Deutsche Bundesbank Spring Conference 2011 – fiscal and monetary policy challenges in the short and long run

This year's Spring Conference, which was jointly organised by the Bundesbank and the Banque de France, focused on the consequences of the financial and economic crisis. One particular point of discussion was the impact on public finances and the implications for the macroprudential regulation of the financial system. During the crisis, central banks and governments in many industrial countries were forced to take unconventional monetary and fiscal policy measures. Central banks cut their interest rates to zero (or close to zero) and provided the financial sector with large amounts of liquidity. In the process, however, they took on considerable risks in their balance sheets. At the same time, governments assumed risks from the banking sector and issued blanket guarantees. Along with direct measures taken to stabilise the economy, this led to a sharp rise in government debt in many economies. The financial and economic crisis therefore resulted in a situation in which confidence in the soundness of public finances was called into question in a number of euro-area peripheral countries.

Against this backdrop, the Spring Conference on the topic of "fiscal and monetary policy challenges in the short and long run" (as well as the preceding workshop, which was likewise dedicated to current macroeconomic challenges) heard academic contributions focusing on these aspects of the crisis.[1] The issues discussed included the factors that contributed to the severity of the financial crisis and what precautions seem appropriate for avoiding similar escalations in the future; the causes of the crisis and its impact on public finances – focusing in particular on the special conditions of European monetary union; and how monetary and fiscal policy should be framed in the future. Furthermore, the conference highlighted the importance of effective macroprudential rules for the financial system and demonstrated that there is no way of getting around the need for a fiscal consolidation strategy.

1 The conference programme, together with the papers and the presentations of the authors and discussants can be found on the Bundesbank's website at http://www.bundesbank.de/vfz/vfz_konferenzen_aktuell.en.php.

Background information

The crisis was triggered by problems at financial institutions that had invested either directly or indirectly in the US housing market. Shrinking confidence among market participants caused risks premiums to rise, financial market prices to decline and some securities markets to freeze up totally. This called for large-scale, internationally coordinated support measures, by both central banks and governments, in order to prevent the collapse of banks and the financial system. The subsequent downturn in economic activity was alleviated by means of rescue measures and spending programmes. The downturn had a particularly hard impact on countries which had previously experienced an upswing strongly driven by private or public borrowing, such as Spain, Greece, Portugal and Ireland.

For central banks, these measures meant extending their balance sheets, with the associated incurrence of credit, interest rate and exchange rate risks. For governments, the fiscal measures, including the granting of guarantees, meant a massive expansion of their existing public debt or future expenditure commitments.

Crises in the financial system

An important prerequisite for avoiding a recurrence of the financial and economic crisis that we have experienced over the past few years is to obtain a good understanding of its root causes. Many studies have described the role of misguided incentives for individual decision-makers, the lack of transparency concerning financial assets and uncertainty about the precise form that financial sector oversight should take.[2] But other issues such as the most effective way to regulate the financial system and how to deal with the repercussions on the real sector are still under discussion. Three papers presented at the conference drew policy-relevant conclusions on these issues on the basis of models which each address important aspects of the financial system that played a role in the crisis.

Propensity to excessive risk-taking can be reduced through macro-prudential regulation

Bianchi and Mendoza[3] show that households and enterprises tend to overborrow in normal times, as they do not take sufficient account of the fact that the value of the assets which they need to post as collateral in order to obtain credit could be significantly eroded in a crisis as a result of panic selling. The amount of this loss in value depends on the aggregate level of borrowing, over which the individual borrower has no control. In such circumstances, macroprudential regulation can influence lending so as to mitigate both the severity and frequency of crises and reduce the economy's vulnerability to exogenous shocks. An important feature of this study is its successful use of a macroeconomic equilibrium model (DSGE) to explain normal economic cycles and rare, yet severe crises, thus facilitating a basic understanding of the crisis

2 For a summary, see, for example, A Cukierman (2011), Reflections on the Crisis and on its Lessons for Regulatory Reform and for Central Bank Policies, Journal of Financial Stability 7, pp 26-37, and the article in: Deutsche Bundesbank, The implications of the financial crisis for monetary policy, Monthly Report, March 2011, pp 53-68.
3 J Bianchi and E Mendoza (2010): Overborrowing, Financial Crises and "Macro-prudential" Policy.

itself and hence of potential remedies. The macroprudential taxes proposed by the authors could therefore be one of the new instruments for safeguarding financial stability which were called for by Christian Noyer, the governor of the Banque de France, in his speech at the Spring Conference.

Expectations of government behaviour influence a crisis

While Bianchi and Mendoza analyse how the likelihood and the severity of crises can be reduced through prudent regulation, Cooper and Kempf,[4] as well as Cukierman and Izhakian,[5] consider the impact that private players' *ex ante* expectations of subsequent government rescue measures could have on the development of financial crises. On the one hand, the anticipation of such bailouts can lead to excessive lending and thus make the financial system more vulnerable to financial crises. On the other hand, expectations as to whether and, if so, how rescue measures will actually be implemented during a crisis may trigger panic reactions, even though this is exactly what such measures are supposed to prevent. One example of this are deposit insurance schemes, which in many countries guarantee deposits up to a certain amount, but which, in extreme circumstances, may require additional government funding. In the United Kingdom, for example, the collapse of Northern Rock during the crisis led to a run on the banks because it was unclear whether and, if so, in what way the government would intervene.[6]

The work of Cooper and Kempf, building on this reasoning, points out that those who benefit from rescue measures are generally not the ones who pay for them. Thus, some large investors in the money market, such as investment banks and their shareholders, benefit from a government rescue of banks, whereas taxpayers, who generally do not participate in these markets, are left to carry the costs. Against this backdrop, it is conceivable that political resistance to *ex ante* promises of state aid may make it impossible to honour them and consequently undermine the stability of the financial system.

Changes in risk perception can intensify a crisis

In fact, a reassessment of the likelihood of government rescue measures can have dramatic effects, which might explain the strong reaction of the financial markets to the collapse of Lehman Brothers. The paper by Cukierman and Izhakian shows that banks' leverage increases with the likelihood that they will be rescued by the state in an emergency. This not only supports the argument that crises are more likely to occur *per se*, as put forward by Bianchi and Mendoza, but also suggests that even a slight reassessment of the likelihood of a bailout can itself trigger a crisis.

Niepmann and Schmidt-Eisenlohr[7] analyse the incentives to conduct bank rescues using a macroeconomic model with an internationally integrated interbank market, which allows contagion effects to be modelled. They

4 R Cooper and H Kempf (2011): Deposit insurance without Commitment: Wall St. vs Main St.
5 A Cukierman and Y Izhakian (2011): Bailout Uncertainty in a Microfounded General Equilibrium Model of the Financial System.
6 H Ennis and T Keister (2009): Bank Runs and Institutions: The Perils of Intervention, American Economic Review 99(4), pp 1588-1607, illustrated how measures that are intended to prevent panic can spur the withdrawal of deposits from the banking system.
7 F Niepmann and T Schmidt-Eisenlohr (2010): Bank Bailouts, International Linkages and Cooperation.

find that, within the scope of their model, bank rescues by individual countries are not carried out on a sufficient scale, as they do not take account of the (positive) externalities on other countries. At the same time, a "free rider" problem arises if the measures taken in a neighbouring country reduce the incentive to rescue one's own banking system. These are major arguments in favour of international coordination in the case of closely integrated banking systems. However, they are counterweighed by other problems, such as moral hazard.

Government debt and the sovereign debt crisis

High sovereign debt leads to loss in confidence

In many countries, government intervention to stabilise the financial system and the real economy, in combination with the economic contraction, has led to a sharp rise in sovereign debt. In several cases, this has shaken confidence in the long-term sustainability of public finances and, owing to the rise in sovereign risk spreads, has made it increasingly difficult to finance general government deficits. In an individual country, this could potentially result in a sudden halt to capital inflows and a slide in the currency's value, thus triggering a collapse of both government finances and the domestic banking system. In a monetary union, in which banks post government securities as collateral to obtain liquidity from the central bank, further complications and contagion effects may arise from interlinkages in the interbank market.

Self-fulfilling debt crises

Two papers focused explicitly on the problems of sovereign debt crises in a monetary union. Roch and Uhling[8] highlight the role of self-fulfilling sovereign debt crises, which can be triggered by the mere expectation of a default. They also explain how countries tend to become over-indebted as a result of the short-termism of government policy. The model demonstrates a complex interaction between these elements. At the end of the day, however, there are only ever two options: either the country is "rescued" by other countries or by international institutions (IMF), ie their debts are assumed by others, or the country defaults. Granting short-term loans to countries with payment problems is not a solution, as, ultimately, it only reduces their incentive to consolidate public finances and can actually increase the cost of rescue operations.

The quest for a suitable institutional framework for European monetary union

Auerbach[9] questioned the effectiveness of institutional regulations, such as the Stability and Growth Pact in the European economic and monetary union. His argument is based on the fact that the US government did not impose any central fiscal framework on the federal states to control public finances. Instead, the US states, owing partly to the central government's strict compliance with its "no-bailout" principle, imposed similar rules on themselves. By contrast, support measures adopted by other states during a crisis out of self-interest can lead to excessive deficits, despite the Stability and Growth Pact. Auerbach, however, places his trust in the trans-

8 F Roch and H Uhlig (2011): The Dynamics of Sovereign Debt Crises in a Monetary Union.
9 A Auerbach (2011): Fiscal Institutions for a Currency Union.

parency and the disciplining role of the markets. He argues that fiscal discipline could be achieved via independent institutions which draw up and publicise long-term public finance projections. In his discussion, von Hagen favoured an alternative institutional approach, proposing a framework for the orderly settlement of sovereign defaults that would be enforced by an independent, and therefore credible, court of law. Bundesbank President Jens Weidmann, on the other hand, stressed the need for a stronger Stability and Growth Pact, as well as a clearly defined mechanism for dealing with crises, with greater attention being paid to market signals. Weidmann expressed doubt, however, that an institution whose sole purpose is to keep a critical eye on budgets could ultimately prove to have a sufficiently stabilising effect.

Orderly sovereign defaults

Another theoretical approach to addressing the issue of sovereign defaults, without running the risk of jeopardising the international financial system, is analysed by Adam and Grill.[10] These authors develop a model framework which, in principle, allows sovereign defaults, subject to clear, well-known conditions. Accordingly, unlike in other models, defaults do not result from breaches of contract stemming from overly weak incentives to comply with the terms of the contract. As long as a country has to bear at least some of the costs in the event of a default, it will choose to exercise this option only in extreme circumstances. Although these costs are factored in by international investors, this barely affects the financing conditions of states, as the likelihood of such a harsh restructuring is small. The paper's findings are predicated on the assumption of a credible promise that payment obligations will be met, except in certain, clearly defined circumstances. But given that, in reality, it could be in the interests of states to subsequently change their conduct, there is a need for the additional mechanisms proposed by von Hagen which would allow sovereign defaults only in extreme circumstances.

Inflation unsuitable as an instrument to reduce sovereign debt

The debate on the problem of sovereign defaults has also covered another means of debt relief that, in principle, is open to sovereign states: the devaluation of outstanding nominal government debt through inflation. This assumes, however, that government debt is denominated in the domestic currency and that the government can control monetary policy. A devaluation of the debt may then succeed if the actual rate of inflation is higher than the rate expected at the time the nominal interest rate on long-term government debt is determined.

The work by Krause and Moyen[11] examines this relationship in a model using long-term sovereign debt and endogenous long-term interest rates on government securities. It can be seen that short-term and also unexpected increases in inflation cannot contribute significantly to consolidating the government budget. Even if the objective of securing low inflation over the medium term is abandoned completely, permanently high levels of inflation would have a rather moderate impact on

10 A Adam and M Grill (2011): Optimal Sovereign Debt Default.
11 M Krause and S Moyen (2011): Public Debt and Changing Inflation Targets.

government debt. The main reason for this is that nominal interest rates increase with rising inflation and thus the country's interest burden remains high. The benefits of relieving the burden on the government budget by pursuing an inflationary policy must therefore be rated as limited on the whole.

The effectiveness of fiscal policy and monetary policy

If sovereign default and inflation are ruled out as potential solutions to sovereign debt problems because of the huge negative impact they have on economies, unsustainable debt levels must be reduced by means of a strict consolidation strategy. In this regard, several papers dealt with the effects of fiscal measures in general and in the special context of the crisis in particular. These include the scenario of short-term interest rates being close to the zero lower bound, which means that the principal monetary policy instrument can no longer be effectively deployed and that unconventional measures have to be taken. However, this may boost the effectiveness of fiscal measures compared with "normal" times, as corrective monetary measures can be factored out.

Size of government debt multipliers controversial

Against the background of the ongoing controversy regarding the effects of fiscal policy, Leeper, Traum and Walker[12] examine the conceptual question of the extent to which the selection of a particular model predetermines the results of an empirical study into the impact of government spending on economic activity. This is also an issue in the case of dynamic stochastic general equilibrium (DSGE) models. For example, allowing for imperfectly optimising households can result in higher levels of government spending not being offset directly by a reduction in private consumption because households do not rationally anticipate the subsequent tax hikes that this entails. The authors show the extent to which various model assumptions determine the results *ex ante*. Empirical findings are always prone to this problem and must therefore be interpreted critically. At the same time, it must also be taken into account that theory can, of course, never be agnostic and that certain elements, in particular for reasons of plausibility, need to be included in a model and consequently influence its structure. The conclusion implied by this paper is that the cyclical effects of fiscal policy should be regarded as rather limited.

Coenen, Straub and Trabandt[13] use such a model to analyse the European Economic Recovery Plan (EERP), which was coordinated by the European Commission and aimed at stimulating the European economy during the crisis. Their analysis shows that the Plan tempered the decline in European GDP during the recession by up to ½%. The paper's discussant pointed out that this result was also based on assumptions that are disputed. Therefore, the estimated effects must be interpreted with caution.

12 E Leeper, N Traum and T Walker (2011): The Fiscal Multiplier Morass: a Bayesian Perspective.
13 G Coenen, R Straub and M Trabandt (2011): Fiscal Policy and the Great Recession in the Euro Area.

Fiscal policy at the zero lower bound on interest rates

Fiscal aspects that are important in the context of the crisis were considered in the papers by Corsetti, Kuester, Meier and Müller,[14] and Cook and Devereux[15]. Corsetti *et al* examine the cyclical impact of the consolidation measures on the economy in the special situation of a zero lower bound on interest rates, coupled with a high general government debt level. If interest rates cannot be cut any further, the phasing-out of expansionary fiscal policy measures is more contractionary than in normal circumstances. At the same time, however, the expectation of lower deficits in the future can stimulate consumption. One particular element of the analysis is the feedback effects of high government debt on risk premiums, which, in turn, dampen enterprises' investment. By running simulations on their model, the authors find that consolidation measures can actually have an expansionary effect during particularly severe crises, thus allaying fears that the current reduction of government deficits will lead to another recession.

Cook and Devereux also consider the zero interest rate bound in their analysis of the international coordination of monetary and fiscal policy, and again, this element provides fresh insight into the crisis, which was lacking in traditional model variants. The authors first demonstrate, under the assumption that goods trade between two countries or regions is fully integrated, that following a sharp negative shock in one country, the optimal policy in both countries is to cut the key interest rate to zero and adopt an expansionary fiscal policy. This no longer applies, however, if there is incomplete integration of trade. In this case, the deflationary effect is greater in the country that experienced the shock and therefore, as a result of the zero lower bound on interest rates, its real interest rate rises more than that of its trading partners. This, in turn, weakens the exchange rate and exacerbates the downturn. The optimal fiscal and monetary policy in the neighbouring country is therefore not only to slightly increase government spending, but also to raise the key interest rate with a view to shifting exchange rate parities in favour of the country that experienced the shock. Remarkably, this is the optimal policy for both regions.

Conclusions

Overall, the conference and the preceding workshop gave a good overview of the current state of the academic debate on the causes of the crisis, as well as the mechanisms that contributed to its exacerbation and ultimately resulted in its spillover to government finances. Several papers discussed measures deemed appropriate for preventing, or at least reducing the likelihood of, similar developments in the future. These include greater macroprudential supervision, which will counteract overgenerous lending by the financial sector and help to prevent irresponsible behaviour fuelled by the *ex ante* anticipation of a government bailout. The conference also confirmed the belief that

14 G Corsetti, K Kuester, A Meier and G Müller (2011): Sovereign Risk and the Effects of Fiscal Retrenchment in Deep Recessions.
15 D Cook and M Devereux (2011): Sharing the Burden: International Policy Cooperation in a Liquidity Trap.

there is no alternative to the rigorous consolidation of public finances. Attempting to solve these problems by increasing inflation appears to be more or less doomed from the start, owing to the sensitivity of the private sector in this regard – not to mention the subsequent permanent damage it would do to the credibility of monetary policy. In this context, it is also important to note that a consolidation strategy is likely to have a positive impact on employment and growth, in particular given a high government debt level. At the same time, it also became clear that it is necessary to exercise caution when assessing fiscal measures. If reasonably reliable conclusions are to be drawn, it is vital to choose the appropriate model carefully. This suggests that policymakers should make only sparing use of fiscal measures in order to influence economic activity, particularly in "normal" times.