Are CCPs Increasing Risk?

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The evolving OTC landscape

- Different and incomplete regulations in US, EU, UK and Asia
- Swap Execution Facilities rolling out in the US
- Mandatory CCP clearing and margin of all "standardised" OTC derivatives – with exemptions for FX, sovereigns and "hedgers"
- Daily valuations of OTC derivative portfolios
- Daily valuations of margin collateral
- Reciprocal initial margin for all swaps dealers and unilateral initial margin for end users
- CCP variation margin must be in the currency of the swap
- Basel III Credit Valuation Adjustments (CVAs) and IOSCO recommendation of higher initial margin on uncleared OTC exposures
- Standardised reference data implementation (Legal Entity Identifiers and CICIs in the US)

What does a CCP change?

- CCP rules rather than bilateral contract govern obligations
  - CCP rules will supersede many terms of bilateral contracts
  - No flexibility or forbearance under CCP rules
  - Strict time limits for meeting margin payments
- CCP credit risk instead of bilateral counterparty credit risk
  - CCP interposed as counterparty on cleared trades
- Initial margin to a CCP pre-funds portfolio liquidation costs
- Variation margin through a CCP zeros out market risk daily
  - Variation margin equals move in price since last variation margin call
  - Pass through from out-of-the-money participants to in-the-money participants
- Because only large dealers will participate in CCPs, everyone else takes risk on their clearing agents

Central clearing outlook

- Current clearing of OTC markets
  – 50 per cent of $400 trillion interest rate swaps
  – 20-30 per cent of $2.5 trillion commodity derivatives
  – 10 per cent of $30 trillion credit default swaps
- Target model for CCP clearing
  – 70 per cent of OTC derivatives should be cleared in CCPs
  – FX, sovereigns and some corporates exempt
  – Punitive margin and capital treatment of uncleared OTC derivatives exposures
- Competing CCPs
  – More than 20 global, sector and regional CCPs planned
  – Cross-margining introduces its own risks between CCPs
  – Risk of "race to the bottom" spurring common standards

Limits to CCP scope

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Suitability for mandatory central clearing is likely to depend on product and process standardisation, but also on market liquidity. Liquidity is an important constraint and may require central counterparties (CCPs) to modify risk management models.

Che Sidanius and Anne Wetherilt, *Thoughts on determining central clearing eligibility of OTC derivatives*, Bank of England, March 2012

Overview of the main risks

RISKS	DIRECTION OF CHANGE
CREDIT RISK	LOWER – initial margin covers credit risk on derivatives portfolios, but still uncertainty about clearing, custody and loss sharing credit exposures
VALUATION RISK	HIGHER – risk of mispricing as OTC markets are less price transparent, highly concentrated and more volatile under stress
LIQUIDITY RISK	HIGHER - more demand for limited supply of safe assets and lower velocity of re-use
OPERATIONAL RISKS	HIGHER – huge workflow challenge to move to CCPs and CSAs, especially for Buy Side
CASH, CUSTODY AND CLEARING RISKS	HIGHER – issues include Segregation, Portability, Concentration, Default Guarantee Fund waterfall, and domestic Resolution regimes
SYSTEMIC RISKS	HIGHER – lower systemic liquidity , volatility as credit markets normalise, high concentration and correlation risks, unclear resolution processes

Credit implications

- New regulations on mandatory margin effectively outlaw credit between derivatives counterparties
- Implementation is retroactive, throwing over many bank, dealer, asset manager and corporate business plans that relied on clean credit, credit thresholds and minimum transfer amounts as terms of portfolios supporting business and investment strategies
- Value of uncollateralised OTC derivatives approximately $2 trillion – implying a huge margin call for end users by end-2012

Netting and Credit Impact

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- Close out netting in bilateral default is 100 per cent
- Netting efficiency of CCPs is inferior to bilateral netting:
  - Fragmented clearing among multiple CCPs
  - Uncleared and exempt OTC derivatives net separately
- Credit effects of fragmentation unpredictable - posting variation margin through CCPs while in the money on a residual bilateral portfolio could ***increase*** exposure
- Exemptions undermine set-offs and create asymmetric funding burdens - *Risk*'s Duncan Wood estimates the sovereign exemption creates $150 billion funding mismatch for dealers, rising as interest rates normalise
- Clearing, custody and loss sharing on default, create contingent credit risks that are difficult to measure, monitor or control

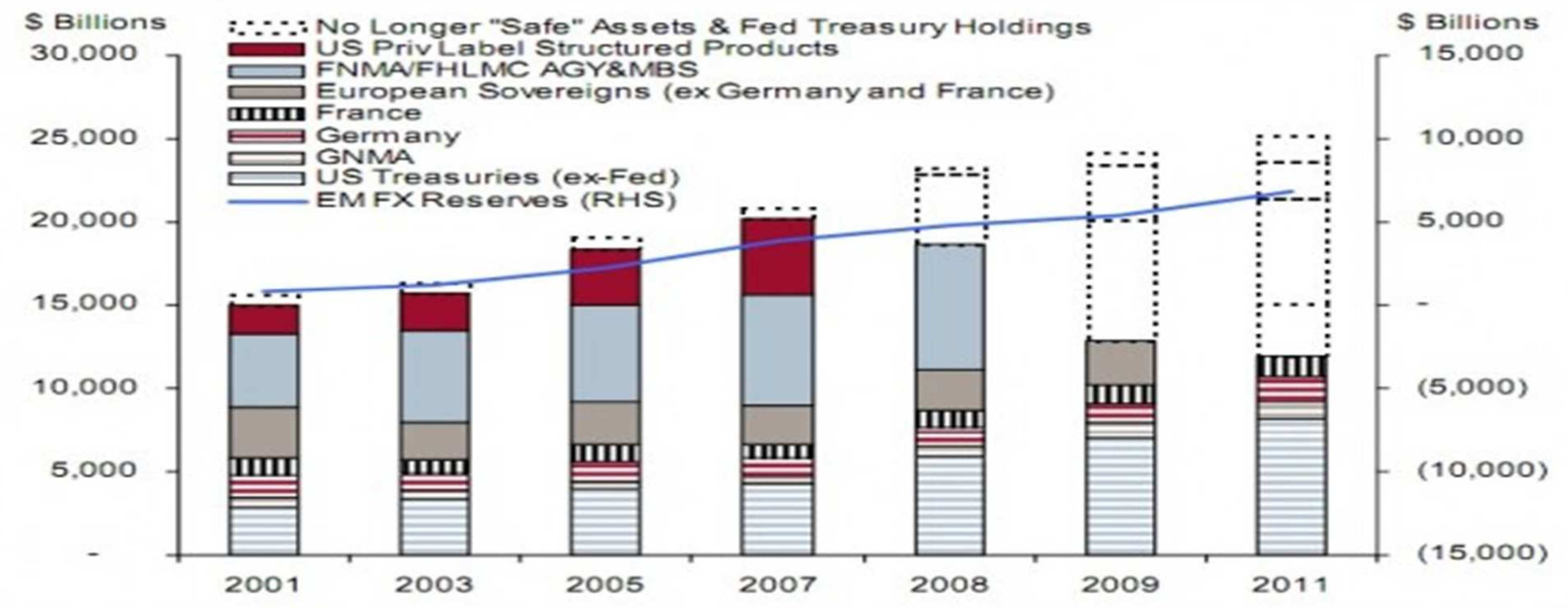
Liquidity Risk

- CCPs do not provide forbearance on margin calls, so create sudden, inflexible liquidity demands
  - Initial margin rises with market volatility, exacerbating the liquidity impact of stress conditions
  - Variation margin calls stress cash management, requiring higher standing reserves or credit facilities
- Safe assets less plentiful, and more in demand for capital, secured liquidity facilities and margin
- Bank balance sheets more heavily encumbered than pre-crisis, implying greater vulnerability to liquidity shocks
- Collateral transformation services will be costly and complex, creating their own set of risks

Safe Asset Outlook

- CCPs increase demand for safe assets at a time when there are fewer quality assets available globally
- Immobilisation reduces collateral asset velocity

Exhibit 174: Shrinking universe of "safe" assets in the primary reserve currencies (USD and EUR)



Source: Federal Reserve, Haver Analytics®, Credit Suisse

Collateral Shock?

- IMF Financial Stability Report projects a global shortage of safe assets, with higher costs for safety
  - CCP initial margin and guarantee fund must be safe assets
  - CCPs must immobilise safe assets, constraining velocity
- BIS paper by Heller and Vause suggests G14 dealers will require additional $100-200 billion initial margin
- IMF paper by Manmohan Singh suggests total global initial margin including end users could be $2 trillion
- Rivast's David Murphy warns the Basel III CVA treatment for uncleared OTC derivatives (sovereigns and corporates) will cause pro-cyclical capital stress if credit spreads widen
- Credit Suisse: ***"Less debt, lower value, higher haircuts, and reduced collateral velocity: in our view, this is an ongoing and significant monetary shock."***

Valuation Risk (mispricing)

- Exchanges provide widely accepted, transparent price discovery and liquid markets on fungible, standardised contracts
- Many OTC derivatives lack standardised terms, price transparency and reliable market liquidity
- CCPs will have discretion over valuation methods
  - All values are theoretical value of future payments
  - Variation margin will depend on position pricing
- Close-out on exchange traded markets is priced same day with market participants, but close-out pricing in OTC markets is slower, less predictable

OTC Derivatives Price Changes

- OTC derivatives benefitting from more standard pricing venues and better price discovery
- But market liquidity and volumes are falling
- OTC markets are highly concentrated - 90 per cent of transactions among the top 5 dealers
- Models for pricing OTC derivatives are changing quickly, as dealers discount for cash collateral and add costs for projected CVA
- Lifecycle costs of margin/capital need to be integrated into front office value propositions in evaluating trade opportunities

Operational Risks

- Diverse CCP timelines
  - CCP operational timelines will vary for each CCP
  - Daily valuation and margin is a huge shift from periodic (monthly or weekly) portfolio valuations at many end users
  - Multiple daily process timelines more demanding
- New systems being built and rolled out globally increase complexity and dependencies
  - Linkages to trade execution and reporting platforms
  - CCP workflows with different formats and processing requirements
  - Reciprocal and unilateral CSA margin operations

Operational Workflow

- Hundreds of thousands of ISDA Master Agreements will have to be renegotiated
  - Trade registration addendum
  - Mandatory CSA for uncleared trades
  - Clearing addendum
  - CCP-Platform documentation
- Front office, middle office and back office workflow needs considerable adaptation
  - Trade pricing may include clearing, CVA and margin costs
  - Trade registration and reporting compliance
  - Reconciliations of CCP and CSA margin calls and margin movements

Cash, Custody and Clearing

- Transparency and Reporting
  - Treasury needs to anticipate and position for margin calls
  - More actions need to be instructed and confirmed
  - More and higher fees from different CCPs and counterparty need to be integrated into trade profitability/value calculation
- Reconciliation
  - Multicurrency flows of cash variation margin
  - Multiple positions from CCPs and bilateral CSAs must be aggregated for overall counterparty credit position
  - Fees will be complex and likely more burdensome
- Asset tracking
  - Collateral asset and liability management
  - Collateral transformation
  - Segregation and re-use mandates

Segregation Models

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- Different segregation models among CCPs
  - Pooled client margin accounts
  - Legally Segregated Operationally Comingled (LSOC)
  - Full client account level segregation
- Portability depends on clear segregation rules that quickly determine client claims to initial margin assets and provide control over those assets
- Uncertainty about segregation leads to increased instability when a default occurs as contagion effects are unknowable

Resolution Risks

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- Portability
  - Portability required by CPSS-IOSCO principles
  - Not all insolvency regimes and/or clearing operations currently support portability
- Default Waterfalls – tier draws on margin, default guarantee fund, capital and contributions
- Claims on clearing banks and asset custodians
  - 2nd tier dealers and end users exposed to custody and credit risks on clearing agents
  - CCPs may use clearing members for cash or custody
- Local resolution regimes critical to claims

Systemic Risks

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- **"Moving only some 'standard' or 'eligible' contracts to CCPs will not reduce the systemic risk within the [large complex financial institutions]."**

  M. Singh, *Collateral, Netting and Systemic Risk in the OTC Derivatives Markets*, IMF Working Paper 10/99
- Fragmented portfolios among CCPs and CSAs could make projecting the impact of a sudden price shock or credit event more difficult
- CCP and daily CSA margin will have pro-cyclical effects on liquidity, exacerbating cash demand and asset immobilisation under stress
- Increased concentration of custody and clearing at top tier banks
  - raises concentration risk, systemic effects, and moral hazard
  - information asymmetries increase risk of unfair market practices

Do CCPs increase risk?

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