Monitoring Clients' Off-CCP Positions

Pablo Azar[1] John Heilbron[2]

[1]FRBNY

[2]OFR

August 7, 2024

Small participants can cause outsize distress

Historical Examples

- CLAM; Paris, 1974; Sugar
- ICCH; New Zealand, 1989; Gov't Bonds
- Nasdaq Clearing; Sweden, 2018; Energy
- LME Clear; London, 2022; Nickel

Lessons

- Small market participants can cause system-wide stress.
- Off-CCP positions can play a role.

Central clearing is a two-tiered system

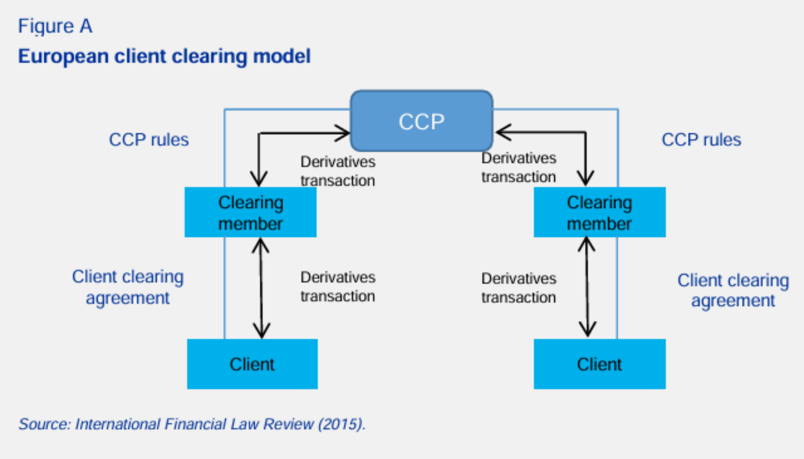
Clearing Members

- Larger; more credit-worthy
- Intermediaries
- Provide clearing access
- Guarantee client positions to CCP

Clients

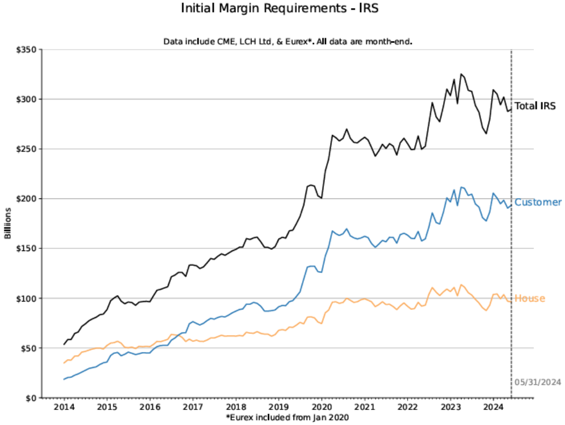
- Smaller; less credit-worthy
- Directional positions
- Pay CMs for clearing access

Members provide clients with clearing access



Sources: *ESRB "Enhancing the macroprudential..."*

Client clearing is growing



Sources: *CFTC Cleared Margin Report*

Client clearing may exacerbate concentration risks

Concentration = large quantity of exposure to a specific position.

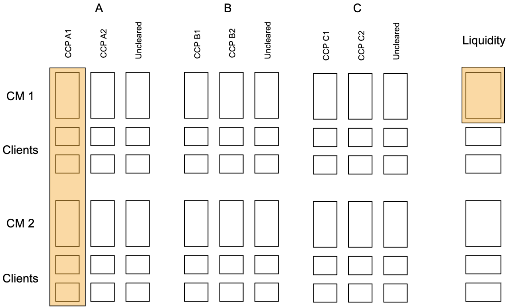
Consequences

- *Liquidity*: market movements likelier to exhaust resources of client
- *Close-out*: market impact from sale of position in large quantities; losses for the CCP

"Hidden" Concentration

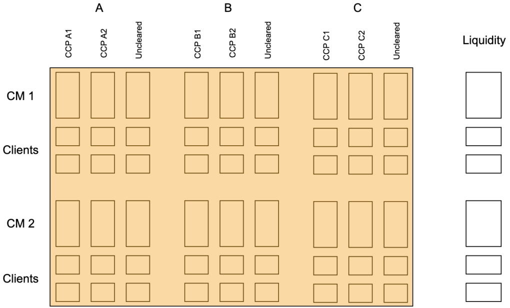
- Splitting of positions across CCPs
- Splitting of positions between CCP and bilateral market

CCPs have a partial view of markets



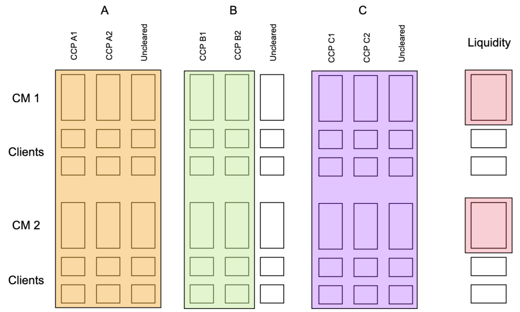
- Omnibus accounts
- Cross-margining/Data-sharing agreements
- Required reporting of member uncleared bilateral positions

Europe has an integrated approach



- EMIR (Derivatives), MiFIR (Securities), SFTR (Repo)
- Trade Repository $\rightarrow$ ESMA $\rightarrow$ Regulators
- Data integration: ESRB, ECB
- Data quality: variable, in progress

The US has a piecemeal approach



- CFTC: Part 39 - Cleared derivatives & SDRs - Cleared & Uncleared swaps
- Fed: 2052a, FR-Y14Q - Margining & Liquidity for US G-SIBs
- OFR: Repo Collection Rule(s)
- Data Integration: Data Sharing, Cash-Futures basis trade

March 2022 Nickel Market Stress

- The London Metal Exchange (LME) is an exchange for metal derivatives.
- LME Clear provides clearing services to 40 clearing members.
- About half of clearing members are banks.
- Each member has a wide variety of clients: Tsingshan Holding Group (THG), Jane Street, Elliot Associates.

March 2022 Nickel Market Stress

- THG is a large manufacturer of nickel alloy and stainless steel.
- THG accumulated short positions on nickel from 12/2021-03/2022: 100,000-300,000 metric tons at prices around $18,000 per metric ton.
- Roughly 20% of positions with LME. The rest were placed in OTC markets with JPM, BNP, Standard Chartered and United Overseas Bank.
- Not fully visible to LME.

Key Economic Friction: Moral Hazard

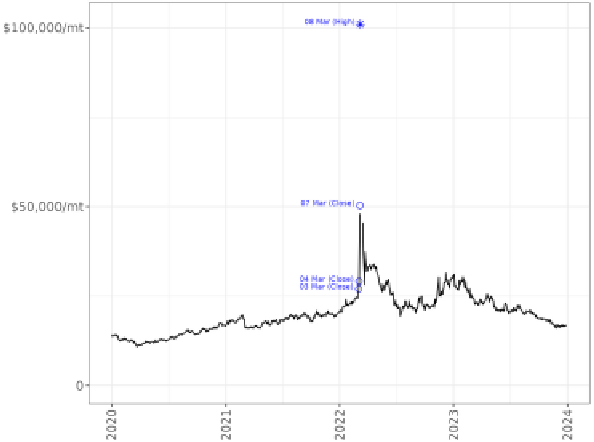
- THG was able to hide their off-CCP positions.
- If THG had revealed their positions, then LME would have asked for additional margin, making THG less able to take place large orders on CCP.
- Effect of Russian invasion on THG would have been less discontinuous.

The Russian Invasion as a Trigger

- Russia Supplies 12% of global nickel and 15-20% of battery-grade nickel.
- The price of nickel grew fivefold between February and March, reaching $100,000 / mt on March 8th.
- LME Announced an increase in IM requirements of 12/25% on March 4.
- By March 8, THG's margin obligation was around $1.1 billion on cleared positions, and may have had a similar obligation on OTC positions.

Price of Nickel

(a) Daily Price



Market Stress and Prefunded Resources at LME Clear

- The market stress presented several breaches in Margin at LME.
- LME Clear faced $23.3 billion in breach volume—two orders of magnitude larger than the last breach.
- Default Fund was $1.1 billion, with the largest breach being $2.0 billion in volume.
- There were about 105 margin breaches in Q1 2022, out of 430 total accounts.

Potential Defaults and Intervention

- The price spike in March 8th would have led to $19.75 billion in margin calls.
- At 6:16 AM, the LME decided to freeze margin requirements at the March 7 closing price.
- At 8:15 AM, all nickel trading was suspended.
- At noon, LME announced a decision to void all trades that had already happened on March 8th.
- Seven members would have been driven into default if LME had not halted trading and cancelled trades.

Potential Defaults and Intervention

- The LME's intervention led the price of nickel to fall back to $50,300/mt.
- Contracts that were not cancelled had less onerous margin requirements.
- THG's margin obligations dropped about 50%.
- THG negotiated a standstill agreement with its brokers, and received emergency credit from JP Morgan.

CCP Reaction: Trade Reporting

Bloomberg

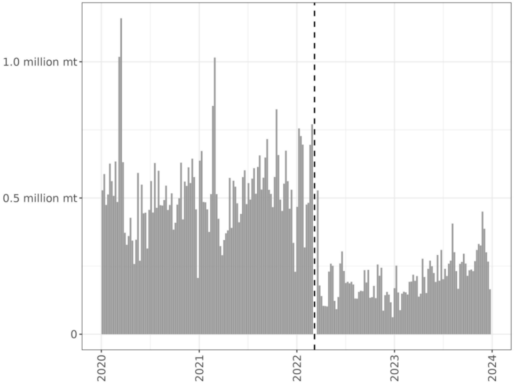
Markets | City Of London

Nickel Chaos Prompts LME to Force Disclosure of Off-Exchange Trades

- Confirmation of plan comes despite concerns by LME members
- Mandatory reporting of OTC trades to start next month

Intermediary Reaction to Voiding: Withdrawal

(b) Weekly Trade Volume



Sources: *Bloomberg, Oliver Wyman 2023, Author Analysis*