ISDA Safe, Efficient Markets

# ISDA Portfolio Reconciliation, Dispute Management and Reporting Suggested Operational Practice

## Document Version: 3.0

This document should be considered a working document based on the industry's implementation of the final document published by the BCBS-IOSCO on Margin Requirements for Non-Centrally Cleared Derivatives in September 2013 and the subsequent final Portfolio Reconciliation rules issued be the European Commission (EC) [1], the U.S. Commodity Futures Trading Commission (CFTC)[2], U.S. Securities and Exchange Commission (SEC)[3], Monetary Authority of Singapore (MAS)[4], Hong Kong Monetary Authority (HKMA)[5], Hong Kong Securities and Futures Commission (HKSFC)[6], and Australian Prudential Regulation Authority (APRA)[7].



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[1] European Commission (EC) 'Regulation (EU) 149/2013' (Article 13). https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32013R0149

[2] 17 CFR §23.502 Portfolio Reconciliation https://www.ecfr.gov/current/title-17/chapter-I/part-23/subpart-I/section-23.502, with relevancy to §23.500 Definitions https://www.ecfr.gov/current/title-17/chapter-I/part-23/subpart-I/section-23.500.

[3] 240.15Fi-3 Security-based swap portfolio reconciliation.

[4] MAS Guideline No: SFA04-G09.

[5] HKMA Supervisory Policy Manual CR-G-14

[6] Hong Kong SFC – Code of Conduct

[7] Australia Prudential Standard CPS 226.

# Contents

# 1 Introduction

The International Swaps and Derivatives Association, Inc. (ISDA) utilized the following working groups to explore current processes for approaching reconciliation and dispute management for both collateral margin differences and for regulatory portfolio reconciliation obligations within the requirements put forward by BCBS-IOSCO, keeping within the regulatory framework.

- ISDA Portfolio Reconciliation and Reporting SOP (Suggested Operational Practice) working group
- ISDA Initial Margin Dispute Processing sub-working group
- ISDA Data and Reporting U.S. Compliance working group
- APAC Portfolio Reconciliation working group

The working groups' objectives were to first review previously published ISDA best practice materials from 2008 to 2013 and compare to processes currently in place at organisations today. This enabled the working groups to develop a revised 2022 suggested operational practice for standards which provides guidance to market participants. The 2021 Initial Margin Dispute Processing SOP has been incorporated into this updated resource to provide full coverage of the processes. Initially, the document referenced US and EU requirements. The second edition, published in 2023, includes APAC requirements.

The purpose of this document is to define suggested operational practices that provide a practical approach to enable effective management of portfolio reconciliation processes that are used for collateral or regulatory purposes. The document touches on related business processes and technology considerations including issue identification, workflow and escalation, dispute processing (margin and regulatory), and dispute reporting.

These suggested operational practices may be aspirational for some market participants who are establishing new processes or for those enhancing existing processes to include regulatory or initial margin (IM) procedures. Their consistent accomplishment across the market professional community will lead to a material improvement compared to current operational, compliance and risk management practices and should form a basis for future advances.

Please note: there are various uses of the term 'dispute' in the context of portfolio reconciliation. From a collateral perspective, a dispute is commonly understood to be a dispute in the amount of margin that needs to be exchanged. Margin disputes usually occur because of differences in the underlying portfolio populations or a disparity in the counterparties' views on associated exposure. However, from a regulatory perspective, the word dispute commonly means a difference in either valuation or parameters. Certain differences are reported to regulators as disputes, which may or may not align with an actual margin dispute. This is an important contextual difference.

# 2 Portfolio Reconciliation Process Considerations

Proactive portfolio reconciliation using industry utilities is an established best practice for OTC bilateral derivatives. It is such an effective credit risk mitigant that regulators made portfolio reconciliation a requirement in multiple jurisdictions.

Firms establishing or updating their portfolio reconciliation function need to take many items into consideration as they formulate their process. Portfolio reconciliation related procedures will naturally vary somewhat based on the purpose of the reconciliation; however, all reconciliation processes have some common elements.

## 2.1: Portfolio Valuation Date

Portfolios should be valued and populated as of close of business for the business day immediately preceding the reconciliation date.

## 2.2: Portfolio Population

The portfolio population that is the target for reconciliation will vary based on the purpose of the reconciliation. Firms should take care to ensure the portfolios they share are aligned to reconciliation purpose to ensure a like-for-like comparison. For example, variation margin (VM) related reconciliations should contain collateralized trade populations that are aligned with the underlying margin agreement. Regulatory reconciliations will require all trades between two legal entities regardless of whether they are collateralized or not. Finally, IM related reconciliations should contain risk arrays related to trades that are subject to an IM margin agreement.

## 2.3: Understanding Internal Data Flows

Variations in process standards will contribute a significant amount of noise within reconciliations and can generate differences between counterparties. It is therefore important that counterparties understand their internal front-to-back process, along with data and pricing sources, as well as market standards for reconciliations to ensure they minimize inadvertent breaks/exceptions as part of their process.

The timing of trades entering and leaving the portfolio is addressed in the Suggested Operational Practices for the OTC Derivatives Collateral Process, located in the ISDA Margin InfoHub's Collateral Management SOP page. However, counterparties do need to understand their own process and compensate in the shorter term for issues yet to be addressed by IT fixes or changes in market practice.

## 2.4 Understanding a Counterparty's Process

Both counterparties should understand the size and nature of their respective teams. In this respect, it is advisable to exchange contact lists including escalation contacts and ensure these are checked and updated at regular intervals (every 6 months recommended.)

Successful reconciliation (that is, a timely and accurate reconciliation), depends on both counterparties working together at the same time and with similar-level of priority. Where counterparties have a good understanding of their own and their counterparty's practices for timing and booking of trades, as well as valuation and FX conversion practices, the investigation process can be streamlined to focus on true discrepancies.

## 2.5 Data Standards

Presentation by counterparties of portfolio details for reconciliation in a consistent format and with agreed-upon standards is the foundation for successful reconciliation. There needs to be sufficient data to differentiate transactions; that data needs to be internally consistent within the portfolio (and across products), and the data needs to be in a form that can be readily exported to a reconciliation tool.

Data standards address how trades are represented and how data is presented in the collateralized trade portfolio. ISDA has worked to standardize the different approaches used across the market and to harmonize these into a set of minimum criteria for trade presentation. For collateral disputes, the resulting body of work ISDA Suggested Minimum Market Standards for Collateralized Portfolio Reconciliations should be taken as the minimum entry-level criteria for performing collateralized

portfolio reconciliations in the derivatives market, although regulatory requirements for required reconciliations may differ. (Please refer to Section 8 'Regulatory Portfolio Reconciliations.')

## 2.6 Trade Identifiers

As a result of the G20 Leader commitments from the 2009 Pittsburgh Summit,[8] CPMI, IOSCO and FSB have developed and recommended to global regulators a set of globally harmonized standards[9] ("Global Harmonization Recommendations"). As the Global Harmonization Recommendations are adopted and implemented across jurisdictions, ISDA strongly encourages use of such identifiers including, Unique Transaction Identifier (UTI), and Legal Entity Identifier (LEI), and the Unique Product Identifier (UPI, for portfolio reconciliation (at such time the UPI system is live.))

To facilitate trade matching, each trade in the portfolio should contain the UTI (which may be referenced in the Confirmation). Optionally, counterparties may choose to incorporate or reference any trade or match IDs generated and provided by shared third-party vendors. Each counterparty should also submit their unique internal ID attached to each trade to facilitate internal traceability for error investigation and corrections. This ID should remain consistent for the life of the trade. In the event of a re-booking where the original trade ID is replaced, it is advised to retain internally a reference of the original trade ID and its association with new bookings for matching purposes. *Please note: The UTI has replaced the USI on 5th December 2022; legacy trades will retain current USI*

If a principal tracks their counterparty's trade identifier, including it in the portfolio data can also facilitate the matching process. Structured trades presented using multiple legs should have an additional common group/structure ID assigned to all legs to facilitate the trade matching process.

Every trade within a portfolio, including structured trades, should have a clearly identified product classification using, at a minimum, an appropriate product class. Once the UPI system goes live, the UPI should be included in the reconciliation file for each trade.

LEIs identifying both counterparties (and trading entity such as an execution agent, if applicable) should be submitted as part of the reconciliation file since these should be captured during the confirmation process.

## 2.7 File Transmission/Data Security

Reconciliation files should be transmitted by secure means. The principle of secure data transmission is important because of the sensitive nature of the data.

Secure transmission is commonly available through secure email tunnels between counterparties, vendor APIs, SFTP transfer and FpML-supported services. Firms should avoid transmitting reconciliation files via open email as this is vulnerable to security breach. Where email transmission is unavoidable, counterparties should encrypt and/or secure files with passwords. Care should be taken when dispatching sensitive data that it is sent to the correct recipient, and receipt of files by the recipient acknowledged.

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[8] *G20 Leaders Statement: The Pittsburgh Summit* (September 24-25, 2009), http://www.g20.utoronto.ca/2009/2009communique0925.html

[9] CPMI_IOSCO Technical Guidance - Unique Transaction Identifier (UTI).
UTI: ISO 23897
CPMI-IOSCO Technical Guidance - Unique Product Identifier (UPI).
UPI: ISO 4914
FSB designates DSB as UPI Service Provider (May 2019)
The Global LEI System (GLEIS)
LEI: ISO 17442

## 2.8 Reconciliation Technology and Solutions

Counterparties should use reconciliation technology for reconciling their portfolios, whether that comprises an in-house solution, or a third-party vendor. Automated solutions significantly reduce the number of resources necessary to reconcile portfolios. Vendor solutions add transparency between counterparties which can make bilateral reconciliations faster, better controlled, and enable more efficient workflow with the added benefit of a coherent process across all counterparties.

OTC Derivative Portfolio Reconciliation is largely carried out today using industry utilities. Such reconciliation compares the two counterparties' portfolio(s) as of a given business date to identify differences to be investigated.

## 2.9 Using In-house vs. Third Party Vendor

| Attribute | In-house Solution | Third Party Vendor |
|---|---|---|
| Industry-standard fields | X | X |
| Future development costs are mutualized | | X |
| Firm-specific customization | X | |
| Low barrier to entry/switch costs | | X |
| Interoperability with counterparties | | X |

## 2.10 Onboarding Considerations for Third Party Vendors

When onboarding a third-party vendor, it is important to recognize that the third party does not take on the regulatory responsibility for the user.

In addition to conducting a thorough third-party vendor review, including privacy and cybersecurity mitigants, the third-party vendor should be using portfolio reconciliation industry standards.

## 2.11 Managing FX Swap Differences

Valuation and population differences may occur due to misaligned FX Swap transactions in portfolio reconciliation. This is a result of varied strategies and system feeds on what is included in trade portfolios, specifically if the near leg, the far leg, or both are included in the portfolio reconciliation and what the ramifications if there are disputes because a counterparty does not report the same level of data.

Operationally, exposure differences driven by FX Swap disparity between the counterparties may cause disputes. If a counterparty includes only the far leg or only the near leg, this can in most cases misrepresent the full trade and lead to mismatches. Also, the near (spot) leg can be excluded as recognised and be considered a stand-alone trade. It is recommended that both legs of the FX Swap transaction should be included in the trade portfolio for effective reconciliation.

However, it is understood that some firms systems do not currently include both legs of the FX Swap transaction in the portfolio and this may require technical enhancements to align to this approach. It is

recommended to work towards system alignment with counterparties as soon as is reasonably achievable to reduce disputes of this nature.

# 3 Additional Process Considerations for Portfolio Reconciliation Supporting Variation Margin

For VM purposes, the primary focus of the reconciliation is to prevent VM disputes from occurring and/or to quickly identify dispute drivers when such a margin dispute does occur.

VM exposure calculation is linear, meaning the sum of exposure for all trades in the portfolio equals the Gross Exposure that goes into the margin call requirements calculation. Therefore, each trades' contribution to Gross Exposure is very straightforward.

Proactive reconciliation of OTC bilateral derivative portfolio populations and Mark-to-Market's (MTMs) enables earliest identification of potential issues and maximizes the resolution window. Portfolio reconciliation is also essential to understand what is driving disputes once they arise.

Independent Amount (IA) reconciliations are typically tied to the VM process. Where complex calculations are used to determine an IA, reconciliations may be done separately.

## 3.1 Trade Population

To correspond with the objective of the VM reconciliation, the trade population for each portfolio should be consistent with the trade population contemplated by the governing VM collateralisation agreement. Portfolio contents should also be consistent with the trade population and valuations used for calculating exposure for the VM requirement.

## 3.2 Reconciliation Frequency/Timing

Portfolio reconciliation for VM purposes is typically performed each business day using portfolio snapshots (population and MTM) taken as of the previous close of business date.

## 3.3 Reconciliation File Fields

From a VM perspective, reconciliation files should include fields identified in the Data Standards in Section 2 (trade identifiers, counterparty and trading entity identifiers and product identifiers), along with enough trade details to properly enable a meaningful comparison of Mark-to-Market values. Fields required vary slightly by product type, but will typically also include trade notional(s) or quantity, currency(ies), start and end date as well as information about the trade underlier floating rate reference, commodity type, credit tranche, etc.

The derivatives market has adopted suggested practices for data presentation for collateral disputes portfolio reconciliation. ISDA and its members created ISDA Suggested Minimum Market Standards for Collateralized Portfolio Reconciliations – as a guideline of fields to be included in reconciliation files for VM purposes for each asset class.

Common root causes for VM differences appear in Section 5 'Collateral Reconciliation Exception Processing.'

# 4 Additional Process Considerations for Portfolio Reconciliation Supporting Regulatory Initial Margin

For IM purposes, the primary focus of the reconciliation is to quickly identify dispute drivers when a IM dispute does occur. Since IM is both collected and paid each day, there are usually two IM reconciliations per relationship each day.

IM exposure calculation is non-linear, meaning the sum of exposure for all trades in the portfolio will not equal the Gross Exposure that goes into the margin call requirements calculation (Pledgor or Secured). Therefore, each trades' contribution to Gross Exposure is somewhat obscured when the ISDA SIMM™ is used as the calculation model.

Daily reconciliation for IM enables earliest identification of potential issues, maximizes the resolution window and is essential to understand what is driving disputes once they arise.

## 4.1 Trade Population

To correspond with the objective of the IM reconciliation, the trade population for each portfolio should be consistent with the trade population contemplated by the governing IM collateralisation agreement. Portfolio contents should also be consistent with the trade population and methods used for calculating exposure for IM requirements.

The regulations specify that you can calculate IM using two different approaches:

- Schedule-based calculation (Grid)
- Regulatory approved model-base calculation, such as the ISDA Standardized Initial Margin Model ("ISDA SIMM")

ISDA SIMM is the primary IM Exposure calculation method in use across the market today. As smaller firms come into scope with UMR Phase 6, there may be more entities using the BCBS-IOSCO Schedule (Grid) method.

ISDA has produced an overview of the two approaches and the challenges involved across both. The material also provides steps taken for the calculations and key implementation considerations. This can be found on the ISDA website, Initial Margin Calculation Methods: ISDA SIMM and GRID.

For both IM calculation methods, firms will need to identify in-scope transactions including new trades from their respective phase-in date and any legacy trades which could be brought into scope via a lifecycle event. Please refer to the following material available on the ISDA website Margin InfoHub which can assist in this exercise: In-Scope-Products-Chart and Trade Life Cycle Events Guidance.

## 4.2 Reconciliation Frequency/Timing

Portfolio reconciliation for IM purposes is typically performed each business day using portfolio snapshots (population and sensitivity calculations) taken as of the previous close of business date.

## 4.3 Reconciliation File Fields

From an IM perspective, reconciliation files should include fields identified in the Data Standards covered in Section 2 along with corresponding details of each trades' applicable sensitivity risk types, tenors and buckets needed to calculate IM using either ISDA SIMM or BCBS-IOSCO Schedule amounts.

# 5 Collateral Reconciliation Exception Processing

The following section touches on the valuation differences in collateralized portfolios, in particular potential causes of mismatches in the values calculated by counterparties. ISDA expresses no opinion and makes no suggestions on how a trade or collateral asset is or should be valued and the discussion relating to valuation is strictly limited to the identification of some common causes for valuation mismatch as identified to ISDA by market participants. Other causes of valuation differences not covered in this section may also exist.

## 5.1 Issue Prevention and Resolution

There are various types of issues which contribute to margin disputes, and these can differ across VM, IM, and IA. To ensure that dispute driving issues are managed effectively, firms need to define their approach to surfacing and managing potential issues.

Members of the ISDA working groups identified common root causes that drive disputes. Participants agreed that establishing a common understanding and suggested operational practice around the main drivers of disputes would be helpful. They also agreed that it would be helpful to share information around the common root causes that drive disputes for each margin type. A table containing common potential root causes appears below. The root cause in question impacts agreement type categories that include an "X" to the right.

| Category | Root Cause | VM | IM | IA |
|---|---|---|---|---|
| **Population Differences** | Unmatched New | X | X | X |
| | Unmatched Terminated/Expired/Matured | X | X | X |
| | Mis-booked margin agreement | X | X | X |
| | Mis-booked legal entity | X | X | X |
| | ISDA SIMM sensitivity population | | X | |
| **Valuation Differences** | Missing / Zero / Stale MTM | X | | |
| | Large MTM Swing | X | | |
| | Cashflow / Cashflow Timing | X | | |
| | FX Snap Timing | X | | |
| | Negatively correlated MTM (backward booked trade) | X | | |
| | Persistent MTM difference (valuation methodology) | X | | |
| | IA value discrepancy | | | X |
| **IM Differences** | ISDA SIMM sensitivity population difference | | X | |
| | ISDA SIMM sensitivity silo / bucket / risk type misalignment | | X | |
| | IM Model diff (ISDA SIMM vs Grid) | | X | |
| | Notional Add-on | | X | |
| | Grid variables (Product Class / Notional / Tenor) | | X | |
| | Regulator not specified/jurisdictional differences | | X | |
| | Index decomposition variances | | X | |
| **Collateral Differences** | Missing / Failed collateral movement | X | X | X |
| | Haircut discrepancy | X | X | X |
| | In-transit collateral treatment discrepancy | X | X | X |
| **CSA Difference** | Credit Support Annex term discrepancy | X | X | X |

## 5.2 Population Differences

Population issues are common drivers of disputes and can be a root cause driver for VM, IM and IA disputes. They occur when one counterparty includes a trade, and the other counterparty does not. Special types of population differences include legal entity and agreement mis-bookings. A mis-booking means that a trade has been included in an incorrect legal entity or margin agreement by one counterparty. This type of error causes disputes for both the legal entity or agreement that now includes the trade as well as the legal entity or agreement the trade should have been included.

The VM reconciliation process is considered the primary process to capture population differences. This is because while nearly all trades are subject to VM, only a subset of trades are potentially subject to IM. For firms who are in-scope for IM, only those trades executed after the in-scope data are included in the IM portfolio.

Population issues related to newly executed trades are a large driver of IM disputes. This is because potential future exposure is at its height when a trade is executed, and that is what IM is meant to cover. New trades are typically executed at or near market price, meaning that their MTM is close to zero and therefore does not have much impact on VM which covers current market exposure.

Inversely, population issues related to trades that are nearing maturity or expiration may have a large impact on VM while their impact on IM is negligible. Firms' procedures should reflect this to ensure that population differences affecting both VM, and IM are prioritized appropriately for investigation.

Getting IM trade populations aligned requires awareness of several nuances as delineated in the Section 4 'Additional Process Considerations for Portfolio Reconciliation Supporting Regulatory Initial Margin'. However, under IM, there is an additional population difference type. When using ISDA SIMM, there is a possibility that the array of risk buckets and/or sensitivities that one counterparty attributes to a trade will vary from the counterparty they are facing. This is a nuance that firms should recognize because it can occur even when IM in-scope trade populations are well-aligned between counterparties.

## 5.3 Valuation Differences

Valuation differences are common drivers of both, there are various types of scenarios that cause MTM discrepancies. We split them into multiple buckets because the underlying root cause/mechanism to fix the issues are different.

For VM, there can be MTM errors including:

- Stale MTMs that are not up to date, which are generally caused by a firm's inability to easily value trades daily. This tends to occur more frequently on trades that are very complex or illiquid. When these trades are periodically revalued and the MTM included in the portfolio, they can cause large/unexpected MTM swings.

- Missing or zero MTMs caused by issues with data feeds.

Other VM dispute drivers related to valuation include the following:

- Cashflow differences or cashflow timing differences related to trades where one firm drops a maturing or novated/terminated trade out of the portfolio in advance of the final payment. That final cashflow will still have an MTM value, so if the trade is no longer included in the portfolio, the portfolio level VM exposure is understated.

- FX Snap Timing disparities occur when firms are located in different time zones and observe FX rates for pricing at their own end of day, thus causing different observations for the same rate. Please refer to 'Managing Valuation Differences Due to FX Snap Times' under Section 6 'Dispute Resolution & Issue Management'.

- MTM correlation issues occur when the MTM value from one side does not move in an opposite direction to the other side. In situations where recent MTM values are trending in the same direction, especially on new trades, it indicates that one of the counterparties booked the trades backwards.

- Model differences/persistent valuation issues are those where the MTM remains significantly different over a period of 10 days or more. These types of differences tend to be caused by entrenched pricing model differences such as discounting methodology, divergent volatility surfaces etc.

IA calculation discrepancies occur when the payor believes that the caller's value is incorrect.

## 5.4 Initial Margin (IM) Differences

As stated earlier, population differences, especially those related to newly executed trades are a key driver of IM disputes. There can be disparities in the sensitivity populations submitted by each counterparty which can also drive differences.

There are additional types of dispute drivers that are relevant for IM, in particular:

- Misalignment between counterparties related to the ISDA SIMM silo, risk class and/or bucket for a particular trade can contribute to disputes as it will cause disparities in the underlying sensitivities applied to trades.
    - If an IM exposure difference is the result of misalignment of risk sensitivities being used by each of the two parties, counterparties may bilaterally agree to share risk sensitivities to resolve IM disputes; this process has not become common practice due to the proprietary nature of the data. In some cases, internal procedures require internal authorizations before sensitivity data can be shared with the counterparty. Often, sharing the high-level view of the ISDA SIMM bucket breakdown can highlight where the different risk sensitivities may exist without the need for sharing the underlying sensitivities.

- Model differences occur when one counterparty uses ISDA SIMM and the other uses Grid – this will result in a disparity in the IM Exposure calculation for each counterparty.

- Jurisdictional Differences and Trade Inclusion – For IM, one jurisdiction could define a trade to be in-scope for Uncleared Margin Rules (UMR) and another jurisdiction can define that same trade as out-of-scope for UMR. These categorization differences can impact the IM calculation and may result in an issue being escalated to legal and compliance teams for resolution. It is necessary to ensure each counterparty correctly allocates all in-scope trades under all-inclusive regimes of the IM agreement to the calculation. For both IM calculation methods, firms will need to identify in-scope transactions including new trades from the respective phase-in date and any legacy trades which could be brought into scope via a lifecycle event. Please refer to the following material available on the ISDA Margin InfoHub on isda.org which can assist in this exercise: In-Scope-Products-Chart and Trade Life Cycle Events Guidance.

- Failure to specify a regulator on trades will cause those trades to be excluded from the 'winning regulator' calculation.

    - When submitting trade data, a principal and their counterparties should specify a regulator (or regulators) for each trade and each sensitivity. An IM Exposure calculation

will be performed for all the submitted regulators, results are compared, and a 'winning regulator' is chosen for the end calculation. The 'winning regulator' is the one where the resulting calculation results in the highest (i.e., most conservative) exposure value. Calculating IM Exposure in this manner ensures that all applicable regulators will be satisfied by the overall IM Exposure used on the margin calculation.

- Notional Add-on is a calculation parameter that can be used with ISDA SIMM to increase the calculated exposure for certain types of trades. If there is a difference between counterparties in the Notional Add-on value, or the population to which it applies, it will result in a difference in IM Exposure.

- Index decomposition differences occur when one counterparty has decomposed underlying indices into their constituents before applying ISDA SIMM risk weights and correlations, but the other counterparty has done so at the index level.

- Firms using Grid need to specify Product Class, Notional and Tenor (Rates & Credit) to determine the IM requirement (% of notional) that applies. If any of these fields are misaligned between the parties, it is likely that the retrieved Grid percentage will be different and thus result in a dispute.

### 5.5 Collateral Differences

Some disputes are driven by variations in the way counterparties process collateral movements or balances. These types of differences include:

- One firm misses a collateral payment or fails to pay it correctly (e.g., sends the money to the wrong counterparty account) resulting in a failure to receive required collateral.

- Disparity in haircut values applied by the two counterparties to a bond or equity posted as collateral.

- Different treatment of in-transit collateral in the margin requirement calculation between counterparties.

### 5.6 CSA Term Discrepancy

If the counterparties use disparate values for CSA Terms used in the margin requirement calculation, it can cause inaccurate call amounts and result in a margin dispute. Examples may include:

- Minimum transfer amount
- Rounding
- Threshold
- Base currency

## 6 Collateral Disputes Investigation and Issue Management

### 6.1 Internal Organization and Support

Counterparties should have a process in place which reaches across relevant functional areas to resolve issues uncovered as part of the reconciliation process.

Most likely, several functional areas will need to be involved in rectifying different types of breaks. This requires cooperation between the reconciliation function and other key stakeholders including for example, operations, front office, and funding and optimization.

Counterparties should ensure that such lines of communication are established, and procedures are in place to enable timely resolution of breaks and to capture and remedy root causes where these are contributory factors to ongoing breaks.

## 6.2 Process Transparency

To assist break resolution, a full list of breaks arising from any reconciliation should be available if requested by the counterparty and deliverable to a destination of the counterparty's choice. This concept holds true, irrespective of technology used to perform the reconciliation.

In principle, counterparties should aim to create a common unified view of results to minimize ambiguity around breaks.

The ability of vendors to standardise reconciliation results across a variety of external sources contributes to efficiency and timeliness of break resolution between parties. Vendors also have an important role in facilitating transparency between parties.

## 6.3 Effective Issue Prioritization for Break Resolution

Each counterparty should identify their own priorities for break resolution and determine their own workflow and thresholds to address breaks.

Although the UMR regulations do not provide specific details regarding when and how to prioritise differences that lead to margin disputes, the regulations do indicate that regulated entities should have robust dispute resolution procedures in place. The first step to a robust dispute resolution process is to be able to identify, investigate, prioritize, and resolve individual differences. Procedures should be established to ensure differences are addressed before they cause a margin dispute.

As an example, in the HKMA rules under the 'Dispute Resolution' section, it states that "*An Authorized Institution (AI) should agree with its counterparties on, and document, the mechanism or process for determining when discrepancies in material terms or valuations of non-centrally cleared derivatives should be considered disputes, as well as how such disputes should be resolved as soon as practicable, with a specific process for those disputes that remain unresolved within five business days. Such mechanism or process should provide for the escalation of material disputes to an appropriate level of senior management at the AI.*" (Please note 'escalation' suggested guidance is covered in section 7.)

Each individual institution will likely adopt their own prioritization approach based upon internal configuration of collateral and reconciliation teams, credit risk appetite, XVA and capital reporting requirements etc. The application of thresholds on difference vectors (e.g. value, type, or, age) of a difference can be helpful in establishing priority and/or escalation needs.

An example approach could be as follows:

1. Reconcile trade portfolio to ensure portfolio trade populations are aligned. Investigate differences.
2. Investigate large Mark-to-Market differences.
3. For IM, identify large differences in IM Exposure, and prioritise these for investigation
4. Items identified in 2 or 3 above which drive a margin dispute should be prioritised over calculation discrepancies or operational issues that do not appear to drive a margin dispute.
5. Prioritize further investigation of margin disputes which are aged more than 5 days.
6. Review top 10 margin dispute difference drivers and identify root cause of the differences.
7. Develop internal reporting to ensure that Collateral, Operations, Credit, Finance, XVA and Compliance and any other relevant areas are informed accordingly.

## 6.4 Categorization: Operational Issues vs Discrepancies in Calculations

Whilst it is an individual institution's determination of how they wish to classify certain types of disputes or causes of disputes, a standard approach can be adopted to add a framework to assist with categorization.

Correct categorization and prioritization of collateral disputes is important for timely resolution. Efficient analysis by the institution's collateral management team to determine where and how to identify the root cause of a dispute is essential. As a first step, firms should assess if populations are aligned. If the populations are misaligned, then the dispute is an Operational Dispute. If the populations are aligned, the margin dispute is more likely caused by Calculation Discrepancies.

## 6.5 Operational Differences

Operational Disputes will be escalated to the appropriate operations team for initial investigation which could include the reconciliation file production team (e.g., missing trades), confirmation team or middle office team. The initial objective here is to determine which counterparty is the source of the unmatched trade and to resolve the issue by ensuring the trade is included in the appropriate portfolio as early as the same day via an updated margin call or by at least the next day to correct the problem.

When the reconciliation process establishes there is an internal system problem or operational process issue which causes trade breaks, it is expected that such a counterparty will work in good faith to resolve the underlying data issue in a timely fashion.

It is not considered acceptable practice for a counterparty to enter placeholder bookings or trades to account for trades or exposures which they otherwise cannot systemically feed into their portfolio.

## 6.6 Calculation Differences

Calculation Disputes will be escalated to the appropriate team for initial investigation. This could include operations, compliance, front office, and credit/risk.

## 6.7 Managing Calculation Differences Due to FX Snap Times

According to ISDA members, many valuation differences are due to the use of misaligned FX exchange rate timings in the trade valuation process. These are commonly referred to as 'snap times' - when one counterparty values their trades using an FX conversion rate that is not 'snapped' at the same time of day as the other counterparty's 'snap time.' The issue is more prevalent when counterparties face each other across different time zones and the market influences a reasonable shift in FX rates between the end of day 'snap' cut-off times. It is important to track when counterparties conduct their valuations and FX snaps, and then those discrepancies can be more easily identified.

Operationally, at both the portfolio and trade level, exposure differences driven by FX snap time disparity between the counterparties may cause many false positives, especially in times of market disruption. Sometimes, FX snap timing is the main cause of margin disputes. This difference is problematic since neither counterparty can change their FX snap timing. In this case, firms may periodically agree to move the other counterparty's margin amount to avoid long running disputes. Firms who track FX snap timing for their counterparties can more easily determine when this is the driver of a margin dispute and then act accordingly.

Taking the following suggested approaches could also assist in minimizing FX snap timing differences:

- Follow a regional model where FX rates are applied based on the region where the risk in managed.
- Daily validation of own business centre FX snaps times VS major financial centres FX currency pairs to identify potential difference drivers and false positives.
- FX snap times and rates incorporated in reconciliation data shared with counterparties to understand and validate differences.
- Some 'third party' vendor reconciliation services will offer a dispute breakdown categorisation criterion which will allow firms to identify the type of break and if its origin is FX based and if the root cause is FX timing.

### 6.8 Break Management and Interaction with Counterparties

Counterparties should track the progress of resolving agreed breaks, and they should have clearly identified between themselves which of the counterparties is assigned to action a particular break. The other counterparty should support this process by providing documentation, confirmations, or any other information requested by its counterparty in a timely manner and no later than one business day following a request by the other counterparty.

Counterparties need to work together in a coordinated manner, and this is an area of mutual responsibility; the resolution time for any difference or margin disputes will depend on counterparty responsiveness.

### 6.9 Root Cause Analysis and Issue Tracking

Counterparties are encouraged to establish workflow processes to identify, assign, investigate, prioritize, and resolve issues. A key aspect of issue investigation is root cause identification. Monitoring root causes and their trends over time can help identify consistent operational issues or counterparty issues that need to be escalated internally or externally for resolution.

Issue status, root cause and age should be tracked for each counterparty to ensure all issues are appropriately managed. Large organizations may wish to track root causes by underlying product class to facilitate better communication with operations and front office teams.

Internal reporting and escalation needs should also inform issue tracking and root cause procedures.

## 7 Issue and Margin Dispute Escalation Procedures and Audit Requirements

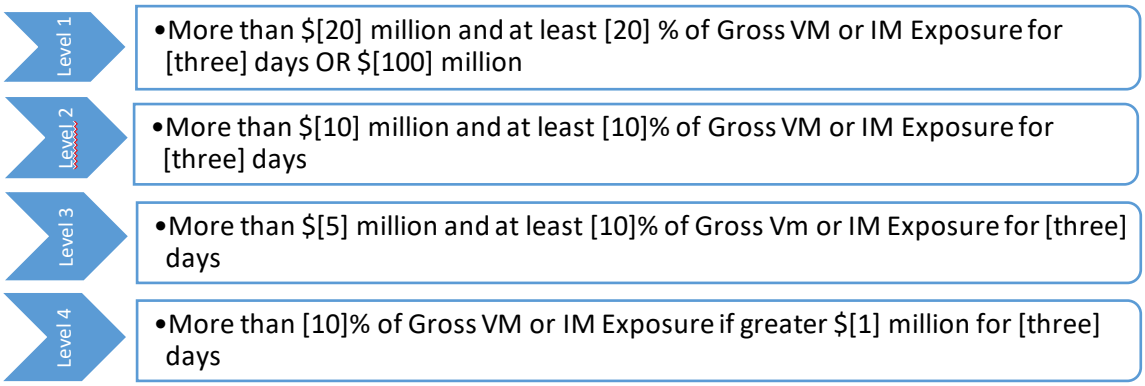
### 7.1 Issue and/or Dispute Escalation Thresholds

Application of threshold levels in procedures to certain difference or dispute types may be a useful mechanism to ensure that significant issues or disputes are escalated at the appropriate time and to the appropriate stakeholders.

The diagram below (Figure 1) is an illustrative example received from members who introduced procedures for IM dispute monitoring during UMR Phases 1 to 4. Similar approaches could be adopted for both VM and IM disputes. Such thresholds need to be set according to each firms' internal requirements.

*Please Note: ISDA is not prescribing, endorsing, or suggesting any thresholds; the specifics in [brackets] are examples and, if chosen to be adopted, should be amended and applied using individual risk assessment.*

Figure 1: Escalation and Risk Management Levels Example:




Level 1 items would be higher risk and prioritized to be addressed first. Additional layers could be applied to the level of risk of the counterparty faced for the individual difference; a tiered system could be used to categorize these into a similar structure to ensure these have the required level of urgency.

## 7.2 Internal Issue and Dispute Reporting & Escalation Process Recommendations

Institutions need to consider their individual stakeholders and understand the appropriate content and frequency that information needs to be made available to each stakeholder. A general example could be:

Intra-day

- Issue status to operations, including portfolio reconciliation team heads
- Root causes statistics to portfolio reconciliation and collateral management team heads
- Dispute reporting to collateral management
- Dispute reporting to credit/risk
- Dispute reporting to funding and optimisation

End of Day

- Dispute reporting to collateral management
- Dispute reporting to credit/risk
- Dispute reporting to funding and optimisation
- Dispute reporting to XVA desk
- Dispute reporting to business function COO

These reporting processes will help ensure that issues are monitored and escalated accordingly, especially those which are more significant.

Internal escalation processes should include additional weekly and/or monthly reporting to ensure consistent monitoring of potential issues, discrepancies, and disputes. Reporting snapshots to internal stakeholders should be structured and contain pertinent information (such as dispute amount, direction, age and frequency of dispute with a particular counterparty). Note that root causes and dispute trends should also be disclosed to relevant stakeholders to ensure appropriate visibility of apparent risks.

Additional measures could be applied to regularly coordinate teams to monitor and escalate disputes. As an example:

On a weekly basis or when determined appropriate, a dispute escalation forum could be held to review material disputes with key governance stakeholders. Stakeholders could include business partners from operations, compliance, credit/risk, and XVA. All such meetings should be documented to ensure appropriate record keeping of relevant decisions, actions, and outcomes. Disputes breaching materiality thresholds would be tracked through this forum following a prescriptive path of escalation decisions which starts with clearly defined entry points to escalation (i.e., as defined by threshold) and conclude with clearly defined closure points to escalation, which may involve either a resolution of the underlying root-cause driver or an agreement to conclude further escalation actions. Through coordination with stakeholder groups, it is possible to administer all necessary risk control actions in association with those agreed thresholds.

In addition, periodically, executive heads from each stakeholder group would be required to acknowledge any large or long running disputes to evidence their awareness of said disputes.

### 7.3 Issue resolution tracking

Counterparties should ensure that their adherence to established procedures is recorded showing when the issue was first noted, what investigation steps were undertaken, by whom and when. Resolution and escalation steps as well as interactions with counterparties, should also be recorded as applicable. Information of this type provides a valuable audit trail to evidence adherence to processes.

## 8 Regulatory Portfolio Reconciliation

Previous sections have focused on reconciliations related to collateralized trades. This section focuses on regulatory reconciliation for counterparties subject to these reconciliations. Regulatory reconciliation requirements apply for both collateralized and non-collateralized trades.

Some counterparties have compliance obligations related to regulatory portfolio reconciliations. For instance, in the US, all CFTC registered swap dealers are required to perform portfolio reconciliation with all their counterparties on a regular basis (frequency is dependent on the type of counterparty and the portfolio size). While most US based buy-sides do not have a similar direct compliance obligation, they may find that if they do not agree to perform reconciliation, dealers will not trade with them. Similarly for MAS all (OTC Derivatives Intermediaries), APRA (Covered Entities), HKSFC (Licensed Corporation) are required to perform portfolio reconciliation with all their counterparties on a regular basis. However, in the EMIR and HKMA rules, most financial counterparties do have a direct regulatory obligation to reconcile their portfolios. Thus, all counterparties should be cognizant of their own regulatory obligations as well as their counterparties.

Regulatory requirements regarding the timing to resolve breaks is specified, typically based on the principal counterparty type and the type of counterparty being faced.

As an example: In the Singapore rules MAS (SAF04-G09) Portfolio Reconciliation 6.2 it states "*An OTCD Intermediary should determine the scope and frequency of portfolio reconciliation with a counterparty, taking into account the risk exposure profile, size, volatility and number of non-centrally cleared over-the-counter derivatives transactions which the OTCD Intermediary has with that counterparty"*. The rules then continue to go on to state specific frequencies based on portfolio size.

Frequency of reconciliations is dependent on this along with the size of the portfolios between the counterparties.

A summary of the CFTC, EMIR and SEC Regulatory Portfolio Reconciliation Requirements is located in Appendix I.

A summary of the HKMA, HKSFC, MAS and APRA Regulatory Portfolio Reconciliation Requirements is located in Appendix 2

Therefore, you must monitor portfolio size to ensure reconciliation is at the right frequency. Firms who are following established suggested operational practices for collateral reconciliations, such as reconciling daily and include their non-collateralized trades, will automatically be compliant with the required strictest reconciliation frequency.

Regulatory requirements related to trade level valuation differences are generally identified using the VM reconciliation assuming that non-collateralized trades between the counterparties are also reconciled as separate portfolios, if applicable.

Regulatory reconciliations have many of the same requirements in terms of issue identification and process as collateral-based reconciliations. Sections 5, 6 and 7 of this document, apply generally to regulatory reconciliations as well. The principles of each section can be applied to forming regulatory reconciliation procedures, but tolerance levels should reflect regulatory requirements in terms of valuation differences and/or disputes that need to be reported. (Please refer to Section 10 'Regulatory Disputes Reporting'). Procedures should also address resolution time frames required for various types that apply per counterparty type.

## 8.1 File Formats and Recommended Inclusion of Reconcilable data Fields

Under Regulatory portfolio reconciliation obligations, for reconcilable fields each of the regulatory rules sets out its own mandatory and optional data matching requirements. For example, in EU regulations, Article 13 of RTS on OTC derivatives, states that such terms shall include the **valuation attributed to each contract** and should also include other relevant details to identify each particular OTC derivative contract, such as the effective date, the scheduled maturity date, any payment or settlement dates, the notional value of the contract and currency of the transaction, the underlying instrument, the position of the counterparties, the business day convention and any relevant fixed or floating rates of the OTC derivative contract."

The "valuation attributed to each contract" as referenced in bold above can be split into 3 components. It is considered these to be the key terms that should be used at a minimum to identify breaks:

1. ***MTM valuation***
2. ***Legal Entity Name (leading to MTM valuation break)***
3. ***Unmatched Trades details (leading to MTM valuation break)***

In the HKMA, HKSFC, MAS and APRA Regulatory Portfolio Reconciliation Requirements state that the 'material terms and valuations' are reconciled.

The following footnote covers the key material terms required for regulatory reconciliations for SEC and CFTC[10]:

[10] SEC 240.15Fi-1(l) states that "The term portfolio reconciliation means any process by which the counterparties to one or more security-based swaps:
(1) Exchange the material terms of all security-based swaps in the security-based swap portfolio between the counterparties;
(2) Exchange each counterparty's valuation of each security-based swap in the security-based swap portfolio between the counterparties as of the close of business on the immediately preceding business day; and
(3) Resolve any discrepancy in valuations or material terms."
CFTC 17 CFTC 23.500 specifies that:

However, it is suggested that counterparties share a wider range of contract details for reconciliation to enable effective pairing of trades for field comparisons.

## 8.2 ISDA Protocols, Amendment Agreements and Adherence

ISDA has developed and published several Protocols pertaining to regulatory portfolio reconciliation, dispute resolution, and disclosures to expedite documentation updates and communication with and among counterparties. ISDA Protocols allow for both counterparties to efficiently communicate with one another and amend previously executed documents or to put new documents in place.

The Protocols address many issues, and they allow counterparties to agree certain elections regarding portfolio reconciliation with each other, as an example:

> EMIR Protocols allow counterparties to efficiently comply with the (Sender or Receiver) obligation and establish counterparty classification. If a firm is adhering as a 'Sender' and the other counterparty also adheres as a 'Sender', then typically an exchange of data takes place and both counterparties are obligated to undertake portfolio reconciliation independently. 'Receiver' status can be elected, and data will be sent from the counterparty to be reviewed, and any discrepancy found must be communicated to the 'Receiver' counterparty within 5 days, otherwise the data will be deemed affirmed.
>
> Under ISDA Protocols, there is a mechanism provided for a change of its status from 'Receiver' to 'Sender' or vice versa, but this is available only by bilateral written agreement between the counterparties (consent not to be unreasonably withheld or delayed). This may require counterparties to change the platform/vendor of choice as the portfolio reconciliation process evolves.

Each counterparty should carefully review the Protocols in the context of applicable regulations between them and their counterparties to determine what information is required and applicable.as elections. The Protocols can be accessed via the ISDA website and are listed here:

> The ISDA 2013 EMIR NFC REPRESENTATION PROTOCOL
>
> ISDA 2013 EMIR Portfolio Reconciliation, Dispute Resolution and Disclosure Protocol
>
> ISDA March 2013 Supplemental D-F Protocol
>
> ISDA 2020 UK EMIR Portfolio Reconciliation, Dispute Resolution and Disclosure Protocol
>
> ISDA 2021 SBS Protocol
>
> ISDA 2021 SBS Top Up Protocol

(i) Portfolio reconciliation means any process by which the two counterparties to one or more swaps:
(1) Exchange the material terms of all swaps in the swap portfolio between the counterparties.
(2) Exchange each counterparty's valuation of each swap in the swap portfolio between the counterparties as of the close of business on the immediately preceding business day; and
(3) Resolve any discrepancy in material terms and valuations.
…and that (g) Material terms means the minimum primary economic terms as defined in appendix 1 of subpart I of part 23 of this chapter.

Each of the ISDA Protocols has a related FAQ on the ISDA website that covers common questions and advice such as:

- What the protocol does and how to adhere to it.
- When in some circumstances counterparties may wish to change information within the protocol, for examples amending Portfolio Data Sending Entity and Portfolio Data Receiving Entity status in the future.
- How to become a Sending Entity in respect of some of my counterparties and a Receiving Entity in respect of others.
- How to understand change of status with multiple counterparties.
- Whether or not counterparties must execute portfolio reconciliation terms for the applicable jurisdiction (US domiciled counterparties who are not CFTC registered swap dealers do not technically have to execute schedule 4 covering portfolio reconciliation).

If required, please access the FAQ section within each of the respective protocol areas of the ISDA website using the links provided throughout this section.

For the HKMA, HKSFC, MAS and APRA regions, Amendment Agreements were developed by working groups of ISDA member institutions for implementation of the risk mitigation standards set out in the respective rules for margining and risk mitigation for non-centrally cleared derivatives. The agreements enable parties to bilaterally agree terms to reflect the portfolio reconciliation and dispute resolution requirements imposed by the individual rules. The Amendment Agreements can be accessed via the ISDA website and are listed here:

Amendment Agreement relating to HKMA Risk Mitigation

Amendment Agreement relating to Hong Kong SFC Risk Mitigation Requirements

Amendment Agreement relating to Singapore MAS Risk Mitigation Requirements

Agreement and FAQs relating to APRA Risk Mitigation Standards

## 8.3 CFTC, SEC and HKMA 10% Valuation Dispute Differences: Operational Approaches

Within the CFTC and SEC Portfolio Reconciliation 17 CFR § 23.502[11], and 17 CFR 240.15Fi-3[12], valuation discrepancies that are identified as part of the portfolio reconciliation process by US registered Swap Dealers ("SD") or Major Swap Participants ("MSP") and Security-Based Swap Dealers ("SBSD") or Major Security-Based Swap Participants ("MSBSP") must be resolved.

A difference between the lower valuation and the higher valuation of greater than 10 percent of the higher valuation are considered to be discrepancies. There is no absolute value threshold to this requirement, and therefore, every such valuation discrepancy of 10 percent or more must be treated as a dispute, even if the dollar value may seem immaterial. This can result in very high volumes, and as most of the discrepancies are due to counterparties' FX snap times not aligning with one another. According to ISDA members, in these cases, those specific discrepancies usually resolve themselves within 2-4 days.

[11] 17 CFR §23.502 https://www.law.cornell.edu/cfr/text/17/23.502. Please also refer to Definitions in §23.500 as relevant.
[12] 17 CFR 240.15Fi-3 and definitions in 15Fi-1.

Firms that face non-US SDs, SBSDs, MSPs, and MSBSPs may be faced with unanswered requests for information because their regulatory requirements are not as prescriptive. In those cases, the US SDs, SBSDs MSPs, MSBSPs must still track the discrepancies and attempt to resolve any such differences.

Firms that face other US SDs, SBSDs MSPs, MSBSPs along with other types of counterparties not covered by reconciliation and dispute management regulation should use automation to track issues and prioritize those that could cause the greatest counterparty risk. Examples include:

- Tagging each discrepancy with a date
- Identifying root causes of discrepancies
- Creation of messages to counterparties with issue to be researched and resolved
- Streamline reporting for internal and regulatory purposes

Within the HKMA CR-G-14 (section 4.4) In relation to portfolio reconciliation Authorized Institutions (AI) must include material terms for all transactions '*In case of a discrepancy in valuation, a difference between the lower valuation and the higher valuation of more than 10 percent of the higher valuation needs to be reconciled.*'

As an additional note, the HKMA rules also say "*The valuation reconciliation threshold of 10% could be applied at the netting set level. Once the 10% threshold is exceeded, all the transactions in the netting set portfolio need to be reconciled. Nevertheless, this does not preclude an AI from applying a reconciliation threshold at the transaction level which is agreed with its counterparty taking into account the risk profile of the portfolio.*"

# 9 Regulatory Dispute Investigation and Issue Management

## 9.1 Break Management with Counterparties and Interaction with Internal Stakeholders

Counterparties should track the progress of resolving agreed breaks and should have clearly identified between themselves which of the counterparties is assigned to action a particular break at any one point in time. Counterparties should expect to provide information to facilitate break resolution promptly within one business day of receiving a written request to do so. Inter-alia this may include providing confirmation copies, relevant IDs, or any other information requested and available relating to a trade under investigation.

Counterparties should have a process in place which reaches across relevant functional areas to efficiently resolve issues or root causes uncovered as part of the reconciliation process.

Several functional areas may need to be involved in rectifying different types of breaks. This requires co-operation between the reconciliation function and, for example, collateral, operations, front office teams.

Counterparties should ensure that appropriate lines of communication are established, and procedures are in place to enable timely resolution of breaks and to capture and remedy root causes where these are contributory factors to ongoing breaks.

Counterparties should have formal escalation procedures in place to address important or aged issues. Escalation procedures should focus on timeframes and process for communicating with cross-departmental escalation process in place internally, for example operations, credit/risk, and front office. Escalation points should be available and communicated to the counterparty where appropriate.

Where breaks are not being resolved within agreed timeframes, the reasons should be clearly communicated internally and to the counterparty, with appropriate action being taken to remedy the underlying cause.

### 9.2 Counterparty Responsiveness and Asymmetric Benefits/Challenges

Timely response by both counterparties to a request for investigation of breaks is an area that firms should give priority to and should be adequately resourced to support, especially given short resolution timeframes required under regulatory requirements.

Counterparties may agree to alternative timeframes between themselves for responding to requests for break investigation and for agreeing a course of action to resolve those breaks, mindful of regulatory requirements either counterparty may have.

Unless otherwise required by regulatory obligations, counterparties should identify and raise queries by the next business day, and break investigation/resolution, wherever possible, should occur within 5 business days.

## 10 Regulatory Disputes Reporting

The regulatory reporting requirements for the CFTC, NFA, SEC, US Prudential, EMIR, HKMA, MAS and APRA are referenced below. Users of this document should review the various regulations that apply to them and their counterparty relationships to determine the applicable regulatory requirements and develop relevant regulatory dispute reporting procedures.

### 10.1 US: CFTC (including NFA Requirements as delegated by the CFTC) Reporting Requirements

> Each swap dealer and major swap participant shall promptly notify the Commission and any applicable prudential regulator, or with regard to swaps defined in section 1a(47)(A)(v) of the Act, [13] the Commission, the Securities and Exchange Commission, and any applicable prudential regulator, of any swap valuation dispute in excess of $20,000,000 (or its equivalent in any other currency) if not resolved within:
>
> (1) Three (3) business days, if the dispute is with a counterparty that is a swap dealer or major swap participant; or
>
> (2) Five (5) business days, if the dispute is with a counterparty that is not a swap dealer or major swap participant.

Further Information can be found in CFTC Portfolio Reconciliation 17 CFR Part 23

### 10.2 NFA Reporting Requirements

The CFTC delegated certain responsibilities related to dispute reporting to the National Futures Association (NFA) in 2016 and specifies requirements for swap valuation disputes that must be reported by SDs and MSPs.[14]

[13] This is a reference to Security-based swaps agreements, which are swaps, regulated by the CFTC, that have underliers that may be securities, including exempt securities, where the SEC has recordkeeping and anti-fraud authority.

[14] For further information see the following publications:

## 10.3 US: SEC Requirements

Each security-based swap dealer and major security-based swap participant shall promptly notify the Commission, in a form and manner acceptable to the Commission, and any applicable prudential regulator of any security-based swap valuation dispute in excess of $20,000,000 (or its equivalent in any other currency), at either the transaction or portfolio level, if not resolved within:

(i) Three business days, if the dispute is with a counterparty that is a security-based swap dealer or major security-based swap participant; or

(ii) Five business days, if the dispute is with a counterparty that is not a security-based swap dealer or major security-based swap participant.

(2) Amendments. Each security-based swap dealer and major security-based swap participant shall notify the Commission, in a form and manner acceptable to the Commission, and any applicable prudential regulator, if the amount of any security-based swap valuation dispute that was the subject of a previous notice made pursuant to paragraph (c)(1) of this section increases or decreases by more than $20,000,000 (or its equivalent in any other currency), at either the transaction or portfolio level. Such amended notice shall be provided to the Commission and any applicable prudential regulator no later than the last business day of the calendar month in which the applicable security-based swap valuation dispute increases or decreases by the applicable dispute amount.

Further Information can be found in 240.15Fi-3 Security-based swap portfolio reconciliation[15] and SEC Statement on Submitting Security-Based Swap Valuation Dispute Notices.[16] In the Statement on Submitting Security-Based Swap Valuation Dispute Notices, SEC Staff has made available two alternative options for satisfying the requirements in Rule 15Fi-3(c), both of which involve submitting a security-based swap valuation dispute notice as a PDF attachment.

The first option is to submit the notice using the Commission's Electronic Data Gathering, Analysis, and Retrieval ("EDGAR"). EDGAR includes two form types, SBS DISPUTE NOTICE (for filing an initial submission of a dispute) and SBS DISPUTE NOTICE/A (for filing an amendment for a previously submitted dispute). Instructions for submitting both form types are now included in the updated EDGAR Filer Manual, Volume II: "EDGAR Filing," Version 59 (September 2021)[17]. The second option is to submit the notice by email to a dedicated email address. That email address is SBSDISPUTENOTICES@sec.gov.

In an ISDA call with SEC Staff on 19 May 2021 about SBS Portfolio Reconciliation, when discussing valuation disputes, SEC staff agreed that following existing processes and requirements under the CFTC portfolio rule and related existing NFA guidance will satisfy the SEC rule requirements as well; this includes that calculations and notices will apply to portfolios that may include swaps and SBS (mixed portfolios) and that an SBS may not be the driver of a dispute of which they may be notified. Staff caveated that they wanted to go through the rule one more time, to double check that

- Notice I-17-13 July 20, 2017 Effective date of Interpretive Notice to NFA Compliance Rule 2-49: Swap Valuation Dispute Filing Requirements
- 9072 - NFA COMPLIANCE RULE 2-49: SWAP VALUATION DISPUTE FILING REQUIREMENTS (Board of Directors, May 18, 2017, effective January 2, 2018.)
- Notice I-19-11 March 28, 2019 Reminder: Filing requirements for swap valuation dispute notices under NFA Compliance Rule 2-49 apply to all swap dealer Members

[15] https://www.ecfr.gov/current/title-17/chapter-II/part-240#240.15Fi-3
[16] Security-Based Swap Valuation Dispute Notices
[17] Updated EDGAR Filer Manual, Volume II: "EDGAR Filing," Version 59 (September 2021)

there are no issues, but did not expect any. The SEC subsequently provided guidance on reporting portfolio reconciliation valuation disputes in the updated EDGAR Filing Manual Volume II published September 2021.[18]

Regarding where notices need to be sent to the SEC and in which format, SEC provided guidance in the updated EDGAR Filing Manual Volume II:

"Exchange Act Rule 15Fi-3(c), adopted on December 18, 2019, requires security-based swap dealers and major security-based swap participants (together, "SBS Entities") to provide the Commission with notices of certain valuation disputes with their counterparties. In accordance with this rule, EDGAR will be updated to include the following two new form types:

- SBS DISPUTE NOTICE: Security-Based Swap Entity Valuation Dispute Notice
- SBS DISPUTE NOTICE/A: Amendment to a Security-Based Swap Entity Valuation Dispute Notice

The new submission form types are accessible by selecting the 'Online Forms' link on the EDGAR Filing Website. Additionally, filers may construct XML submissions for these submission form types by following the "EDGARLink Online XML Technical Specification" document available on the SEC's Public Website.

## 10.4 EMIR Requirements

Article 15 of the EU commission delegated regulation states that financial counterparties shall report to the competent authority designated in accordance with Article 48 of Directive 2004/39/EC any disputes between counterparties relating to an OTC derivative contract, its valuation, or the exchange of collateral for an amount or a value higher than EUR 15 million and outstanding for at least 15 business days.

Further Information can be found in European Commissions published C (2012) 9593 final – *Article 15.*

## 10.5 HMKA Requirements

To facilitate early identification of disputes relating to material terms by the MA, an AI should report to the MA any material disputes in excess of HKD 100 million (or its equivalent in any other currency) if not resolved within 15 business days.

With respect to the exchange of margin, the HKD 100 million threshold is applied to the AI's disputes with its counterparty on VM and IM (separately).

Further information can be found in HKMA Supervisory Policy Manual CR-G-14

## 10.6 MAS Requirements

To enable the Authority to monitor disputes involving significant amounts that may cause disruptions to the market, an OTCD Intermediary should report promptly to the Authority any dispute that exceeds S$25 million which remains unresolved beyond 15 business days.

Further information can be found in MAS Guideline No: SFA04-G09

[18] From page 7, EDGAR Filer Manual Volume II

## 10.7 APRA Requirements

An APRA covered entity must notify APRA of disputes that are material either in dollar value or period of time outstanding. An APRA covered entity must clearly document and regularly review the criteria used to determine when a dispute is reported to APRA.

Further information can be found in Australia Prudential Standard CPS 226.

# 11 Suggested Operational Practices Table

## Definition of Suggested Operational Practices Table

| | |
|---|---|
| **SOP (Suggested Operational Practice) #** | Unique reference number assigned to each consideration in the document |
| **Process or Background** | High level description of each minimum consideration |
| **Minimum Consideration Description** | Recommended business and technology considerations required to comply with new margin rules |
| **Assumptions & Dependencies** | Description of key assumptions and dependencies related to each minimum consideration |

| SOP# | Process or Background | VM | IM | Reg. | Minimum Consideration Description | Assumptions & Dependencies |
|---|---|---|---|---|---|---|
| **SOP1** | Valuation Date | X | X | X | Establish portfolio valuation date. | Make note if there are time zone issues, especially with fx snap times for collateral valuation. |
| **SOP2** | Population | X | X | X | Establish portfolio population. | Make note if there are time zone issues. |
| **SOP3** | Data file | X | X | X | Establish data file with transmission process, including agreement with counterparties to frequency. | Use industry standards, including data elements from the required Minimum Market Standard, data security and cyber security measures. |
| **SOP4** | Determine frequency | X | X | X | Establish frequency patterns for VM, IM, and Reg Port Recons. | VM and IM should be run daily. Reg Port Recons are based on type of firm and number of trades in portfolio. See Appendix 1 for more details. |
| **SOP5** | Run reconciliation process | X | X | X | Automate process using vendor or in-house straight-through-process. | |
| **SOP6** | Identify breaks | X | X | X | Establish thresholds for data discrepancies and collateral disputes. | Identify breaks that are data discrepancies and collateral disputes. |
| **SOP7** | Internal reporting | X | X | X | Use straight-through-process to identify breaks that should be reported internally. | Based on governance structure, run regularly scheduled reports and distribute. |
| **SOP 7.1** | Internal Issue Management | X | X | X | Establish root causes of breaks and disputes. Include in internal reporting. | Group port recon and dispute issues, and ensure front office is aware of any issues; trading may |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | be influenced if post-trade processing is causing disputes. |
| **SOP8** | Internal escalation | X | X | X | Use straight-through-process to identify breaks that should be escalated for action. | Based on governance structure, escalate issues internally for action. Use thresholds to prioritize which breaks are internally escalated. |
| **SOP9** | External escalation | X | X | X | Use straight-through-process to identify breaks that should be escalated to counterparty for action. | Based on governance structure, escalation issues to counterparties. Use thresholds to prioritize which breaks are externally escalated. |
| **SOP 9.1** | External Issue Management | X | X | X | Include root cause details with external escalation/communication. | Use Internal Issue Management grouping, noted in 7.1. |
| **SOP10** | External reporting | X | X | X | Use straight-through-process to identify breaks that should be reported to necessary regulators. | Based on governance structure and regulatory requirements, transmit external report to necessary regulators. Use thresholds to determine which breaks are reported to regulators. |

# Appendix I. Summary of the CFTC, EMIR and SEC Portfolio Reconciliation Requirements.

| *EMIR/ CFTC Comparison* | *CFTC Port Rec Rules* | | *EMIR Port Rec Rules* | |
|---|---|---|---|---|
| *Client Classification* | **Swaps with SDs and MSPs** | **Swaps with other entities** | **OTC Derivatives with FC and NFC+** | **OTC Derivatives with NFC -** |
| *Rule applicable to* | Swap Dealers (SDs) and Major Swap Participants (MSPs) | | Financial counterparties (FC's), Non-Financial Counterparties above the clearing threshold (NFC+) and Non-Financial Counterparties below the threshold (NFC). | |
| *Compliance date* | 23rd August 2013 | | 15th September 2013 | |
| *Terms* | Agree in writing with each counterparty on terms governing portfolio reconciliation | | Agree in writing or by other electronic means with each of their Counterparties the terms on which the portfolio will be reconciled | |
| *Reconciliation venue* | Bilateral or qualified 3rd party vendor subject to agreement of the counterparties | | | |
| *Reconciliation frequency* | Daily for portfolio 500+ trades Weekly for 51-499 trades Quarterly for 1 - 50 trades | Quarterly for portfolio >100 trades Annual 1-100 trades | Daily for portfolio 500+ trades Weekly for 51-499 trades Quarterly for 1-50 trades | Quarterly for portfolio > 100 trades Annual 1-100 trades |
| *Material Terms Definition* | Material Terms (subset of SDR reportable fields) | | Key trade terms, including at least valuation attributed to each contract | |
| *Resolution of parameter discrepancies* | Immediate resolution of any discrepancy in material terms | Resolution of any discrepancies in a material term in a timely fashion | No specific guideline for resolving key trade term discrepancies, talks specifically about the "dispute relating to the recognition of valuation of collateral and exchange of collateral." | |
| *Valuation discrepancy definition* | Difference between the lower and the higher valuation of more than 10% of the higher valuation (per the rule). | | Defined by each firm's internal risk tolerances and documented within their policies. | |
| *Resolution of valuation discrepancies* | Establish policies and procedures reasonably designed to ensure the swap valuation discrepancies are resolved as soon as possible but in any event within 5 business days | Establish policies and procedures reasonably designed to resolve swap valuation discrepancies in a timely fashion | When concluding derivatives contracts with each other, FC and NFC shall have agreed detailed procedures and processes in relation to the resolution of disputes in a timely manner with a specific procedure for those disputes that are not resolved within 5 business days. | |
| *Reporting of valuation disputes* | Valuation disputes > 3 business days Exceeding USD 20mm Reported to CFTC | Valuation disputes > 5 business days Exceeding USD 20mm Reported to the CFTC | Any disputes relation to OTC Derivatives contract, its valuation or exchange of collateral. >15 business days, exceeding EUR 15mm Reportable to competent authority | |
| *Record keeping* | SDs and MSPs - Make and keep a record of each swap portfolio reconciliation Including number of portfolio reconciliation discrepancies Including number of swap valuation disputes (including time to resolution of each dispute, age of outstanding valuation disputes, categorized by transaction and counterparty) For 5 years after termination, maturity, expiration, transfer, assignment or novation date of the swap. Records to be made available promptly on request to CFTC and other US regulators (if applicable). | | At the conclusion of the derivative contract with each other, FC and NFC shall have detailed procedures and processes for the recording of disputes. Key elements: i ) length of time which the dispute remains outstanding, ii ) counterparty, iii )amount disputed. | |

| | *SEC Port Rec Rules*[19] | |
|---|---|---|
| ***Client Classification*** | **Swaps with SBSDs or MSPs** | **Swaps with other entities** |
| ***Rule applicable to*** | Security Based Swap Dealers (SDs) and Major Swap Participants (MSPs) | |
| ***Compliance date*** | 18 months after the effective date of the final rules set forth in the Cross-Border Amendments Adopting Release[20]. Effective date for Cross-Border SBS rule amendments was 6 April 2020[21] therefore the Compliance date was October 20, 2021. | |
| ***Terms*** | Agree in writing with each counterparty on terms governing portfolio reconciliation, including, if applicable, agreement on the selection of any third-party service provider who may be performing the portfolio reconciliation. | |
| ***Reconciliation venue*** | Bilateral or 3rd party vendor selected by the counterparties | |
| ***Reconciliation frequency (no less frequently than)*** | Daily (business day) for SBS portfolio of 500+ SBS<br>Weekly for SBS portfolio of 51-499 SBS on any business day of week<br>Quarterly (calendar) for SBS portfolio of 1 - 50 SBS at any time of quarter | Quarterly (calendar) for SBS portfolio of >100 SBS at any time of quarter<br>Annual for SBS portfolio of 1-100 SBS at any time of year |
| ***Material Terms Definition*** | Material Terms (subset of SDR reportable fields) | |
| ***Resolution of parameter discrepancies*** | Immediate resolution of any discrepancy in material terms | |
| ***Valuation discrepancy definition*** | Difference between the lower and the higher valuation of more than 10% of the higher valuation (per the rule). | |
| ***Resolution of valuation discrepancies*** | Establish and maintain policies and procedures reasonably designed to resolve any valuation discrepancy as soon as possible but in any event within 5 business days | Establish and maintain policies and procedures reasonably designed to resolve swap valuation discrepancies in a timely fashion |
| ***Reporting of valuation disputes*** | Valuation disputes: SBSD/MSP shall notify the SEC of any SBSD valuation dispute in excess of US$20mm (or its equivalent in another currency), at either the transaction or portfolio level, if not resolved > 3 business days, if the dispute is with a counterparty that is a SBSD or MSP. | Valuation disputes: SBSD/MSP shall notify the SEC of any SBSD valuation dispute in excess of US$20mm (or its equivalent in another currency), at either the transaction or portfolio level, if not resolved > 5 business days if the dispute is with a counterparty that is not a SBSD or MSP. |
| ***Security-based swap trading relationship documentation*** | The security-based swap trading relationship documentation shall be in writing and shall include all terms governing the trading relationship between the security-based swap dealer or major security-based swap participant and its counterparty, including for dispute resolution.<br><br>Such documentation shall include either an alternative methods for determining the value of the security-based swap in the event of the unavailability or other failure of any input required to value the security-based swap for such purposes or a valuation dispute resolution process by which the value of the security-based swap shall be determined.[22] | |

[19] https://www.law.cornell.edu/cfr/text/17/240.15Fi-3

[20] Section V, SECURITIES AND EXCHANGE 17 CFR Part 240, Risk Mitigation Techniques for Uncleared Security-Based Swaps,

[21] Key Dates for Registration of Security-Based Swap Dealers and Major Security-Based Swap Participants

[22] https://www.law.cornell.edu/cfr/text/17/240.15Fi-5

# Appendix II. Summary of the Hong Kong, MAS and APRA Portfolio Reconciliation Requirements.

| *Hong Kong Comparison* | *HKMA Port Rec Rules* | | *HKSFC Port Rec Rules* |
|---|---|---|---|
| *Client Classification* | Financial Counterparties and Significant Financial Counterparties | All other Counterparties | Financial Institutions |
| *Rule applicable to* | Authorised Institutions (AIs) | | Licenced Corporation (non-centrally cleared OTC Derivatives) |
| *Compliance date* | 27th January 2017 | | September 2020 |
| *Terms* | Establish and implement policies and procedures to ensure that the material terms and valuations of all outstanding transactions (both collateralised and uncollateralised) in a non-centrally cleared derivatives portfolio are reconciled | | Establish and implement policies and procedures to ensure that the material terms are exchanged and valuations (including variation margin) are reconciled with counterparties at regular intervals. |
| *Reconciliation venue* | Bilateral or qualified 3rd party vendor subject to agreement of the counterparties | | |
| *Reconciliation frequency* | Daily for portfolio 500+ trades<br>Weekly for 51-499 trades<br>Quarterly for 1 - 50 trades | Quarterly for portfolio >100 trades<br>Annual 1-100 trades | The frequency of portfolio reconciliation with each counterparty should be commensurate with the risk exposure profile of the counterparty, considering the size and volatility of the portfolio of the licensed corporation with a particular counterparty. |
| *Material Terms Definition* | Material Terms and Valuations | | Material Terms and Valuations |
| *Resolution of parameter discrepancies* | Agree with counterparties and document the process for discrepancies that should be considered a dispute and resolved as soon as practicable | | Agree in writing with its counterparties, other than counterparties who are individuals, the mechanism or process for determining when discrepancies in trade populations, material terms, valuations and margins should be considered disputes, as well as how such disputes should be resolved as soon as practicable. Where the counterparty is not a financial counterparty, the licensed corporation may meet this requirement by establishing and implementing effective policies and procedures regarding the type of counterparties with whom such dispute resolution mechanism or process should be agreed, proportionate to the level of exposure to the counterparty. |
| *Valuation discrepancy definition* | Difference between the lower and the higher valuation of more than 10% of the higher valuation (per the rule). | | |
| *Resolution of valuation discrepancies* | A specific process for disputes that remain unresolved within five business days. Such a process should provide for the escalation of material disputes to an appropriate level of senior management at the AI. | | |
| *Reporting of valuation disputes* | An AI should report to the MA any material disputes in excess of HKD 100 million (or its equivalent in any other currency), if not resolved within 15 business days. | | N/A |
| *Record keeping/ Governance* | An AI and its counterparties should have in place agreed detailed procedures and processes in relation to the identification, recording, and monitoring of disputes relating to the recognition or valuation of derivatives contracts and to the exchange of margin between counterparties. Sufficient records should be kept to facilitate the reporting of material disputes | | N/A |

| *APRA / MAS Comparison* | *APRA Port Rec Rules* | *MAS Port Rec Rules* | |
|---|---|---|---|
| *Client Classification* | Covered Counterparty | Financial Counterparties | Non – Financial Counterparties |
| *Rule applicable to* | Australian Prudential Regulation Authority (APRA) Covered Entity | Over-the-counter Derivatives (OTCD) Intermediaries | |
| *Compliance date* | 1st March 2017 | 17th January 2019 | |
| *Terms* | Establish and implement policies and procedures designed to ensure that the material terms and valuations of all transactions in a non-centrally cleared derivatives portfolio are reconciled with covered counterparties at regular intervals. | Should include in its policies and procedures the process or method for portfolio reconciliation that it has agreed with its financial counterparties. | Should include in its policies and procedures the process that reflects its efforts to conduct portfolio reconciliation with its non-financial counterparties, e.g. by providing, on a periodic basis, a non-financial counterparty with a statement on the material terms and valuations. |
| *Reconciliation venue* | Bilateral or qualified 3rd party vendor subject to agreement of the counterparties | | |
| *Reconciliation frequency* | Conduct portfolio reconciliation with a scope and frequency that reflects:<br>(a) the nature and extent of its non-centrally cleared derivative activity.<br>(b) the materiality and complexity of the risks it faces.<br>(c) global regulatory standards imposed on similar institutions for similar transactions; and<br>(d) market practice and industry protocols in the relevant derivative markets. | Daily for portfolio 500+ trades<br>Weekly for 51-499 trades<br>Quarterly for 1-50 trades | Quarterly for portfolio >100 trades<br>Annual 1-99 trades |
| *Material Terms Definition* | Material Terms and Valuations | Material Terms and Valuations | |
| *Resolution of parameter discrepancies* | Identify and resolve discrepancies in the material terms and valuations in a timely manner. | Agree and document with counterparties the process for determining when discrepancies should be considered disputes and resolved as soon as practicable. | |
| *Valuation discrepancy definition* | Defined by each firm's internal risk tolerances and documented within their policies. | Defined by each firm's internal risk tolerances and documented within their policies. | |
| *Resolution of valuation discrepancies* | The dispute resolution procedures must address the mechanism or process for determining when discrepancies in material terms or valuations should be considered disputes as well as how such disputes should be resolved as soon as practicable. | Material disputes should be escalated to senior management of the OTCD Intermediary. There should be clear criteria used by the OTCD Intermediary to determine when a dispute is considered material. | |
| *Reporting of valuation disputes* | A covered entity must notify APRA of disputes that are material either in dollar value or period of time outstanding. An APRA covered entity must clearly document and regularly review the criteria used to determine when a dispute is reported to APRA. | An OTCD Intermediary should report promptly to the Authority any dispute that exceeds S$25 million which remains unresolved beyond 15 business days. | |
| *Record keeping/ Governance* | An APRA covered entity must have policies and procedures to document disputes and such documentation must be made available to APRA upon request. | The policies and procedures governing portfolio reconciliation and dispute resolution should be approved by the board of directors or its delegates, and be subject to periodic independent review. | |