Central clearing in fixed income markets

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Disclaimer: Views in this presentation are those of the author and not those by the Bank for International Settlements (BIS)
How we got here: trading & clearing mandate for OTC derivatives ...

In the aftermath of Lehman, G20 leaders in 2009 declared in Pittsburgh that...

"All standardized OTC derivative contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties by end-2012 at the latest. OTC derivative contracts should be reported to trade repositories. Non-centrally cleared contracts should be subject to higher capital requirements."

- Main rationale:
  - Remove complex web of opaque bilateral relationships
  - Enhance transparency of OTC markets
- Substantial progress, but not yet fully there (clearing mandate applied in 17 FSB jurisdictions)
- Other major OTC markets, like cash government bonds & repo have seen limited take-up, despite potential fin. stab. benefits, and them being at the epicenter of several market stresses
### Bilateral vs central clearing: key differences & implications

<table>
<thead>
<tr>
<th>Bilateral clearing</th>
<th>Central clearing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netting (can) take place across markets in which <strong>counterparties</strong> are trading with each other</td>
<td><strong>Netting</strong> takes place within the market where the CCP is active - &gt; frees up <strong>intermediation space</strong></td>
</tr>
<tr>
<td>Risk is (mainly) <strong>counterparty credit risk</strong> (to the extent margining practices are not as stringent as CCP margining): exposure to a defaulting counterparty</td>
<td>Risk is (mainly) <strong>liquidity risk</strong>: access to cash at short notice to pay margin changes</td>
</tr>
</tbody>
</table>
| **Opaqueness**: very difficult to have a view of the complex net of exposures of different entities | • Increased **transparency**  
• CCP itself becomes a ‘**single point of failure’**... (and netting benefits imply that participants will want a single, large CCP (LCH for IRSs...)) |

⇒ **Key risk exposures** are **much reduced**, but **risks morph**...
Rise of PTFs and the fact that IDBs take on greater principal risk gives great urgency to expand the scope of central clearing in the US Treasury market…

- Discrepancy between the trading technology and “plumbing” on which it is running (TMPG (2019))

- Need to make sure the tracks (ie the clearing & settlement process) are fit-for-purpose for bullet trains (PTFs) running on them …

- And that necessary rules to ensure operational and financial resilience are in place …
But no one size fits all in cash sovereign bond clearing ...

Cash government bond market

<table>
<thead>
<tr>
<th>Centrally cleared (only interdealer)</th>
<th>Bilaterally cleared</th>
</tr>
</thead>
<tbody>
<tr>
<td>US (but not PTFs!)</td>
<td>US D2C</td>
</tr>
<tr>
<td>Japan</td>
<td>Japan D2C</td>
</tr>
<tr>
<td>Italy</td>
<td>Italy D2C</td>
</tr>
<tr>
<td></td>
<td>Germany (D2D &amp;D2C)</td>
</tr>
<tr>
<td></td>
<td>France (D2D &amp;D2C)</td>
</tr>
<tr>
<td></td>
<td>UK (D2D &amp;D2C)</td>
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</tbody>
</table>

State of affairs in other core markets (Europe/Japan):

- No penetration by PTFs (unlike US on-the-run)
- Primary dealers retain a strong grip and have shied away from central clearing (except Italy and Japan)
- Push towards central clearing perhaps less urgent from counterparty credit / operational resilience point of view ...
- ...but to the extent that limited intermediation capacity is a problem, central clearing could still be beneficial
- Central clearing as conducive to all-to-all trading

Source: FSB (2022)
How will market liquidity in fixed income evolve?

- **Expect benefits for market liquidity** in terms of ...
  - Reduced counterparty risks and improved operational resilience
  - Greater intermediation capacity by dealers (especially for repo): more elastic liquidity supply
  - Conducive to market structural shifts: all-to-all

- **Cross-currents**, potentially reducing liquidity:
  - Greater funding liquidity needs of the system (higher margins)
  - Client access to central clearing & costs
  - Certain trading strategies that foster market liquidity (relative-value trades) less viable

⇒ **Trade-off** between (slightly) less liquid markets in **normal times** and **more resilience at times of stress** (but jury is still out ...)
Financial stability: we need to brace for a greater prevalence of liquidity as opposed to credit crises ...

- A CCP for a “fully-cleared” government bond market will be:
  - **The** systemically important entity
    - Crucial on its own – as it clears the “risk free” asset
    - Massively interconnected – CCP members on the hook in case of member default
    - Linked with multiple markets (repo, futures, etc), where members will be active
    - Likely to be in trouble only at times of large price declines (*wrong way risk*)

  ➔ A doomsday scenario if such a CCP goes under and cannot continue to perform its obligations as expected

  Access to central bank lending facilities (ie going beyond deposits) would need to be formalized ...
  ... subject to very stringent supervisory requirements
Thanks much for your attention!
- Appendix -
Research on the impact of the trading/clearing mandates in OTC derivatives: what have we learnt?

Liquidity:

- Duffie et al (2005) **pre-trade transparency** is necessary for competitive liquidity provision... and clearing may be a **pre-requisite to all-to-all trading** (Duffie 2020)
- Loon & Zhong (2014, 2016) central clearing resulted in **improved liquidity in CDS** (no analysis of implications for overall systemic risk)
- Benos et al (2020): centralised trading of US IRS **improved liquidity** metrics by ~15% as dealers compete more

Financial stability / dealer balance sheet capacity:

- UST market: Fleming & Keane (2021) find that central clearing would have lowered dealers’ daily gross settlement obligations by 60 percent during March 2020 turmoil
- Baranova et al (2023): central clearing could materially enhance dealer intermediation capacity in gilt-repo market, but benefits are more limited in gilt cash market
Competition issues for CCPs active in the fixed income space

- A CCP for government bonds & repo will also likely be a natural monopolist:
  - How should prices/fees be set?
  - Who should benefit from the profits? Should it be a user-owned utility?
  - How should access to the CCP be governed/regulated?

- For resiliency and fairness, multiple CCPs may be beneficial ...
- But... that would be costly as netting benefits would be reduced (Benos et al, 2023)

Design decisions will have consequences for the topology of financial markets as participants adjust to the new situation ...
References


Benos, Huang, Menkveld and Vasios (2023), The Cost of Clearing Fragmentation, Management Science


Fleming and Keane (2021), The Netting Efficiencies of Marketwide Central Clearing, Federal Reserve Bank of New York Staff Reports, no. 964


## State of affairs in clearing of repos across core markets

### Repo market

<table>
<thead>
<tr>
<th>Centrally cleared</th>
<th>Bilaterally cleared</th>
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<tbody>
<tr>
<td>US - D2D + sponsored repo via FICC</td>
<td>US – D2C</td>
</tr>
<tr>
<td>Japan - all D2D, some D2C</td>
<td>Japan - rest of D2C</td>
</tr>
<tr>
<td>Italy - most D2D</td>
<td>Italy - some D2D and D2C</td>
</tr>
<tr>
<td>UK - most D2D</td>
<td>UK – some D2D and D2C</td>
</tr>
<tr>
<td>Germany – most of D2D</td>
<td>Germany - some D2D and D2C</td>
</tr>
<tr>
<td>France – about 50%</td>
<td>France – about 50%</td>
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Source: FSB (2022)