

In Search of Monetary Stability: The Evolution of Monetary Policy

Some Reflections

Experience – Lessons – Open Issues

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1. Introduction¹

In mid-1980s a period started which might in retrospect once be seen as the “golden age” of monetary policy. Inflation had come back from the high levels it had reached in the 1970s. Worldwide inflation rates were at their lowest level for a long time. Low and stable inflation went along with first reasonable and later remarkable growth and reduced volatility in the real economy.

The term “Goldilocks” sometimes used to describe this situation indicated that at least a number of fortunate circumstances contributed to this situation. Deregulation and globalisation with their impact on competition and pricing power in goods and labour markets are sometimes seen as major factors supporting this process of low inflation (Rogoff 2003). With these forces weakening will we see also the end of the “golden age” which then will turn out to have been only a short episode?

On the one hand this would be no surprise for those who have stressed from the outset that the highly positive macroeconomic outcome if not the result of luck was in first place due to the combination of benign circumstances which could not be expected to last forever (Sims and Zha 2006).

And, do recent developments not already confirm this sceptical assessment of the role of central banks and monetary policy during this period? Isn't inflation rising? Doesn't the ongoing turbulence in financial markets not indicate that central banks did not or rather could not prevent such developments?

On the other hand: have we not seen the emergence of a policy regime which should be robust enough to extend the period of monetary stability into the future? And would not a regime of monetary stability contribute to the stability of the real economy? We might only ex post be able to give a definite answer to this question. For the time being we can just study the

¹ Klaus Adam has provided a number of valuable suggestions. For valuable comments on a first draft I would like to thank Claudio Borio, Vitor Gaspar, Marvyn Goodfriend, Julian von Landesberger, Klaus Masuch, Wolfgang Modery, Volker Wieland.

emergence of the current policy regime and its elements and the process behind in the practice of central banking and in research.

I would like to start with a personal note. It would be, to say the least, overambitious to try to give a survey on a few pages on roughly three decades of research on monetary policy. The same is true for the analysis of the practice of monetary policy during this period. What I have tried is just to present some reflections of someone who came from academia to play a special role in two central banks under extremely difficult circumstances, namely the start of EMU and the aftermath of German Unification. It was a challenge and privilege to build the bridge between research and the process of preparation and decisions on monetary policy in these two central banks. What were the most relevant aspects of theory to be considered when deciding on monetary policy? How did it work in practice? One of the main lessons I got during these 16 years of central banking practice is that it is key to raise the relevant questions and not to ignore important insights – even if at the time dominant approaches in research seem to suggest otherwise. It should therefore also not come as a surprise that the paper will end with open questions.

The structure of the paper is as follows. The next chapter tries to confront some results of monetary policy with progress in research which to a high degree was triggered by these events. Chapter three analyses the principles guiding the conduct of monetary policy by the ECB and the Bundesbank. The following chapters focus on specific aspects of monetary policy.

2. The lessons of the 1970s

Conferences on monetary policy in the 1970s provided a forum for heated debates. Academics were divided in Monetarists and Keynesians with many different facets within these two groups. Central bankers represented institutions with very heterogeneous views on how to conduct monetary policy. Against this intellectual and institutional background which had all signs of chaos, the macroeconomic performance is not surprising: The “great inflation” of the seventies which ended in stagflation was the dominant feature.

True, the first oil price shock had been a big challenge but cannot be accepted as an excuse to the macroeconomic failures experienced during this period. There are libraries devoted to the explanation of policy in this period.² In a nutshell the analysis of the Fed’s policy by A. Meltzer (2005) contains all relevant elements.

First of all there is not a single factor which can explain the unsatisfactory outcome but it was a combination of elements which have contributed and reinforced each other in their impact on the economy. The major reasons indentified by Meltzer are:

- a lack of leadership (even worse : misguided views by the chairman)
- a flawed theory of the causes for inflation
- coordination with fiscal policy

“The absence of a relevant, coherent framework proved costly” (Meltzer). Lack of leadership, flawed theory and misguided coordination with fiscal policy have all contributed to this incoherent framework which could only result in bad monetary policy decisions. The elements identified by Meltzer in the case of the Fed are however of a general character and

² Fiscal policies played an important role, too, which is not discussed here. Wage developments in many countries were also a major cause which contributed to the problems. But, insofar as wage demands reflected inflation expectations and inflationary uncertainty they were a kind of endogenous factor.

refer to the personal factor in the central bank, the economic analysis for monetary policy decisions and the relation with government.³

The positive side of the bad experience of the seventies is the gradual emergence of a consensus that these mistakes should not be repeated. Research had ample experience to study questions of optimal conduct of monetary policy. But, not surprisingly the two other elements (personal and institutional) have not only contributed to the policy mistakes of the seventies – they are also indispensable pillars of a satisfactory framework.

The core cause for bad monetary policy lies in flawed theory and lack of a consistent framework. It is not a contradiction to this that in such an environment, a central bank might become extremely ambitious being inclined towards fine tuning the economy and trying to achieve varying goals (Goodfriend 2007). As a consequence financial markets and the public at large will be unable to predict the actions of the central bank and adjust their own plans. This might contribute to higher volatility in the real economy because private agents have only limited capacity to process divergent information (Adam 2007).

The rational expectations theory concentrated on the interaction between policy makers and private agents (Lucas and Sargent 1978). Today there is consensus that the central bank must act in a systematic way and should make not only the decisions but also the process which leads to these decisions transparent so that the private sector can understand and anticipate the policy (Woodford 2003).

Controlling – I prefer the term anchoring- inflation expectations at a level consistent with the explicit goal has become the key principle of central banking.

What seems obvious today is the result of some 25 years of research encompassing many strands and steps, including innumerable publications. There are excellent surveys of this development (e.g. Blinder 1998; Mishkin 2007; Walsh 2007). The following kind of short cut is meant only to highlight the connection between those strands of research and their interdependence in leading to a coherent framework for monetary policy.

³ For a broad survey on the experiences of the 1970s see Mishkin 2007.

A first, decisive step stressed the importance of credibility (Barro and Gordon 1983). Credibility is the cornerstone of a monetary policy achieving optimal macroeconomic results (Cukierman 1992). Only a credible central bank can guide expectations of private agents in a consistent way. Credibility can be gained by past good practice, i.e. by a convincing track record. To be continued into the future a commitment of the central to a policy delivering on its goal is needed. To achieve this the central bank must communicate its policy intention in a transparent way.

The theory of dynamic inconsistency (Kydland and Prescott 1977) was an important contribution in supporting the need for credible commitment. Theory and experience discard the option of a purely discretionary monetary policy. At the same time the idea to exclude any discretion in a paper standard by a credible commitment – Friedman initially even suggested an act of constitutional law – to a strict rule did not survive strong objections and was finally given up even by its most prominent proponent. However, the discussion on monetary policy rules has brought many insights – and may continue endlessly (see e.g. Taylor 1999).

Pure discretion gives the widest latitude for the impact of personal preferences of decision makers. In the tradition of the “Rules versus Authority” debate (Simons 1936, Woodford (2003) monetarists (Brunner 1981) heavily criticised the incompetence of central bankers. But, as their quest for strict rules did not succeed there remains at least some room for discretion and insofar for personal preferences also in any rule based approach.⁴ One strand in the public choice literature (Acheson and Chant 1972) was not continued. Yet, implicitly the “personality issue” remains relevant in the theory (and practice) of monetary policy. The figure of the “conservative central banker” (Rogoff 1985) explains that the appointment of persons might give a strong signal of future monetary policy and thereby influence the forming of expectations by the public. The search for optimal contracts for central bankers (Walsh 1995) brings interesting insights when designing the statute of the central bank (see e.g. the case of New Zealand).

⁴ It is interesting to note that the discussion on „persons“ has more or less disappeared from the research agenda. This might to some extent reflect the fact that stronger input from research in monetary policy and more rule based behaviour has increased the stakes for purely political appointments.

It is interesting to note that a fundamental element of the statute of a central bank namely its independence (or dependence) from government for a long time was hardly discussed. A first paper finding a correlation between independence and the degree of price stability was ignored (Bade and Parkin 1980). However, since the paper by Alesina and Summers (1993), the literature has grown so much that it is hard even to survey it. The political economy argument for giving independence to the central bank is best summarized by the statement of the Chancellor of the Exchequer Gordon Brown on the Bank of England (20 May 1997): “The previous arrangements for monetary policy were too short-termist, encouraging short but unsustainable booms and higher inflation, followed inevitable by recession. This is why we promised in our election manifests to ... reform the Bank of England to ensure that decision-making on monetary policy is more effective, open, accountable and free from short-term political manipulation”.

A central bank and even more so one endowed with, independence in its monetary policy decisions must be given a clear mandate. There is consensus that the mandate must include price stability respectively low inflation. However, the discussion on “single vs. dual mandate” goes on – and might never end.⁵ There is a consensus that monetary policy can have an impact on the real economy in the short-to medium-term and no central bank will ignore this in conducting a monetary policy to maintain price stability. How this is achieved depends on the monetary policy strategy, the time horizon of policy considerations etc. Credibility and a convincing commitment to the goal of price stability respectively stable low inflation are the indispensable fundament for the conduct of sound monetary policy. If these conditions are fulfilled one might ask if there is in the end any difference between monetary policy acting under a “single” (price stability) or a “dual” mandate.⁶ Being legally obliged to conduct a monetary policy to increase employment it might e.g. very difficult for a central bank to explain the limits of what it cannot do in the long-run and/or in the case of structural unemployment. And, how to anchor inflation expectations in a situation of high inflation and high unemployment?

⁵ The discussion on the Fed’s mandate ignores the inconsistencies of the legal text. “Dual” is reduced to price stability and employment.

⁶ For a discussion see e.g. M. Friedman 1977, B.Friedman 2004

3. Experience with monetary policy – The ECB and the Bundesbank –

The statute of the European Central Bank (ECB) -to be established years later (June 1998)- is enshrined in an international Treaty, the Maastricht Treaty which was signed by all EU member states on 7 February 1992. The key elements are a clear mandate, priority for maintaining price stability, independence from political interference, and prohibition of monetary financing.

This statute was the outcome of long discussions and negotiations. Two strands were dominant in the formulation of this agreement. One was political. The political situation certainly was crucial for the agreement between European governments on the statute of the ECB. There was no other way for chancellor Kohl to get support at home for giving up the DM than to overcome scepticism towards the new currency by insisting on a “Bundesbank type model” for the ECB (and to bring the new central bank to Frankfurt). Politicians from other countries wishing a common currency had to accept these principles as a monetary union in Europe without Germany would have been a non-issue.

The other was the result of the development of the theory of central banking as shortly described in the previous chapter, and the strong evidence delivered by the monetary policy of the Bundesbank.⁷

The Treaty implied that before entering monetary union countries had to make their national central banks also independent. Against this background it happened that countries which had not considered to give independence to their own central bank agreed on this status for the supranational central bank ECB to be established years later.

The principles of a clear mandate for price stability or low inflation and independence had come out from research as the two key elements for the optimal institutional design of a central bank. Therefore, the decision to endow the future European central bank with independence reflected “state of the art”.

⁷ The rules on the appointment of members of the Executive Board of the ECB also reflect these influences. The term of eight years might lie at the lower end of considerations for personal independence which is supported by the prescription that the term is not renewable.

In this context the example of the Bundesbank and its impact on the statute of the ECB was not just the expression of political interests but reflected also the successful track record of the monetary policy of the German central bank. The success of the Bundesbank's policy which was based on its independence and its mandate was widely seen as a benchmark for sound monetary policy.

The independence of the German central bank dates back to 1948 when the allies introduced the law on the Bank deutscher Länder, the predecessor of the Bundesbank. This happened at a time when (West) Germany as a country did not yet exist. When the law on the Bundesbank (1957) was discussed the then Chancellor Konrad Adenauer was anything but a supporter of the status of independence for the central bank. But, two factors prevailed over his preference. Firstly, the strong influence of Ludwig Ehrhard, the father of the so called "economic miracle". Secondly it was the high reputation with the public the central bank had already gained in post-war (West) Germany. This has to be seen against the background of two currency reforms (1923/4 and 1948) which ended periods of extreme inflation and in which savers twice in one generation had lost their (nominal) wealth. The DM fulfilled the strong desire of the German people for a stable currency, the high reputation of the central bank protected it against all political attacks which were limited anyway because politicians were aware that they could only lose when starting such a battle. This explains also why the statute of the Bundesbank was never at risk despite the fact that it was based on a law which could have been changed any time with a simple majority.

Hence, the independence for the central bank in Germany was sustained. The Bundesbank came to be regarded world wide as an example of a sound institutional framework for conducting a price stability oriented monetary policy. However, the Bundesbank had also to go through an experience which is of general importance. In the context of the Bretton Woods regime the exchange rate of the DM was fixed against the US Dollar (with small margins). In the late 60s and early 70s the Bundesbank was increasingly forced to intervene in the foreign exchange market to defend the parity against the US currency. In such a regime money growth becomes endogenous. The external component of central bank money creation was for a while even higher than growth of the monetary base implying that the domestic contribution to money creation was negative.

The consequences for the institutional arrangement for monetary policy are far reaching. In a regime of a fixed exchange rate (and convertibility), notwithstanding its legal independence from political interference and being equipped with all necessary instruments the central bank becomes powerless to pursue the domestic goal of price stability. These are the rules of the gold standard. However without the “golden anchor” the national inflation rate is determined by the monetary policy of the dominant world currency (which was the US dollar).

This changed fundamentally when the German government in March 1973 decided to let the DM float against the US dollar. The external constraint was abolished. The Bundesbank could pursue a course of price stability. In 1974 the Bundesbank adopted a monetary target for the following year and continued this practise until the end of its existence as a central bank responsible for a national currency. Initially the Bundesbank declared this strategy an “experiment”. Overall its approach was interpreted as a kind of “pragmatic monetarism” which triggered critique from opposite sides. For academic monetarists the policy of the Bundesbank was not focused enough on controlling the money supply as the Bundesbank met its monetary target only in roughly half the years. From the other side the Bundesbank’s policy was criticized as paying too high a tribute to money growth.

Judged by the results, i.e. performance of price developments, the Bundesbank can point to a track record which overall is superior to those of most other central banks. This became especially visible in the 1970s when the “Great Inflation” did not happen in Germany (Issing 2005, Beyer et al 2008). In the context of the macroeconomic challenge caused by German unification the strategy of monetary targeting also played a decisive role in first containing inflationary pressures and finally bringing back price developments in line with stability.

As the positive result of the Bundesbank’s monetary policy hardly can be denied prominent critics of the strategy are trying to explain that the Bundesbank only pretended to follow a strategy of monetary targeting but in reality practised a policy of “inflation targeting in disguise” (Svensson 1999, Bernanke et al.) or followed a Taylor rule (Clarida, Galí and Gertler 1998). Potential output and trend velocity (together with the normative rate of inflation) were the elements in deriving the annual monetary target. A “pragmatic” attitude in

pursuing this target entailed enough flexibility so it is not surprising that applying a model with variables for the output gap and inflation could come close to explaining the monetary policy decisions of the Bundesbank although one has to say that some “ingenious adjustment” is needed to derive a proper Taylor rule. As the Bundesbank was constantly aware of the long time lags of monetary policy and always applied a medium-term approach to maintain price stability – never reacting mechanistically to short-term deviations of money growth from target – it is also not surprising why the label “inflation forecast in disguise” was invented.

But, interesting as it might be for academic contributions, everybody having been involved in the preparation of the policy of the Bundesbank and the decisions finally taken knows better: “money always mattered” and the Bundesbank did what it communicated, it applied “pragmatic monetarism”, deeds were consistent with words. Therefore, independent researchers having had all the information at their disposal found convincing evidence for the perseverance of pragmatic monetary targeting (Baltensperger 1999; Neumann 1997). Finally, new research provides additional interesting results supporting this view (Scharnagl, Gerberding and Seitz 2007).

The attempt to discredit “money” as a major factor in the monetary policy of the Bundesbank has been hardly convincing- to say the least. The ECB, when confronted with the challenge to design a proper monetary policy strategy was not too much impressed by this criticism. Quite the opposite: While rejecting the option of monetary targeting, “money” was given a prominent role.

As a new institution preparing monetary policy for a new currency the ECB was in a special position. On the one hand it had the unique opportunity to start from scratch and apply a new approach. On the other hand considering the extreme uncertainty surrounding the creation of a new and heterogeneous monetary union and the introduction of a new currency the risk of taking a wrong decision on the strategy was enormous. It might have taken only a short time before learning that the chosen strategy was flawed. But, being responsible for a strategic mistake would have almost fatally undermined the reputation of the new institution and its

currency. The ECB might have needed years to recover from a major mistake at the beginning.⁸

The challenge for the ECB can be summarized in one sentence: Anchoring inflation expectations at a level consistent with the mandate of maintaining price stability.

This would imply that long-term interest rates in all (future) euro area countries would have to come down to the lowest level which was that of the most stable currencies (DM, French Franc, Dutch Guilder, Austrian Shilling). This seemed very unlikely if not impossible, a kind of average level was widely expected. But, from hindsight we know that the ECB was successful.

This was achieved by a strategic approach which took several steps:

- Gathering all relevant information on the new currency area.
- Taking stock of best practice in central banking, experience and research.
- Designing an appropriate strategy for the (future) conduct of monetary policy.
- Communicating the results of the preparation timely, i.e. before the start of EMU to the public.

Without going into details, the data situation before the start of EMU (and for years to come) was anything but satisfying. Discussions in the context of the European Monetary Institute (EMI) had helped to prepare a common understanding among members of EMU. But, the final stage of “taking stock” and decision could be done only after the establishment of the ECB. The process and the result are documented in Issing et al. (2001). It culminated in an agreement on a number of principles which were highly influenced by the contributions discussed in the previous part of this paper. Credibility can only be established (and maintained) by a convincing commitment to the mandate; a strategy is needed, but neither

⁸ Wrong decisions on the monetary policy strategy and its implementation had to be considered as a kind of worst case. This is not to say that other mistakes could not also have caused great damage. The choice of instruments and their application would have been another major “candidate”.

pure discretion nor a simple rule embody a solution; all available information has to be considered and “money” (in a broad sense including credit) has to be given a prominent role; finally, transparency has to be achieved by effective communication and accountability to the relevant authorities and the public at large is an indispensable requisite for an independent central bank in a democratic society.

The ECB published the Governing Council `s decision on the future monetary policy strategy on the strategy on 13 October 1998, i.e. two and a half months before the start of EMU. The first element of the strategy was the announcement of a quantitative definition of the primary objective of the single monetary policy, namely an annual increase of the HICP of below 2%. The commitment to “below 2%” was seen by outsiders as very ambitious. For the ECB it was the appropriate goal taking a safeguard against deflation as well as a likely measurement bias into account and at the same time marking a ceiling for tolerable price increases. The ECB stressed from the beginning the medium-term orientation of its policy. As it turned out inflation expectations became well anchored.

The available options for the monetary policy strategy included monetary targeting, inflation targeting or a new approach (Issing 2008). The strongest argument against adopting monetary targeting was the potential impact of the regime shift implied in the transition from 10 national currencies to the euro.

But, why did the ECB not vote for the concept of inflation targeting which seemed to emerge at that time “state of the art”? In short the main reasons were the following:

Because of the then existing uncertainty (over data and structure), the ECB had every reason to exercise the greatest caution as regards forecasts of all kinds, quite apart from the fact that at the time models for the euro were still in their infancy. Inflation targeting would have required commitment to a specific economic model or to a suite of models. Model here does not mean just a statistical forecasting model but a structural economic model that is appropriate for conducting policy exercises. To put it simply: such models were almost non-existent for the euro area or –in the case of the ECB `s area wide model- have just come into existence, so that the uncertainty surrounding it was immense.

Given these uncertainties, the linkage between the forecast and the monetary policy response becomes less clear: inflation targeting becomes extremely complex, the “charm” of its seeming simplicity is lost, and communication becomes correspondingly difficult. These considerations argued already against an inflation targeting strategy for the ECB. Moreover, in the case of EMU, structural change will constitute a very lasting challenge going beyond of what central banks are normally confronted with. The euro area is expected to undergo changes resulting from the introduction of the single currency and enlargement over an extended period of time.

Alongside these objections, one fundamental shortcoming of inflation targeting was a decisive factor in the ECB’s decision, namely the fact that it completely ignores the relationship – borne out by overwhelming empirical evidence – between the growth of the money supply and inflation. The models commonly used for inflation targeting are essentially models of the real economy, and thus do not assume any independent influence of monetary growth on price developments. More generally, the modelling of the financial system is in most cases, stylized to the extreme. Financial variables are limited in number. Developments of the yield curve, risk spreads across financial assets –to mention only a few –are hardly integrated. Hence, inflation forecasts, produced by these econometric models, cannot provide a full picture for monetary policy purposes. The question that remains, therefore, is why central banks should rely for their assessment of current conditions and future inflation solely on models that completely disregard this important relationship between money and prices. In an inflation targeting framework it is moreover almost impossible to take adequate account of developments in asset prices.

In trying to give money a prominent but anything but exclusive role in monetary policy the ECB adopted its “two pillar” strategy.

The monetary policy strategy rests on two pillars. This is a way to organize the analysis of all information which after cross-checking the results leads to an encompassing assessment of

risks to price stability and finally to monetary policy decisions to bring price developments in line with the mandate (ECB 1999).⁹

In a nutshell the economic analysis or pillar spans a wide range of indicators and models. In the short to medium term, prices are determined by non-monetary factors such as wages (unit labour costs), the exchange rate, energy and import prices, indirect taxes, etc. Indicators of developments in the real economy include data on employment and unemployment, data from surveys, incoming orders, and so on. This economic analysis also encompasses financial sector data such as the yield curve, stock prices and real estate prices. Asset price trends can yield information e.g. on how the wealth effect is expected to influence the growth of demand of private households. As part of its economic analysis, the ECB takes a broad look at developments in macroeconomic demand and its structure, in costs and in the labour market. This includes taking account of the influence of fiscal policy (spending and revenue) and of external factors (the international economic environment, exports and imports). The analysis also addresses the problem of what shocks are already confronting the euro area, and what shocks are to be expected with what degree of probability.

A special position in the economic analysis is occupied by the staff's macroeconomic projections. The ECB uses the term projections (and not forecasts) to make clear that these are scenarios. Essentially, they involve estimating the future trend of prices and of GDP and its components based on certain assumptions. For example, the exchange rate is assumed to remain unchanged over the projection horizon. Initially, the ECB also assumed a constant short-term interest rate, but in 2006 it switched to basing the projection on market rates.

In their projection exercises, the Eurosystem experts use various methodologies and models, including a (euro) area-wide model and a multi-country model.¹⁰ How the projections are produced is described in detail in an ECB publication.¹¹ Four times a year, the staff elaborates projections with a two-year horizon. In June and December of each year, this is done by the

⁹ After a thorough evaluation the strategy was confirmed by the Governing Council in May 2003.

¹⁰ G. Fagan et al., „An Area-Wide Model (AWM) for the Euro Area“, ECB Working Paper No. 42, 2001; G. Fagan, J. Morgan (eds.), Economic Models of the Euro-area Central Banks, Cheltenham 2005. The new micro-founded model – New Area Wide Model NAWM is developed by [Coenen et al.](#) (2007)

¹¹ ECB, A Guide to Eurosystem Staff Macroeconomic Projection Exercises, 2001.

ECB experts jointly with their counterparts at the national central banks; in March and September the ECB experts produce the projections on their own.

The ECB first needed to gain experience with its projections. Organising the cooperation between the experts at the ECB and at the national central banks was far from easy. Before long, however, the resources available and the possibility of discussion between the experts were coming together to yield a good overall result. Once the procedures had been set up and the result had been tested over a certain period of time, the ECB Governing Council decided in December 2000 to publish the projections. Initially, only the Eurosystem staff's projections were published, but later those of the ECB staff were published as well. To illustrate the uncertainty associated with such projections, the results are published in the form of projections ranges. The ranges are determined by the difference between previous projections and actual outcomes. The ECB decided not to use the "fan chart" method in order to avoid giving the impression that it had specific knowledge of the profile and distribution of forecast uncertainty.

The ECB's projections are produced by a staff of experts in time for the Governing Council's last monetary policy meeting in each quarter. The Governing Council receives the projection results together with a detailed report that sets out the underlying technical assumptions, describes the risks to the projections and discusses alternative scenarios. The Governing Council itself, however, does not exert any influence on the elaboration of the projections. Its very size means that the Governing Council would not be suited to producing projections. It is, however, the task of the Governing Council to discuss its assessment – which may well diverge between individual members – and their significance for the monetary policy decision to be taken (Issing 2004b).

The strategy adopted by the ECB takes appropriate account of the projections: they represent an important input into analysis and decision-making, but are not the central basis, still less the only one. Their results are uncertain, and are subject to rapid and large changes if the assumptions, e.g. about the oil price or exchange rates, do not (or no longer) reflect reality. Quite apart from that, the projection results depend in large measure on the chosen methodologies. In addition, the already limited reliability of the projections decreases as the projection horizon lengthens.

Projections cannot incorporate all relevant considerations, and thus are only a partial reflection of a comprehensive analysis. They are not suited at all to take due account of monetary and financial factors.

It was already explained why the ECB rejected a monetary target. This could not, however mean that little or even no regards were to be paid to the importance of monetary factors in the evolution of prices. The close relationship between the money supply and prices has been proven in countless studies all over the globe and all through history. It is one of the most certain facts in economics – insofar as anything is ever “certain” in economics. This relationship, it is true, holds only over the long run, but it can be regarded as robust across virtually all models of monetary economics (Lucas 1980). This was the starting point in the considerations of the Governing Council to give money a prominent role in the form of a monetary pillar or analysis.

Hence the ECB had every reason to treat this insight, and its own responsibility for monetary developments in the euro area, with due seriousness. How could the intention of “assigning a prominent role to money” be put into practice? There were two aspects that were difficult to reconcile in this regards. On the one hand, the same reasons that led the ECB to reject a money supply strategy argued against fixing on a single monetary variable or relationship between money and prices. On the other hand, a concrete means had to be found to present any risks to price stability from the monetary side in operational form.

These considerations led to the concept of a reference value for growth of the broad aggregate M3. The value calculated was to serve as a guide to the rate of growth that is consistent with maintaining price stability.

Money provides a “natural” anchor for a monetary policy committed to price stability. A reference value for monetary growth underlines the central bank’s responsibility for “monetary” impulses to inflation: As its rejection of a monetary objective showed, however, the ECB was aware of the difficulties that were to be expected in the practical implementation of monetary policy, as already reflected in the phrase “under normal circumstances” in the

press release. In the January 1999 article on its strategy, the ECB explicitly highlighted two aspects.

Firstly, the concept of a reference value does not entail “a commitment on the part of the Eurosystem to correct deviations of monetary growth from the reference value over the short term. Interest rates will not be changed ‘mechanically’ in response to such deviations in an attempt to return monetary growth to the reference value.

Secondly, the monetary analysis does not consist solely and exclusively of the reference value and M3. Other monetary aggregates, the various components of M3 and the counterparts to all these aggregates in the consolidated balance sheet of the monetary financial institutions would also play an important role in assessing the monetary risks to price stability on an ongoing basis. After just a few years, the ECB was able to report that its monetary analysis had been considerably broadened and deepened. (ECB 2004; Issing 2005) In its quarterly Bank Lending Survey, provided in close collaboration with the national central banks, the ECB has developed an instrument that provides an important overview of current developments in lending, that is, in the “counterpart” to M3.

There are a number of elements in the strategy and monetary policy of the ECB which reflect the results of research and experience like communication, transparency and accountability (Issing 2004a). The following chapters will concentrate on some issues related to strategy considerations.

4. Further considerations on the role of “Money”

The ECB’s monetary policy strategy has several aspects in common with inflation targeting: A quantitative definition for the final goal of price stability (or low and stable inflation), transparency on the monetary policy process and decision, and corresponding communication being crucial (Issing 2004a). As already explained an important difference with inflation targeting is the role given to the model-based inflation forecast.

But, the main specific character which makes the difference – and which is heavily criticised especially by the proponents of inflation targeting – is the role for money in the strategy of the ECB.¹² What now is widely seen in research as representing “state of the art” on monetary policy gives money no role (Woodford 2003; Svensson 2005). According to this view looking at “money” at best has no value added.

However, as one should have expected neglect of “money” should not last for long. Interest in the role of money for the conduct of monetary policy is increasing.¹³ For the time horizon of the monetary policy of the central bank the development of “money” plays an indispensable role.

Ongoing research at the ECB promises to offer important insights. Christiano et al (2007) show that a central bank is well advised to supplement monetary policy actions based on a standard interest rate with careful monitoring of monetary developments. They explore two specific examples. In the first example, involving financial frictions associated with firms' financing, they show how money may help anchor price sector expectations. In their second example, building on wage setting frictions, they show that taking credit growth into account eases asset prices volatility.¹⁴ De Fiore and Tristani (2008), in turn, explore monetary policy making in a model where financial market imperfections generate a credit channel in the transmission of monetary policy. In their model, money, credit and financing margins co-move over the business cycle and are relevant for the conduct of monetary policy. Both Christiano et al (2007) and de Fiore and Tristani (2008) start from the standard new Keynesian model and depart from it in deliberately minimal ways. Hence, they suggest that even minimal departures from the standard framework are enough to establish a role for money and credit.

A complex approach to the transmission mechanism is part of the ECB's view on how monetary policy has an impact on the economy. Gaspar and Kashyap (2007) argue, that even in their very stylised and ad hoc setting, the importance of the financial system for the transmission mechanism warrants careful attention, when conducting monetary policy. The importance of these considerations is testified by the fact that the first Eurosystem Research

¹² The Bank of Japan has adopted a strategy which has strong similarities with that of the ECB. For a comparison see Gerdesmeier et al 2007.

¹³ See e.g. Goodhart 2007; King 2007.

¹⁴ For a critical comment on the role of the financial sector in these models, see Borio 2007.

Network – a co-operative venture involving the ECB and the national central banks – was devoted to the study of the monetary transmission mechanism from a variety of perspectives.¹⁵

This role comes into play where the information from analysis of economic factors and usual forecasts ends. There is always the risk that the central bank bombarded with a myriad of economic news is becoming hypnotized by the latest indicators, by the markets anticipation of the central banks' response to the latest indicators, and so on into infinity. This mechanism can lead monetary policy gradually astray from its role of providing a firm medium- to long-term nominal anchor for the economy.

This is not to say that a central bank should ignore latest data on all relevant developments. Not at all! But, the information coming from these indicators have to be put into context with the long term orientation of monetary policy which develops its impact on the economy only with long time lags. Short- to medium-term analysis has to be made consistent with medium- to long-term orientation.

At the risk of oversimplifying the principles of prudent monetary policy the central bank has to reconcile the need for prompt action and the long-term-orientation. (Issing 2002).

(1) First, a central bank always needs to tailor action upon the origin the magnitude and the nature of the shocks that hit the economy from time to time. This is a highly demanding exercise because shocks do not come about with labels. They have to be identified first, in real time. But there are no shortcuts or excuses – no simple rules linking policy to one or two privileged indicators can substitute for an accurate examination of shocks and a careful analysis of their potential for transmission into prices over a sufficiently extended span of time ahead. A corollary to this principle is that the horizon for policy action cannot be set in advance (see e.g. Adam 2007).

¹⁵ See Angeloni et al. 2003

(2) Second, a central bank can benefit from keeping an eye fixed on the single long term compatibility condition that monetary economics has to offer to practitioners, free of model-specificities and restrictive assumptions. Namely, that over a sufficiently extended period of time, money should grow at a rate that is consistent with trend growth in real output terms, this principle embodies the ancient wisdom of the quantity theoretic law – that growth of money and inflation go together in the long-run..

Each of these two principles – if taken individually – entails some guidance for the monetary policymaker, which, however, is partial. A monetary policy strategy – such as the one adopted by the ECB – can be seen to provide a robust framework for monetary policy decision-making, which heeds these two general principles in a way in which they reinforce and complement each other.

The lesson suggested by the first principle is that disturbances have to be evaluated as they come about, according to their potential for propagation, for infecting expectations, for degenerating into price spirals. And in case the anchoring of inflation expectations is at stake preventive action should not be delayed, as it becomes clear, shocks – whatever their origin – may take hold in the economy and evolve into inflationary or deflationary pressures over the medium term. The time dimension of these possible developments varies with the type of shock, the initial macroeconomic conditions, the prevailing financial sentiment, the international environment, and many other variables. Therefore, the horizon for monetary policy cannot be set in advance. Sometimes it pays to look far ahead beyond the average lag of monetary transmission. Sometimes the economy can be expected to return to price stability within a much shorter horizon. In all events, a central bank has to ensure that expectations be quickly reverting to its declared objective of policy.

The policy recommendation implicit in the second principle is simple: Do not ignore the information that monetary developments contain for medium-term price developments; even if the relationship between money and prices may not come through strongly at short horizons. This principle also provides an antidote against the pitfalls of exceedingly forward-looking rules. Looking into the future with a vigilant eye, as the first principle suggests, is a fundamental element of good policy. But, by constantly looking ahead one should not lose sight of the intended trajectory of policy and the need to act consistently over time. One

should always be constantly aware of possible inadvertent slippages from intended long-term direction. In the end monetary policy needs to ensure a path of money supply that is consistent with maintaining price stability over medium term. Trends in money velocity can be incorporated in such a longer term benchmark to account for the evolving structure of the monetary exchange. But, in the end, there can be no sustained inflation without systematic accommodation in monetary aggregates.

The key point that I want to bring out here is that neither of these two principles can stand alone. Both are in need for mutual cross-checking.¹⁶ The first principle suggests that the central bank moves its interest rate policy instrument in reaction to the disturbances that are considered to have implications for the price stability in the medium term. But these actions – taken at successive points in time – may not prove to be consistent over time and could, thus, cumulatively result in systematic divergence from the desired objective. Thus, the course of policy followed in the attempt to counter perturbations via shock-specific responses needs to be ascertained against the straight line provided by the quantity theoretic reference of the second principle. If that line turns out to have been departed from an extended period of time, then policy, sooner or later, has to be brought back onto the right course.

As already mentioned over time the ECB has deepened and broadened its monetary analysis including a major role for credit. Looking at “money” and “credit” together also helps to better assess the inflationary potential of monetary developments. In case strong money growth is accompanied by broadly based strong credit growth the identification of inflationary risks is on rather safe ground, whereas strong money growth going along with weak and probably also declining credit development might indicate – like in the time after 2001 – that growth of broad money could be driven by higher uncertainty and increased preference for liquidity. Therefore, the ECB has always stressed that the development of “money” has to be analysed and properly assessed (Roffia et. al. 2007).

However, the role of “credit” goes far beyond the analysis of the balance sheet of the banking sector. Financing investment via corporate bonds instead of bank loans played e.g. an increasing role after the start of EMU. This is, of course only one way of substituting bank lending by other means of financing. The whole process of securitisation, financial innovations of all kinds have opened new options of financing for the non – financial sector.

¹⁶ For a formal approach see Coenen, Levin and Wieland (2005) , Beck and Wieland (2007) .

And, the development of prices, of risk spreads across all types of financial instruments may contain important information for the conduct of monetary policy.¹⁷ This is anything but a reason to neglect “money”. It is rather a strong argument to extend monetary analysis beyond the interpretation of the balance sheet of the banking sector and to try to integrate the results into an encompassing approach. In this context it is not surprising that the concept of “liquidity” in all forms is used to identify risks to price stability (and the stability of the financial system) on a global scale.¹⁸

In this context one might also ask if we do not need a new discussion on the definition of money respectively monetary aggregates. The M3 of the ECB represents already a very broad aggregate which comprises marketable assets like money market funds. These are obviously assets which at times were called “near money”. However, the present crisis also reveals that finally there is a fundamental difference between different types of assets concerning their “liquidity”. Assets highly liquid under “fair weather” conditions can lose this capacity rapidly in “bad weather”. In a crisis it might become visible that there is in the end only one means of final liquidity which is central bank money. It is not surprising that in times of rapid financial innovations the question “what is money” has to be newly discussed – remember the currency-banking controversy in the 19th century.

Critics of an approach giving money an important role in monetary policy take not least these problems of defining money and monetary aggregates properly as an argument to disregard money. But, the solution to understand and analyse rapid changes in the financial system and the highly increased importance of the financial industry cannot be expected from models which lack a realistic financial sector with frictions that would generate a meaningful interdependence between financial sector allocations and the real sector.. How, could one pretend to understand modern economies by ignoring these interactions?

5. Monetary Policy and Asset Prices

The role of money and credit has gained new interest via their relation with the development of asset prices. An impressive number of empirical studies by researchers at the BIS (e.g., Borio and Lowe 2002 and 2004) and the ECB (Detken and Smets 2004) have demonstrated

¹⁸ The BIS is playing a leading role in this field. See Borio and Lowe (2002) as only one example.

that hardly any asset price “bubble” has not been accompanied, if not preceded, by strong growth of credit and/or money. What does this imply for the conduct of monetary policy?

On the role of asset prices there is wide consensus on the following principles:

- 1) Central Banks should not target asset prices
- 2) Central banks should not try to prick a bubble
- 3) Central banks should follow a “mop up strategy” after the burst of a bubble which means injecting enough liquidity to avoid a macroeconomic meltdown.

1) and 2) are uncontroversial. A central bank has no instruments to target successfully asset prices and creating a macroeconomic disaster by pricking a bubble would ruin the standing of a central bank. (The role of a central bank as a regulator and supervisor is a separate issue.) On 3) there is also broad agreement – once a bubble has burst the central bank has to take all necessary steps to avoid the propagation of the consequences of a collapse of asset prices.

However, restricting the role of the central bank to a totally passive role in the period of the built-up of a bubble and practically pre-announcing its role as the “saviour” once the bubble bursts represents an asymmetric approach which might imply the risk of creating moral hazard with actors driving the development of asset prices.

What can be called the “Jackson Hole Consensus” (Greenspan 2002; Blinder 2005; Mishkin 2007) is exactly that. Efficient markets incorporate all relevant information and reflect the markets best assessment. How could a central bank pretend to know better? However, this strand of argumentation may be misleading. A central bank is not a trader, nor an actor in financial markets which might for business reasons be forced to follow a market trend which to their own judgement is not sustainable. A central bank has a different position and responsibility. The central bank must not pretend that it has better knowledge on the “true valuation” of specific assets. But this does not hinder it to communicate concerns on the sustainability of strong increases in asset prices over an extended period of time in an appropriate form thereby trying to contribute to a more sober assessment of such

developments. As the central bank is not subject to business incentives its position should get special attention.

But, beyond proper communication we did not need the present financial crisis to understand that simply committing to principle 3) i.e. announcing to provide enough liquidity in case of a crisis might not be the panacea to the problem of asset prices from the perspective of a central bank. In some financial crises this policy might seem to work, but because not least of the moral hazard problem this “success” may lay the ground for future, even bigger problems.

The Jackson Hole consensus follows a different philosophy. “ The `mop up after` strategy received a severe real world stress test in 2000-2002, when the biggest bubble in history imploded, vaporizing some \$8 *trillion* in wealth in the process. It is noteworthy, but insufficiently noted, that the ensuing recession was tiny and that not a single sizable bank failed. In fact, and even more amazingly, not a single sizable brokerage or investment bank failed either. Thus the fears that the `mop up after` strategy might be overwhelmed by the speed and magnitude of the bursting of a giant bubble proved to be unfounded. Regarding Greenspan`s legacy, then, we pose a simple rhetorical question. If the mopping up strategy worked this well after the mega-bubble burst in 2000, shouldn`t we assume that it will also work well after other, presumably smaller, bubbles burst in the future? Our suggested answer is apparent” (Blinder 2005, p.67n.).

At a closer look the “Jackson Hole Consensus” seems to be based on unconvincing arguments. Even if the mop up strategy might work initially, by exactly doing “its job” in a financial crisis of limited dimension, because of its asymmetric character it may lay the ground for the next bubble and crisis (and so on).¹⁹

The asymmetry in this monetary policy proposal is strengthened by the practice of what has been called “risk management” paradigm. This can be seen as an approach to deal with low probability events and severe outcomes against which a kind of “insurance” (e.g. via interest rate cuts) has to be applied (Greenspan 2004). It seems that this approach so far has only been referred to or applied in dealing with risks of recession or deflation, that is, in a rather asymmetric way.

¹⁹ For a “counterfactual exercise” see Taylor (2007)
See also Cechetti et al. (2000); Bordo and Jeanne (2002)

The greatest macroeconomic risk is apparently a broad collapse of asset prices (including real estate) after a big bubble, destroying balance sheets of banks and other financial institutions, non-financial companies and households. If such a disaster emerges mop up is without alternative but is anything than a fast working and satisfying solution.

Should not risk management also be applied by looking forward and trying to if not avoid at least mitigating the risk of the built- up of a bubble that sooner or later might burst?

This leads to the argument of the central bank leaning against the wind²⁰. This is anything but a simple device and it is not even certain that it might always work sufficiently well. But, this is no argument to let things just go, keep central bank interests low even if the economy is doing well. Can central banks under such circumstances just ignore the impact of low central bank interest rates on the financial industry, on innovations, decline in spreads across different types of risk etc. and on asset prices especially for housing? There is evidence that (too) low interest rates e.g. encourage too much risk taking by banks with the consequence of threatening financial stability (ECB 2007).²¹

6. In search of a monetary policy strategy?

As already mentioned inflation targeting i.e. inflation forecast targeting is widely seen as “state of the art” of central banking (with announcing the future path for central bank interest rates as a kind of “coronation”).

No doubt, inflation targeting has played an important role in the achievement of worldwide low inflation. This is especially true for central banks which were confronted with the challenge to disinflate their economies from rather high inflation rates.

²⁰ Kohn (2007) is very critical on what he prefers to call “extra action” arguing that high (and certain) costs would outweigh potential benefits.

²¹ On the relation between the level of interest rates and the riskiness of bank loans in Spain see Jimenez et al. (2007).

However, over time the limits of the initially simple approach have become more and more obvious. It started with the acknowledgement that the usual horizon of the forecast of (around) two years has to be extended. But, as can easily be seen by fan charts or other devices the uncertainty of projected variables increases the more the forecast horizon is extended. Therefore, it seems doubtful if the limits of the inflation targeting approach can be overcome by the extension of the forecast horizon. And, what is even more important, factors, in first place money, which are not, and – so far at least – cannot be integrated in the traditional forecast models have to be taken into account. Therefore, some central banks have started to monitor a number of additional variables outside the model forecast. However, how can the information coming from outside the model be consistently integrated when monetary policy decisions have to be taken?

This development is best recognised when comparing the standard presentation of inflation targeting then and now (Svensson 1999 and 2005). Inflation targeting “with judgement” shows progress in the direction of a broader approach, but reveals also the shortcoming of the concept. And, still neglecting the role of “money” is not suited to deal with the problem of asset prices. Because of the limited time horizon and neglect of monetary factors inflation targeting might even imply a tendency of producing boom and bust cycles (Christiano et.al. 2007)

The question “Is price stability enough?” (White 2006) goes to the core of the problem. Highest attention has to be paid that the big achievement of low and stable inflation is not endangered. Central banks must not lose sight of their main objective which is (goods) price stability. But, fortunately there is no lasting trade-off between price stability and financial stability (Issing 2003).

If the central bank applies a medium term horizon for the definition of price stability and adopts an encompassing approach which integrates money and credit in an appropriate way, financial imbalances will implicitly obtain attention. This is true even if financial stability is not considered a general objective of the central bank and monetary policy aims at maintaining the objective of price stability. This does not rule out the existence of a short-

term conflict. In most cases price stability would foster financial stability. In rare circumstances though, a short-term conflict is possible. With short-term conflict I refer to a situation where it is optimal to deviate from the desired rate of inflation in the short-run in order to best maintain price stability over the medium run. Therefore, in the context of an appropriate definition of price stability and financial stability and in particular an appropriate concept for the horizon to which the policy objective should apply, the conflict disappears.

A monetary policy strategy that monitors closely monetary and credit developments as potential driving forces for consumer price inflation in the medium to long run has an important positive side effect: it may contribute at the same time to limiting the emergence of unsustainable developments in asset valuations. As long as money and credit remain broadly controlled the scope for financing unsustainable runs in asset prices should also remain limited. Corresponding changes in asset prices also help to support the analysis of the character of the development of money and credit .²²

The obvious advantage of the ECB monetary policy strategy is the fact that taking information from the monetary analysis into account avoids the need to be specific about mispricing of assets. The widening of the horizon to the medium- to long-term within the monetary analysis functions as a kind of “integrated risk management”. And this works symmetrically in both directions leaning against “headwind” (asset price declines) as well as against “tail wind” (increases). This is in contrast to the risk management approach as it was presented so far as a concept and applied in practice when it was triggered more or less arbitrarily and was considered only in cases of supposed risks of deflation or a general downturn of the economy.

Monitoring money and credit continuously and taking the results of the analysis into account via “cross-checking” when it comes to monetary policy decisions guarantees the symmetry of the approach and its permanent application. ”Ultimately, this cross-check leads to a better assessment of the correctness of the policy stance. Early indications that a process of surging equity or house prices in the euro area might be interacting with conditions of abundant liquidity would lead to heightened vigilance” (ECB 2005). There are many examples of the

²² For an approach including house prices in the money demand function see Greiber and Setzer 2007.

application of “vigilance”. “Monetary developments, therefore, require careful monitoring, especially in the light of the strengthening of economic activity and, in particular, of strong asset price dynamics, especially in housing markets” (Introductory Statement of 6 June, 2006).

The ECB has never claimed that it has found the final solution to this challenge. But, it has acknowledged that there is a problem a central bank should not ignore.

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