

# Not All *Central Banks* Are Created Equal

BY MARCO LEPPIN AND JOACHIM NAGEL

*The complications  
of QE bond buying.*

**F**ollowing the failure of the Lehman Brothers investment bank and the global financial market crisis, the central banks of the United States, Japan, and the euro area launched several conventional and unconventional monetary policy measures in order to stabilize the financial system and cushion the severe economic slump.

They not only reduced interest rates to all-time lows but also pumped massive amounts of liquidity into the financial markets. This caused their balance sheets to expand considerably. The array of instruments used by these central banks included full allotment in refinancing operations or purchasing assets directly in the financial markets. With regard to nominal balance sheet expansion, it can be seen that the balance sheets of the Federal Reserve System and the Bank of England expanded to about five times their size prior to the financial crisis. The Eurosystem's consolidated balance sheet hit an all-time high following allotment of the second 36-month tender at the end of February 2012. Since the Eurosystem's balance sheet "only" doubled in size, this led to accusations that euro area central banks were not doing enough to fight the consequences of the financial and sovereign debt crisis and the economic downturn.

## **MATERIAL DIFFERENCES IN THE CONDUCT OF MONETARY POLICY**

This simple comparison based on the original size of the balance sheet neglects two key points, however. One is that operational monetary policy in the United States is significantly different from that of the euro area. The other is that the various non-standard measures conducted in each currency area involve vastly different levels of risk.

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*Marco Leppin serves as Head of Office for Joachim Nagel, who is a Member of the Executive Board of the Deutsche Bundesbank.*

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220 I Street, N.E., Suite 200

Washington, D.C. 20002

Phone: 202-861-0791

Fax: 202-861-0790

www.international-economy.com  
editor@international-economy.com

Prior to the financial market crisis, the Fed conducted its monetary policy open-market operations in its “Primary Dealer System” with a group of only around twenty banks. The Fed has traditionally conducted its monetary policy operations with a comparatively small balance sheet. Following the Lehman Brothers collapse and the liquidity distress encountered by financial market participants, the Fed considerably expanded banks’ access to central bank liquidity. Confidence among financial market participants soured severely and the interbank market broke down, to which the Fed responded by distributing liquidity centrally and becoming, for a time, the banks’ most important counterparty. The rising number of transactions and direct liquidity supply caused the balance sheet to expand quickly from a low starting level.

The sudden growth of the Fed’s balance sheet in September 2008 was due initially to its new temporary and more active role as a distributor of liquidity in the financial market. The subsequent balance sheet expansion was attributable to a total of three programs to purchase government bonds and mortgage-backed securities beginning in 2009.

By contrast, the Eurosystem has traditionally operated using a larger balance sheet within a bank-based system, instead of a more capital-market oriented system such as in the United States. Through its regular open-market operations, it constantly conducts tender operations with a large number of commercial banks. Although a raft of non-standard measures were taken following the outbreak of the financial market crisis, the number of counterparties did not have to be increased significantly.

The second major difference is that the Fed, the Bank of England, and the Bank of Japan actively expanded their balance sheets through targeted asset purchases as one of the first measures in the financial crisis. By contrast, the

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Eurosystem used its full allotment policy, beginning in autumn 2008, to provide banks with unlimited liquidity against collateral. It therefore did not actively manage the size of the central bank balance sheet. Even later on, until 2014, the volumes of the securities markets program and the covered bond purchase programs one and two were small relative to the Eurosystem’s total assets.

### **ACTIVE BALANCE SHEET MANAGEMENT INVOLVES GREATER RISKS**

Although a central bank can directly change the size of its balance sheet through direct asset purchases, balance sheet size is not a monetary policy goal in itself with any direct implications for the real economy. It is merely a reflection of monetary policy measures and price movements.

However, the risks to a central bank of managing its balance sheet actively by means of asset purchases is always greater than if it expands its secured refinancing operations. Consequently, the risk to the taxpayer is also considerably greater, since a central bank’s gains as well as losses ultimately affect public budgets.

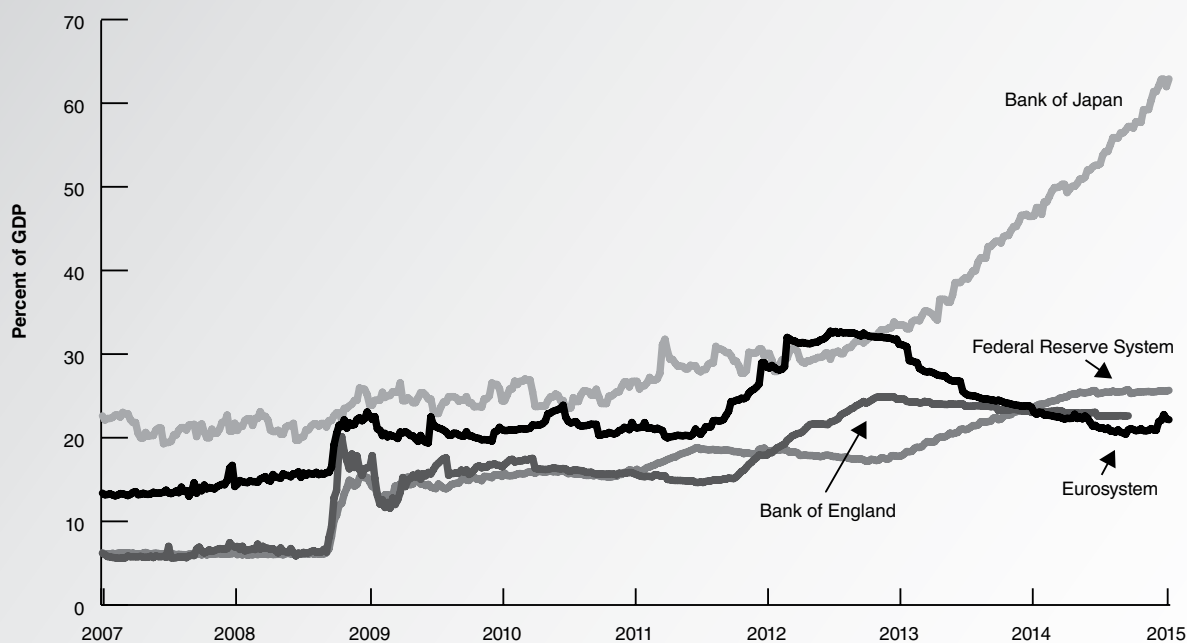
Refinancing operations always require the provision of collateral in order to protect the Eurosystem against losses on monetary policy operations. To this end, the Eurosystem has developed a single framework for eligible assets common to all Eurosystem credit operations (known as the “General Documentation”). A valuation haircut is applied to all assets. For a fixed-income bond in the highest liquidity category with a residual maturity of less than one year, the haircut is merely 0.5 percent. This would apply, for instance, to a AAA-rated Bund. In the strictest case, a valuation haircut of 65 percent on the central bank loan would be applied to a refinancing transaction for a non-marketable credit claim rated at least BBB-. The haircut applied to a marketable asset-backed security rated at least BBB- would be 22 percent. Were the Eurosystem to purchase this asset-backed security instead, it would pay the full market price. The asset would then enter the balance sheet without a haircut.

The default of an issuer should likewise not be ignored when looking at risk: in secured lending, the central bank incurs a loss only if both the issuer and the bank borrowing from the central bank default. Direct asset purchases do not provide this double line of defense.

### **NEW EUROSISTEM ASSET PURCHASE PROGRAMS AND EXPECTED BALANCE SHEET EXPANSION**

Back in September 2014, the ECB Governing Council adopted an additional package of monetary policy measures against the background of slackening growth and a persistently subdued inflation outlook. Measures adopted included not only an interest rate cut but also the purchase of covered bonds and asset-backed securities. Their purpose was

## Central Bank Balance Sheets



Sources: Central banks, Bloomberg, and Eurostat

Beginning of Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	Multiple
Federal Reserve System (\$)	874	894	2,266	2,237	2,423	2,928	2,909	4,033	4,516	5.2
Eurosystem (€)	1,151	1,501	2,043	1,852	2,004	2,736	3,018	2,285	2,158	1.9
Bank of Japan (¥)	116	106	128	124	127	141	158	223	305	2.6
Bank of England (£)	86	102	238	238	247	290	410	402	*	4.7

\*Bank of England balance sheet as of September 24, 2014.

to improve the functioning of monetary policy transmission, support the provision of credit to the real economy, and contribute to an even more accommodative monetary policy stance.

In its November and December 2014 policy meetings, the ECB Governing Council expressed the expectation that it would expand its total assets to the early 2012 level of around €3 trillion. Given the diminishing level of excess liquidity, the purchase volume is expected to be around at least €1 trillion. In January 2015, the Eurosystem announced a public sector purchase program encompassing the third covered bond purchase program and the asset-backed security purchases program with the aim of fulfilling the ECB's price stability mandate. The purchases started in March 2015 and are intended to be carried out until at least September 2016 and in any case until the Governing Council sees a sustained adjustment in the path of inflation that is consistent with its aim of achieving inflation rates below, but close to, 2 percent over the medium term.

It is often noted that the Fed conducted similar measures and thus effectively halted the economic slump. However, if we compare the euro area with the United States, we should remember that, when the Fed started purchasing mortgage-backed securities in 2009, those assets' valuations were under severe stress and the liquidity position was visibly tight. Spreads had expanded considerably and interest rates were generally higher. The markets had already applied a significant haircut. If we compare the situation at that time with the current price level on Europe's asset-backed security market, we find that the assets today have a much narrower spread and are even regarded by some market participants as overpriced in the light of a "search for yield" in a low interest rate environment.

The argument is often proffered that the only way to achieve the expected balance sheet expansion is by purchasing government bonds, as only this market is sufficiently large and liquid to move such large volumes. The debate on the effectiveness and the overall need of such a program

is still vivid. Apart from fundamental misgivings, a number of economic risks and side-effects have to be borne in mind whenever a central bank purchases government bonds. We would like to focus below on the risk aspects of these purchases.

### **RISKS FROM GOVERNMENT BONDS HARDLY COMPARABLE**

When comparing the risks of the public sector purchase program with those of such a program in the United States, the United Kingdom, and Japan, the fundamental differences between each currency area's government bonds in terms of risk are often neglected. First of all, the euro area has only one single monetary policy. Unlike the United States and Japan, it does not have a fiscal or political union. The risks which emerge are thus ultimately borne by nation-states and not by a federal European structure. They would be passed on to individual countries without direct democratic legitimacy. In fact, policymakers have thus far expressly rejected the idea of transferring fiscal policy responsibility to the European level.

The lack of a political union leads to another significant factor which sets apart the purchase of assets by the Eurosystem for monetary policy purposes. In this case, the Eurosystem is not purchasing "homogeneous" government bonds backed by a central government and thus by a central agent, as it is the case for the United States, the United Kingdom, or Japan. Instead, it is purchasing up to nineteen different government bonds with ratings ranging from top-notch to below investment grade. In addition, many financial market participants view the credit quality of the United States and Japan as being better than that of many euro area countries.

### **CHALLENGES OVER THE MEDIUM TERM**

We have already discussed the difference between the level of risk involved with asset purchases and that of securitized lending. However, a possibly excessive purchase price is not the only place where market risk becomes visible. In the current low interest rate environment, in which some interest rates are even negative, securities prices are very high. If the general interest rate level goes back up once the financial and sovereign debt crisis has ended and economic growth has become more stable, this will impact on the central bank's balance sheet. This will initially mean that securities portfolios will depreciate.

In addition to public and political pressure should the central bank's profits dwindle or even reach zero, governments will also not want to see interest rates pick up again since refinancing costs are currently extremely low. Given the central bank's primary mandate to maintain price stability, this pressure needs to be resisted.

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## *The Bank for International Settlements*

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Once the consequences of the financial and sovereign debt crisis have been overcome, central banks will face the question of how to exit their numerous non-standard measures. In its latest Annual Report, the Bank for International Settlements has warned that central banks, owing to the politico-economic risks described above, could possibly be too slow and too late in exiting their non-standard monetary policy measures.

For temporary refinancing operations, the issue is relatively simple for a central bank. Eurosystem operations, for instance, currently have a maximum maturity of four years. They will certainly need to avoid friction in the provision of liquidity as the operations mature. However, should the interbank market be functioning smoothly by this time and no longer need any significant excess liquidity, the central bank could return to a market-oriented provision of liquidity through variable-rate tenders.

The large-volume portfolios of purchase programs, however, tend to have longer maturities and cannot simply be handed back to the market. All central banks are going to face the task of winding down these portfolios with minimal market impact. A major future challenge will be to find the right time to normalize market conditions while avoiding market turmoil. At the same time, the market will also have to be able to reabsorb the excess liquidity. The Fed is at a different stage here than the central banks of the United Kingdom, Japan, or the euro area.

It has already begun its process of "tapering," that is, gradually winding down its non-standard measures, the first step being to discontinue its purchases of additional government bonds and mortgage-backed securities. Once interest rates "lift off," however, the accrued interest gains will be reinvested. Conversely, this only means that the balance sheet will grow significantly less than during the asset purchase programs. Looking to the future, the cautious shrinking of the balance sheet is scheduled to occur only once the Fed Funds Target Rate has been increased. ◆