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Clearinghouses as Shock Absorbers in Financial Markets

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What are functions of a clearinghouse (CCP) in the Financial Market?

CCPs Eliminate Counterparty Risk

- The individual counterparty risk of a market participant is replaced with the higher creditworthiness of CCP

CCPs Reduce Systemic Risks

- CCPs reduce risks from domino-effects in a crisis situation by replacing complex bilateral relationships with high interconnectness („spiderweb“) with a 1:1 relationship to a CCP

CCPs Create Transparency

- CCPs perform a continuous and independent valuation of risk positions and create transparency of individual risk positions of market participants for regulators

CCPs Reduce Operational Costs

- CCPs perform a netting of trades and positions provide straight-through-processing of transactions.

By their design CCPs are shock absorbers in the financial markets with a primary focus on risk mitigation and control

How does the CCP ensure its superior creditworthiness?

- The CCP does not carry market risk, but always runs a balanced portfolio of long and short positions (in contrast to market participants)
- The CCP performs a mark-to-market valuation as well as calculating the expected worst case loss of a position
- The CCP ensures strict collateralization of exposures by market participants in order to be covered in a member default (margining)
- The CCP is protected through additional lines of defence mutually funded by its members (e.g. a guarantee fund)
- The CCP is subject to strict regulatory requirements (risk management, prudential requirements), e.g. subject to banking regulation in France and Germany, and also inflicts high standards on its clearing members.

The problem: How can orderly markets in a financial market shock be maintained?

In the financial crisis in 2008, exchanges and clearinghouses have played a key role to maintain orderly markets by being resilient to market shocks:

- Even during the most volatile periods in 2008 exchanges provided price discovery and clearinghouses mitigated counterparty concerns, while the interbank market ran into significant disarray.
- So, exchanges and clearinghouses are shock absorbers in the financial markets, they contribute to a functioning market mechanism. As a conclusion from the financial crisis their role is to be strenghtened (see G-20)

However, the Flash Crash on May 6th, 2010, has revealed that market fragmentation has become a major problem*:

- An algorithm to sell a significant volume in E-mini contracts caused a liquidity crisis in the underlying securities markets and lead to the biggest one-day point decline, 998.5 points, on an intraday basis in the Dow Jones Industrial Average.
- The crisis was worsened by the lack of coordinated trade interruptions and fragmentation of trading across multiple venues without a harmonized regulatory approach.

* See SEC/CFTC Report, Findings Regarding The Market Events on May, 6th.

The problem: How can orderly markets in a financial market shock be maintained?

So, each crisis has a distinct anatomy, but always leads to failures of the market mechanism. Examples over the past years reveal different causes and implications:

- SocGen Trade Incident (January 2008)
- Lehman Brothers Default (September 2008)
- Flash Crash (May 2010)
- European Sovereign Debt Crisis (May 2010)

To prevent herd behaviour and further acceleration in a financial market crisis, it is critical to ensure the efficient functioning of the market mechanism:

- Exchanges should stay liquid and provide efficient price discovery (avoid price shocks and liquidity crisis)
- Clearinghouses are to protect market integrity by guaranteeing trades and ensuring solvency to market participants both for exchange and OTC markets.

* Report by SEC/CFTC, Findings Regarding The Market Events on May, 6th.

How can shock absorbers in financial markets be strengthened?

- Exchanges and clearing houses have implemented a number of tools to cope and absorb financial shocks such as:
  - Circuit breakers and volatility interruptions
  - Real-time price and risk data
  - Position and risk limits

- Acting in concert in crisis situations across venues and across cash and derivatives is critical
  - Consistent regulatory approach with same requirements for exchanges and alternative venues
  - Market fragmentation has to be reduced to ensure efficient price discovery

- In particular, CCPs need to be crisis resilient and provide full transparency on risks on a real-time basis

How should CCPs be designed to best absorb market shocks?

For CCPs the focus has to be on three areas:

i. Risk Management

- CCPs need to follow a strict mark-to-market in risk management to avoid accumulation of risks and doubts about a CCP’s integrity and solvency
- This requires to intraday monitor price and position changes in margining constantly and requires to call for additional margins if risks increase. If margin calls cannot be met by a member, additional collateral is required or positions have to be reduced

ii. Collateral & Liquidity Management

- Clearinghouses should avoid pro-cyclical behaviour in collateral requirements and margin setting
- CCPs should maintain a sufficient liquidity buffer and use a sensible haircut approach

iii. Liquidation Procederes

- CCPs need to ensure that liquidation procederes do no cause market impact and protect customers of a defaulting intermediary
- This is especially critical for less liquid products such as OTC products

Eurex Clearing has implemented a number of tools to strengthen its risk protections in all three areas

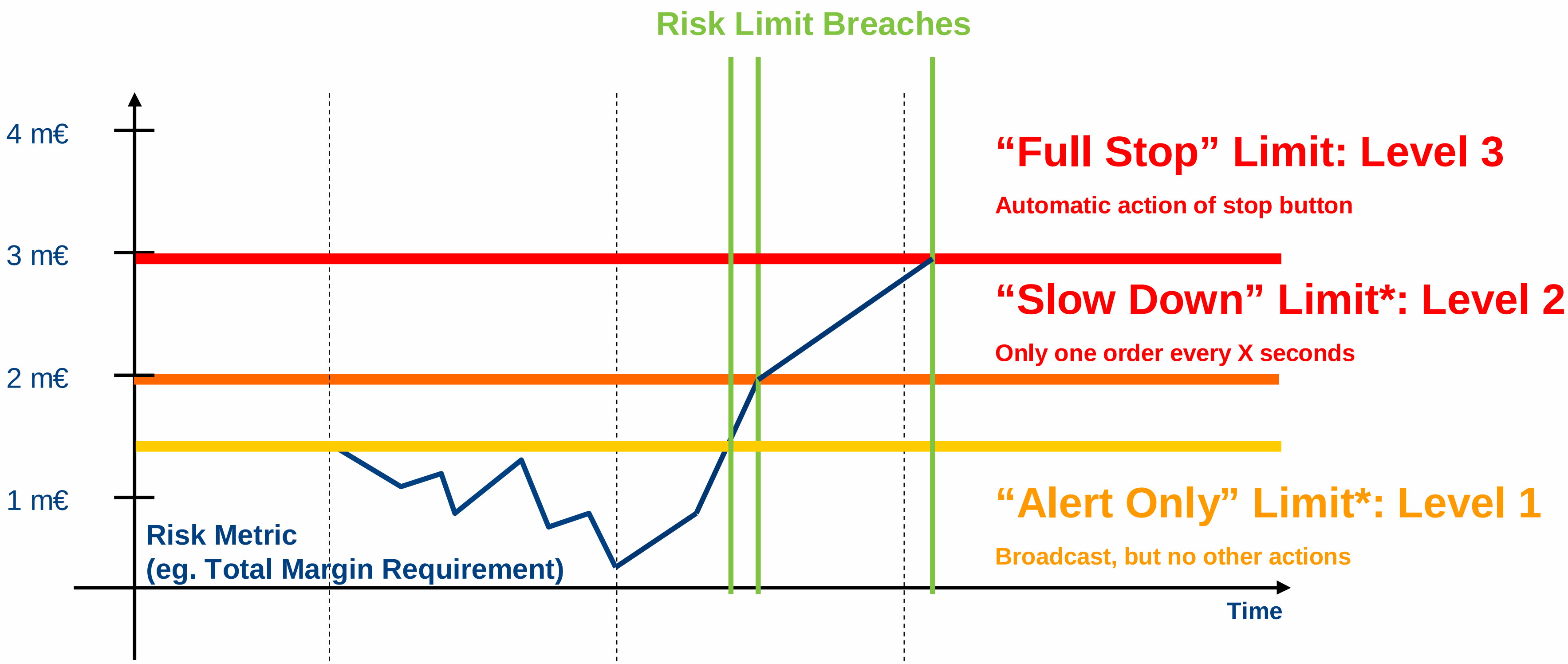
- Eurex Clearing calculates margins in real-time based on actual price and position data and provides this data also in real-time to its trading and clearing members.

- Eurex Clearing performs a continuous intraday margining to avoid accumulation of risks and posts an intraday margin call if defined limits are exceeded.

- Eurex Clearing offers a suite of advanced risk tools for its member such as a Stop Button that allows quick reaction of CMs in emergency situations to prevent any further risk and pre- and post trade risk limits that allow to limit the trading activities of market participants, traders or machines

- Eurex Clearing implements a client asset protection regime, that ensures full portability of clients in a default situation

Example: Pre-trade risk controls at Eurex Clearing provide for an innovative circuit breaker for risk protection



Pre-trade risk limits act like a “phased circuit breaker” for a participant’s risk and contribute to absorb shocks in financial markets.

* It is optional to also automatically clear the order book if the limit is breached.

Conclusions

- CCPs help to absorb financial market shocks: They prevent domino effects and help to ensure liquidity in crisis situations in both exchange and OTC markets

- Exchanges can contribute through their design to prevent price shocks: volatility interruptions, circuit breaker, risk protection limits, real-time information

- Market fragmentation is a risk to liquidity and a consistent regulatory approach is critical

- CCPs have to follow a mark-to-market approach – their integrity and liquidity is of paramount importance in a crisis

- Three areas are in focus for CCPs: Safe and real-time risk controls, sufficient liquidity buffer and non-interfering liquidation mechanisms

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