

# Central Counterparty Clearing

Federal Reserve Bank of New York  
2015 Payment System Policy and Oversight Course

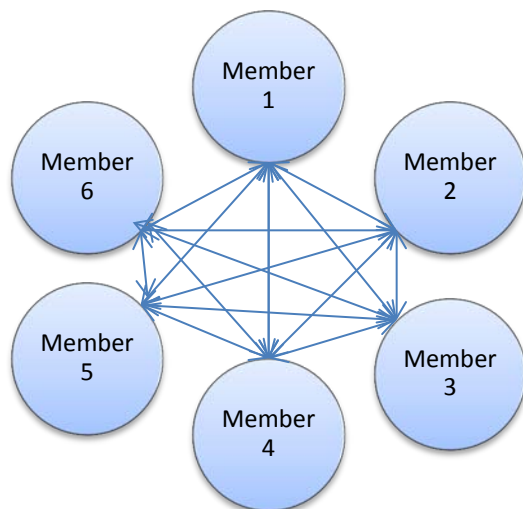
May 2015



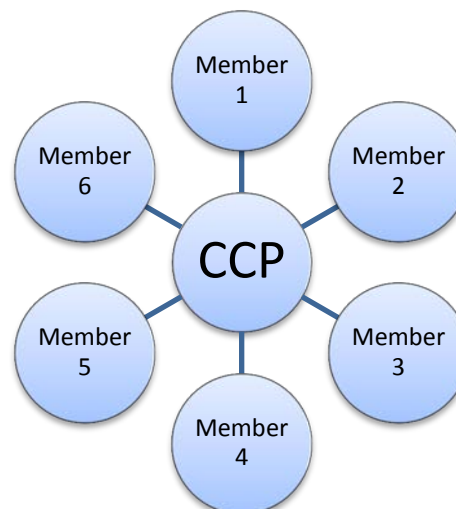
# What is a CCP?

- CCP stands for Central Counterparty. It
  - Act as seller to every buyer and buyer to every seller.
  - Insures clearing members against counterparty losses by taking on the positions of the defaulted member.
  - Nets down payment obligations across all the cleared contracts to one payment obligation to the CCP per member.
  - Takes in collateral to guarantee contractual performance.
  - Enables risk mutualization among its member through a guaranty fund/default fund.
- CCP is a key element of the post-trading process and an integral part of payment and settlement systems.

## BILATERAL TRADING

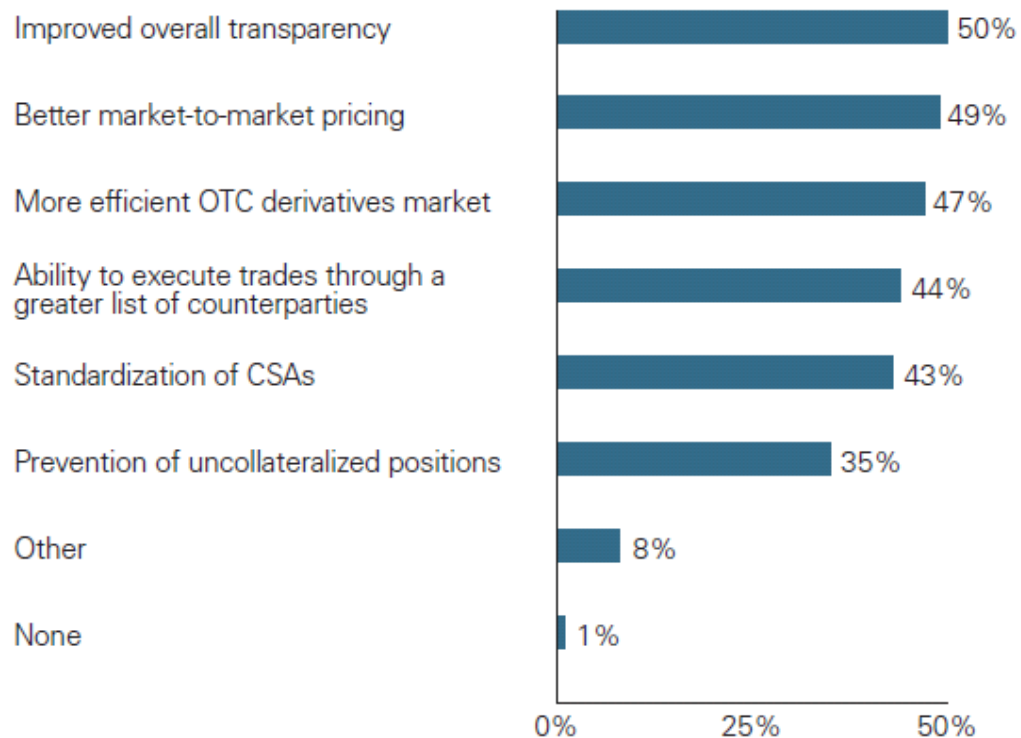


## CENTRAL CLEARING



# Benefits of a Central Counterparty

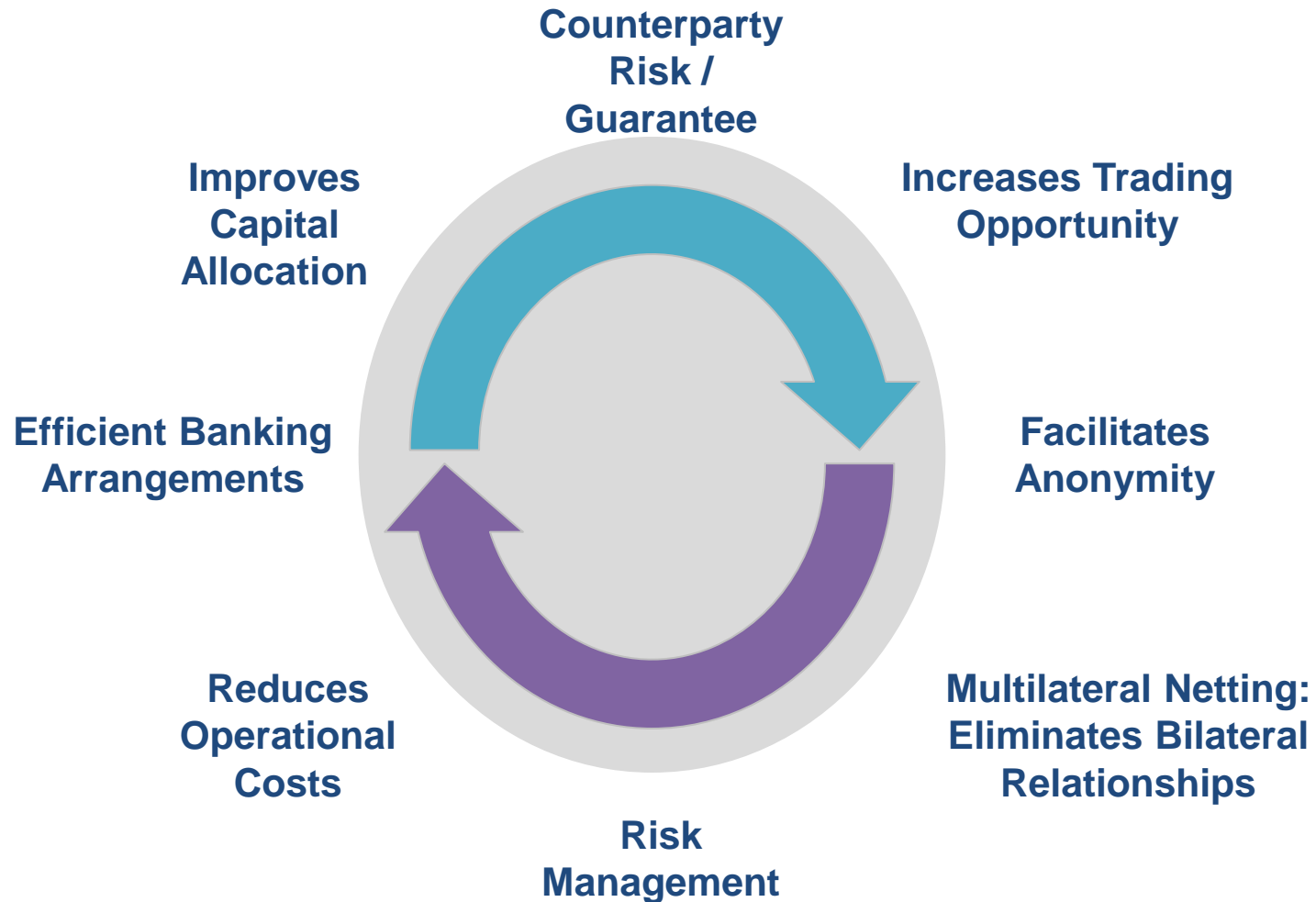
## Benefits of Clearing Beyond Counterparty Risk Reduction



Note: Based on 72 respondents in 2014.

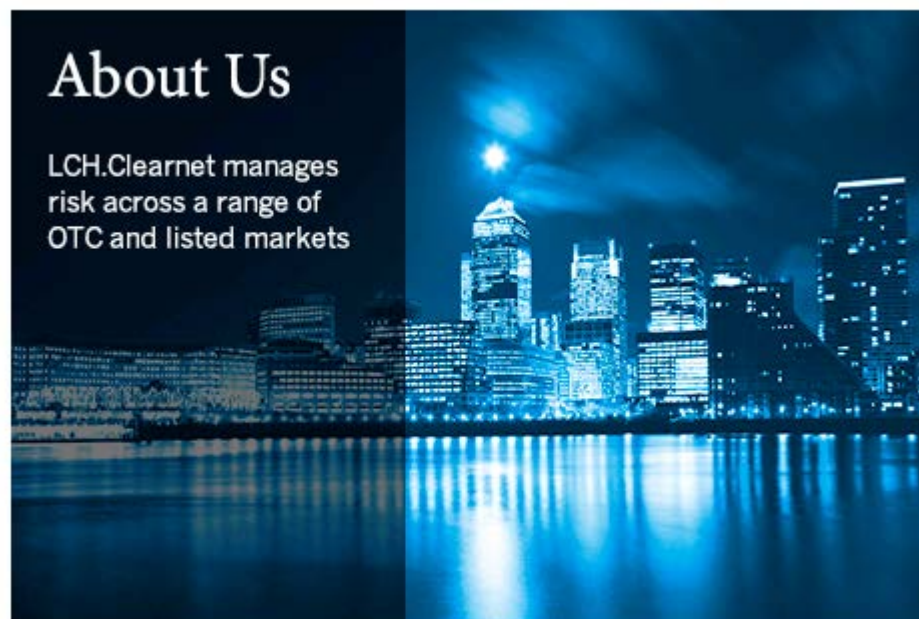
Source: Greenwich Associates 2014 Systemic Risk and the Impacts of Central Clearing Study

# Benefits of a Central Counterparty (cont.)

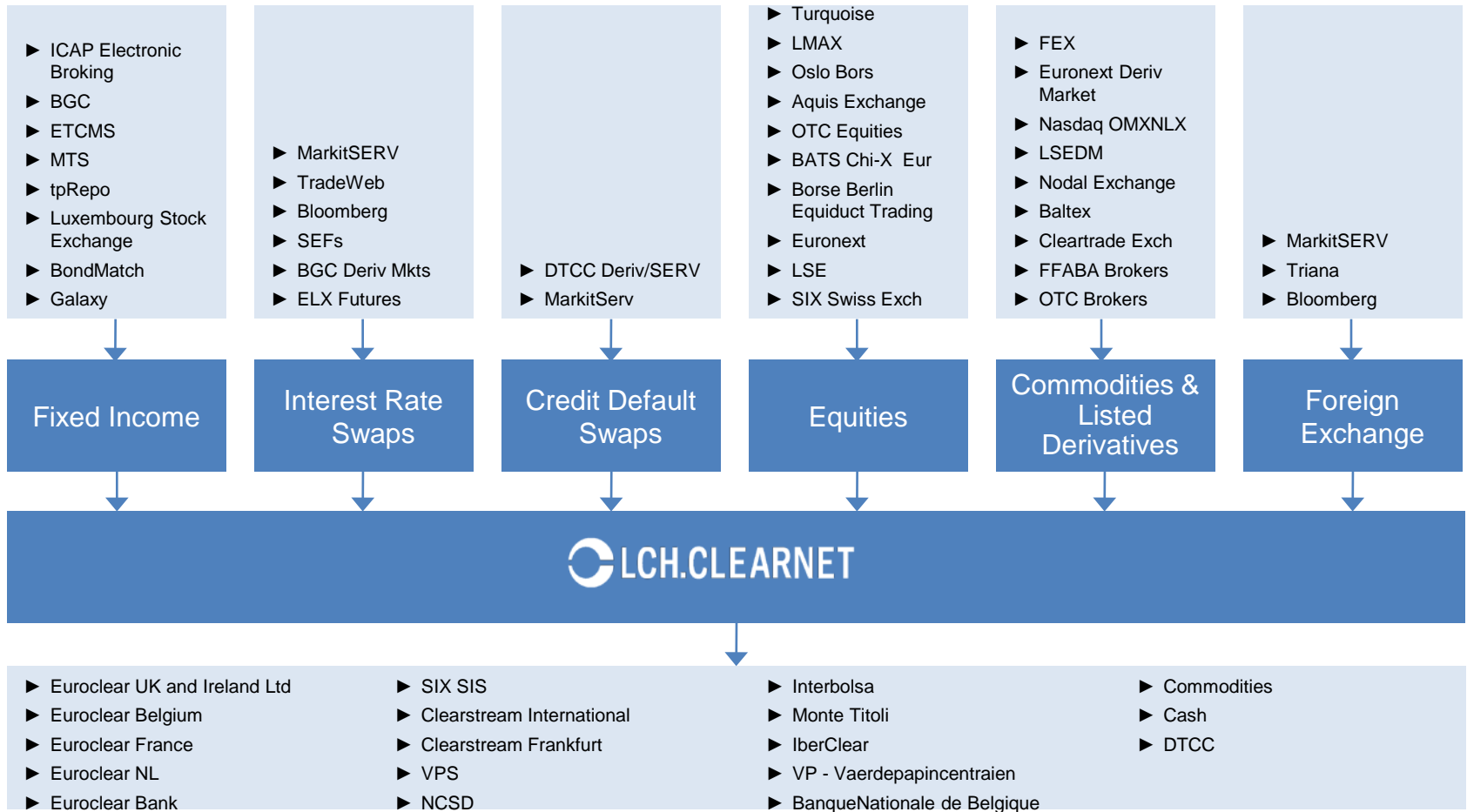


# LCH.Clearnet Group

- The world's leading multi-national clearing house.
- Serves major exchanges and platforms as well as a range of OTC markets.
- Provides the markets with exceptional levels of protection through its world-class risk management framework.
- Proven record of successfully managed defaults; the only Clearing House to have managed a significant OTC default - Lehman Brothers.
- Majority owned (c. 57%) by the London Stock Exchange with the remainder being owned by its clients and other exchanges.



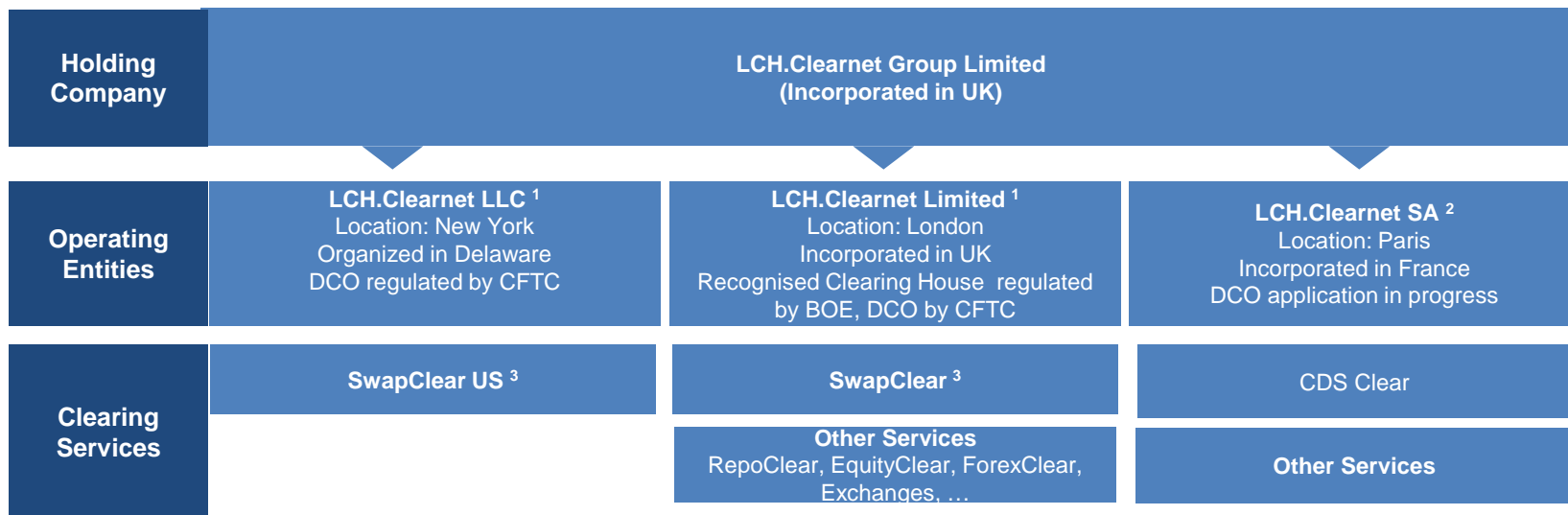
# Markets Served by LCH



*This diagram may not reflect markets that have recently been introduced. LCH.Clearnet may not clear all contracts on the markets listed.*

# LCH – Global Reach

- LCH.Clearnet Ltd is a regulated entity:
  - as Recognised Clearing House (RCH) by the Bank of England in the UK.
  - as Designated Clearing House (DCO) by the CFTC in the USA.
  - Licensed by ASIC to offer IRS clearing directly to Australian entities.
  - Recognised as a clearing agency by the Ontario Securities Commission (OSC).
  - LCH.Clearnet’s SwapClear services designated as systemically important by the Bank of Canada.
  
- LCH.Clearnet LLC is regulated as a DCO by CFTC in the USA and permitted to clear for Ontario-based clearing members by OSC.



<sup>1</sup> Regulated as a Derivatives Clearing Organization subject to CFTC rules & regulations

<sup>2</sup> Regulated as a Compagnie financiere by the Commission Bancaire (France)

<sup>3</sup> No current plans for interoperability between SwapClear US and SwapClear

# LCH – Global Membership





# LCH Risk Management and Default History

LCH.Clearnet's aims are to:

- Provide efficient and cost-effective services to its users.
- Have risk management policies and actions which protect the integrity of the cleared markets and the interests of participants.

→ **Mitigation and Management of Risk is central to what we do.**

A cornerstone of our risk management is how we manage a clearing member's default.

- Our default management framework guides our handling of defaults and it is regularly tested in internal fire drills.
- The rules on default management, including an outline of LCH's powers and obligations, are included in LCH's rulebooks that are public available on our website.

There have been seven defaults in LCH.Clearnet's history:

- Drexel Burnham Lambert (1990)
- Woodhouse, Drake and Carey (1991)
- Barings (1995)
- Griffin (1998)
- Lehman Brothers (2008)
- MF Global UK Ltd (2011)
- Cyprus Popular Bank Co Ltd (2013)

In all cases, the defaults were successfully managed without any knock-on impact on any of LCH.Clearnet's other clearing members or on its cleared markets.

# Default Management Principles

## Maintain ongoing performance of LCH.Clearnet obligations vis-à-vis all other non-defaulting clearing members

- LCH.Clearnet continue to meet its obligations, including those of the defaulter, such as meeting payment and delivery obligations (if any).

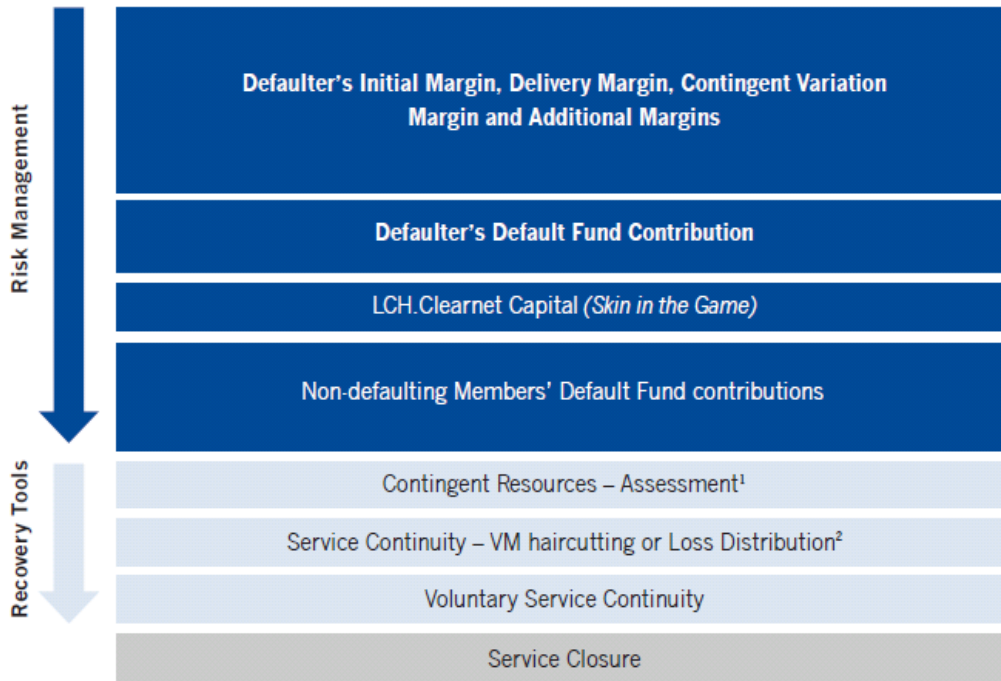
## Preserve LCH.Clearnet capital and default fund(s)

- LCH.Clearnet will seek to preserve the LCH “Skin-in-the-Game” capital and mutualized resources contributed by non-defaulting members to the default fund(s).

## Manage the transfer of all segregated client positions

- LCH.Clearnet will seek to facilitate the transfer of the defaulting member’s client positions and segregated collateral to other clearing members.

# LCH Default Waterfall



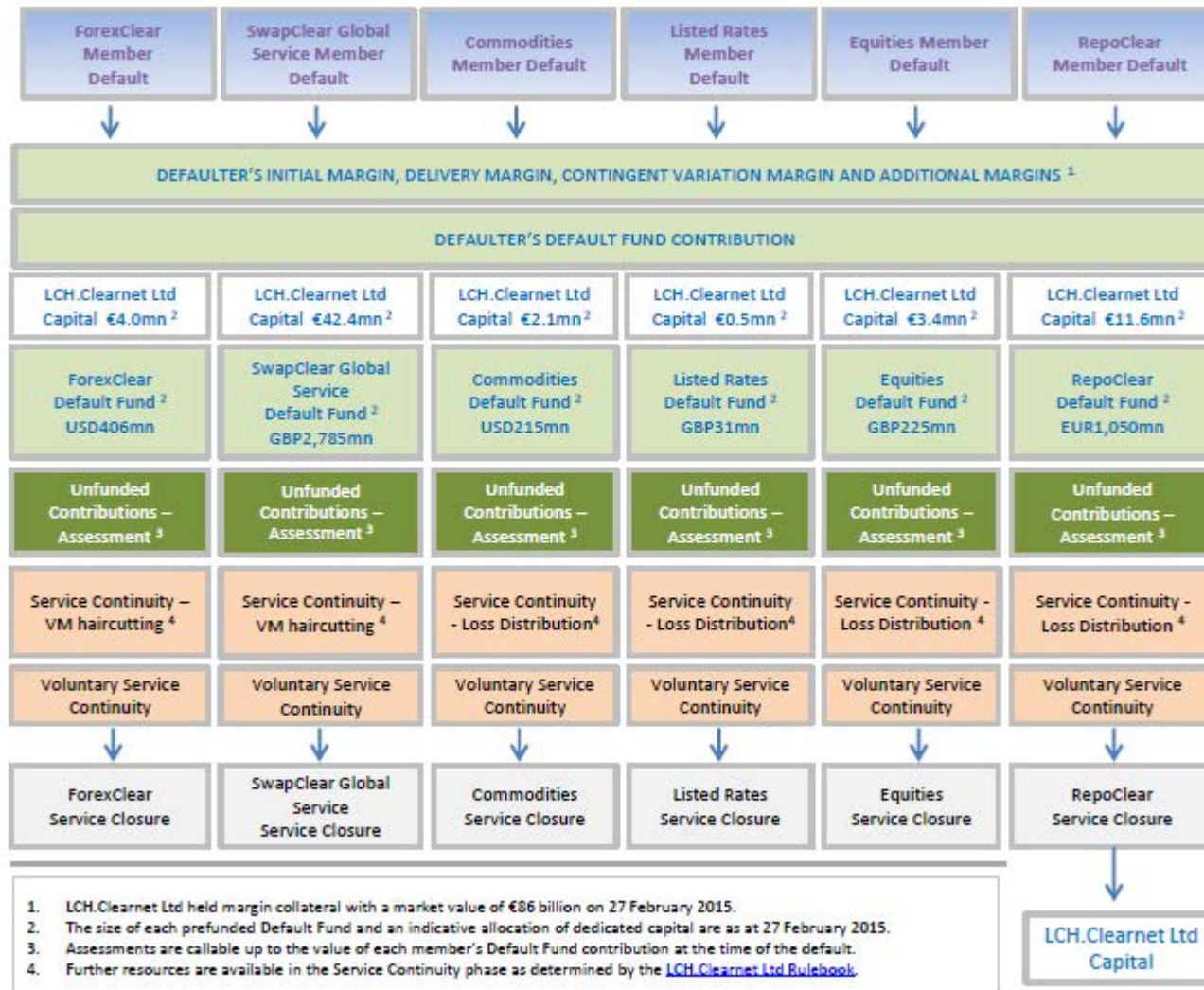
<sup>1</sup> Callable up to the value of each member's Default Fund contribution at the time of the default.

<sup>2</sup> The resources available in the service continuity phase are determined by the LCH.Clearnet Rulebooks.

- The LCH Default Waterfall stipulates a specific order of usage based on the “defaulter pays” principal.
- Defaulter’s financial resources will be used first, the CCP’s capital (skin in the game) next, followed by the non-defaulting members’ prefunded default fund contributions.
- Initial margins posted by non-defaulting members will never be used.

- Non-defaulting members will be assessed for further default fund contribution on if the total losses exceed the prefunded financial resources and the CCP’s capital.
- The loss attribution process will commence only if all the funded and unfunded contributions are completely exhausted.

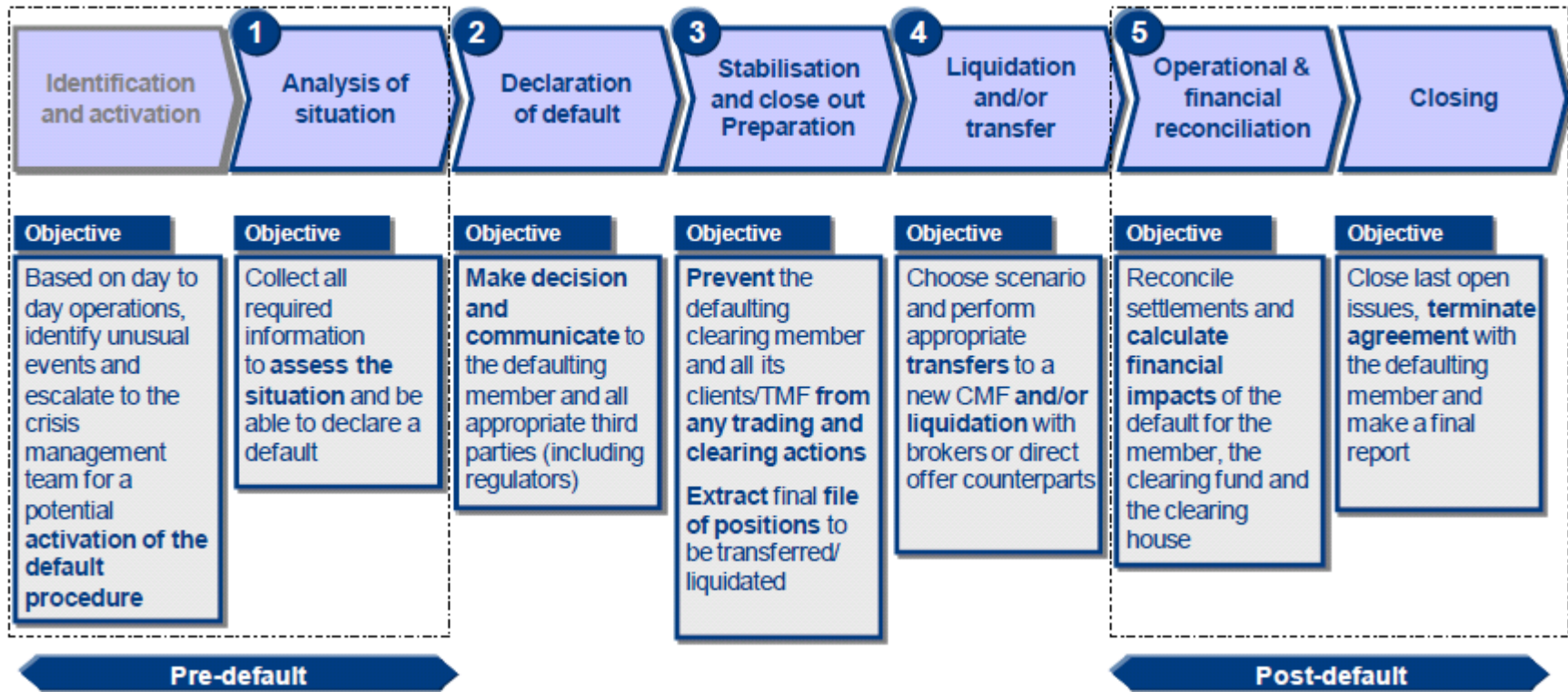
# LCH Default Funds



- All LCH default funds are fully prefunded and sized to Cover 2 factoring in in extreme but plausible market conditions
- Each default fund is calibrated monthly and tested daily to ensure Cover 2 compliance.
- Separate default funds for each asset class minimise the risk of contagion between asset classes.

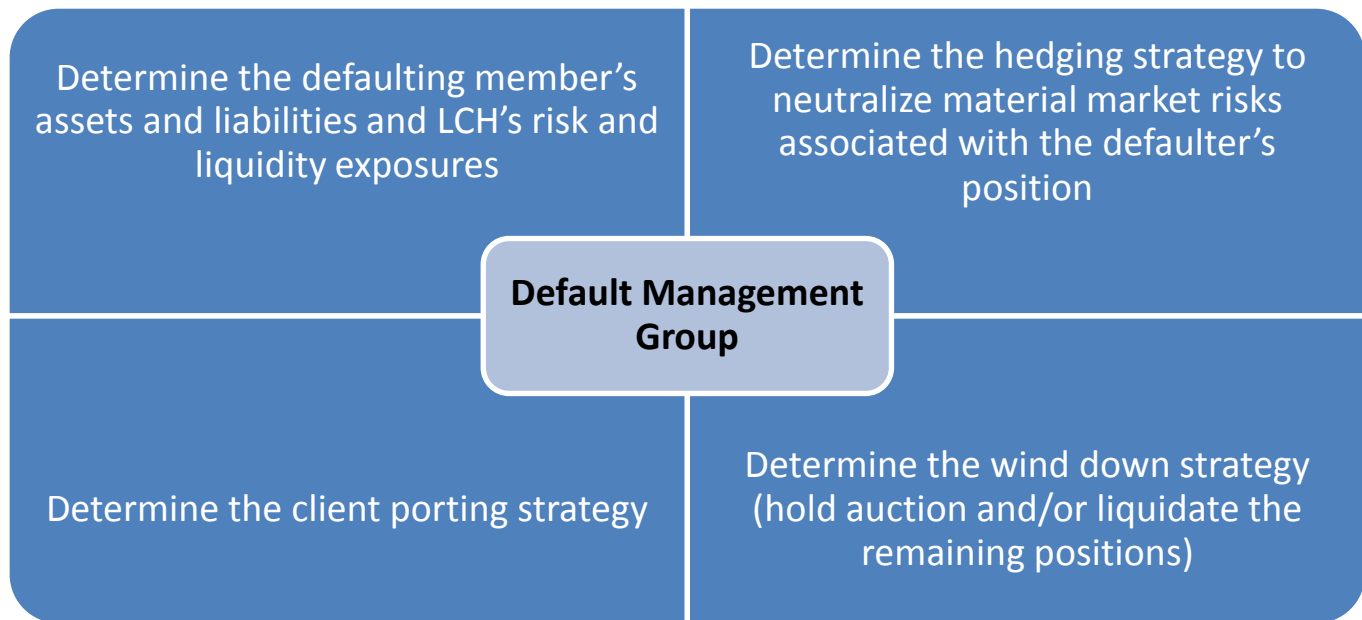
1. LCH.Clearnet Ltd held margin collateral with a market value of €86 billion on 27 February 2015.
2. The size of each prefunded Default Fund and an indicative allocation of dedicated capital are as at 27 February 2015.
3. Assessments are callable up to the value of each member's Default Fund contribution at the time of the default.
4. Further resources are available in the Service Continuity phase as determined by the [LCH.Clearnet Ltd Rulebook](#).

# Default Management Phases



# Default Management Group (DMG)

- DMGs are convened within the first few hours of the Default Notice being served and are responsible for the day-to-day management of the default process.
- Members of the DMG may include seconded trading representatives from clearing members in advisory roles.
- Example of activities conducted by a DMG:



# In sum...

## Key benefits of CCPs

- Reduction of counterparty credit risk.
- Stringent and consistent risk management.
- Risk reduction and collateral savings through netting.
- Additional safety buffer through risk mutualisation and CCP's own financial resources dedicated to central clearing.
- Fostered market transparency, e.g., through daily mark to marketing.

## However, CCPs are not without their own risks

- Systemic risk due to financial risk concentration → too-big-to-fail, "super-systemic"?
- Moral hazards, increase in risk taking.
- Monopoly concerns regarding access and efficiency.
- Others?

The screenshot shows a webpage from FT.com with the breadcrumb 'ft.com > markets > fitradingroom >'. The main heading is 'Clearing & Settlement'. Below the heading is a navigation bar with links: Home, UK, World, Companies, Markets, Global Economy, Lex, and Comme. A secondary navigation bar includes: fastFT, Alphaville, FTfm, Markets Data, Trading Room, Equities, Currencies, and Capital MK. The article is dated 'December 2, 2014 9:56 am' and has the title '‘Too big to fail’ worries reach clearing houses' by Philip Stafford. The text states: 'Clearing houses, which sit between two sides of financial trades, have become risk managers for global markets in the post 2007-crisis era. But they are having to defend their role in a growing debate over what would happen if one of them failed.' It also mentions operators such as LCH.Clearnet, Deutsche Börse's Eurex, and CME Group.

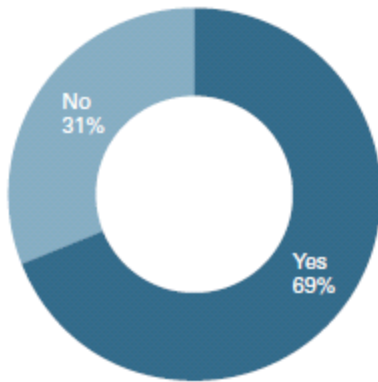
And since their own failure is very unlikely unless one or more systemic members failed, CCPs --- especially those clearing globally traded instruments --- can be thought of as super-systemic.

Paul Tucker, "Are Clearing Houses The New Central Banks?", Over-the-Counter Derivatives Symposium Chicago, 11 April 2014.

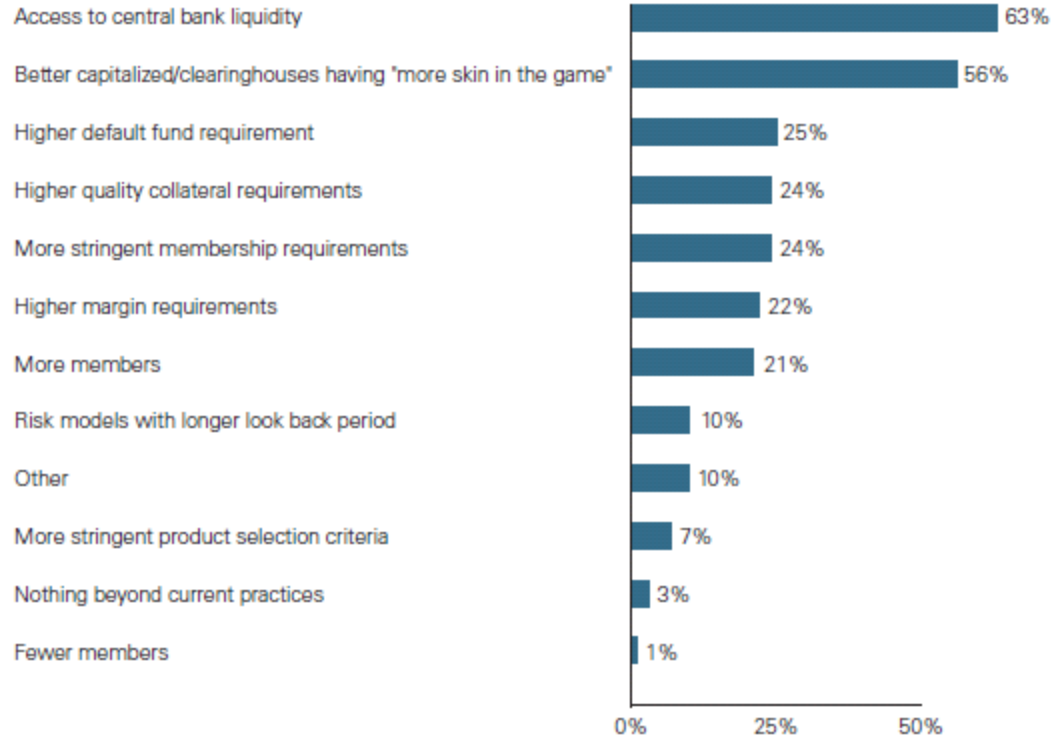
# Risks of a Clearinghouse Fail

## Financial Resources

Does the major clearinghouse currently have adequate financial resources to deal with a major multiple bank default?<sup>1</sup>



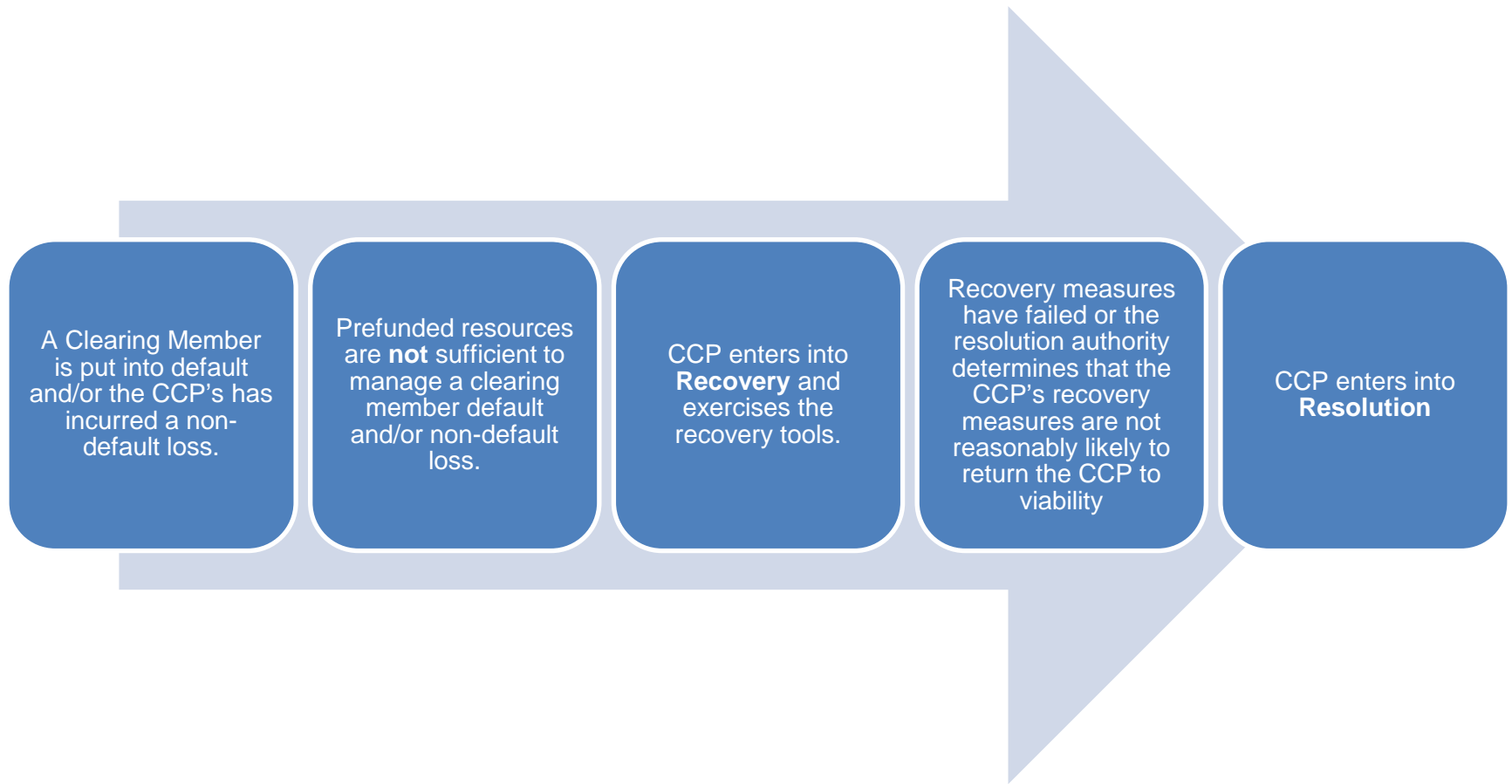
What can be done to limit the likelihood that a clearinghouse will fail?<sup>2</sup>



Note: <sup>1</sup>Based on 62 respondents in 2014. <sup>2</sup>Based on 72 respondents in 2014.  
Source: Greenwich Associates 2014 Systemic Risk and the Impacts of Central Clearing Study



# Road to Recovery and Resolution



# Key elements in CCP Recovery and Resolution

## Recovery

- CCP should have pre-established tools and rules for recovery that are transparent and predictable.
- The recovery tools should be developed with inputs from clearing members and their clients.
- The tools should allow CCP flexibility to deal with the particulars of any given situation.
- There should be certainty and transparency around the size of non-defaulting member's contingent liabilities.

## Resolution

- Resolution authority will be required to step in to ensure that trading/markets are not disrupted.
- CCP resolution will be most effective if it is led by the home resolution authority.
- There should be close cooperation with the resolution authorities of the jurisdictions where the CCP provides clearing services.

For further information see LCH's white paper on CCP Risk Management, Recovery & Resolution: (<http://www.lchclearnet.com/documents/731485/762448/final+white+paper+version+three.pdf/1d1700aa-a1ae-4a6c-8f6f-541eec9b7420>)

# Central Counterparty Clearing – Looking Ahead

## **Current**

- Already widely used for listed securities and derivatives.
- Spreading use for OTC products (e.g. interest rate and credit derivatives).
- Implementation of central clearing requirement for OTC derivatives.
- Revised and enhanced international standards.
- Strengthened supervision and oversight.



## **Future**

- Strengthened legal frameworks in major jurisdictions.
- Increased focus on CCP Risk Management, including Recovery & Resolution.
- Increase transparency and disclosures: e.g, CPMI-IOSCO PFMI assessment, standardized stress tests.

# LCH White Papers

- CCP Risk Management, Recovery & Resolution  
<http://www.lchclearnet.com/documents/731485/762448/final+white+paper+version+three.pdf/1d1700aa-a1ae-4a6c-8f6f-541eec9b7420>
- Stress this House – A Framework for Standardized Stress Testing for CCPs  
<http://www.lchclearnet.com/documents/731485/762444/Stress+Testing+Final+Paper+1.pdf>

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