# Axel A Weber: Financial markets and monetary policy

Speech by Professor Axel A Weber, President of the Deutsche Bundesbank, at the University of Constance, Constance, 25 June 2008.

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## 1 Introduction

Ladies and gentlemen

It is a great pleasure to be here, at the University of Constance, where I myself studied economics some 30 years ago. When I finished my studies, the university's postgraduate studies programme "International Economic Relations" had not yet been launched. In retrospect, I think there were many interesting topics to study in the late 70s and early 80s. Think of the two oil price crises of the 1970s or the Great Inflation in the USA. In fact, both topics are worryingly relevant today – even though the background story is now a different one and our theoretical and empirical insights have advanced significantly.

I would therefore like to come back to both issues later on when I will also be able to talk about the current monetary policy stance of the Eurosystem. Before doing so, however, I would like to focus on yet another topic: financial markets and central banks. My choice seems a natural one given the extent to which global financial markets have been characterised by turmoil and volatility over the past 11 months. Indeed, what began as a fairly contained deterioration in the (relatively small) US-subprime market in August last year has rapidly developed into a severe test of the stability of the global financial system.

Financial markets perform an indispensable task for economic welfare. They provide the services and products by which the intertemporal allocation of savings and investments is accomplished. As such, financial market stability is a precondition for macroeconomic stability and economic growth. In addition, monetary policy is largely transmitted to the real economy and the price level through financial market operations. It should therefore come as no surprise then that central banks have always had a keen interest in financial market developments. And, most certainly, there was no need for the recent financial market turmoil to drive home that point. I have chosen two topical questions to guide me in my following remarks: First, what are the underlying causes of the recent financial market turmoil? Second, how can central banks help avoid disturbances in the financial system?

## 2 The underlying causes of the recent financial market turmoil

When looking at the underlying causes of the recent tension in the global financial system, is one particular development to blame as a clear cause? In fact, numerous culprits have been put forward: securitisation, quality of risk management, credit rating agencies, compensation schemes, accounting standards – to name just a few. Against this background, I am extremely sceptical about monocausal explanations. Instead, I believe that a cocktail of various ingredients triggered the shock waves for the financial system.

Many ingredients in this recipe stem from innovations in financial intermediation or, to be more precise, from a combination of new and complex instruments to transfer credit risks and the "originate and distribute" business model. The disruptions of the previous few months have highlighted the increased complexity of credit risk transfer (CRT) instruments. This would have been less problematic if the risk management systems of financial intermediaries had kept pace with the changing characteristics of the financial landscape. However, not all of them did. At the same time, the investor base has become more diffuse, with some participants being only recent entrants to the CRT markets. All of this suggests that several investors may not have fully appreciated the higher-risk nature of CRT products and were therefore overly optimistic in their assessments of the risks involved.

As you probably know, the securitisation activity was promoted by the "originate and distribute" model at large banks and securities firms. On a positive note, the securitising, tranching and trading of credit risks has led to a fairly broad risk dispersion. But it has become clear that the "originate and distribute" model can actually improve the resilience of the financial system only if a high-quality standard is maintained at all levels of the transfer process and no new concentrations of risk arise. The past few years, however, have been characterised by a series of distorted incentives which has manifested itself in lax origination standards for products such as subprime mortgages and an excessive reliance on credit ratings by some investors.

As a final point, let me add that, at the end of the day, the "originate and distribute" model led – rather unexpectedly – to a huge reintermediation of credit risks on to banks' balance sheets. In other words, the financial market turmoil has demonstrated that removing assets from bank balance sheets does not mean that banks are no longer exposed to the risks associated with them. Hence, risk management systems should reconsider their view of reputational risk, credit guarantees and credit lines to off-balance-sheet entities such as structured investment vehicles and conduits. In a nutshell, securitisation, as Claudio Borio aptly put it in 2008, has, in the end, "distributed fear rather than risks". However, while financial innovation has undoubtedly increased vulnerabilities in the global financial system, there is more to the present financial market turmoil than meets the eye of the casual observer.

The proliferation of structured finance products and the "originate and distribute" model would arguably not have been possible without the benign economic and financial backdrop notably robust global economic growth, low inflation, a low level of interest rates, low default rates and rising asset prices in many countries, not just in the USA. This Goldilocks economy, where conditions were neither "too cold" nor "too hot", had – as a side effect – masked the gradual build-up of financial imbalances. Hence, while lending and risk-taking experienced rapid growth, words of warning by central banks and other institutions were largely disregarded on the basis of "this time, developments are surely different from the past". The fact that minor financial market tensions in the spring of 2005 and in 2006 had left financial markets more or less unscathed only reinforced that impression. Once, however, the vulnerabilities in the global financial system were revealed in August last year and financial imbalances started unwinding, we all witnessed that the scene changed considerably.

## 3 Financial stability analysis at central banks

For some time now, there has been much talk about financial stability and the respective role of central banks, and so I would like to address this topic here. A widely accepted definition of financial stability is the ability of the financial system to perform its key functions efficiently – namely, the allocation of capital and risks and the settlement of payments and securities transactions. These functions must be fulfilled smoothly not only in normal times but also during periods of structural adjustment and stress. Stable financial systems reduce uncertainty and therefore develop positive external effects on the real economy, thereby contributing to greater economic prosperity. However, the reverse is also true: Instability in the financial system can have negative external effects and therefore cause high economic costs.

Contributing to financial stability is thus part of a central bank's core area of responsibility, in order to ensure price stability and avert negative repercussions of the financial system on the real economy. Just over a year ago, some observers questioned this view, calling it a temporary "fad" or even dismissing it as the result of central banks' searching for new responsibilities – these voices have now been silenced for obvious reasons. Indeed, financial stability analysis is anything but a passing fashion. It has established itself as a field of research of its own right since the mid-1990s, when financial stability issues were boosted by

financial globalisation and an acceleration in financial innovation. This is reflected in the wide dissemination of financial stability reports, which central banks now produce in more than 50 countries worldwide.

I would therefore like to give you a brief overview of the kind of challenges central banks face when embarking on financial stability analysis. It starts with the fact that financial stability is not easily measured. This is hardly surprising as, in contrast to monetary policy analysis, there is no single indicator (such as inflation) to observe.

Similarly, initiatives to create some sort of an all-encompassing financial stability index have failed to convince so far. Instead, the concept of financial stability involves various financial intermediaries, financial market segments and infrastructure, for which a whole host of different quantitative and qualitative indicators exist. As a consequence, determining the degree of financial stability remains a highly complex task. Moreover, constructing theoretical models and conducting model-based financial stability analysis are still in their infancy. One particular difficulty lies in modelling periods of stress. To begin with, modellers face a lack of relevant data as historical time series on episodes of stress are rare, luckily. More generally, it is difficult to capture the behaviour of financial market participants because they are affected by feedback effects between the financial system and the real economy. In many cases, a shock to the financial system will be amplified by interrelationships between financial markets and economic variables. For instance and without reference to the present situation in the euro area, if, after a period of financial turbulence, financial intermediaries experience a widespread process of deleveraging, credit crunch mechanisms might come into play that could drive bigger second-round effects on the economy and, in turn, cause further losses in the banking sector. How to model such feedback effects consistently is still an open issue.

Another significant limitation to assessing a financial system's vulnerability to contagion and system-wide stress is the fact that financial instability is inherently non-linear. As one consequence of this non-linearity, risk factors typically are not normally distributed. Instead, their distribution is characterised by fat tails, implying that extreme values are observed more frequently than what would be predicted under the assumption of normality. Modelling non-linearities greatly complicates research, but it is indispensable, given the central focus of financial stability analysis on default, contagion and spillover effects.

To sum up, it should come as no surprise that a standard analytical model of financial stability has not yet been developed. At present, modelling is often scattered with respect to risk categories, financial market segments and structural or regulatory issues. Mind you, there is no reason to play down the progress achieved so far. On the contrary. Financial stability analysis is becoming more and more sophisticated, as is borne witness by the increasing number of related working papers and conferences. As for the recent financial market turmoil, central banks (and other institutions) have frequently and in good time warned of many aspects, notably excessive risk-taking and a general underpricing of risk. However, the trigger for the recent financial market turbulence, the speed at which it spread across global financial markets and its persistence were not foreseen, but that does not conflict with my statement. Far from it – financial stability analysis does not aim for clairvoyance. Instead, it is most likely that financial crises will continue to emerge in spite of perceptible progress in financial stability analysis. But the crucial point is that their impact can be alleviated by warnings, moral suasion and – if necessary – adjustments to the institutional and regulatory framework.

Right now, national, European and international institutions and forums are putting a lot of effort into identifying the lessons to be learned. In an international context, most notably, the analysis and recommendations by the Financial Stability Forum and the recently published "Principles for Sound Liquidity Risk Management and Supervision" by the Basel Committee on Banking Supervision deserve close attention. They are an important step forward in making the international financial system more resilient.

## 4 The Eurosystem's current monetary policy stance

Even though financial stability is of vital interest to the Eurosystem, our primary objective is the maintenance of price stability in the euro area. During the past ten years, the Eurosystem has lived up to this mandate. Since the inception of the euro, annual inflation in the euro area has, on average, remained in the close vicinity of 2% (at 2.05% to be precise), which is only marginally above the Eurosystem's benchmark for price stability. Recently, however, euro-area inflation has accelerated, remaining above 3% for the past seven months and reaching a worrying record high of 3.7% in May. This confirms that the current upward pressures on euro-area inflation, which result largely from sharp increases in energy and food prices at the global level, are rather persistent.

On the face of it, the present inflationary pattern seems to bear some resemblance to that of the 1970s. Not only is inflation unusually high in many countries but the oil price increase that has occurred gradually over the past few years is now comparable in real terms to that of the 1970s. Furthermore, economic growth is slowing down on a global scale, even though, as far as the euro area is concerned, we do expect it to remain robust, but certainly less dynamic in the quarters ahead.

On closer observation, however, there are several caveats worth mentioning. They might explain why the present oil price shock has so far been less damaging than that of the 1970s. First, oil intensity has decreased substantially over the past 30 years both as a consequence of the declining relative weight of the energy-intensive industrial sector in the industrialised countries and growing ecological awareness. Second, whereas the shocks of the 1970s were caused mainly by sizeable disruptions to the oil supply, the present episode is largely driven by unexpectedly buoyant demand for oil, particularly from the rapidly growing emerging market countries – notably China. The latest price hikes, however, are primarily related to supply-side factors. The third, and arguably most important, difference between today and the 1970s is the accumulated advance in the theory of monetary policy making. Monetary theory no longer sees inflation as a by-product of real-sector forces which are largely outside the control of the central bank. On the contrary, in the long run inflation is generally believed to be a monetary phenomenon. Therefore, there is widespread agreement on the substantial benefits of price stability and central bank independence, on the forward-looking nature of monetary policy and its need for credibility and commitment.

Given these changes in monetary policy, the re-emergence of an inflationary wage-price spiral which was characteristic of the 1970s now appears less likely. But even if these differences to the 1970s are reassuring, there is no room for complacency. First, oil prices have hiked more strongly and persistently than generally anticipated. Their present level in real terms even surpasses that of the 1970s. In addition, the uncertainty surrounding future oil price developments greatly complicates the accurate forecasting of inflation and therefore poses a further challenge to monetary policy. Second, apprehension is growing that inflation expectations are on the rise. In the euro area, this is chiefly true for short-term to medium-term inflation expectations, which cover the policy-relevant time horizon of monetary policy. By contrast, medium to longer-term inflation expectations which are the best indicator of the public confidence in the central bank and its credibility have not moved significantly. This is especially true for survey-based measures. Yet, even if the rise in longer-term inflation expectations is only marginal compared to the substantial temporary increase in the current HICP rate, this is not guaranteed to remain unchanged.

In that respect, the Great Inflation of the 1970s should serve as a cautionary tale. Subsequent to the two oil price shocks, many industrialised countries experienced a period of elevated inflation. As a word of warning I would like to add that correlation should not be confounded with causation. Obviously, global developments at that time were affected by more than just high and rising oil prices. Nonetheless, I will focus my remarks on the nexus between oil price hikes and monetary policy. In particular, I will touch on two examples of the 1970s, that of Germany (which I am most familiar with) and the USA (which has been widely

discussed in the macroeconomic literature). Germany suffered to a much lesser extent from the Great Inflation than many economies elsewhere. One reason for that might be the high inflation aversion in the German public that had evolved as a consequence of the two periods of hyperinflation in Germany in the first half of the 20th century. It enabled the Bundesbank to adopt a firmer monetary policy stance than many of its counterparts. The start was not perfect. In 1973, right after gaining freedom of action after the collapse of the Bretton Woods system, the Bundesbank tried to keep inflation low by means of moral suasion rather than by committing itself to a clear strategy. Trade unions more or less ignored the Bundesbank's signals and pushed through high increases in nominal wages, trying to compensate for the loss in real disposable income. As a consequence, inflation went up.

But the Bundesbank learned from that experience and, in 1975, together with the Swiss National Bank, was the first central bank worldwide to adopt a monetary targeting strategy, thereby committing itself publicly to a stability-oriented policy. After the second oil price shock, from 1979 to 1981, the Bundesbank sent out clear signals for restoring price stability by raising its key interest rates sharply. As a consequence, German inflation did not rise as much as in the USA and started to decline earlier. At the same time, output losses also remained lower than in the USA, demonstrating that a restrictive monetary policy can, in the medium term, prove superior also in real terms.

The situation in the USA and in many other industrialised countries was different. In the USA, consumer prices started to hike as early as the mid-1960s for reasons which were at first unrelated to the oil market (Vietnam War, food prices, monetary policy geared to combating recession) from 1½% in 1965 to 6% in 1970 and in the aftermath of the oil price shocks to more than 14% in 1980. In response to this persistent upward trend in actual inflation, short-term inflation expectations also drifted upwards, until they peaked at 12% in 1981. Such a spiral of mutually reinforcing increases in inflation and inflation expectations suggests that monetary policy somehow did not rise to the challenge of that period.

The macroeconomic literature has put forward numerous, often complementary explanations, and I would like to focus on two of them. First, it has been argued that monetary policy in the USA – though broadly committed to price stability – did not respond sufficiently strongly to high and rising inflation rates before 1979 (technically speaking, it did not adhere to the Taylor principle).[1] By not readily raising key interest rates, the Fed allowed public inflation expectations to become unhinged, which gave rise to a damaging wage-price spiral and further fuelled inflation. According to this view, monetary policy itself injected volatility into the US economy, thereby contributing markedly to the large and persistent inflation fluctuations of the 1970s. As I noted earlier, both the macroeconomic framework of the 1970s and the general understanding of monetary policy have undergone notable changes. Nonetheless, the US experience demonstrates how quickly inflation expectations can drift upwards if actual inflation is persistently above the stability norm of the central bank and if, consequently, market participants lose confidence in the central bank's will to restore price stability.

Another explanation of the Great Inflation focuses on the Fed's response to output.[2] This view does not regard the Fed's weak response to inflation as problematic, but the importance it attached to output stabilisation. Indeed, a strongly activist monetary policy, which strives to keep the economy close to potential, suffers from a fundamental conceptual problem. Although such a policy performs well under ideal conditions, it may well produce markedly sub-optimal outcomes given the inevitable uncertainties associated with estimating the output gap in real time. The latter is what happened during the Great Inflation. It is argued that the Fed did not detect the productivity slowdown in the USA, which started in the mid-

[1] See Clarida, Galí and Gertler (2000).

[2] See Orphanides (2003, 2004).

1960s, in real time. In a similar vein, the Fed (and probably many other central banks) did not immediately take account of the fact that a persistent increase in oil prices has a dampening effect on potential output, even if the exact magnitude is difficult to quantify with any precision both directly via a reduction in energy inputs and indirectly via making some of the existing capital stock redundant. Both factors led to a systematic overestimation of US potential output. Consequently, the slow-down in the US economy after the first oil price shock was (wrongly) perceived as a significant increase in economic slack, which the central bank did not want to counter with a tightening monetary policy. For the same reasons, the central bank systematically underestimated inflationary pressures and, hence, thought its monetary policy stance more restrictive than it actually was. In any case, the lesson to be learned from this explanation is that monetary policy has to factor in changes in potential output even if they are unobservable in real time. In particular, central banks should keep in mind that persistent oil price hikes are likely to cause a decline in potential output. Against the background of the Great Inflation, the most pressing issue at the current juncture is whether there is any danger that the Eurosystem will repeat the policy mistakes of the 1970s. To give you the answer straightaway, no, I do not think so. As for the risk of inaccurately assessing potential output, I would first like to emphasise that the Eurosystem does not primarily aim at output stabilisation. Our primary objective is price stability. However, potential output, the output gap and capacity utilisation are part and parcel of the collection of data that the ECB Governing Council monitors to assess the short and medium-term risks to price stability. But we are aware of the uncertainties surrounding such data and make allowance for it by cross-checking the short to medium-term indications for monetary policy coming from the economic analysis with the medium to long-term perspective stemming from the monetary analysis.

Given the Eurosystem's stability orientation, we take the dampening impact of oil price shocks on potential output into account and have therefore not yielded to calls to relax our monetary policy stance. If we did, monetary policy would only strengthen the shock-related inflationary pressures. At the current juncture, however, with inflation in the euro area having reached a record high and inflation risks still on the upside, there is the concrete risk that longer-term inflation expectations will start creeping up more strongly. The experience of the Great Inflation demonstrates that a stability-oriented central bank is well-advised to fight the risk of broad-based second-round effects decisively and proactively. By doing so, it will keep the costs of curbing inflation dynamics relatively low. Our commitment to a systematic focus on price stability is even more important, as the recent rounds of wage settlement in the euro area have not contributed to curbing inflation pressures. On the contrary, recent wage dynamics in conjunction with elevated and persistent energy and food price pressures have increased the risk of a prolonged period of intolerably high inflation.

At our last meeting of the ECB Governing Council, we emphasised that, given the uncertainty about the economic outlook and the prevailing downside risks to economic growth, the continued vigorous expansion of money and credit and the strong upside risks to price stability, the Governing Council is in a state of heightened alertness. Financial markets should by now have understood our readiness to act. It is our strong determination to secure a firm anchoring of medium and long-term inflation expectations in line with price stability. After all, the best contribution that the Eurosystem can make to sustainable growth in the euro area is to safeguard price stability in the medium to long term And lastly we should also not forget that a reliable monetary policy also helps to reduce uncertainty in times of an ongoing financial market turmoil.

Thank you for your attention.

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