Report on Collateral Management

Best Practices of Collateral Management for Cleared and Bi-laterally Traded Products

March 2014

Abstract
Drawing on recent regulatory and market changes a working group of ISSA members and external experts propose a number of best practices relating to the use of assets transferred as collateral to secure bi-lateral and centrally cleared products between trading counterparties.

Target Audience
Market intermediaries such as custodian banks, brokers, asset managers, issuers, industry associations/groups, market infrastructures and regulators.

Acknowledgements
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1. Executive Summary

1.1 Report Scope and Objectives

This is a report on how the many changes in collateralization are creating a new post trade landscape for many ISSA members. In particular it will focus on the new regulatory and market requirements for Collateral Management and how these requirements will in turn drive new services and modifications to existing services on the part of the ISSA membership. This report will also introduce ideas around best practices for the benefit to those custodians and administrators active in providing services to asset owners (e.g. investment managers), many of whom will be relatively new to the needs of Collateral Management. In addition, as regulation is a significant driver of change in the Collateral Management space, the authors have been able to provide a European overview of current EU legislation that will impact Collateral Management practices globally.

The body of the report will cover:

- What is meant by Collateral Management, including definition of key terms such as the two principal Collateral Management models: Bi-lateral versus cleared via a Central Clearing Counterparty (CCP).
- The critical players and their respective roles in the new post trade environment and how these players may handle collateral, including engagement with new entities and other informational intermediaries.
- Ideas on operational best practices associated with the new Collateral Management processes.
- Relevant future trends in Collateral Management.

This report does not review or comment on the various commercial services offered by banks and market infrastructures to support their clients in managing collateral issues. This report will neither address those so called «front office» elements of the Collateral Management process such as the risk based calculation process associated with setting margin (collateral) requirements, hair-cut calculations, investment strategies and re-use (rehypothecation) of collateral. To the extent possible this report will be product agnostic, focussing solely on the individual Collateral Management processes rather than any specific product (e.g. OTC derivative or FX option) related collateral. It should also be noted that due to the ever changing regulatory requirements some principles will naturally become redundant. Therefore, to the extent possible hyperlinks are provided within this report to allow the reader to obtain locations containing current informational sources.

1.2 Chapter Topics

The body of this report contains seven chapters. The second and sixth chapter provide information around collateral and end with comments on future trends. While each of the intermediate chapters (three, four and five) lead off with a short discussion of a new function or legal and/or regulatory issue with an attendant recommendation from this working group on related best practices[1]. The seventh chapter provides an overview on regulatory issues in the EU.

Chapter 2 introduces the basic concept of collateralization identifying the fundamental drivers for its use as a credit risk mitigation tool. Along with the risk drivers it introduces the survey of legal and regulatory initiatives in Europe. In addition it identifies a number of current and emerging player types in the market and further notes changes that are taking place within these players' traditional service offering. The report also identifies the customary documents and operational processes that are employed to support this business process.

Chapter 3 notes that following the Sub-Prime Mortgage crisis of 2007 and the ensuing credit crisis of 2008 there has been intense market and regulatory pressure for the expanded use of collateral as a risk mitigation tool. The use of collateral to secure a counterparty does not eliminate risk as

[1] To the extent best practices are discussed in this document they are meant to complement the excellent best practices documents produced by allied industry groups such as the International Capital Markets Association, International Securities Lending Association and the International Swaps and Derivatives Association.

collateralization carries its own risks. In this chapter collateral protection is discussed and best practices associated with managing the risks of both cash and non-cash collateral for both centrally cleared and non-cleared transactions are introduced.

Chapter 4 provides a summary of those issues that a firm might consider for creating best practices both in terms of preparation before and immediately following a default by a third party.

Chapter 5 reviews issues and best practices associated with customer communication, reporting and position reconciliation. In addition it focuses on reporting to third party service providers as well as to regulators.

Chapter 6 discusses some observations relating to emerging trends primarily in response to the general regulatory reform including the mention of noteworthy industry initiatives.

Chapter 7 gives a high level summary of provisions in primary legislation (including certain proposed legislation) which may have an impact on collateral takers and collateral givers in the EU.

Chapter 8 provides a choice of hyperlinks to allow the reader to access current informational sources.

And finally in chapter 9, the members of the Working Group and associated contributors are listed.

2. Background and Key Definitions

2.1 Introduction

Collateral when discussed in the report, refers to collateral used to provide credit enhancement in support of both over the counter bi-lateral trading as well as in support of trading/clearing via a CCP. Similar in concept to a chattel mortgage, traditional collaterization is composed of assets transferred by a borrower to secure a loan or other credit to support financing and or trading activities for fixed income, equities and derivative products. In a trading context the collateral is often referred to as margin.

In all cases, the collateral discussed in this report may be subject to realization by the holder in the event of default by the transferring party. This report refers throughout to the party that moves its collateral under contract form with either a pledge of interest or outright transfer as the «payer» or «provider» of collateral and the party that obtains collateral from a payer as the «receiver» or «taker» of collateral.

2.2 What is Meant by Collateralization?

Collateral Management represents the wide ranging set of activities around handling of exposure requirements related to trading activity and collateral that is held and managed to cover that exposure or other trading risk:

- Management of margin payments in response to exposure requests from a clearing house and/or bi-lateral counterparties.
- Monitoring of client positions to determine whether margin calls are required.
- Management of disputes of margin calls and escalation of outstanding calls.
- Application of initial margins.
- Application of terms of collateral agreements and net collateral held against exposure.
- Application of haircuts to collateral held.
- Determination of margin excess or deficit.
- Collateral reporting to counterparties, CCPs and other Self Regulatory Organisations,Trade Reporting Warehouses or Trade Data Repositories.
- Monitoring/management of collateral substitution.
- Notification of corporate events (relating to collateral assets held).
- Processing of securities transfers on behalf of the client (when required to post or receive collateral).
- Ensuring that sufficient collateral is in place for the positions held (including collateral held with Central Securities Depositories [CSDs] and as a result of tri-party agreements).
- Calculation of interest and coupons payable to clients.
- Booking additional collateral or return of collateral (including substitutions).
- Issuance of instructions for collateral movements and receiving confirmation of settlement of transfers.
- Monitoring of collateral to ensure maturities and dividend payments are managed, issuer downgrades are reflected in collateral liquidity, and collateral type conforms to policies (including concentration limits).
- Cash collateral re-investment, where permitted.

2.3 Why is Collateral Required?

The main purpose for taking and paying collateral is to mitigate credit risk associated with a trading relationship, however, there may be other factors that motivate parties to require collateral from each other. They include but are not limited to:

- Reduction of exposure in order to do more business with each other when credit limits are under pressure.
- Ability to achieve regulatory capital savings by transferring or pledging eligible assets.

- Meeting new regulatory requirements (see 2.4 below). Improved credit projections and access to funding.
- Improved access to market liquidity by collateralization of interbank derivatives exposures, repo markets and securities lending provision.
- Facilitating specific types of structured transactions (where collateral is required at the time of the trade).

2.4 Regulatory Requirements; Impact on Collateralization

Recently, and especially since 2008, there has been a significant amount of global activity in the form of both legislation and rule making addressing the practice of collateralization in the OTC derivative and secured financing markets. The global leadership from the regulatory perspective vis-a-vis collaterization has been largely out of Europe as the US regulators have kept focus on overall market reform addressing issues of market transparency, reporting of trading execution, mandatory clearing and sphere of regulatory control via the Dodd Frank Wall Street Reform and Customer Protection Act (Dodd Frank).

From the European perspective, in addition to addressing the issues associated with overall market reform, there has been a myriad of legislative and rulemaking efforts as it relates to collateralization. The European regulators' additional focus on collateral may have been observed via

- The European Commission Markets in Financial Instruments Directive (MiFID)
- Basel Committee on Banking Supervision (BCBS)
- The International Organisation of Securities Commissions (IOSCO)
- The BCBS/IOSCO Sponsored Working Group on Margin Requirements (WGMR)
- The EU Legislative agenda for implementing Basle III via the Capital Requirements Directive no. IV (CRD IV),

to name a few.

As a full regulatory review would be an extensive report in its own right, chapter 7 provides a summary in the form of a Regulatory Survey of European legislation and rulemaking by supervisors, which was prepared by Simmons and Simmons, UK.

2.5 Typical Legal Models Related to Collateral Management

Different legal models are provided within the Collateral Management space, however two models predominate: Either a pledge of security interest or title transfer of the collateral. It should be noted that the choice of agreement is often driven by the legal jurisdiction of the overarching transaction users. Readers would be advised to understand the specific legal treatment of collateral models applicable to the specific legal jurisdiction of the transaction calling for the use of collateral.

2.5.1 Pledge of a Security Interest Collateral Arrangement

This means an arrangement

- under which a collateral provider provides financial collateral by way of security to or in favour of a collateral taker,
- and where the full or qualified ownership of, or title to, the financial collateral remains with the collateral provider when the security right is established.

The foregoing is most always subject to an obligation on the collateral taker to return «equivalent» property. In theory, the collateral taker could return equivalent collateral in value (but different assets). Practically, counterparties return the same collateral assets (see later paragraph 3.4.3). This arrangement is typically found in OTC Derivatives «Credit Support Appendix under English Law».

This legal set-up and related collateral arrangement is not really suitable for cash used as collateral and should only be considered for non-cash collateral in certain jurisdictions.

2.5.2 Title Transfer Financial Collateral Arrangement

This means an arrangement (including repurchase agreements) under which a collateral payer transfers full ownership of - or full entitlement to - collateral to a collateral taker for the purpose of securing or otherwise covering the performance of relevant financial obligations. It is generally bi-laterally agreed in the collateral arrangement that the collateral provider remains the economical beneficiary of the assets transferred as collateral, and therefore will be returned any rights attached to the securities transferred. However even if title to the collateral is not transferred, some forms of agreement still permit the collateral taker to sell, pledge, rehypothecate, assign, invest, use, commingle or otherwise dispose of any posted collateral, **even though these rights maybe restricted by the parties' agreement or by regulation.** Therefore choosing one form over the other may have a significant effect on the treatment of collateral following a close-out.

Each form, be it a pledge of a security interest or a title transfer, has unique advantages and disadvantages that must be well understood by both parties prior to signature of documentation including the understanding of how the form of holding will impact collateral protection.

2.6 The Market Players and Operational Landscape

2.6.1 Key Market Players in the Collateral Management Process

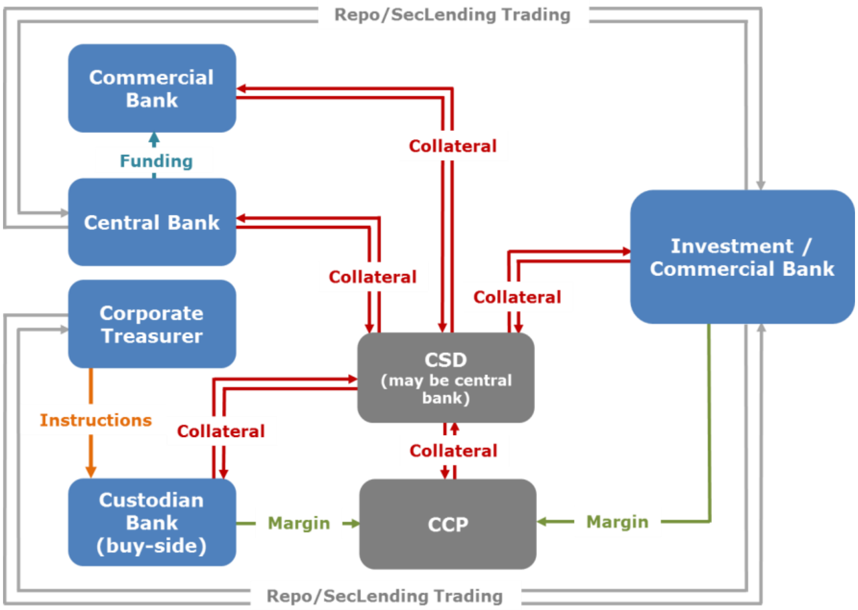
Market events combined with legislative and regulatory initiatives have caused significant changes in the roles and responsibilities of the traditional market players and have also introduced both new functions and new service providers who have emerged to meet some of the new regulatory requirements. Nearly all market participants are tasked with new or enhanced reporting on their trading activities to regulators either directly or via an agent. Below, the major participants to the market are listed, and one or two high level observations are offered, which relate to the impact new regulations will have on these players.

- **Registered, Pension and Hedge Fund Managers**
  With the exception of pension funds these organizations must consider if they have the status as major swaps participants, connectivity to clearing systems and other service providers.
- **Dealers (Brokers, Prime Brokers)**
  Integration/connectivity to trade execution systems, clearing systems, custody systems, trade data repositories.
- **Market Infrastructures (CCPs, SSSs, CSDs and ICSDs)**
  Connectivity to other market service providers, enhanced services offerings to customers in support of market and regulatory requirements.
- **Trade Execution Platforms; Swap Execution Facilities**
  New and existing players with expanded product classes.
- **Custodians, 3rd party Collateral Agents, Securities Lending Agents**
  Expanded services relating to custody and collateral transfer to support clients and dealer relationships.
- **Trade Compression and Reconciliation Services**
  Expansion of standard service offering to dealers and customers to provide risk reduction and transparency to regulators.
- **Trade Data Repositories, Trade Information Warehouses**
  Newer players with enhanced connectivity to market participants and infrastructures to support market transparency to regulators.
- **Fund Administrators**
  Enhanced connectivity and information requirements for clients.
- **Central Banks**
  Lenders of last resort to an expanded list of significant market players.

2.6.2 Operational Landscape

A complex landscape with many players and multiple operational models exists. There are a number of papers that have already been produced that give details on the different players and models available. A schematic representation of this landscape is shown below.

Illustration «Collateral Management Operational Process»



The following links provide additional information on this topic:

CICF Collateral Fluidity White Paper of November 2012, prepared by the Collateral Initiatives Coordination Forum http://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/collateral-initiatives-coordination-forum/collateral-resources-cicf-participants/
The Annex of this White Paper provides some schematic illustrations

IMF Working Paper on Velocity of Pledged Collateral of November 2011
www.imf.org/external/pubs/ft/wp/2011/wp11256.pdf
Box 1 on Page #9 is about rehypothecation

2.7 Types of Collateral

There is a wide range of possible collateral types used to collateralize exposures with various degrees of risks. Collateral may be anything of value so long as it is of high quality and may be promptly liquidated when required.

The following types of collateral are currently in use in the financing and derivative markets:

- Cash and/or Government Bonds (predominately G11 Sovereigns)
- Better rated Corporate Bonds/Commercial Paper
- Letters of Credit/Guarantees
- Equities
- Mortgage-backed securities (MBSs)
- Covered bonds
- Investment fund shares (i.e. Money Market Funds, Equity Funds, Fixed-Income Funds)
- Out of Network Assets (e.g. metals primarily gold, commodities etc.)

The most common form of collateral is cash, followed by government securities. The other types of collateral are used less frequently. Haircuts will vary depending on the quality and liquidity of the specific collateral asset.

It is expected that current and pending regulatory requirements will create pressure on available collateral capacity by increasing the demand for collateral to support both cleared and non-cleared trading. This in turn is expected to result in practitioners turning to employ other forms of collateral and the market as a whole will observe an increase in the use of non-G11 cash and treasuries. Therefore, an understanding of market, operational, settlement and substitution risks of these forms of collateral will be crucial to ISSA members.

3. Collateral Protection

3.1 Introduction

Lessons learned during the insolvencies and near misses that took place during the financial crises of 2007/08 continue to create intense focus on the part of regulators and market practitioners on expanding many of the operational requirements associated with Collateral Management. This chapter highlights the need to expand best practices as they relate to the protection of collateral; this irrespective of whether a party is paying or receiving collateral or otherwise providing a service in support of the collateralization process on behalf of a customer/a clearing system and/or meeting a regulatory requirement.

Counterparties to a transaction, even those credit enhanced with collateral, view their own credit analysis of the counterparties' ability to pay in a trading transaction as being the «first way» of ensuring performance under the terms of an underlying contract. When the counterparty or transaction is further credit enhanced via the use of collateral, the secured party has the additional benefit in that any collateral transferred to support the transaction provides a «second way» of ensuring performance. Typically, should a collateralized contract call for a payment or performance and should simultaneously the paying counterparty fail to pay, the secured party may then use the second way to realize on the collateral in an attempt to make themselves whole as provided under the contract. In this example, at the time of default the credit risk associated with a counterparty's failure to pay is transformed into the legal, operational and market risk associated with the seizing, converting and potentially liquidating the collateral. Therefore it is observed that collateralization does not eliminate risk but when it is used, it acts as a vehicle for transforming credit risk into other more operational types of risk.

Therefore a discrete topic addressing best practices as they relate to the management of these risks has been put under the umbrella of «Collateral Protection». While not exhaustive, the list of best practices for collateral protection covers issues associated with:

- Legal basis and documentation requirements
- Collateral segregation requirements and account structure
- Use of cash and non-cash collateral
- Independent amount for non-cleared derivatives
- Supporting cleared transactions.

3.2 Legal Basis and Documentation Requirements

Best Practice (1)
Wherever possible, standardized industry legal documentation should be used to support a collateral agreement between a collateral provider and a collateral taker.

Principle
Firms should regularly review and update existing agreements.

Description
Across segments of the market (repo, securities lending, derivatives), standardized legal documentation has evolved for the benefit of the industry participants. Standard market agreement forms such as

- *International Swaps and Derivative Association (ISDA) Master Swaps Agreement and Credit Support Annex (CSA)*
- *Global Master Repurchase Agreement (GMRA).*

Such industry standards also serve as a basis for third party service providers.

Best Practice (2)
The collateral provider and the collateral taker must agree on the type of collateral arrangement they execute and have a shared understanding of «who owns what».

Principle
Firms must be aware of their legal and contractual responsibilities as both receiver and payer of collateral.

Description
The types of agreements most commonly used are pledge and title transfer. It should be noted that following the 2nd September 2013 release of the BCBS / IOSCO margin requirements for non-cleared swaps this process is subject to major revision (see chapter 7).

Best Practice (3)
All risk bearing and operational units within a firm should ensure that the standardized contract terms address their risk requirements.

Principle
A consistent approach to documentation terms reduces risks associated with exception management.

Description
Operational risk management and legal functions should be involved in development and ongoing management of «collateral agreement» negotiation with counterparties to ensure (i) consistency within the firm's credit and risk policy framework and (ii) from an operational risk perspective the ability to consistently perform under the proposed terms of the agreement.

3.3 Collateral Segregation Requirements and Account Structure

Best Practice (4)
Firms should adopt a flexible approach to rehypothecation and be prepared to support limits and enhanced reporting on its use.

Principle
The collateral provider and the collateral taker must agree on the rights and/or conditions of re-use or rehypothecation of the collateral in compliance with current and anticipated regulation.

Description
Certainly events of 2007/08 have caused the market to more aggressively employ segregation of Initial Margin (IM) and the holding of such collateral with third party providers. Reports such as the November 2011 IMF Working Paper on the Velocity of Collateral (see Pt. 2.6.2) identify some of the risks associated with rehypothecation of collateral transferred under a pledge agreement.

Best Practice (5)
Firms must always be cognizant of the relationship between the account structure and the agreement terms.

Principle
Under a security financial collateral arrangement, the collateral provider and the collateral taker must agree (i) whether the relevant collateral account (in which the entries are made based on the type of collateral that is provided to the collateral taker) is subject to an Account Control Agreement and (ii) the terms of this agreement and its implications.

Description
A title transfer collateral arrangement will lead to an effective transfer of an asset position from an account of the collateral provider to the account of the collateral taker. A security financial collateral arrangement may or may not imply an effective transfer of a collateral position in the relevant

collateral account. The collateral may indeed be «earmarked» directly in an account of the collateral provider. In either case, the relevant collateral account may be subject to an account control agreement with the involvement of a third party that will meet control requirements of both the collateral provider and the collateral taker, by either holding the collateral positions, or by managing the «earmarking» process in the relevant collateral provider's account. The implications of such mechanisms on the event of default are presented in chapter 4 «Operational Processes Associated with Default Management».

If the asset segregation is monitored and controlled by a third party agent (i.e. a triparty collateral agent), then the asset segregation does not mean account segregation at the custodian level and/ or at the SSS/CSD level. The triparty service should provide enough assurances to the parties before being permitted to use any approved[1] internal segregation model. The Collateral Management system, operational processes, legal agreement management and reporting provided by a third party collateral agent should ensure enough transparency to the parties to give them confidence that adequate safeguards are in place for protection of the collateral.

3.4 Use of Cash and Non Cash Collateral

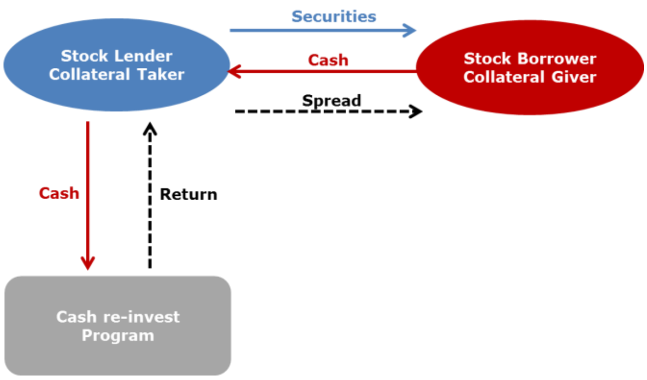
3.4.1 Introduction

Collateral assets should be preferably liquid and easy to value, customarily in the form of either cash or securities. In securities lending, cash collateral is predominant in the US, while non-cash collateral is predominant outside of the US. In OTC derivatives, cash is the predominant form of collateral and expected to remain so in the future. With the introduction of clearing and more systematic IM on bilateral transactions, non cash collateral is anticipated to become more common.

3.4.2 Cash Collateral

When one party (counterparty to an OTC derivative contract or securities lender) receives cash as collateral, they may wish to re-invest this cash in order to generate income for themselves and/or the transferring party in the form of interest or spread. The following chart illustrates a typical cash re-investment process.

Illustration «cash re-investment process» (securities lending transaction)



The cash re-investement process may pose a risk associated with cash collateral. As observed during the financial crisis and especially during periods of market stress, certain issues relating to cash re-investment may surface and work to the detriment of both parties. Issues associated with immediate liquidity needs forcing the «fire sale» of securities collateral pledged within a cash re-investment program may in turn cause collateral to lose its primary function as a risk mitigation tool. Liquidity

[1] There are many choices for asset segregation, e.g.in the EU there is individual segregation accounts (ISAs / OSAs) while in the USA in addition to individual segregation there is Legally-Segregated-Operationally-Commingled or (LSOC) model

and related issues have drawn the interest of regulators to review established practices and issue a number of recommendations. Some examples:

- **Financial Stability Board (FSB)**[1]**:** In August 2013, the FSB launched its «Policy Framework for Addressing Shadow Banking Risks in Securities Lending and Repos». It stated in its recommendation #6: «Regulatory authorities for non-bank entities that engage in securities lending (including securities lenders and their agents) should implement regulatory regimes meeting the minimum standards for cash collateral re-investment in their jurisdictions to limit liquidity risks arising from such activities.»

- **Federal Financial Institutions Examination Council (FFIEC)**[2]**:** The FFIEC's «Supervisory Policy Securities Lending» quotes: «When cash is used as collateral, the lender institution is responsible for making it income productive. Lenders should establish written guidelines for selecting investments for cash collateral. Generally, a lender institution will invest cash collateral in repurchase agreements, master notes, a short term investment fund, and US or Eurodollar certificates of deposit, commercial paper or some other type of money market instrument. If the lender institution is acting in any capacity other than as principal, the written agreement authorizing the lending relationship should specify how cash collateral is to be invested.»

- **European Securities and Markets Authority (ESMA):** In its «Guidelines on ETFs and other UCITS issues» ESMA introduces several restrictions, in particular: «Cash collateral received should only be
  - placed on deposit with entities prescribed in Article 50(f) of the UCITS Directive,
  - invested in high-quality government bonds,
  - used for the purpose of reverse repo transactions provided the transactions are with credit institutions subject to prudential supervision and the UCITS is able to recall at any time the full amount of cash on accrued basis,
  - invested in short-term money market funds as defined in the Guidelines on a Common Definition of European Money Market Funds.»

Relying on this general framework the following best practices are recommended:

Best practice (6)
Firms should understand legal, commercial, credit and operational risk implications associated with the choice of a particular collateral.

Principle
Lender / counterparty (collateral receiver) / third party provider should understand and assess benefits of using cash versus non cash as collateral.

Discussion
Risk and rewards should be well understood since re-investing cash may involve additional risk to achieve additional returns.

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[1] The FSB has been established to coordinate at the international level the work of national financial authorities and international standard setting bodies and to develop and promote the implementation of effective regulatory, supervisory and other financial sector policies. It brings together national authorities responsible for financial stability in significant international financial centres, international financial institutions, sector-specific international groupings of regulators and supervisors, and committees of central bank experts. (Source FSB Overview)

[2] The **Federal Financial Institutions Examination Council**, or **FFIEC**, is a formal interagency body of the United States government empowered to prescribe uniform principles, standards, and report forms for the federal examination of financial institutions by the Federal Reserve Board of Governors (FRB), the Federal Deposit Insurance Corporation (FDIC), the National Credit Union Administration (NCUA), the Office of the Comptroller of the Currency (OCC), and the Consumer Financial Protection Bureau (CFPB) and to make recommendations to promote uniformity in the supervision of financial institutions. It also oversees the systems of real estate appraisal in the United States.

Best practice (7) *(with respect to OTC derivative trading only)*
The collateral payer should have the choice of the bank / investment vehicle selected to hold its cash collateral and the determination if the account should be commingled or segregated.

Principle
The owner of the collateral pledged should be made aware of where their cash is ultimately placed as well as of the chain of transferees (payment agents/custodians) between themselves and the ultimate holder.

Discussion
Cash segregation could be ensured in a separate deposit account under a security interest form (US only). However, in this circumstance, cash will not offer any financial return. Also, collateral if not immediately re-invested in a securitized asset will then bear the unsecured risk to the bank holding the collateral. Depending on the jurisdiction, asset segregation and collateral protection are operationally and legally more difficult to achieve for cash than non cash collateral.

Best Practice (8)
The collateral payer should have transparency over the collateral receiver's investment objectives for the cash collateral.

Principle
When collateral is re-invested, the investment objective should focus on capital preservation.

Discussion
The objective should be established in writing and agreed between the parties. This agreement should address investment guidelines, define eligible instruments, and describe account set-up and reporting. In addition, to ensure proper oversight, the collateral receiver should be prepared to provide enhanced reporting and be in a position to support further modification in its cash re-investment program.

Best practice (9)
A re-invested collateral portfolio should be valued on a daily basis with a mark-to-market process.

Principle
A daily reporting of the portfolio (statement), including value of portfolio and key risk indicators (liquidity, market and counterparty) should be provided by the investing party to the transferring party and/or their agent.

Discussion
This requirement is prevalent in the centrally cleared environment and will become mandatory under the BCBS/IOSCO recommended requirements[1]*.*

3.4.3 Non Cash as Collateral

When non cash is received as collateral most of the regulations tend to give a framework to restrict the type of collateral which should be exchanged.

BCBS / IOSCO Principle 4 states the following «To ensure that assets collected as collateral for initial and variation margin purposes can be liquidated in a reasonable amount of time to generate proceeds that could sufficiently protect collecting entities covered by the requirements from losses on non-centrally cleared derivatives in the event of a counterparty default, these assets should be highly liquid and should, after accounting for an appropriate haircut, be able to hold their value in a time of financial stress.» [2]

[1] See BCBS/IOSCO Margin Requirements for non-centrally cleared derivatives, final release dated 2 September 2013. http://www.bis.org/publ/bcbs261.htm
[2] BCBS/IOSCO Release dated 2 September 2013, page 16

Although there is no defined list of eligible collateral, BCBS provided – next to cash - the following examples (although not exhaustive) of collateral satisfying the principle:

- High-quality government and central bank securities
- High-quality corporate bonds
- Equities included in major stock indices
- Gold.

In Europe, ESMA has issued specific provisions (article 43) for ETFs and UCITS (ESMA Guidelines) restricting the choice notably in terms of

- Liquidity
- Valuation
- Issuer credit
- Correlation
- Diversification.

Best practice (10)
Counterparties should carefully review the credit, market and operational risks associated with the choice of non cash collateral.

Principle
In addition to addressing the legal and regulatory requirements associated with any form of collateral, counterparties should also understand the market and credit risk to the collateral as well as the fundamental relationship between the nature of the selected collateral and its relationship to the secured positions.

Discussion
Firms should consider the following points prior signing any collateral agreement:

- *Collateral eligibility framework*
  - *Liquidity analysis*[1] *or «fire sale» risk*
  - *So called «procyclicality risk»*[2]
  - *Issuer credit quality*
- *Concentration risk within particular issue, sector and within / across counterparties*
- *Correlation / wrong way risk.*

Best practice (11)
Non cash collateral should be reconciled to its holding location and valued on a daily basis.

Principle
During the course of business, counterparties and triparty service providers should be able to monitor the collateral received and ensure that all legal and contractual requirements are satisfied. In particular, counterparties should ensure that the collateral is valued on a daily basis.

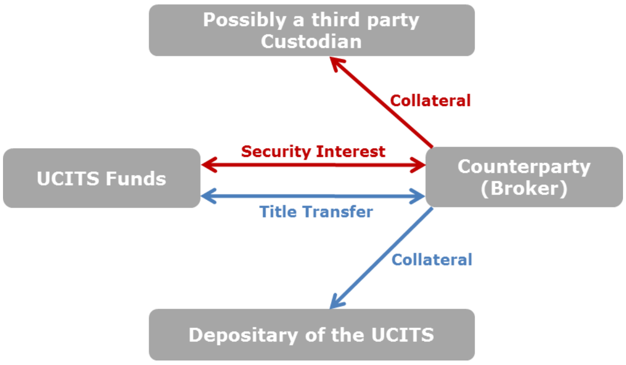
Discussion
This best practice echoes established best practice in place in the cash and derivatives markets and mirrors such requirements being supported by service providers to these markets[3]*.*

[1] See «The Fire Sale Problem and Securities Financing Transactions», Remarks by Jeremy C. Stein at BoG FRB, Oct 4,2013 http://www.federalreserve.gov/newsevents/speech/stein20131004a.pdf
[2] See Committee on the Global Financial System (CGFS) Paper No.36 The role of margin requirements and haircuts in Procyclicality, March 2010
[3] See ISDA Best Practices for the OTC Derivative Collateral Process, October 2013

Best practice (12)
As concerns UCITS, the collateral receiver (or taker) should carefully select the custodian of its collateral. When a UCITS receives the collateral under title transfer, it has to be held with the depositary. However, the depositary of the UCITS can sub-deposit these assets received as collateral to sub-custodians, such as banks and/or ICSDs (i.e. on triparty collateral accounts opened in the name of the depositary of the UCITS specifically for this purpose and this UCITS).

Discussion
As for the criteria of eligible collateral, regulators also tend to define a framework for holding of collateral. In particular in Europe «where there is a title transfer, the collateral received should be held by the depositary of the UCITS. For other types of collateral arrangement, the collateral can be held by a third party custodian which is subject to prudential supervision, and which is unrelated to the provider of the collateral».

Illustration «deposit of collateral» (transactions for UCITS)



Best Practice (13)
The collateral payer and service providers should at all times ensure that the payer is not over-collateralized with their trade counterparties.

Principle
The receiver of collateral should not be used as a holding location for collateral in excess of the amount specifically required under the trading or financing agreement.

Discussion
In case of over-collateralization by the collateral provider to its collateral takers the collateral provider should treat such excess collateral as an unsecured loan when consolidating risk to such counterparties. For collateral being posted in cash or non-cash form and through a title transfer agreement, it is worth noting that any excessive buffer of collateral posted creates additional risk to the collateral provider.

3.5 Independent Amount for Non-cleared Derivatives

3.5.1 Introduction

Independent Amount (IA) more and more being also referred to as Initial Margin (IM) is that additional collateral amount over and above the variation margin. It provides additional protection for the collateral receiver, and usually depends on the credit quality of the party paying it. Indeed the IA holder (i.e. the collateral taker, the dealer) wishes to be protected against adverse market movements that might occur between two margin calls or during the close-out process. The amount is negotiated and agreed between the parties and is typically expressed as a fixed currency amount, a percentage of the notional principal amount, or a computation of value-at-risk. It can be defined at the level of the portfolio of transactions between two parties, or uniquely for each individual transaction. IAs are a common practice in the alternative investment environment between clients who often post this «cushion» to dealers/prime brokers.

The management of the process of providing IA/IM is subject to complete overhaul by virtue of the most recent BCBS / IOSCO Release of 2 September 2013. As a full analysis of the release is beyond the scope of this report readers are advised to commence their own analysis by referring to the EU Regulatory Survey in chapter 7.

In the repo market, as in the derivative markets, an IM may be negotiated. It will be a percentage premium that may be added to the market value of a security that is being offered as collateral.

In the standard repo documentation Global Master Repurchase Agreement (GMRA), this IM is called a margin ratio. IAs are an extension of the «defaulter pays» model, which protects the surviving party by absorbing losses thanks to the collateral provided by the defaulting entity.

3.5.2 Risk Associated to Independent Amount (IA)

The Lehman Brothers' bankruptcy made the buy-side community more sensitive to the need to protect collateral. IAs often turned out to be commingled with other assets and possibly (theoretically and effectively) being re-used by their dealers/prime brokers to a certain degree. Clients who did not safeguard collateral with a third-party custodian realised how vulnerable those assets could be in case of dealers / prime broker default. In such a case of default of its dealers / prime broker, depending on the legal and operational frameworks, the client would have a general unsecured claim and the recovery rate of posted IA would typically be less than 100%.

To address such concerns, in 2010 ISDA, the Managed Funds Association (MFA) and the Securities Industry and Financial Markets Association (SIFMA) have published a paper on IA posted as collateral under derivative transactions. The paper provides recommendations to market participants on how collateral providers posting IA can protect themselves from the risk of loss of IA in the event of the insolvency of the collateral taker.

Furthermore, since 2008, the industry has evolved such that clients are negotiating limitation of re-use (implicit application of the 140% re-hypothecation limit in the US rules) and triparty custody arrangements. Nevertheless, according to the 2013 ISDA margin survey, 82% of collateral is eligible for re-use, and more than 75% is effectively re-used in large institutions. At the same time, a vast majority of IA (69%) is still commingled with variation margin.

It is worth noting that this question arises only where the IA is under security interest (Credit Support Annex [CSA] New York Law or Credit Support Document [CSD] English Law) since under CSA English Law (title transfer), the receiving party becomes the legal holder of the securities. Therefore, the client has no right on the collateral posted to the dealer and the questions of re-use and segregation are not relevant.

3.5.3 Best Practices Relating to Independent Amount (IA)

Best Practice (14)
Firms should consider expanding due diligence functions surrounding IA especially in light of recent regulatory reform.

Principle
Changes in market practice due to market events and regulatory reform will require firms to be mindful of the attendant impact to legal terms and business process.

Discussion
Both parties should pay the utmost attention to legal documentation, specifically:

- *Use of standard industry documentation (repos, stock lending, derivatives)*
- *Review legal uncertainty / insolvency law (client asset protection regime)*
- *Ensure accordance with home and industry regulatory framework*
- *Attention to legal arrangement and disclosure from financial counterparty: Clients should get sufficient disclosure from financial intermediaries in relation to rehypothecation of assets so that clients can understand their exposures in the event of a failure of the intermediary).*

Best Practice (15)
Firms should be prepared to accept a variety of IA arrangements.

Principle
Changes in market practice due to market events and regulatory reform will require firms to be mindful of the attendant impact to the business processes required to support IA.

Discussion
The collateral provider should, notwithstanding the upcoming framework, have the following options:

- *Segregation model among the four main models (see table below)*
- *Choice of the custodian*
- *Form of legal and custodial agreement and attendant legal jurisdiction*
- *Limit of re-use.*

In addition the following issues should be considered:

- *Such collateral should be subject to stringent operational procedures*
- *A robust process should be implemented in particular when IA is segregated*
- *A specific control on the underlying assets should be put in place*
- *When re-invested (cash), best practices as detailed in paragraph 3.4.2 should also be applied.*

Table: Segregation Model (Applies to Bi-lateral Arrangements)

IA Holding	Commingled in Dealer's Book	Segregated Account in Dealer's Book	Segregated within Third Party Custodian	Third Party Custodian under «Account Control Agreement»
Segregation	No	Yes	Yes on third party	Yes on third party
Dedicated contract	No	No	Custody agreement between the dealer & the custodian	Tri-party custody agreement between the client, the dealer & the custodian
Use of IA	Direct use by dealer	Potential limit of re-use	Potential limit of re-use	Release of collateral is subject to agreement between the parties
Re-investment	No	No	Yes	Yes
Recovery of collateral upon dealer's default	-	-	+/-	+
Recovery of collateral upon client's default	+	+	+	+/-

3.6 Supporting Cleared Transactions

Best Practice (16)
Attention should be given by the client to the choice of not only the clearing member(s) selected but also to the choice of the CCP(s) selected as they represent the ultimate risk for the client.

Principle
As the client chooses the clearing venue there will be a requirement for expanded due diligence around all of the risk elements in the chain of service providers from transaction execution through clearance and settlement.

Discussion
Indeed clients will have to carefully choose their service providers, not only based on creditworthy-ness and financial stability but also based on the level of services provided to non-clearing members. Among a number of selection criteria, the following features relating to collateral protection are worth noting:

- *Segregation of collateral at clearing member level and at CCP level*
- *Portability of the portfolio of cleared transactions and its related exposure to the CCP*
- *The synchronized portability of the margin collateral from a defaulting clearing member towards another substitutable clearing member.*

Best Practice (17)
Firms must be aware at all times of the segregation terms available.

Principle
Particular attention must be given to collateral segregation offered by both clearing members and CCPs.

Description
Under new regulations such as the European Market Infrastructure Regulation (EMIR) and the Dodd Frank Act, a clear and transparent level of collateral segregation is to be provided along the clearing chain. Different models of segregation requirements for client assets are for example to be foreseen according to EMIR. However and above all, those models all agree for a pre-requisite to distinguish and segregate at clearing member and CCP level the assets and positions held by a clearing member on its own account(s) from the assets and positions it holds on separate account(s) for its clients at the CCP.

Essentially two models are to be offered to clients for clearing and related collateralization:

- *Omnibus client segregation - EMIR 39 (2) which represents lower costs and provides lower protection*
- *Individual client segregation - EMIR 39 (3) which triggers higher costs with higher protection.*

Best Practice (18)
Firms must understand each CCP's ability to port trades from a defaulting member's account to a non-defaulting member's account.

Principle
Automated portability of the exposure (positions) to the CCP and the related collateral deposited with the CCP is of the utmost importance in case of default of the Clearing member.

Description
The level of readiness of the CCP towards this process of portability of positions and assets should therefore be considered by the clients.

Best practice (19)
Firms must be aware of the discrete operating environments for each CCP.

Principle
Non-clearing members must carefully assess the potential that the services offered by clearing members and CCPs may result in different models of delivery of collateral.

Description
An ultimate level of protection by the clients for the collateral they transferred to the CCPs is to carefully assess the possibility to apply either a «pass through» model (collateral transiting through accounts of the clearing members) or rather to adopt, if applicable, a «direct delivery» model in which the clients can transfer collateral directly to the CCP account(s) dedicated for clients' assets of their clearing members.

In the context of Europe there are choices amongst the different models, i.e. under EMIR Article 39 (5) the paying party has a choice between either an omnibus holding (net or gross) or an individual account.

The parties to a collateralized agreement should carefully analyse risk / benefits of each framework taking into account the following criteria:

- *The legal / regulatory jurisdiction of the CCP*
- *The choice of clearer*
- *Choice of CCP within and across markets*
- *Legal / contractual arrangements with their clearer*
- *Level of segregation at the clearer and CCP / re-use option.*

4. Operational Processes Associated with Default Management

4.1 Introduction

This chapter presents a high level punch list of items that readers may wish to consider when developing their operational plans for managing a default scenario with respect to a customer, a counterparty and/or another market entity. The approach recognizes the need to consider planning in advance of a default management process and also the need to consider additional responses once an event of default has occurred.

The intent and scope of this chapter covers:

- Documenting general best practices, principles, and procedures that can be applicable to collateral practitioners during a counterparty default scenario.
- References to other relevant industry documents and initiatives, including information on where practitioners may go for more information
- Key issues, assumptions, and gaps (if any).

The information contained in this paper is largely driven from the perspective of an entity that is experiencing counterparty default. However, the best practices are intended to be general in nature and may apply to multiple types of entities during counterparty default scenarios. They are general considerations for practitioners and not a step-by-step guide, as actions will differ depending on the default scenario.

The best practices below are separated into two distinct areas:

- Pre-default: Preparations that can be made in advance of a default that may help facilitate the post-default process
- Post-default: Activities to consider after default of a counterparty.

4.2 Pre-Default

Best Practice (20)
Design MIS procedures to allow rapid data queries or reporting as required, including information on balances, exposure values, legal entity names, etc.

Discussion
Systems should allow for close monitoring of collateral haircuts and eligibility, including the ability to quickly update these parameters.

Best Practice (21)
Ensure appropriate account naming conventions and account structure for all collateral accounts.

Discussion
This helps to prevent ambiguity on ownership of accounts and assets during default scenarios.

Best Practice (22)
Keep all agreements in a single location, ideally electronically, to easily download all executed documentation against a specified entity.

Best Practice (23)
Understand all legal documentation and implications of all clauses, particularly those pertaining to default or insolvency.

Best Practice (24)
Maintain a searchable database of agreements to capture non-standard terminology that could require exceptions or modifications to normal procedures in the event of a default.

Discussion
Rapid identification of these exceptions may be required during a default scenario.

Best Practice (25)
Know which entities to instruct in the event of a counterparty default (e.g. custodian, collateral agent, etc.).

Discussion
Create and maintain draft notices and ensure these are ready for rapid delivery in a default-event.

Best Practice (26)
Create and regularly update a crisis event «playbook», which can include an overview of possible default scenarios and tactical steps required in the event of a default.

Discussion
Dry-runs and tests on the playbook should be conducted and amended as necessary. Updated calling lists and calling trees for key decision makers should be included.

4.3 Post-Default

Best Practice (27)
Immediately access all relevant legal documentation to facilitate legal review.

Discussion
Identify any agreements with non-standard terms or clauses to help prioritize the legal review process.

Best Practice (28)
Generate and collate all necessary reporting to identify all exposures against the defaulting party, including collateral positions and value.

Best Practice (29)
Contact legal and compliance representatives to follow guidance related to the specific default scenario as actions are likely to vary.

Discussion
This above guidance may include information on:

- *Communication protocols and rules of engagement – both internal and external (e.g. regulators and/or court-appointed trustees)*
- *Timing and delivery of formal notices*
- *Potential return and/or liquidation of collateral*
- *Jurisdictional standards.*

Best Practice (30)
Follow the collateral liquidation process per legal guidance.

Discussion
Determine if there are any corporate actions, coupons, maturities, valuations issues that may impact the liquidation process.

Best Practice (31)
Maintain a master list of legal entities that have declared bankruptcy, and associated dates of bankruptcy, to prevent confusion within the organization.

Discussion
A central group should be designated to «own» this list, including any amendments (e.g. legal department). Any sub-entities that may not have declared bankruptcy should be borne in mind.

Best Practice (32)
Provide transparency throughout the process to ensure key stakeholders are aware of necessary actions.

Discussion
It is crucial to

- *Know and have access to any key decision makers for critical functions (e.g. risk, legal, compliance, etc.),*
- *Provide structure during internal conversations to optimize the use of time and flow of information,*
- *Ensure good record keeping of all decisions, issues, and their resolution as necessary.*

Best Practice (33)
Maintain constant communication with custodian and/or collateral agent. Legal agreements may call for a cease or change of day-to-day procedures for applicable entities, unless otherwise instructed by courts or trustees.

5. Customer Communication and Reporting

5.1 Introduction

Since the 2008 financial crisis, industry participants have experienced continued growth in customer communications primarily regarding margin calls and associated collateral movements. With the onset of regulatory reform across the globe the collective market expectation is that communications regarding margin call and collateral movement volumes will further increase. Drivers for these increases include:

- «Un-netting» of margin into discrete processes for initial and variation margin
- Bi-lateral posting of initial margin held in segregated accounts
- Reduction in thresholds and minimum transfer amounts of variation margin
- General move away from uncollateralized derivative transactions
- Move to currency-based margin silos via the Standard Credit Support Annex.

This increase in margin call volumes and follow-on collateral movements held in segregated accounts require practitioners to further develop their processes including standardized messaging and reporting to allow for automation and scale.

5.2 Message Automation

Best Practice (34)
Adoption of automated solutions for margin call issuance and response.

Principle
Firms should automate the margin call issuance and response process moving away from email and towards adoption of electronic margin messaging.

Discussion
Automation is key to market participants' ability to scale in order to meet the expected increased demand in margin calls and collateral movements. Whilst there are differing views about the adequacy of the supply of quality collateral going forward, there is a common agreement that access to this collateral will need to be more efficient. This means that market participants must be able to maximize the use of available quality collateral and be able to deploy it with greater frequency. The result will be a requirement for increased automation and the ability to accommodate higher transaction volumes. The challenge for market participants is to accommodate this increased volume while maintaining appropriate controls to ensure accurate recordkeeping.

The exchange of margin call messages between institutions, whether between

- *Bi-lateral OTC derivatives counterparties and their prime brokers,*
- *CCPs and their clearing members,*
- *Clearing members and their end-clients and custodians,*

is a critical process in Collateral Management. Growth in trade volumes and market volatility, combined with the increased adoption of real-time risk management and with the expected survival of multiple CCPs in and across different regions and product sectors, will mean that the frequency with which margin is called to secure exposures will continue to drive rapid growth in the number of messages that will have to be issued, acknowledged and processed.

Unfortunately, however, margin processing has not achieved the level of straight-through processing realised in other areas, such as the electronic trading and settlement processes. This will have to change, and one of the key methods by which the Collateral Management process can be improved is through the greater adoption of open standards for core messaging flows. Their increased adoption can substantially alleviate the challenges market participants will face by

- *Enabling the required higher levels of automation*
- *The systematic capture and transmission of information between multiple different end points and infrastructures*
- *Facilitating the processing of vastly increased messaging flows.*

Messaging channels and tools are available to manage this increased volume of transactions relating to collateral movements.

SWIFT's new messaging-based collateral management solution, developed under the ISO 20022 Open Standard, is specifically designed to address these challenges. The solution complements SWIFT's existing messaging and standards which are already used for the mobilization, settlement and reconciliation of cash, securities and other types of collateral positions, and can be easily adopted and integrated into existing workflows.

5.3 Pledge and Release Automation

Best Practice (35)
Adoption of automated solutions for the pledge and release aspect of third party collateral movements.

Principle
Firms should automate the process of sending release instructions for collateral held in tri-party accounts.

Discussion
Many custodians, fund administrators and investment managers have implemented messaging automation via SWIFT, however, there are still a number of market players who have yet to automate the instructional (pledge and release) aspects of third party collateral movements. As a result, the custodians who transact with these institutions do not yet have the capability to receive automated collateral pledge or release instructions.
Today, in a third party collateral release scenario, many firms either fax instructions to their custodians or manually enter messages into a custodian's proprietary web portal. Custodians presently receive thousands of transactions per month via fax requiring them to manually authenticate the instructions by matching signatures on file to those received via fax and then keying the instructions into their internal systems.

Recently, custodians, fund administrators and sell- / buy-side market participants have come together via their respective trade associations of ISITC, SIFMA and ISDA to agree a market practice around the automation of the pledge and release of collateral held at third party custodians. This market practice had yet to be finalized at the time that this best practice document was in the process of being published. Collaborative efforts have focused in on the SWIFT MT 527, 54X and 210/202 messages, depending on the scenario. They are considered the preferred method for communicating automated instructions to third party custodians for cash or securities movements, thereby eliminating the need for (i) custodians to manually receive and match instructions and (ii) sell-side institutions to fax these instructions or manually enter them via a custodian's proprietary web portal.

5.4 Report Automation

Best Practice (36)
Automate solutions for standard and bespoke reporting.

Principle
To reduce risk and enhance performance, firms should automate the process of producing and distributing standard and bespoke reports.

Discussion
Customer demand for timely and accurate reporting has never been greater. As compliance costs rise due to the global regulatory push for clearing and exposure / collateral reporting, firms are looking to simplify their operating and data structures via consolidation of their cleared, non-cleared and listed derivative businesses. Fixed exposure, collateral, margin and interest data sets, make the collateral space ideal for implementing business intelligence reporting solutions. These systems create a scalable framework to support the automated production and distribution of information in a highly controlled environment.

Moreover, from a control perspective, the ability for the account owner and/or the custodian or fund administrator to capture real time collateral movements and receive or produce daily reporting of collateral holdings is central to their ability to implement sound financial controls.

With the regulatory intent to offer segregated accounts for collateral now moving forward, the volume of position reporting will increase throughout the transaction chain. This leads to further requirements in terms of automation, together with the use of standard report formats.

Daily reconciliations of

- *Expected versus actual collateral movements,*
- *Prior end of day versus current end of day collateral balances,*
- *Account owner versus custodian end of day collateral balances,*

represent just a few key tasks that reconciliation managers will increasingly be required to perform on a daily or intra-day basis.

5.5 Reconciliation

Best Practice (37)
Adoption of automated solutions for reconciliation.

Principle
Firms should consider automating the process of reconciling exposure and collateral balance data reported to a trade repository.

Discussion
Both Dodd Frank and EMIR legislation maintain trade repository report requirements. Both counterparties to the trade remain accountable to their regulator for the accuracy and completeness of the trade repository's record. The importance of this is underlined by the fact that the data held by trade repositories is not only a regulatory record but will also be made publically available.

The operational complexities brought about by this new requirement are compounded by the number of trade repositories currently in existence or in the process of registration. EMIR explicitly encourages a multiplicity of trade repositories creating a reconciliation and control challenge, as well as risk of duplication and fragmentation. Where a buy-side firm elects to be reliant on trading partners or a third party to report, it may be necessary to establish relationships with multiple trade repositories, potentially across jurisdictions, to gain a view of its total portfolio. Broker dealers are generally willing to report on behalf of buy-side firms but are reluctant to accept any regulatory liability for incomplete or inaccurate reporting. It is therefore easier for buy-side firms to verify the accuracy of their reporting where trading partners / third party reporting agents report to a single trade repository.

In light of this complex, evolving and embryonic reporting landscape, institutions may elect to undertake direct reconciliations of their records to those of the trade repository or outsource the process to a vendor to ensure that regardless of the reporting mechanism, any errors or omissions are promptly identified for remediation.

6. Future Trends in Collaterialization

6.1 Introduction

The passage of both laws and rules by supervisory agencies has created both challenges and opportunities to market participants as firms look to address changes to their traditional business model due to changes in client requirements and regulation. Rather than listing specific market products or individual commercial initiatives, this section will merely highlight some of the drivers of change and the attendant implications for market participants. Certainly Capital Requirements Directive IV, Dodd Frank and Basel III have created a robust market for current and emerging service providers to meet the informational, operational and capital allocation requirements arising out of new regulation.

Broadly, the need for more transparency by customers and regulators has imposed burdens on market participants to furnish information in a robust format over a progressively shorter time frame with far more accuracy to more consumers.

6.2 Market Initiatives and Expansion in Services

TARGET2-Securities Initiative (T2S)
Certainly this is one of the most significant market initiatives relating to the efficient control and movement of collateral in support of cash securities transfers, secured financing, centrally cleared and non-centrally cleared transactions. T2S commenced in early 2000 and engages primarily the CSDs, custodial and dealing firms in Europe through the introduction of a single settlement system across most of Europe with access to a single Euro account to facilitate cross border settlements of cash and securities. The first significant delivery date under T2S will be June 2015.

Legal Entity Identifier Initiative (LEI)
As both home and host regulators are requiring more consolidated data there is an emerging need for a more universal identifier for firms to be able to report on the complete family of legal entities transacting within each bank, CCPs and other market servicers such as trade repositories and custodians. The LEI is a reference code to uniquely identify a legally distinct entity that engages in a financial transaction. Currently, there are many ways to identify entities, but there is no unified global identification system for legal entities across markets and jurisdictions. The LEI will be a linchpin for financial data - the first global and unique entity identifier enabling risk managers and regulators to identify parties to financial transactions instantly and precisely. Currently, an international collaborative effort between public and private entities is developing the LEI, with the support of the FSB and endorsement of the G-20. More information may be obtained from page 1 of the US Department of the Treasury LEI Initiative FAQ.
http://www.treasury.gov/initiatives/wsr/ofr/Documents/LEI_FAQs_August2012_FINAL.pdf

Triparty Repo Reform (US only)
This industry initiative was created to respond to a call by US Regulators (US Federal Reserve Board) to strengthen the resilience of the tri-party repo infrastructure. The foregoing is meant to provide a sufficiently robust infrastructure to allow the market to continue to operate during periods of market stress and to reduce those conditions where a dealer default could prompt a destabilising «fire sale» of its collateral held by lenders. More information may be obtained from the FRB New York via the FRB NY Website http://www.newyorkfed.org/banking/tpr_infr_reform.html

Financial Products Markup Language (FPML)
This industry initiative is sponsored by ISDA. Its XML-based standard is supporting OTC trading of financial derivatives. ISDA is known for its documentation and risk management standards for the privately negotiated derivatives industry. This initiative combines the organizational strengths of ISDA with FPML's technology base for sharing information on, and dealing in, financial derivatives over the Internet.

Collateral Transformation, also known as Collateral Upgrade
There is much talk in the industry about how providers will look to take in certain forms of securities (equities) as collateral from certain players, and provide them with more liquid or quality assets (cash or treasuries) that can be placed at CCPs. This could potentially be done either on an agency

or proprietary basis. It may be offered on a stand-alone basis or integrated with a clearing product (where the collateral transformer will also place the quality collateral at the CCP on behalf of the client). There are still many open questions on who will be willing to provide such services (due to potential balance sheet impact), and how this service would function in a stress or «fire sale» scenario, when the provider of high quality assets would likely want them returned.

Virtual Collateral Pools

New product offerings emerge from large ICSDs and triparty providers. They are looking to ensure that trapped securities can be moved or pledged to CCPs within a virtual pool, without having to move the assets from one location to another. This reduces the operational and settlement risk that might otherwise occur, and allows custodians and national CSDs to continue to hold assets locally. As these virtual collateral pools establish themselves, it will be important to assess the new risks that they potentially create (what happens in the event that the virtual pool ceases to function on a given day, and how will these pools interoperate or link up?).

ISDA Proposed Standard Initial Margin Model (SIMM)

In order to facilitate the introduction of final BCBS / IOSCO guidelines for «Margin requirements for non-centrally cleared derivatives», published September 2, 2013, ISDA proposed in December 2013 the creation of a SIMM for use by market participants. A common methodology would have several key benefits to the market, such as permitting timely and transparent dispute resolution and allowing consistent regulatory governance and oversight.

7. Regulatory Overview

This overview table sets out a high-level summary of provisions in primary legislation (including certain proposed legislation) which may have an impact on collateral-takers and collateral givers in the EU. The below does not constitute legal advice and should not be relied upon to be an exhaustive summary of the relevant legislation.

Primary Material	Relevant Provisions	Headlines	Looking Ahead
European Market Infrastructure Regulation (*Regulation 648/2012*) (EMIR) (The margin requirements for non-centrally-cleared derivatives is set out in the Basel Committee on Banking Supervision Consultative Document)	Article 4	***Clearing obligation:*** Applies to financial counterparties (including MiFID firms, BCD credit institutions, UCITS, UCITS managers, insurers, pension funds [in due course], and AIFs). The clearing obligation only applies to a non-financial counterparty if the gross notional value of OTC derivative positions over a rolling 30 day period exceeds the relevant threshold (including all non-hedging contracts entered into by it and any other relevant entities in its group). A clearing member shall offer its clients, at least, the choice between omnibus client segregation and individual client segregation and inform them of the costs and level of protection. A CCP shall have a right of use relating to the margins or default fund contributions collected via a security financial collateral arrangement.	«Switch-on» of obligations arising under EMIR continues through 2014.
	Article 11	***Risk mitigation:*** Applies to OTC derivative contracts which are not cleared. Parties must confirm the terms of a relevant contract in a timely manner and undertake portfolio reconciliation in order to manage risk (and compression where necessary). For NFC (above the clearing threshold) and financial counterparties, the value of contracts is to be marked to market on a daily basis, and parties must have procedures in place to ensure timely, accurate and appropriately segregated exchange of collateral. In particular, such entities will be subject to the mandatory margining requirements set out in the Basel Committee paper setting out global standards for exchange of margin.	
	Article 9	***Transaction reporting :*** For all derivative contracts concluded, including those which are modified or terminated, certain data must be reported to a trade repository (subject to the final text of MiFID 2 being agreed, firms subject to the MiFID reporting obligations may not be required to double report).	

Primary Material	Relevant Provisions	Headlines	Looking ahead
Alternative Investment Fund Managers Directive *(Directive 2011/61/EU)* and Commission Delegated Regulation (EU) No 231/2013 (**AIFMD**)	Article 15	***Risk and liquidity management:*** Pursuant to the risk management provisions, managers of Alternative Investment Funds (AIFMs) will be required to set maximum levels of leverage that they are able to employ for each fund managed and the rights of re-use of collateral that can be granted to counterparties, and will be required in this context to take into account when managing their risk profile the sources of leverage to which the fund is exposed, and the need to limit the exposure to any single counterparty, among other factors.	Revised draft Level 2 RTS due from ESMA in Q4 2013. Initial periodic report for those within scope due Q1 2014.
	Article 21	***Depositary:*** Broadly, EU managers of alternative investment funds established in the EU are required to appoint a single depositary for each fund managed. The assets of the fund will be entrusted to the depositary for safekeeping, effected through custody, registration, ownership verification and recordkeeping. Various disclosure requirements with respect to the depositary and arrangements thereto will apply to the AIFM. EU managers of Non-EU funds are subject to a reduced sub-set of these requirements, known as the «depositary lite» regime.	
	Article 23	***Disclosure to investors:*** Rights of re-use of collateral granted to prime brokers and other fund counterparties will be required to be disclosed in fund disclosure documentation. Various disclosure requirements also apply with respect to, in addition to restrictions applicable on the use of, leveraging arrangements, where «leverage» means any method by which a manager increases a fund's exposure whether through borrowing of cash or securities or leverage embedded in derivative positions or by any other means.	
	Article 24	***Disclosure to the regulators:*** Periodic reporting requirements will also apply to AIFMs whereby the arrangements of each fund with respect to leveraged exposure achieved through fund counterparties will be discloseable on a regular basis to the home state regulator.	

Primary Material	Relevant Provisions	Headlines	Looking ahead
Capital Requirements Directive (*Directive 2013/36/EU*) and Regulation (EU) No 575/2013 (**CRD IV**)	Title VII Chapter 4, Title XI Chapter 2 of Level I, Part Two and Part Three of Level II	***Quality and quantity of capital:*** The definition and criteria of capital instruments are to be tightened and regulatory adjustments made to capital instruments will be harmonised. Increased minimum capital resource requirements will apply to CRD IV firms. A new capital conservation buffer will be introduced, consisting of common equity Tier 1 capital in addition to the increased minimum capital requirements. A countercyclical capital buffer will require firms to mitigate against systemic risk by accumulating a further buffer of capital during periods of credit growth.	Provisions of Level 1 recast CRD will apply from 31 December 2013 and provisions of CRR will apply from 01 January 2014 – phased implementation for certain provisions in line with Basel 3.
	Part Three Title II Level II	***Counterparty credit risk:*** CRD IV complements EMIR in encouraging clearing of OTC instruments by adjusting the risk weighting of collateral and mark-to-market exposures, with differentiations made between exposures to regulated financial firms and unregulated counterparties held in respect of cleared and un-cleared positions.	Further EBA consultation papers on remaining Level 2 provisions expected Q4 2013 and throughout 2014, 2015, 2016 and 2017 Level 2 provisions likely to start to apply in line with phased implementation of Level 1.
	Part Three Title VI Level II	***Credit valuation adjustment risk:*** Offsetting of the regulatory expected loss will be capped at the level of loss on the trade or netting set to which it relates.	
	Article 87, 98 and Part Seven Level II	***Leverage ratio:*** Corporate governance measures will apply to investment firms subject to CRD IV relating to the identification, management and monitoring of leverage, with competent authorities being required to monitor firms' exposure to leverage risk.	
	Part Six Level II	***Liquidity:*** Global minimum liquidity standards are to be introduced including a liquidity coverage ratio, a net stable funding ratio and a common set of monitoring metrics enabling competent authorities to identify and analyse liquidity risk at a systemic level.	
	Part Eight Title II Level II	***Disclosures:*** Various new disclosures will be required of CRD IV firms, including, for example, that of all regulatory adjustments, main features of capital instruments issued, and ratio calculations.	
	Article 110 Level II	***Credit risk adjustments:*** Adjustments will be made to the treatment of general and specific credit risk adjustments appearing in financial statements – firms will either be subject to the standardised or IRB approach.	

Primary Material	Relevant Provisions	Headlines	Looking ahead
Markets in Financial Instruments Directive *(2004/39/EC)* (**MiFID**) (as pending amendment by MiFIDII and MiFIR Regulation)	MiFID (8) **(currently in force under MiFID)**	***Organisational requirements:*** When holding funds belonging to clients, an investment firm will make adequate arrangements to safeguard the clients' rights and, except in the case of credit institutions, prevent the use of client funds for its own account.	European Parliament voted on its amendments back in October 2012 and 'trilogue' negotiations are currently underway between the Parliament, Council and Commission.
	MiFID II Article 16 (9) and (10) **(proposal by MiFID II)**	***Organisational requirements:*** When holding funds belonging to clients, an investment firm must make adequate arrangements to safeguard the clients' rights and with the exception of credit institutions, it will prevent the use of client funds for its own account. Furthermore, investment firms will not conclude title transfer collateral arrangements with retail clients for the purpose of securing or covering these clients' present or future, actual, contingent or prospective obligations.	
	MiFID II Annex 1 **(proposal by MiFID II)**	***List of services and activities and financial instruments:*** Safekeeping and administration of financial instruments for the account of clients, including custodianship and related services such as cash/collateral management is a MiFID ancillary service.	
	MiFIR Regulation Recital 23 **(proposal by MiFIR)**	***Non-discriminatory access to central counterparties (CCPs):*** This should mean that a trading venue has a right to non-discriminatory treatment in terms of how contracts traded on its platform are treated for example, in terms of collateral requirements.	
	MiFIR Regulation Article 19 (1) and (3) and Article 20 **(proposal by MiFIR)**	***Post-trade disclosure by investment firms:*** Investment firms which either on own account or on behalf of clients, conclude transaction in shares, depositary receipts, ETFs, certificates and other similar financial instruments or in bonds, structured finance products, emissions allowances and derivatives traded on a trading venue; must make the transaction public through an APA. ESMA will develop draft regulatory technical standards specifying elements of this obligetion to transactions involving the use of those financial instruments for collateral, lending or other purposes where the exchange of financial instruments is determined by factors other than the current market valuation of the instrument.	

Primary Material	Relevant Provisions	Headlines	Looking ahead
	MiFIR Regulation Article 28 **(proposal by MiFIR)**	***Non-discriminatory access to a CCP:*** Subject to Article 7 of Regulation (EU) No 648/2012, a CCP will accept to clear financial instruments on a non-discriminatory and transparent basis, including as regards collateral requirements and fees related to access, regardless of the trading venue on which a transaction is executed. This should ensure that a trading venue has the right to non-discriminatory treatment in terms of how contracts traded are treated in terms of collateral requirements and netting of economically equivalent contracts and cross-margining with correlated contracts cleared by the same CCP. Furthermore, ESMA will develop draft regulatory technical standards specifying the conditions under which access shall be allowed by a CCP, including confidentiality of information provided regarding financial instruments during development phase, the non-discriminatory and transparent basis as regards clearing fees, collateral requirements and operational requirements regarding margining.	

Primary Material	Relevant Provisions	Headlines	Looking ahead
Undertakings in Collective Investments in Transferable Securities Directive (**UCITS IV**) *(2009/65/EC)*	Article 22 Article 23 Article 24 Article 32	***Obligations regarding the depositary*** **:** The assets of a common fund will be entrusted to a depositary for safe-keeping and the depository's liability will not be affected by the fact that it has entrusted to a third party all or some of the assets in its safe-keeping. ***Regulation of a depositary:*** A depositary will be an institution which is subject to prudential regulation and on-going supervision. The depositary will also give sufficient financial and professional guarantees to be able to effectively pursue its business as depositary and meet its inherent commitment. ***Depositary liability*****:** In accordance with the national law of the UCITS home Member State, a depositary will be liable to the management company and the unit-holders for any loss suffered by them as a result of its unjustifiable failure to perform its obligations or its improper performance of them. ***Obligations regarding the depositary:*** The assets of an investment company will be entrusted to a depositary for safe-keeping and the depositary's liability will not be affected by the fact that it has entrusted to a third party all of some of the assets in its safe-keeping.	UCITS VI is currently being considered. The Commission's legislative proposal is expected shortly. The proposals are expected to include relevant issues around efficient portfolio management and collateral.

Primary Material	Relevant Provisions	Headlines	Looking ahead
Financial Collateral Directive (Directive 2002/47/EC) (**FCD**) as amended by the Financial Collateral Amending Directive *(2009/44/EC)* (**FCAD**)	Article 4	***Enforcement:*** Povides for enforceable realisation of financial collateral - including appropriation and self-dealing where agreed to, and where valuation has been agreed, in the arrangement.	Securities Law Directive currently under consultation (available here) originally expected in Q3 2013.
	Article 5	***Right of use:*** Sets out the extent to and conditions under which a collateral taker is entitled to exercise a right of use of financial collateral, including the obligation to transfer equivalent replacement collateral, or set-off pursuant to the terms of the arrangement.	
	Article 7	***Close-out netting:*** Requires Member States to take measures so that close-out takes effect in accordance with agreed terms notwithstanding winding-up of either party.	
	Article 8	***Commencement of winding up proceedings:*** Looks to harmonise treatment of arrangements made on the day of commencement of winding-up or reorganisation proceedings, or within a preceding prescribed period, so that obligations may not declared void or reversed and may be enforceable against a third party in certain circumstances. (Article 8)	
	Article 9	***Conflict of laws*:** States that certain matters, including the legal nature and proprietary effects of book entry securities collateral, perfection requirements and realisation, are to be governed in accordance with the law of the country where the account is maintained.	

Primary Material	**Relevant Provisions**	**Headlines**	**Looking ahead**
Settlement Finality Directive (**SFD**) (*Directive 98/26/EC*) as amended by the Financial Collateral Amending Directive *(2009/44/EC)* (**FCAD**)	Article 3	***Netting:*** Seeks to harmonise procedures on insolvency by providing that orders entered into settlement systems prior to the opening of insolvency proceedings are binding on a third party, including netting provisions.	Securities Law Directive currently under consultation (available here) originally expected in Q3 2013.
	Article 5	***Finality:*** States that from the moment defined by the rules of a settlement system an order is irrevocable and final.	
	Articles 7, 8	***Insolvency:*** Looks to prevent retroactive effect on rights and obligations arising from participation in a settlement system prior to declaration of insolvency, and states that the law governing the settlement system will determine the participant's rights in the system on his insolvency.	
	Article 9	***Collateral security rights:*** Establishes that the law of the Member State where a collateral securities right is legally recorded, on a register, account or centralised deposit system, will determine the right of a party to that collateral security.	

Primary Material	Relevant Provisions	Headlines	Looking ahead
European Commission Green Paper "Shadow Banking" and road map (**EC Green Paper**)		***Shadow banking entities:*** Increased focus on entities which raise funding with deposit-like characteristics, perform maturity and/or liquidity transformation, allow credit risk transfer and use direct or indirect leverage. Highlights the need to reduce opportunities for regulatory arbitrage between regulated sector and "shadow banking" activities. ***Banking interaction:*** Looks both to requirements for transactions concluded between banks and financial counterparties, and accounting requirements regarding consolidation and transparency. ***Insurance companies:*** Technical measures implementing Solvency II to provide for increased risk and capital management requirements ensuring that risks inherent in transacting in the shadow banking forum are limited. ***Rating agencies:*** Increased regulatory framework for rating agencies to reduce overreliance on external ratings, avoid pro-cyclical over-extension of credit, and increase accountability. ***Collection and exchange of transaction data:*** Joint FSB and IMF "Data Gaps Initiative" to collect data on banks of systemic importance and their sectoral interconnectedness to monitor shadow banking risks. EMIR and MiFID 2 to increase derivative, bonds and structured products markets transparency, and identify risks posed by high-frequency traders. The effectiveness of the central repository approach to collection of detailed transaction data to be monitored. ***Money market funds:*** A proposal for regulation applying to all European money market funds looks to strengthen quality and liquidity of asset portfolios and establish capital buffers to cover gaps in valuation associated with asset value fluctuation. ***Sector supervision:*** Requests that authorities ensure establishment of a suitable and comprehensive monitoring system capable of capturing shadow banking activities, to be collected and shared at European level.	

Primary Material	Relevant Provisions	Headlines	Looking ahead
Central Securities Depositary Regulation (**CSDR**) which is forthcoming	Recital (2)	***Central Securities Depositaries (CSD):*** CSDs operate securities settlement systems which are closely involved in the collateralisation of monetary policy operations as well as in the collateralisation process between credit institutions.	Proposals under consideration by European Parliament and Council – this summary is based on the latest compromise text available dated as of 23 September 2013.[1]
	Article 3(2)	***Book entry form:*** Transferable securities which are transferred following a financial collateral arrangement must be recorded in book-entry form in a CSD prior to settlement date unless already recorded.	
	Article 4(3)	***Enforcement:*** Member States' authorities responsible for the supervision of the collateral taker and the collateral provider must be competent for ensuring that Article 3(2) of CSDR is applied when the securities are transferred following a financial collateral arrangement.	
	Article 57(3) and (4)	***Credit and liquidity risks of ancillary services:*** Credit institutions designated by a CSD to provide banking types of ancillary services to the CSD or its participants, will be subject to prudential requirements in respect of the credit risks related to those services - including, for example, fully covering corresponding credit exposures to individual borrowers using collateral and other equivalent resources, and managing corresponding credit risk if collateral is used, in which case it will accept collateral with low credit, liquidity and market risk. Furthermore, such credit institutions must comply with prudential requirements for the liquidity of risks to services in respect of each securities settlement system - including, ensuring it has prearranged and highly reliable arrangements to liquidate collateral provided by a defaulting client in a timely manner.	

[1] http://register.consilium.europa.eu/pdf/en/13/st13/st13748.en13.pdf

Primary Material	Relevant Provisions	Headlines	Looking ahead
Financial Transaction Tax ("FTT") Directive (draft – still at proposal stage)		***FTT on collateral transactions:*** If the FTT were adopted in the form of the existing draft Directive, then the sale or purchase of collateral securities would be subject to FTT if any of the parties to the sale or purchase, or the securities which were the subject of it, were located in an EU Member State participating in the FTT. A pure pledge of collateral would not be subject to FTT, but there is uncertainty as to whether collateral movements involving the legal transfer of collateral, other than on a sale, would be caught.	EU Commission's February 2013 FTT proposal is still officially "on the table", but it is likely to be severely curtailed and the EU Commission is expected to release a revised proposal in the coming weeks or months. The FTT Directive was originally intended to come into force on 01 January 2014. However, the EU Commission's own website now implies a delay of at least 6 months and press reports suggest a significantly scaled back FTT could come into effect in 2015 at the earliest, if at all.

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8. Relevant URLs

Below is a choice of hyperlinks to allow the reader to access current informational sources.

BCBS/IOSCO Margin Requirements for non-centrally cleared derivatives, Final Release, Dated 2 September 2013: https://www.bis.org/publ/bcbs261.pdf

European Markets and Securities Authority: Guidelines on ETFs and other UCITS
http://www.esma.europa.eu/system/files/2012_832en_guidelines_on_etfs_and_other_ucits_issues.pdf

The Fire-Sales Problem and Securities Financing Transactions, Remarks by Jeremy C. Stein Member Board of Governors of the Federal Reserve System Federal Reserve Bank of New York Workshop on Fire Sales as a Driver of Systemic Risk in Triparty Repo and other Secured Funding Markets October 4, 2013:
http://www.federalreserve.gov/newsevents/speech/stein20131004a.pdf

The Basel Committee on the Global Financial System, CGFS Papers No 36, The role of margin requirements and haircuts in procyclicality: http://www.bis.org/publ/cgfs36.pdf

The Financial Stability Board, Policy Framework for Addressing Shadow Banking Risks in Securities Lending and Repos:
http://www.financialstabilityboard.org/publications/r_130829b.htm

Best Practice Documentation:
International Capital Markets Assoc., Regulatory Policy and Market Practice:
http://www.icmagroup.org/Regulatory-Policy-and-Market-Practice

ISDA Best Practices for Collateral Managers October 2013:
http://www2.isda.org/functional-areas/infrastructure-management/collateral/

ISMA ESLA Guide:
http://www.esma.europa.eu/system/files/ESMA_response_UCITS_ETFs_Sept_2011.pdf

Also, relating to Repo - How do repo parties ensure they have enough collateral:
http://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/short-term-markets/Repo-Markets/frequently-asked-questions-on-repo/20-how-do-repo-parties-ensure-they-have-enough-collateral/

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