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**Developments in Market Clearing and Settlement Arrangements:  
Some Balance Sheet Recognition and Measurement Issues**

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ARRANGEMENTS:  
SOME BALANCE SHEET RECOGNITION AND MEASUREMENT ISSUES**

By Chris Wright, Bank of England

This paper looks at the implications for statistical compilers arising from some innovative developments within the London Repo and OTC derivatives markets. It shows how changes to contract clearing and settlement practices can impact on the size of financial companies' balance sheets, by changing the scope for netting of positions, and how such arrangements may require changes to statistical inquiries or methods of compilation, to prevent loss of key information.

The Working Party are invited to:

- Indicate whether equivalent practices are operating in other geographical or product markets; and
- Consider whether any consequential changes to existing statistical outputs simply reflect genuine changes in institutional behaviour or whether the new arrangements may be leading to some unintended loss of information.

**Background**

The macroeconomic statistical treatments for financial derivatives and repurchase agreements have both undergone major reviews in recent years. In both cases, the consensus among statisticians is that positions should be recorded gross on the balance sheet, such that aggregate counterparty exposure is identified. Netting of offsetting positions with the same counterparty may be permitted/encouraged where there is a clear legal right of set off but, in general, balance sheets should reflect the extent of business being undertaken. This guidance has potentially large implications for the size of balance sheets.

In the case of repo and similar reversible transactions, the cash taker will record both the receipt of cash and the obligation to return cash (loan liability) while continuing to report the repoed security on balance sheet. The effect is to inflate both sides of the book. For active market participants, the cash provider (reverse repoer) may undertake back-to-back repo and reverse repo transactions so that balance sheet positions may be leveraged up. In the United Kingdom, this phenomenon became particularly apparent following the introduction of the London Gilt Repo Market in 1996.<sup>1</sup>

A very similar process of balance sheet expansion is observable for market makers in OTC derivatives. In this situation, a dealer may take an initial position with an end user, but then offset this in the market to neutralize, or at least modify, his market risk exposure. This is particularly prevalent in the OTC swaps market, where risk management amongst traders can give rise to chains of back-to-back inter-dealer trading.

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<sup>1</sup> See the Bank of England Inflation Report May 1996.

The growth of gilt repo and OTC swaps trading have thus provided a major source of balance sheet growth for UK banks and securities firms in recent years. As a consequence, since London is a global center for both markets, the ability of UK financial companies to classify their business by the sector/residency of counterparties, is important for the derivation of associated Balance of Payments flows.

### **The impact of Central Counterparty clearing**

Statistical guidance on these activities, and the associated growth in balance sheet positions, rested upon trades taking place bilaterally between active counterparties. However, in August 1999, the London Clearing House (LCH) introduced a limited Central Counterparty (CCP) clearing and settlement service – “RepoClear” - for Euro denominated bonds. This was extended to cover the London Gilt Repo Market from August 2002. Also in 2002, LCH introduced a parallel CCP service – “SwapClear” – for the OTC swaps market.

CCP clearing is not in itself new. The LCH has long played this role in respect of on-exchange trading, for example financial futures and options traded through LIFFE. What is different in these new facilities is that they allow OTC deals with named counterparties to be settled through the CCP, thereby combining the flexibility of OTC trading with the benefits of the electronic exchanges.

Under CCP, bilateral trades may be “novated” to the clearing house for clearing and settlement. This involves the clearing house assuming any counterparty risks by entering into separate contractual arrangements with both counterparties – in effect becoming buyer to one and seller to the other. To protect its own position, novated contracts will normally be subject to initial and variation margin calls.

The user benefits of CCPs may include the ability to trade anonymously; the transfer of credit risk to a high quality counterparty; and cost savings associated with straight through processing and the consolidation of margining and settlement functions. But it is the scope of CCP clearing to maximise netting through a single legal set off, which may deliver the greatest benefit by increasing the volume of business that can be supported by any given size of balance sheet/regulatory capital requirement.

The potential of CCP to consolidate complex bilateral trading positions into a set of net positions between the CCP and its clearing members, raises the prospect of slower balance sheet growth, or even the reversal of past growth, for active market participants. For the present, take-up of the new services has been fairly modest – one major swaps dealer reported 1% of their business was cleared through SwapClear last December and 4% in March - but with all indications pointing to likely future use being substantial.

### **What are the issues for statisticians?**

The Working Party are invited to consider the statistical implications of these developments. These might include:

- Issues related to the increased scope for netting of positions;
- Issues related to counterparty sectorisation;
- Issues raised by the existence of non-resident members of clearing houses; and
- Issues raised by cross border mergers/integration of CCPs.

The evident scope which the institutional framework for clearing and settlement has for the **reporting of balance sheet levels**, raises an obvious issue about what statisticians should be attempting to measure. Current guidance presumes in favour of gross recording, since this serves both to maximise information about total business and sectoral exposures. However, with a growing proportion of business migrating to a single legal counterparty, where it becomes eligible for netting under set off provisions, the relationship between balance sheet positions and business growth becomes unclear.

In the United Kingdom, the relationship between balance sheets and business volumes is further obscured because business cleared through SwapClear, and to a lesser extent through RepoClear, is continuing to be reported gross by some statistical reporters. Given a straight choice between gross or net reporting of positions with LCH we favour the former. However, the current mix of conventions is unhelpful and this suggests adoption of net reporting by all as the logical outcome.

The **sectoral issues** arise from the progressive concentration of business with the CCP. In the United Kingdom, LCH are classified as an Other Financial Corporation (OFC). So, in the limiting case, if all repo and swap business were cleared through LCH, then inter-dealer business currently undertaken between banks (MFIs/Depository Corporations) would be counterpartied to the OFC sector. Such a switch carries implications for the UK broad money aggregates M4 and M4 lending, which exclude interbank lending but include cash received/provided by the private non-bank sector (including OFCs) on repo/reverse repo business. The full impact of CCP clearing on these aggregates therefore results from both the netting of repo positions with the non-bank private sector, and from the migration of previously excluded interbank positions.<sup>2</sup>

A further consequence of business migration may occur if the clearing house has **non-resident members**. This may be an issue because cross border business undertaken by resident market makers will increasingly be counterpartied to the resident CCP. In this situation, the CCP may become the principal/only statistical source of cross border positions and flows for national compilers. A possible corollary to this may be that a purely domestic transaction could be reported as cross border by both parties to the originating deal if they chose to settle through a non-resident CCP.

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<sup>2</sup> A full account of the statistical treatment of CCP settlement of repo transactions on the UK monetary aggregates is currently in preparation and will be published shortly in Monetary and Financial Statistics.

The scope for more complex examples may be further increased by **cross border mergers/integration of CCPs**. Such developments are occurring. Of particular relevance for the UK is the integration of LCH with the European Clearnet. The operational significance of this link requires further investigation.

### **Conclusions**

This paper has raised issues for compilers requiring further consideration. The market developments described here are already affecting the data we collect and the statistics we compile. These effects are set to increase over time. The Working Party are invited to consider whether such effects can be treated passively, as the statistical representation of real changes in behaviour by economic agents, or whether some form of intervention may be needed either to change data collections or to modify compilation methods.