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CCPs – Crises, Risks, Resolutions

Webinar

Monday 06 July 2020

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A Word From Our Chairman

Professor Michael Mainelli

Executive Chairman

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Agenda

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12:00 – 12:05	Chairman’s Introduction
12:05 – 12:30	Keynote Address
12:30 – 12:45	Questions & Answers

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CCPs – Crises, Risks, Resolutions

Kathleen Tyson

Chief Executive

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Martin Watkins

Chief Executive

Cournswood Group

CCPs: Crises, Risks, Resolutions

Kathleen Tyson
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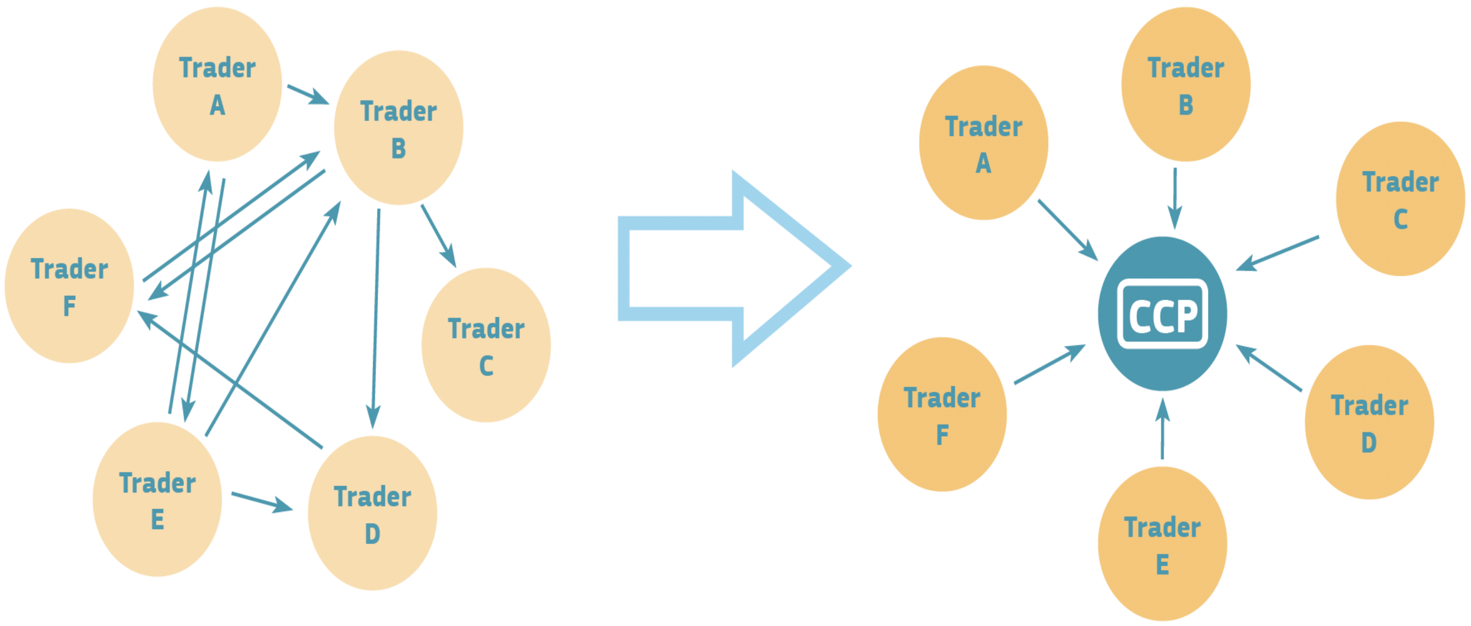
6 July 2020

Qualifications

- 5 years in the Federal Reserve Bank of New York
  - Founding member of the Settlement Systems Studies Group
  - Expert on clearing, settlement, margin and systemic liquidity shocks
- 4 years at the Securities and Investments Board
  - Supervised LSE dematerialisation and supervision regime
  - Supervised Euroclear, Clearstream, SWIFT and other market infrastructures
- 3 years at Clearstream
  - Co-inventor of Tri-Party Repo and Global Credit Support Service
  - SEC exemption for clearing & settlement of US Treasuries in Luxembourg CSD
- 20+ years of consultancy in financial infrastructure design, modernisation, supervision and PFMI compliance

CCPs intermediate default risk

Central counterparties stand between the buyer and the seller of a security, which are typically banks and other financial institutions. They reduce the risk that a trade falls through because the buyer does not pay or the seller does not deliver the purchased security ('counterparty failure').



CCPs are required to calculate and call Initial Margin and Variation Margin at least daily to mitigate counterparty risk.

Margin calls are pro-cyclical and add to stress in volatile markets.

Clearing Members must manage the risk of a margin call with appropriate liquidity provision and resources.

Margin models, stress testing, and default management protocols are the main CCP and Clearing Member tools for risk mitigation.

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Recovery and Resolution Planning

Preparation and prevention

- Each CCP draws up a recovery plan with measures to be taken in case of financial problems.
- National supervisors review and approve these plans.
- National authorities draw up a resolution plan for each CCP in the event of its failure.
- They can require a CCP to change specific business practices that could make resolution difficult.

Early intervention

- National authorities have powers to step in when a CCP faces financial difficulties.
- They can instruct a CCP to take actions in its recovery plan or other steps.

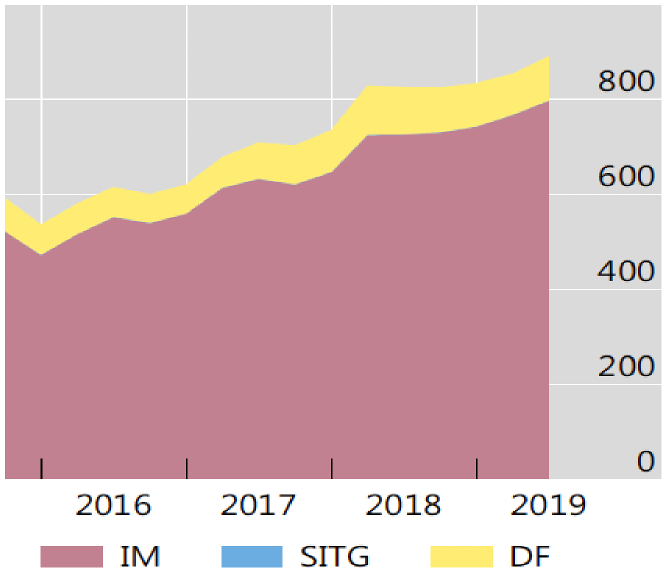
Resolution

- A failing CCP can be put into resolution by national authorities when it is in the public interest.
- National authorities apply resolution tools to protect financial stability and taxpayers.
- Tools include power to restructure or sell CCPs and distribute losses among owners and participants.

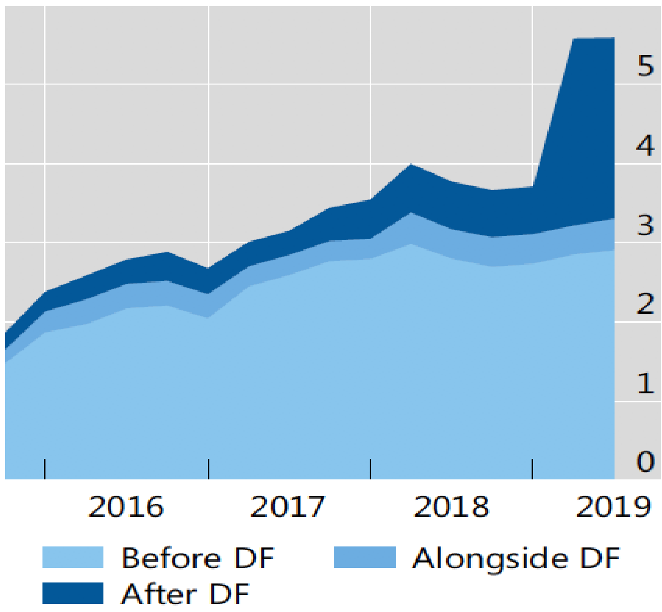
COOPERATION BETWEEN SUPERVISORS

CCP “Skin-in-the-Game” (SITG)

CCP prefunded resources



CCP skin-in-the-game



Source: Clarus CCPview, Fitch & BIS WP on SITG

CCPs are relatively sparsely capitalised relative to their holdings of Initial Margin (90%) and Default Funds (10%), but skin-in-the-game is deemed important to incentivising prudent CCP margin policies.

CCPs are very profitable, with an average return on equity of 36%, far exceeding the average for banks.

BIS WP 866 concludes SITG “significantly associated with more prudent modelling.”

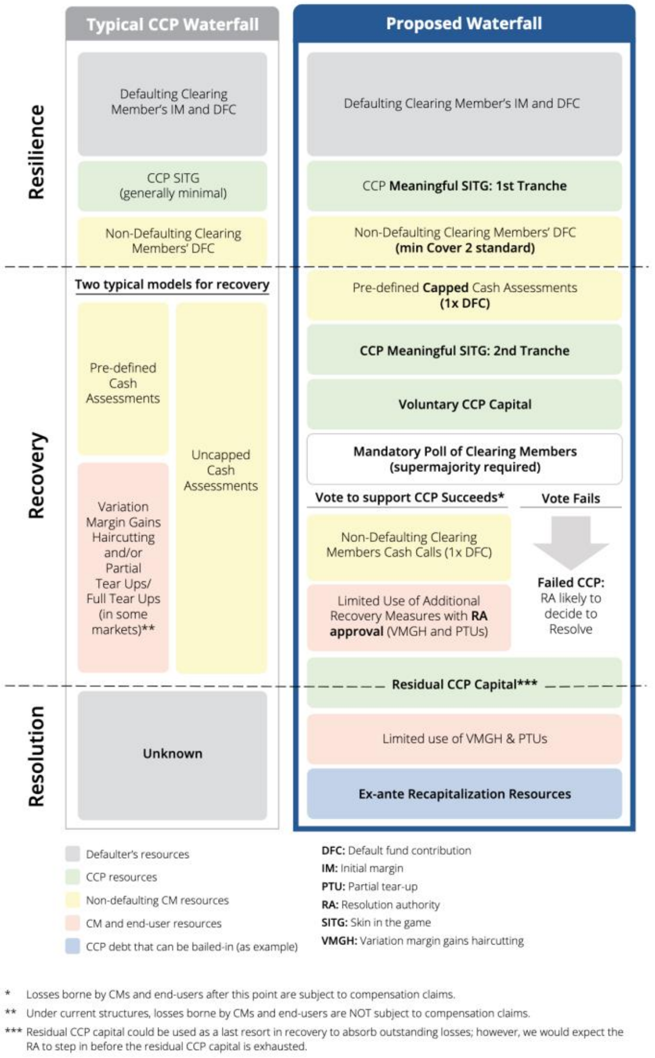
“Waterfall” Loss Allocation to Clearing Members

Top CCP Members are seeking Waterfall reforms:

- More CCP SITG to make draws on members a last resort
- Member ‘ballot’ on Recovery of a failing CCP above Default Fund contributions
- Compensation for losses allocated to market participants with regulator or resolution authority approval
- Bail-in debt to recapitalise a failed CCP giving equity to those who participate

The following elements are key additions to a typical CCP waterfall:

1. Meaningful, multiple tranches of CCP SITG to better align interests (particularly important for for-profit CCPs) and allow residual capital to be utilized as a last resort.
2. A ballot mechanism to facilitate additional support from clearing members for a failing CCP, over and above DF contributions and 1xDFC committed assessments, in exchange for compensation.
3. Limited broad loss allocation to market participants subject to resolution authority or systemic risk regulator’s approval, with appropriate compensation arrangements for such losses.
4. A provision for ex ante resources (e.g., through issuance of long-term debt that could be bailed in) which could be used for recapitalization of the resolved CCP.



Source: “Path Forward”

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CCP Clearing Volumes in the Covid-19 Crisis

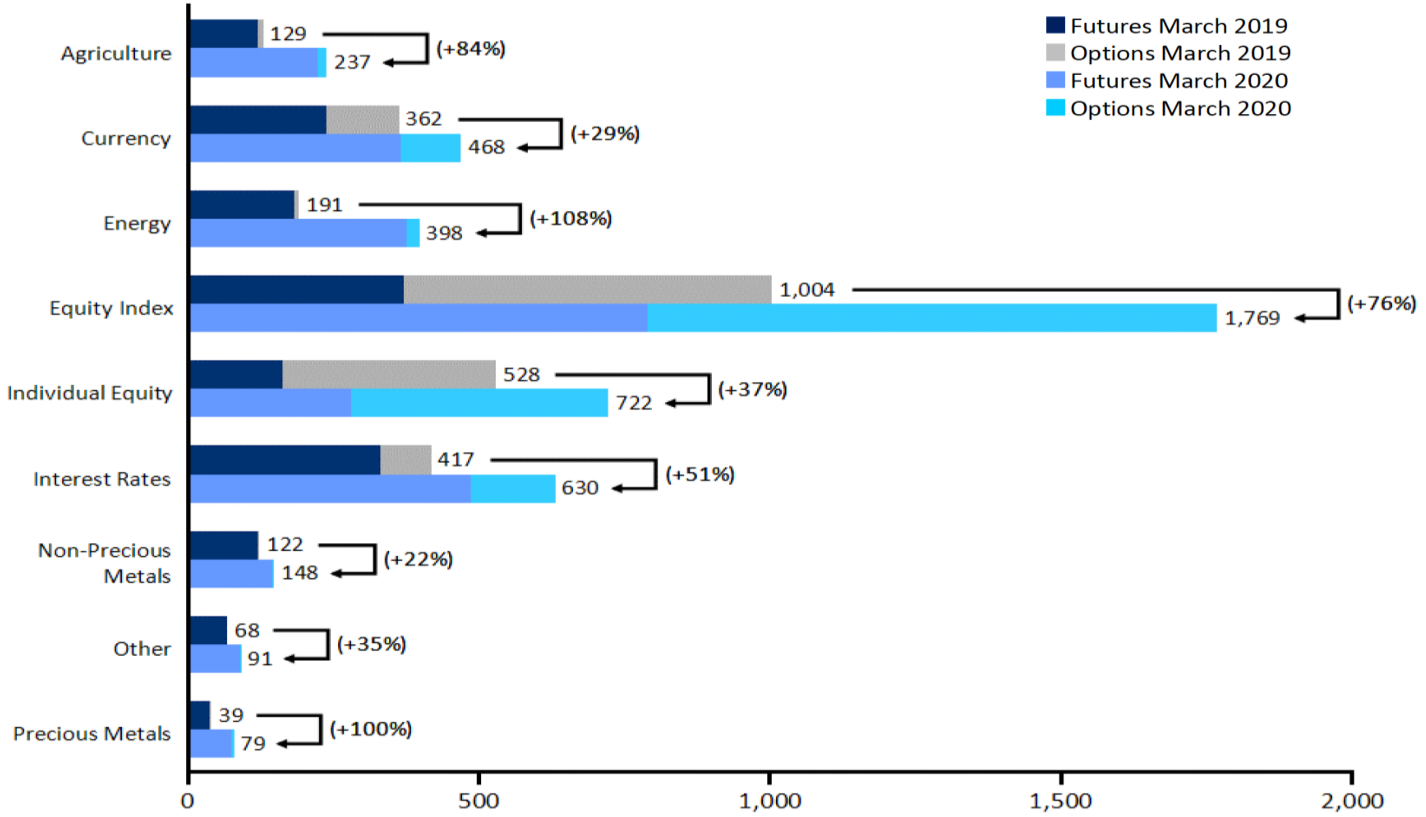
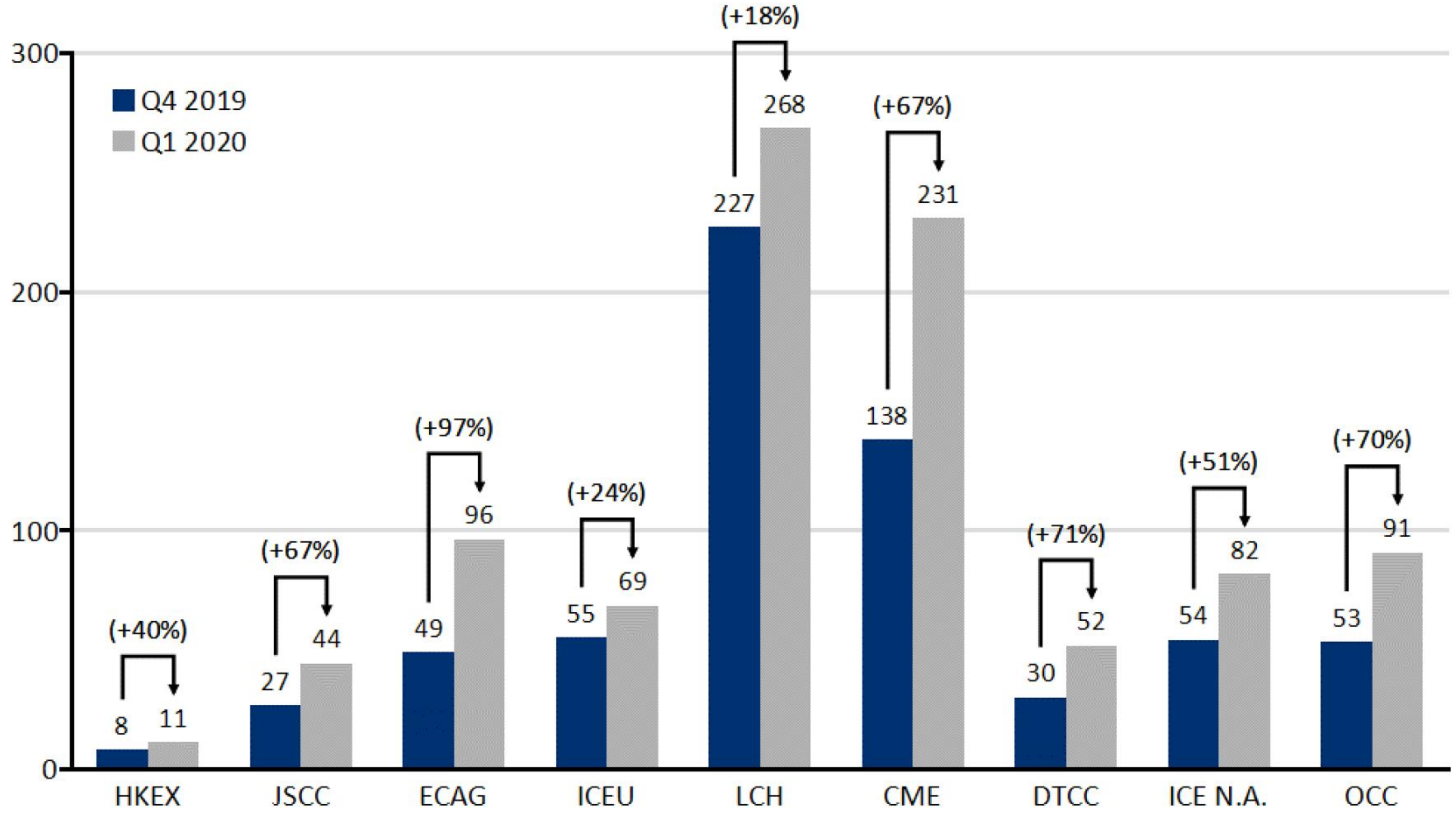


Figure 4: Clearing Volumes by Asset Class March 2019 vs. March 2020 in Millions of cleared trades[31]

Source: CCP12

Massive spike in volumes in all asset class derivatives as assets re-priced at the onset of the Pandemic, reaching record highs as markets bottomed in mid-March.

“Doom Loop” from Forced Sales



Source: CCP12

Figure 7: Quarter End Figures Comparison of Disclosure 6.1.1 – Q4 2019 vs. Q1 2020 in bn USD[47]

- A “doom loop” developed as Hedge Funds liquidated positions taken before the Covid Crisis, and sought to raise assets and funds to meet escalating CCP Margin calls.
- All markets became less liquid as dealers backed away, so that even US Treasuries froze up in mid-March until the Federal Reserve intervened with QE4 and relaxed dealer capital requirements.

“Dash for Cash” to meet Variation Margin calls

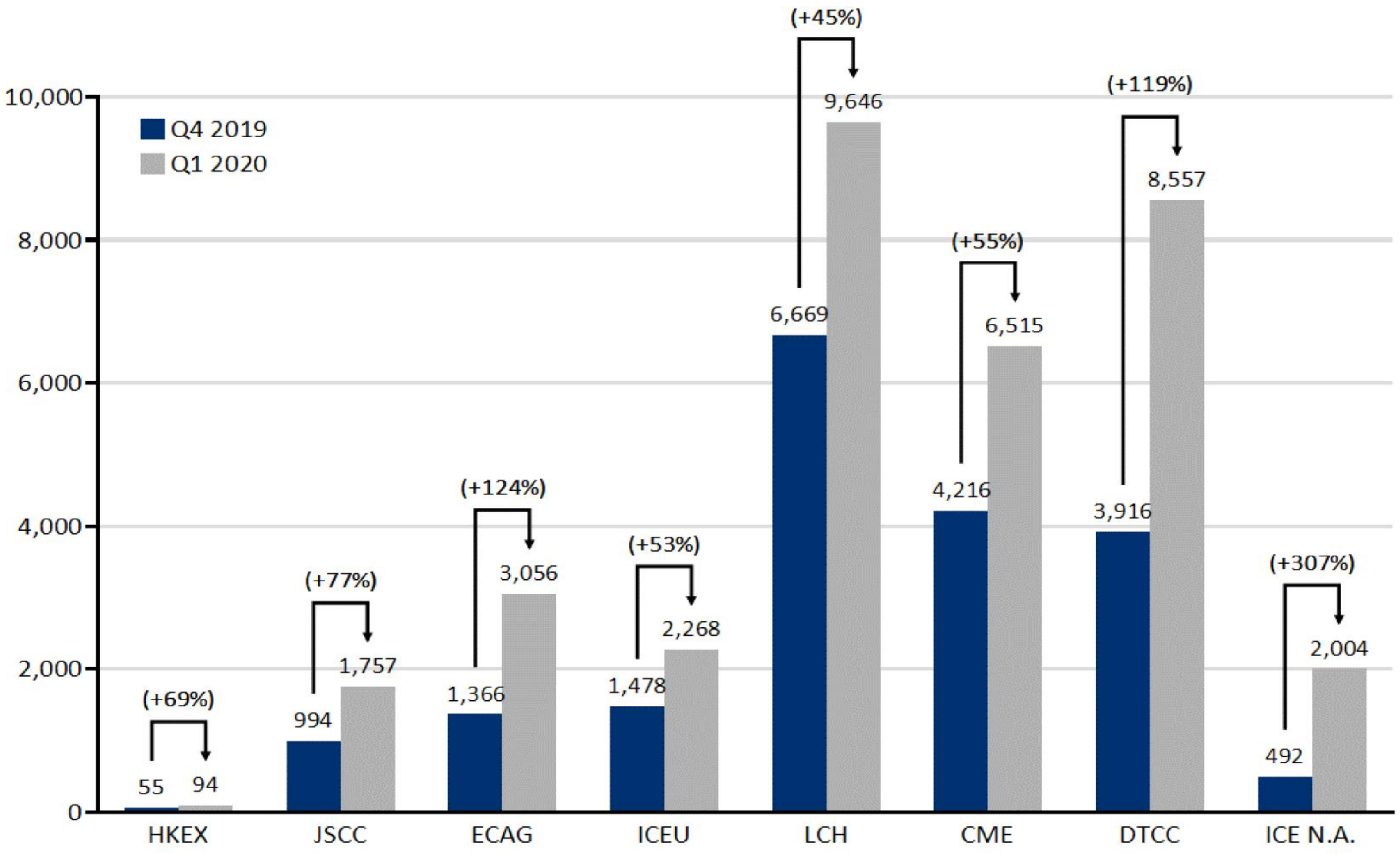


Figure 8: Quarter Average Figures Comparison of Disclosure 6.6.1 – Q4 2019 vs. Q1 2020 in m USD[60]

Source: CCP12

- Variation margin must be paid in cash, so a ‘Dash for Cash’ caused a liquidity crisis – forcing central bank interventions.
- Banks with access to central bank credit facilities, and the hedge funds and asset managers they prefer, always benefit most when liquidity is stressed, leaving others marginalised and vulnerable.

IM and VM on 10yr UST Front Month Futures

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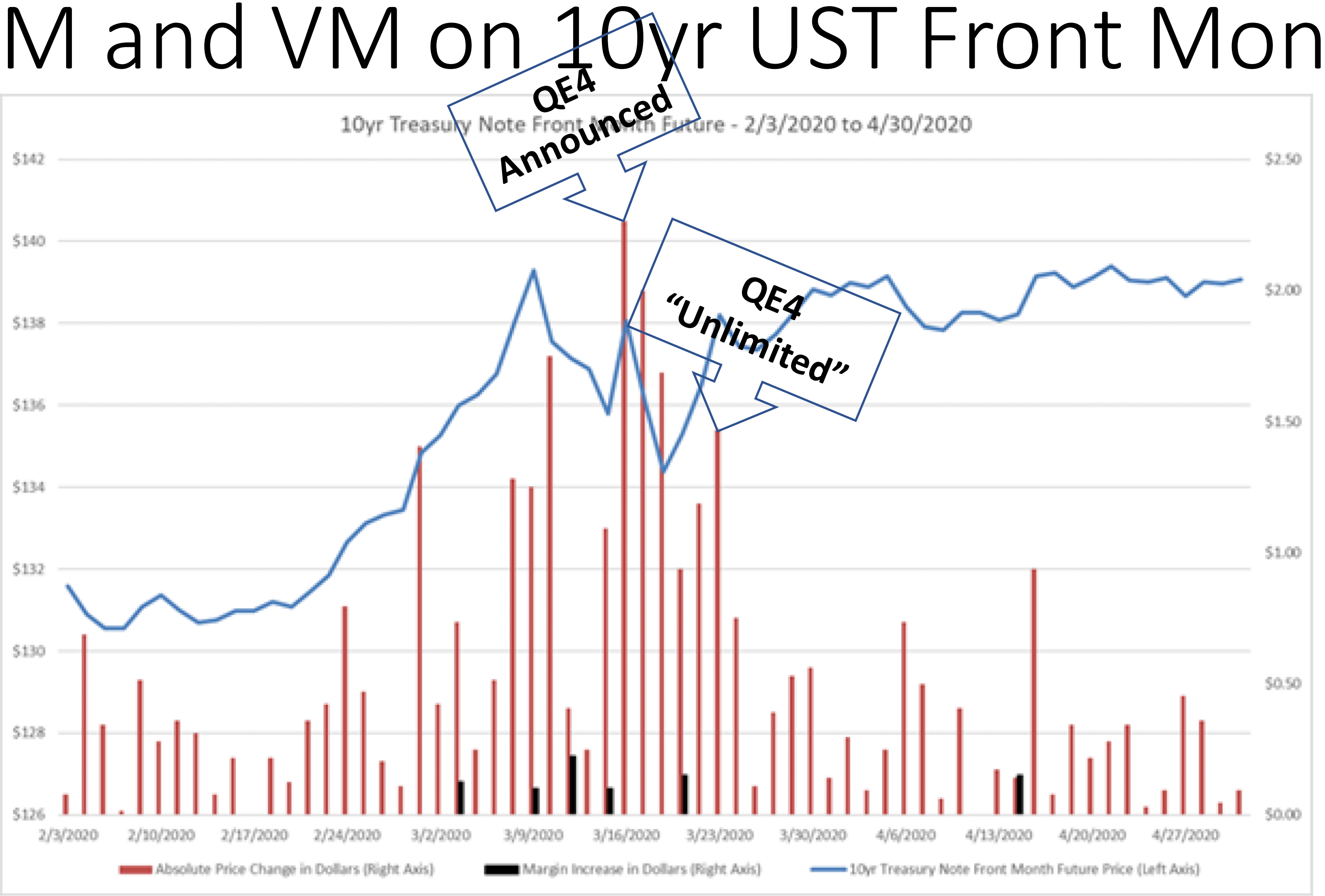


Source: CCP12

Figure 9: 10yr Treasury Note Front Month Future

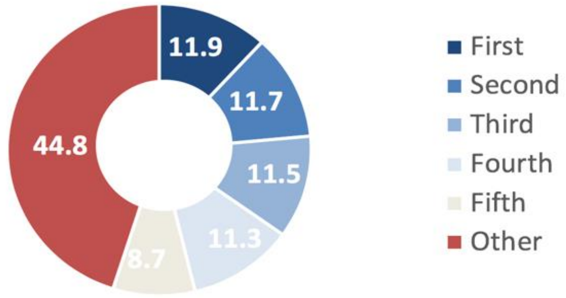
- Increases in Initial Margin were stepped, and relatively modest.
- Variation Margin calls were large and stressed systemic liquidity, causing deleveraging, forced selling in all asset markets, dealer illiquidity, and triggering unlimited QE4.

Increasing Concentration Risk

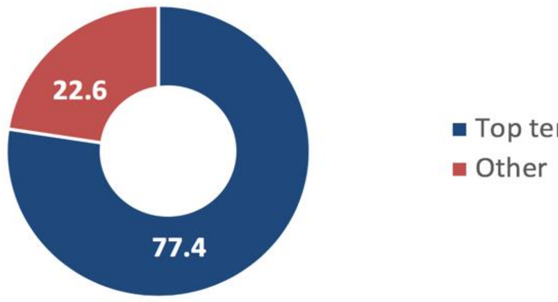
Concentration of customer funds among futures commission merchants (FCMs) in the United States, 2019

Top 20 FCMs	Total customer funds
Citigroup	$38,380,485,609
JP Morgan	$37,747,558,068
Morgan Stanley	$37,008,793,491
Goldman Sachs	$36,382,693,683
Merrill Lynch	$28,272,032,206
Société Générale	$19,522,903,615
Credit Suisse	$18,857,251,342
Barclays	$13,864,053,231
Wells Fargo	$11,829,939,098
UBS	$7,454,807,828
Interactive Brokers	$4,202,467,751
ADM Investor Services	$4,248,330,534
Mizuho	$4,003,856,788
BNP Paribas	$3,977,290,427
R.J. O'Brien & Associates	$3,644,962,811
HSBC	$3,041,337,586
Deutsche Bank	$2,820,794,278
RBC Capital Markets	$2,710,159,085
ABN AMRO	$2,561,742,458
INTL FCStone	$2,139,344,434

Five largest FCMs, by customer funds



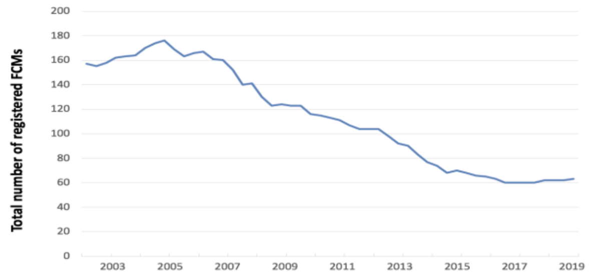
Ten largest FCMs, by customer funds



Source: Concentrations

- As CCP clearing becomes more concentrated, it becomes harder to manage the risks of default of top Clearing Members, with costs on mid-tier squeezing them out of business

Futures commission merchants (FCMs), 2002–19



Source: CFTC Monthly FCM Data (parent level), February, June, and October reports 2002-19.

FSB Consultation on CCP Resources & Resolution

- FSB seeking comments by 31st July on CCP resources and resolution
  - Financial Resources Questions on:
    - Scenarios
    - Evaluating existing resources and tools
    - Assessing resolution costs
    - Identifying gaps
    - Evaluating means to address gaps
  - Treatment of CCP equity in resolution
    - Treatment of equity in resolution
    - Tools and methods of resolution authorities
    - Transparency for stakeholders
- What is missing is any analysis of increasing market and Clearing Member concentrations on CCP risk management

CCP Resiliency & Recovery Resources

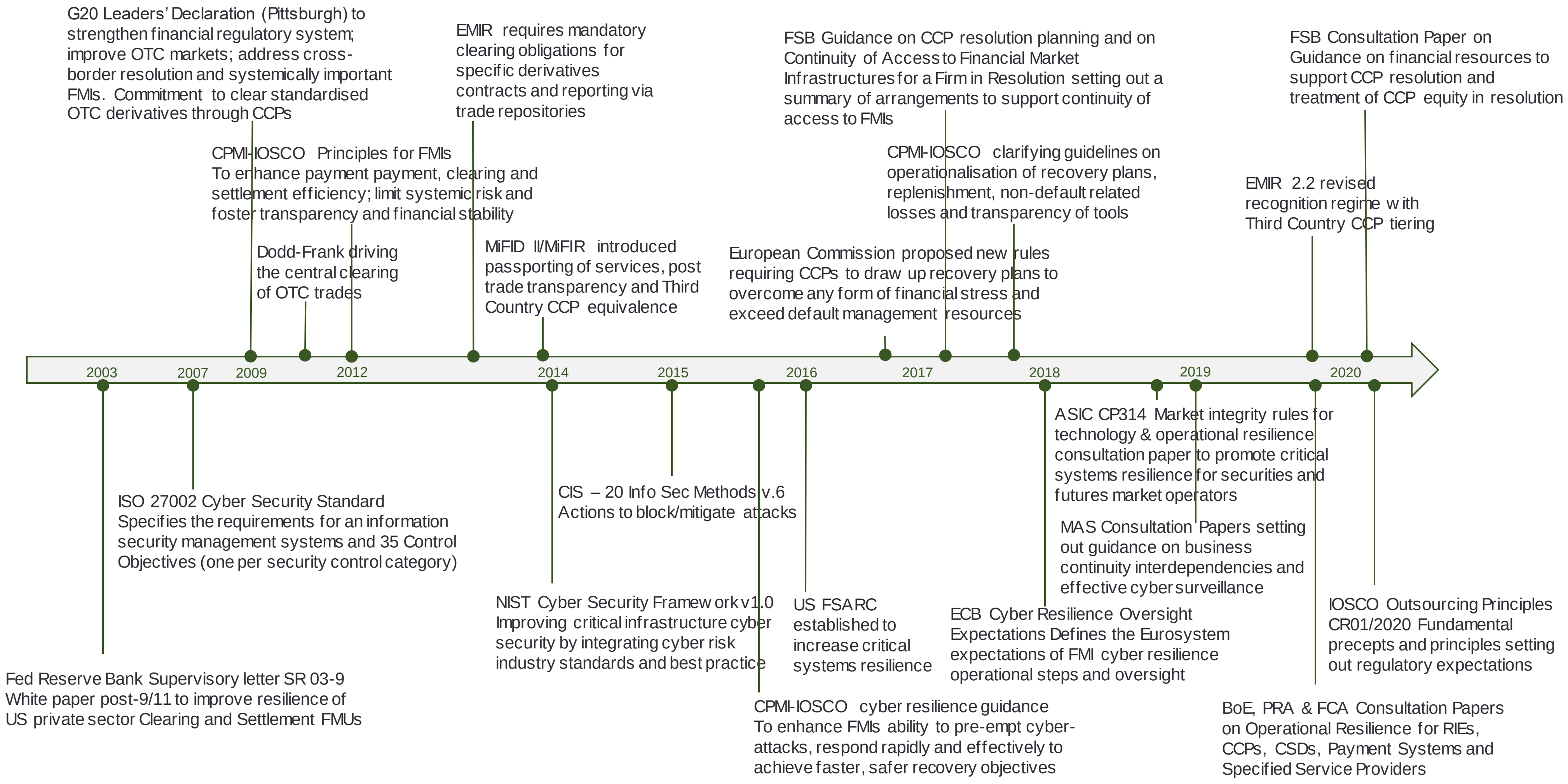
- FSB consultation on guidance on assessing the adequacy of financial resources for CCP resolution, 4 May 2020 (deadline 31 July 2020)
- CCPs Again Demonstrate Strong Resilience in Times of Crisis, CCP12.org, 1 July 2020
- A Path Forward for CCP Resilience, Recovery, and Resolution, 10 March 2020
- N. Alvarez and J. McPartland, The concentration of cleared derivatives: Can access to direct CCP clearing for end-users address the challenge?, Federal Reserve Bank of Chicago, August 2019
- W. Huang and E. Takats, Model risk at central counterparties: Is skin-in-the-game a game changer?, BIS Working Paper No 886, May 2020
- W. Huang and E. Takats, The CCP-bank nexus in the time of Covid-19, BIS Bulletin No 13, 11 May 2020
- J. Cheng, D. Wessel and J. Younger, How did COVID-19 disrupt the market for US Treasury debt?, Brookings, 1 May 2020
- A. Schrimpf, H.S. Shin and V. Sushko, Leverage and margin spirals in fixed income markets during the Covid-19 crisis, BIS Bulletin No 2, 2 April 2020

CCPs:
Crises, Risks, Resolutions

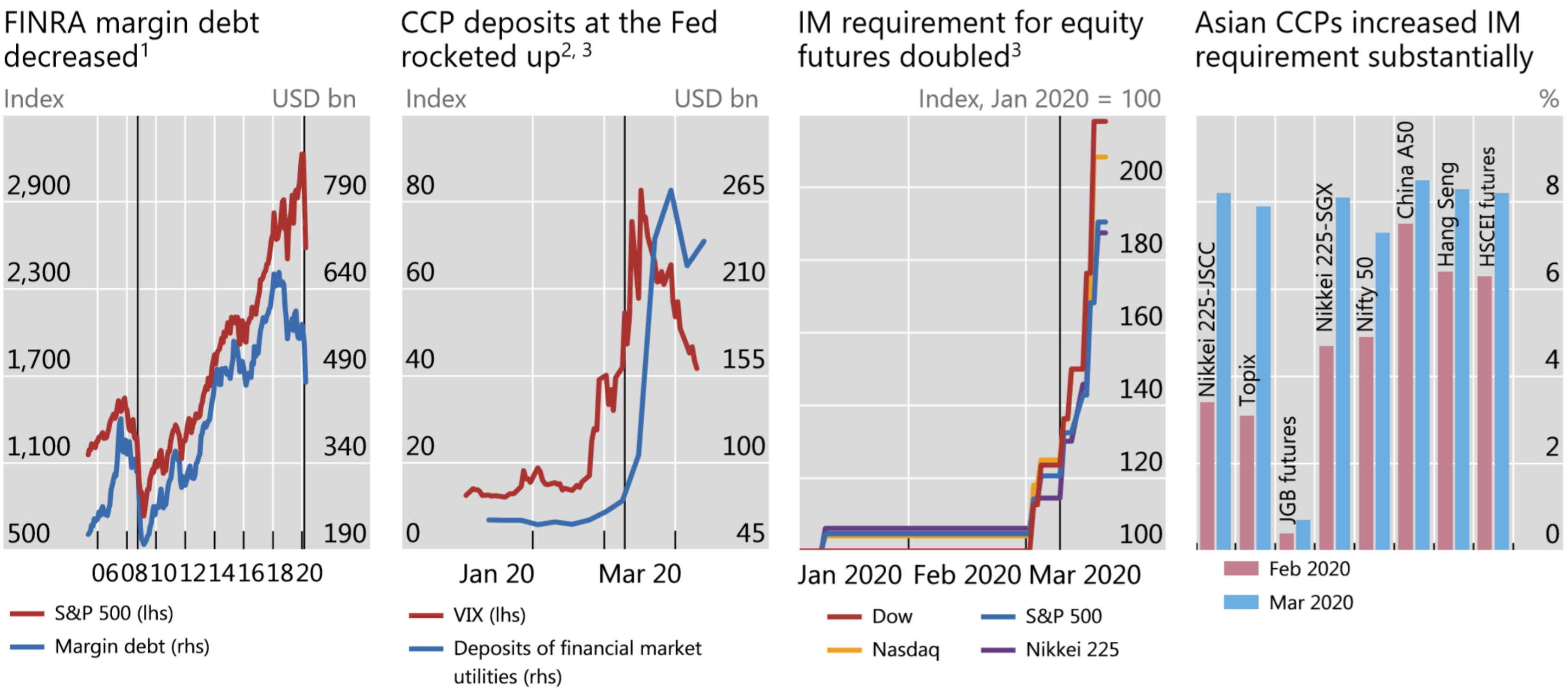
Martin Watkins
Cournswood Group

6th July 2020

Evolving complexity of global regulations



Margin procyclicality



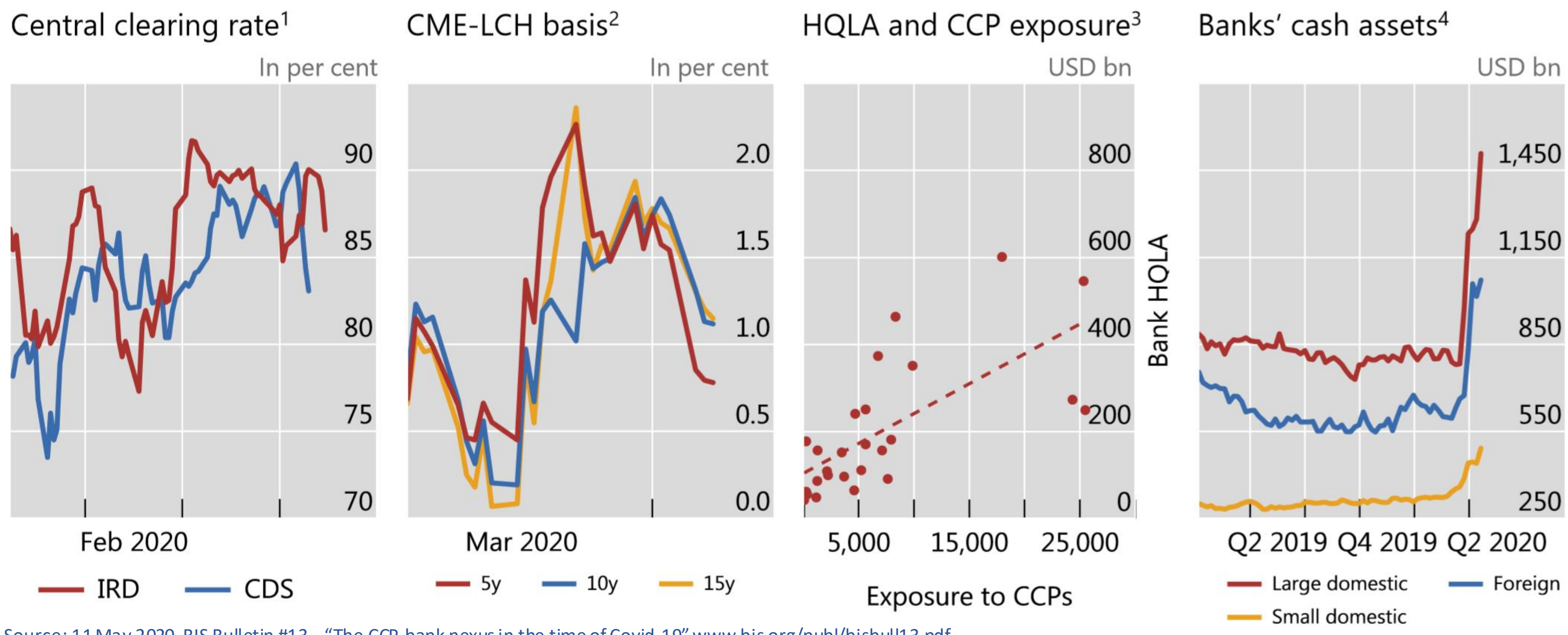
Source: 11 May 2020, BIS Bulletin #13 – "The CCP-bank nexus in the time of Covid-19" www.bis.org/publ/bisbull13.pdf

[1] The total of all debit balances in securities margin accounts reported to the Financial Industry Regulatory Authority (FINRA). The first vertical line indicates the Lehman default; the second indicates the COVID-19 related market turmoil. [2] The deposits mostly reflect those held by financial market utilities, but also include deposits held by international and multilateral organisations, government-sponsored enterprises and depository institutions. [3] The vertical line indicates 9 March, the date of the oil price drop.

Sources: Fed H.4.1; FINRA; Chicago Mercantile Exchange (CME); DataStream; Risk.net; futures commission merchant (FCM) and exchange data; authors' calculations.

Source: 11 May 2020, BIS Bulletin #13 – "The CCP-bank nexus in the time of Covid-19" www.bis.org/publ/bisbull13.pdf

Stressed environments cost of high margins



Source: 11 May 2020, BIS Bulletin #13 – "The CCP-bank nexus in the time of Covid-19" www.bis.org/publ/bisbull13.pdf

[1] The clearing rate is calculated as the share of new trades cleared by CCPs in total new trades reported to DTCC. [2] This is a relative measure. It is the ratio of the CME-LCH basis to the swap rate. The CME-LCH basis is the difference between the swap rates of two otherwise identical US dollar-denominated interest rate swaps (IRS) cleared by the Chicago Mercantile Exchange (CME) and by the London Clearing House (LCH). It arises when dealers cannot net positions across CCPs, which is in turn due to the fact that one CCP is dominated by natural sellers whereas the other by natural buyers. [3] Latest available figures. [4] Includes vault cash, cash items in the process of collection, balances due from depository institutions, and balances due from Federal Reserve Banks.

Sources: Fed H8 report; European Banking Authority (EBA); Depository Trust and Clearing Corporation (DTCC); Bloomberg; Options Clearing Corporation (OCC); JPMorgan Chase; bank financials; authors' calculations.

The real-world economic impact

- No tool can be used without trade-offs and disadvantages
  - Initial margin haircutting
  - Forced allocation
  - Mixed views on CCP use of variation margin gains haircutting
- Product and Clearing Member concentration
- Changes to “severe but plausible”
- Corporates and asset managers suffering higher margin calls
- Challenge of maintaining a proportionate approach

Questions, Comments & Answer(s)?

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07 July 2020 (09:00)	Corporate Governance – Why People Are Your Board's Biggest Problem
08 July 2020 (11:00)	Beyond Investing: At The Frontier Of Positive Change
09 July 2020 (10:00)	Awarding Shares To Employees In A Covid 19 World: How To Make Good Use Of The Government's Share Incentive Plan (SIP)
10 July 2020 (11:00)	Building A Global Britain

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