Collateral Management

Agenda

- Collateral Management Fundamentals
- Pros and Cons of Holding Collateral
- Types of Collateral
- Documentation
- Credit Risk
- Centralized Clearing
- Clearing House Margin Calls

Collateral Management Fundamentals

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Collateral Management Fundamentals

Collateral	Asset pledged to one party to mitigate counterparty credit risk with another party
Purpose	Mitigates credit risk is the counterparty to a trade defaults on their obligations
Collateral Management	The process through which credit exposures are calculated and collateral calls are made and followed up.

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Transactions Involving Collateral

Loans

Derivatives

- OTC: Arrangements directly between the counterparties
- Listed: Rules determined by the Clearing House

Securities Financing Transactions

- Repos
- Stock Borrowing
- Margin Lending

Pros and Cons of Holding Collateral

Pros and Cons of Holding Collateral

Pros	Cons
• Reduced credit risk • Increased competitiveness • Reduction in regulatory capital • Access to higher risk trades	• Operationally complex • Legal risk – inability to 'perfect a claim' • Potentially unreliable exposure calculations

Types of Collateral

Types of Collateral

There is a wide variety of different assets that could be lodged with a counterparty as collateral

Standard forms of collateral	Alternative forms of collateral
• Cash • G10 Government Bonds	• Mortgage Backed Securities (MBS) • Corporate Bonds • Letters of Credit • Equity

Types of Collateral

Collateral Type	Amount received (2014 USD billions)
Cash	767.6
Government Securities	134.0
MBS	18.7
Corporate & Other Non Government Bonds	29.4
Letters of Credit	4.2
Equities	28.9
Other	19.6
Total	1,002.0

Source: ISDA Margin Survey 2015

Documentation

Documentation

- Legal documentation is required to determine the requirements for collateral to be pledged
- Documentation is relied on in the event of a dispute or bankruptcy of one party

ISDA Master Agreement	A document agreed between two parties on a bilateral basis which covers the standard terms in OTC derivative transaction (including responsibilities in the event of default and netting arrangements)
Credit Support Annex (CSA)	An element of an ISDA Master Agreement which defines key elements of collateral arrangements

Documentation – Credit Support Annex

Key elements defined within a CSA include:

Eligible Collateral	Exposure	Threshold	Minimum transfer amount	Frequency
The types of assets and currencies of assets that can be pledged as collateral	Explanation of how counterparty credit risk exposure is calculated for different derivative instruments	Mark-to-market value of derivative position above which collateral must be pledged	Defines the minimum amount of collateral that needs to be posted if threshold is breached	How often the need for collateral is recalculated

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Credit Risk

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Credit Risk

The risk of suffering a loss as a result of borrower or counterparty failing to meet their obligations

Expected Loss = Probability of default (PD) × Exposure at default (EAD) × Loss given default (LGD)

Reduced via holding of collateral

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Collateral Risks

Market Risk	Credit Risk	Liquidity Risk	Operational Risk
The value of the assets held as collateral could fall prior to default	Conditions causing default by counterparty could also lead to default or deterioration in creditworthiness of collateral	In stressed market conditions collateral may not be able to be sold to generate cash for a fair value	Systems or human error could be encountered regarding the quantification and collection of collateral

Mitigated though:
Haircuts: Market value of collateral must be greater than credit risk exposure mitigated by collateral
Limits to types of eligible collateral

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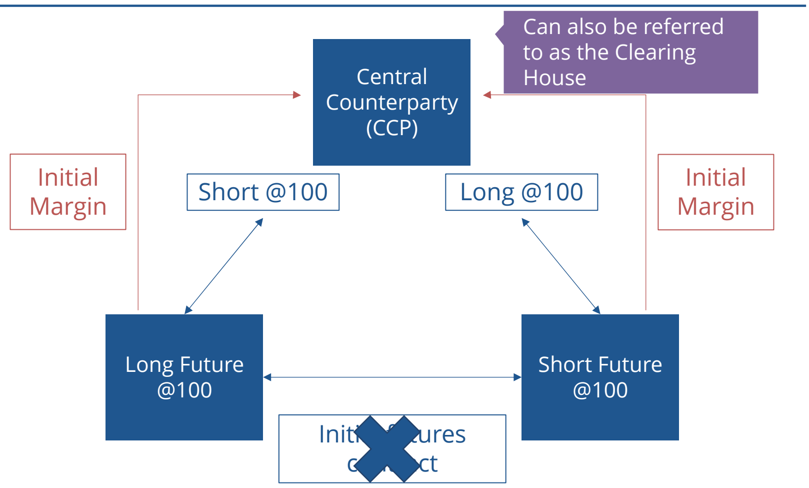
Centralized Clearing

Centralized Clearing



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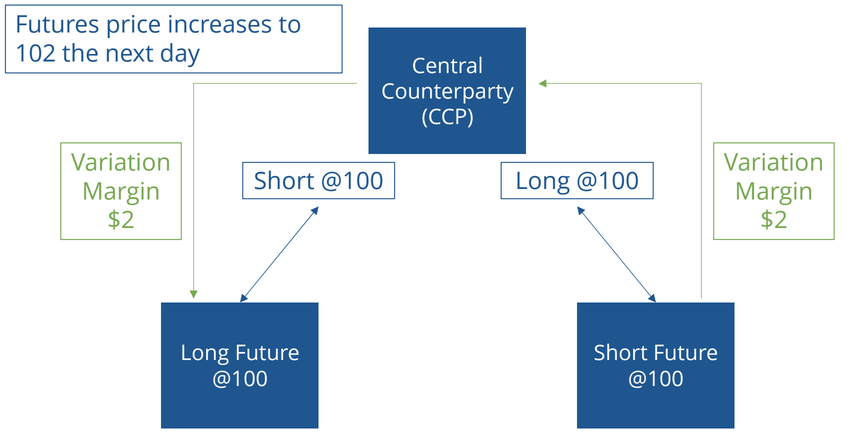
Centralized Clearing – Variation Margin



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Clearing House Margin Calls

Clearing House Margin Calls

There are two main approaches used by clearing houses regarding margin calls

Variation Margin

- If the value of the margin account falls below the initial margin amount, this must be topped up the next day
- Used by LCH

Maintenance Margin

- The margin account only needs to be topped up if it falls below the maintenance margin level, which is set below the initial margin level
- Used by CME

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