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Expanding the Universe of Eligible Variation Margin Collateral for Non-cleared Derivatives

CONTENTS

EXECUTIVE SUMMARY[1]

ISDA conducted a series of interviews with buy- and sell-side firms to understand the drivers of a growing use of non-cash assets as variation margin (VM) for non-cleared over-the-counter (OTC) derivatives and the barriers that remain to expanding the use of non-cash collateral. The firms interviewed span asset managers, pension schemes and global dealers across North America, the UK and Europe, and reflect a wide range of operating models, from fully in-house collateral programs to those outsourced to a custodian or collateral agent.

A clear consensus emerges from these conversations: the use of securities collateral for VM requirements is already widespread and is expected to grow. Firms are motivated less by the operational convenience of cash than by a desire to keep cash invested, to avoid reliance on the repo market and to maintain a diverse pool of pledgeable assets – not just for OTC derivatives but for all collateral requirements, such as securities lending and repo activity. Active managers view every dollar of cash pledged as a dollar uninvested. Pension schemes, mindful of the liquidity stress experiences of the past, such as the March 2020 'dash for cash' and the UK 2022 liability-driven investment episode, value the ability to pledge a broad range of securities rather than being forced to sell assets during a falling market. On the sell side, dealers increasingly regard the acceptance of non-cash collateral as a cost of doing business, driven by client demand, and some dealers are eager to expand their use of non-cash VM when allowed by regulation. While there are pricing and capital implications to consider, firms identified operational issues as the key obstacle to a broadening of eligible collateral.

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The operational frictions that accompany expanded eligibility are concentrated in a relatively small number of areas. They arise not in the movement of collateral itself, which participants generally regard as manageable, but in the surrounding processes (see Figure 1).

Figure1: Areas of Friction in the Expansion of Non-cash Collateral for VM

Eligibility	**Selection**	**Substitution**	**Servicing**	**Concentration**	**Settlement**
Defined in the CSA	Optimized Across Users	Recall and Replace	Coupons and Actions	Limits Checked at Pledge	Connectivity Across Systems

Many of these processes remain manual, are replicated firm by firm and depend on the quality of counterparties' staff and systems.

[1] This document does not constitute legal, accounting or financial advice and describes the range of views expressed by derivatives market participants who took part in these interviews. As with other guidance and market practice statements that the International Swaps and Derivatives Association (ISDA) disseminates, parties are free to choose alternate means of addressing the specific facts of their situation. Nothing in this document is contractually binding on any parties or amends any ISDA Master Agreement or ISDA credit support annex

THE PRINCIPLES

The principles set out in Figure 2 summarize what participants believe a future-state model for non-cash VM should achieve. They are intended to guide firms expanding eligible collateral schedules and inform industry efforts to reduce common frictions.

Figure 2: Future State for Non-cash Collateral

1. Standardize Standardize the definition and taxonomy of eligible collateral to remove ambiguity and operational disagreement Preserve pricing transparency as eligible collateral schedules broaden Adhere to the terms of the credit support annex (CSA)	**2. Automate** Automate substitutions, asset servicing and settlement messaging to reduce manual effort and points of failure Operationalize concentration limits within core collateral systems rather than through manual controls Reduce points of failure and reliance on the quality of individual counterparties' staff
3. Optimize Keep cash invested: minimize the funding drag created by pledging cash where eligible securities are available Enable portfolio-wide collateral selection and optimization across all collateralized obligations, beyond non-cleared VM Integrate collateral, trading, custody, valuation and settlement systems to create a single, consistent view	**4. Scale and Elevate** Reduce replication of collateral processing across the industry Support scalability across thousands of accounts, counterparties and instruments Elevate collateral management from a back-office function to a front-office discipline

CURRENT STATE OF VM COLLATERAL

Although the use of non-cash assets as VM is well established among the firms interviewed, the degree of adoption varies by region and mandate. For example, several buy-side firms report that the majority of the VM they pledge is non-cash, with estimates ranging from roughly half to as much as 80%. Others, particularly in North America, continue to predominantly pledge cash and US Treasuries. According to the 2025 ISDA Margin Survey[2], non-cash collateral for VM made up 32.4% of VM received by 32 reporting dealers, which is the highest since the survey began. Programs designed to maximize the use of non-cash typically reserve cash for situations of genuine need, a philosophy that participants describe as driven by portfolio managers rather than operations.

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In some firms, collateral businesses are often siloed, with securities lending, repo and derivatives collateral competing for the same inventory. In some organizations, lending has first claim on assets, with the remainder available to the collateral desk. Participants increasingly recognize the value of a holistic view that spans all obligations, and several report they are building dashboards to support it. Firms that have integrated liquidity, treasury, derivatives, collateral and lending into a single group cite this as an advantage in managing the trade-offs between funding, execution and operational efficiency.

[2] ISDA Margin Survey Year-end 2025, Chart 12, www.isda.org/a/nl6iE/ISDA-Margin-Survey-Year-end-2025.pdf

Cash remains attractive because it is fungible and simple to manage, and dealer-to-dealer flows continue to favor cash for the netting benefits it provides and due to regulatory restrictions. The use of non-cash, by contrast, requires a more developed collateral selection process, reliable market data for daily revaluation and the ability to manage asset servicing. Participants are broadly comfortable receiving either cash or securities, provided the collateral is eligible, but many prefer receiving cash so it can be easily reused. Core collateral systems and the sophistication of eligible collateral selection rules have improved markedly in recent years and participants generally agree that technology is no longer the primary constraint. However, more work is needed to expand the use of non-cash collateral for non-cleared VM in the future.

OBSERVED PAIN POINTS

What makes it difficult for firms to pledge and receive a broader range of VM collateral today? The list below, while not exhaustive, sets out some of the issues raised across the interviews.

- For dealers, non-cash collateral may create pricing and balance-sheet challenges, including refinancing risk, leverage and net stable funding ratio considerations.
- Eligible collateral is defined inconsistently across credit support annexes (CSAs) and definitions for asset classes, such as corporate bonds, can include 20 or more attributes, leaving room for operational disagreement even after a CSA is signed.
- There is no widely adopted industry taxonomy for describing collateral, so firms rely on various data vendors and legal opinions to reach different conclusions about what is eligible.
- Collateral selection is often reactive, with calls answered as they arrive rather than optimized across all obligations, and optimization tools remain rudimentary at some firms.

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- Multiple internal users, including lending, repo and the collateral desk, compete for the same assets, creating substitutions and settlement risk.
- Lack of workflow automation is resource-intensive, especially if firms don't have sophisticated in-house systems, third-party technology service providers or outsourced collateral management administrators.
- Substitutions are widely described as painful and largely manual, conducted by email, PDF or release letter, with initially low adoption of automated workflows.
- Asset servicing, including coupon payments and corporate actions, requires manual intervention that adds cost and is a particular obstacle to pledging equities.
- Concentration limits are difficult to operationalize within core systems and are frequently monitored manually, leading to friction with counterparties.
- Settlement systems are not well connected to collateral systems and settlement across multiple custodians and jurisdictions introduces delays.

- Adding non-cash collateral requires a security master and daily repricing. Market data feeds for a broad universe of securities can be resource-intensive and costly.

- Amending an existing CSA to expand eligibility is a time-consuming legal process and firms would prefer a means of changing schedules in bulk rather than agreement by agreement.

- Collateral management is often treated as a back-office function, which limits the investment and talent that firms are willing to devote to it

THE TARGET FUTURE STATE

This section examines the parts of the collateral lifecycle most affected by the expansion of eligible VM collateral. For each, the current process is described, the challenges to be addressed are set out and the opportunities that participants identify for a more efficient future state are summarized. Taken together, these describe a target state in which a broader range of collateral can be pledged and received with less manual effort, fewer disputes and greater transparency.

CSA Onboarding and Collateral Eligibility

Current Process

Eligible collateral is defined in the CSA negotiated between the parties. Many firms dedicate staff to codifying agreed schedules into their collateral systems, and the accuracy and consistency of that data is essential to straight-through processing. Definitions for asset classes beyond cash and government bonds – and for corporate bonds in particular – can be highly detailed and firms report that even a carefully negotiated definition can give rise to disagreement once it is applied operationally.

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Challenges to be Addressed

- Corporate bond definitions can include 20 data attributes or more and edge cases are common.

- There are inconsistencies in describing financial instruments, including data vendors describing the same instrument differently.

- Disagreements on eligibility surface at the point of pledge, requiring back-and-forth with counterparties and, in some cases, the need to rapidly identify an alternative security.

- Amending an existing CSA to broaden eligibility is a lengthy legal and risk exercise and firms would prefer to change schedules in bulk when appropriate, considering economic implications, rather than one agreement at a time.

Opportunities

- Standardized, unambiguous definitions and a common taxonomy for eligible collateral, adopted consistently across the industry.

- A shared reference library, such as one built on the Common Domain Model (CDM)[3], to resolve the corporate bond definition problem.
- Mechanisms to amend eligibility schedules efficiently and, where possible, in bulk.

Collateral Selection and Optimization

Current Process

Once a call is agreed, firms select collateral from the eligible pool (assuming the CSA allows the party to post more than cash). Selection is commonly based on the cheapest-to-deliver or lowest-quality assets first, while retaining securities that are special or lendable, and cash is typically posted last. Because calls are frequently answered as they arrive, firms cannot always optimize across all their obligations, and several firms describe optimization as a live project. More advanced firms have built algorithms that combine holdings data, restricted lists and corporate action calendars to identify which securities can be pledged and which should be restricted from collateral use.

Challenges to be Addressed

- Answering calls individually prevents optimization across the full set of collateral obligations, and assets pledged early in the day may prove suboptimal.
- Multiple internal users, including securities lending and repo, compete for the same inventory and firms must ringfence an amount for collateral while still using it efficiently.
- Selecting collateral requires near-real-time visibility of holdings and portfolio manager activity, so a security can be pledged and then sold without impeding the front office.
- The inability to manage concertation limits at the time of collateral selection can lead to pledges that the counterparty deems unacceptable; it is cumbersome to find and settle acceptable pieces of collateral.
- The data needed to determine when and where cash should be used is not always readily available.

Opportunities

- Portfolio-wide optimization that accounts for all obligations, internal users and concentration limits.
- Encumbrance tagging and improved investment-book-of-record data to increase visibility into the status of potential collateral.
- Near-real-time connectivity between trading and collateral, with alerts when a portfolio manager sells a pledged security.
- Tokenization, including workflows driven by smart contracts on distributed ledgers, along with near-instantaneous settled assets pledged as collateral.

[3] The Common Domain Model (CDM) is a standardized, machine-readable and machine-executable model that represents financial products, trades in those products and the lifecycle events of those trades. More information is available here: www.isda.org/isda-solutions-infohub/cdm/

Substitutions

Current Process

Substitutions arise during the ordinary course of managing a non-cash program and are amplified by concentration breaches and the sale of pledged securities. They are generally managed bilaterally via email and the exchange of PDF or fax release letters and can require dialogue with the counterparty's relationship manager. Automated workflows exist but adoption remains limited. Participants consistently identify substitutions as one of the most burdensome parts of the process, requiring additional headcount.

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Challenges to be Addressed

- Substitutions are largely manual and depend on the quality of counterparties' staff, creating a point of potential failure.
- They add settlement risk and can cause exposures to double, because both the recalled and the replacement security may be encumbered at the same time.
- When a security has been reused, unwinding the resulting chain adds to the operational burden.
- Some dealers have asked counterparties to limit the volume of substitutions.

Opportunities

- Broader adoption of automated substitution workflows provided by infrastructure providers, including improved connectivity between order management and collateral platforms.
- Standardized release-letter methodology and SWIFT messaging to replace bilateral, document-based exchange.
- Triparty arrangements, which can remove the need to manage substitutions bilaterally.
- Smart contracts on distributed ledgers, along with near-instantaneous settled tokenized collateral.

Asset Servicing: Coupons and Corporate Actions

Current Process

Holding securities as collateral requires firms to manage the associated servicing events. Coupon payments are often handled through a manual process to identify the payment and instruct the custodian. While several firms describe this as manageable, none regard it as ideal. Corporate actions on equities are materially harder to track, and firms recall securities ahead of record dates when necessary. When servicing is outsourced to a custodian or collateral agent, the burden shifts but does not disappear.

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Challenges to be Addressed

- Coupon management is frequently manual and adds cost, even when processing is performed in a low-cost location.
- Corporate actions, including dividends, stock splits and voting events, are difficult to manage at scale and deter the pledging of equities.
- Recalling a security before its record date is necessary but partly manual, and errors can be expensive.

Opportunities

- Automation of coupon identification, confirmation and payment routing.
- Integration of corporate action calendars into collateral selection, with a look-ahead window to avoid pledging securities near a servicing event.
- Solutions, including triparty and tokenized workflows, which could allow servicing to be handled automatically.

Concentration Limits

Current Process

As eligible schedules broaden, concentration limits by issuer, sector and rating become an increasingly important control. Firms report that these limits are difficult to operationalize within core systems and are often monitored manually, with the pledgor playing an oversight role and tracking how close it is to various limits. Credit officers may be reluctant to accept non-cash collateral where limits are a concern.

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Challenges to be Addressed

- Concentration limits are hard to embed in core collateral systems and are frequently managed through manual controls.
- A pledge that inadvertently breaches a limit leads to back-and-forth with the counterparty and delays settlement, increasing counterparty risk.
- Breaches are a significant driver of substitutions and friction with counterparties.

Opportunities

- Expanded adoption of technology service providers with robust automated concentration limit capabilities.
- Greater flexibility within core systems to check and enforce concentration limits automatically at the point of pledge.

- Implementation of the CDM's eligible collateral representation that includes attributes such as issuer, sector and rating to reduce disagreements.

- Standardized common schedules with the CDM for corporate bond collateral.

Collateral Settlement and Connectivity

Current Process

The movement of collateral is generally regarded as straightforward, but the difficulty lies in the surrounding infrastructure. Adding non-cash collateral requires a security master and daily revaluation, and firms must sometimes build reference data for obscure or newly pledged securities at short notice. Settlement systems may not be connected to collateral systems and settlement across multiple custodians introduces delays. Participants note that a broad, consistent data architecture, supported by an industry standard such as the CDM, is needed to ensure systems can communicate.

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Challenges to be Addressed

- Settlement systems are not well connected to collateral systems.

- Settlement across different custodians creates delays and firms would value a single point of settlement.

- Security master files must be built and maintained for a wide universe of securities and market data feeds for daily repricing, which can be costly.

- Fragmented data models and multiple investment books of record require manual reconciliation.

Opportunities

- An integrated collateral system connecting margin call management, reconciliation, valuation and settlement.

- Implement the CDM, including a conformed data architecture spanning investment-book-of-record, custody and static data.

- Improved connectivity between custodians or a single settlement location to reduce delay.

Emerging Solutions

Current Status

Participants identified three developments that could materially change the handling of non-cash VM. Triparty arrangements for VM are newly available, with limited uptake to date. Tokenization is widely discussed but at an early stage of adoption. Money market funds and US Treasury exchange-traded funds (ETFs) are attractive to firms seeking to keep cash invested, although their eligibility and operational treatment are not yet consistently acknowledged by regulators and counterparties.

Challenges to be Addressed

- Triparty offerings for VM have seen little uptake and the cost may be prohibitive for smaller firms.
- Tokenization is widely regarded as a longer-term solution, on a horizon of three to five years, and requires critical mass; managing a tokenized flow alongside a legacy flow is a concern.
- Traditional money market fund cut-off times remain a practical obstacle to converting cash into fund holdings.
- The eligibility of instruments such as money market funds and US Treasury ETFs is not harmonized across regulators, and data vendors do not consistently label them as eligible collateral.

Opportunities

- Triparty arrangements that solve substitutions, asset servicing and settlement together, potentially including a lighter-weight product for smaller firms.
- Tokenization that could reduce settlement lags and allow coupons and corporate actions to be managed automatically on chain.
- Tokenized money market funds may allow for extended hours.
- Policymaker agreement on the eligibility of money market funds and US Treasury ETFs, supported where necessary by regulatory clarification and data service providers.

CONCLUSION

The expansion of eligible VM collateral is, in the words of one participant, a "journey of inevitability". The direction of travel is clear: cash is no longer free, firms are unwilling to hold it at the expense of investment returns or rely on the repo market, and the events of recent years have underscored the value of a diverse and readily pledgeable pool of assets. The challenge is not whether to expand eligible collateral but how to do it in a way that is operationally sound and does not introduce new risk.

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After conducting outreach to ISDA member representatives from both buy- and sell-side firms, specific themes emerged that affirmed that, with at-scale adoption, non-cash collateral VM can become more streamlined and improve collateral optimization.

While emerging solutions are promising, they are not yet a substitute for near-term improvement. Triparty arrangements, tokenization and money market funds and US Treasury ETFs each hold promise, and industry momentum is moving from pilot to production. However, while these options continue to mature, firms are exploring interim improvements that are operationally focused to expand the use of non-cash collateral for non-cleared VM.

This document reflects the views expressed by buy-side and sell-side participants in a series of ISDA interviews on the use and expansion of non-cash variation margin. Individual firm views varied, and the summary above represents areas of broad, although not universal, consensus.