EUROPEAN CENTRAL BANK

Opening Remarks by Otmar Issing

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on Risk Measurement and Systemic Risk

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Ladies and gentlemen,

It is my pleasure to welcome you this morning to the Fourth Joint Central Bank Research Conference on Risk Measurement and Systemic Risk.

Today I will talk about some recent financial innovations and their implications for monetary policy.

By financial innovation, I mean the emergence of novel financial instruments, new financial services and new forms of organisation in financial intermediation. To be successful, financial innovation must increase financial market completeness, allowing better risk sharing and, more generally, improving the services for the participants of the financial system.

In view of this definition, I will not talk about my favourite recent financial innovation – the euro – but about securitisation, structured finance, credit derivatives and hedge funds. After describing each of these innovations, I will analyse their impact on the economy. Finally, I will briefly discuss the potential implications for the conduct of monetary policy.

I. Recent innovations in financial systems[1]

As regards financial instruments, in recent years, we have seen the wide expansion of products to transfer risk such as loan securitisations, collateralised debt obligations and credit default swaps. As far as financial institutions are concerned, we have witnessed the rapid expansion of hedge funds. Quite interestingly, as we will see, these recent financial innovations are closely related.

Securitisation is the process of creating and issuing securities backed by a pool of assets. Securitisation may involve the actual transfer of loans off the financial intermediary's balance sheet or, alternatively, the transfer by the bank of the credit risk through the use of credit derivatives – for example, through credit default swaps

[1] See the ECB's Financial Stability Review (December, 2004, and June, 2005) and its publication "Credit risk transfer by EU banks: activities, risks and risk management" (May, 2004), as well as Garbaravicius and Dierick (2005).

(CDS), whereby the bank buys protection in case a credit event occurs such as the bankruptcy of the debtor. The notional amount of credit derivatives outstanding globally is higher than 5 trillion US dollars. Although the market has been rapidly expanding, it is useful to put its size into perspective: the total volume of credit derivatives still represents less than 5% of all derivatives outstanding.

Structured finance, broadly defined, refers to the repackaging of cash flows that can transform the risk, return and liquidity characteristics of financial portfolios. A collateralised debt obligation (CDO) is a debt security issued by a Special Purpose Vehicle and backed by corporate loan or bond portfolios. A "synthetic" CDO has similar features, but the underlying securities are CDS, which have been repackaged into a reference portfolio. Typically, several classes (or "tranches") of securities with different degrees of seniority are issued to investors. The most junior is called equity, the next tranche is called mezzanine, and the senior tranche can achieve a triple-A rating, as is indeed the case for 80% of the structured finance market in Europe. Just to give you an idea of the exponential growth of this market in Europe: the number of deals in CDOs more than doubled between 2003 and 2004, with a total gross protection sold of more than €300 billion.

Who participates in these markets? While all of these instruments would have permitted the transfer of risk out of the banking sector, the bulk of the activity in credit risk transfer markets has still continued to take place between banks. Yet some important changes have taken place in the structure of counterparts over recent years. The global insurance industry, which has been an active protection seller in credit derivatives instruments, began to pull out of the market in 2003. Taking their place, hedge funds have become very important participants in the market. Since hedge funds are not regulated, relatively little is known about their activities. Rough estimates suggest that hedge funds may trade as much as 20-30% of the overall credit derivatives volume. Although there is no common definition of what constitutes a hedge fund, it can be described as a fund which can freely use various active investment strategies to maximise the profits of investors. Typically, the fees of fund managers are related to the absolute performance of the fund in question and managers often even commit their own money. Although hedge funds typically target very rich individuals and institutional investors, they have recently also become

increasingly available to retail investors due to the development of funds investing in hedge funds and structured financial instruments with hedge fund-linked performance.

II. Implications for the economy

By separating the origination – and funding – of credit from the allocation of the credit risk, securitisation, structured finance and credit derivatives facilitate the transfer of risk across different agents in the economy. Furthermore, the tradability of CRT instruments permits an allocation of risks to the agents most willing to bear them. Recently, hedge funds have developed a particular appetite for them. Moreover, through their expansion to retail investors, households have indirectly absorbed part of this risk. As a consequence, the broader dispersion of risk across different financial intermediaries and households may have improved risk sharing. Besides, since wider access to credit risk insurance enables banks to reduce their vulnerability to idiosyncratic or industry-specific credit risk shocks, these recent financial innovations may well have enhanced financial stability.

Both market and funding liquidity are also enhanced by these recent financial innovations. For instance, through securitisation, a bank can obtain liquidity to provide new loans. Insofar as the growing presence of hedge funds in CRT markets contributes to its deepening and widening as a result of the increase in market liquidity, hedge funds facilitate securitisation by banks. In turn, this reduces banks' riskiness, strengthening their funding liquidity capacity, i.e. banks have the ability to lend to more profitable projects. Consequently, the supply of credit may be less dependent on conditions affecting banks' funding ability, which in turn allows the economy to sustain higher investment and growth.

By accessing the market for credit risk, banks are able to sell some loans to the market where relations are conducted at arm's length. This not only allows banks to lend more (and generate more non-financial investment) but also to specialise more in the risks in which they have a comparative advantage – i.e. those risks that arm's length markets are not particularly good at dealing with. All of this improves both the efficiency of the financial system and economic growth.[2]

[2] See for instance Rajan (2005).

Financial innovation – through the increase of arm's length finance – may also have affected bank-firm lending relationship. By relationship lending I mean that, through repeated contact, banks and their customers build up agreements on terms of credit, implying for instance secured access to credit lines at pre-set prices. The bank acquires expertise about the credit-worthiness of its customer by keeping close contact with the management of the firm. For instance, the bankers who sit on the board of many European firms can gain insider information on these firms. The implication of this close link may be that the bank provides the firm with easier access to liquidity, especially in times of tight supply of funds. In consequence, through the increase in arm's length finance, it is possible that the liquidity insurance provided by banks may be reduced for some firms. In addition, it may be more difficult for these firms to renegotiate their debt in times of distress – i.e. it is more difficult for very distressed firms to renegotiate their debt with the market (arm's length finance) than to renegotiate it with the bank that they have a close relationship with. Both the reduction of liquidity insurance and the difficulty in renegotiating debt may reinforce declines in investment during downturns.

More arm's length finance – and lower relationship lending – may thus increase the volatility of the business cycle. This potential risk should be viewed against the potential benefits that credit risk transfer instruments – apart from improving the possibilities of risk sharing – may improve the ability of financial intermediaries to elastically offset tight credit supply in downturns. I will come back later to this point.

All this means that, from a theoretical perspective, the swift development of credit risk transfer instruments over the last years could increase or decrease the general riskiness of banks. The net effect is therefore an empirical question. As a matter of fact, Raghuram Rajan, the Economic Counselor and Director of Research at the IMF, argued in his contribution to the last Jackson Hole conference that the evolution of these instruments may not have reduced the riskiness of individual banks.[3] Actually, risk developments seem to vary across different countries and over time. He advances, however, the hypothesis that the incentives of managers in market-oriented forms of finance is likely to lead to increased forms of risk taking in terms of small probability extreme forms of risk, known as "tail risk". Available evidence is actually consistent

[3] See also Gropp (2004).

with somewhat increased multivariate tail risks among major banks in the euro area and the United States.[4] The policy panel – which Mr. Papademos will chair this afternoon – will address the financial stability implications in detail.

Overall, these recent financial developments increase the importance of arm's length finance, improve the possibilities of risk sharing and augment both funding and market liquidity. The better performance of the financial system facilitates greater possibilities of financing for households and firms. Consequently, these financial innovations may be beneficial for the overall performance of the economy and thereby support growth.

III. Implications for monetary policy

The implications of financial innovations for the transmission mechanism are not straightforward. One reason is that they touch on more than one channel through which monetary policy operates. Another reason is that financial innovations may have ambiguous effects on the strength of the transmission mechanism.

On the one hand, the recent financial innovations have made financial systems more developed. In particular, market and funding liquidity creation is enhanced by these innovations. Suppose, for instance, that the central bank were to increase interest rates. Since the cost of funds would be higher, bank loans should decrease. Banks could nowadays, however, obtain liquidity through more securitisation. Notice the increasing importance of hedge funds as a source of liquidity in CRT markets. This access to liquidity partially insulates banks from the direct effects of monetary policy. In fact, there is evidence that securitisation has reduced the effect of funding shocks on banks' credit supply. Hence, securitisation may have weakened the link from bank funding conditions to credit supply in the aggregate, thereby partially mitigating the real effects of monetary policy.[5]

On the other hand, more arm's length finance can weaken the liquidity insurance provided by banks to their customers through relationship lending. That is, relationship lending implies that, as a tendency, a bank insulates its customers from

[4] See Hartmann et al. (2005).
[5] See Estrella (2002) and Loutskina and Strahan (2005).

liquidity or interest rate shocks. In case of a drop in its cash flow, for example, a firm can draw on a credit line that has been previously negotiated. Likewise, bank lending rates will not necessarily be adjusted in line with market interest rates. While firms that have access to these risk-sharing schemes can be expected to pay some form of an insurance premium to the bank, their decisions on investment, employment and production should be less sensitive to financial shocks. In consequence, through the weakening of the liquidity insurance provided by banks, more arm's length finance may strengthen the real effects of monetary policy.

Furthermore, loans – which will be securitised – tend to have interest rates that are more closely tied to market interest rates.[6] By arbitrage in capital markets, securitised corporate loans ought to have similar interest rates than other securities of similar risk. Thus, a change in market interest rates should also change the rate on loans that will be securitised. As a result, with securitisation, the influence of monetary policy on corporate loan rates may as well depend on its ability to affect market interest rates, and not only on its direct ability to influence the cost and availability of funds to banks. As a consequence, more arm's length finance may shorten the legs in monetary transmission.

We have seen how the interest rate and the credit channels of the transmission mechanism are affected. In addition, the wealth channel of the transmission mechanism is also affected by securitisation and the spreading of hedge funds. As I mentioned earlier, non-financial firms and households nowadays bear more systematic risks. For instance, households have higher levels of debt and participate more (directly and indirectly) in the stock market. Hence, an increase of interest rates – through the reduction of the value of debt and equity – nowadays has stronger real effects. In consequence, recent financial innovations are likely to increase the importance of wealth effects for the conduct of monetary policy.

All in all, recent financial innovations may have changed the strength of monetary transmission. Furthermore, since arm's length finance has increased – and financial markets react quickly – the speed of monetary policy may have increased.

[6] See Sellon (2002).

Now let me turn to the implications for the ECB's monetary policy strategy. Earlier this year at Jackson Hole, Raghuram Rajan pointed out that: "somewhat *obviously*, one can no longer just examine the state of the banking system and its exposure to credit to reach conclusions about aggregate credit creation, let alone the stability of the system."[7] At the ECB, we do not only consider monetary and credit aggregates. We take institutional factors and financial innovations into account in our two-pillar strategy. However, money and credit aggregates remain very relevant. For instance, empirical evidence suggests that monetary and/or credit aggregates are important indicators for financial and price stability over the medium term.

Let me explain these issues in more detail. The emergence of new financial products may lead economic agents to substitute money with other types of assets, potentially affecting the information content of those assets and the demand for money. This could potentially have destabilising effects on money demand. The ECB's monetary policy strategy is designed in such a way that monetary policy decisions can take account of the consequences of financial innovation. The ECB carefully analyses monetary developments and their information content for price stability. In addition, by cross-checking the information from monetary developments with that of a wide range of non-monetary economic variables, monetary policy is made robust against the possible effects of financial innovation on money demand. As demonstrated in several recent papers, extraordinary increases in asset prices have typically been accompanied by strong monetary and/or credit growth. This empirical relationship suggests that monetary and/or credit aggregates can be important indicators of the possible emergence of asset price "bubbles", and thus are crucial to any central banks' approach to maintaining macroeconomic and price stability over the medium term.[8]

IV. Conclusion

Overall, securitisation and the spreading of hedge funds may improve the efficiency of the financial system, foster liquidity creation and increase the capacity of risk sharing in the economy. In turn, this may increase investment and allow the economy

[7] See Rajan (2005).
[8] See for instance Detken and Smets (2004).

to sustain higher growth. Furthermore, though a better financial system facilitates the operation of monetary policy, some financial developments may change the way in which the economy reacts to it, or may affect the information content of the indicators that central banks regularly monitor. The ECB's monetary policy strategy is well designed to deal with these challenges.

I thank you for your attention and I hope you enjoy the coming two days at the ECB.

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