Regulatory Uncleared OTC Margining

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What is Regulatory Uncleared OTC Margining?

- Regulatory Requirement for OTC Counterparties to exchange
    - Initial Margin
    - Variation Margin

  for bilateral OTC positions using prescriptive methodology and eligible collateral and collateral haircuts

- Phase-in started with large US broker/dealers Sep 1st 2016

- 2011 G20 Meeting Objective: reduce systemic risk and create level playing field for cleared and uncleared OTC

- Implementation: IOSCO, BIS, ISDA via Dodd Frank, EMIR.

Regulatory Initial Margin

- Initial Margin: Gap Risk Protection

- Implementation Options
  - Schedule based (i.e. Notional based – punitive!)
  - Risk based (ISDA SIMM ®- VaR based Model)

- Very constrained:
  - Posted Bilaterally (No bilateral netting)
  - Segregated
  - No Rehypothication
  - No netting across asset classes

Initial Margin – ISDA SIMM ® Methodology

- ISDA Defined Var/CoVar methodology based on trade sensitivities (delta, gamma, vega)

- 99% Confidence limit of 10-Day MPOR

- Defined Hierarchy / Product Types for define scope. Netting only within asset class (no diversification effect beyond asset class). Hybrid products to be classified based on primary risk driver (see SA-CCR)

- Model Governance: Unit Tests; Backtesting

Variation Margin

- VM already common practice and highly standardised (low thresholds, low MTA, currency silos)

- Regulatory VM
  - 2-way Cash
  - MTA US$ 500K
  - Zero Threshold
  - Daily Margining

- Considerable re-papering effort for potentially large number of counterparties (renegotiate CSAs or sign new regulatory CSAs?)

Industry Standardisation – Dispute Reduction

- Project Blazer
  - ArcadiaSoft / TriOptioma
  - Daily Industry Reconciliation of Sensitivities and IM

- ICE Crowdsourcing Utility
  - Comparison of sensitivities
  - Consensus on risk definition and standardisation

- ISDA SIMM already standardisation compared to original (pre-SIMM) model which allowed firm specific IM calculations

Implementation Phase-In

- Sep 1st 2016 – Initial Margin
  - New Trades / Material Amendments
  - US Counterparties of ≥ US$ 3 Trn Exposure
  - Uncleared Swaps and Security based Swaps – Excluding Physically settled FX Fwds and equity options

- Feb 2017 (?) – Initial Margin
  - Europe putting live US regulation (equivalent)

- March 2017 - Variation Margin new contracts

- Phase-In into Sep 2020

Implementation Challenges

- Significant cross-organisation effort to standardise risk and trade representation
- Timeliness of risk calculation
- Banks traditionally externalised PV for VM but not risk calculation
- Operational Readiness – Collateral Disputes due to complexity of calculation

Collateral Eligibility and Haircuts

Asset class	Haircut (% of market value)
Cash in same currency	0
High-quality government and central bank securities: residual maturity less than one year	0.5
High-quality government and central bank securities: residual maturity between one and five years	2
High-quality government and central bank securities: residual maturity greater than five years	4
High-quality corporate\covered bonds: residual maturity less than one year	1
High-quality corporate\covered bonds: residual maturity greater than one year and less than five years	4
High-quality corporate\covered bonds: residual maturity greater than five years	8
Equities included in major stock indices	15
Gold	15
Additional (additive) haircut on asset in which the currency of the derivatives obligation differs from that of the collateral asset	8

Source: BIS

Funding Implications

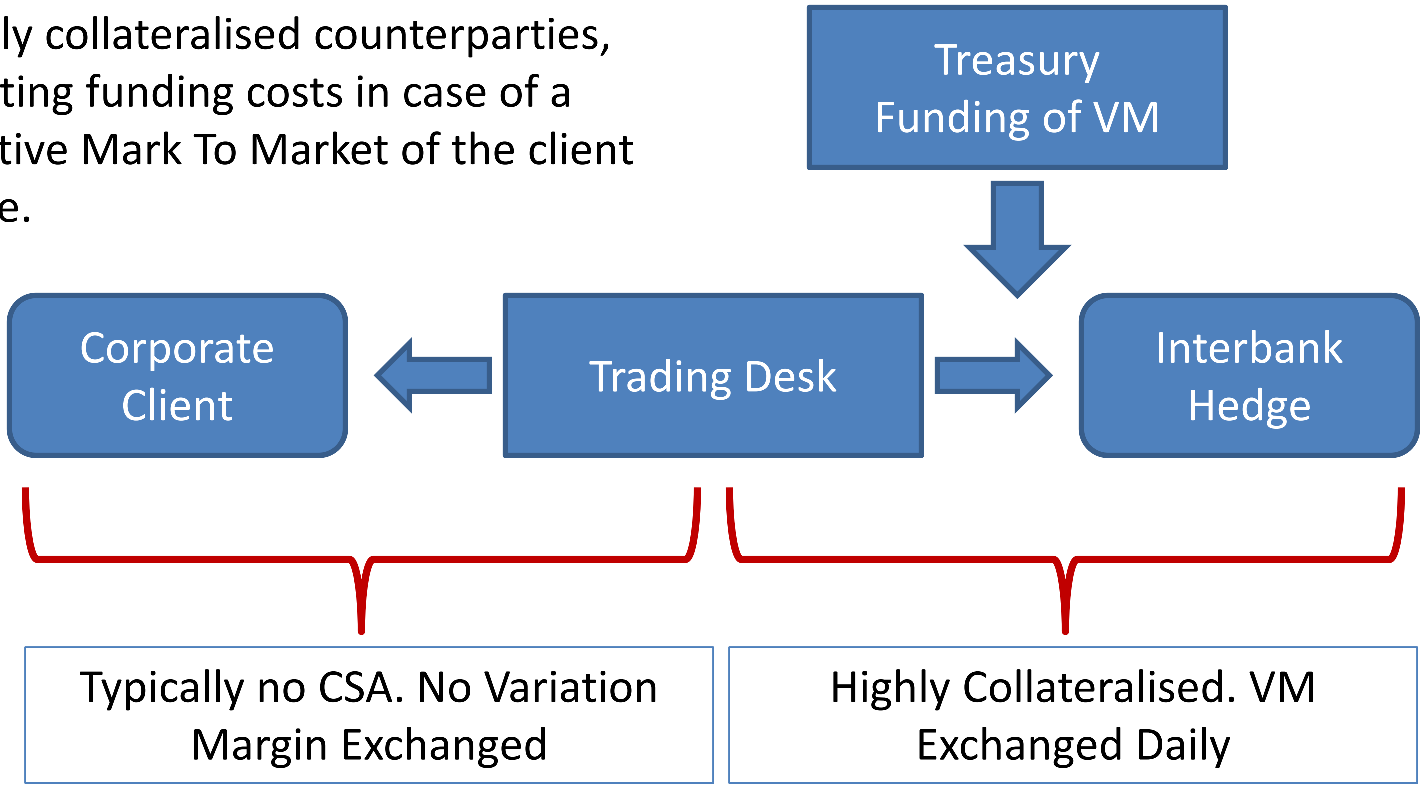
- Initial Margin Segregation leading to different dynamics compared to Variation Margin – Research ongoing (see Gregory, Albanese, Hull and White)

- Implicit wealth transfer of creditor seniority from bondholders and shareholders to derivatives counterparties

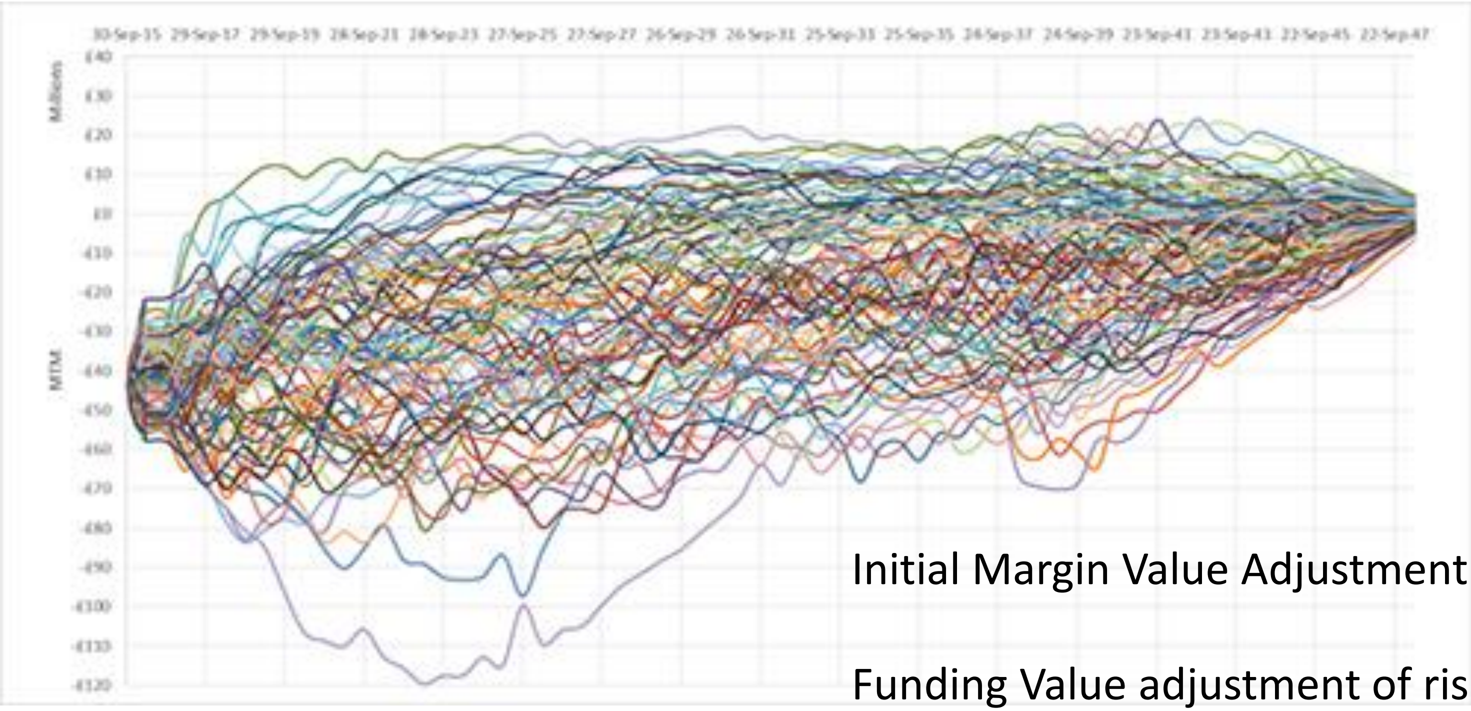
- Complexities of IM Funding cost calculation:
  - Counterparty Netting Set (Position) vs. Bank 'Funding Set'
  - Complexity of IM future exposure estimate
  - Funding curve adjustment for Collateral Complexity – collateral cost but also collateral availability

Funding Value Adjustment – Variation Margin

A trading desk facing an uncollateralised client may hedge the position against highly collateralised counterparties, creating funding costs in case of a positive Mark To Market of the client trade.



Funding Value Adjustment – Initial Margin (“MVA”)



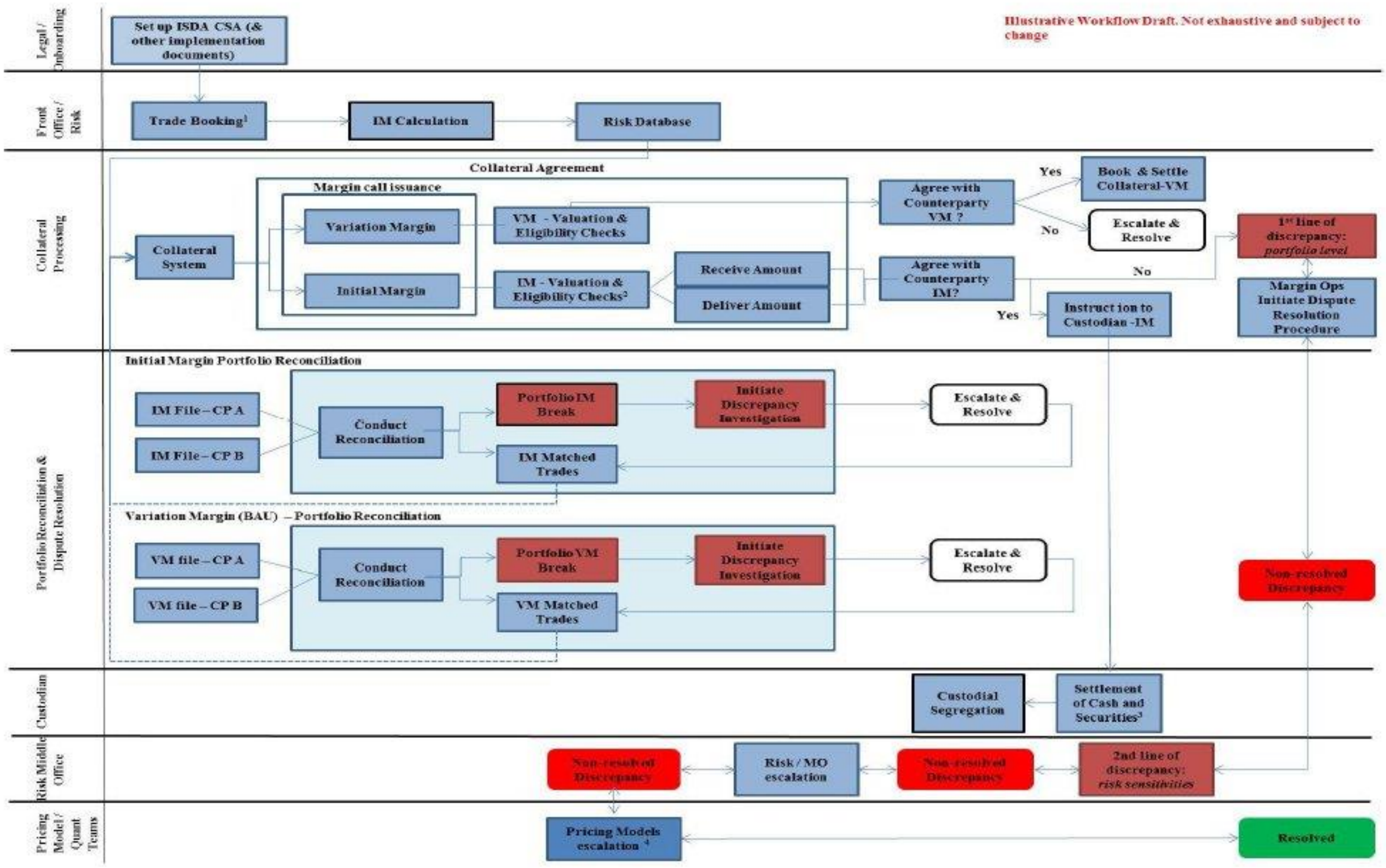
Source: http://www.centrusadvisors.com/wp-content/uploads/2016/07/image021.jpg

Initial Margin Value Adjustment -

Funding Value adjustment of risk based Initial Margin – VaR calculation for each Forward PV in Netting Set.

- *Computationally feasible?*

Initial Margin Implementation



Sources: ISDA, Minimum Considerations for Uncleared Margin Future State Workflow, March 2015

Summary

- Uncleared OTC Margining, particularly IM has a significant effect in market structure
- The impact is yet to be truly felt due to phase-in (new trades, top counterparties) just started
- FVA is becoming standard (albeit still debated), MVA models developing
- Implementation is data and operational intensive