

Box 7**ECB MONETARY POLICY DURING THE FINANCIAL CRISIS AND ASSET PRICE DEVELOPMENTS**

The ECB has responded swiftly and decisively to the financial crisis and the subsequent deterioration in economic, monetary and financial conditions with the aim of maintaining price stability over the medium term.¹ A range of measures adopted by the ECB made ample liquidity available to the banking system and aimed at safeguarding the transmission of monetary policy at times of impairment and fragmentation in financial markets, thereby helping to sustain financial intermediation and the availability of credit to the real economy. At the same time, the historically low interest rates and the unprecedented scope of liquidity support could give rise to concerns about renewed asset price misalignments and financial imbalances. This box looks at asset price developments in the euro area and concludes that there is currently little evidence of broad-based asset price misalignments in the euro area.

The impact of standard and non-standard monetary policy measures on asset prices

Adjustments in the monetary policy stance of the ECB are normally achieved through changes in the key ECB interest rates. These changes in policy interest rates and the associated adjustments in expectations of future policy interest rates directly affect short-term interbank market rates and the entire spectrum of returns on financial market instruments of different maturities. Aside from the effects on debt instrument prices, the prices of all other asset classes – such as stock market prices, real estate prices and exchange rates – are also affected by changes in policy interest rates, owing to arbitrage. Therefore, asset price variations are a natural channel through which changes in the monetary policy stance affect the wider economy. Money and credit developments are also affected by interest rates – via changes in the opportunity cost of holding money vis-à-vis alternative assets and via asset prices in the context of portfolio reallocations across asset classes as well as through the bank lending channel operating via adjustments in prices and quantities on bank and borrower balance sheets.

Against this background, most non-standard measures implemented by the ECB can also be seen to operate via asset price channels. For example, the fixed rate full allotment procedure in

¹ For a comprehensive overview, see the article entitled “The ECB’s response to the financial crisis”, *Monthly Bulletin*, ECB, October 2010; and the article entitled “The ECB’s non-standard measures – impact and phasing out”, *Monthly Bulletin*, ECB, July 2011.

refinancing operations attenuated stress on the availability and the cost of financing for banks, while the ECB's covered bond purchase programmes provided support to a specific bank funding channel, which had become impaired following the collapse of Lehman Brothers in the autumn of 2008 and the ensuing breakdown in the smooth functioning of interbank markets. In addition, the Securities Markets Programme and the announcement of Outright Monetary Transactions (OMTs) aimed to restore appropriate functioning of the monetary policy transmission mechanism by focusing on the secondary market for sovereign bonds. By providing support and backstops to specific asset markets, non-standard measures can also contribute to indirectly alleviating borrowing and liquidity constraints and can thereby help to overcome impairments to the monetary transmission mechanism and ensure that the ECB's monetary policy stance is smoothly transmitted to the real economy.

Conditions that could lead to asset price misalignments

Besides affecting asset prices in a normal or "desirable" way, standard and non-standard monetary policy measures can, under certain circumstances, also carry the risk of creating an environment that is conducive to asset price misalignments and the emergence of financial imbalances. For example, interest rates that are low for too long may have the potential to induce excessive risk-taking and an underpricing of risk if investors start buying higher-yielding assets, irrespective of their risk profile, in a search for yield induced by low interest rates on low-risk assets. Concerns about asset price misalignments may also emerge from high amounts of excess liquidity resulting from the ECB's non-standard measures. In such a situation and subject to demand and the capacity to absorb risks, banks may be more inclined to expand lending to households, governments, non-financial corporations or other financial institutions for the purpose of asset purchases or they could purchase assets directly. In this case, demand for these assets would increase and push up their prices. Therefore, concerns about potential asset price misalignments should relate to the strength in money and credit growth and not to the rise in bank reserves per se.

Although asset price misalignments are inherently difficult to detect, it is possible to extract signals about the true fundamental value of assets by looking at valuations of stocks and real estate in relation to their potential earning capacity in terms of dividends/earnings and rents, respectively. Once such valuations depart too far and for too long from certain benchmarks, it is usually a sign of future or imminent risk of unsustainable asset price developments. In the same vein, spreads between yields on highly rated corporate bonds and sovereign bonds should reflect the magnitude of uncertainties associated with the economic outlook and the expected default frequency for firms. A sharp compression of corporate bond yield spreads divorced from improvements in the economic outlook could thus provide a signal of misaligned developments in bond prices.

There is evidence that certain indicator variables can provide information regarding boom/bust cycles in specific asset markets. Money and credit developments stand out in this regard as a number of theoretical channels link these variables to asset prices and, ultimately, consumer prices.² Indeed, looking at empirical regularities, boom/bust cycles in asset markets seem, historically, to have been closely associated with large fluctuations in money and credit

² For a detailed discussion of this line of research, see "Asset price bubbles and monetary policy", *Monthly Bulletin*, ECB, April 2005 and "Asset price bubbles and monetary policy revisited", *Monthly Bulletin*, ECB, November 2010.

aggregates, particularly in periods of either: (i) asset price busts; or (ii) asset price booms that end in financial distress. One robust finding across a number of recent studies is that various measures of excessive credit creation are good leading indicators of a build-up of financial imbalances in the economy. The ECB's monetary analysis therefore considers, among others, money and credit developments to assess whether asset price misalignments appear to be present in the euro area.

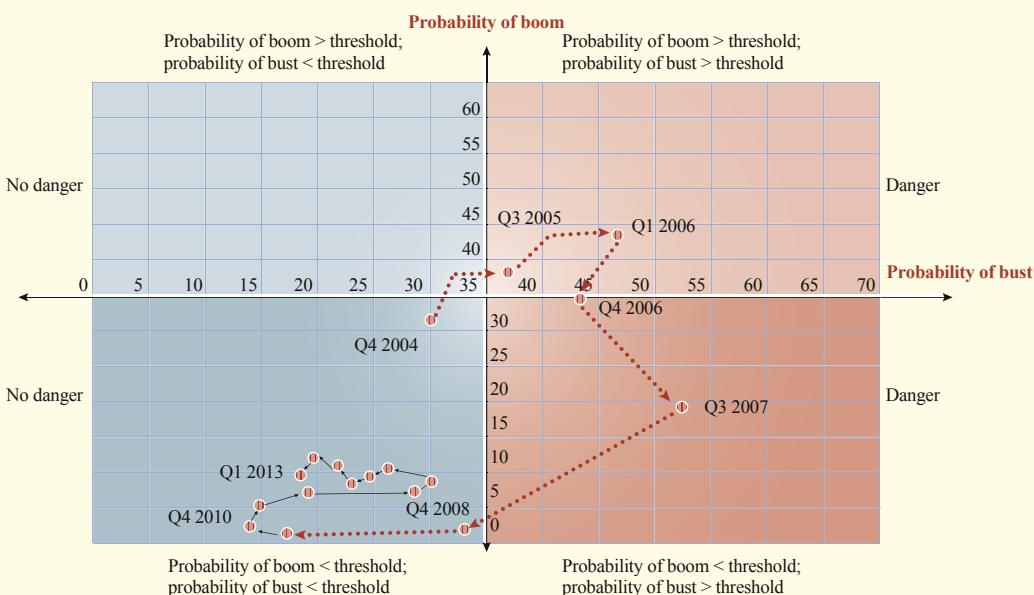
Little evidence of broad-based asset price misalignments in the euro area

In general, even though aggregate liquidity provision by the ECB has increased substantially in recent years as a result of various non-standard measures, money and in particular credit dynamics have remained subdued.³ This suggests that, currently, the continued high amounts of excess liquidity in money markets are not fuelling credit-driven asset price misalignments. The amounts of excess liquidity are rather a sign of the continuing fragmentation in euro area financial markets.

Specifically, growth in money and credit has been subdued since mid-2010, with average annual growth in the broad monetary aggregate M3 having fallen from 11.2% in 2007 to 2.3% in the second quarter of 2013, and growth in loans to the private sector having declined from 10.8% to -0.9% over the same period. Early warning models based on money, credit and real developments can provide an assessment of the risk of asset price booms or busts. Chart A shows that in the last four years the probability of a boom or bust in an asset market combining euro area stock and house prices over the next two years has remained below the critical threshold that would signal

Chart A Assessment of the risk of booms and busts in euro area composite asset prices

(percentages)



Sources: ECB staff estimates based on Gerdesmeier, Reimers and Roffia (2010, 2011) (see footnote 3 in this box).

³ On the relationship between excess liquidity and money growth, see the box entitled "The relationship between base money, broad money and risks to price stability", *Monthly Bulletin*, ECB, May 2012.

risk based on historical experience (as indicated by the fact that the latest estimates are situated in the lower left quadrant of Chart A). Yet the subdued signals emerging from this indicator may mask differences in boom and bust risks across euro area countries and asset segments owing to financial fragmentation.

As regards bond markets, spreads of non-financial corporate bonds and bank bonds over the corresponding swap rates increased markedly in autumn 2008 as a result of the severe tensions in financial markets. From mid-2009 and following the unprecedented monetary policy response, they decreased considerably. After surging again in the context of the sovereign debt crisis, these spreads have declined significantly as financial market participants' confidence has improved since the ECB's implementation of the two three-year LTROs in winter 2011/12 and the announcement of OMTs in mid-2012. In addition, significant progress in terms of governance at the national and European level has supported this development. For example, the recapitalisation of banks and the decision to establish a banking union have contributed to the more positive sentiment of investors. As a result, at the end of July 2013 spreads of investment-grade non-financial corporate bonds and bank bonds over the corresponding swap rates stood, on average, at 107 and 177 basis points respectively, close to their lowest levels in two years (see Chart B). In addition, the difference between spreads of bank bonds and non-financial corporate bonds decreased as well. Both groups of spreads remain, however, well above the levels witnessed prior to the financial crisis, in part reflecting higher risk perceptions in a weak economic environment and the continued need to repair corporate balance sheets in the wake of the crisis.⁴

Chart B Spreads on euro area investment-grade non-financial corporate bonds and bank bonds, and the difference between the two

(basis points)

- euro area investment-grade bank bonds
- euro area investment-grade non-financial corporate bonds
- difference



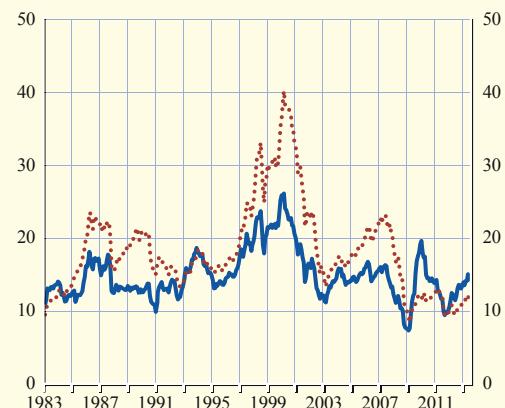
Sources: Merrill Lynch and ECB calculations.

Notes: The latest observation is for July 2013. Spreads are calculated against swap rates taking into account maturity adjustment. Average time to maturity is between three and six years.

Chart C Price-earnings ratios in the euro area based on the previous year's earnings and ten-year average earnings

(ratios)

- based on last year's earnings
- based on ten-year average earnings



Sources: DataStream, OECD, Eurostat and ECB calculations.

Notes: The indices used are the DataStream broad indices. Price-earnings ratios based on ten-year average earnings are calculated using the average of the last ten years' earnings measured at the current period's price level.

⁴ For more details, see the box entitled "Recent developments in spreads on corporate bonds issued by euro area non-financial corporations", *Monthly Bulletin*, ECB, June 2013.

As regards equity markets, euro area stock prices have been on a steady upward trend since July 2012. This upward trend reflects improvements in risk appetite on the part of investors, who have shifted their preferences towards stocks in an attempt to search for yield in the current environment of low real interest rates. However, stock prices are still far from pre-financial crisis levels in most euro area countries. Furthermore, price-earnings ratios for the euro area remain relatively low in a historical context (see Chart C).⁵

Conclusion

Low interest rates and non-standard monetary policy measures have, under certain circumstances, the potential to create an environment that is conducive to asset price misalignments and the emergence of financial imbalances. However, the review of a selected set of asset price indicators has shown that, in the case of the euro area, there is currently little evidence of broad-based asset price misalignments or of a build-up of financial imbalances. Asset prices by and large continue to reflect an elevated perception of risk and continued financial market fragmentation across euro area countries. The medium-term outlook for inflation remains subdued owing to weak aggregate demand and subdued growth in money and credit.

5 For more details, see the box entitled "Stock market developments in the light of the current low yield environment", *Monthly Bulletin*, ECB, August 2013.