

## Box 5

**CENTRAL BANK BALANCE SHEET EXPANSION AND FINANCIAL STRENGTH IN CRISIS TIMES: THE CASE OF THE EUROSISTEM**

The exceptional nature and scope of central bank liquidity support in the context of the global financial crisis has prompted questions about the implications for the financial risks on central bank balance sheets. If a central bank is perceived to be taking excessive risk, its credibility and the public's perception of its ability to deliver on its mandate may be affected.

In the wake of the crisis central banks have significantly expanded their balance sheets. This reflected the stepping up of liquidity provision and an increased intermediation role, with central banks acting as a backstop to banks and financial markets at times when the interbank market and more generally financial market functioning were impaired. To different extents depending on the central banks' operational frameworks, liquidity provision to the economy took the form of temporary lending or outright operations, with those central banks engaging mainly in outright asset purchases seeking to further ease the monetary policy stance (as a substitute for policy rate cuts in a zero lower bound environment), and those central banks primarily using lending operations, such as the Eurosystem, aiming to address the malfunctioning of the monetary policy transmission mechanism. Increased intermediation via central banks' balance sheets operates either through a change in the composition of assets and liabilities or through an expansion of total assets and liabilities, or a combination of both, as has been the case for all major central banks recently, altering the quantity and type of risk to which they are exposed.<sup>1</sup>

**Financial risk exposure and financial strength**

The implementation of monetary policy is inevitably associated with financial risk because it involves the provision of central bank money against assets or collateral from private agents. Subject to the magnitude of shocks and risks to the monetary policy transmission mechanism, central banks may increase their risk exposure in crisis times so as to ensure the fulfilment of their mandate. Whereas in normal times the risk profile of the Eurosystem is mainly dominated by risks associated with holdings of foreign exchange reserves and gold, in times of tensions in domestic markets, the consequent increase in Eurosystem intermediation implies a more prominent role for the risks associated with monetary policy operations.

<sup>1</sup> See, for instance, the analysis in Durré, A. and Pill, H., "Central bank balance sheets as policy tools", *BIS Papers*, Vol. 66, 2012, pp. 193-213, as well as Cour-Thimann, P. and Winkler, B., "The ECB's non-standard monetary policy measures: the role of institutional factors and financial structure", *Oxford Review of Economic Policy*, Volume 28, Number 4, 2012, pp. 765-803.

Both in normal and in crisis times, central banks must preserve their financial strength, which means that they must always have sufficient financial resources available over time to conduct monetary policy in an independent manner, and hence deliver their policy objectives in all circumstances. Central banks typically generate income through the stream of seignorage accruing over time (e.g. from issuance of banknotes as a non-interest-bearing liability) and from the returns on their asset holdings. In assessing the financial strength of a central bank, a recent report by the Bank for International Settlements (BIS) not only considers its financial resources, but also the “transfer or insurance arrangements and, importantly, institutional design features that help maintain financial resources over time”.<sup>2</sup> In other words, what matters in ensuring the credibility of the central bank is its financial strength across time, and thus also its institutional framework.

In the case of the Eurosystem, the institutional setting reinforces the integrity of the Eurosystem balance sheet in specific Treaty provisions. Article 130 of the Treaty on the Functioning of the European Union states that the Eurosystem independently exercises its powers and carries out its tasks and duties. In addition, Article 123 prohibits monetary financing. These provisions preclude the monetising of sovereign debt, e.g. by providing Member States with financial contributions in excess of their shares in the profits realised in the respective financial year. Through promoting price stability in the long term, they indirectly contribute to the financial health of the Eurosystem balance sheet.

In turn, the central bank’s stand-alone financial strength reinforces credibility in its capacity to always deliver on its mandate while avoiding exposure to political pressures. This helps to anchor expectations among the general public and financial market participants that the central bank is in a position to effectively deliver on its mandate and that its monetary policy decisions will not be unduly constrained by concerns about financial resources.

### **Developments in the Eurosystem balance sheet during the crisis**

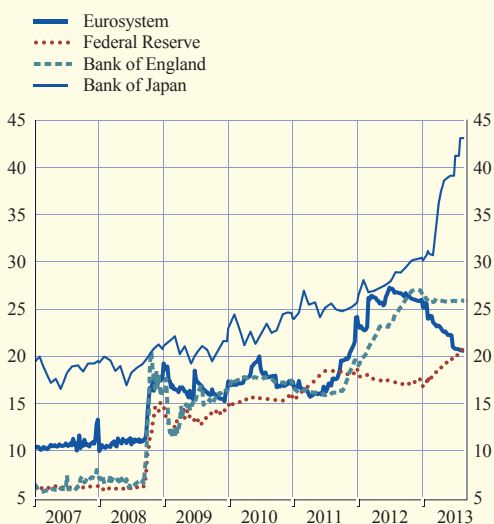
All major central banks have seen their balance sheet expand overall during the recent crisis (see Chart A). While the Eurosystem had increased its intermediation in bank funding markets after tensions in the money market emerged in August 2007, it initially did so only on a short-term basis through reverse repo transactions, while avoiding the emergence of excess liquidity by conducting frequent liquidity-absorbing fine-tuning operations. The increase in the size of the Eurosystem balance sheet was relatively limited until September 2008 but became significant after the fall of Lehman Brothers. Indeed the Governing Council decided, as of October 2008, to fully accommodate the liquidity demand of solvent banks that are counterparties in its refinancing operations (under a fixed rate full-allotment tender procedure), while ceasing to absorb excess liquidity. A limited covered bond purchase programme supporting a key bank funding channel in the euro area added to the excess liquidity conditions generated by the new allotment procedures in the refinancing operations.

The sovereign debt crisis later resulted in increased fragmentation in the bank funding markets and significant further problems for the transmission of monetary policy to the real economy. The Eurosystem further expanded its intermediation role – through purchases under the Securities

<sup>2</sup> According to this report, such arrangements may, among other things, take the form of fiscal backing or stand-alone financial strength. See Archer, D. and Moser-Boehm, P., “Central bank finances”, *BIS Papers*, No 71, April 2013.

Chart A Size of simplified balance sheet

(as a percentage of GDP)

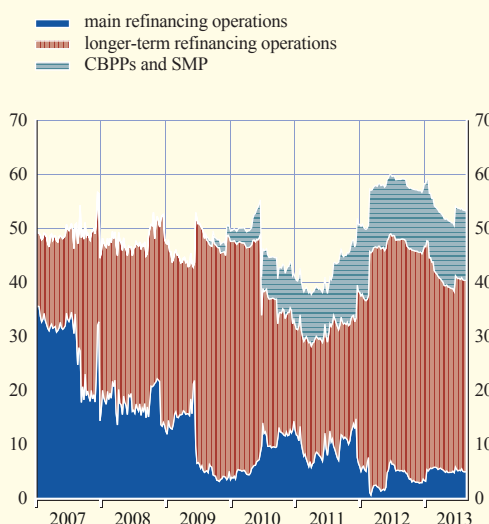


Source: Respective central banks.

Notes: ECB calculations. For the simplified balance sheet definition, see the box entitled "Simplified balance sheets: methodology", *Monthly Bulletin*, ECB, October 2009.

Chart B Eurosystem main liquidity-providing measures

(as a percentage of the simplified balance sheet size)



Source: ECB.

Note: CBPPs refers to the covered bond purchase programmes and SMP to the Securities Markets Programme.

Markets Programme, a second edition of its covered bond purchase programme, and, notably, through two three-year longer-term refinancing operations (LTROs) conducted under a fixed rate full-allotment tender procedure.<sup>3</sup>

While the balance sheet expansion of other major central banks has mainly resulted from large-scale outright asset purchases, the expansion of the Eurosystem balance sheet largely reflects the increase in the size and maturity of temporary lending operations under the fixed rate full-allotment tender procedure (Chart B).<sup>4</sup> Given that there was on aggregate no shortage of eligible collateral, this procedure has made Eurosystem liquidity provision endogenous to banks' aggregate demand for central bank liquidity. De facto, the fixed rate full-allotment tender procedure has allowed the accumulation of liquidity in excess of banks' aggregate liquidity needs.

As of mid-2012, excess liquidity and concomitantly the size of the Eurosystem balance sheet have started to decline again. This reflects growing confidence among market participants, particularly in view of the Governing Council's announcement on Outright Monetary Transactions (OMTs), but also follows progress on the part of national governments in addressing domestic imbalances and implementing the necessary structural and fiscal reforms. The activation of an early repayment option for the three-year longer-term refinancing operations as of January 2013 further contributed to the decline in the size of the Eurosystem's balance sheet.

3 For related analysis, see the boxes entitled "The Eurosystem's balance sheet in times of financial market tension", *Monthly Bulletin*, ECB, September 2011, and "The impact of non-standard measures decided upon on 8 December 2011", *Annual Report*, ECB, 2012.

4 See, for instance, Mercier, P. and Papadia, F., "The Concrete Euro: Implementing Monetary Policy in the Euro Area", Oxford: Oxford University Press, 2011, as well as Eser, F., Carmona Amaro, M., Iacobelli, S. and Rubens, M., "The use of the Eurosystem's monetary policy instruments and operational framework since 2009", *Occasional Paper Series*, No 135, ECB, August 2012.

Beyond the implications of such a repayment option, the initial balance sheet expansion of the Eurosystem is set to unwind naturally. The Eurosystem non-standard measures are temporary in nature and the liquidity provided in refinancing operations is returned to the Eurosystem as the term of those operations expires. Today the size of the consolidated balance sheet of the Eurosystem has declined to a level of around 20% of the euro area GDP.

### **Managing financial risk exposure: the case of the Eurosystem**

The Eurosystem ensures its financial protection by building up financial buffers, implementing prudent risk management and accounting frameworks and cautiously allocating its invested assets.

In practice, looking at one of the key components of Eurosystem risk exposure, all of the Eurosystem's monetary policy credit operations are secured by adequate collateral and can only be accessed by financially sound credit institutions subject to supervision in accordance with harmonised EU requirements. Eligible collateral must meet appropriate credit quality standards and is in turn subject to valuation and haircuts. The haircuts depend on the market, credit and liquidity risk characteristics of the assets. The general aim of their application is to protect the Eurosystem balance sheet, while ensuring that the residual risk after a possible counterparty default is equally spread across the different collateral types from the Eurosystem's perspective.<sup>5</sup> As a result of these risk control measures, the risk profile of the Eurosystem's balance sheet has been kept contained, despite the implementation of the various non-standard measures since August 2007.

Over time, the Eurosystem as a whole has also built up relatively large financial buffers, including from part of the stream of seignorage revenues generated by banknote issuance. Those buffers are mainly in the form of capital and reserves (i.e. paid-up capital, legal reserves and other reserves), revaluation accounts (i.e. unrealised gains on certain assets like gold) and certain provisions. As at end-2012, these items stood at €88 billion, €407 billion and €57 billion respectively.<sup>6</sup>

Notwithstanding the significant increase in its balance sheet during the financial crisis, the financial strength of the Eurosystem has been preserved. This reinforces the financial independence of the Eurosystem as a whole (including that of the ECB). At the same time, the perception of financial strength underpins the public's understanding that monetary policy, including the implementation of non-standard measures, remains firmly focused on price stability.

<sup>5</sup> During the crisis, the average haircut on the collateral posted has increased at the same time as the pool of collateral eligible has been enlarged overall. For a related analysis, see, for instance, the article entitled "The Eurosystem collateral framework throughout the crisis", *Monthly Bulletin*, ECB, July 2013. See the ECB press release entitled "ECB further reviews its risk control framework allowing for a new treatment of asset-backed securities", 18 July 2013.

<sup>6</sup> In addition to the financial buffers on their balance sheets, some Eurosystem central banks enjoy financial guarantees from their shareholders.