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The development of monetary policy in the 20th century – some reflections



Working Paper Research

by Otmar Issing

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Editorial Director

Jan Smets, Member of the Board of Directors of the National Bank of Belgium

Editorial

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Abstract

In this paper I outline – from a practitioner’s as well as from a researcher’s perspective – several of the key developments that took place during the last century in monetary policy. In particular, I describe how the monetary system evolved from gold standard, prevailing throughout most of the last century, to paper money and how the norm in central banking changed from pure discretion after World War II to transparency and independence. I furthermore analyze how the exchange rate regime under Bretton-Woods impacted on countries’ monetary policy and, with a focus on Europe, how European Monetary Union (EMU) emerged from the European Monetary System (EMS). I then outline today’s relatively broad consensus on monetary policy and how it developed from a learning process on the side of central banks and important contributions from research. Finally, after arguing that the ECB’s monetary policy which fruitfully combines past experience and current research is a successful and promising approach, I outline some challenges lying ahead.

Key words: monetary policy, monetary system, European Monetary Union, ECB

JEL codes: A11, B22, E42, E58, F33, N10

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1. Introduction

It would be, to say the least, overambitious to survey in such an article a century of monetary policy. This would have been even more true if I had followed the initial suggestion to cover the development of central banking.

Narrowing the subject of my paper to comment only on monetary policy implies that a number of interesting issues are not part of my reflections. This is especially true for the role of central banks in the supervision of banks and financial markets, a topic which is in the context of the crisis of major interest in many countries. I will also not comment on the role of lender of last resort, another issue which has gained great interest. To continue with this list I exclude also aspects like management of reserves and debt management. However, interesting as these topics certainly are, concentrating on monetary policy alone is still a daunting task.

There exists a whole library on the history of central banking and monetary policy in the last century (see e.g. Capie et al., 1994). As a devotee to the law of comparative advantage, in this paper I will try to provide the reflections of somebody who, coming from academia with a special interest in monetary economics, played a special role in two central banks under extremely demanding circumstances: In the Bundesbank as member of the Executive Board and chief economist from 1990 to 1998 in the aftermath of German reunification in 1990 and the preparation for European Monetary Union (EMU); In the European Central Bank as member of the Executive Board and chief economist from the start in 1998 to 2006. In both institutions it was a challenge and a privilege to build a bridge between research and policy.

It is against this background as researcher and policy maker that I will present some reflections on the development of monetary policy: I begin the survey with a description of how the monetary system evolved from the gold standard, prevailing throughout most of the last century, to paper money and how – with a focus on the Fed and the Bundesbank – the state of the art in central banking evolved from pure discretion after World War II to transparency and independence. I will then point out how the exchange rate regime under Bretton-Woods impacted on countries' monetary policy and, with a focus on Europe, how Monetary Union (EMU) emerged from the European Monetary System (EMS). I will furthermore outline today's relatively broad consensus on monetary policy and how it emerged from a learning process on the side of central banks and important contributions from research. Finally I will focus on the research based nature of the ECB's monetary policy and on challenges lying ahead.

Please let me begin now as outlined with monetary policy under the gold standard.

2. From gold to paper

The 20th century saw the deepest change of the monetary system in the history of mankind. Before, with few exceptions money either consisted of physical entities of scarce goods or was “backed” by gold or silver. The “world” which looked at that time very different from today’s entered the last century on the predominance of the gold standard. As a consequence the monetary policy of a central bank under this regime was determined by the evolution of its gold reserves, i.e. it was constrained by the balance of payments. Defending the external value of the currency which was based on the gold parity to other currencies was the only viable goal for the conduct of monetary policy.¹

As it turned out the world for decades was searching for a monetary standard. Knut Wicksell whose work has a lasting influence on monetary theory and policy characterized this challenge: “...the choice of a measure of value, of a monetary system, of currency and credit legislation – all are in the hands of society, and natural conditions (e.g. the scarcity or abundance of the metals employed in the currency, their chemical properties, etc.) are relatively unimportant. Here, then, the rulers of society have an opportunity of showing their economic wisdom – or folly. Monetary history reveals the fact that folly has frequently been paramount; for it describes many fateful mistakes.”²

The regime of a monetary standard based on gold de facto collapsed with the outbreak of World War I. The following interwar period is marked by two different reactions: On the one hand desperate attempts to restore the old regime. On the other hand hardly successful experiences with a pure paper standard. The most remarkable and in the end disastrous example of the first category is the ambition of Great Britain to regain its leading position in the financial world by restoring the gold standard at pre-war parity.³ The philosophy behind this policy which is of interest also for later generations was dominated by the intention to play a leading role in the world. “The desire that sterling should be able to look the dollar in the face determined not only the monetary policy of Great Britain but also her budgetary and trade policy. Sterling had to be restored to its pre-war parity irrespective of the consequences, and it had to be maintained at the old parity regardless of the sacrifices involved.” (Einzig 1937, p. 331). As it turned out, the sacrifices caused by an overvalued currency became much too high and Keynes’ (1930/1978) warnings were proven right. The UK’s experience represents the futile attempt to return to the old regime, and the great depression was the final nail in the coffin of the gold standard.

The other line of development is the challenge to manage a pure paper standard. Germany was the first country whose departure from the gold standard after World War I ended in hyperinflation (1923). The reform of 1924 brought a new currency (Reichsmark) which was designed to be based on gold,

¹ This applies notwithstanding an interesting discussion to what extent a latitude for „managing “the currency existed (positive: Bloomfield 1959; for arguments against this claim see Issing 1965).

² See Wicksell 1906, p. 3/4.

³ “The British decision to return to the old parity with the dollar was taken on the day when sterling first deviated from it “, Brown 1940, p. 221/222.

an approach which ended a few years later. Other countries going off the gold standard were also trying to adjust to a paper standard regime.

World War II created specific challenges. Monetary policy was dominated by the goal of supporting the government which implied monetary financing of military expenditures.⁴

3. Monetary policy after World War II – the failure of pure discretion

The world came out of World War II without a clear concept for the conduct of monetary policy. A return to the gold standard was no option. Hansen (1945 p. 62) expressed the dominant view: “No country will again sacrifice the goal of internal stability and full employment on the altar of the gold standard.”⁵ However, it turned out that this is not a device for how to manage a paper standard properly. Bretton Woods had established a regime of fixed exchange rates. The consequences of this constraint for the conduct of monetary policy became evident only after convertibility of currencies was restored and the “uneasy triangle” started to show its implications.

Monetary policy in the immediate post-war period was a struggle to get rid of the subordination to the government and regain sovereignty on the decisions by the central bank. For the US the end of this period is marked by the Treasury-Federal Reserve Accord of March 1951 which freed the Fed from the obligation to stabilize the rate on long-term government bonds and allowed it to raise interest rates without prior approval or consultation with the Treasury.⁶ As a consequence and in order to underline this independence the Fed adopted the “bills-only doctrine” which was abandoned in the fall of 1960.

1951 is the turning point in the Fed's monetary policy. After two decades of extraordinary challenges – first the great depression and later the impact of the war – finally “normality” came back. The US was the only remaining world power where the economy had not suffered from war destruction and whose money was used as a convertible reserve currency in the world. Other countries continued applying foreign exchange controls. The so called “dollar shortage” characterized current account deficits in other countries and their desire to build up dollar reserves. In December 1958 the declaration of convertibility marks another break with restrictions which had prevailed in most countries for more than two decades.

⁴ For the U.S. see Meltzer's detailed explanation in his impressive work on the Fed's history (Meltzer 2003 and Meltzer 2009).

⁵ It is also interesting to read the following arguments from the author in the same article. Countries “will not permit their internal structure of income, wages and prices to be deflated to meet the requirements of a rigid foreign-exchange rate. On the contrary, they insist and rightly so, that the first consideration must be internal economic stability and full employment and that the foreign-exchange rates must be adjusted so as to promote and sustain these domestic ends” (Hansen 1945, p. 62).

⁶ See Meltzer 2009.

The Fed can be seen as a kind of model for the conduct of monetary policy during the following period. It would be impossible anyway to cover individual countries and central banks in this article, and even on the Fed the following remarks can highlight only the main aspects

In the context of this paper the focus is on why the Fed's monetary policy finally ended in the great inflation of the seventies. In my judgement the most important reason lies in the reliance on a long-run trade-off between unemployment and inflation, and a neglect of money. This is certainly a crude simplification. However, in the words of Herbert Stein (1990, p. 50) "simple-minded Keynesianism" was the dominant economic philosophy during this period.⁷ A paper by two eminent authors, Samuelson and Solow (1960) had great influence on contemporary economic thinking. "In the early 1960s policy makers adopted the view that held that very low unemployment was an attainable long-run goal and that there was a permanent trade off between inflation and unemployment" (Romer and Romer 2002, p. 12).

Fiscal policy was the powerful instrument to deliver the desired macroeconomic results, monetary policy had no major role to play and should be coordinated with the government's policy. This view is also reflected in the neglect of money. "Money doesn't matter" was a widespread belief. It might be sufficient here to quote the former chairman of the Fed William McChesney Martin, Jr. (1985): "They don't really know what the money supply is now, even today. They print some figures... but a lot of it is just about superstition."⁸

I do not pretend that this is even a cursory coverage of the Fed's monetary policy in this period. I just want to explain why the underlying philosophy almost unavoidably ended in inflation and finally in stagflation.⁹

Starting with Volcker whom Meltzer (2009, p. 39) describes as a pragmatic monetarist at the helm of the Fed monetary policy turned in a direction which became more and more consensual around the globe. I would like to identify three sources for this convergence:

1. A positive outcome of the great inflation and consecutive stagflation was the emergence of the conviction that the mistakes of that period should not be repeated.
2. Research responded to this experience by painstakingly studying questions of optimal monetary policy.
3. The Bundesbank's monetary policy was increasingly seen as a different and successful model.

These aspects are intertwined. I will continue with the last point.

⁷ For more evidence see Meltzer, 2009, Vol. II, book one, Introduction.

⁸ Quoted from Meltzer (2009, p. 267).

⁹ For a detailed analysis see Meltzer (2009) and for a condensed overview Meltzer (2005).

4. The Bundesbank – a counter-model

The great inflation of the 1970ies was not just a U.S. related event – it was a more or less global phenomenon. So it comes not as a surprise that exceptions from this development deserve special attention. The most interesting question is: Why did the great inflation not happen in Germany (Issing, 2005c)?

Discussing the “German case” one has to start from the fact that the experience of the destruction of two currencies in one generation (1923 and 1948) had left a deep imprint on the mind of people. The memory of hyperinflation (Ehrmann and Tzamourani 2009) has shaped the preferences of the people and created strong support for a monetary policy aimed to maintain price stability. Stable money was seen as an indispensable prerequisite of a well functioning market economy (Eucken 1955).

There is ample research on this topic.¹⁰ In this article on the development of monetary policy in the last century the following aspects are fundamental for an explanation of the Bundesbank’s success:

- The institutional foundation was laid by law of the allies in 1948. This act on the Bank deutscher Länder was transformed in 1957 into the Law on the Bundesbank. It made the central bank independent from political interference and instituted the mandate to “safeguard the currency” which was soon interpreted as maintaining price stability.
- The central bank never lost sight of this mandate, tried to avoid fine tuning and followed a medium-term strategy.¹¹
- After Germany left the fixed exchange rate regime of Bretton Woods, the Bundesbank used the monetary policy sovereignty granted by a flexible exchange rate against the U.S. dollar by adopting a monetary target for 1975. This practice of monetary targeting was continued until the end of the DM with entry into European Monetary Union in 1999.
- It is true that the Bundesbank missed its target roughly half the time (Issing 1996, 2005c). This does not mean, however, that the Bundesbank did not take the monetary targets seriously. On the contrary, money growth targets were regarded as constituting the basis for a rule-oriented approach to monetary policy. Announcing such a target implied a commitment towards the public (Beyer et. al. 2008). Deviations of money growth from the target path always had to be justified.
- Following a price stability oriented approach the Bundesbank not only saved Germany from the great inflation of the 1970s, but also made the DM one of the most stable currencies in the

¹⁰ The Bundesbank (1999) has published a volume with contributions by Baltensperger, Holtfrerich, Neumann, and von Hagen.

¹¹ For details and further literature see e.g. Deutsche Bundesbank (1995).

world. This success had an important impact on the practice of monetary policy as well as on research.

5. Monetary policy and the exchange rate regime

For a long time consequences of the dollar based fixed exchange rate regime (Bretton-Woods) for the conduct of monetary policy were obscured by capital controls. But with more and more free movements of capital across national borders the inconsistency of the “uneasy triangle” became obvious. From three desirable objectives

- fixed exchange rate,
- free international mobility of capital, and,
- monetary policy directed towards domestic goals

only two are mutually consistent. However, what was called by Mundell (1973) the “impossible trinity” was well developed before and several times reinvented (see Issing, 1964). The floating of the DM on 19 March 1973 signalled the final collapse of the Bretton Woods system and accomplished the determination by Germany to end the subordination of monetary policy to balance of payments considerations and to pursue the domestic goal of price stability.

On a global level countries now had to decide if by adopting a flexible exchange rate they wished to create the condition for a sovereign monetary policy or preferred to link their currency to that of a large economy. The world since then has experienced a variety of exchange rate regimes (Reinhart and Rogoff, 2004). Only few relatively small and open economies that are ready to subordinate their monetary policy with respect to some key country have succeeded in maintaining fixed exchange rates (Obstfeld and Rogoff, 1995).

The decision of Germany to let the DM float against the US dollar had met strong resistance before because the European partners had very different views on fundamental exchange rate issues. However, the intention to preserve a zone of exchange rate stability between these countries ran into severe difficulties. Finally, following a Franco-German initiative the European Council in December 1978 concluded the agreement establishing the European Monetary System (EMS) which came into effect on 13 March 1979.

According to the logic of the impossible trinity or uneasy triangle, adapting a system of fixed exchange rates had unavoidable consequences for the conduct of monetary policy. In contrast to what others had in mind it soon became apparent that the EMS was a system founded on the strongest currency. In short: it was a DM bloc. Member countries that were unable or unwilling to join the disinflationary monetary policy of the Bundesbank were forced into repeated devaluation. Under this system, there

was no other alternative than to align monetary policy with the Bundesbank or to devalue from time to time one's own currency (see Issing, 2008).

As (a) capital controls are incompatible with common market principles, (b) the option of flexible exchange rates was never considered seriously, and (c) the dominance of the monetary policy of one country as a permanent solution was politically not acceptable, the consequences of the uneasy triangle left open only one solution: monetary union.¹²

For such a large economy as the euro area – and with a clear domestic mandate for the new central bank – namely maintaining price stability – a floating exchange rate for the euro was without alternative.

6. Lessons learned

When central bankers from around the world meet today, a broad consensus on how to conduct monetary policy can be observed (Issing 2009b). This is an experience very different from previous times when conferences on monetary policy provided a forum for heated debates. Academics were divided into Monetarists and Keynesians, with many factions within each of those groups. For their part, central bankers represented institutions with very heterogeneous views.

What caused the emergence of such a consensus? For me the short answer is: A learning process on the side of central banks stemming mainly from past mistakes underpinned by important contributions from research.

To start with, a consensus which is hardly debated any more is that on the implementation of monetary policy. For a long time central banks had quite different preferences as to monetary policy instruments than nowadays and many of them relied on administrative measures such as credit ceilings (see Icard 1994, Issing 1994, King 1994, Wellink 1994). Those instruments proved increasingly ineffective and incompatible with free-market conditions. All central banks now rely on open market operations as their main instrument. As the Maastricht Treaty contains only a few provisions which were couched in rather general terms, the ECB was quite free to design its instruments for the conduct of its monetary policy (Bindseil 2004; Issing 2008). Therefore, it does not come as a surprise that the ECB chose a set of instruments which over time became a kind of benchmark for other central banks. This is also true, for example, for its system of remunerated minimum reserves which was initially criticised.

¹² This is not ignoring the fact that to create a monetary union in the first place was a politically motivated decision. The implications of the uneasy triangle, however, reflect the economics behind.

If one had to condense the experience of monetary policy in theory and practice in one principle it should read: Controlling, I would prefer anchoring, **inflation expectations** (Woodford 2003).¹³ The rational expectations theory (Lucas and Sargent 1978) explains the interactions between policy makers and private agents and the formation of expectations is at the centre of considerations for optimal monetary policy. There now is a vast literature on the theory of expectations (survey by Blinder 1998; Mishkin 2009; Walsh 2007). A first, decisive step concentrated on the importance of **credibility** (Barro and Gordon 1983) which is the cornerstone of a monetary policy that aspires to achieve optimal macroeconomic results (Cukierman 1992). Only a credible central bank can guide expectations of private agents in a consistent way. Credibility is gained by a convincing track record. But to maintain its credibility, the central bank must commit itself to a policy that is appropriate to deliver on its goal and communicate its policy intentions in a transparent way. The theory of dynamic inconsistency (Kydland and Prescott 1977) provided strong support for the concept of a credible commitment, and central bank **communication** is nowadays seen as an indispensable element of a successful monetary policy (Issing 2005a; Blinder et al. 2008). Theory and practice have discarded the option of a purely discretionary monetary policy.

On the other extreme, strict rules which would not allow for any deviation from the side of policy makers did not stand the test in theory – not to talk about the practice of monetary policy. Friedman's proposal (1959) e.g. for a constant growth rate for money – the so called k-per-cent rule – was later rejected even by the author himself and is now not more than a footnote in the history of ideas. However, the discussion on rules has delivered many useful insights in how to conduct monetary policy (e.g. Taylor 1999). Instead of following a restrictive and likely suboptimal rule to avoid the pitfalls of pure discretion, central banks should adapt a kind of rule-governed or rule-based behaviour as embodied e.g. in the commitment to an explicit monetary policy strategy (ECB 2001).

Whereas following a strict rule would eliminate any influence of individual preferences of central bankers, pure discretion would give the widest latitude for decision makers. The practice of monetary policy remaining somewhere in between implies that the traditional debate “rules versus authorities” (Simons 1936; Woodford 2003) continues. So, implicitly the “personality issue” remains relevant in theory and practice. Rogoff's (1985) paper demonstrated how the appointment of a conservative central banker might give a strong signal on future monetary policy and thereby influence the forming of expectations by the public. To constrain personal preferences which might get in conflict with the public interest, optimal contracts for central bankers (Walsh 1995) could be designed, an idea which was so far adopted only in the case of New Zealand.

To draw the consequences from mistakes of the past and new insights into the impact of monetary policy the central bank must also be able to adopt this improved knowledge. It is interesting to note

¹³ To prevent any misunderstanding: The consensus on the importance of anchoring inflation expectations does not include consensus on how to achieve this goal. For my part I am not convinced that this can be done in a consistent way with a robust result by a monetary policy which ignores “money” (see par. 7 and 8).

that the vast literature of the 1970s and 1980s hardly discussed the issue of the optimal institutional arrangement for central banks (Issing 1993). One might be surprised that a fundamental aspect of a central bank's statute, namely the degree of independence from government was for a long time ignored. An early finding of a correlation between independence and the degree of price stability (Bade and Parkin, 1980) was neglected. However, starting in the nineties (Cukierman 1992; Alesina and Summers 1993) the literature has grown into such a dimension that it is hard even to survey it. The political economy argument for giving independence to the central bank is best summarized by the following statement of then Chancellor of the Exchequer Gordon Brown (1997): "The previous arrangements for monetary policy were too short-termist, encouraging short but unsustainable booms and higher inflation, followed inevitably by recession. This is why we promised in our election manifesto 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, especially one endowed with independence in its monetary policy decision must be given a clear mandate. There is a broad consensus that the mandate must include price stability in the form of low inflation. However, the discussion of a single versus a dual or even more-dimensional mandate goes on.¹⁴

No central bank will ignore the situation of the real economy and the impact of monetary policy in the short to medium term. A medium-term oriented monetary policy will take this into account on the basis of a single mandate. However, if a dual mandate obliges the central bank to foster employment it might be very difficult for the central bank to explain the limits of what it can do – or rather cannot do – in the long run or in the case of structural unemployment. The most likely outcome of a dual mandate will be that the central bank is trying to achieve one objective at a time (Meltzer 2009, p. 1207 and passim). From a constitutional point of view it is questionable if such a choice should be left to an independent central bank and political pressure in favour of "employment" is to be expected. Central banks must be aware of what they can do – and what is beyond their influence (Friedman 1968), and must communicate this limitation convincingly to the public. If they seem to promise more than they can deliver they will severely undermine their credibility.

As a result of a huge bulk of literature but also practical experience one could conclude that an optimal institutional arrangement for a central bank should include three principles:

- independence for the conduct of monetary policy,
- a clear mandate, and
- prohibition of monetary financing of public finances.

¹⁴ J. Viner (1964, p. 37) once made an ironic comment which is worthwhile to quote: „If you were to ask me what are the professed goals of most central bankers, I would say on the basis of what I have heard *them* say that if they were appearing before a commission ... they would either include a wide range of goals, including virtue and motherhood and also everything they could think of which is nice and good, or insist on the lack of power of central banks to serve effectively any specific important goal."

In the context of the present financial crisis the “lender of last resort” obligation became a reality. The question if the status of a central bank should include clear rules for this intervention remains open. Other issues like decision-making by committee or a single person, accountability and transparency also belong to a framework for a successful monetary policy.

This very cursory overview of “lessons” presents a combination of insights from academic research and experiences from the conduct of monetary policy with all its successes and failures. It is interesting to note that one finds the following two sentences on the same page of A. Blinder’s remarkable book on “Central Banking in Theory and Practice”:

“I think central bankers could learn a good deal more from the academics”. And “...the academics must learn from the central bankers, and the sooner the better.”¹⁵

This learning in the meantime is going on strongly as probably never before. Central banks have developed in-house research (see e.g. the impressive analysis by Maes 2010) and established regular strong relations with academics. This process is indeed mutual (Mishkin 2009; Svensson 2009). However, there are important cases in which central banks were substantially ahead of research. This is e.g. true for the policy of the Bundesbank which was a kind of demonstration of the importance of independence. Leading Bundesbankers were also fully aware of the importance of credibility long before academics have discovered this as an interesting and highly relevant issue.

The fundamental significance of research was prominent in the case of the ECB when it had to prepare the conduct of monetary policy as a new institution for a new currency.

7. The ECB’s monetary policy – a research-based approach

European Monetary Union (EMU) is exceptional in several respects. As an institutional arrangement it is unique in history as it is characterised on the one hand by one central bank and a single monetary policy for a common currency, and on the other hand by (in the meantime) 16 sovereign states. The competence for monetary policy was transferred from the eleven national central banks to the ECB with the introduction of the euro on 1 January 1999.

This happened without any historical precedent. (Previous monetary unions were based on gold or silver with fundamentally different conditions.) Whereas the European Monetary Institute and national central banks had made substantial contributions on technical issues the final challenge to design a concept for the conduct of monetary policy was left to the European Central Bank (ECB) which started on 1 June 1998. At its meeting on 13 October 1998 the ECB Governing Council resolved on its

¹⁵ Blinder 1998, p. 23.

strategy. To ensure transparency vis-à-vis the public and to demonstrate accountability, this decision was published on that very day.

This is not the place to explain the details of the ECB's "stability-oriented monetary policy strategy".¹⁶ What is of interest here is to see the ECB's monetary policy in the context of past developments in theory and practice of central banking. The change from national currencies with a long tradition to a new currency, the euro, marked a regime shift with the potential for huge structural breaks (Lucas 1976). As a consequence, monetary policy was subject to a degree of uncertainty far beyond usual dimensions (see Issing, et al. 2005).

Therefore, the ECB could not just replicate policies of other central banks. Instead, it had to take stock of past experiences and the result of economic research and adapt it to the special situations it was confronted with. This process is documented in a book which was published only two years after the start (Issing et al. 2001) describing how the ECB's strategy reflects monetary economic thinking. Research played also a major role in the context of the review of the strategy which was conducted in 2003.¹⁷

The ECB's strategy and policy is based on the results of research in the field of central banking or rather on its assessment of theoretical developments. Issues dealt with in the previous section, i.e. "lessons" like the importance of credibility, transparency and communication were taken into account and anchoring inflation expectations was identified as the key challenge. Insofar the ECB was in line with other leading central banks in the world.

At the same time, however, the strategy of the ECB and its monetary policy have also some specific elements. The major factors here are the "two pillars" of the strategy. Economic and monetary analysis are reconciled under an encompassing regular cross-checking which provides the final guidance for monetary policy decisions aiming to reach the ultimate goal of maintaining price stability. In this context it is the role for money which is the major element that distinguishes the ECB's strategy from those of most other central banks. It is important to note that right from the beginning monetary analysis included much more than just comparing M_3 growth with the reference value. Other monetary aggregates and credit were also monitored on a regular basis. Over time monetary analysis was substantially broadened and deepened (Issing 2005b, Fischer et al. 2009), notably by including a major role for credit. Looking at money and credit together helps to better assess the inflationary potential of monetary developments (Roffia and Zaghini 2007). Whereas the recent financial turmoil posed difficult challenges for central banks the merit of a monetary analysis "that complements model-based information with institutional knowledge" (ECB 2009) confirmed anew the appropriateness of the ECB's decision for the strategy.

¹⁶ See e.g. ECB 1999 and 2000, Issing et al. 2001, ECB 2004, Issing 2008.

¹⁷ The major studies were published in ECB 2003.

Inflation Targeting was widely held as the “state of the art approach” for monetary policy at the time of the start of the ECB (Svensson 1999; Woodford 2003). Although the concept of inflation targeting in the meanwhile was substantially revised (e.g. Svensson 2005) – including now elements which were covered by the ECB’s strategy from the beginning – inflation targeting continues to suffer from the conceptual incapability to integrate monetary and financial developments in proper terms. This deficit was clearly demonstrated in the context of the financial crisis and is now more and more recognized. In contrast, the ECB’s view on how monetary policy has an impact on the economy recognises the influence of the financial system for the transmission of monetary policy (Gaspar and Kashyap 2007).

How to take developments of asset prices into account poses another important challenge for central banks. An increasing number of studies (Bordo and Jeanne 2002; Detken and Smets 2004; Borio and Lowe 2004) demonstrates that asset prices are related to developments of money and credit. Whereas inflation targeting meets narrow limits to integrate asset price developments, 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 side effect: It may contribute at the same time to limiting the emergence of unsustainable developments in asset valuations. This is another factor demonstrating the encompassing character of the ECB’s monetary policy strategy.

In addition the dual pillar strategy helps the ECB to keep its monetary policy stance on a robust track. A central bank is constantly bombarded by economic news and risks becoming hypnotized by the latest indicators, by the market’s likely reaction to the latest indicator, by the central bank’s response... and so on (Issing 2002). The strategy with a clear focus on monetary developments has provided a medium to long-term orientation and avoided the pitfalls of fine tuning.

In carefully assessing the “lessons” from past experiences the ECB attached high importance to avoid mistakes that occurred to other central banks (see Issing et al. 2001). The relevance attributed to the output gap represents such an example. The output gap is a latent, highly complex variable which is never exactly observed over time. From a theoretical point of view it is an elusive concept depending on the model to define the “equilibrium output benchmark”. Different models can deliver very different results.¹⁸ It was this uncertainty, but also the experience of the Fed’s policy relying on real time data that were later revised substantially (Orphanides and van Norden 2002) which induced the ECB not to give the output gap the importance for the conduct of its monetary policy it possesses in theoretical analyses. This decision is supported by studies which have demonstrated that output gap estimates are problematic and have the potential of misleading monetary policy.¹⁹

¹⁸ Ross and Ubide (2001), e.g. look at output gaps for the euro area produced by fifteen different methods and find large differences.

¹⁹ See a recent ECB Working Paper (Marcellino and Musso 2010) which presents evidence for the high degree of uncertainty of euro area real-time output gap estimates. The study points clearly to a “lack of any usefulness of output gap real-time estimates for inflation forecasting both in the short term ... and the medium term ...”.

8. Challenges

The development of monetary policy didn't end at the turn of the century – in fact, it will never end. The world is changing, this is especially true for financial markets; Globalisation will have an increasing impact. Research will bring new insights but it will never be easy for central banks to select and integrate those ideas which can improve monetary policy. Overall, central banks will have to cope with these challenges and find a route as safe or rather robust as possible in this world of uncertainties.

The crisis has raised a number of open questions. Here I will comment on those which in my mind represent the biggest challenges for monetary policy.

First of all, central banks have to reconsider their strategies. From today's perspective it is hard to understand why neglect of “money” – in a broad sense – had become the dominant philosophy.²⁰ The ECB has always insisted that no relevant information should be disregarded and a concept of inflation targeting just relying on the interest rate rule must be suboptimal. Christiano and Rostagno (2001) have shown that monitoring money growth would limit the extent to which inflation could become too big or too low. This creates a “barrier” against major policy mistakes and macroeconomic disasters. Broad analysis of money and credit with all its ramifications can deliver considerable information relevant for the conduct of monetary policy. It seems that research is re-discovering the importance of “quantities” (Adrian, T. and Shin, H.S. 2009).

Since many years a large number of conferences and even more publications were devoted to the role of asset prices for the conduct of monetary policy. In a broader context harmony on potential conflicts between price stability and financial stability were discussed (Issing 2003). Considering the role of central banks for preserving or at least contributing to financial stability two different strands have to be considered. The first is whether and in case so how monetary policy should take into account the development of asset prices. For many years the dominant view was what I have called the “Jackson Hole Consensus” which boils down to a passive role during the built-up of a bubble and practically pre-announcing the role as “savior” once the bubble bursts. This is an asymmetric approach which might imply the risk of creating moral hazard with actors driving the development of asset prices (Issing 2009a). I have already mentioned the implicit “leaning against the wind” approach of the ECB's monetary policy strategy. In a nutshell the message is: As long as money and credit remain broadly controlled the scope for financing unsustainable runs in asset prices should also remain limited. This is, of course an anything but simple approach considering the emergence of so many financial innovations.

The often used argument that the interest rate of the central bank is “too blunt a tool” to be effective not only for monetary but also for financial stability is far less convincing than it seems. Taylor (2007)

²⁰ See Woodford 2003; Eggertson and Woodford 2003.

presented a “counterfactual” exercise for the hypothesis that a timely increase in interest rates would have moderated house price developments in the U.S. The recent crisis has delivered further evidence in favour of the potential effectiveness of monetary policy for stability of financial markets (Papademos 2007). 1) Even small changes in the spread between long- and short-term interest rates might have a substantial effect on the profitability of financial entities with high leverage and maturity mismatch. As the central bank can influence the yield curve it would contribute to curtailing maturity mismatch and leverage. 2) Communication about evolving imbalances combined with relatively small changes in the key policy rate could serve as signalling device and support credibility of the risk assessment of the central bank. 3) Even a moderate increase of the policy rate at an early stage of an asset price boom could work against herding behaviour.

Notwithstanding these arguments monetary policy must not be left alone.

The second aspect refers to the fact that monetary policy must not be left alone in the task to maintain financial stability. Quite a number of other tools of a mainly regulatory nature are already disposable or should be developed (see e.g. Bank of England 2009). An open issue remains which institution(s) should have the command of using these instruments and how this kind of “financial stability policy” should be coordinated with monetary policy.

The other big challenge for central banks is the definition of the final goal for monetary policy. The debate on an inflation goal versus a price level target has so far basically remained an academic discussion (for a recent survey see Bundesbank 2010). However, this discussion has also brought new insights in the optimal conduct of monetary policy (Svensson 1999; Gaspar et al. 2007)

What is at present more relevant and even alarming is that the fundamental consensus on low and stable inflation being the ultimate goal for monetary policy is put into question (Blanchard et al. 2010). The main argument here is that in an environment of deflation risks the zero bound for the nominal interest rate makes monetary policy more or less impotent in relation of the challenge to stabilise economic activity in a deep recession (an argument which is not convincing as “quantitative easing” has a high potential).

Weighing the substantial costs of higher (but still “moderate” inflation, see Feldstein 1999) it is anything but convincing to point to the possibility of indexation tools. The intense discussion on the advantages and limits of indexation at a time of higher inflation does not support this “optimistic” assessment. But, what is fundamental is the high risk that the credibility of a regime of low and stable inflation which was gained by going through very tough times and with high macroeconomic costs would be sacrificed. One of the major “lessons” of the last century was that establishing credibility for a monetary policy delivering low and stable inflation was the most important achievement. Having all practical experiences in mind and looking at all the contributions from research how could one expect that inflation expectations could be easily anchored at will at a higher level? And, is the depth of the

present crisis to a large extent not due to a macroeconomic policy in the past that neglected asset price bubbles, practiced overambitious fine-tuning and fought against the risk of deflation which in reality was not existent? The conclusion I draw from the development in the first decade of this century is rather the opposite: Once the crisis is resolved the world in general and central banks specifically, on the basis of anchoring inflation expectations at low levels, should strive for more stability in a broad sense and avoid the re-emergence of huge bubbles. Concentrating on the challenge how to deal with the next crisis of comparable dimension is the best recipe to repeat past mistakes.

9. Epilog

As an academic and former central banker the key message through the lens of my experience still is (Issing et al. 2005):

- Don't try tricks; don't try to be too clever.
- Keep steady, remain committed to your mandate even in exceptional circumstances.
- Say as much as you can of what you are going to do; Announce a strategy.
- Don't be dogmatic; follow a policy which is always in line with your strategy.
- Institutions matter.
- Credibility is paramount – the test is in anchoring inflation expectations.
- Resist temptations of short-run / short sighted considerations.

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