2013 Best Practices for the OTC Derivatives Collateral Process

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Introduction

This 2013 interim updated edition of Best Practices for the OTC Derivatives Collateral Process (the "Best Practices") substantially revises the guidance that ISDA has previously provided to the market on the operation of collateral agreements. This is largely in response to the evolution of regulation governing the collateral management process over the past 2 years.

The previous 2011 edition was published prior to the finalizing of many CFTC and ESMA rules impacting collateral. When the 2011 edition was published, it was noted that many of the recommendations were likely to require modification or in some cases would be no longer applicable in whole or in part, as a result of regulation. The 2011 edition noted that "best practices put forth in this document could be significantly altered or rendered invalid by pending CFTC rulemaking or other industry initiatives (e.g. Standard CSA) and as such could be withdrawn in whole or in part where applicable”.

The ISDA Collateral Steering Committee have continuously monitored the development of regulation and decided in April 2013 that an updated version of the document was required to avoid any potential confusion or conflict with recent regulation due to come into effect later in 2013. However, this can be only an interim update, because significant further regulatory change is anticipated in the collateral space, most notably as the recommendations of the Basel/IOSCO joint Working Group on Margin Requirements are adopted by national regulators in 2015 and beyond. A further update to this document is therefore anticipated in 2014.

Approach to the 2013 Edition

In formulating this update the editors have tried to preserve the text of the prior edition wherever regulation and modern market practice do not conflict with it. Where a former best practice is essentially replicated, replaced or rendered obsolete by regulation, then in order to avoid potential conflicts we have chosen to remove the best practice guidance completely. In other cases we have retained the concept but modified the text to reflect regulation and current practice.

Origins of the Best Practices

The 2013 interim edition of the Best Practices replaces and vacates the earlier editions of this document that were published by ISDA in 2010 and 2011.

The original and continuing intent of the document is to demonstrate ISDA’s pro-active commitment to industry improvements based on industry engagement, by establishing a set of best of breed practices that may inform the activities and policies of market participants.

The harmonization of practice between practitioners serves to mitigate risks inherent in the collateral management process and also sets expectations and standards for new entrants to the over-the-counter (OTC) derivative market.

This document focuses on OTC derivative trades collateralized on a bilateral basis under the ISDA English and New York law Credit Support Annexes (CSAs) and English Law Credit Support Deed (CSD) agreed between two parties. It does not cover best practices for OTC derivatives that have been given up to central clearinghouses by clearing members, whether on their own behalf or that of their clients.

It is important to note that the Best Practices are the latest in a series of industry efforts by collateral professionals to articulate and enhance collateral management practice.

Since 1998 with the publication of the first ISDA Guidelines for Collateral Practitioners, collateral professionals have sought to improve the collateral process. Following the LTCM crisis, the first real test of the newly-emerging collateral management process in 1999, updated guidelines were published in 2005.

Other, more recent contributions by the industry that are referenced herein include the 2009 Recommended Practices for Collateralized Portfolio Reconciliation, Standards for the Electronic Exchange of OTC Derivative Margin Calls, the 2010 Market Review of Bilateral Collateralization Practices, the Independent Amount Whitepaper and the 2011 Convention
on Portfolio Reconciliation and Investigation of Disputed Margin Calls and 2011 Formal Market Polling Procedure released in April 2011. More recently ISDA has published an entirely new collateral agreement, the 2013 ISDA Standard Credit Support Annex, which incorporates many improvements and seeks to provide greater market standardization of process and economics.

It should be noted that the Best Practices are not intended to create legal obligations nor alter any existing obligations of the parties pursuant to their bilateral documentation. As market participants continue to discuss and evolve the topics contained herein, this document may be subject to periodic revisions.

Note that in this document the terms Initial Margin, IM, Independent Amount and IA are used interchangeably.

**Section 1 - Client On-boarding and ISDA/CSA Set Up**

**Introduction**
When on-boarding new clients onto internal systems it is important to ensure that key procedures are followed and that tasks are completed accurately and in a timely manner, prioritizing where necessary, and aspiring to a two to three day turnaround.

Adherence to the established best practices will ensure that collateral operations teams are in a position to support the collateral process as soon as trading commences following the execution of the ISDA/CSA or other trade confirmation. Both parties should ensure that adequate resources are allocated to the on-boarding process to ensure that all procedures are completed in the established timeframes.

**Best Practice 1.1: Capturing ISDA/CSA Terms on Internal Systems**

**Principle**
The terms of a newly-signed ISDA/CSA should be input into internal systems promptly after execution of the agreements and appropriately prioritized relative to expected trading activity.

**Description**
Once a client is on-boarded onto internal systems, there should be a procedure in place that enables the collateral department to access all executed agreements and verify that operational terms have been captured correctly within the collateral application.

The terms of the CSA which have been entered in the legal documentation system should automatically feed into the collateral calculation system. Where there is no system interface between the legal documentation and collateral systems, the collateral team must have access to copies of executed documents.

**Best Practice 1.2: Exchange of Contact Information**

**Principle**
General contact information for collateral operations should be included in the CSA.

**Description**
Each institution should provide a group email address, phone number and an initial operations contact to help streamline the data collection process when establishing new accounts.

It is incumbent upon all institutions to maintain a current listing of daily contacts. This should include department managers and, in some cases, credit officers.

**Best Practice 1.3: Exchanging Standard Settlement Instruction (SSI) Information**

**Principle**
Standard Settlement Instructions (SSIs) should be exchanged prior to first collateral delivery.

**Description**
Each institution should provide authenticated SSIs for all eligible collateral pools covered by the CSA. The verification process should be completed before the first exchange of collateral. Institutions are responsible for conforming to their own internal funds transfer policy but as a minimum their process should include a call back to someone other than the individual who originally supplied the SSIs. The call back process also applies to amended SSIs.

A client’s prime broker or outsourced operator can provide SSIs on behalf of the client if evidence of delegation authority is received from the client.
Best Practice 1.4: Non-Standard Agreements

**Principle**
Any CSA or long form confirmation, containing non-standard terms should be reviewed by collateral operations prior to execution.

**Description**
If non-standard terms in a CSA or long form confirmation will require manual support from collateral operations, the agreement must be reviewed and approved by operations prior to its execution. Each institution’s operating areas are responsible for supporting any manual processes in a controlled and efficient manner. Additionally, all non-standard processes should be reviewed for effectiveness on a periodic basis.

Best Practice 1.5: Use of Standardized Industry Documentation

**Principle**
Wherever possible an ISDA Master Agreement and Credit Support Annex (CSA) should be used to confirm collateral terms, if any, between counterparties. In the rare situation where trading of OTC derivative contracts is performed in advance of an ISDA/CSA being executed, the collateral terms should be specified in a long form confirmation. Adoption of recently-published fully standardized collateral documentation (the ISDA 2013 Standard CSA) should be considered by market participants in order to promote market convergence towards common standards.

**Description**
OTC derivative transactions should not be executed without a signed ISDA Master Agreement and Credit Support Annex in place, if appropriate, with the counterparty. Once counterparties have executed these agreements, only the economic terms of a transaction will need to be negotiated and documented each time a transaction is completed.

The Standard CSA (SCSA) provides an even higher level of standardization, including all of the portfolio level collateral terms that are economically material to the valuation of underlying derivative transactions. Use of the SCSA will ensure alignment of collateral assets with the funding required for future swap cashflows; creates a consistent basis for valuation of derivatives across bilateral and cleared parts of the swap market; and creates improved market transparency and consistency of behavior.

Best Practice 1.6: Tax Documentation Handling

**Principle**
All relevant tax documentation should be in place prior to any collateral being exchanged.

**Description**
The repatriation of interest on cash collateral (or coupons on security collateral) to the Transferor can be delayed or incomplete if the relevant Tax documentation is not in place or has expired. Tax documentation (such as forms W-8 and W-9 in the US and other documents as appropriate in other jurisdictions) should be exchanged between parties to ensure any interest accrued on cash collateral balance or proceeds of security collateral are not subject to Withholding Tax or any other deductions applicable for other tax jurisdictions. Firms should also implement processes whereby existing tax documentation is monitored to ensure that if the existing tax documentation is due to expire, updated tax documentation can be exchanged ahead of the existing documentation’s expiration date.

In 2010, the Foreign Account Tax Compliance Act (FATCA) was signed into US law. FATCA requires, among other things, foreign financial institutions, such as banks, to enter into an agreement with the US Internal Revenue Service (IRS) to identify their US account holders and to disclose further account details. Given the global nature of derivatives trading, firms should consult their tax professionals to determine if FACTA rules apply in their specific trading circumstances.

Best Practice 1.7: Tri-Party Control Agreements

**Principle**
Any required Collateral Control Agreements should be executed along with the ISDA Master Agreement and CSA, at the onset of a new client relationship.

**Description**
Prior to executing collateralized trades for new counterparties, each party (including the 3rd party custodian bank) should countersign and deliver an executed copy of the Collateral Control Agreement (CCA). The terms therein would apply to counterparties who require
The segregation of collateral whether mandated or otherwise and make reference to the ISDA Master Agreement. Collateral assets pledged by mutual funds are currently required to be segregated for the benefit of the Secured Party at the fund’s own custodian for mutual funds registered under the Investment Company Act of 1940. However the scope should be broadened to include all counterparties negotiating tri-party collateral agreements. Without an executed CCA, bilateral swap transactions will not be sufficiently collateralized creating undue risk for the Secured Party.

Section 2 - Margin Requirement Calculations

Introduction
When calculating exposure for margin calls it is important to ensure that exposure is calculated on a timely basis, using accurate valuation parameters consistent with standard market practices. The margin requirement calculation will include the mark to market of the specific trades covered by the agreement (variation margin), any independent amounts (IA or initial margin), which may be applicable at a trade or portfolio level, the valuation of collateral previously held or posted, and the application of other relevant collateral agreement terms for instance, threshold and minimum transfer amounts. Note that in some jurisdictions margin rules may be applied by regulators that overlay or in some cases supersede the contractual provisions agreed by market participants; accordingly, care should be taken to ensure compliance with all applicable rules, and especially to understand the interaction between rules and contractual provisions.

The application of rules and contractual provisions related to netting, the scope of agreement, branches and legal entity should be automatically applied so that only trades falling within the collateral agreement parameters are included in the margin calculation.

Adherence to the established guidelines will ensure that collateral operations teams are in a position to consistently apply exposure calculations in accordance with the ISDA CSA documentation, market conventions and applicable rules. This will help minimize margin disputes and ensure timely exchange of collateral, as well as helping market participants to comply with the relevant rules.

Best Practice 2.1: Variation Margin and Initial Margin Calculations

Principle
VM and IM should be calculated in accordance with the relevant regulatory rules for the specific transactions covered by those rules, and also in accordance with the collateral agreement between the parties. Note that some rules may “grandfather” pre-existing transactions and thus not apply to those trades.

Best Practice 2.2: Timing of Inclusion or Exclusion of Transactions from Collateral Calculations

Principle
Unless applicable rules or contractual terms state to the contrary, in general, collateral should cover the present value of future cashflows between the parties to a swap, including settlement events that have occurred or will shortly occur until such time as they have been completed.

Description
For new trades, initial and variation margin requirements should be included in margin calculations on trade date plus one. Variation Margin, where applicable, should include the initial premium for new trades, which should be included in the margin calculation until settlement date plus one. The initial premium payor should not claim or receive credit from a variation margin perspective for payment of the initial premium until settlement date plus one.

In the case of terminated or matured trades, variation margin equal to the termination fee amount should be required until settlement date plus one (that is, the day after the termination fee has settled).

In the normal course of business, with respect to terminated or matured trades where initial margin is calculated at the trade level and the confirmation or other relevant documentation is silent regarding the treatment of initial margin on matured or terminated trades, initial margin

1 For these purposes we assume in the text that settlement date plus one represents the point where settlement finality occurs, but parties should be aware of and adjust for situations where settlement cycles are elongated beyond 1 day.
should be available to be returned to
the pledging counterparty on the next available
settlement day after termination date or maturity
date plus one (that is, the day after the trade
has terminated or matured), providing the CSA
states a daily Valuation Date and the period
between expiration and settlement of the trade is
not prolonged. When in doubt, parties should
mutually agree IA handling in the event of an
unwind or termination. Initial margin will
generally be calculated at a trade level although
firms should maintain the ability to support the
calculation of this figure at a portfolio level and
also to support the retention of initial margin in
the portfolio until settlement date plus one.
Finally, firms should also maintain the ability to
net settle variation margin with trade premiums.

Best Practice 2.3: Population of Trades to be
Included

Principle
Unless applicable rules or contractual terms
state to the contrary, in general, collateral should
cover all derivative product types between two
parties as defined by the applicable Master
Agreement and CSA.

Description
Any trade that matches a derivative product type
that is covered by the Master Agreement and/or
listed in the CSA should be included in the
collateral calculation used to determine whether
or not a collateral exchange is required, unless
stipulated otherwise by rules or contractual
terms. If CSAs or rules are ambiguous with
respect to foreign exchange trades and lack
differentiation between spot and forward
transactions, it is common operational practice
to exclude spot trades from the margin call
calculation; however, best practices is for
parties to bilaterally agree the handling of FX
spot trades for the purpose of margin call
calculation.

Section 3 - Margin Call Issuance
and Response

Introduction
Greater automation of the collateral
management process via electronic messaging
will standardize the delivery method, content
and formatting of margin calls, and will also
improve the timeliness and security of call
issuance and response.

Since the 2008 financial crisis, industry
participants have experienced continued growth
in margin call volume along with increased
scrutiny of the collateral processes. With the
onset of regulatory reform across the globe the
collective market expectation is that margin call
volumes will further increase. Drivers for these
increases include: a) the ‘un-netting’ of margin
into discrete processes for variation margin and
initial margin; b) the bi-lateral posting of initial
margin; c) the reduction in thresholds and
minimum transfer amounts; d) the move away
from unclealateralized derivative transactions,
and the move to currency-based margin silos via
the Standard Credit Support Annex.

This increase in margin call volumes requires
practitioners to further develop their processes
to allow for scale while ensuring control. One
area of focus is the communication of margin
calls and related margin activities (e.g.
substitutions, interest processing) between
parties. Historically, email has been the most
widely used form of communication in the
collateral space. However, with the recent
introduction of electronic messaging for margin
activity there is an opportunity for firms to
streamline this aspect of their process.

ISDA and its members have been strong
supporters of electronic messaging, as
evidenced by the development of agreed
message standards and message attributes
("Standards for the Electronic Exchange of OTC
Derivative Margin Calls") and commitments to
test such functionality across a number of
vendor platforms. In 2012, ISDA brought
together past electronic messaging efforts into a
new document, the 2012 Collateral Best
Practices for Electronic Messaging (the
“Messaging Best Practices”).

The purpose of this section is to provide
members with guidelines designed to
standardize their existing margin process and by
reference to the 2012 Messaging Best Practices
to ease their implementation of electronic margin
message communication. The section focuses
on OTC derivative trades collateralized under an
ISDA Credit Support Annex (CSA). It does not
specifically cover cleared trades. However, it is
the intention of the document to provide a
foundational layer that can be leveraged for
electronic messaging of cleared derivatives in the future.

**Best Practice 3.1: Data Availability**

**Principle**

*It is imperative that the data used in the margin calculation be received into the collateral system in a timely manner allowing for margin calls to be issued as soon as possible.*

**Description**

It is critical to establish firm cut offs for delivery and receipt of trade level details into collateral systems. All business areas should be made aware of timeframes for the delivery of data and that trades booked after the cut off will not feed into systems and will not be included in the margin call.

Timeliness for mark to market and independent amount adjustments is key for business and control areas to achieve optimum data integrity. This ensures that there is adequate time for sign off and validation prior to the marks being published and a margin call being issued.

Calls must be issued by the notification deadlines outlined in the CSA; however, it is preferable for a call to be issued as early as operationally possible.

The criticality of early and consistent deadlines for margin data within and across firms is likely to become even more acute with the advent of universal IM regulations in approximately 2015 (with later implementation dates expected for some non-dealer market participants). These will require complex calculations to be performed prior to the making of a margin call, and to both ensure compliance with the rule and avoid endemic disputes regarding IM calculations, market participants should be prepared for tighter data delivery timeframes.

**Best Practice 3.2: Data Integrity**

**Principle**

*Collateral practitioners must ensure that robust processes and controls are in place to monitor data integrity. It is important that the data contained within the margin call, along with the underlying data, is as complete and accurate as possible in order to minimize the risk of call dispute.*

**Description**

Margin call calculations rely on several data sources: trade and exposure data, collateral positions, agreement terms, market data, and instrument data. Firms should have in place controls to measure the accuracy of such data.

For example, it is critical that completeness programs monitor and track the receipt of all files and raise warnings and highlight potential missing or incomplete data.

**Best Practice 3.3: Content for Exchanged Collateral Call**

**Principle**

*For the issuance of exchanged collateral calls, the following minimum standard data fields should be included:*

1. **Principal Counterparty Reference** – Reference of the client issuing the margin call
2. **Counterparty Reference** – Reference of the client receiving the margin call
3. **Valuation Date** – The close of business date for which the principal counterparty is issuing the margin call
4. **MTA** – Minimum amount to pay/receive as specified in the agreement in the base currency
5. **Threshold** – Amount of exposure a counterparty will accept before issuing a margin call in the base currency
6. **IA** – Required Credit Support, in addition to the Variation Margin, included in the MTM in the base currency
7. **Total MTM** – Net market value of the portfolio in the base currency
8. **Collateral Balance** – Value of current held and pledged (actually settled), in the base currency
9. **Collateral In-Transit Balance** – Value of current held or pledged (pending settlement), in the base currency
10. **Margin Requirement - Value of the requested collateral transfer in the base currency**

**Best Practice 3.4: Data Validation**

**Principle**
Before responding to a counterparts call, the receiving party should quickly verify the core data elements that make up a collateral call.

**Description**
Parties should perform a simple mathematical check to ensure their counterpart has performed the correct mathematical calculation to arrive at a call amount.

**Best Practice 3.5: Call Response Timing**

**Principle**
Generally speaking, counterparts should provide a response as soon as possible after receipt of the call, and at latest by close of business on the day a call is received, provided settlement is call date plus one. Where call issuance and settlement of collateral is same day, wherever possible, responses should be received as soon as possible after receipt of the call and no later than one hour prior to closing of the securities market and two hours prior to cash deadlines.

**Description**
Parties should have the system capability and the procedural framework in place allowing for delivery of collateral within the timeframes agreed upon in the CSA. If a party has agreed a delivery and is aware that it will be late in paying, every effort should be made to notify the receiving party to avoid unnecessary loss due to positioning of funds.

**Best Practice 3.6: Content for Exchanged Response to Collateral Call**

**Principle**
If a party is responding to a collateral call in an exchanged message then parties should include, at a minimum, the below fields in their collateral call response:

1. **Counterparty Reference** – Reference of the client responding to the margin call
2. **Indication of agreement or a full or partial dispute**
3. **Collateral Amount** – Amount of collateral agreed to and being sent
4. **Collateral Type** – e.g., EUR/USD cash or security ID and par value
5. **Settlement Date** – The business date for which the counterparty is delivering the agreed collateral
6. **Total MTM** - Net market value of the portfolio in the base currency if anything other than agreed in full

**Best Practice 3.7: Adjustment of Margin Calls**

**Principle**
Adjusted (revised) margin calls, when required, should be issued as early as possible during the day. The receiving party should endeavor to review and respond to the adjusted margin call in a timely manner to meet delivery timings in the CSA on a reasonable efforts basis.

**Description**
It is recognized that adjusted margin calls may be necessary from time to time due to pricing, collateral or other issues. The parties should work together to provide notification, to respond to these adjusted calls and then deliver collateral on a reasonable efforts basis, even if the notification timing does not meet the formal definition in the CSA.

**Best Practice 3.8: Failure to Respond**

**Principle**
From time to time counterparts may experience technical difficulties preventing them from answering margin calls within the accepted timeframes. Wherever possible, parties should endeavor to communicate the existence of technical difficulties prohibiting call response as soon as possible. A party experiencing technical difficulties does not have good faith grounds to dispute all incoming margin calls for this reason alone - a dispute should still be raised only where there are reasons to believe the counterparty’s margin call is erroneous in some way.

**Description**
As there is clear guidance regarding the issuance of collateral calls and the subsequent delivery of collateral arising from that call, it can be assumed that a failure to respond by close of business on settlement day constitutes a failure under the terms of the CSA. A response to a validly issued collateral call should not be delayed by unnecessary requests for additional...
information. Parties should communicate technical difficulties prohibiting call response as soon as possible.

Section 4 - Settlement of Call

Introduction
In order to settle collateral calls it is important to ensure that appropriate procedures and controls are in place to ensure timely and accurate instruction of collateral movements and to minimize counterparty risk.

Best Practice 4.1: Timing of Instructions for the Settlement of Collateral Movements

Principle
Once the collateral type to be delivered has been agreed by both parties, settlement instructions for collateral movements should be issued, including explicit instructions for both deliveries and receipts of collateral, regardless of whether cash or securities are to be settled.

Description
Procedures should be in place to ensure that instructions for the settlement of collateral movements are effected once the collateral to be delivered has been agreed by both parties. This may involve the release of instructions directly from collateral systems linked directly to payment systems or the provision of settlement instructions to an independent settlement function for execution.

Instructions should be input to the appropriate settlement systems for both the receipt and the delivery of securities to facilitate matching between both parties to the transfer. This principle equally applies to the movement of cash collateral, though matching is not required.

Best Practice 4.2: Reconciliation of Collateral Balances

Principle
Where payments are effected in a settlements/payment system which is not embedded within the collateral system, a reconciliation of collateral balances should be performed between the systems on a daily basis.

Description
A daily reconciliation of collateral balances should be performed where there is no direct link between the collateral system and the appropriate collateral movement settlement system. All discrepancies should be investigated and corrected promptly.

Best Practice 4.3: Return of Collateral Balance if under MTA

Principle
The collateral balance should be returned whenever the exposed party has collateral pledged out.

Description
In the event that exposure between two parties changes direction, and the party previously pledging collateral is now exposed, the full balance should be returned regardless of the MTA. MTA does not apply in this scenario as an exposed party should never also have to post collateral.

Section 5 - Collateral Dispute Resolution

Introduction
For best practices associated with portfolio reconciliation and dispute resolution of trade differences, see section 10.

US and European regulators have taken a somewhat different approach to rulemaking in the dispute resolution space.

The CFTC rules on dispute resolution can be found under Portfolio Reconciliation on page 60 of the following link: www.cftc.gov/ucm/groups/public/@lrfederalregister/documents/file/2012-21414a.pdf.

The parallel ESMA rules are found on page 12 of the following link: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:052:0011:0024:EN:PDF.

In summary, the CFTC and ESMA dispute resolution rules apply to the portfolio reconciliation requirement as outlined in Section 10 and are silent with respect to dispute resolution at the portfolio level and dispute resolution under the credit support annex. The CFTC rules define a material mark-to-market (MTM) difference at the trade level while establishing a 5 day resolution timeframe for trades with material MTM differences between
swap dealers. While the CFTC doesn’t penalize firms for not resolving trade level material differences within 5 days, regulated firms are required to maintain policies and procedures that are reasonably designed to resolve material MTM differences within 5 days and to report matched trades aged more than 3 or 5 days, depending on counterparty type.

The ESMA dispute resolution rules take a different approach. ESMA doesn’t define a material MTM difference nor does it define the timeline within which a dispute must be resolved, however it does require procedures to be in place for tracking, monitoring and for reporting disputes with specific procedures for disputes lasting more than 5 days. ESMA doesn’t define a dispute but rather leaves the definition open-ended, providing market participants with the flexibility to apply their own materiality tests. The ESMA rules do, however, require regulated firms to report to regulators disputes aged more than 15 days and EUR 15mm.

The following best practices will be further defined and enhanced after publication of final margin rules. Best practice guidelines for resolving trade level MTM differences are included in the Portfolio Reconciliation section of this document.

In both sections we have not included any description of practices that would replicate or potentially be confused with the requirements of the applicable rules, which should of course be followed by market participants. The best practices outlined here augment the rules by addressing points of practical significance that are not directly regulated.

| Best Practice 5.1: Portfolio Level Collateral Dispute Aging Principle |
|-------------------------|---------------------------------------------------------------------|
| collateral disputes should be aged on a calendar basis from both the perspective of the individual disputing party as well as the cumulative age of both parties. |

<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>Firms should maintain the system capability to age collateral disputes on a calendar basis from two perspectives; the first being from their own exposure perspective and the second being the cumulative age of the dispute (i.e. where either party is exposed). Non Standard call date (i.e. weekly call) collateral disputes should also be aged on a calendar basis from both the perspective of the individual disputing party as well as the cumulative age of both parties. The dispute should age from the original disputed call date until the next call date and only get reset at the next call date as per the reset criteria from Best Practice 5.2.</td>
</tr>
</tbody>
</table>

| Best Practice 5.2: Resetting Dispute Aging Principle |
|-----------------------------|----------------------------------------------------|
| The collateral dispute aging clock is reset to zero upon the following circumstances; no call from either party or an agreed in full margin call. |

<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>For the purpose of aging a collateral dispute from either an individual firms perspective or a cumulative age of dispute perspective, the dispute aging clock should be reset to zero when the following circumstances occur; no call from either party or an agreed in full margin call. The instance of a holiday, local or otherwise, should not reset the dispute aging clock to zero. Dispute aging should continue if one party fails to call or respond to a call due to a local holiday.</td>
</tr>
</tbody>
</table>

| Best Practice 5.3: Communicating Issues Causing Disputes to your Counterparty Principle |
|-----------------------------|----------------------------------------------------|
| To facilitate prompt dispute resolution, firms should communicate to their counterparty the complete population of trades under investigation (TUI) as the cause or reason for the collateral dispute. |

<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>As quickly as possible after portfolio reconciliation is complete, trades under investigation (TUI) should be escalated to the appropriate internal department for resolution. Also, where appropriate, TUI should be escalated to the appropriate counterparty contacts.</td>
</tr>
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</table>

### Section 6 - Collateral Fails

<table>
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<th>Introduction</th>
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| In the event that an agreed-upon collateral transfer is not settled by the collateral transfer date it is important that all relevant parties are informed, and that there is a procedure in place to quickly resolve any issues. The counterparty risk associated with failed collateral transfers will
be mitigated as quickly as possible if both parties have well-defined escalation points and sufficient resources to address the problem. Identifying the cause of failed transfers and implementing protocols to resolve systematic issues leading to failed transfers will ultimately reduce the total number of fails in the market.

**Best Practice 6.1: Identification**

**Principle**

Systems and procedures should be in place to actively monitor settlement status of all forms of collateral transfers.

**Description**

SWIFT or other electronic communication methods can be utilized to automatically update settlement status on collateral transfers. Fail reports generated by these systems should be actively reviewed by a firm’s settlements team. In the absence of an electronic communication method, manual procedures should be implemented to gather settlement status information. Custodians should be required to provide information for failed transactions on a settlement date plus one basis. This information should be consolidated and reviewed by the firm’s settlements team.

**Best Practice 6.2: Notifications**

**Principle**

Once a failed collateral transaction has been identified, the party that has identified the failed collateral delivery should promptly notify the other to allow ample time to resolve the issue.

**Description**

Both parties should be aware of a failed transaction if the proper identification steps are in place. However, the party that has failed to receive collateral should advise the party that has failed to deliver to ensure that appropriate steps to resolve the fail have been initiated. To ensure that the correct transaction is investigated, the notifying party should supply, at a minimum, the following information: Account Name, Security ID (or cash), and Quantity. Also, once identified, pending settlements should be noted on outgoing collateral calls.

Collateral Control Agreements (CCAs) are set up with reporting and communication provisions enabling the beneficiary to monitor collateral segregated on its behalf. This communication type defined in the CCA should allow the beneficiary to easily confirm that the agreed upon transaction has been processed. In the event that a transaction is not processed, the pledging party is responsible for addressing the deficiency, and having the custodian advise the beneficiary immediately upon completion.

**Best Practice 6.3: Resolution Timeframe**

**Principle**

Failed collateral transactions should be resolved on the day they are identified or the next available settlement date determined by market settlement cycles (ex JGB or Euroclear transfers).

**Description**

Once a fail is identified, settlement teams should work to resolve the problem as soon as possible. If the sending party’s movement was not recognized, settlement instructions should be exchanged and re-verified. The cause of any recurring settlement issue (incorrect SSI, any settlement flag, problems with custodians/cage, etc.) should be investigated, and steps should be taken to eliminate these issues going forward.

**Best Practice 6.4: Escalation and Reporting**

**Principle**

Failed collateral settlements should be recorded on an end of day fails report. This report should be distributed to operations managers and credit officers with escalation procedures in place to address aged fail items.

**Description**

All failed settlements should be listed on a system-generated fails report. Ideally this report should be available close of business each day. The report should name the counterparty that failed the type and amount of collateral and the date the settlement should have occurred. Aging should be applied to all fails. The report should be distributed to all relevant operations managers and credit officers on a daily basis. It should be remembered that a failed collateral movement may technically constitute an event of default, and should be treated with the appropriate gravity. A settlement fail may actually be an early warning of counterparty distress, and if appropriately notified to the failing counterparty may initiate the process that ultimately leads to termination of swaps under the ISDA Master Agreement.

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2 Sometimes referred to as a “DK” or “Don’t Know” rejection of a movement by a receiving institution.
Best Practice 6.5: TMPG Fails Charge

Handling

Principle

Fails Charges, assessed when one party fails to deliver a covered security under a collateral agreement, should be a wash to those parties who fail to deliver as a result of a failure to deliver by another party. As a general principle, although SIFMA’s TMPG Fails Charge regime does not technically cover the OTC derivative market, it is the practice of that market to honor the same principles and standards on a voluntary basis.

Description

The government bond cash securities market is interconnected with other markets in which margin calls result in the free-of-payment movement of government securities collateral. Examples of interconnected markets include those that accept government securities under the ISDA CSA, but also under other agreements such as the GMRA, the MSFTA, prime brokerage agreements, futures and options agreements, and collateral agreements between FCMs, DCM’s and their clearing corporation arrangements. In certain government bond cash securities markets it is convention for a party failing to make delivery of a security to pay a Fails Charge to the other party (for example, under the SIFMA Treasury Market Practices Group “Fails Charge Trading Practice” in the US); however, free deliveries of securities as collateral are typically excluded from such requirements. Where securities cross from one market to the other, this creates a disparity between markets that can lead to a party not at fault for a failed delivery having to pay a Fails Charge to their counterparty in the cash securities market, but being unable to reclaim this from their counterparty in an exempt collateralized market. This disparity is an undesirable disconnect between markets and leads to the cost of fails being inappropriately borne by parties not at fault. Therefore, where this situation arises under an ISDA CSA or any other agreement including clearing agreements, all parties should voluntarily honor Fails Charge claims, subject to the detailed provisions below.

Fails Charges as defined by the TMPG and SIFMA (commonly known as “TMPG Fails Charges”) are assessed when one party fails to deliver a covered security to another party. In spirit, Fails Charges were affected to penalize parties failing to delivery U.S. Treasury securities and thus making that market function inefficiently. Fails Charges, assessed when one party fails to deliver a covered security under a collateral agreement, should be a wash to those parties who fail to deliver as a result of a failure to deliver by another party. Within the TMPG/SIFMA “Fails Charge Trading Practice” document, securities that are delivered free of payment, such as the deliver of treasuries for margin purposes are specifically exempted. However, to the extent one party delivers a security free of payment to another under a collateral agreement, and that subsequent party fails to deliver the security onwards and is claimed for a Fails Charge under TMPG as a result, the original party failing to deliver the collateral should honor a pass-through claim of the TMPG Fails Charge. The amount of a claim to be cross-honored under the collateral agreement shall not exceed the upstream claim amount.

The decision of one party to honor a claim as a result of a TMPG charge is subject to the determination of the “reasonability” of that claim.

Exceptions that may lead to a legitimate rejection of a request to cross-honor a TMPG Fails Charge claim include situations where:
- The party requesting the return of collateral to satisfy an executed sell must have made the request within a reasonable time. Anything shorter than the normal collateral settlement cycle would not be considered reasonable. For example, if party A requests a substitution for same day on an account that settles collateral Trade Date plus one; party B should not be held accountable for a TMPG charge if they are unable to accommodate the same day request.
- The par size under consideration for claim is greater than the size of the collateral fail. For example, if a party fails to deliver a sell for $50 million as a result of a failed collateral delivery of $3 million, the party failing to deliver $3 million should be claimed for a fail of $3 million rather than for $50 million. It is the intermediate party’s responsibility to...
break trades in order to make delivery on $47 million.
- Delivery of the security depended upon cash or a security being delivered for a substitution, and the cash or security was not delivered by a time at least 1 hour prior to the close of the relevant securities wire transfer system and by at least 1 hour prior to the market closing in the business location of the party delivering collateral.
- An attempt to deliver the security was made but was rejected or not timely processed by the receiving agent bank or custodian bank.
- Settlement instructions provided for the security delivery were incorrect.
- An event of default or potential event of default existed at the time of the transfer with respect to the party expecting to receive delivery.
- The claiming party is asked to prove a claim on the other side and that wash-through claim cannot be produced.
- The claim amount is subject to minimums specified by TMPG and SIFMA.

In adopting this best practice, it is not the intent that collateral under ISDA CSAs should become generally subject to the requirements of the TMPG/SIFMA "Fails Charge Trading Practice" document or any other general requirements relating to cash securities markets. This Market Practice to honor the pass-through of TMPG Fails Charge is intended as a narrowly-specific action to reduce the economic impact of the disparity between markets. The exceptions listed above are intended to reflect specific aspects of the collateralized OTC derivatives markets that differ from the cash securities markets, and will mean that there is not perfect symmetry between actual TMPG Fails Charges in the cash securities markets and claims on OTC derivative market participants which are cross-honored under this practice.

For the avoidance of doubt, claims to voluntarily cross-honor TMPG Fails Charges are not in and of themselves transactions. As such, TMPG Fails Charges shall not have any standing under an ISDA Master Agreement or Credit Support Annex, including but not limited to any characterization as a Transaction, an element of Exposure or any kind of obligation whatsoever, nor inclusion in calculations of Termination Amounts. Additionally, failure to cross-honor TMPG Fails Charges shall not be an event of default under an ISDA Master Agreement.

Section 7 - Assignments

Introduction
When an assignment occurs, exposure on the applicable trade moves from one counterparty (Transferor) to another (Transferee), while the exposure for the Remaining Party is unchanged and simply moves from Transferor to Transferee. Collateral requirements shift from Transferor CSA to Transferee CSA. These relevant exposure moves occur one business day after the Novation Trade Date. Effective Date of the underlying transaction is irrelevant for purposes of collateral.

Best Practice 7.1: Transferor Principle
By stepping out of the trade, the Transferor no longer has any collateralized exposure to the Remaining Party as of the Novation Effective Date. All collateralized exposure related to the trade in question should be removed from the portfolio of the Transferor as of the Novation Effective Date plus one.

Description
As Best Practice, the settlement fee agreed upon as part of an assignment should be collateralized between the Transferor and the Transferee until the applicable settlement date. If the Transferor removes its position from the portfolio of the Remaining Party on Novation Effective Date plus one, the exposure related to the settlement fee should remain collateralized with the Transferee until the applicable settlement date.

Best Practice 7.2: Transferee Principle
The Transferee stepping into the trade will collateralize the full exposure of the swap with the Remaining Party on trade date plus one of the assignment, subject to its CSA with the Remaining Party.

Description
The settlement/fee related to the assignment is collateralized between the Transferee and the Transferor until the applicable settlement date.
The Transferee will continue to collateralize its new position versus the Remaining Party following current market standards.

**Best Practice 7.3: Remaining Party**

**Principle**
The Remaining Party simply moves the exposure from the Transferor to the Transferee. Their exposure on the transaction does not change in an assignment.

**Description**
The consistent collateralization of the settlement/fee between the Transferor and Transferee will result in more accurate calls between the parties. The Transferor should not be hesitant to remove its trades, as its settlement risk will be fully collateralized versus the Transferee.

**Section 8 - New Trades / Unwinds / Credit Events / Compressions**

**Introduction**
The following section outlines best practice for collateralizing each of the trade events listed.

**Best Practice 8.1: New Trades**

**Principle**
All new trades are to be included in the collateral calculation on trade date plus one. All upfront fees on new trades should be included in the calculation until settlement date plus one.

**Description**
All new trades, upfront fees, and corresponding economics should be included in the relevant collateralized portfolios on trade date plus one regardless of effective date to align collateral process with the exposure resulting from the new trade. Parties should not be able to claim that deals are not included in the collateralized deal population on Trade Date plus one because their effective date is Trade Date plus two. All fees referenced in legal documentation, as well as trade economics should be included in overall trade valuation through settlement date plus one.

In the case that one party does not recognize a new trade, all efforts should be made by the counterparty to provide evidence of the trade’s existence either through Bloomberg messaging or trade ticket.

With respect to handling initial margin related to new trades, please refer to section 2 of this document.

**Best Practice 8.2: Unwinds**

**Principle**
Exposure related to trades that are unwound should stay in the portfolio through settlement date.

**Description**
In the case of unwinds, parties should margin all fees through settlement date capturing all remaining exposure. This is consistent with the recommended handling of all fees and final payments regardless of how they were derived. Collateral call differences resulting from unwinds are generally due to one party removing economics of the unwound trades from its margin calculation on the unwind date while the other drops the same trade on settlement date. After the unwind occurs, both parties should reflect fees and corresponding economic changes in their exposures in the collateralized portfolio through settlement date plus one. This includes subsequent notional and valuation implications due to partial unwinds.

For additional details related to the treatment of unwinds from a portfolio reconciliation perspective, please refer to Section 10 of this document.

With respect to handling initial margin related to unwinds, please refer to section 2 of this document.

**Best Practice 8.3: Credit Events**

**Principle**
Exposure related to trades that are subject to a Credit Event should remain in the collateralized portfolio through settlement date.

**Description**
Similarly to unwound trades, credit events can cause collateral call differences by one party dropping the impacted trades from the collateral calculation on auction date while the other collateralizes through settlement date. In addition, if a trade is live at the time of an
applicable Credit Event and then subsequently matures before Auction Date, it should remain in the portfolio until settlement date as the Credit Event occurred before the Maturity Date.

Best Practice 8.4: Trade Compression
Principle
Trades that are subject to industry wide trade reducing events should be removed from the portfolio on the day the trade-reducing event occurs. This should be in agreement with governing documentation for the applicable risk reducing process.

Description
All unwound trades should be removed from the portfolio on the execution date of the applicable event. All replacement trades should be booked according to the relevant compression guidelines and subsequent exposure for replacement trades should be included in collateralized exposure on the date following execution.

Section 9 - Rehypothecation and Substitution
Introduction
The granting of rehypothecation rights and the substitution of collateral under the ISDA CSA are standard elements of collateralization where appropriate. The decision to grant rehypothecation rights, usually on a reciprocal basis, is a decision made by both sides to the agreement.

Best Practice 9.1: Tracking of Securities Eligible for Rehypothecation
Principle
It is the obligation of the secured party to ensure that all assets, whether eligible for rehypothecation or not, are tracked in accordance with the agreed terms of the ISDA CSA. Where appropriate this obligation can be assigned to an agent, but responsibility in a bilateral agreement resides with the secured party. The correct reuse rights of secured assets should be checked regularly and Client money/asset rules applied where applicable.

Description
A critical element of the collateral process, especially involving the pledging of securities, is the ability to differentiate between assets that are delivered by a pledgor that has granted rehypothecation rights and those that have been delivered without those rights. If this differentiation is not in place, the risk is that assets may be inadvertently reused inappropriately.

Best Practice 9.2: Reuse of Securities in Appropriately Aligned Settlement Periods
Principle
To avoid settlement fails where rehypothecation rights are granted, it is advisable to ensure that the settlement convention of the market where the assets are being reused is aligned with the settlement convention of the ISDA CSA.

Description
The ability to reuse assets, whether through rehypothecation or title transfer rights, opens up the possibility of taking those assets from one set of settlement rules, very specific to the OTC derivatives market, into shorter or longer settlement and recall environments thereby increasing the opportunity for a settlement fail.

It is therefore advisable that the settlement convention of the market where the assets are being reused is aligned with the settlement convention of the ISDA CSA.

Best Practice 9.3: Substitutions - Recall and Delivery Times
Principle
Parties should endeavor to make substitution requests as soon as possible but no later than 4pm time on T in the time zone in which secured party is located. Wherever possible, the secured party should endeavor to return items of posted credit support on the same day in which the secured party receives the substitute credit support but no later than the next local business day.

Description
Where possible, delivery back of a requested item of posted credit support should take place in the same day that a substitute credit support is received, especially when the substitute item uses the same settlement convention and is in the same country.

Best Practice 9.4: Substitutions - Replacement Item in Event of Non Delivery
Principle
In the event that the secured party is unable to source and return the pledged asset, unless otherwise agreed by the parties, the secured party must provide an exact ISIN/CUSIP not later than one local business day after the substitute credit support item is received.

Description
If the pledgor requests that specific assets be returned for substitution, the secured party is obligated to deliver collateral with that specific ISIN/CUSIP no later than the next local business day after which the substitute credit support item is received.

Most collateral agreements do not contractually permit “equivalent” securities or cash to be delivered instead of returning the exact asset that is being substituted. However, a party finding itself unable to return the specific security may discuss with their counterparty the alternative of making a temporary delivery of cash or another security, while continuing working to source the correct asset. Unless the contract provides explicitly for such “temporary alternative collateral”, the other party is not obligated to accept such a request; however, it may be in the best interest of both parties to do so. The recalling party may prefer to hold alternate collateral temporarily to mitigate the credit risk and funding gap to which they would otherwise be exposed; the returning party may prefer to deliver alternate collateral temporarily to mitigate the risk that they might be determined to be in default for non-return of collateral.

Section 10 - Non-Cleared OTC Derivative Portfolio Reconciliation

Introduction
For best practices associated with collateral dispute resolution, see section 5.

The specific portfolio reconciliation rules put forth by the Commodity and Futures Trading Association (CFTC) can be found on pages 60-61 of the document on the CFTC website using the following link:


The specific portfolio reconciliation rules put forth by the European Standards and Markets Association (ESMA) can be found beginning on page 83 of the document on the ESMA website using the following link:


The new CFTC and ESMA reconciliation rules are broadly similar in that each set puts forth requirements for defining reconciliation frequencies based on trade portfolio size and counterparty type; expanding the reconciliation trade set from primarily collateralized trades to now include non-collateralized and inter-entity trades; documenting reconciliation policies and procedures; and agreeing to the terms of the reconciliation with your counterparty.

However it’s important to note that the CFTC rules differ from the ESMA rules in a few important ways. The CFTC rules a) expand reconciliation into data reported to a Swap Data Repository (SDR) commonly referred to as “material terms”, b) define a “material” MTM break and c) set the resolution speed and timing of MTM breaks observed during the recon process.

Firms should download both sets of reconciliation rules and familiarize themselves with the requirements to determine their applicability.

This section is designed to replace and vacate the existing Portfolio Reconciliation section from the November 2011 Best Practices for Collateral Operations document. Regulations have now replaced many prior reconciliation best practices, incorporating them now as legal requirements, and market practice has evolved. This document is meant to make the reader aware of these circumstances and to document new, emerging best practices as firms adjust their operations to new reconciliation requirements and practices.

In this section we have not included any description of practices that would replicate or potentially be confused with the requirements of the applicable rules, which should of course be followed by market participants. The best
practices outlined here augment the rules by addressing points of practical significance that are not directly regulated.

Setting Priorities and Sharing Escalation Contacts
When commencing any new reconciliation relationship with counterparty, or when reconciling for the first time, it is important to appreciate the bilateral nature of the relationship and that both parties share a responsibility to work together co-operatively.

Time is of the essence when performing reconciliations, particularly in the case of trades under CFTC jurisdiction which have specific timelines for resolution depending on counterparty type. In order to be effective, parties should be prepared to share escalation contacts when on-boarding new counterparties.

Best Practice 10.1: Agreeing in Writing with your Counterparty to the Terms of your Reconciliation

Best Practice 10.2: Reconciliation Compliance Strategy

Best Practice 10.3: Reconciliation Frequency

Best Practice 10.4: Reconciliation Technology

Best Practice 10.5: Approval of Third Party Reconciliation Vendor

Best Practice 10.6: Reconciliation Tolerances

Best Practice 10.7: Data Standards

Best Practice 10.8: One Confirmation, One Trade

Best Practice 10.9: Trade Population

Reconciliation Approach and Initial Results
Correct population of portfolios and correct trade identification results in better and more accurate matching of bi-lateral portfolios. This will reduce time taken in manually matching trades and enable the parties to focus on true breaks.

As per new regulation, parties will need to agree an approach to their handling of reconciliations. This consistency of approach will result in a more efficient and effective process.
The trade population of portfolios to be reconciled is now largely defined by regulation. Market participants should familiarize themselves with these new CFTC and ESMA rules and comply accordingly.

**Best Practice 10.10: Product Identification**

**Principle**
Wherever possible, but minimally as required by regulation, individual trades within the portfolio should be identified using the CFTC’s standard Unique Product Identifier (UPI) for product classification at the point of reconciliation.

**Best Practice 10.11: Trade Identification**

**Principle**
Wherever possible, but minimally as required by regulation, each trade in the portfolio should contain the CFTC’s standard Unique Swap Identifier (USI) for trade identification. Where the USI is not available, each trade should contain that counterparty’s unique trade ID (as referenced if applicable in the Confirmation) together with any common market IDs that may have been assigned by an electronic confirmation platform. Structured trades recorded using multiple legs with multiple IDs should have an additional common ID assigned to all legs to facilitate the matching process.

**Best Practice 10.12: Counterparty Identification**

**Principle**
Wherever possible, but minimally as required by regulation, each firm should include their Legal Entity Identifier (LEI) as provided upon firm registration with the CFTC. Where the LEI is not available, unique counterparty IDs should be submitted as part of the reconciliation file.

**Best Practice 10.13: File Transmission**

**Principle**
Files for reconciliation should be transmitted by secure means, recognizing that flexibility may be required in certain situations.

**Best Practice 10.14: File Formats**

**Principle**
Files for reconciliation should be sent in a commonly-available standard industry format such as CSV or XLS, and agreed between the parties at the outset of their reconciliation activities.

**Best Practice 10.15: Availability of Portfolios for Reconciliation**

**Principle**
Where governed by regulation or otherwise, to facilitate timely Dispute Resolution, portfolios should be available for reconciliation on any mutual business day by request of either counterparty.

**Best Practice 10.16: Timing of Transmitting Portfolios for Reconciliation**

**Principle**
Parties should agree the time by which files are to be exchanged or uploaded. This should occur as soon as possible on the required portfolio exchange date and not later than mid-day in the location of the collateral call or the location where the reconciliation function resides if different.

**Breaks and Issue Management**

Once reconciliations are performed, parties may identify breaks or differences in their bilateral records.

Breaks may occur simply due to data quality issues and/or timing differences in allocating a trade to a portfolio or taking it out of the portfolio. In this event, only one party will show the trade at the time of the reconciliation (i.e., unmatched or alleged trades). Also parties may see mismatches in trade populations due to system constraints, although the trade is actually recognized by both parties.

Alternatively, the reconciliation process may uncover genuine breaks between the parties, such as parameter differences, i.e. differences in trade booking, or valuation differences where parties may have adopted different valuation models.

In all cases, the parties need to have an effective channel of communication in order to raise and resolve breaks. Responding to a request for break investigation and addressing the underlying cause(s) should be seen as high priorities.

Internally, firms should recognize the high priority ascribed to break analysis and ensure that trade information and breaks are made available to operations, margin, controllers,
trading and other personnel who may be required to assist in the analysis and resolution process, and ensure appropriate resourcing and priority focus.

Best Practice 10.17: Process Transparency
Principle
To assist break resolution, full results of all breaks arising from any reconciliation should be available if requested by the counterparty. This includes trades with field differences, MTM differences and unmatched trades. This principle applies irrespective of technology used to perform the reconciliation, whether performed in-house or through a vendor-serviced external platform.

Best Practice 10.18: Prioritization and High-Level Drivers in Break Resolution
Principle
Regulation now governs the priority and timelines that many breaks must resolved. Firms should familiarize themselves with these new requirements and comply accordingly. Where break resolution is not specified by regulation, parties should agree mutual priorities for resolution.

Best Practice 10.19: Counterparty Responsiveness
Principle
As the timelines for resolving many breaks are now specified by regulation, firms should give priority to and be adequately resourced to support timely response to a counterparty request for investigation of breaks.

Best Practice 10.20: Break Management
Principle
Parties should clearly identify which of them is assigned to action a particular break and they should track and monitor the progress of resolving agreed breaks. Documentation, confirmations, or information requested by the firm investigating the break should be provided in a timely manner and no later than one business day following a request.

Best Practice 10.21: Internal Organization and Support
Principle
Firms should have a process in place which shares data associated with the portfolio reconciliation and investigation process across relevant functional areas, such as operations, margin, controllers, trading, etc. This should include procedures designed to discover, escalate and resolve both specific differences and their wider root causes. Firms are encouraged to implement data analysis capabilities that not only operate reactively to diagnose discrepancies as mandated by regulatory requirements but also operate proactively to detect, understand and where possible avoid them in the first place.

Best Practice 10.22: Escalation and Effective Communication
Principle
Firms should have formal escalation procedures in place for addressing and actioning differences in the portfolio promptly. Escalation procedures should focus on timeframes and process for communicating with impacted departments, for example operations, middle office, credit, product controllers and front office.

Best Practice 10.23: Internal System Issues
Principle
When the reconciliation process establishes that the cause of the trade break is an internal system or process at one of the counterparties, it is expected that the counterparty will work in good faith to resolve the underlying data issue in a timely fashion. Firms should not raise disputes for trades where they are aware that they have internal technology or data issues, unless they have other reason to believe that a genuine discrepancy exists.

Root Cause Analysis and Reporting
Trades requiring investigation which are not true breaks, e.g. late bookings, novations, tear-ups, settlements create noise in the portfolio. This noise is worst in the 1-2 day period but can last up to 5 days and over. With actively traded portfolios it is important to know the source of recurring issues and to understand the nature of the problems involved. Identifying root causes and reporting of differences helps both parties to understand the issues and take steps towards resolution. The ultimate goal is to reduce the time spent in managing regular reconciliations and to focus on resolving any real breaks between the parties.

Best Practice 10.24: Understanding Data Flows in the Front-to-Back Process
Principle
Flawed data and process standards will contribute a significant amount of noise to the reconciliation process, with new or maturing trades and system issues underlying many of the breaks between the parties. It is therefore important that parties understand their internal front-to-back process and data and pricing sources, in order to successfully filter out these issues from the population of breaks to be addressed.

Best Practice 10.25: Minimum Standards of Results Reporting
Principle
Firms should agree minimum standards and methods for reporting breaks in order to support transparency of results following any portfolio reconciliation. Reporting of results from the reconciliation process should include at a minimum a statement of breaks identifying individual trades through use of mandatory fields identified in the ISDA Minimum Market Standards for that product.

As best practice, the parties should exchange results by no later than the business day following the reconciliation taking place. It is open to parties to agree what information should be reported between themselves, but at a minimum should include all unmatched trades (own and alleged), all Valuation differences over regulatory defined or agreed tolerances, and any field parameter breaks also outside of agreed tolerances.

Breaks should be aged by both parties from the reconciliation date the break was first seen. Accurate ageing of breaks helps a firm to prioritize and successful engage internal escalation contacts when required.

Best Practice 10.26: Reporting Disputes to Regulators
Principle
Firms should have procedures in place that track large trade and portfolio level disputes from the first day that they appear and escalate internally or with your counterparty to address the issue before the trade becomes reportable.

Both the CFTC and the FCA now have requirements to report trade and/or portfolio level differences on a regular basis. The CFTC requires Swap Dealers and Major Swap Participants to report daily matched trade breaks where the mtm difference exceeds USD 20mm for 3 or 5 days depending upon counterparty type. The FCA requires Financial Counterparties to report both trade and portfolio level disputes that exceed EUR 15mm for 15 consecutive days on a monthly basis. These issues should be tracked from the date the break was first seen to enable both parties to the trade or collateral dispute to correspond internally or with each other to resolve the issue before it becomes reportable. Where possible, firms should always retain a copy of their submission for their internal records and copy internal Compliance and Risk personnel as necessary to ensure full transparency of reportable issues.

Section 11 - Interest Processing

Introduction
All collateral cash balances pledged should earn accrued interest as agreed and defined under the terms of the ISDA CSA.

Best Practice 11.1: Settling Interest (Standard Monthly Interest Calculation)
Principle
Interest on the collateral balance is accrued on a daily basis using the CSA agreed interest rate and spread. Interest accrued should be paid monthly to the applicable party monthly under most CSAs, unless otherwise agreed; however under some agreements such as the Standard CSA interest may be compounded into the credit support balance daily rather than being settled each month. It is best practice for the party receiving interest to raise any differences in the amount received within 30 days of receipt.

Description
For CSAs with monthly interest settlement, advice of the amount to be paid should be sent on the first business day of the month with actual interest settlement occurring as mutually agreed by the parties. Delivery of the interest amount will be made to the pledgor’s original settlement instructions. The following month’s starting balance, interest rate and account spread should all be reconfirmed. For CSAs with interest compounded into the credit support amount (including the Standard CSA) no interest settlement is required. This method reduces the post-month-end interest processing burden on firms, and thus reduces operational risk; it also
ensures that interest is compounded into the collateral balance which is then more accurately calculated because it does not ignore accrued but unpaid interest, thus reducing credit risk for both parties.

**Best Practice 11.2: Negative Interest Rates Principle**

*Market participants should review and follow more detailed ISDA guidance that may be published on this topic. In summary, where the floating rate index (e.g. OIS rates such as Fed Funds, EONIA, SONIA, etc) sets in the market at a negative level, then under the standard published text of the CSA this negative rate should be used in the Interest Rate and Interest Amount calculations. Therefore negative Interest Amounts may be computed. Parties should either settle these negative interest amounts in the reverse direction to normal interest settlement or alternatively compound the negative interest into the credit support balance under the CSA, decrementing it rather than incrementing it, as would be the normal case. Where the parties have modified the relevant language within the CSA to change the way that interest is calculated (for example, by the inclusion of a spread, one-way collateral arrangements, an interest rate floor, or other modifying language) the parties should consult and decide how to address negative interest rates.*

**Best Practice 11.3: Including Accrued Interest upon Final Return of Collateral.**

*When closing a client relationship and returning collateral, the full amount of collateral should be returned, including any accrued interest.*

**Description**

To avoid having any future payable amount at the end of a client relationship, when returning any collateral balance in full, all interest (capitalized and non-capitalized) should be included at the same time.

**Best Practice 11.4: Interest Should be Calculated Using a Standard Formula Principle**

*Absent specific wording to the contrary in the ISDA CSA, interest should be calculated using a standard formula. The formula should be (Principal Balance * (Interest Rate/100)) / (360 or 365) * number of days relevant to the currency of collateral held.*

**Description**

Market practice is that interest should be calculated using actual days. The formula should be (Principal Balance * (Interest Rate/100)) / (360 or 365) * number of days relevant to the currency of collateral held. All decimals should be rounded to 2 places to avoid rounding issues.

**Best Practice 11.5: Client Communication Principle**

*All requests for interest should include the information necessary for a client to be able to evaluate and agree to any interest amount.*

**Description**

Request for interest delivery should be standardized around a single electronic message format. A list of fields to include in the interest message are included in the "Standards for the Electronic Exchange of OTC Derivative Margin Calls". If the interest statement is sent via e-mail, the body of the e-mail should include the interest period, legal entity, amount of interest (payable or receivable), contact name/phone/email address and wire instructions. The interest statements should include: rate, daily principal amount, date, accrued interest amount and daily interest amount. The interest statement should be included in the communication as an attachment.

**Best Practice 11.6: Interest Calculation Principle**

*Interest should be calculated on a full month basis only unless otherwise agreed by the parties.*

**Description**

Some CSAs have been written with non-standard interest period calculations, such as interest is to be calculated to the 20th day of every month. Language should be standardized to allow interest calculations based on a full calendar month basis only. As a best practice, interest calculations should be from the first day of the month to the last day of the month, with interest accrued up to and including the last day of the month.
Section 12 - Tri-Party Reconciliation

Introduction
In a Third Party custodial relationship, an unaffiliated bank, broker dealer or other party operates under agreement with one of the two counterparties and simply provides typical custody and safekeeping services.

In a Tri-Party custodial relationship, an unaffiliated bank or other party operates under a three-way contract between it and the two derivative counterparties. Among other duties, the tri-party agent releases collateral to each of the counterparties subject to pre-defined conditions.

Best Practice 12.1: Collateral Balance Reconciliation

Principle
Where collateral movements are effected in a Third Party or Tri-Party system, a reconciliation of collateral balances should be performed between the parties on a daily basis.

Description
Where the pledged collateral balance, whether cash, securities, letter of credit etc, is held by a Third Party or Tri-Party, daily balance reconciliation should be performed to ensure risk exposure is minimized.

Best Practice 12.2: Timing of Collateral Balance File for Reconciliation

Principle
At the close of each business day or as soon as possible thereafter, the Third Party or Tri-Party system should provide, in a standardized electronic format, the information needed to effect a daily reconciliation of collateral balances.

Description
At the close of each business day or as soon as possible thereafter, the Third Party or Tri-Party system should provide, in a standardized electronic format, the account balance, including daily collateral movements and a breakdown of positions, for each individual client.

Best Practice 12.3: Format of Collateral Balance File for Reconciliation

Principle
The format of the collateral balance file for reconciliation should be standardized to maximize efficiencies in the automation of reconciliation.

Description
The minimum collateral balance fields required for reconciliation should include the following:
- Close of Business Statement Date
- Custody Account Number
- Collateral Identifier (ISIN, Cash Currency, Letter of Credit reference etc)
- Par Value/Original Face Amount of Security
- Price
- Market Value
- Currency

Conclusion
These Best Practices have been drawn up by a wide group of market practitioners over the course of several years and represent a common view of operational criteria which support derivative trading activity.

While OTC derivatives documented under ISDA Master Agreement terms are bilateral contracts, these Best Practices recognize that many of the prior reconciliation best practices have now been codified in regulation and parties should be mindful of where regulatory requirements begin and end and where parties remain free to decide between themselves suitable bilateral parameters for the reconciliations they perform.

While these Best Practices are not intended to be obligatory nor are intended to create or alter legal obligations, they seek to incorporate the recent regulations regarding reconciliation where appropriate and create consistency and efficiency in the market.
References

ISDA Paper: Standards for the Electronic Exchange of OTC Derivative Margin Calls
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ISDA Paper: 2009 Collateral Dispute Resolution Procedure” (DR Procedure). Published September 2009

ISDA Paper: Collateralized Portfolio Reconciliation – Best Operational Practices
Published December 2009

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