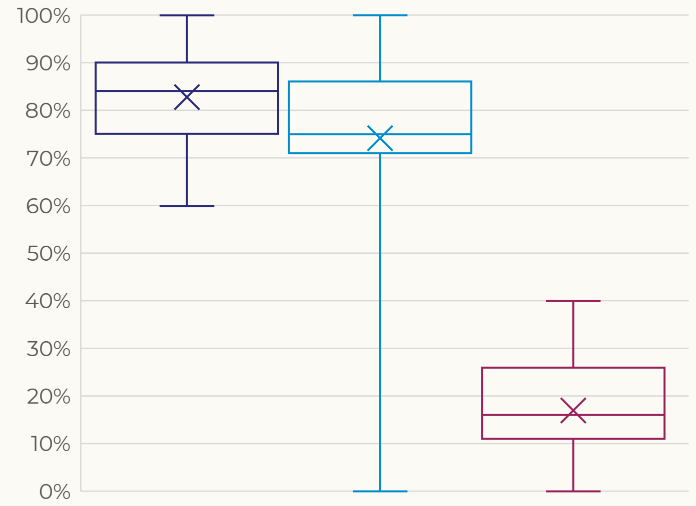
FMSB Uncleared Margin Survey Results – Variation Margin Call Automation[1]

% of Outgoing Variation Margin Calls that are Fully, Semi and Non-Automated by No. of Calls



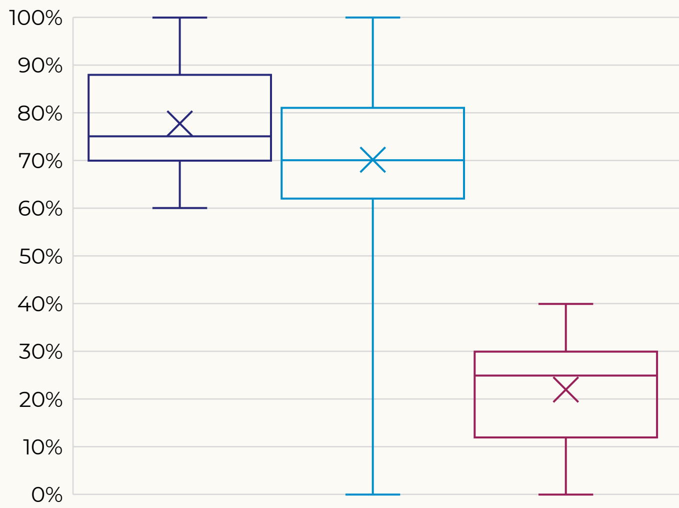
☐ Fully and Semi-Automated
☐ Fully-Automated
☐ Non-Automated

% of Outgoing Variation Margin Calls that are Fully, Semi and Non-Automated by $ Value of Calls



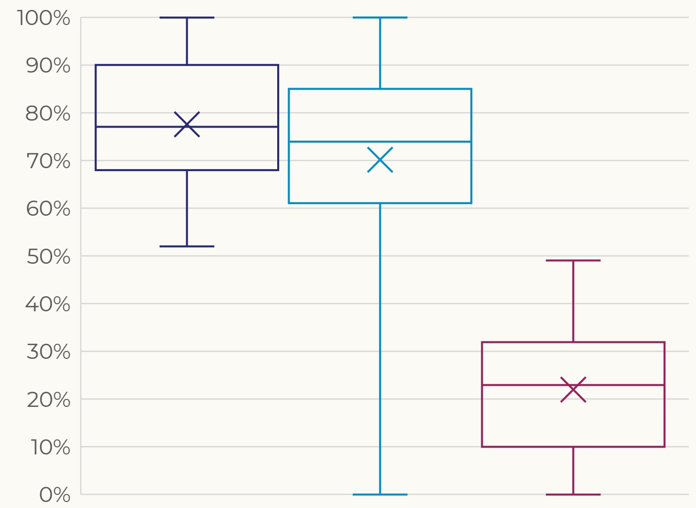
☐ Fully and Semi-Automated
☐ Fully-Automated
☐ Non-Automated

% of Incoming Variation Margin Calls that are Fully, Semi and Non-Automated by No. of Calls



☐ Fully and Semi-Automated
☐ Fully-Automated
☐ Non-Automated

% of Incoming Variation Margin Calls that are Fully, Semi and Non-Automated by $ Value of Calls



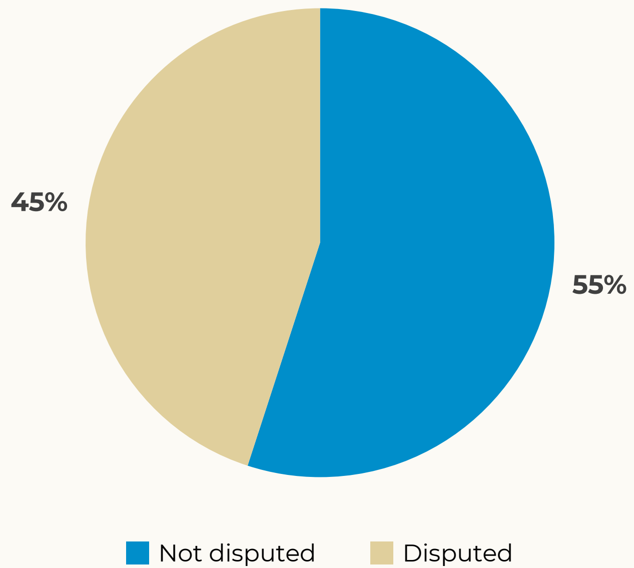
☐ Fully and Semi-Automated
☐ Fully-Automated
☐ Non-Automated

1. The lines and boxes in these diagrams represent the range, quartiles, and median of responses. The cross marks the arithmetic mean.

FMSB Uncleared Margin Survey Results – Disputes

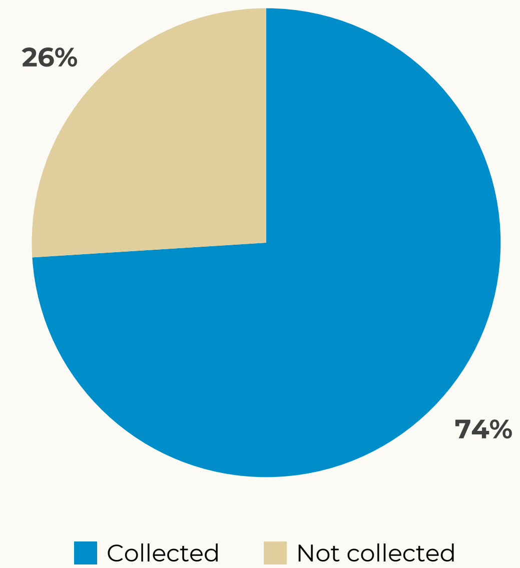
Margin call disputes

The average amount of **45%** of margin calls in June 2024 were disputed (either fully or partially).



Margin call collection

Margin collected as a percentage of margin called averaged **74%** for the month of June 2024.



FMSB Uncleared Margin Survey Results – Dispute Causes and Solutions

Disputes

Disputes are a common and often lengthy occurrence in the OTC markets. As previously advised, survey responses showed that 45% of margin calls in June 2024 were disputed (either fully or partially).

We questioned FMSB Member firms along three dimensions: what were the top drivers of disputes? Which solutions could help reduce the number of disputes? And which solutions could help reduce the time taken to resolve disputes?

Dispute Drivers

When asked for the top 3 drivers of disputes, the greatest responses were FX, insufficient agreement of inputs, and differences in valuation model used.

In more detail, FX timings (85%) and insufficient agreement on VM calculation models (70%) were where most firms replied there was either “high” or “medium” friction. Data timeliness leading to differences in population (70%), insufficient agreement of market prices (60%) and lack of daily portfolio reconciliation (55%) were next.

50% responded that problems with agreement transposition into systems were high or medium – which is a unilateral opportunity.

Reducing the Number of Disputes

The top 3 methods of prevent disputes were more upfront agreement and standardisation, greater agreement on the use of models including use of central valuation, and wider adoption of existing best practice. A write-in, which is very low tech and easy to implement, is to share contact lists with counterparties.

Reducing the Time Taken to Resolve Disputes

When asked for the top 3 solutions for reducing the time taken to resolve disputes, improving vendor take up was 30% of the responses, while daily portfolio reconciliation, more upfront agreement on sources and timing of inputs, and more industry data standards received about 10% each.

Notably, a few firms made similar comments as a write-in about workflow and certainly around where queries are to be directed, and their contacts; one identified counterparties who outsourced in particular, and ensuring that decision-makers are nominated where appropriate.

FMSB Uncleared Margin Survey Results – Dispute Causes and Solutions continued

By Trade Lifecycle:

The following were unanimously agreed as desirable solutions for Pre-Trade:

- Agree / standardise more terminology
- More common data standards
- Digital negotiation (very low current adoption)
- Digital reconciliation tools for agreements

On Trade Capture and reconciliation:

- 2/3 reported better internal communication between functions to ensure that ops can manage trades permitted under CSAs
- Unanimous call for vendors to create accessible solutions for non-users of these utilities
- Half would support sponsored access (a limited number already provide this, but for a limited set of clients)
- 75% recognised they could make improvements to own internal data processes to ensure accuracy of feed of agreement to systems

On exposure and margin calculations:

- 75% approved clearer definition of trade eligibility at negotiation stage
- Those who wanted ongoing FX snaps were equally split between supportive and not supportive
- 90% approved CCP Lite central valuation approach, but the adoption remains low
- Development of industry-approved models was supported by two thirds of participants, but opposed by the remainder
- 100% backed clearer agreement about sources and times for inputs
- 100% backed greater adoption of existing ISDA best practice on Trade Lifecycle events

FMSB Uncleared Margin Survey Results – Settlement Fails Causes and Solutions

Settlement Fails

There was generally more agreement on solutions to settlement fail, compared to dispute prevention. Additionally, it emerged that the greatest driver of settlement fails is not an OTC derivative-specific issue, with mature industry-wide solutions already existing.

Drivers of Settlement Fails

When asked for the top 3 drivers of settlement fails, respondents overwhelming cited the lack of adhesion to best practice for SSIs – and in more than one way. Over half the responses listed not having all relevant accounts, or incorrect labelling of the purpose of cash movements. Not sharing SSIs in advance was a "high" or "medium" problem for 85%, and 65% reported the same for not using utilities.

Collateral selection was a very distant second (13% of responses), with collateral release, use of CSDs, blockchain/tokenisation and response times between counterparties evenly split thereafter.

50% have medium or high difficulty in recalling hypothecated collateral. However, agreement on eligible collateral, methods of cash payments, and agreements of settlement venues do not cause significant issues for the significant majority.

Reducing the Number of Settlement Fails

There was unanimous agreement on the following solutions:

- All relevant accounts, including back-up cash collateral accounts, should be shared in advance. Less than 25% reported doing this for more than 75% of counterparties.
- Receivers of SSIs should ascertain their purposes and clearly label them in reference data. Over 60% do not do this for at least 75% of their SSIs.
- Use of collateral eligibility schedules (75% of respondents already use in 75 – 100% of cases)
- Automation of collateral selection (65% of respondents already use in 75 – 100% of cases)
- Market standard for transaction settlement identifiers to clarify purpose of cash movements

All but one respondent agreed on negotiating eligibility schedules in advance, or backing the use of CSDs.

85% backed defining settlement timings during agreement negotiation.

78% backed dedicated nostro accounts for collateral, although the survey noted that current usage remains low.

Recommendations

There were certain problems which were of high impact across the market, but no clear agreement on the best solution to address. They do not feature in the recommendations.

However, the working group and survey responses still conclude that there are clear and actionable areas for improvement in current practice which should generate meaningful efficiencies. There are two fundamental categories:

Firstly, improvements that can be unilaterally implemented immediately by firms and secondly, strategic market practices and tools that could be adopted.

Firms should be reminded of the additional benefit the recommendations can bring to periods of stress and volatility, as well as in BAU.

Enhancements that are actionable individually:

Where there are improvements that can be made unilaterally or bilaterally, there is no need to wait for more market agreement to adopt and they can be actioned internally by all parties immediately. This includes:

1. **Adherence to current industry guidelines**: Firms should ensure they are fully adhering to existing market guidelines. This includes the FMSB Standard on Sharing of SSIs (January 2025) which, if properly implemented, should significantly reduce rates of settlement fails. All SSIs used for collateral should be clearly labelled with this purpose.
2. **Enhancements to internal processes**: This review shows the openness of firms in highlighting their need to enhance internal processes. Firms must ensure that their processes and controls are as efficient as possible. Many simple and uncostly internal processes can easily be improved to make a significant positive impact on firms and the market. For example, issues such as the creation of shared counterparty contact lists and where queries are to be directed, and the need for better internal communication between internal functions.
3. **Automation of processes**: The review shows that firms believe the resource required for BAU activities and exception handling could be reduced predominantly via increased automation on a firm's own part. Firms should prioritise the automation of manual processes and controls to reduce their non-STP practices.
4. **Emerging Technology**: Firms, and vendors, should consider the use of emerging technologies (such as AI) to automate any residual portions of the manual market, as well as encouraging further automation from their counterparties.

Enhancements that require holistic market adoption:

Unanimous or near unanimous support was seen within the working group and survey for a number of strategic market practice improvements. Where there are improvements that require market adoption and (perceived or actual) first mover disadvantage, widespread or even unanimous support could encourage adoption. Strategies should be explored to enhance existing solutions, increase awareness, and promote broader adoption.

Digital adoption: Firms should prioritise agreeing and implementing the use of common tools that focus on areas such as digital agreement negotiation and/or digitisation of agreements, and portfolio reconciliation.

Further industry work:

Standardisation within the market: This review highlights the appetite of all firms for further market standardisation, with particular support for cash purpose indicators (which would help identify cash payments made in relation to derivative transactions), and central pricing indicators (independent reference prices for calculation inputs). The working group also supports the initiatives and priorities of ISDA in recent years, including ISDA SIMM, ISDA's Portfolio Reconciliation and Collateral Management Suggested Operational Practices, and the Common Domain Model for margin and collateral management use. We encourage the industry to focus on these as next steps.

But recognising that the nature of the OTC market is to accommodate bespoke transactions, there is a natural limit to the amount of standardisation. Equally important is being able to find the root causes of disputes for firms to act upon as appropriate. Industry service providers should consider improvements to the analytical tools currently in use, to support faster, and deeper, analysis of discrepancies.

Appendix: Problems and Solutions

In the following pages, Solution Desirability excludes those who expressed no opinion but where there were a significant number of respondees who did not respond, this is noted.

For Survey Consensus – Problem Impact Rating, Solution Desirability and Extent solution is Already Applied, the most popular response and the percentage has been noted.

The FMSB working group and survey identified a high number of common problematic areas and a high consensus of potential solutions to address these.

Pre-trade

Problem	Insufficient terms agreed up front	Non-interoperable data standards	Agreements incorrectly / incompletely transposed into downstream systems and processes		
Survey Consensus – Problem Impact Rating	50% - Low	60% - Low	53% - Low		
Solutions	Agree /standardise more terminology	More common data standards	Digital negotiation	Use of digital agreement reconciliation tools	Better governance around communication between trading, negotiators and operations
Survey Consensus – Solution Desirability	100% - Yes	100% - Yes	100% - Yes	100% - Yes	82% - Yes
Survey Consensus – Extent Solution Already Applied	60% - 75-100%	44% - 75-100%	91% - 0-25%	100% - 0-25%	45% - 75-100%
Existing Practice in Place?		ISDA CDM	ISDA Create Agreement Manager		
Barriers to Adoption					

Survey Consensus KEY

Problem Impact Rating: High, Medium, Low

Solution Desirability: Yes, No, No Opinion

Extent Solution Already Applied: 0-25%, 25-50%, 50-75%, 75-100%

Appendix: Problems and Solutions continued

Trade Capture and Reconciliation

Problem	Data timeliness leading to differences in population captured		Accuracy of feed from agreement to collateral management systems	Subjectivity over trade eligibility	Daily portfolio reconciliation is not required for all counterparty types and trade volumes
Survey Consensus – Problem Impact Rating	Medium – 47%		Low – 50%	Low – 60%	Low – 43%
Solutions	Vendors to consider solutions to allow automation without the counterparty being on the platform, e.g. convert emails (e.g. Acadia Relay) or digest file uploads (e.g. Triresolve)	Sponsored access for non-automated counterparties	Improve internal data processes and governance	Clearer definition at the agreement negotiation stage	Mandate daily portfolio reconciliation
Survey Consensus – Solution Desirability	91% - Yes	80% - Yes	92% - Yes	75% - Yes	64% - No
Survey Consensus – Extent Solution Already Applied	50% - 75-100%	This solution is N/A to 40% of firms. Of those in scope: 67% - 0-25%	60% - 75-100%	60% - 75-100%	This solution is N/A to 38% of firms. Of those in scope: 75% - 50-75%
Existing Practice in Place?	Yes, vendor solutions for portfolio reconciliation				
Barriers to Adoption	Smaller clients not on automated solutions, resulting in slower and less accurate trade population reconciliation. Vendors could consider functionality that allows for automation without a counterparty being on the platform, for example, ability to upload clients' data files, or convert emails. Sponsored access?				

Appendix: Problems and Solutions continued

Exposure and Margin Calculation

Problem	**Insufficient agreement of inputs: use of market prices**	**Insufficient agreement of inputs: use of FX**		**Insufficient agreement on VM calculation models**		**Insufficient agreement on around lifecycle events**
Survey Consensus – Problem Impact Rating	47% - High	67% - High		50% - High		47% - Low
Solutions	Clearer upfront agreement about sources and time taken for inputs	Clearer upfront agreement about sources and time taken for inputs	Ongoing snaps to minimise impact of large end of day fluctuations	Develop industry-approved models	CCP Lite central valuation agent approach	Greater adoption of industry best practice documentation e.g. ISDA Trade Life Cycle Events Guide for Non-Cleared Margin
Survey Consensus – Solution Desirability	100% – Yes	100% – Yes	55% - Yes	79% - Yes	90% - Yes	100% - Yes
Survey Consensus – Extent Solution Already Applied	70% - 0-25%	70% - 0-25%	75% - 0-25%	83% - 0-25%	83% - 0-25%	44% - 50-75%
Existing Practice in Place?	There is no existing work for this topic that we are aware of.	There is no existing work for this topic that we are aware of.				ISDA Industry guidance
Barriers to Adoption	(a) Broader industry agreement and agreement on central sources or timings to be used for the calculation of collateral balances. (b) Technology changes that may be required to support new sources or new valuation timings. (c) Appetite of market participants to address this issue.	(a) Broader industry agreement and agreement on central sources or timings to be used for the calculation of collateral balances. (b) Technology changes that may be required to support new sources or new valuation timings. (c) Appetite of market participants to address this issue.				

Appendix: Problems and Solutions continued

Settlement (Static Data)

Problem	Insufficient use of utilities for sharing SSIs	Not all SSIs are shared in advance	SSIs not correctly labelled in reference data
Survey Consensus – Problem Impact Rating	47% - Medium	53% - Medium	57% - Low
Solutions	Counterparties should share all relevant accounts including back-up cash collateral accounts	Counterparties should share all relevant accounts including back-up cash collateral accounts	Receivers of SSIs should clearly label their purposes
Survey Consensus – Solution Desirability	100% - Yes	100% - Yes	100% - Yes
Survey Consensus – Extent Solution Already Applied	31% each - 0-25%, 50-75% and 75-100%	31% each - 0-25%, 50-75% and 75-100%	50% - 75-100%
Existing Practice in Place?	Digital SSI platforms e.g. Alert, SSimple FMSB Standard on Sharing of SSIs (published January 2025) ISDA SOP: ISDA Standing Settlement Instructions Suggested Operational Practices (version 1.0 published 20 September 2024)	Digital SSI platforms e.g., Alert, SSImple FMSB Standard on Sharing of SSIs (published January 2025) ISDA Standing Settlement Instructions Suggested Operational Practices (version 1.0 published 20 September 2024)	Digital SSI platforms e.g., Alert, SSImple FMSB Standard on Sharing of SSIs (published January 2025) ISDA Standing Settlement Instructions Suggested Operational Practices (version 1.0 published 20 September 2024)
Barriers to Adoption			

Appendix: Problems and Solutions continued

Settlement

Problem	Disagreement on what constitutes eligible collateral			Inconsistent methods of transferring net cash payments means difficulty in reconciliation		Lack of agreement on settlement venues in advance	Difficulties in recalling hypothecated collateral
Survey Consensus – Problem Impact Rating	53% - Low			87% - Low		93% - Low	53% - Low
Solutions	Negotiate eligibility schedules in Agreement Negotiation stage	Use collateral eligibility checkers	Automate collateral selection	Market standard for transaction settlement identifiers to clarify purposes of cash movements	Dedicated nostro accounts for collateral	Use of central securities depositories	Clearly define settlement timings at Agreement Negotiation stage
Survey Consensus – Solution Desirability	93% - Yes	100% - Yes	100% - Yes	100% - Yes	79% - Yes	92% - Yes	86% - Yes
Survey Consensus – Extent Solution Already Applied	93% - 75-100%	79% - 75-100%	71% - 75-100%	40% each - 0-25% and 75-100%	46% - 0-25%	78% - 75-100%	75% - 75-100%
Existing Practice in Place?						Acadia – 3rd party messaging for release letters	No
Barriers to Adoption						Bi-lateral agreement to use platform	Difference in legal CSA on settlement timing

Appendix: Problems and Solutions continued

Disputes

Disputes are a common and often lengthy occurrence in uncleared margin practices. As previously advised, survey responses showed that 45% of margin calls in June 2024 were disputed (either fully or partially). Volumes dictate that not all disputes are reviewed and prioritisation in firms is required based on internal risk appetites and usually where they are exposed. Root cause analysis or thematic review of disputes along with remediating steps is not always prioritised, and in some cases technology development or market standardisation may be required.

Dispute Drivers

According to survey responses, 54% of disputes arise during the lifecycle stage of exposure and margin calculation, specifically the inputs and calculation models used. After the top three choices detailed below, survey responses highlighted that collateral balance, Mark to Market and valuation differences also have an impact on creating disputes.

Problem	Insufficient agreement of inputs: FX Snap time	Insufficient agreement on calculation models	Insufficient agreement of inputs: use of market prices
Survey Consensus – top three choices %	22%	19%	14%
Problem	Firms are using differing sources and grab times to mark their derivatives	There are challenges in agreeing valuations as firms use different models. This is most prevalent when calculating VM	Firms are using differing sources and grab times to mark their derivatives
Existing Practice in Place?			
Barriers to Adoption			

Appendix: Problems and Solutions continued

Dispute reduction

According to survey responses, firms believe that holistic agreement between firms and the use of centralised agents and models would help reduce disputes, which is in line with the top drivers.

	Clearer upfront agreement about sources and time taken for input	CCP Lite central valuation agent approach	Develop industry-approved models
Survey Consensus – top three choices %	21%	12%	6%
Problem	Firms are using differing sources and grab times to mark their derivatives	There are challenges in agreeing valuations as firms use different models.	There are challenges in agreeing valuations as firms use different models.
Existing Practice in Place?			
Barriers to Adoption			

Dispute timeliness

Dispute timeliness focuses on trade capture and portfolio reconciliation practices. According to survey responses, portfolio reconciliation enhancements would be the most beneficial area to reduce the time taken to achieve resolution of disputes. 64% of firms, however, stipulated they would not want daily reconciliations mandated, so potential solutions should perhaps focus on digital efficiencies.

Problem	Portfolio reconciliation	Vendors to consider solutions to allow automation without the counterparty being on the platform	Clearer upfront agreement about sources and time taken for inputs	Common data standards
Survey Consensus – top three choices %	21%	14%	10%	10%
Problem	Daily portfolio reconciliations are not mandated in the market.	Counterparties not using the platform	Firms are using differing sources and grab times to mark their derivatives	
Existing Practice in Place?				
Barriers to Adoption				