



The expanding role of central banks since the crisis: what are the limits?¹

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It is an honour and a great pleasure for me to participate in this celebration marking the 150th anniversary of the Central Bank of the Russian Federation. I would like to congratulate Governor Ignatiev and the staff of the central bank on this occasion.

The role of central banks has become much wider than just setting the policy interest rate. This is partly attributable to the exceptional circumstances created by the crisis. But some aspects of the expanded role of central banks are likely to become permanent features of the post-crisis environment. In my remarks today the main message is that, although central banks may have reached the apex of their powers after the crisis, care should be taken not to overburden them. Central banks appropriately emerge from the crisis with a broader mandate to ensure financial stability. But they do not possess the power to shield financial systems from the fluctuations inherent in a market economy. This points to the need for central banks to be clear on the limits of their intervention in financial markets and to refrain from pushing back the frontiers of their mandate too far.

I. Central banks' role at its peak since the crisis

Before the crisis: narrow definition of mandates

Over the two decades preceding the crisis, a broad consensus had emerged that price stability – a low and stable inflation rate – should be the main, if not exclusive, goal of central banks (Table 1).

The consensus further held that monetary policy worked through interest rates, not through any direct effect of monetary aggregates. This implied that the goal of price stability was best served by monetary policy focused on one instrument, the policy interest rate. Under the prevailing assumptions, bond yields moved with expectations of future policy interest rates, and these yields discounted cash flows from equities and real estate. Monetary policy therefore only needed to influence current and future expected short-term interest rates. Long-term rates and asset prices would then adjust in a more or less predictable manner to the movements in short-term rates.

Apart from price stability, it was not entirely clear – nor agreed – what other roles central banks should play to ensure macroeconomic and financial stability. One exception was commercial banking: since commercial banks take (short-term) deposits as liabilities and provide (long-term) loans as assets, they are potentially subject to bank runs. This justified deposit insurance and the role of central banks as providers of emergency liquidity

¹ This speech was prepared with Dubravko Mihaljek, Senior Economist. Bilyana Bogdanova provided research assistance.



assistance (“lenders of last resort”). As such arrangements could lead to moral hazard-type behaviour on the part of banks and their customers, banks needed regulation and supervision. This involved, among other things, the use of microprudential tools such as capital requirements at the level of individual banks.

Table 1 The expanding role of central banks in the past few years

Conventional	Monetary policy tools	Prudential policy tools
<ul style="list-style-type: none"> • Focus on prices • Indirect approach to influencing financial conditions and asset prices • Direct influence on the very short-term interbank market only 	<ul style="list-style-type: none"> • Policy interest rate • Reserve requirements 	<ul style="list-style-type: none"> • Capital requirements • Liquidity requirements

Unconventional	Central bank balance sheet tools	
	Intervention in domestic financial markets	Intervention in FX markets
<ul style="list-style-type: none"> • Focus shifted from prices to quantities • Direct intervention in financial markets 	<ul style="list-style-type: none"> • Term interbank market • Sovereign bond markets • Credit markets (corporate and covered bonds, ABS) • Mortgage markets 	<ul style="list-style-type: none"> • FX intervention • Reserve accumulation • Currency swap arrangements

Within this setup, central banks generally concerned themselves little with the size and composition of their own balance sheets. The most important liability on the balance sheet of central banks was typically currency, ie banknotes on issue. Commercial banks’ settlement balances with the central bank were generally small. Central banks were often bankers to governments, but government deposits only rarely represented a large proportion of central bank liabilities. Central banks usually held a mixture of foreign currency (“international reserves”) and domestic currency assets (mostly government bonds and some claims on banks).

In the emerging market economies, the central banks have traditionally had a broad mandate. They were in many cases involved in a wide range of activities such as managing the exchange rate and foreign exchange reserves, developing local currency bond markets, managing government debt and performing prudential supervision.

Broadening role of central banks during the crisis

Then came the crisis. Central banks intervened in financial markets on an unprecedented scale, in successive moves that have not yet stopped, in order to prevent the collapse of the global financial system.

In **advanced economies**, the major central banks responded in the final months of 2008 by introducing or expanding the use of balance sheet policies. As conventional monetary easing ran its course, approaching the zero bound, central banks in a number of countries shifted their focus from prices to quantities (Table 1). These unconventional measures included:

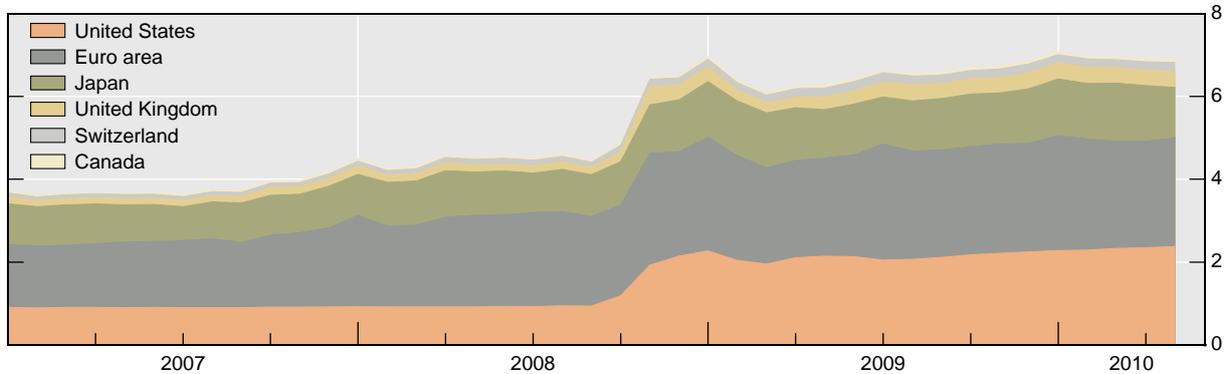


liquidity provision to banks on extraordinary terms, especially at longer maturities, in order to alleviate pressures in the interbank market; intervention in selected credit markets to support secondary market liquidity and credit pricing and supply; and outright bond purchases aimed at easing financing conditions beyond what could be achieved by policy rate cuts.

As a result, central banks' balance sheets in advanced economies expanded significantly, in some cases to more than twice their pre-crisis size (Graph 1), with a notable lengthening of asset duration (Graph 2). As market and macroeconomic conditions stabilised and improved over the course of 2009, central banks began to wind down these unconventional measures and to prepare for the return to conventional policy mode. However, the Greek sovereign debt crisis has brought these efforts to a halt – hopefully a temporary one. Central banks' balance sheets in the advanced economies still amounted to some \$7 trillion at the end of May (Graph 1).

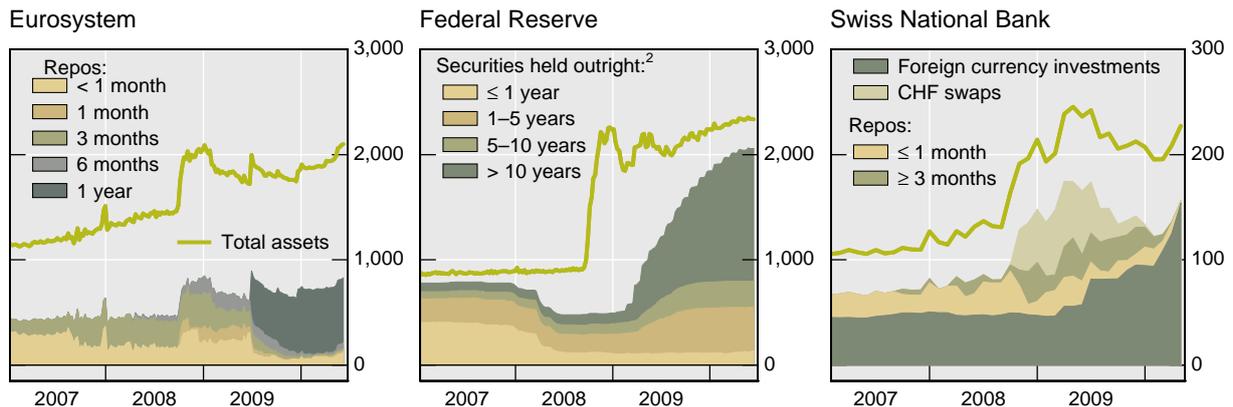
Graph 1
Balance sheets of central banks in advanced economies

In trillions of US dollars



Sources: Central banks, Bloomberg.

Graph 2
Central bank balance sheet size and asset duration¹



¹ In billions of units of national currency. For the Eurosystem and the Swiss National Bank, breakdown of outstanding repo operations refers to original maturity; for the Federal Reserve, breakdown of securities held outright refers to remaining maturity. ² Includes mortgage-backed securities, US Treasuries and agency debt securities held outright.

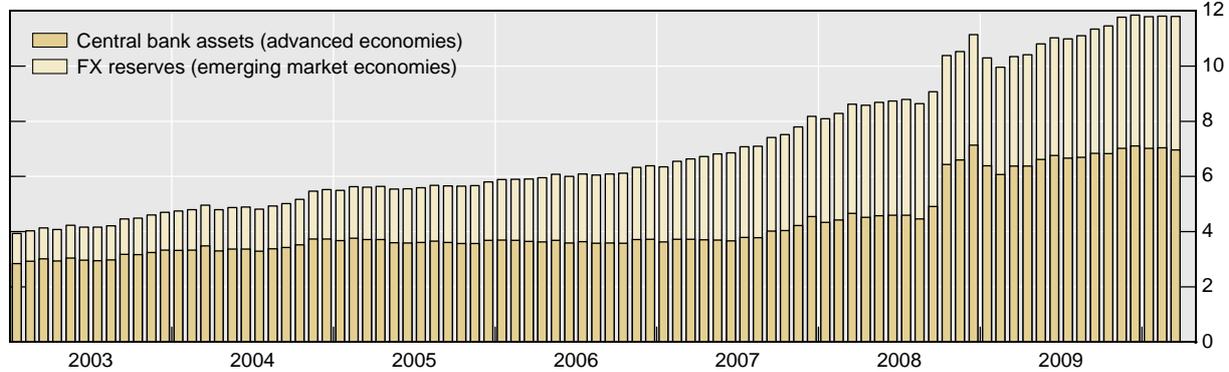
Source: Central banks.

In the **emerging market economies**, the size of central banks' balance sheets had already expanded considerably before the crisis, as central banks, in a long-standing form of unconventional policies, had built up reserves to extraordinary levels (Table 1). The combined foreign exchange reserves of major emerging market economies stood at around \$5 trillion in mid-2008, and after a temporary dip in late 2008 and early 2009 they have



continued to grow (Graph 3). Currently, central bank balance sheets, the bulk of which consists of foreign exchange reserves, are equivalent to roughly 70% of GDP in China and between 20 and 40% of GDP in Brazil, India and Russia (Graph 4).

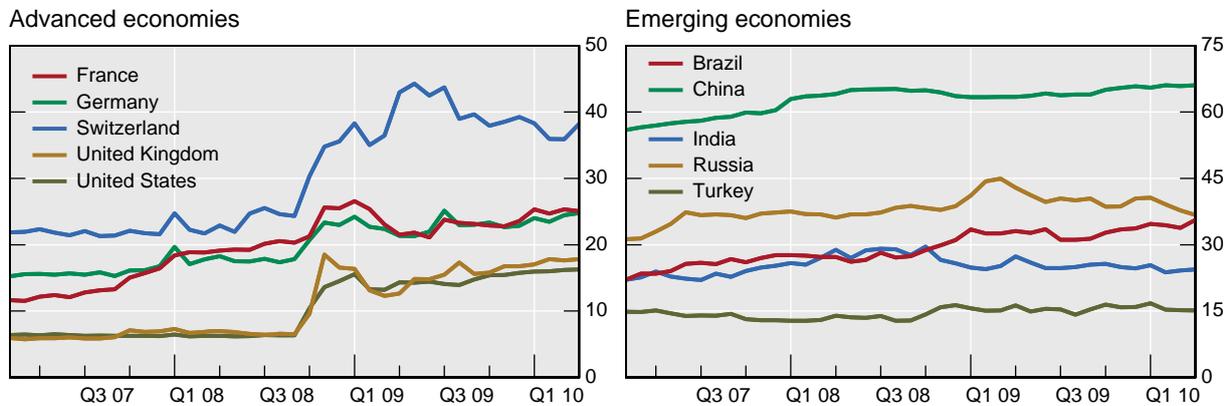
Graph 3
Global liquidity: central bank assets¹ and foreign exchange reserves²
In trillions of current US dollars



¹ Total of the United States, the euro area, Japan, Canada, Sweden, Switzerland and the United Kingdom. ² Total of major emerging market economies (China, Chinese Taipei, Hong Kong SAR, India, Korea, Malaysia, Singapore, Thailand, Brazil, Mexico, Russia and Turkey).

Source: National data.

Graph 4
Central bank balance sheets as a share of GDP
In per cent



Sources: Central banks; IMF, *World Economic Outlook*, *International Financial Statistics*.

Such a high level of reserves had significant domestic and international implications. Domestically, there were major effects on the liquidity of the banking system and on bank credit. This was because the scale of the central bank local currency liabilities that were the counterpart of foreign currency assets was large in relation to the size of the banking system. Many emerging market central banks sought to neutralise this effect by raising reserve requirements. But high reserve requirements could over time drive intermediation from the regulated banking system to less regulated entities.

Internationally, the foreign exchange reserves of emerging market economies became sizeable in relation to global stocks of benchmark bonds. Continuing reserve accumulation raised the demand for benchmark bonds further, and may have joined low policy rates in holding down bond market yields in advanced economies, spurring the growth of asset prices in some countries. Moreover, resistance from some emerging market countries to medium-term currency appreciation weakened the global adjustment of current account imbalances.



On the positive side, large foreign exchange reserves provided the emerging market countries with a sizeable buffer of liquid foreign assets on the eve of the crisis.

When the crisis struck, the impact on emerging markets was much greater than many had expected. There was a huge shock to trade volumes and commodity prices. Commodity exporters including Russia were hit very hard. Furthermore, it became extremely difficult for banks and corporations to roll over short-term dollar liabilities. Banks, especially in Europe, experienced an acute dollar funding shortage after the collapse of Lehman Brothers in September 2008.

This led to drastic reactions in some emerging market economies. There was a large sell-off of foreign exchange reserves as the authorities in several countries – Brazil, Korea, Mexico, Poland as well as Russia – discovered large corporate and banking sector exposures to exchange rate depreciation. Central bank emergency measures often took unorthodox forms, including foreign currency loans to banks and corporations. Partly as a result of these measures, the balance sheets of some central banks, including that of Russia, expanded significantly during the crisis, despite the often sizeable run-down of reserves. How to unwind the expansion of central bank balance sheets has thus become a big issue for central banks in both emerging and advanced market economies.

Since the start of the crisis almost three years ago, the prevailing view on the central banks' role has swung from the relatively narrow definition I described a moment ago to almost the other extreme, a view that central banks can and should be an almost omnipresent force in the financial system.

Can central banks perform all of these roles successfully? After the crisis, what should be exceptional, and what should be permanent in the expanded role of central banks in the national and global economies?

II. Greater role for central banks in promoting financial stability and systemic oversight: a permanent and welcome development

The role of central banks as an anchor for price stability remains crucial, as illustrated by their success so far in keeping inflation expectations low. But in the post-crisis environment, central banks are expected to ensure stability in a broader sense than just price stability. In particular, it is now more or less universally recognised that central banks should have a formal mandate for financial stability. Yet what that mandate exactly means is still a work in progress.²

Leaning against financial imbalances

Let me first mention the potential role of monetary policy in leaning against the build-up of financial imbalances as reflected in asset prices and credit booms, and the role of monetary aggregates as indicators of financial instability.

As emphasised in our work at the BIS over the past decade, as well as in that of some other central banks, notably the ECB, the analysis of monetary and credit developments may offer insights into the slow accumulation of financial imbalances and thus identify an emerging threat to price stability and more broadly to macroeconomic stability over the longer term. Given such signals, central banks can respond, together with supervisory authorities, in a

² A recent example is the Swedish central bank's submission of a request to the Swedish parliament to clarify and anchor in law the central bank's responsibility for financial stability and the tools it needs. The purpose is "to establish a coherent and effective framework that can contribute to maintaining financial stability and to minimising the costs to both the economy and consumers". See "Coherent regulatory framework and clear division of roles between authorities", submission to the Riksdag by the General Council and the Executive Board of the Riksbank, 15 February 2010.



commensurate and timely manner. In particular, they can “lean against the wind” in the sense that the interest rate and supervisory tools are varied taking into account changes in credit availability that could create financial imbalances and asset price misalignments. After the crisis, it is more widely recognised that monetary policy may have a role to play to counteract excessive credit expansion and asset price booms even if price stability seems assured over the short term.

Supervision of individual institutions

Developments over the past three years indicate that monetary authorities are swinging back towards the view that it is natural for central banks to be in charge of **microprudential supervision of banks**. In particular, the role of central banks in banking supervision has been not only confirmed but also expanded in a number of cases. In some countries, supervisory powers might even be returned to central banks after having been assumed by separate institutions a decade or so ago. Developments in Germany and the United Kingdom will be watched particularly closely in this respect.

In addition, some central banks are taking over responsibility for the **microprudential supervision of non-bank financial institutions**, in particular insurance companies. Under proposed legislation, the Fed would acquire important new powers to regulate systemically significant non-bank financial companies. The French authorities inaugurated earlier this year a new institution, the Prudential Control Authority, which merges existing structures for the surveillance of banks and insurance companies. The president of the new authority is the Governor of the Bank of France, an appointment that personifies the very close link between prudential control and the tasks of the central bank. Those central banks that already had a mandate to supervise non-bank financial institutions in the past – for instance, in the Netherlands, the Czech Republic, India, Malaysia and Singapore – found these powers extremely useful during the crisis.

Systemic oversight

Furthermore, central banks are increasingly being put in charge of **overseeing systemic risk**. This is because, as “the ultimate provider of liquidity”,³ they are in a unique position to focus on system-wide risks and obtain an integrated view of both the individual financial institutions and the financial system as a whole. Even when financial institutions look strong on an individual basis, systemic risk can emerge as a result of the interconnectedness of financial institutions, markets and infrastructures. The macroprudential approach to supervision has to take account of these externalities.

Two recent examples of this approach are the creation of the European Systemic Risk Board (ESRB) at the ECB, and the proposed Financial Stability Oversight Council in the United States. The ESRB will be an independent body responsible for conducting macroprudential oversight of the European Union’s financial system as a whole. It is thus expected to fill a gap in the ability of financial regulators to detect, assess and contain the build-up of systemic risks. Similarly, the Financial Stability Oversight Council of regulators in the United States is expected to identify systemically significant companies and monitor markets for the development of asset price and credit booms that might threaten financial stability. According to these proposals, the Fed would be responsible for the **supervision of systemically important financial institutions**, for which stricter capital, leverage and liquidity requirements are being considered.

The mandate of central banks is also being extended in the area of **oversight of systemically significant financial market infrastructures** (large-value payment systems, securities settlement systems and central counterparties). The role of central banks in

³ See “The G-20’s core agenda to reduce systemic risk”, remarks by Mark Carney, Governor of the Bank of Canada, International Organization of Securities Commissions (IOSCO), Montreal, 10 June 2010.



payment and settlement systems has a long tradition and is taken for granted. Until September 2008, counterparty and liquidity risks in over-the-counter (OTC) derivatives markets were not considered to be something that central banks should concern themselves with. The prevailing view was that the private counterparties involved had enough incentives to keep the risks of OTC derivatives transactions under control. However, the collapse of Lehman Brothers and the difficulties of American Insurance Group (AIG) have demonstrated the limitations of this approach.

Today, the establishment of central clearing counterparties (CCPs) is expected to reduce significantly the counterparty risk in OTC derivatives markets. As these will assume a very prominent role in the future financial system, adequate oversight and regulation of CCPs will be very important. No doubt central banks will want to be closely involved in this process. One important issue that will need to be clarified is the central banks' liquidity policy vis-à-vis the new central counterparties, especially in periods of market stress.

III. Large-scale central bank intervention in financial markets: an exceptional development not to be perpetuated

A broader role for central banks in promoting financial stability and systemic oversight is a permanent and welcome development. In contrast, large-scale intervention by central banks in financial markets should be seen as an exceptional development. It is a by-product of the crisis with some dangerous side effects that are likely to become more harmful the longer the "medicine" is taken. The sustained bloating of their balance sheets means that central banks still dominate some financial market segments, thereby distorting the pricing of some important bonds and loans, discouraging necessary market-making by private individuals and institutions, and increasing moral hazard by suggesting that there is a buyer of last resort for some instruments. Over the past three years, central banks have accepted the need to push back the boundaries of their traditional domain of intervention in order to prevent the collapse of the global financial system. But they should not run the risk of perpetuating these exceptional actions. They need to explain the rationale for these measures, set clear limits on the time and size of their interventions, and return to the task of influencing the transmission mechanism by shaping only the very short end of the yield curve.

Rationale for central bank intervention in dysfunctional markets

During the crisis, central banks had to step in to replace disrupted and dislocated funding markets. Severe tensions in interbank, foreign exchange swap and some segments of securities markets – including, lately, government bond markets – hampered the monetary policy transmission mechanism. The usual relationship between key policy rates and the rates applicable in the real economy was disrupted, and the main tool for influencing financing conditions in the real economy did not work properly. In short, the proper transmission of monetary policy impulses to the economy may be impaired if the "risk premia become so large that they dominate the signal from the key policy rates".⁴ If credit and liquidity spreads widen beyond any reasonable level, central banks may exceptionally decide that direct intervention in selected markets is the only way to ensure consistency between the policy rates and financing conditions determining funding costs for households, financial institutions, non-financial corporations and governments.

However, as their interventions expanded, central banks over time crossed the boundary between monetary policy and asset price formation. Whether by design or not, the unconventional measures started to influence directly not only the short end of the yield curve but also long-term sovereign bond rates, credit spreads, mortgage rates, covered bond

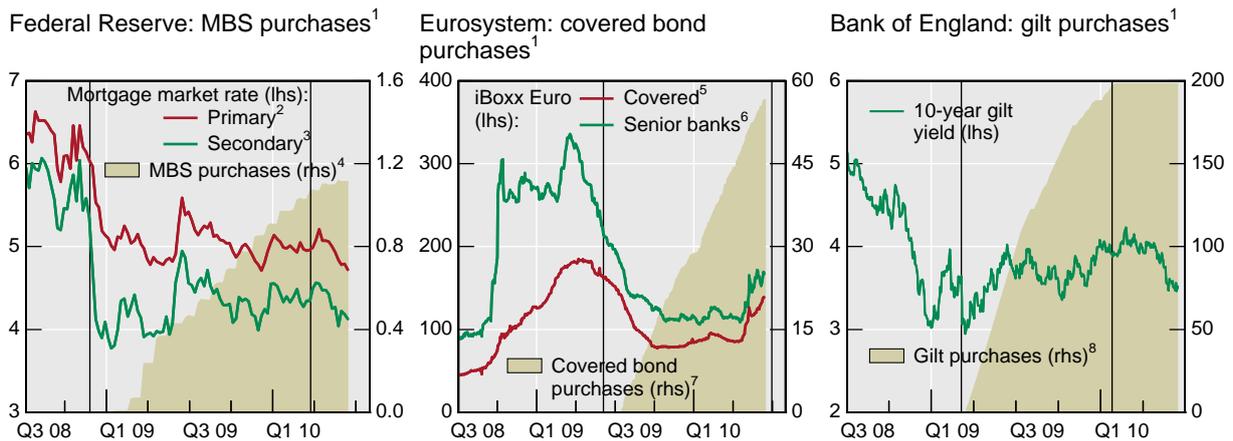
⁴ "The ECB's response to the recent tensions in financial markets", speech by Jean-Claude Trichet, President of the ECB, at the 38th Economic Conference of the Austrian National Bank, Vienna, 31 May 2010.



spreads, etc. The rationale for these measures has been the easing of overall financing conditions via lower yields and spreads, or ensuring an effective functioning of the monetary policy transmission mechanism in the face of dysfunctional financial markets. But there is a danger that market participants may at some point come to expect that central banks, for one reason or another, will stay more or less permanently involved in shaping the long-term rather than just the very short-term segment of the yield curve. The market's role in determining asset prices would in this case be undermined.

Graphs 5 and 6 illustrate this point. In the United States, purchases of mortgage-backed securities by the Fed as part of its “credit easing” policy have led to lower interest rates on 30-year fixed mortgages over the past two years (Graph 5, left-hand panel). In the euro area, covered bond purchases under the ECB’s “enhanced credit support” helped bring about significantly lower spreads on such bonds until the recent tensions in government bond markets emerged (centre panel). Outright purchases of government bonds by the Bank of England as part of its “quantitative easing” not only helped to lower long-term bond yields from their crisis peaks but have also kept yields low since (right-hand panel). And in Japan, the announcement in late 2008 of an increase in outright purchases of Japanese government bonds (JGBs) by the Bank of Japan and the expansion of the range of eligible JGBs helped maintain JGB yields at a very low level (Graph 6).

Graph 5

Central bank intervention in selected markets

¹ The first vertical line indicates the announcement of the programme, the second indicates its termination. For the Bank of England, the second line indicates the last purchase of gilts (26 January 2010). ² Thirty-year fixed mortgage rate provided by Freddie Mac's Primary Mortgage Market Survey, in per cent. ³ Fannie Mae's 30-year current-coupon MBS, in per cent. ⁴ In trillions of US dollars; settled transactions only. ⁵ Spread between the yield on a basket of euro-denominated covered bonds and interest rate swaps with a similar maturity, in basis points. ⁶ Spread between the yield on a basket of senior unsecured bank bonds and interest rate swaps with a similar maturity, in basis points. ⁷ In billions of euros; settled transactions only. ⁸ In billions of pound sterling; settled transactions only.

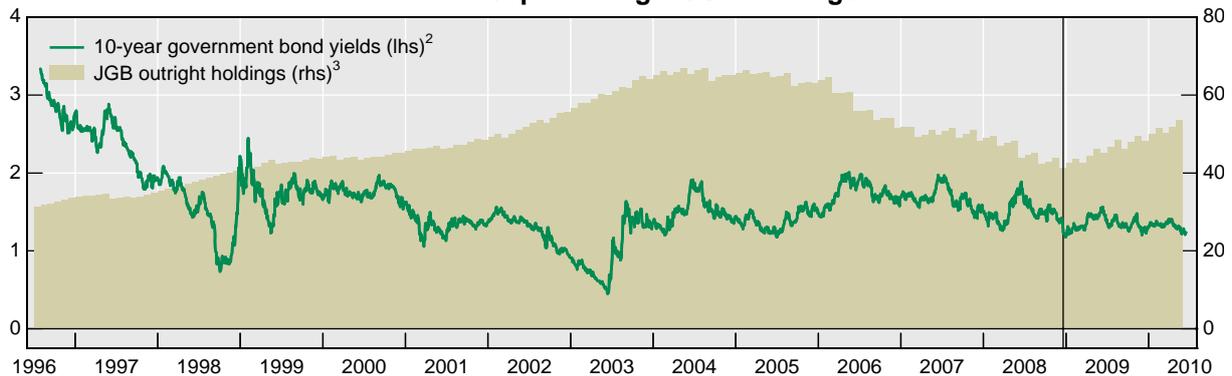
Sources: Central banks; Bloomberg; Freddie Mac; Markit.

Central bank intervention in financial markets: what are the limits?

These developments suggest that unconventional measures have on the whole been effective in achieving their goals. However, there is a risk that this relative success may create expectations that central banks will continue to intervene heavily in markets. Central banks strive to avoid creating such expectations by making it clear that there are time and size limits to their interventions in financial markets, while at the same time keeping open the option to intervene if severe tensions reappear and impair the operation of the monetary transmission mechanism.



Graph 6
Bank of Japan outright JGB holdings¹



¹ The vertical line indicates the announcement of the increase in outright purchases of Japanese government bonds (JGBs) and the expansion of the range of eligible JGBs to be accepted (19 December 2008). ² In per cent. ³ Outstanding amounts of all maturities, end of month, in trillions of yen. Ten-year JGBs account on average for 45–50% of the Bank of Japan's outright JGB purchases. Total JGB holdings of the Bank of Japan amount to around ¥54 trillion (\$585 billion, or 11% of GDP).

Source: Central banks; Bloomberg.

Time limits: unconventional balance sheet policies are temporary and exceptional

Historically, the balance of risks in judging the timing and pace of exit from unconventional policies has been tilted towards exiting too late and too slowly. The main reason is that political economy pressures inevitably go in the direction of delaying the exit. However, there are strong reasons for setting clear time limits to unconventional balance sheet policies.

The normal functioning of financial markets should clearly not depend on public support – central banks cannot take the place of the market nor become the “lender of first resort” each time stress in markets appears. Unconventional balance sheet policies need to be withdrawn without delay once central banks judge that these policies have achieved their goal.

Size limits: central banks cannot take unlimited credit and market risk

Another reason why central banks need to unwind their intervention in financial markets is that they are not immune to credit risk. The conventional rule is that central bank lending must be fully collateralised. Unsecured lending is a risky art, requiring discretion, which is incompatible with the principles of transparency and equal treatment in access to central bank credit. Nor is it consistent with the accountability of the central bank.

However, central banks' risk tolerance has evolved since the start of the crisis. Central banks deviated from the conventional rule of minimising credit risk and from the principle of full collateralisation when they started making outright purchases of securities and intervening in credit markets. These measures came under different names: “credit easing”, “quantitative easing”, “enhanced credit support”, etc. But in essence they were all unsecured and involved a greater acceptance of credit risk on the part of central banks. To preserve the soundness of their credit operations – and ultimately their financial independence – central banks cannot accumulate credit risk without limit.

The same applies to market risk: large-scale bond buying, like foreign exchange intervention and reserve accumulation, exposes central banks to considerable market risk. The core function of central banks and their area of expertise are to implement monetary policy to achieve price stability, not to be asset managers of very large portfolios.



The road to normalisation of interest rate and balance sheet policies

There are two aspects to normalising monetary policy: first, the normalisation of the monetary transmission mechanism; and second, the normalisation of the levels of policy interest rates. Both presuppose that central banks and financial markets have resumed their traditional roles.

Normalisation of the monetary transmission mechanism

As noted above, the key issue arising from massive interventions in the form of outright asset purchases relates to the potential role of central banks in **directly** influencing long-term bond yields and credit spreads. Market participants should be under no illusion that we are entering into a new and permanently accommodative monetary policy regime in which central banks undertake to control directly the entire length of yield curves as well as credit spreads and mortgage rates. The unconventional measures, exceptionally used by central banks to permit the reduction of policy rates to be fully transmitted, should not be seen as an additional set of tools that central banks would use in their normal day-to-day conduct of policy.

In normal times, central banks will need to go back to their usual approach of controlling only the short end of the yield curve, of influencing asset prices only indirectly, and of refraining from direct interventions with potentially distorting effects on relative asset prices. They need to exit from their unconventional monetary policy to make it clear that the unconventional will not become the new normal. The sooner the exit, the better.

Normalisation of the level of interest rates

Regarding the short end of the yield curve, the large financial institutions that dominate global financial communication are clearly biased towards perpetuating a very low policy interest rate environment. There is little doubt that market participants will continue to advocate for quite a while yet the continuation of the current near zero interest policy in advanced economies, and to repeat again and again that “it is too soon to exit”. Central banks will have to remind market participants that the decision on policy rates cannot be dictated by a “market consensus” that aggregates a myriad of individual views from representatives of financial institutions who have a common business interest in low interest rates and their positive impact on asset prices.

IV. Conclusion

In my remarks, I have tried to outline which aspects of the greater role assumed by central banks during the crisis are likely to become permanent, and which ones can be regarded as temporary and therefore exceptional from a longer-term perspective. We can be pretty sure that central banks will see their financial stability mandate broadened in the future. Systemic oversight is also likely to become part of more permanent central bank activities in many countries.

In contrast, central bank interventions in financial markets cannot be perpetuated indefinitely and need to be wound down eventually – in principle, the sooner, the better. This conclusion derives from the fundamental principle that central banks cannot substitute for the market nor become the “buyer of last resort” of financial assets: the broad policy role of central banks as an anchor of stability in the medium and long term should not be overshadowed by short-term intervention in financial markets.