Axel A Weber: Financial markets and the central bank

Keynote speech by Professor Axel A Weber, President of the Deutsche Bundesbank, at the SUERF Colloquium "New trends in asset management: exploring the implications", Munich, 12 June 2008.

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1 Introduction

Ladies and gentlemen

In recent years, we have seen far-reaching structural changes in global financial markets. Financial innovation has manifested itself in various ways, the most prominent being the growing importance of new and complex financial instruments, the increasing significance of new business models, especially in the realm of securitisation and disintermediation, and intensifying competition, partly owing to the consolidation process in the banking sector, partly owing to the rising importance of relatively new, largely unregulated players, such as hedge funds, private equity firms, conduits and SIVs.

These remarkable financial developments are bound to alter the range of activities financial market participants pursue. But are they also changing financial markets' reaction to monetary policy?

The starting point for answering this question is easy to find: the monetary policy transmission process. This term describes the long, variable and uncertain process by which a change in a central bank's official interest rate impacts first on financial markets and is ultimately transmitted to the economy in general and the price level in particular. As a significant part of this monetary policy transmission process takes place in financial markets, it goes without saying that the recent trends in global financial markets are of special interest to central bankers – and it would not have needed the recent financial market turmoil to drive home that point.

Against this backdrop, I will focus my remarks today on the following three issues. First, have the recent structural changes in the global financial system altered the transmission process of monetary policy – and, if so, do these changes make a central banker's life more – or less – difficult? Second, how can central banks help avoid disturbances in the financial system? This is a crucial question because financial stability is a precondition for the effective transmission of monetary policy decisions to the real economy. Third, how does financial integration affect monetary policy transmission? Specifically, what is the current state of affairs in the euro area?

2 Financial markets and monetary policy transmission

I shall start with the most general question. To what extent have the recent financial market trends changed the way monetary policy affects the economy and its price level? This is a crucial issue. Without a fair knowledge of the monetary transmission process, its key variables and the lags involved, central banks will face a tough job when deciding on official interest rates. For this reason, the Eurosystem closely monitors structural developments in financial markets. We also try to detect how financial innovations could have modified the way changes in short-term interest rates are transmitted to other financial variables, output and inflation.

Without wanting to go into too much detail, it is essential to point out that, when it comes to the impact the recent financial trends have on monetary policy transmission, several countervailing effects are in play. These countervailing effects are best captured when unravelling monetary policy transmission into its different channels, that is by considering

individually the different ways in which a change in central bank interest rates affects economic variables – at least in the short term.

Let me focus on the channels and arguments that are the most prominent in the euro area. To begin with, there is the interest rate channel. According to the existing literature, the development of deeper, more complete and more competitive financial markets seems to have strengthened the pass-through from central bank interest rates to market interest rates. This can be put down to two factors: Consolidation in the banking system, implying the emergence of (fewer and) larger banks and thus improved arbitrage opportunities between different financial markets, and an enhanced availability of alternative capital market-based instruments for debt financing.

It is indeed likely that the increased competition between banks, as well as between bank loans and different financial market products, has led to a closer relationship between market and bank interest rates. Consequently, the deepening of financial markets should have amplified and/or speeded-up the effects of monetary policy on bank interest rates (and, other things being equal, on other financial variables, output and inflation).

Financial developments over the past decade should also have strengthened the balance sheet channel. Basically, the idea is that, in an economy with highly developed mortgage markets and a proliferation of mark-to-market accounting rules, changes in the value of collateral and wealth have a greater impact on the economy. In such an environment, borrowers' balance sheets tend to fluctuate more, which leads to a higher volatility in the amount of funds banks are willing to lend to households and firms. Obviously, greater changes in the supply of credit will translate into greater changes in consumption and investment, thereby strengthening monetary policy transmission.

At the same time, a third prominent monetary policy transmission channel, the bank lending channel, is generally supposed to have become less important. Comparable with the balance sheet channel, the bank lending channel emphasises that monetary policy can influence aggregate demand not only through interest rates, but also through its impact on the supply of bank loans. Whereas the balance sheet channel focuses on the availability and value of collateral necessary for borrowing operations, the bank lending channel refers to changes in the banks' and borrowers' funding possibilities.

Usually, two reasons are put forward why the balance sheet channel has weakened of late. Banks have become more flexible because of the growing use of securitisation and improvements in risk management. Consequently, banks can respond more flexibly to changes in financial market conditions and will therefore not pass through each and every change in the central bank's official short-term interest rate. Hence, other things being equal, the effect of monetary policy on the overall loan supply has decreased. Moreover, financial development has not only broadened banks' options in terms of responding to interest rate changes; it has also broadened borrowers' financing opportunities, reducing their dependency on bank loans.

To put all the arguments in a nutshell, monetary policy seems, on balance, to have gained influence on financial market prices and the real economy in the short run. This is confirmed by the existing theoretical and empirical literature, which, by the way, delves much more deeply into the intricacies of the various transmission channels than I am able to do today. In any case, it should be borne in mind that the evidence is still tentative. As financial development is an ongoing phenomenon, it should therefore be considered valid only at the current juncture. Nonetheless, the bottom line is that, in the face of greater competition among financial intermediaries, financial innovation and financial globalisation, monetary policy remains a powerful tool for delivering price stability.

In this context, however, it is of the essence that the monetary policy strategy utilises a broad-based approach in order to guarantee a robust assessment of the developments in the economy and on financial markets.

3 Financial stability

3.1 Financial stability analysis

Let me now turn to financial stability. 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.

For obvious reasons, supporting financial stability is an important objective for central banks – and has always been so. First, as noted above, monetary policy is largely transmitted through financial market operations. Hence, the effect that monetary policy has on the real economy depends crucially on the smooth functioning of financial intermediaries and financial markets. It is at this point that financial stability analysis and monetary policy analysis are most closely interlinked.

Second and more generally, major macroeconomic objectives, especially price stability and sustainable output growth, are jeopardised if the financial system suffers from instability. This is underlined by the generally high macroeconomic costs of financial crises. In addition, this aspect has gained importance since financial turbulences seem to have become more frequent in past decades owing to accelerated growth in financial transactions and the greater complexity of new financial instruments.

Third, financial stability is closely linked to a central bank's interest in the prudent design and management of the payment and settlement systems which process its currency. The Eurosystem, for instance, has the statutory task of promoting the smooth operation of payment and settlement systems.

Against this background, referring to financial stability analysis as a new trend among central bankers would be something of a misnomer. Indeed, financial stability analysis is anything but a passing fashion. It has, in fact, been a field of research of its own right since the mid-1990s. This is reflected in the wide dissemination of Financial Stability Reports, which are now produced in more than 50 countries worldwide.

Nonetheless, it is fair to say that financial stability analysis is still, to a large extent, work in progress. To illustrate my point, let me outline briefly the kind of challenges central banks face. To begin with, 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.

At this point, the natural suggestion from an academic outsider would be to construct a theoretical model. Such a simplified representation of reality would help the academic to single out the most relevant indicators and to define the interrelationships between financial market and economic variables. However, model-based financial stability analysis is still in its infancy. Three issues are particularly striking.

The feedback effects between financial system behaviour and the real economy are difficult to model, especially in episodes of stress. Currently, most macroeconomic models treat key financial system interactions and feedback effects only in a rudimentary manner. Therefore, the "true" costs in terms of real GDP that are associated with systemic risk in financial markets are difficult to determine. This is a significant limitation, given that feedback effects play a crucial role in assessing a financial system's vulnerability to contagion and system-wide stress.

Another principal reason why episodes of stress are difficult to model lies in 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.

A further challenge faced by financial stability analysts is a lack of relevant data. First of all, historical time series on episodes of stress are rare, luckily. But that makes it even more difficult to understand financial markets' behaviour in the fat tail of risk distributions. Moreover, and more generally, some of the data needed for financial stability analysis still require development. With the exception of market prices and regulatory information, only a limited set of data is on hand in a timely, comparable and satisfactory manner. Think, for instance, of financial intermediaries' financial reporting and the little information available on credit risk transfer. Therefore, methods have to be found for handling the shifting demand for data in an environment in which financial markets are constantly undergoing change.

To sum up, feedback effects, non-linearities and the handling of a limited set of data are prime examples of the numerous challenges encountered by financial stability analysts in designing financial stability models. As a consequence, it comes as no surprise that a standard analytical model of financial stability has not yet been developped. 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 – 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. For this reason, further improvement in the framework for financial stability analysis is a very high priority for central banks.

3.2 Dealing with episodes of financial instability

There is yet another reason why central banks need to keep well-informed on financial market developments. The turmoil that has been affecting global financial markets since summer last year has been a further example of central banks not only taking a predominantly passive role in analysing and commenting on financial stability, but also of playing an active part as well. Indeed, the role of central banks in crisis management dates back to the 19th century and was reflected in the views of Thornton and Bagehot. Both noted that a central bank should – under specific conditions – provide liquidity to the banking system as a lender of last resort.

And that is exactly what happened when the crisis in the US subprime market triggered a rapid loss of confidence among financial intermediaries on a global scale. As a result of it, uncollateralised interbank lending has been muted – the reasons for which are twofold. On the one hand, banks' willingness to lend has fallen sharply due to mounting counterparty risks. On the other, the uncertainty banks face with respect to their own longer-term liquidity planning has increased considerably. To alleviate ongoing tensions in interbank money markets, central banks from all over the world have acted as liquidity providers of last resort to the banking system.

As for the Eurosystem, we have so far stood the test in this challenging environment. Owing to the broad design of our liquidity operations toolbox, the Eurosystem's operational framework has had to change only slightly since the outbreak of the financial market turbulence. What is more, the Eurosystem succeeded fairly quickly in reestablishing confidence in the functioning of the Euro money market by promptly injecting additional funds on a temporary basis. We shall continue to provide liquidity flexibly – which seems warranted given the ongoing tensions in the Euro money market, including, and especially, in the longer-term sector.

Although there have recently been some identifiable signs of easing in several financial market segments, it is still too early to give the all-clear. Specifically, the still elevated level of money market spreads underlines the fact that there is no room for complacency.

In this context, I would like to stress two points. In the Eurosystem, we have strictly separated our management of aggregate liquidity conditions from the determination of our monetary policy stance. Hence, when deciding on interest rates, the primary objective of the Governing Council has been (and will continue to be) price stability. Against the background of the continuing and persistently strong upside risks to price stability, the Governing Council is in a state of heightened alertness and in readiness to act. Moreover, our strict separation makes clear that the Eurosystem does not intentionally and directly offer some sort of ex post insurance to financial market participants who have engaged in excessive risk-taking. This is intended to limit moral hazard to a large extent.

Apart from this, it seems appropriate to point out that, in a free market economy, central banks' liquidity support must always be confined to a transitional period. In other words, in the medium run, central bank interventions cannot substitute the need for financial intermediaries to regain confidence gradually. At the top of the list of requirements, I would like to see financial intermediaries trying to enhance their transparency regarding credit and market risk exposures and also, if necessary, raising capital and adjusting business models. Furthermore, it is essential that financial intermediaries convince investors that the financial system as a whole is capable of managing risks adequately in a setting of continuously changing financial market trends.

Finally, taking a step back from crisis management, the recent financial market turmoil has underscored the need for crisis prevention to be strengthened. This is exactly what is taking place at the moment. National, European and international forums and organisations are currently putting a lot of effort into identifying the lessons to be learned. There are various initiatives under way, but it is particularly important that the recommendations made by the Financial Stability Forum are implemented rapidly and effectively. The implementation of these recommendations, including those on disclosure standards and risk management, will be a major step forward in enhancing the resilience of the international financial system.

4 Financial integration in the euro area

If I were governor of a central bank whose currency area coincided with the boundaries of its financial markets, I could end my speech here with a brief summary. However, as governor of a central bank that is an integral part of the Eurosystem, there is yet another topic to cover: financial integration. It is generally accepted that, in a currency union, well-integrated financial markets facilitate the implementation of the single monetary policy. There are three aspects worth mentioning.

First, a currency union should work more smoothly, the more integrated the national financial markets are. Indeed, financial integration can help individual EMU member states to absorb country-specific shocks more easily. The reason for this is that the more diversified the sources of national income and the easier it is to borrow abroad, the less consumption and investment need to follow fluctuations in national output. Hence, national consumption and

investment levels can be insulated from domestic macroeconomic shocks via cross-border risk sharing.

Second, financial integration strengthens the stability of the euro area financial system – and of the macro economy in general. Basically, in a well-integrated financial system, risks tend to be more diversified on a cross-border scale which should lead to financial intermediaries, markets and infrastructure becoming more resilient to idiosyncratic shocks. Having said that, integrated financial markets arguably broaden the scope for spillover effects across borders – as manifested by the recent US subprime crisis.

Third, I have already stated that the Eurosystem's tasks include the smooth operation of payment and settlement systems – which is closely linked to the progress of financial integration. There is an abundance of evidence that the launch of the euro was a major catalyst for financial integration in the euro area.

In general, financial integration is most advanced in those market segments which are the closest to the single monetary policy. This is particularly visible in the unsecured money market, which was almost perfectly integrated right at the start of EMU, as measured by the low cross-country standard deviation of the average overnight lending rates among euro area countries. Moreover, the euro has significantly reduced home bias in the euro area bond and equity markets, albeit to varying degrees. Principally, financial integration has progressed most in government bond markets and is least advanced in equity markets. Having said that, the percentage of cross-border holdings of bonds and equities in the euro area has grown over the past ten years. In addition, bond market yields and share prices are increasingly being driven by common euro area factors, although local factors continue to play a role. These developments have been supported by the elimination of currency risk within the euro area, the higher demand from a larger pool of investors, and – as far as bonds issued by smaller member states and companies are concerned – the reduction of liquidity premiums in domestic-currency debt. In essence, however, these developments reflect the high degree of substitutability among bonds and equities issued by various governments and corporations across the euro area.

Let me also highlight the fact that the recent financial market turbulence has not undone the process of financial integration in the euro area. True, euro area sovereign spreads vis-à-vis the German benchmark have increased substantially. Moreover, cross-border country and cross-sector dispersions in euro area equity returns have risen since the second half of 2007. Both examples indicate that national factors in market dynamics and asset pricing have regained importance in a time of financial market tensions. But the scale on which this has happened is still small in comparison with the major developments of the past ten years.

As already noted, financial integration in the euro area has not proceeded at the same pace across all sectors and markets. Integration of the retail banking markets, for instance, has remained limited, reflecting the persistence of legal, institutional and cultural differences. This shows that financial integration in the euro area is dependent not only on how close a market segment is to monetary policy, but also on how far the relevant market infrastructures have become integrated. A case in point is the high degree of integration of the large-value payment systems in the euro area. They have made possible the integration of euro area money markets. TARGET2, offered by the Eurosystem, is a further step forward in that direction. Other efforts to reduce infrastructure barriers are under way. One of the most significant initiatives in this regard is the Eurosystem's TARGET2-Securities project which will provide a pan-European securities settlement platform. These innovations demonstrate that the Eurosystem attaches great importance to promoting financial integration in the euro area.

5 Concluding remarks

Ladies and gentlemen, this has been a wide-ranging overview of the changing relationship between central banks and financial markets. I hope it has given you some flavour of the importance that financial stability, financial market developments and financial integration have for monetary policy implementation. Financial markets have always been a field of vital interest to the Eurosystem, but certainly, the recent financial market turmoil has been a further spur to our efforts in coping with periods of financial stress, conducting financial market research, and supporting the integration of the euro area financial markets.

First and foremost, however, the Eurosystem contributes to safeguarding financial stability by maintaining price stability in the euro area in the medium term.

Thank you for your attention.