Jürgen Stark: In search of a robust monetary policy framework

Keynote speech by Mr Jürgen Stark, Member of the Executive Board of the European Central Bank, at the 6th ECB Central Banking Conference "Approaches to monetary policy revisited – lessons from the crisis", Frankfurt am Main, 19 November 2010.

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I am very pleased[1] to open the second day of the ECB Central Banking Conference. We witnessed very interesting presentations and discussions yesterday, and today's programme promises to be no less stimulating.

In my remarks I would like to offer some reflections on what I consider to be the desirable features of a robust monetary policy framework. Only three years ago, it was widely believed that this issue had been settled once and for all. At that time, several studies outlined the then prevailing consensus view on monetary policy.[2]

This view emphasised, among other things:

- central bank independence;
- price stability as the primary objective of central banks; and
- the importance of transparent communication for the solid anchoring of long-term inflation expectations.

But the consensus also emphasised four elements to which the ECB has never subscribed, namely:

- the targeting of inflation at a relatively short and fixed horizon;
- the assignment of a primary role to monetary policy in the management of aggregate demand in the short term;
- the systematic disregard of money and credit indicators in the conduct of monetary policy; and
- the asymmetric reaction to asset price bubbles as opposed to busts; the latter often referred to as the "cleaning-up strategy" in the context of the "Jackson Hole consensus".

This framework has been severely tested during the financial crisis and perhaps, to some extent, damaged. Moreover, the crisis has exposed the fact that, on some crucial questions, the consensus view, as expressed in these studies, is in need of revision.

Certainly, some aspects of the framework will, in my view, *have* to survive the crisis. The first aspect is central bank independence and, at least in the EU context, the prohibition of government debt monetisation. The second aspect is the centrality of price stability for monetary policy. And the third aspect is the importance of transparent communication. The crisis has not at all discredited these three principles. Together they have formed, and I believe will continue to form, the basis for central banks' credibility and efficiency in contributing to the economic welfare of nations.

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1 I am grateful for support and comments by Claus Brand, Francesco Drudi, Philippine Cour-Thimann, Dieter Gerdesmeier, Christophe Kamps, Wolfgang Schill, Wolfgang Modery, Philippe Moutot, Huw Pill, and Massimo Rostagno.

2 See e.g. Goodfriend (2007), Mishkin (2007) and Woodford (2008).

International convergence on these principles has, however, been a slow process. After the collapse of the Bretton Woods system there was a long period of confusion created by the loss of a nominal anchor, which, during the system's good times, had been provided by the US commitment to peg its currency to the price of gold. In the 1970s even some central bankers were sceptical that monetary policy alone could control inflation.[3] Failed attempts to fine-tune the economy and the associated stop-and-go policies resulted in stagflation in a vast portion of the industrialised world. Drawing lessons from this experience, and inspired by monetarist views that had successfully influenced monetary policy in Germany and Switzerland, central banks in the 1980s gained confidence in their ability to bring inflation down to levels consistent with price stability at a modest cost to the economy at large.

The 1990s were characterised by the development of monetary policy frameworks capable of perpetuating the achieved degree of price stability. In my view, two major initiatives stand out: first, the development of inflation targeting. Inflation targeting developed in many countries when other strategies failed to bring about the desired level of price and macroeconomic stability. Some countries turned to inflation targeting because the instability of money demand in the face of ongoing financial innovation appeared to render the application of textbook-type versions of monetary targeting unappealing. Even so, inflation targeting was heavily influenced by the monetarist view that monetary policy can control inflation.

The second development was the establishment of the ECB, with its two-pillar monetary policy strategy. Inflation targeting and the ECB's strategy share important features: the insistence on central bank independence, the priority assigned to the price stability objective, and the importance of transparent communication. These three principles are fundamental to sound monetary policy.

Nevertheless, for various reasons, the ECB does not view itself as an inflation-targeting central bank, at least not in the way inflation targeting is commonly described. One reason relates to our definition of price stability and our specification of the policy horizon. Another reason relates to the special role our monetary policy strategy assigns to money and credit. Both aspects differ markedly from textbook inflation targeting. But I should also add that the ECB's monetary pillar builds on the tradition developed by the most successful central banks prior to the introduction of the euro – a tradition which precedes the advent of inflation targeting, in some cases by decades.

Let me adopt a stylised incarnation of a flexible inflation-targeting regime, a description which, nonetheless, follows closely early expositions in the literature. Inflation targeting has evolved, as we all know, both in theoretical work and in the practice of the inflation-targeting central banks. However, it might still be useful to identify elements in the regime – as it was originally conceived – which have influenced the conduct of monetary policy in the years immediately prior to the crisis more profoundly than was perhaps ideal.

I will concentrate on two specific features, the implied short-termism in terms of excessive focus on aggregate demand management, on the one hand, and the systematic disregard of monetary phenomena, on the other, which in my view are essential ingredients for understanding the genesis of the crisis.

A key lesson from the current crisis is that, going forward, any monetary policy framework that lays claim to being "robust" will have to satisfy the following two requirements – beyond the uncontroversial principles I mentioned earlier: first, the monetary policy strategy needs to be geared towards the medium term to resist the fine-tuning temptation; and second, the strategy needs to assign a prominent role to developments in money and credit which – as

[3] See Burns (1979). As Chairman of the Federal Reserve, Burns had long lamented the difficulty for a central bank to control inflation.

the crisis has shown convincingly – provide reliable signals of risks to long-term price stability, financial stability and overall macroeconomic stability.

In my view, these two requirements are natural complements. The key role of money, both before and during the crisis, has been to maintain a focus on developments in nominal trends at lower frequencies.

The case for monetary policy strategies oriented towards the medium term

In this context let me elaborate the case for monetary policy strategies oriented towards the medium term. You may ask "but isn't this exactly what central banks around the world have been pursuing for the past two decades?" Well, perhaps or perhaps not. Five years ago, at the Jackson Hole conference, for example, former Fed Vice Chairman Alan Blinder described US monetary policy since the late 1980s in terms of the "resurrection of fine-tuning".[4] Moreover, flexible inflation targeting, with its added focus on output stabilisation beyond inflation stabilisation is at risk of succumbing to the temptation of fine-tuning.

An element of the so-called "Jackson Hole consensus" was that monetary policy should play a key role in the management of aggregate demand in the short term, whereas fiscal policy was viewed as an inappropriate instrument, mainly because of decision and implementation lags embedded in the policy process. I would argue that we should not overestimate the potency of either policy. Before the crisis there was a common misperception that monetary policy could focus more on demand management because inflation was durably under control. Proponents of this view found apparent vindication in the phenomenon of the "great moderation" observed in the 20 years before the crisis. However, there were clear warnings that the short-term orientation could have negative side effects in the medium to long term.[5] As we now know, the side effects manifested themselves in a spectacular build-up of monetary and financial imbalances. The sudden unwinding of these imbalances marked the beginning of the current crisis. Although monetary policy frameworks oriented more towards the medium term could probably not have completely prevented the current crisis, I am convinced that they would have helped to make it less disruptive.

The then dominant theoretical framework suggested otherwise. The New Keynesian model generated policy prescriptions which assigned the central bank the task of stabilising inflation and output developments at short horizons and in quite precise terms.

These prescriptions have shaped the inflation-targeting policy advice to a non-negligible extent. Let me emphasise, though, that many inflation-targeting central banks retain a considerable degree of flexibility when putting this advice into practice – although in a very different way from the meaning the term "flexibility" has received in theoretical work. I will return to this point shortly.

Simplifying, the inflation-targeting policy advice can be articulated in three main precepts:

- First, look at inflation forecasts and output gap forecasts as summary statistics of the state of the economy.
- Second, rely on your best model of the economy, even if it does not integrate or just assigns a trivial role to a host of variables, particularly money and credit, which are assumed to adjust to the state of the economy.
- Third, follow the best policy implied by the model and set the policy instrument so that inflation forecasts – whatever the nature of the shocks that might have caused them – are stabilised, and output volatility is minimised, at a pre-set horizon.

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[4] See Blinder and Reis (2005).

[5] See e.g. Rajan (2005).

Now, it is easy to imagine economic conditions in which these prescriptions induce destabilising behaviour on the side of monetary policy, which is the exact opposite of what monetary policy should do.

Limiting the information set to inflation forecasts and output gap forecasts can be highly misleading. One of the reasons for this has been known for a long time: output gaps cannot be observed in real time. An imperfectly understood concept – which, in addition, is statistically very imprecisely measured and subject to frequent revisions – is not a safe indicator to choose as a guide for policy. Indeed, the great policy failures of the 1970s have been traced to policy-makers' exaggerated real-time measures of economic slack.[6]

Another reason which argues against limiting the policy-makers' information set is that the same inflation forecast can result from very different combinations of economic shocks. In other words, inflation forecasts are *not* summary statistics of the state of the economy: you have to look at the underlying shocks in order to interpret inflation. This is far less appreciated, but it is one of the economic foundations of the ECB's monetary policy strategy. A fundamental principle of our strategy is that different underlying shocks – although potentially leading to the same inflation forecast – can have vastly different implications for policy. Failing to recognise that a prudent policy stance is always conditional on the shocks that hit the economy, and that accordingly the policy-relevant horizon varies with those shocks, would not comply with the requirements of a medium-term orientation and, in addition, would be extremely hazardous.

Let me give you an example. Think of a benign disinflation caused by positive supply-side shocks. Positive supply-side shocks tend to produce lower inflation and high output growth at the same time. The attempt to stabilise inflation at a certain horizon – and thus resist disinflation – can, in those circumstances, introduce pro-cyclicality in monetary policy. A central bank that is instructed to stabilise inflation at a pre-set horizon in those circumstances can well end up providing too much accommodation, precisely at a time when output and incomes are growing robustly and asset markets are most prone to exuberance. Think of the protracted period of productivity growth and negative price surprises associated with technological innovation and globalisation that we saw over the second half of the 1990s. If you combine that scenario with systematic resistance to disinflation, and systematic neglect of monetary phenomena, you can lay the ground for financial instability down the road.

As I said, central banks describing themselves as inflation targeters have realised that, in practice, one needs to go beyond the standard inflation-targeting policy advice emanating from the New-Keynesian framework.

Referring back to my example, my feeling is that the central bank community is increasingly sharing the view that – in the face of positive supply-side shocks – one should accept in the short run inflation somewhat lower than the inflation objective so as to avoid the risks involved in potentially large deviations from target at longer horizons.[7]

This view is perfectly consistent with the ECB's view of the medium term, also in the sense of not trying to manage aggregate demand. It points to the advantages of limiting the central bank's mandate to the maintenance of price stability over the medium term without any reference to aggregate demand management. However, it immediately raises the question of how to enshrine this view into a monetary policy strategy. For inflation-targeting central banks, embedding this view appears to be achieved by extending the forecast horizon and by applying judgement. In contrast, the ECB's monetary analysis can be seen as a formalisation of the view that the policy horizon should be commensurate with the nature and size of shocks, rather than being determined by a particular set of inflation forecasts.

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[6] See Orphanides (2002).

[7] See e.g. King (2004), p. 15.

This leads me to my second topic, the case for correcting the systematic disregard of monetary phenomena in the consensus framework.

The case for correcting the systematic disregard of monetary phenomena

As I have stressed before, in my view, monetary policy should avoid any kind of short-termism. The necessary medium-term orientation of monetary policy calls for the use of tools and indicators that have a comparative advantage over such a horizon. At the same time, it is an undisputed fact in academic and central banking circles that prolonged periods of high inflation are associated with high money growth. On both theoretical and empirical grounds, the ultimately monetary nature of inflation cannot be challenged. While other factors can influence price developments at shorter horizons, this does not call into question the underlying long-term relationship between money and prices.[8] Furthermore, the empirical evidence clearly points to monetary trends *leading* inflationary trends, thus giving support for a monetary analysis in a forward-looking monetary policy. The analysis of monetary aggregates allows the ECB to identify the longer-term and more persistent trends in inflation. This is the main reason for the monetary pillar in our monetary policy framework.

The monetary pillar should not be confused with a "financial stability pillar". Monetary analysis is not conducted with the principal goal of detecting financial imbalances. It ultimately rests on the quantity-theoretic notion of there being a reliable link between money and price developments. Exploring the link between money and asset prices should be seen as a complementary way of better understanding the role of money.

A number of recent studies have demonstrated, in a quite impressive way, that monetary developments – especially when seen in conjunction with credit developments – can also alert policy-makers to unwarranted financial developments and imbalances. Needless to say, the financial crisis we have experienced has, in my view, clearly demonstrated the need for policy-makers to have such reliable early warning signals at their disposal.

While some parts of the academic literature have long held the view that identifying a bubble in real time is an impossible task, the academic literature on early warning indicator models has made significant progress over the past ten years. Research carried out within the BIS and the ECB have illustrated that – among other variables, such as price-earnings ratios or price-dividend ratios – simple deviations of money and credit aggregates from a trend that exceed a given threshold are among the few early indicators for (potentially costly) boom and bust periods.[9] And one key property that strikes me as being of particular interest for policy-makers is the fact that these warning signals emerge well before the alarm bells of standard conjunctural analysis start ringing.

The financial crisis and its subsequent shockwaves have also led to recommendations for greater importance to be placed on an approach of "leaning against the wind". According to this approach, monetary policy should be conducted in a "symmetric" manner over the financial cycle. More precisely, monetary policy should be more accommodative in times of falling asset prices, but less accommodative during a financial market boom. For instance, the central bank should conduct a slightly tighter monetary policy than warranted by its price stability objective, when the build-up of a potentially detrimental asset price boom has been identified. In so doing, the central bank would better ensure price stability over extended horizons and – at the same time – contain the future growth of the bubble. Such an approach can be compared to "buying insurance" against the risk of a harmful asset boom-bust cycle, with its potential costs in terms of macroeconomic and financial stability.

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8 See Lucas (1972, 1996) or McCandless and Weber (1995).

9 For a number of illustrative examples see, for instance, ECB (2010a).

Traditionally, however, there has been a great deal of scepticism about “leaning against the wind” for at least four reasons.[10] First, it has been argued that it is not evident that asset price boom-bust cycles are necessarily a bad thing for real long-term growth in all countries. The benefits from the realisation of additional investment projects could, on average, outweigh the costs incurred during the bust phases.

Second, as I have already mentioned, it is considered very difficult to identify an asset price bubble in real time. In particular, a tight policy response to asset price increases may end up destabilising the economy unnecessarily if the asset price valuation is driven by fundamentals.

Third, it has been claimed that the policy interest rate is “too blunt a tool” to contain potential bubbles. Raising policy rates will depress the prices of many assets – including those not booming – as well as the real economy and consumer prices.

Furthermore, in times of market euphoria, the policy rate might have to be raised quite significantly in order to have a measurable effect on booming asset prices. When taken seriously, these considerations lead to doubts about the effectiveness and efficiency of an active “leaning against the wind” approach.

A fourth argument basically refers to cost-benefit considerations. In essence, the argument postulates that the costs of “cleaning up afterwards” (namely by loosening the monetary policy stance after the bust) are smaller than the “collateral damage” of a leaning against the wind approach pursued during the boom. These considerations describe the so-called “cleaning-up strategy” I mentioned earlier.

In essence, these arguments all reflect valid concerns and cannot be easily dismissed. More recently, however, a number of arguments have given reason for a tempering of the concerns I have just expressed and have lent support to a “leaning against the wind” approach to asset price bubbles.

First of all, with regard to the welfare implications of “leaning against the wind”, the analysis of the costs of boom/bust cycles in asset prices in developed economies has been deepened and refined. Existing theoretical models use fairly specific assumptions to allow for bubbles in general equilibrium, and tend to neglect important aspects which make bubbles costly in the real world. Admittedly, not all boom/bust cycles are detrimental and have significant real effects. This is also one of the reasons why the mechanical targeting of asset prices is not a sensible option for monetary policy. However, the experience of the recent financial crisis – which has been accompanied by sharp declines in global economic activity and increasing unemployment in advanced economies – is a vivid reminder that there are boom/bust cycles which have the potential to trigger systemic crises and thus constitute a serious threat to world economic growth.

Furthermore, as regards the scepticism on the effectiveness of monetary policy in containing asset price bubbles, recent research has detected some additional monetary policy transmission channels that, in essence, relate to the risk-taking behaviour of banks, the signalling effects of monetary policy and the breaking of herding behaviour. Taken together, the results then point towards the fact that each of these channels can reasonably be expected to amplify the impact of monetary policy during boom periods. For instance, the “risk-taking” channel suggests that banks’ attitudes towards risk are strongly correlated with the monetary policy stance. In the presence of very considerable intra-financial sector leverage, even relatively modest increases in policy rates can lead to significant changes in credit conditions and market dynamics, to the extent that they alter financial institutions’ risk tolerance. Similarly, mechanisms that operate through the signalling effects of monetary policy or the role potentially played by central banks in discouraging herding behaviour by

[10] For a more detailed discussion, see Papademos and Stark (2010), especially Chapter 6.

investors can result in policy rate changes exerting more pronounced effects on asset prices than was typically thought to be the case in the past.

Regarding the appropriate policy reaction to the build-up of financial imbalances, there seems to be broad agreement that monetary policy would hardly be the first best line of defence against, for example, systemic risk associated with asset markets, let alone asset price bubbles detected in specific market segments. This task would rather fall to regulatory and supervisory policies. But if bubble-like behaviour becomes more widespread and reflected in imbalances in money and credit developments, it becomes a concern for monetary policy too.

If the past is of any guidance for the future, monetary policy needs to support regulatory and supervisory policies on two accounts. First, by making sure that the very short-term, risk-free price of credit – which the central bank controls – does not become a pro-cyclical source of volatility. And second, by intervening in a timely manner, both before asset price booms develop and when the bust of a bubble impacts the economy. Indeed, regulatory and supervisory policies lag behind innovation-driven financial market developments, and sometimes they tend to be implemented too cautiously or too slowly. In this context, it is worth keeping in mind that asset prices by no means constitute the end point of the monetary policy transmission process. There are a variety of mechanisms – among them wealth and confidence effects – through which higher asset prices have an impact on business cycle developments and may eventually result in higher consumer prices.

As the financial crisis illustrates, the macroeconomic costs of financial instability and the challenges that it poses for the maintenance of price stability provide support to the case for a flexible and cautious strategy encompassing the need, in some well chosen circumstances, to influence financial markets. But how can such a policy be made operational? And if it can, can it really be implemented in practice? The answer to these questions very much depends on the monetary policy framework specifically adopted by a central bank. In this respect, the ECB's monetary policy strategy embodies elements that – in my view – provide a suitable and robust framework for an occasional, but appropriate "leaning-against-the-wind" approach.

The ECB's Governing Council has defined its aim of keeping inflation rates below, but close to 2% over the medium term. The medium-term anchoring of inflation expectations allows the conduct of a less accommodative monetary policy during a period of buoyant financial markets, even in an environment of relatively subdued inflationary pressures. While this will result in lower inflation over shorter horizons, one could expect it to be more effective in maintaining price stability over longer horizons by helping to prevent the emergence of possible deflationary risks after the bursting of the bubble.

Taken together, I tend to regard the ECB's monetary policy strategy as being particularly well equipped to deal with risks to price stability across different time horizons insofar as they arise from imbalances in money and credit.

It is fair to say that there have been times when the ECB's monetary policy strategy has not been well understood in some academic circles. In my view, there is only one way of addressing these concerns in a constructive way: the ECB needs to foster the public's understanding of its monetary policy strategy and, thereby, especially the robustness of monetary analysis.

In spring 2007 the Governing Council endorsed the pursuit of an agenda to enhance the ECB's monetary analysis. Having faced excessive money growth, we then perceived serious challenges. We have made significant progress on our agenda. The results look promising and they will hopefully stimulate the debate further. To this end we have published a book on "Enhancing Monetary Analysis". Copies of this book will be made available outside the room during the break. Of course, the book should not be seen as the final word. While it has interesting answers to offer regarding some questions, other questions and challenges have arisen during the process of compiling the material. But I am confident that the new generation of tools presented in the book and the results of the subsequent debate will help us to prevent a crisis of the magnitude seen in the recent past in future decades.

Conclusions

Let me conclude by summarising what are – in my view – the main features of a robust monetary policy framework.

- First, there is broad agreement that central bank independence, price stability and transparent communication will remain key features of effective and credible monetary policy-making.
- Second, in the case of the ECB, a quantitative definition of price stability, a medium-term orientation and a broad analytical framework, with money and credit playing an important role, have been key elements in the conduct of monetary policy. The crisis seems to be paving the way for solidifying support for the medium-term orientation and for the role of money and credit in a central bank's analysis.
- Third, in relation to this, the crisis seems to point towards a need for a symmetric approach in central banks' reaction to asset price bubbles and busts. Traditionally, the proposal of "leaning against the wind" has faced a considerable degree of scepticism. Recent results, however, call for a fair reassessment that does more justice to the advantages of such an approach.

I am confident that these features of a robust monetary policy framework will guide us in the future. At the same time, I am convinced that central bankers have a responsibility to ensure that their monetary policy frameworks create the proper incentives for the banking community to assume its responsibilities and take the appropriate decisions in a timely manner to shape a healthy banking sector at the service of the real economy.

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