

# What role for central banks in safeguarding financial stability?

Isabel Schnabel\*

The author is Professor at the University of Bonn Institute for Finance and Statistics

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## 1 Motivation

Can central banks ignore financial stability? The answer is clearly no. Independent of their mandates, central banks have to take financial stability into account. The main reason is that the banking system plays an important role in the transmission of monetary policy. When the banking sector is impaired, monetary policy is unlikely to function well. In addition, severe banking crises tend to go along with deep depressions, putting pressure on macroeconomic stability and necessitating monetary policy action. Hence, the question is not whether central banks should take account of financial stability but how they should do it.

Central banks may contribute to financial stability in three different ways: First, central banks act as crisis managers, that is, as lenders of last resort, in an acute financial crisis. Second, they affect financial stability through their regular monetary policy decisions. Finally, they may act as prudential supervisors themselves. While it is largely uncontroversial that central banks have a role to play in an acute crisis, there is much more dispute about how financial stability concerns should enter monetary policy and whether central banks should be responsible for prudential supervision. In the following, I will discuss all three potential roles, focusing on the latter two and trying to enrich the debate by recent research.

## 2 Central banks as crisis managers

It is largely uncontroversial that central banks should act as lenders of last resort in an acute financial crisis (although it is no longer taken for granted that this should be done according to Bagehot's rules, see Hellwig, 2015). In fact, one of the lessons learnt in the Great Depression was that the failure to act as a lender of last resort may deepen a crisis. This insight helped modern central banks to deal with the global financial crisis. By quickly injecting large amounts of liquidity, central banks may have prevented an even deeper economic downturn.

Does the role of the central bank as a lender of last resort stand in conflict with monetary policy objectives? In most instances, the answer is probably no. Systemic financial crises typically go along with deflationary pressure. Therefore, lender of last resort activities tend to support both monetary and financial stability.

However, this may not be true in a fixed exchange rate regime or in a banking system whose liabilities are mostly denominated in foreign currency (see also Hellwig, 2015). In such circumstances, the scope for lender of last resort activities is limited. A telling example is the German crisis of 1931 when the Reichsbank's role as a lender of last resort to the banking system increasingly clashed with its objective of safeguarding the stability of the currency. When its reserves breached the mandatory gold cover, the Reichsbank rigorously curtailed lending to banks, which triggered the breakdown of Danatbank and simultaneously the general banking panic, and resulted in the abandonment of the gold standard (Schnabel, 2004). Hence, lender of last resort activities are generally supportive of macroeconomic stability but they may stand in conflict with the goal of maintaining a fixed currency peg.

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### 3 Financial stability as a monetary policy objective

Whether financial stability should explicitly be considered as a monetary policy objective is highly controversial. The debate has focused on the question whether central banks should take account of the evolution of asset prices and the potential emergence of financial bubbles when taking monetary policy decisions. Should central banks behave passively and intervene only when a bubble bursts? This is the “cleaning up the mess” view associated with Alan Greenspan (1999, 2002). Or should they try to prevent the emergence of bubbles early on? This is the “leaning against the wind” view propagated by the Bank for International Settlements (Cecchetti et al., 2000; Borio and Lowe, 2002; White, 2006). And if central banks lean against the wind, should they do so by raising interest rates or by using macroprudential tools?

There are a number of arguments why central banks should or should not react to asset prices in their monetary policy (see Brunnermeier and Schnabel, 2016 for a more detailed exposition). Proponents of the view that monetary policy should not react to asset prices put forward the argument that bubbles cannot be identified with confidence, which may lead to the pricking of non-existent bubbles. Moreover, monetary policy is said to be a blunt tool, which is not well-suited to contain a bubble in a specific market. In fact, the costs of intervention can be quite high if other parts of the economy are negatively affected. Finally, bubbles are seen as a problem mostly in combination with unstable financial systems and expanding credit volumes. Therefore, they should be tackled by financial (macroprudential) regulation rather than monetary policy.

The opposing view is that even if bubbles are hard to identify, doing nothing is not the best option. In fact, the estimation of key variables in the conduct of monetary policy, such as the output gap or the natural interest rates, is similarly demanding. Moreover, the costs of a cleaning strategy are considered to be very high. The bursting of the bubble is costly in itself. In addition, cleaning is an asymmetric strategy and gives rise to moral hazard problems (the “Greenspan put”), which risks creating the next bubble. Finally, financial regulation may not be sufficient to deal with asset price booms. Regulatory arbitrage limits the reach of financial regulation, whereas monetary policy also reaches the shadow banking sector. Moreover, financial regulation may be less effective if monetary policy is working in the opposite direction.

In a recent paper, we have analyzed the role of central banks in dealing with asset price booms from a historical perspective (Brunnermeier and Schnabel, 2016). We analyze and categorize 23 prominent asset price booms from the past four hundred years, by considering the types of assets involved, the holders of the assets, the economic environment during the emergence of the bubbles, the severity of the crises, as well as policy responses.

The historical analysis yields several important lessons:

1. The type of financing of the bubble (debt versus equity) matters more for the severity of crises than the type of bubble assets. The most important determinants are lending booms, high leverage, as well as direct asset holdings by financial institutions.
2. A pure “cleaning up the mess” strategy is unlikely to be optimal. We see numerous examples where “leaning against the wind” appears to have been effective in mitigating crises. We also see examples where cleaning strategies seem to have promoted the emergence of new bubbles.
3. The timing and dosage of interventions are of the essence. Late interventions are ineffective or even harmful. This calls for a continuous macroprudential analysis trying to detect the emergence of bubbles early on.

4. No instrument appears to be dominant to deal with asset price bubbles. There is a trade-off: While macroprudential policy is more targeted, it can also be circumvented more easily. Interest rate tools and macroprudential tools should be used in a complementary fashion.

So how should central banks react to asset price booms? There is no simple prescription. Macroprudential oversight is certainly important as an early-warning system. Macroprudential policy measures can serve as the first line of defense against the build-up of asset price bubbles. However, given the uncertainty about the effectiveness of macroprudential policies, it seems a very risky strategy to entirely rely on them. Moreover, they are unlikely to be effective if monetary policy is working in the opposite direction. Evasive behavior may make macroprudential policies ineffective under such circumstances. Therefore, monetary policy and macroprudential tools should be used in a complementary way.

## 4 Central banks as prudential supervisors

The most direct way to affect financial stability is through prudential supervision. In fact, central banks are frequently directly involved in prudential supervision. Since November 2014, this has also been true for the European Central Bank (ECB), which has taken over broad responsibilities in banking supervision in the context of the Single Supervisory Mechanism (SSM). This setup was chosen because it could be implemented quickly under the existing legal constraints and because the ECB at the time was one of the few institutions capable of acting. However, it was recognized early on that this setup was not necessarily optimal, leading to a debate whether the combination of monetary policy and banking supervision within one institution is really desirable or whether a separation would be preferable in the longer term.

In fact, this debate is not new. Nevertheless it is far from being resolved, which is also reflected in the widely varying degree to which central banks are involved in banking supervision in different countries. Theoretically, there are arguments for and against combining monetary policy and banking supervision (for an overview, see Rutkowski and Schnabel, 2016). Therefore, this question needs to be answered empirically. In the literature, a number of papers have analyzed the relationship between supervisory structure and macroeconomic outcomes, in particular inflation and financial stability.

Overall, the empirical evidence is mixed. Di Noia and Di Giorgio (1999) and Copelovitch and Singer (2008) find that inflation rates are higher (and more volatile) in countries in which the central bank is responsible for monetary policy and banking supervision. In contrast, Lima, Lazopoulos and Gabriel (2012) claim that inflation does not depend significantly on whether the central bank is responsible for banking supervision and monetary policy. Peek, Rosengren and Tootell (1999) show that bank supervisory information has helped the Federal Reserve to conduct monetary policy more effectively. This suggests that a combination may yield informational advantages.

Regarding financial stability, Goodhart and Schoenmaker (1995) show that bank failures are less frequent in countries in which the central bank is also the banking supervisor. Regarding non-performing loans, the evidence is again mixed. Barth et al. (2002) claim that banks have more non-performing loans if the central bank is involved in banking supervision, whereas according to Dincer and Eichengreen (2012), banks have fewer non-performing loans (and higher capital ratios) if the central bank supervises banks.

In a recent paper, we reassess the relationship between supervisory structure and inflation or financial stability (Rutkowski and Schnabel, 2016). The paper contributes in two ways to the literature: First, it presents a new detailed dataset on the structure of banking supervision in OECD countries from 1970 until 2013 based on a careful research of legal texts and other sources and complemented by a survey among central banks. Second, it

makes an attempt to solve the endogeneity problems inherent in this type of analysis, using instrumental variable and dynamic panel methods. In contrast, the papers cited above mostly provide no more than correlations.

The new dataset provides a much finer classification of supervisory regimes than previous research, which distinguishes only between combined and separated regimes in a 0/1-fashion. The new data contains information about seven characteristics of supervisory regimes. The first set of indicators concerns the degree of *cooperation* among bank supervisors and central banks and comprises three aspects: (1) Are there any formal mechanisms for the exchange of information? (2) Is there a sharing of resources (such as staff or financial budget)? (3) Do central banks have voting rights in the supervisors' administrative boards? The second set of indicators refers to the transfer of supervisory *tasks* to the central bank, comprising four types of tasks: (1) the granting and withdrawal of bank licenses, (2) the right of imposing and enforcing sanctions, (3) participation in off-site analysis, and (4) participation in on-site inspections.

The distinction between cooperation and tasks seems useful as theoretical predictions are different. A closer cooperation among central banks and supervisors is expected to improve monetary and financial stability. First, it may help to improve the implementation of monetary policy due to better information about monetary transmission. Second, it may make the central banks' policies as a lender of last resort more effective because it allows for a prompt response to banking troubles, a better distinction between illiquidity and insolvency on the basis of supervisory information (if feasible at all), and thereby a mitigation of moral hazard problems.

The expected effects of a transfer of supervisory tasks to the central bank are less benign. It is likely to raise inflation, whereas the effect on financial stability is ambiguous. The transfer of supervisory tasks makes the central bank responsible and accountable for developments in the banking sector, leading to potential conflicts of objectives and interest. In particular, the central bank is likely to subordinate monetary stability to financial stability when banks are getting distressed, leading to financial dominance. This is not necessarily harmful – it may in fact raise financial stability if the central bank keeps interest rates low at times of bank distress and thereby stabilizes the banking sector (as happened in the US in 1990, see Hellwig, 2014). However, this may give rise to moral hazard (Greenspan put), leading to lower financial stability. It may also induce supervisory forbearance to preserve the central bank's reputation as a supervisor (Hellwig, 2014). Finally, it may lead to higher inflation.

Our empirical results are in line with theoretical predictions. A higher level of cooperation tends to lower inflation and the probability of banking crises. A higher level of tasks tends to raise inflation and has no significant effect on the crisis probability. For the euro area, no significant effects are found. This is not surprising as in the considered time period supervision remained at national level, whereas monetary policy was at supranational level. Hence, the supervisory structure at national level did not measurably affect inflation (managed at supranational level) or financial stability.

The results have interesting policy implications. They suggest that close cooperation between supervisory authorities and central banks is beneficial because it leads to lower inflation and a lower probability of crises. In contrast, the benefit of transferring supervisory tasks to the central bank is less obvious because this tends to raise inflation and does not have measurable benefits in terms of financial stability. For the euro area, the creation of the SSM is likely to have improved cooperation at the supranational level, which is desirable. However, the transfer of tasks may be seen more critically and may even prove to be harmful.

## 5 Conclusion

In this short paper, I have discussed the different roles that central banks may play with respect to financial stability. The beneficial role of central banks as lenders of last resort in acute financial crises is largely uncontroversial. This is not true for the central bank's role in dealing with asset price booms. Our historical research suggests that monetary policy should support macroprudential policy in preventing the build-up of asset and credit booms rather than leaving this task to macroprudential policy alone. Regarding the role of central banks in prudential supervision, it seems important to carefully consider the specific details of collaboration. The exchange of supervisory information can be useful for monetary policy and lender of last resort activities. Therefore a close cooperation between supervisors and central banks seems desirable. However, a transfer of supervisory responsibilities to the central bank may compromise monetary stability without providing clear benefits in terms of financial stability.

What does this imply for the current situation in the euro area? Low interest rates are putting increasing pressure on financial institutions' profitability and inducing the search for yield behavior, leading to the build-up of risks in various market segments. So far, a sharp expansion of credit has not been observed, but banks' leverage is still high. Macroprudential policies are used only reluctantly and are counteracted by monetary policy. At the same time, there is the danger of a build-up of risks in the shadow banking sector, while a macroprudential framework "beyond banking" does not exist. Given this situation, the ECB may find itself in a straightjacket in the future because raising rates would threaten the stability of the financial system, making an exit from low interest rates more and more difficult. This calls for decisive actions to prevent a further build-up of risks now. Macroprudential tools may prove insufficient, which would require supporting measures from monetary policy. This would be beneficial for both financial and macroeconomic stability.

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