

# The Mayekawa Lecture: Central Banks—Paradise Lost

by Otmar Issing

*The focus of the paper is to analyze how the concept behind central bank policy developed over time and how the recent financial crisis and its consequences will have an influence. While the principles of the institutional arrangement for central banks (independence, clear mandate, prohibition of monetary financing) are relevant as ever, pre-crisis consensus strategies of monetary policy have been revealed as flawed. The close monitoring of money and credit developments, a key lesson to be drawn from the crisis, however, does not imply the extension of the central bank's mandate to financial stability. As much as central banks should demonstrate modesty in what they deliver, equally their reputation should not be challenged further by other tasks imposed upon them.*

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## I. Introduction

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The development of economics is influenced if not driven by cycles and trends in the economy. In the case of monetary economics, this connection is especially visible in times of severe crises. The Great Depression of the 1930s is an example that is still showing its influence in renewed discussions on the causes and consequences of this macroeconomic disaster. What is true for theory in general is obviously even more relevant for the conduct of policy. And monetary theory and policy are fields in which we can observe a strong interaction between changes in the economy, new avenues in theory, and policy reactions. Of necessity the center of such developments is central banking, central banks as the institutions responsible, and central bankers as the acting persons.

This is not the occasion to analyze the ups and downs from a long-term perspective (see Goodhart [2010]). However, the rise of central banks to the top of respected institutions in the 1990s and the much more critical perception in the context of the financial crisis is an outstanding example.

A crisis is always an occasion, one might even say a chance, to analyze what went wrong and why, and to think about improvements in theory for a better understanding, and in policy to avoid repeating past mistakes and delivering better results in the future. To the extent that central banks have contributed to the financial crisis or at least not done the utmost to prevent it, they are faced with a threefold challenge: economic, intellectual, and institutional (Borio [2011]). “Rethinking Central Banking” is a title that reflects this challenge (Committee on International Economic Policy and Reform [2011]).

As success and failure of monetary policy is often attributed to individuals, it is not surprising that leading central bankers have often been exposed to extreme variations in public appraisal. Brunner (1981) sees central bankers as people who have always been surrounded by a peculiar and protective political mysticism, which in turn is expressed in an essentially “metaphysical approach” to monetary policy. Central bank policy is presented as an esoteric art in which only the initiated can participate. Such an attitude, Brunner argues, is dangerous firstly because it exposes monetary policy to almost limitless exploitation for political purposes; and secondly, this arrangement is all the more questionable as the choice of incumbents is (in his judgment) at best arbitrary, and the filling of executive posts with competent people is the exception rather than the rule (see Issing [1996]).

Times have changed. Transparency has become a kind of mantra for central banks. In any case, the intention of this paper is not to contribute to the numerous stories about personalities, although the influence of individuals on monetary policy should never be underestimated. The focus here is to analyze how the heyday of central banks developed over time and how the recent financial crisis and its consequences will influence this institution.

I will begin my lecture in Section II by giving a short description of how the reputation of central banks evolved over time (with milestones being relief from administrative measures, acknowledgment of the rational expectations theory and a focus on a clear, single mandate of price stability). I will then discuss the concept of

inflation targeting in Section III and (although central banks around the world seem to have reached a consensus on the optimal monetary policy) I will make the case that inflation targeting is based on shaky ground. Considerable flaws characterize also the Jackson Hole consensus, with the unfolding of the recent financial crisis being only the most recent and prominent manifestation of these flaws. In Section IV, I will explain the lessons to be drawn from this experience. While the close monitoring of money and credit developments is one of these lessons, it does not imply the extension of the central bank's mandate to financial stability (as other, even more important tools—such as regulation and supervision—lie beyond the monetary policy sphere). After saying a couple of words on the complexity of communication taking time lags and real-time data uncertainty into account, I will stress the point of not challenging central banks' reputation even further by imposing tasks on them for which they have no competence.

## **II. The Heyday of Central Banks**

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Around the turn of the last century, central bank reputations were at their peak. There was a widespread impression that inflation would be forever under control, and the situation of growth and employment on a global level looked better than any time before. The term “great moderation” indicates that this was a period in which inflation had come down from rather high levels and variability of output had substantially declined. The discussion of the extent to which this “Goldilocks economy” was the result of merely good luck—that is, from the policymakers' perspective due to exogenous factors—or the consequence of improved macro policies, especially monetary policy, still continues. It might be too early to draw a final conclusion.

Stock and Watson (2003), for example, present empirical evidence for a decline in the size of exogenous shocks after the 1970s, whereas Romer and Romer (2002) see the development to greater stability primarily as a result of improvements in policy. Not surprisingly, central banks overall tend to prefer the latter explanation. Although this debate is anything but resolved, there is reason to attribute at least some influence to changes in monetary policy.

This becomes obvious if we look back at the history of central banking during the last 60 years. After World War II, central banks were divided by very different approaches. It took a while before they were relieved from obligations imposed upon them during the war. Quite a number of central banks relied on administrative measures such as credit ceilings or other types of quantitative controls (see, e.g., Icard [1994], Issing [1994], King [1994], and Wellink [1994]). These instruments proved increasingly ineffective and incompatible with free-market conditions. The more foreign exchange controls were lifted, the more central banks abolished such instruments and relied increasingly on open market operations.

The 1970s had a fundamental impact on concepts of monetary policy, the “philosophy” of monetary policy. The “great inflation” in the United States was identified as a consequence of a discretionary monetary policy that was “misguided” by unreliable indicators such as the output gap (Orphanides [2002]), reliance on the Phillips

curve trade-off, and neglect of money (Meltzer [2009]).<sup>1</sup> When this policy ended in stagflation, the Federal Reserve under Chairman Paul Volcker reoriented its policy in the direction of pragmatic monetarism (Meltzer [2009]).

Research responded to this anything-but-satisfying experience by painstakingly studying questions of optimal monetary policy (for the following, see Issing [2010]).

If we had to condense the experience of monetary policy in theory and practice into one principle, it would read “controlling” (I would prefer “anchoring”) inflation expectations (Woodford [2003]). The rational expectations theory (Lucas and Sargent [1981]) explains the interactions between policymakers and private agents, and the formation of expectations is at the center of considerations for optimal monetary policy. There is now a vast literature on the theory of expectations and its implications for monetary policy (surveys by Blinder [1998], Mishkin [2007], and 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] and Blinder, Ehrmann, Fratzscher, Dehaan, and Jansen [2008]). Theory and practice have discarded the option of a purely discretionary monetary policy.

On the other extreme, strict rules that would not allow for any deviation from the side of policymakers did not stand the test in theory—not to talk about the practice of monetary policy. Friedman’s proposal (1959), for example, for a constant growth rate for money—the so-called *k*-percent 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 on how to conduct monetary policy (e.g., Taylor [1999]). Instead of following a restrictive and likely suboptimal rule and avoiding the pitfalls of pure discretion, central banks should adapt a kind of rule-governed or rule-based behavior as embodied, for example, in the commitment to an explicit monetary policy strategy (European Central Bank [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 of “rules versus authorities” (Simons [1936] and Woodford [2003]) continues. So implicitly the “personality issue” remains relevant in theory and practice. Rogoff (1985) 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 that might

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1. The “misleading potential” of real-time data of the output gap is a conceptual flaw. In a new study, Orphanides shows that as late as 2008 these data saw 2006 as a year of wasted resources. Revised figures in 2009, however, gave the message that in 2006 the euro area was overheated and output exceeded its potential by a significant amount. An activist policy would have been a serious error (Orphanides [2011]).

conflict with the public interest, optimal contracts for central bankers (Walsh [1995]) could be designed; an idea that so far has been tried only in the case of New Zealand.

To draw the consequences from mistakes of the past and obtain 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 that the vast literature of the 1970s and 1980s hardly discussed the issue of the optimal institutional arrangement for central banks (Issing [1993]). It might be surprising that a fundamental aspect of a central bank's statute—namely, the degree of independence from government—was for a long time widely ignored. An early finding of a correlation between independence and the degree of price stability (Bade and Parkin [1988]) was neglected. However, starting in the 1990s (Cukierman [1992] and Alesina and Summers [1993]), the literature has grown by such dimensions 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 by then Chancellor of the Exchequer Gordon Brown in 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 continues.

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 favor 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 in the conduct of monetary policy; a clear mandate; and prohibition of monetary financing.

This consensus is reflected in the statute of the European Central Bank (ECB) that was agreed on in Maastricht in 1991. The successful policy of the Deutsche Bundesbank that had avoided the great inflation (Issing [2005b] and Beyer *et al.* [2008]) in this context has played a major role as a kind of benchmark for an optimal institutional arrangement.

### III. What Consensus? Will It Survive?

Conferences on monetary policy for quite some time had provided a forum for heated debates. Academics were divided into monetarists and Keynesians, with many fractions within each of these groups, and central bankers represented institutions with very heterogeneous views.

In the course of the 1990s, this constellation changed fundamentally and central banks around the world seemed to have reached a general consensus on the optimal monetary policy strategy. Inflation targeting was identified as the state of the art of monetary policy. Moreover, proponents of this approach still see inflation targeting as the optimal strategy, or even more so as a consequence of the financial crisis (Mishkin [2010]). As stated by Svensson ([2009, p. 7]), “In the end, my main conclusion so far from the crisis, applied the right way and using all the information about financial factors that is relevant for the forecast of inflation and resource utilization at any horizon, remains the best-practice monetary policy before, during, and after the financial crisis.”

This statement obviously immunizes the strategy against any critique. And stating that a strategy should fulfill these demanding conditions, that is, using all information, comes close to being a tautology (Issing [2011]). This argument is supported by the history of this approach that started from a straightforward concept connecting decisions of a central bank on interest rates directly with the results of an inflation forecast to “inflation targeting with judgment” and finally “flexible inflation targeting,” which leaves the door wide open to further refinements. This by itself does not deserve a critique, quite the opposite. Any policy approach should be designed in a way that is robust in an environment of uncertainty and open to take into account changes in the structure of the economy, innovations in financial markets and so on (see, e.g., ECB [2000]). Nevertheless, it is crucial to not endanger or destroy the fundamentals of the concept while constructing it in such a way that allows the integration of new developments.

It is hard to see how inflation targeting as it is presented in the literature can deal with the fundamental flaw, which is the neglect of money and credit as a source of risks for price stability. It is mainly for this reason that the ECB discarded this option and adopted its two-pillar strategy, which gives the development of money and credit an important role (Issing *et al.* [2001] and Issing [2008]).

Before dealing with the question of which consensus will survive, it is important to clarify what the “consensus” included and what it did not.

The consensus that includes almost all central banks and is in line with research is based on the following principles:

- (1) Price stability or rather low and stable inflation is the objective of monetary policy.
- (2) This objective should be pursued by a strategy that comprises (a) a quantitative definition of the objective of price stability, (b) a forward-looking monetary policy, and (c) transparency of the decision-making process and corresponding communication with the public.

If this were the definition of inflation targeting, there would indeed be a very broad consensus with the still-open question of whether the mandate should be a single one

(price stability) or whether it should also include other objectives, for example, the goal of high employment. The crucial element of divergence remains the issue if monetary policy decisions in principle are based on an inflation forecast that is mainly derived from a real-economy model or on a strategy which gives money and credit a relevant or even prominent role (see Goodfriend [2004, 2007]).

Therefore, ignoring this fundamental difference and claiming an overall consensus is the result of ignoring not only the strategy of at least one central bank (the ECB) but also research on the relevance of money and credit for the conduct of monetary policy.

#### **IV. The Financial Market Crisis: Its Consequences for Central Banks and Monetary Policy**

The financial market crisis has triggered questions with a wide range: Could central banks have prevented or at least mitigated it? Or have they actually contributed to the crisis, if not even laid the basis for it?

In any case, the “great moderation” was a short-lived episode and a fundamental illusion. It is not the first time that this kind of overconfidence in current “success” initially found broad support and turned out later to be a premature farewell to past patterns of ups and downs. Recall the time when part of the economics profession believed in the control of the economy and declared the business cycle to be obsolete (Bronfenbrenner [1969]).

Central banks will suffer from the outcome of the recent crisis. To start with an institutional aspect: whatever the appropriate answer, it is almost inevitable that this event will imply a negative shock to the reputation of central banks. It also remains to be seen what the implications will be for the status of independence.

A major aspect of the role of central banks in achieving financial stability has been and is still debated under the headline of monetary policy and asset prices. Before the recent crisis, the dominant view—also connected with the strategy of inflation targeting—was that central banks should follow simple principles: namely, they should not target asset prices and should not try to prick a bubble, and should follow a “mop-up” strategy after the bursting of a bubble, which meant injecting sufficient liquidity to avoid a macroeconomic meltdown. As this position was presented several times at these conferences, I have termed it the “Jackson Hole” consensus (for the following, see Issing [2011]).

There can hardly be any disagreement on these principles. A central bank has no instruments for targeting individual asset prices successfully, and creating a macroeconomic mess by pricking a bubble would ruin the reputation of a central bank. Certainly, monetary policy mistakes after 1929 (as documented by Friedman and Schwartz [1963]) are ample evidence for the need to advise central banks to take all necessary steps to avoid, as far as possible, propagating the consequences of a collapse of asset prices through the financial sector to the real economy (Issing [2009]).

However, restricting the role of the central bank to being totally passive during the period of the buildup of a bubble and practically pre-announcing the bank’s function as a “savior” once a bubble bursts represents an asymmetric approach. Such an approach

is one that might create moral hazard and over time contribute to—if not trigger—a sequence of ever-larger bubbles and subsequent collapses (ECB [2005]).

It should be obvious that the “consensus” has a problem. Mishkin (2010) sees a consequence in arguing in favor of aggressive actions by central banks in case of financial disruptions. However, this only extends the asymmetry in the so-called risk management approach that was advocated by Greenspan (2005). One might ask whether this concept should be applied at all in monetary policy (for a critique, see Buiter [2008]). However, risk management as a strategy to deal with low-probability events and severe outcomes should by construction be neutral toward upside and downward risks. This would imply that the cost-benefit analysis should not just consider the consequences of a potential bursting of a bubble but also be applied to estimating the risks implied in an emerging bubble and the costs and benefits of trying to prevent them (see White [2009]). Seen from this perspective, the foremost challenge would be to prevent the development of a massive bubble rather than to concentrate on what should be done once a bubble bursts. Should this not be the most important message transmitted by all the major macroeconomic disasters in history that were triggered by a bursting of a preceding bubble? The question of what to do once a bubble bursts remains. But it should come only second, if the evolution of a major bubble, despite all efforts, is not prevented.

Inflation targeting is paradigmatic here: an inflation-targeting central bank only needs to concentrate on one indicator, the inflation forecast, and on one objective, inflation, which summarizes all the policy-relevant information. But an inflation decline due to a fall in demand is a very different macroeconomic phenomenon from a decline in inflation that originates on the supply side. (The same logic applies to the case of an increase in inflation.) For an inflation-targeting central bank, a decline in inflation does not need further qualifications.

Such a situation makes monetary policy extremely sensitive and averse to disinflation and, ultimately, turns policy into an independent source of instability, particularly in an environment characterized by a prevalence of positive supply-side shocks (as in the second half of the 1990s). In such an environment, there is a risk that policy forbearance vis-à-vis disinflationary forces will fuel financial exuberance and that financial exuberance will in turn create financial imbalances. This raises two questions:

- (1) Can the emergence of a major bubble be identified?
- (2) What instruments are available to avoid the realization of a major bubble?

The uniform answer to (1) for a long time was that central banks cannot identify a bubble in real time. This was often linked to the efficient-market hypothesis, according to which market prices incorporate all relevant information. How could central banks pretend to know better?

The recent crisis has led to a renewal of the discussion about the validity of the efficient-market hypothesis. Central banks can deal with this uncertainty by looking at information beyond prices, notably financial quantities and flows (see ECB [2010]). The challenge for central banks is not to assess whether specific assets were properly valued. What matters for central banks is the development of asset prices in general. And here a number of tools were always available and methods have been refined to identify misalignments of asset prices (see ECB [2010]).

For (2), an often-repeated argument why central banks should not lean against the emergence of a bubble (Kohn [2007] in a succinct presentation calls it “extra action”) is that the only instrument available is the interest rate, which following the Tinbergen Rule cannot be used for two (or more) purposes. To mitigate upward developments of asset prices, strong increases in the central bank interest rate would be needed, which would imply major—and in essence too high—macroeconomic costs in the form of losses in output and employment. However, this argument is far less convincing than it seems. Taylor (2007) presents a “counterfactual” exercise to show how the Fed could have moderated housing price developments by a timely increase in interest rates. (For a different approach, see Orphanides and Wieland [2008].)

New research and empirical evidence have delivered further arguments in favor of the potential effectiveness of using the central bank interest rate to stabilize financial markets (Papademos [2009]).

- Even small changes in the spread between long- and short-term interest rates might have a substantial effect on the profitability of financial actors with high leverage and maturity mismatch problems. For such actions to be effective, it is important that they be taken at an early stage before “irrational exuberance” and the “this-time-is-different” syndrome (Reinhart and Rogoff [2009]) can take hold. Since the central bank can influence the yield curve, it would contribute to curtailing maturity mismatch and leverage (Adrian and Shin [2009]).
- Communication about evolving imbalances combined with relatively small changes in the key policy rate could serve as a signaling device and support the credibility of the risk assessment of the central bank (Hoerova, Monnet, and Temzelides [2009]).
- Finally, even a moderate increase at an early stage of an asset price boom—in combination with the first two factors—could work against herding behavior.

These are strong arguments against (only) “cleaning,” that is, following the asymmetric approach described earlier (White [2009]). The policy of “leaning” against the wind of asset price booms must be based on a reliable assessment of substantial misalignments. The ECB’s monetary pillar draws attention to rising imbalances in the monetary sector that are well correlated with financial imbalances: “A market bubble which progresses in symbiosis with a credit bubble, and which then spills over into excess money creation, is certainly a policy-relevant event. Being vigilant to the monetary imbalance means for a central bank being better able to discriminate between benign and less-benign phenomena in financial markets” (Fahr *et al.* [2011, p. 48]).<sup>2</sup>

### A. Central Banks and Financial Stability

It is hard to expect that the asymmetric approach to asset prices could survive—intellectually and in the practice of monetary policy. In several publications by the Bank for International Settlements (BIS), policies following this approach were identified as having contributed to bubbles and imbalances (e.g., Borio and White [2003] and Borio [2009]). At the same time, advocates of inflation targeting are trying hard to develop

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2. In a number of papers, Shin has argued that monetary aggregates can convey important information on the emergence of risks to financial stability (see Kim, Shin, and Yun [2012]).

this approach into a model that includes the problem of asset prices (Svensson [2009], Curdia and Woodford [2010], and Woodford [2011]).

This dimension has already become a central aspect of monetary theory. However, can one really expect the strategy of inflation targeting and its underlying model to be developed in such a way that it can deal with this challenge? In his 2010 Mayekawa Lecture, White (2010) discussed the fundamental theoretical questions.

In the end, financial and monetary factors are and will remain an alien element in the concept of inflation targeting. Moreover, ignoring the development of money and credit, and of imbalances in various sectors of the economy, is exactly the reason why monetary policy has at least contributed to the boom and bust of asset prices.

Asset price dynamics are only one—albeit important—element of the much broader concept of financial stability. Therefore, it is not surprising that the discussion is now whether and to what extent central banks should be made responsible for preserving financial stability. There are (at least) two dimensions to this problem. The institutional aspect relates mainly to the question of whether central banks should be given a formal mandate for financial stability. Depending on the answer, central banks must have instruments at their disposal to be able to fulfill this mandate.

While a broad literature exists on the definition of price stability, “financial stability” as a goal for the central bank remains a vague concept. This is highly relevant, as the actions of the central bank can and will always be challenged from different positions in regard to the interpretation of the mandate. But, what is even more critical is the risk of conflicts between the goals of price stability and financial stability. Full responsibility for financial stability would necessarily imply that the central bank is provided with additional tools from the area of regulation and supervision. The more the central bank interferes with the existence of individual financial institutions, the more the question of political responsibility emerges. When it comes finally to taxpayers’ money, the decision must be made in the area of parliamentary responsible politics. Conflicts of any kind are programmed, and the statute of independence would be undermined each time. This is a lose-lose situation in the following sense. If the central bank succeeds in preserving financial stability by applying its instruments, independence would be challenged exactly because too much power was given to such an institution (e.g., Cihak [2010]). In case of failure, the central bank itself would deliver the arguments.

One might argue that independence of the central bank is a means and not an end in itself, and as a consequence this institutional aspect should not be a barrier to a better arrangement to preserve financial stability. Before subscribing to this logic, one should reflect for a moment on the consequences and potential negative repercussions.

The simple, but fundamental argument to make the central bank independent is based on the experience that inflation correlates negatively with the degree of independence which is supported also by strong theoretical arguments. A clear mandate to maintain price stability (or low and stable inflation) to be delivered by an independent central bank is the nominal anchor in a paper standard system. One must expect that with the removal of the precondition of independence, inflation expectations would be deprived of this anchor and over time the period of low inflation would remain a rather short-lived episode.

Is this not too high a price? This is even more compelling as this change in the institutional framework would hardly improve the conditions for financial stability. For the sake of crisis relief, the case for slightly higher inflation rates seems tempting, but who would argue that a system in which inflation expectations are no longer anchored would be an environment in which the chances for financial stability are improved?

The conclusion that central banks should not be given a formal mandate for financial stability does not exclude them from responsibility completely—formally or informally. There is an intense discussion on options for interactions of central banks and other institutions in the area of regulation and supervision. There are strong arguments why central banks should have all the information they need and might contribute or take responsibility for macroprudential supervision. The “line in the sand” should be drawn where the intrinsic goal of the central bank—maintaining price stability—is endangered.

For a long time, the view dominated that guaranteeing price stability is the best and in the end only—because only possible—contribution of central banks to financial stability. The notion that price stability is not enough rests on the observation that financial instability as documented in credit and asset prices’ booms happened at a time when (consumer price) inflation remained subdued. In fact, the financial sector in many countries approached the brink of collapse during a period of price stability. The argument that the situation of price stability (and the expectation that this regime would also extend into the future) has contributed to higher risk taking and thereby to future financial instability misses, however, an important aspect of the environment where it occurred: namely, very low interest rates. The justification for the monetary policy stance was the reference to low inflation. However, this approach neglected the strong increase in money and credit. A monetary policy strategy taking these monetary developments into account would imply an automatic leaning against the wind (Issing [2003a, b]).

This is the proper contribution of the central bank and monetary policy to foster financial stability. But this will hardly be enough. However, the implementation of other tools—regulation and supervision—should be organized in a way that neither blurs nor impairs the intrinsic task of the central bank.

## **B. Time Horizon, Monetary Policy, and Communication**

Whereas central banks for most of the time of their existence had a preference for opaqueness in their decision making, transparency has become a principle of modern monetary policy. Unlimited transparency, however, is a mirage (Issing [2005a]). There are strong arguments in favor of limits to transparency (Cukierman [2009]) without returning to the previous level of opaqueness. Corresponding communication is used as an indispensable tool to guide market expectations. Monetary policy can only fix the short-term rate. The influence of monetary policy on the long end of the interest rate spectrum—and over the entire yield curve—depends crucially on expectations regarding future monetary policy decisions. Communication, which is also important in the context of accountability, can be used to guide these expectations (Woodford [2003]). The steering of expectations has two dimensions (Issing [2005b]). The first is of a short-term nature involving pending policy decisions. The second dimension is

communication on the medium- to long-term policy of the central bank.<sup>3</sup> Consistency between the two dimensions is a crucial requirement of efficient communication and monetary policy *per se*.

Credibility is the fundamental for any attempt at steering expectations over the medium to longer term. Ensuring consistency of the sequence of monetary policy decisions is a key element of the central bank's monetary policy strategy. Applying simple logic means that a strategy is needed which itself has a medium- to long-term orientation. As central banks still seem to agree that over the longer term inflation is a monetary phenomenon, it is hard to see how a strategy can fulfill the requirement of credibility guiding inflation expectations over this extended time horizon without taking monetary developments into account. Lucas (1996) refers to the overwhelming empirical evidence that the relationship between monetary growth and inflation "needs to be the central feature of any macroeconomic theory that claims empirical seriousness." It is true that since the early 1990s it has become more difficult to forecast inflation. However, money-based inflation forecasts even in the new environment are a useful tool to give guidance for monetary policy to maintain price stability (see Papademos and Stark [2010]).

The usual inflation forecasts underlie severe limitations concerning the time horizon. Fan charts or ranges show increasing uncertainty, which demonstrates that the forecasting horizon can hardly be extended beyond two years. Considering the long and variable time lags of monetary policy on prices, this creates a challenge that is hard to resolve. Communication that is concentrated on predictability of the instrument which is the central bank short-term interest rate is confronted not only with the requisite to clarify whether the commitment is conditional or unconditional, but also with the intellectual challenge to explain how such a commitment can be based on a forecast that by construction lacks a longer-term orientation.

This aspect is especially relevant in the context of the financial crisis and its aftermath (see, e.g., White [2010]). It is now widely recognized that the great inflation of the 1970s was to a large extent the consequence of reliance on real-time information on the output gap. Currently, there is a high risk that relying on models that contain such structural elements could lead to a repetition of mistakes made in the past (Wieland [2012]). Estimates on the current output gap for large economic areas vary widely, which could be seen as warning that future revisions of data might be substantial. There is a high degree of uncertainty on the extent to which the financial crisis has an impact on potential growth, or rather the level of potential output. It is difficult to see how a signaling of the future path of the central bank interest rate that is based on such shaky ground can reduce uncertainty and guide market expectations.

The complexity of good communication is demonstrated when the relation between sender and receiver is taken into account. Research in psychology has shown the mind's information processing capacity to be limited (Kahneman [2003]). Selecting and weighting of information, for example, depends on its intuitive accessibility. Furthermore, information is generally simplified and categorized before it is collated.

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3. It is interesting to note that in a survey (Barclays Capital [2009]) market participants are mostly interested in predictability of monetary policy decisions over the next three to 12 months, but not for a longer period.

This raises high barriers for successful central bank communication and creates a substantial risk of failure. Striking the balance between the need for clear and simple messages and the requirement to adequately convey complexity is a constant challenge (Winkler [2000]).

Widening the forecast horizon implies a higher degree of uncertainty, with the consequence that publishing an interest rate path might mislead markets and the general public. Morris and Shin (2002) have shown that public information can crowd out private information and imply a risk of welfare losses.<sup>4</sup>

Communication can be an important tool for central banks, but the complexity of the challenge implies also a substantial risk for the credibility of the central bank in terms of its reputation. This is the case already for a central bank with the single mandate of maintaining price stability. It becomes more complicated with a dual mandate that includes responsibility for the real economy, for example, in the form of employment, and might end in total confusion once financial stability is added to the mandate of the central bank.

A further source of risk for the credibility of the central bank arises if it is perceived as just following the markets. Praise and criticism from financial actors has become a permanent companion of monetary policy. Central banks are therefore exposed to the temptation of attributing an importance to market reactions that goes beyond their interest in the transmission of monetary policy. It is obvious that this risk is especially relevant in times of instability in financial markets. At the same time, this is a situation in which stability-oriented guidance can come only from a central bank that leaves no doubt about the commitment to its mandate.

In assessing the time horizon of communication on future central bank actions, it also must be considered that any signaling on the interest rate path that rests on the traditional forecasts seems to neglect the time lag of monetary policy decisions. There is broad agreement that the time lag of the impact of monetary policy on the real economy is at least around one year, and on prices the lag is on the order of two years or more. It is a daunting challenge to anticipate proper policy actions over such a horizon. (If “unorthodox measures” are adopted at the same time, the signaling on the interest rate path becomes even more complex.)

The alternative is not to resign and to fall back to unguided “ad-hocery.” The appropriate answer is not to overcome heightened uncertainty with a pretense of

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4. For an interesting example, see the minutes of the Swedish Central Bank Executive Board’s monetary policy meeting of September 1, 2010:

Mr Svensson believed that the repo rate path in the main scenario is unreasonably high. It is far above market expectations and the corresponding short-term and long-term market rates. If it were to achieve full credibility, market expectations would shift upwards to the same degree. This would have fateful consequences. Mr Svensson called on his colleagues on the Executive Board to point out any faults in his reasoning . . . . Normally, the Riksbank’s wish and endeavour is that the repo rate path shall gain credibility and be incorporated into market expectations and market pricing. In this way, monetary policy will have the largest possible impact. However, this time it is the opposite. Mr Svensson claimed that if the repo rate path in the main scenario is supported by the majority [of the board], one must hope that it is still not credible and thus will not have very large consequences before it can hopefully be corrected at the next monetary policy meeting. There is an old saying that one should be careful what one wishes for. This is because getting what you wished for may sometimes have unforeseen consequences. This could be one of those times. Mr Svensson claimed that in this case, one should not wish for better credibility for the repo rate path.

knowledge about the future, but to design a monetary policy strategy that is based on those fundamentals which are relevant and reliable for identifying longer-term risks to price stability.

It is hard to see how this can be achieved without integrating monetary factors in the strategy. For the euro area, there are a number of studies that do not ignore the complexity of the situation but provide convincing evidence that the longer-run relation between money and prices is still intact (Calza and Sousa [2007], Papademos and Stark [2010], Belke and Czudaj [2010], Baeriswyl and Ganarin [2011], and ECB [2012]). On the basis of such a strategy, a credible commitment to maintain price stability can be communicated without falling into the trap that is hardly avoidable in the concept of publishing an interest rate path based on widely used models.

### **C. Reputation at Risk**

The financial market crisis saw central banks in the role as “savior” of last resort. True, the function as lender of last resort in theory has always been part of the monetary system. Central banks were supposed to follow two rules: “First. That these loans should only be made at a very high rate of interest. This will operate as a heavy line on unreasonable timidity, and will prevent the greatest number of application by person who do not require it . . . Secondly. That at this rate these advances should be made on all good banking securities, and as largely as the public ask for them” (Bagehot [1873]).

In providing liquidity at zero or close to zero interest rates against collateral that hardly in all cases qualifies as “good securities,” a number of central banks have gone far beyond Bagehot’s famous principle. In the subsequent crisis of high public debt, central banks were seen also as the ultimate buyer of public debt. This is, however an inappropriate extension of the role of lender of last resort. Solvency of a sovereign debtor is traditionally defined as a state being able to service debt by collecting taxes. Bringing this responsibility into the domain of the central bank means transferring an obligation of public finance into a monetary phenomenon. There has been a lengthy discussion about the demarcation line between fiscal policy and monetary policy. But the arguments in favor of the central bank being the ultimate buyer of government bonds imply that the central bank could and will finally be taken hostage by politics. Prominent bad examples for the consequences of such a regime are not lacking.

There are convincing reasons for open market operations implying huge purchases of government bonds in case of deflationary risks. Without such a convincing “monetary” explanation, however, the dividing line between monetary and fiscal policy is crossed and the central bank becomes part of politics (for a classification, see Goodfriend [2011]).

In this context, another discussion triggers pressure on central banks. There are two strands of arguments why currently central banks should tolerate higher inflation, respectively raise their inflation target. One is derived from the problem of the zero bound for nominal central bank interest rates. To reduce the risk of being trapped by the zero bound, the inflation target should be raised to achieve more room for maneuver (Blanchard, Dell’Ariccia, and Mauro [2010]). The other argument is based on the idea that higher inflation would facilitate the service of public debt.

The acceptance of a higher inflation rate by the central bank would be a major blow to its reputation. How credible would be a statement that this was a temporary measure? Inflation expectations would lose their anchor, and long-term interest rates would rise and include an inflationary risk premium that would have a negative impact on growth and employment.

The second strand of argument concerns coordination—explicitly or implicitly—of monetary policy and fiscal policy. This coordination for which academics show a lasting preference has in practice failed too often and too badly for it to be tried again. “Perhaps the most serious flaw in the economic analysis underlying policy was the belief that policymakers could maximize economic welfare by choosing the optimal mix of monetary and fiscal stimulus or restraint to achieve the optimal combination of inflation and unemployment” (Meltzer [2009, p. 286]). This perception of the advantages of coordination seems ineradicable. Once a central bank engages in such a game of “give and take,” it would be exposed to the problem of time inconsistency, its reputation and credibility would be at stake, and its independence *de facto* would be lost.

The argument for “coordination” becomes even more doubtful when it is extended to the global level. The idea that the major central banks should internalize the spillover effects of their policies by creating an “International Monetary Policy Committee” that will “report regularly to world leaders on the aggregate consequences of individual central bank policies” (Committee on International Economic Policy and Reform [2011]) lacks any convincing theoretical basis. Such a concept would establish an international system without a nominal anchor.

True, the world is complex, financial markets are exposed to high risks, spillover effects of any kind are abundant, and financial stability is a major challenge. However, is this a reason to react with a concept of policy that becomes so complex that it would end in a situation where the competence and responsibility for various goals was impossible to disentangle? One conclusion seems sure: this would establish a regime in which price stability (or low inflation) was at the very bottom of the hierarchy of goals.

Society would have to pay a high price. The period of low inflation would finally remain a short episode. The world would return to the time of rising and highly volatile inflation. After a while, merely to stop inflation would be difficult and the path to reducing inflation would again be painful and costly.

Confronted with these requests from politics and the financial industry, supported strongly by seemingly attractive concepts developed by academics, central banks are in an extremely difficult position. Following these ideas would ruin their credibility and reputation as defenders of the value of money. It does no credit to the economic profession that a number of proponents argue openly in favor of expropriating savers via planned higher inflation without even considering the consequences for society. Should and could central banks participate in such a concept?

Central banks will, however in the short term, be on the loser’s side once they defend independence and their responsibility for maintaining the value of money. This will be the case because they will be blamed for all the negative consequences attributed to them for their resistance to participate in the “coordination game.” In the longer term, such firmness might turn out to be the best contribution central banks can make to the welfare of society. For this, central banks should demonstrate modesty in what

they promise to deliver, explain convincingly what they lack competence to do, and be transparent in their actions and open to discussion, but firm in their determination to preserve the value of money, which is the final anchor for a paper standard.

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