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# Symposium on OTC Derivatives—A conference summary

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The People's Bank of China (PBOC) and the Federal Reserve Bank of Chicago sponsored the Symposium on OTC Derivatives in Shanghai on May 23, 2017, in conjunction with CCP12, a global association of major central counterparties (CCPs). The conference focused on current risk management and regulatory issues facing CCPs.

The meeting featured panels on "Resilience, Recovery, and Resolution of Financial Institutions and Financial Market Infrastructures," "CCP Liquidity Risk and Impact on Financial Markets," and "International Standards for CCP Risk Management." Panelists included representatives from central banks, regulatory authorities, CCPs, significant clearing members, and legal authorities. It was held under the Chatham House Rule to encourage free and frank discussion, so with the exception of the opening keynote speeches, speakers are not identified by name.

The conference opened with keynote speeches from Charles Evans, president of the Federal Reserve Bank of Chicago and Pan Gongsheng, deputy governor of the PBOC. Both Evans and Pan agreed on the need for sound financial market infrastructures as well as on the importance of international communication and coordination on financial regulation, especially as it relates to systemic financial stability.

Evans pointed out that in a low interest rate environment, central banks' ability to act in a crisis is constrained. As a result, regulators need to work even harder to ensure that the financial system is resilient. Evans argued that the clearing mandate has promoted financial stability, but noted that clearing concentrates risk in CCPs. As a result, he stated that regulators should apply the liquidity standards laid out in the Principles for Financial Market Infrastructures (PFMI). He also argued that systemically important CCPs should have access to central bank accounts and, in times of significant stress, liquidity loans from central banks. However, he made clear that central bank liquidity provision should be a CCP's last alternative, and that any liquidity loans from the central bank must be secured with sufficient collateral so taxpayers are never at risk. According to Evans, the current supplemental leverage ratio and capital rules create difficulties for CCPs and should be addressed.

Pan stated that the PBOC's goals include promoting financial innovation and strengthening risk management as OTC derivatives markets in China grow. He noted that there can be a tradeoff between innovation and risk management. He emphasized the need to balance the two and ensure that financial markets serve the real economy. According to Pan, the PBOC is committed to strengthening financial risk monitoring and assessment as well as the PBOC's macroprudential oversight.

## Resilience, recovery, and resolution of financial institutions and financial market infrastructures

The first panel focused on ways to ensure the resilience of CCPs even in stressed market conditions. Understanding that efforts to ensure resilience may not always be sufficient, panelists also discussed recovery and resolution measures for CCPs.

The panelists began by noting that resilient CCPs are important for financial markets to function; healthy banks need healthy hedging, which needs healthy CCPs. As a panelist pointed out, CCPs mitigate counterparty risk but increase liquidity risk. At all times, CCPs must have sufficient liquidity to meet their payment obligations, even after the default of a clearing member. The panelist suggested that the tradeoff is worth the risks because, as the lenders of last resort, central banks have tools for addressing liquidity problems. One panelist expressed concern that not all CCPs currently conduct liquidity stress testing. The panelist noted that a CCP's liquidity exposure is much higher than its credit exposure and suggested that liquidity risk should be targeted by supervisory stress testing. Another panelist argued that CCPs' resilience is ultimately derived from their members and so a resilient CCP needs resilient clearing members and strict membership criteria.

One panelist noted that many central banks are prepared to provide liquidity to CCPs in extreme circumstances. Another panelist argued that central banks must provide liquidity support for systemically important CCPs when the market is unable to do so.

The panelists discussed multiple aspects of recovery and resolution. A CCP may have to deal with a bank resolution authority (RA) if one of its clearing members fails. A panelist suggested that the bank RA will likely continue to honor the bank's obligations at the CCP since the bank will be more valuable if its hedges remain in place. The panelist argued that the CCP will also seek to work with the RA to avoid having to liquidate a failed clearing member's proprietary positions.

Panelists also addressed the recovery and resolution of stressed or failing CCPs. One panelist argued that since CCP rulebooks give CCPs the power to allocate all default losses, even under extreme default scenarios, they will only have unallocated losses if clearing members do not meet their contractual obligations to the CCP. This led panelists to question what an RA would do differently from a CCP, especially since the goals of recovery and resolution tend to be the same. One panelist suggested that if a CCP is unable to enforce a recovery plan, an RA backed by the power of the national government might be able to enforce it. Another argued that since resolution is conducted under the auspices of a public authority, the RA presumably has access to tools not otherwise available in recovery.

Panelists agreed that CCPs need a clear recovery and resolution plan, confirmed ex ante with participants. The recovery plan should be comprehensive and help the CCP to avoid resolution. A panelist noted that it is important to avoid both excessive defense and inadequate preparation. Panelists agreed that communication with regulators and clearing members both before and during the default management process is critical, especially since CCPs can sometimes work to avoid calling a default.

In addition to recovery and resolution planning, the panel discussed the appropriate tools for recovery and resolution. The panel generally agreed that the industry needs a flexible set of tools that CCPs can use depending on the gravity of the situation and their particular market, products, and participants.

A panelist argued that initial margin haircutting is highly problematic, but can be tempting since initial margin provides a significant source of money in a crisis. Another panelist argued that initial margin haircutting should be excluded from consideration. A panelist from a CCP argued that variation margin gains haircutting (VMGH) should be in the recovery toolbox since it is the least worst option, but a panelist from another CCP argued that instead of VMGH, CCPs should simply resort to tear-up sooner. Another panelist noted that VMGH harms those with winning positions, but that tear-up presents difficulties since it violates market participants' continuity of hedges. Tear-up for swaps portfolios may be especially difficult since it will not always be obvious which positions must be torn up.

One panelist argued that forced allocation of unmatched positions to the clearing members' house accounts is worth considering since it can restore the matched book and maintain the continuity of members' hedges. The panelist noted that this tool does create hardship for clearing members. Relative to tear-up, forced allocation could be attractive, noted one panelist, since it only affects clearing members, while tear-up affects both clearing members and end users opposite the defaulter. Forced allocation could also be used to incentivize auction participation. Another argued that if the market for a particular contract is broken, tear-up may be better than forced allocation.

The panel noted that CCP loss allocation tools in the rulebook are not available for non-default losses. As a result, one panelist argued, CCPs must seek to mitigate the risk of non-default losses. According to this panelist, the industry as a whole needs to work together rather than assigning blame when addressing non-default losses. According to one panelist, for non-default losses, the responsibility of the CCP should end where the decision-making power of the CCP ends.

## CCP liquidity risk and impact on financial markets

The second panel focused on the liquidity risks that CCPs, clearing members, and clients face.

Panelists noted that CCPs use liquidity to manage credit risk, a practice that accelerated after the failure of Bankhaus Herstatt in 1974. In using liquidity to manage credit risk, hair-trigger deadlines are critical, one panelist noted; if these deadlines were relaxed, CCPs would have to increase initial margin to compensate. One panelist wondered if the industry has gone too far in using liquidity to mitigate counterparty credit risk. All panelists agreed on the importance of monitoring liquidity risk at CCPs, especially since the complications of a clearing member default are most likely to cause a liquidity, not a solvency, problem.

One panelist noted that, while collecting cash as initial margin can help CCPs to manage their liquidity needs, CCPs must find a place to keep it secure. Having to invest the cash creates a dependence upon repo markets. While the net risk in repo markets may be low, the gross risk is high since transactions are conducted separately. Another panelist pointed out that new capital rules have left banks with limited balance sheet room, making them less interested in participating in repo markets. A panelist from a CCP stated that this panelist's CCP struggles to find safe investment vehicles and that the CCP is seeking to recruit large, institutional repo partners. Another panelist cited European regulations that require CCPs to invest cash, which can create liquidity problems by turning cash into illiquid assets that may be difficult to access in a crisis.

In a liquidity crisis, panelists noted that one of the first casualties is the repo market, making it an uncertain solution to CCP liquidity needs. Liquidity lines from banks are also risky since, as the panel noted, the banks providing liquidity lines to CCPs are likely to be major clearing members at risk of failure in times of market stress. One solution is to diversify CCPs' sources of liquidity to pension funds and other large institutional investors. The panelists agreed that a clear way to address liquidity risks at CCPs is the provision of liquidity support by central banks in times of crisis. One panelist noted that, as CCPs' systematic importance increases, central banks' interest in CCPs' liquidity management also increases. The panelist also argued that where CCPs face liquidity stress, the relevant central bank should take measures to prevent systemic risks from emerging. According to the panelist, the provision of liquidity support should be at central banks' discretion in accord with their macroprudential objectives. One panelist noted that there is a difference between liquidity and solvency support from the central bank and argued that just as banks have access to central bank liquidity, so should the CCPs that support the banking system.

Another panelist from a CCP argued that it is important to have a tested liquidity facility in place with the central bank so that clients remain confident during a liquidity crunch. Currently, European CCPs can apply for banking licenses to gain access to central bank liquidity, while UK CCPs have access, and some systemically important U.S. CCPs have "fettered" access.

A panelist noted that CCPs' liquidity needs have a multicurrency dimension: CCPs that clear products denominated in multiple currencies need sufficient liquidity in all currencies. According to one panelist, a possible solution is to have committed foreign exchange facilities. Another panelist cited the 1998 Asian financial crisis, when the Hong Kong Futures Exchange accepted U.S. dollars as initial margin to free up Hong Kong dollar liquidity. This suggests another solution: allowing flexibility in the currencies accepted as initial margin. Central banks do have swap lines with one another, one panelist noted, which in theory could be coupled with central bank liquidity support for CCPs, but the swap lines were not designed to accommodate CCP liquidity needs.

The panel addressed the liquidity risks faced by clearing members and clients. CCPs require clearing members to have sufficient liquidity since clearing members must post cash at their CCP before they collect from clients. A panelist argued that clearing members' liquidity needs make it important for them to conduct liquidity stress tests.

Margin calls can create liquidity stress for clearing members. However, one CCP representative noted that, of the billions in payments required around Brexit, the vast majority was variation margin, not initial margin calls imposed at CCPs' discretion. One panelist noted that a CCP could reduce clearing members' liquidity needs by accepting securities for variation margin. This, however, would create liquidity problems for the CCP because the CCP has to pay out gains with cash. Paying out securities as variation margin would be operationally difficult, but possible in an extreme circumstance.

## International standards for CCP risk management

The final panel addressed international standards for CCP risk management. A keynote address prior to the panel outlined the need for and purpose of international standards. The panel discussed the current proposed standards in general, focusing particularly on three areas: governance, stress testing, and margin.

The keynote speaker argued that regulatory requirements for CCPs are stronger today than they were before the crisis. The speaker echoed Evans, noting that CCPs and banks have different roles and face different risks; therefore, the regulatory tools for banks and CCPs cannot be the same. At CCPs, the speaker noted, capital is not the primary concern. Given the systemic importance of nearly all CCPs, global standards address macroprudential concerns, as the speaker noted. The speaker also stated that, in principle, resolution starts after recovery resources are exhausted, though predictability must be balanced with flexibility in applying both recovery and resolution plans. The speaker also argued that all stakeholders should be incentivized to support CCPs' risk management.

The panel and keynote speaker all agreed on the need for international standards like the Principles for Financial Market Infrastructures (PFMI) to provide for consistency across CCPs and other market infrastructures. As one panelist noted, because market infrastructures interact with one another, the weakest element will create weaknesses for other infrastructures. The links between CCPs and other market participants led a panelist to argue that guidance should consider CCPs as a part of a broader ecosystem rather than in isolation.

Another panelist noted that an additional benefit of the PFMI is the quantitative disclosures they require. These increase the ability of clearing members and market participants to evaluate the CCPs they use. Others agreed, though one panelist noted that the format of the quantitative disclosures should be standardized across CCPs to facilitate easier distribution.

The panel discussed the increasing granularity of the PFMI. Some recognized that CCPs and regulators across jurisdictions may interpret the PFMI differently and saw increased granularity as necessary to standardize implementation. One panelist from a clearing member argued that more granularity and more transparency are necessary to allow clearing participants to understand CCPs' PFMI compliance.

Others argued that the scope of the original PFMI was correct and that the "Further Guidance" released was too granular, usurping the authority of national regulators. One panelist worried that, even if presented as explanatory, the enhanced guidance will necessarily become prescriptive. Another panelist argued that regulators and market participants should not equate granularity with raising risk management standards. Many panelists agreed that national authorities need the flexibility to fit regulations to the local environment and suggested that the authors of the PFMI should stop with the current round of guidance to provide time to assess the implementation of the current standards.

Panelists addressed governance at CCPs. They agreed that good governance at a CCP requires a risk committee. Most felt that the proposed PFMI guidance does not focus enough on the risk committee and focuses too much on the CCP's board. One panelist noted that board members are legally obligated to make decisions for the benefit of the corporation, an obligation that can make it difficult to find qualified board members who understand risk management at CCPs. Given the difficulty of finding qualified board members, a panelist suggested that problems could arise if a CCP's risk committee and board disagreed. One panelist argued that where the CCP is part of a larger organization, the risk committee should have the responsibilities that the latest proposed PFMI guidance gives to the board.

Panelists noted that the members of a CCP's risk committee must have the right incentives and be risk management experts; they must seek what is best for a CCP's risk management. One panelist pointed out that this can create difficulties finding qualified members for the committee. Another panelist argued that the risk committee's powers should be strengthened and that the risk committee should be consulted on all material risk management matters. Since tools like tear-up and VMGH will affect end users as well as clearing members, one panelist suggested that stakeholders in a CCP's risk management should include end users, not just clearing members.

A current difficulty facing risk committees, according to one panelist, is the nondisclosure requirement that makes it difficult for committee members to consult risk managers at a CCP's clearing members. Another panelist was optimistic about the risk committee, arguing that since CCPs have avoided a margin race to the bottom, the current risk committee structure seems to be working. The panelist pointed to the actions of LCH's risk committee during the Lehman default as an example of successful risk management.

Panelists discussed stress testing and international standards at CCPs. Most panelists agreed that since CCPs are not all alike, they should be given the flexibility to design tests that match their unique risk profiles, though communication between regulators, CCPs, and market participants is crucial. One panelist suggested that regulators should set broad parameters, leave the CCP to conduct stress tests, and then review the results and test scenarios. Another panelist argued that the current guidance on stress tests is sufficiently granular. The panelist pointed out that if the guidance becomes more granular, it could create model risk since if the model in the guidance is wrong, all CCPs will be wrong at the same time.

One panelist argued that CCPs should conduct daily stress tests, while supervisory authorities should conduct stress tests for systemic risks. Another panelist pointed out that not all authorities have the ability to conduct a supervisory stress testing. An attendee argued that, given the importance of continuity of services at CCPs, operational stress tests for events like cyber attacks should be considered. Another noted that the structure of the clearing industry limits incentives for hacking.

The panel also discussed international standards on margining practices. One panelist argued that the current level of regulatory oversight is appropriate. The panelist cited the Commodity Futures Trading Commission (CFTC) as a regulator that generally approves CCPs' proposals to accept new forms of margin that the CCP deems appropriate. Another panelist noted that there has been a shift from securities to cash initial margin in the United States, a shift this panelist approved of since it ensures that there is liquidity in the system. In Europe, CCPs must invest their cash, eliminating the liquidity benefits provided by cash margin. Access to central bank accounts, however, can provide a way to keep cash initial margin both secure and liquid.

The panel ended with a discussion of the current shift toward national markets rooted in national interests. While panelists agreed on the importance of international markets, they recognized that the automatic application of international standards does not currently occur and may be difficult to implement. Panelists also recognized that, first and foremost, CCPs must meet the needs of their local markets; international considerations may not be applicable in all cases.

One panelist argued that for swaps, market participants should be free to clear in whatever jurisdiction they want, with CCPs disclosing risk management procedures to market participants so that participants are aware of the risks they take on by using a given CCP. Many panelists agreed that PFMI compliance should provide the basis for equivalence determinations and that the focus should be on outcomes rather than specific rules or procedures. One panelist noted that equivalence granting is currently a politicized process and that the lack of permanence to equivalence designations creates problems for CCPs and market participants.

## Conclusion

The People's Bank of China (PBOC) and the Federal Reserve Bank of Chicago sponsored the Symposium on OTC Derivatives in Shanghai on May 23, 2017, in conjunction with CCP12. The conference focused on risk management and regulatory concerns currently facing central counterparties. Keynote speakers and panelists discussed the role of CCPs in financial markets, recovery and resolution planning, CCP liquidity needs, and international standards for CCPs. While differences of opinion emerged, all speakers agreed on the importance of resilient CCPs for financial markets and the need for international coordination on regulatory policies.



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