

## Bruno Gehrig: Monetary policy in a changing world

Speech by Prof Dr Bruno Gehrig, Member of the Governing Board of the Swiss National Bank at the 3rd Conference of the Swiss Society for Financial Market Research (Schweizerische Gesellschaft für Finanzmarktforschung, SGF), held in Zurich on 7 April 2000.

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The title of my speech may sound somewhat ambitious. It signals all-encompassing breadth and profound depth. These are demands that I will hardly be able to meet. What follows are a few reflections on selected aspects of monetary policy by a practising economist. I should like to begin with a brief historical review leading to the 1990s, which have become known - and justly so - as the decade of successful disinflation. Then I will turn to the changes in monetary policy concepts. Following these rather retrospective remarks, I should like to deal with topics of broad general interest in today's discussion - under the headings "independence", "new economy" and "asset prices".

### 1. A brief historical review

In a historical dimension, central banks are comparatively young institutions. While payment instruments can actually be traced back to prehistoric eras, central banks have emerged only very gradually over the last 300 years.<sup>1</sup> When one considers that the Bank of England was founded when Johann Sebastian Bach was nine years old, one might even regard central banks as somewhat "baroque" institutions. Indeed, the original missions of central banks must strike us as highly bizarre. "A money-raising machine"! This is how a historian termed the Bank of England in the early days of its existence. At that time, the Bank basically acted as banker to the state and manager of national debt, thereby contributing to financing wars and imperial expansion.

With their roots going back to the Age of Enlightenment, early central banks stood for the economic emancipation, ambition and power of the states that established them. Due to their potency as state banks they gradually assumed functions such as the bankers' bank, lender of last resort, regulator of financial activity and privileged issuer of money. In the case of Switzerland, the National Bank was founded (in 1907) in order to unify a somewhat chaotic system of banknote issues and to simplify the payment system. All these functions have remained predominant and gained profile over large parts of central bank history. By contrast, monetary policy as it is practised today is a comparatively recent central bank discipline. It became permanently relevant only after World War II, when the gold-linked money standard was abandoned in favour of a US dollar standard. In fact, individual central banks gained control over "their" money supply only when the US dollar pegs were given up in the early 1970s.

For a long time, the policy objectives of many central banks oscillated between financing the state and maintaining the (internal and external) value and reputation of the currency. These fundamentally conflicting objectives provoked many currency crises and caused tremendous economic harm and, as a result, heightened people's desire for monetary stability. Today, the public's aversion to, and politicians' awareness of, inflation may have reached a peak in the developed world. This was certainly a necessary condition for the global disinflation process of the 1990s.

Historically, the most effective device for keeping the price level down was the gold standard.<sup>2</sup> In the US, for example, accumulated inflation between the founding year (1776) and World War II was just

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<sup>1</sup> The majority of European central banks were established in the 19th century. The rise of central banking accelerated in the 20th century.

<sup>2</sup> However, the long-run stability of the price level was accompanied by strong and recurring fluctuations in output and prices.

30%, whereas since then, the price level has multiplied by factor 8. The figures for Europe look broadly similar when the war-driven hyperinflations are left out of account. This makes central banks' seemingly unique policy performance in the nineties look slightly more modest.

In the past decade, three main factors facilitated a return to purchasing power stability. *First*, a lesson was learned from the negative experience with inflation. *Price stability gained considerably in importance* in the political process. Majorities in both governments and parliaments voted in favour of monetary discipline, which in many places amounted to priority being given to budget discipline and pronounced central bank autonomy. The Maastricht Treaty impressively illustrates this changed approach with respect to the European area. This new political focus was also a reaction to the disillusionment with regard to the central banks' ability to generate permanent growth effects. There was fairly widespread agreement that price stability should be the prime monetary policy objective. *Second*, it was of decisive importance that the currencies of the two leading countries, *the US and Germany, achieved a high degree of price stability*. Numerous countries gained credibility by pegging their exchange rates to the US dollar and the DM, thus seizing the opportunity to successfully import the stability policies of the Federal Reserve and the Deutsche Bundesbank. *Third*, the *deregulation and globalisation* of financial flows have increasingly *disciplined the national authorities*. These days, an excessively relaxed monetary policy is sanctioned much more severely and much more quickly than in the past by growing inflationary expectations, rising long-term interest rates and a persistent devaluation pressure. Correspondingly smaller are the incentives to run the higher risk of a long-term inflationary problem for reasons of short-term opportunism.

On looking ahead, most of these factors promise to remain relevant. Such confidence, however, should not detract from the dangers and risks involved. Fiscal discipline is facing a difficult test phase in a number of countries. It is foreseeable that the combination of demographic trends and non-funded statutory pension claims will lead to intensive discussions on distribution in many places which, in turn, might easily trigger a rise in public indebtedness. At the very least, it is not certain whether in such a scenario central banks will be able to remain independent and continue to concentrate on price stability. However, it should be clear that on a global level the future of price stability depends decisively on whether, and to what extent, the Federal Reserve and the European Central Bank will succeed in ensuring long-lasting purchasing power stability of the two major currencies.

## **2. Changes in concepts**

The recent past has also brought about significant changes with respect to the implementation concept for monetary policy.

Throughout the world implementation concepts have abandoned the use of *money stock growth rates as political intermediate targets*. This change of concept cannot hide the fact that monetarism was a practical concept and one that promised success. It explicitly made the *interconnection*, then almost forgotten, *between excessive money supply growth and inflation* the basis for steering monetary policy, thus making it possible to achieve major stability successes. Two additional aspects proved favourable in this respect. Steering the money supply facilitated *communication and transparency*. Monetary aggregates show rapidly and in the form of an objective figure whether the monetary authorities are actually implementing what they announced. Due to exceedingly long and variable time-lags between measures and ultimate targets, this applies to a much lesser extent to inflation targeting. Finally, money supply targeting also provides a *measure of protection for central banks*. Reference to excessive monetary growth made central banks relatively immune to daily political and fiscal pressure, even in places where institutional independence had not (yet) been established.

Control of the money supply lost some of its attractiveness because its central analytical basis was subject to successive erosion. Money demand functions became increasingly unstable. Given some differences between countries on the one hand and the aggregates employed on the other hand - mainly M0 to M3 - the connection between the intermediate target and the ultimate target became more and more unreliable. That was also the case in Switzerland, even if with a time-lag and to a lesser extent than in other countries, notably English-speaking ones. We recorded shifts in cash

holdings which we could not even explain satisfactorily ex post, much less have forecast them with any degree of accuracy.

The central banks reacted differently to this experience. Some rapidly threw money supply targeting overboard. Others - including the SNB - changed from annual to medium-term targets. The extended room for manoeuvre made it possible to consider various indicators in shaping the policy course. One could use the term *pragmatically adapted targeting of the money supply*. In actual fact, this step came close to a transformation of the money stock from an intermediate target to a monetary indicator, albeit the most important one.

The destabilisation of money demand as previously set out has complex reasons on various levels. Regulatory changes, adjustments in the structure of banks, and innovations in the fields of investment opportunities and payments undoubtedly play a major role. Moreover, with receding inflation rates the relative disruptive effect of such instabilities has increased. Certainly, it cannot be excluded that at some point in the future we will again see a phase of greater stability in the demand for money, but in the current environment such a change is not evident.

*The policy concept implemented by the Swiss National Bank three months ago is made up of the following three elements: an explicit definition - in terms of a figure - of price stability; publication of a three-year inflation forecast; and an operational implementation target in the form of a target range consisting of 100 basis points for the three-month Swiss franc/Libor rate. I need not enter into this in detail before this audience. The decisive test must be in the time path of the ultimate target variable - the price level - which we will achieve on this basis. As regards the concept as such, I should merely like to make two remarks pertaining to misunderstandings.*

First, the interest rate target defined as a target range *is not a substitute for the money supply target* of the concept formerly implemented by us. It is neither more nor less than an operational implementation aid with a much shorter time reach relative to the formerly used money supply target. It must be frequently adjusted in response to various changes and new information so as to enable the stability goal to be reached. Against the background of our knowledge of the monetary policy transmission process and its lag structure, it is obvious that it is hardly the level of money market rates that is decisive, but rather *the interest rate path optimised over time in uncertain circumstances*. The condition for success of the policy is not that the three-month Libor rate is exactly right today; rather, it must be possible to constantly optimise the interest rate path - which leads to the set goal - in a way that the deviations of the ideal line, which can only be defined ex post, will be as small as possible and easy to correct. Interest rate steering will therefore often follow a fairly gradualistic pattern. This has nothing to do with macroeconomic activism, quite the contrary. The macroeconomic fine-tuning activists have lost their case because they have assumed totally unrealistic information conditions and underestimated the uncertainty of political decision-making. With interest rate steering, the situation is exactly the opposite. Precisely where there is considerable uncertainty and false steps are liable to occur, there are good reasons for implementing a policy of small steps. The danger of slipping is smaller, and a false step is easier to correct. But there are also valid grounds for fairly substantial interest rate adjustments. For one thing, it may well happen that policymakers, in the light of new facts and figures on ongoing developments, come to the conclusion that the interest rate pattern currently followed needs to be corrected quite considerably. This would mean correcting a pattern that, from today's vantage point, was not optimal in the past. For another, it may be desirable in certain situations to take the markets by surprise and cause expectations to be revised.

Second, it is in the nature of the concept that the *information content* of a pre-announced interest rate target is *much smaller* with respect to the time dimension than used to be the case for money supply targets. Under the aspects of transparency and central bank accountability, this is a drawback. We have therefore taken effective countermeasures by defining price stability and deciding to publish our inflation forecast, thus submitting our decisions to public discussion. This has made it clear - and equally clearly communicated - how our actions are oriented and how they are to be measured. I have thus addressed issues that have all seen a particularly large number of changes in the past few years: independence, transparency and accountability.

### 3. Independence - mandate - transparency

#### *Independence*

Right into the 1980s, independent central banks were the exception - such as those of the US, Germany and Switzerland - rather than the rule. This has changed on a broad front in the past ten years. The massive surge of inflation in the 1970s and 1980s and the reluctance of some finance ministries (and their associated central banks) to combat it made economists and the public aware that politicians may not have the appropriate incentives to bring or to keep inflation down.

Why are independent central banks more successful when it comes to bringing down inflation rates? The reason is that politicians and central bankers tend to *have somewhat different objectives and largely different time horizons*. Technocrats at central banks mandated to ensure monetary stability can easily afford to take a long-term view, while politicians feel much more constrained by the pressure to produce short-term results. This seems relevant since an inflation-preventing or inflation-combating policy is usually associated with real costs in the short run, while the benefits appear only over time. A government might be seduced into conducting an inflationary policy in order to reap benefits in the short term, while the costs will only become evident years later. Therefore, there is a strong probability (but, of course, no guarantee) that independent central banks will do a better job than governments with regard to the issue of inflation. This insight - and perhaps the relative success of most independent monetary authorities with the disinflation process in the 1970s - has paved the way for granting more independence to monetary authorities.

Essential preconditions for the independence of a central bank include a solidly based consensus concerning its mandate and a commitment to transparency and accountability.

#### *Mandate*

Most economists would agree that the core task is ensuring price stability. This consensus rests on the conviction that *in the long term*, when all the lag effects have come to an end, *monetary policy only determines the price level*, not, however, output or employment. Thus the primary obligation of a central bank to maintain price stability does not imply that priority is given to price stability in preference to full employment. Rather, it is in the economic nature of monetary policy instruments that they are suited for influencing price level trends, not, however, growth or employment trends. Yet in the short term, ie within the monetary policy transmission process, monetary policy does have real effects.

The problem can easily be illustrated if one tries to picture a shock, eg a massive rise in oil prices. The immediate consequence will be an increase in the price level and a fall in production. This constellation confronts the central bank with a trade-off between price stability and growth. If the bank's sole concern is a quick restoration of price stability, it will raise interest rates and consequently exacerbate the loss of output. If, on the contrary, it reacts solely to the production effect, it will strengthen the shock-induced deviation from the goal of price stability by lowering interest rates. *Reacting to shocks may lead to a trade-off between the variability of output and the variability of the price level* (King 1999, p 12). This trade-off in itself is an extremely complex phenomenon. It is determined by the structure of the economic process and the dynamics of expectations. There is, realistically speaking, no chance to deduce a general policy rule and to formally embody such a rule in the central bank mandate. Any decision to correct slowly and gradually or in a single bold effort any deviation from price stability, whatever its origin, can only be taken individually. Monetary history has successful examples to show for both patterns of reaction, but also unfortunate episodes in which central banks actually increased the variability of the price level and of output through activist manoeuvres. It would thus appear reasonable that an addendum, unspecified as to substance, should be made to the mandate of ensuring price stability. For example, to the effect that in fulfilling the mandate due attention should be paid to the development of economic activity.

Art. 99 of the Swiss Federal Constitution obliges the SNB to conduct a monetary policy which serves the general interests of the country. Endeavours are under way to spell out this vague formulation in

more detail in the forthcoming comprehensive revision of the National Bank Law. When revising our monetary policy concept, we took a step in this direction by quantifying the stability target (CPI - inflation below 2%) and undertaking to adhere to the target in the medium term.

### ***Transparency***

A further aim was to continue to improve transparency. It is a fact that the call for more transparency has sounded far and wide. This call is more than merely a short-lived fashion. There are two especially valid reasons for the formerly rather reserved central banks to communicate openly and in good time.

For one thing, *transparency* - in particular, *ex post* transparency - is an indispensable *precondition for accountability* and thus also a necessary correlative to *independence*. Beyond this, transparency is an effective means of gaining the *confidence* of the public and the markets. Central banks depend much more on this confidence in fulfilling their mandate than other institutions.

For another, the increased significance attached to transparency derives from the central role played by *expectations*, also in macroeconomic processes. If the efficiency of forming expectations in the financial markets and in the real sector can be improved with greater transparency, this serves to enhance the productivity of an economy.

Transparency, however, should be optimised rather than maximised. Individual demands can occasionally be quite unrealistic.

In my view, this even applies to *ex post* transparency, which is basically less problematic. Accordingly, I do not see any merit in the popular practice which has gained ground in various countries to *publish the minutes of board meetings*. Board members, too, are only human. Like anyone else, they respond to incentives. My fear is that publication will lead to a certain amount of window talk and probably also to critical discussions being held outside the recorded meetings. Experience has taught me that every decision-making body needs a sheltered area away from the public where things may be imperfectly stated and seemingly irrefutable truths may be called into question. If such a sheltered domain is abolished, this will, in my view, have a negative effect on negotiating practices and the quality of decisions.

Optimisation of *ex ante* transparency is, by its very nature, more critical. A clear and open *commitment to a monetary policy goal* is of central importance. Thus the central bank must state explicitly what it means by price stability, and it must also communicate how it assesses the long-term development of the target figure. Both elements serve to enhance - or even facilitate - the predictability of its policy and to reduce uncertainties. Conversely, it must be accepted in monetary policy that the precise way to the goal is fraught with considerable uncertainties and that therefore too much *ex ante* transparency can easily become counterproductive. In the context of our concept this applies in particular to *the interest rate path to be followed*. If a target range for the money market rate is published at a particular point in time, this steering intention remains valid "for the time being". It is quite understandable that market participants should wish to know more: how long the interest rate target is to remain valid, and what interest rate steps are likely to follow. What they would prefer above all else is information on the planned interest rate path for several quarters. Such far-reaching *ex ante* transparency is, however, due to fail because of the *uncertainty from which policymakers suffer* just like any other market players. As the cornerstone of policy implementation, the interest rate path needs to be revised constantly and optimised conforming to updated information. When we fixed a target range for the first time in December 1999 we simply did not know that as soon as the first quarter of 2000 two interest rate increases would be necessary. The commitment to *ex ante* transparency must take account of the knowledge and the uncertainty of decisionmakers. Thus, as a rule, it is hardly meaningful to give information with regard to any other planned interest rate moves in addition to the announcement of the current interest rate target. In so doing, the central bank would lose essential room for manoeuvre, immobilise its internal decision-making process and give rise to counterproductive changes in market expectations. For this reason, I am also sceptical with respect to the somewhat softer practice of preparing the markets with a so-called *bias statement for a probable interest rate move*. Such signals cause expectations to be revised, which is of small avail in the best case, and ties the central bank's hands, in the worst case. Once a concrete decision - eg to raise the

interest rate - has been taken, it can be implemented without delay, ie without a prior announcement. If, however, the central bank still harbours an uncertainty and - for example - still wishes to await the disclosure of figures, it should refrain from making a prior announcement as it would then find itself under a constraint. For if, in response to a signal received, the markets anticipate the interest rate move, the central bank will hesitate, out of concern for its credibility, not to implement the signalled move. This may well result in an *endogenous interest rate policy*: the central bank becomes, through its own fault, the prisoner of market expectations - an absurd notion. A central bank should inform openly about its long-term designs. At the same time, it should not hesitate to make interest rate decisions, if necessary, which come as a surprise to the majority of market participants.

#### 4. The “new economy” - fact or fiction?

The term “new economy” is certainly vague, which may be the very reason why it is popular. Coined in the United States, it is used as a label for several hypotheses which strive to explain the performance of the US economy in the second half of the 1990s. Poorly explained by most conventional macroeconomic models, this economy is characterised by continued high growth rates, unexpectedly robust productivity, and long-running low unemployment, combined with very little inflationary pressure. These attempts to explain the phenomenon termed “new economy” refer to two prominent areas of change. On the one hand, *deregulation and the opening of markets* for products and factors and, on the other hand, the phenomenal *progress in information and communications technology*.<sup>3</sup> On a macroeconomic level, the explanations lead to three possible conclusions.

*First*, to the conclusion that the economy has lost some of its *cyclical dynamic*, a change which is explained by the increased transparency and more efficient steering of entrepreneurial processes as well as the fact that inventories have been cut or completely eliminated.

*Second*, that there has been a *permanent reduction in the natural rate of unemployment* which results in an upward shift of the potential output curve and thus to significantly higher growth rates in the transition phase.

*Third*, that there is a *gain in long-term productivity growth*, ie a steeper potential output curve in future.

Academic economists usually react with scepticism to these basically supply-side hypotheses. In fact, they are assumptions which, plausible as they may be, have not been empirically tested. Monetary policymakers cannot simply ignore them because they relate to interconnections which are important for the formulation of policies. It would be just as foolish, however, to accept such theories uncritically and to include them in the decision-making process simply because they sound plausible. In any case, the assertions put forward under the label “new economy” create additional uncertainties.

In this particular state of uncertainty, there is growing interest in an ongoing analysis and interpretation of indicators. In this way, one searches for early evidence for the pros and cons of these hypothetical changes. The risks for success inherent in a bold pre-emptive strike are bigger. The famous notion of “acting ahead of the curve” presupposes having solid confidence in one’s own forecasts. Notably the fact that the Federal Reserve has lost this confidence in the late 1990s and that it has refrained from taking big, bold steps, has apparently turned out to be the right strategy. In an environment of increased uncertainty, a tendency to take small, careful steps makes sense. It is hardly possible to chart the ideal course that way, but there is a good chance that deviations remain limited and can be corrected within a reasonable time frame.

In Switzerland - perhaps with a time lag - we are also affected by such uncertainties. This is the case even though the factor of a declining natural rate of unemployment cannot play a central role in this country. Economists in Switzerland would certainly be well-advised to critically analyse the

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<sup>3</sup> A useful overview can be found in Davies 2000.

hypotheses and phenomena propagated as “new economy” - not with preconceived ideas, but with an open mind.

## 5. How relevant are asset prices?

A topic which is related to the “new economy” is the phenomenon of extreme price fluctuations of individual assets. Even previously, the bitter lessons learned on the heels of the recession in Japan had stimulated a discussion of whether and how asset prices are important for monetary policy. The question of whether they are relevant can be answered quickly. There is a broad consensus on several interconnections.

Equity and real estate prices determine household wealth and therefore influence *consumer demand*. This aspect must certainly be taken into account. Another factor impacting monetary policy is the interdependence between equity prices, the cost of capital, and the *demand for capital goods*. Moreover, asset prices, especially real estate prices (as collateral in the credit business) can change *financing conditions*. This can undoubtedly have repercussions for the economy, at least if the prices fluctuate sharply. As indicators for the development of overall demand, these effects must feed into economic forecasts which unavoidably exert an influence on monetary policy.

Above and beyond these aspects, there is a general consensus that, in the event of an *asset price crash*, central banks must react to the sharp increase in liquidity demand. Such willingness to react is the consequence of the central banks’ responsibility for the stability of the financial system.

In addition to this accepted premise, however, the discussion - especially in the financial press - focuses on two calls for action that go even further. Most central banks, however, are sceptical or opposed to such demands.

First, some claim that central banks should not remain passive when confronted with a bubble in the making, but rather take a *proactive stance* so that an abrupt or even dramatic adjustment does not occur at all. There are convincing counter arguments to this opinion. It is impossible to determine with some degree of accuracy whether such a bubble, in the sense of a speculation-driven price increase, has indeed formed. Central bankers are not more ignorant than investors and traders, nor are they more intelligent or better informed when it comes to the valuation of companies.

One might argue that a crash is not so much the result of exuberant cash flow expectations for individual companies but rather the consequence of a sudden increase in discount rates, causing a dramatic downward adjustment of all present values. The relevant discount factors are the combined result of time preference, risk preference, and the prevailing perception of uncertainty. History has taught us convincingly that time preference is a relatively stable factor. The problem, therefore, lies more in a sudden shift of risk preference and the perception of uncertainty. If these two determinants could be stabilised, much would be achieved already. This task, however, also presupposes some “*superior knowledge*” and “*deeper insight*” on the part of central banks relative to the market. Such assumptions are unrealistic.

Moreover, central banks, with the instruments they have at their disposal, do not have the possibility to deflate a presumed bubble all on their own. Interest hikes would certainly be a possibility. In so doing, however, one would have to accept *consequences in the real sector* which could be completely counterproductive. Finally, if central banks were obligated to avoid stock market excesses, this would have extremely disastrous *moral hazard implications*. To be realistic, a simple recommendation is all that is in order: those who buy equities bear the price risk themselves. People who, out of greed and carelessness, buy and sell in such a way that they cannot survive a brutal crash have only themselves to blame. They must bear the consequences alone, even if it means their economic ruin.

Second, there is also an argument that *price stability* as the relevant goal of monetary policy should be *defined more broadly* and measured in such a way as to include the development of important asset

prices.<sup>4</sup> The demand that monetary policy, in its use of the concept of monetary conditions, should not only take account of interest rates and foreign exchange rates but also of equity prices does not go quite as far. On a technical level, such an expansion of the price index would not be a trivial undertaking, but certainly doable. There are some serious economic concerns, however, which are mainly due to the ambivalent nature of equity price fluctuations. Equity prices may rise in anticipation of a pick-up in total demand, which - if anything - would indicate some restrictive monetary policy correction. If the stock market expects business activity to pick up, the central bank will, in assessing the situation, hopefully realise this as well. It is for that purpose not necessary to expand the price index or the monetary conditions index as has been suggested. On the other hand, equity prices can go up as a result of real changes, eg due to achieved or expected productivity improvements. Such supply-side driven equity price increases signal a higher productivity potential and would - if anything - be a reason for an expansive but certainly not a restrictive monetary policy correction. This example illustrates the central banks' scepticism against the suggested changes. From the Swiss vantage point, there is well-founded additional scepticism. Our stock market is dominated by companies whose activities are concentrated abroad and thus have little direct connection with our economy.

It is possible that new insights will lead to different conclusions. For the time being, however, it seems advisable to stay with the generally accepted "consensus view", but to do that job as well as possible.

## **Conclusion**

I am about to come to the end of my reflections, fully aware that my journey through a changing world is far from complete. I did not mention payment transactions, for example, even though this is an area undergoing various changes with potentially far-reaching consequences. In reflecting on change, however, we must not forget that the basic mandate of central banks remains unchanged: to secure stable monetary conditions for the economies they serve - both today and in the future.

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<sup>4</sup> Cf IMF 1999, p 124.