



Keynote Speech: Reflections on the Current Financial Markets Correction

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Ladies and Gentlemen,

It is a great pleasure for me to speak at the invitation of the Organisation for Economic Co-operation and Development on the occasion of its 2008 Forum. It is hardly surprising that the turbulence and volatility characterising the global financial system over the past 10 months will be the focus of my remarks today – it is after all a matter that greatly concerns those present here. Both private and public institutions across the globe are still deeply immersed in tackling all the consequences that the continuing process of financial deleveraging is having on financial systems.

Public authorities issued clear warnings about the vulnerabilities that were building up on account of a significant under-pricing of risks in some segments of the financial markets already in early 2007. The European Central Bank (ECB) drew attention to these vulnerabilities through its semi-annual Financial Stability Review and equivalent warnings were largely communicated by other central banks and international institutions. Indeed, I had myself, as Chairperson of the global economy meeting of Central Bank Governors, regularly expressed the view, in 2006 and at the beginning of 2007, on behalf of my fellow Governors, that our judgement was that there was a significant under-pricing of risks in general in global finance.

We do all what we can at the ECB to be equally forward-looking in both our actions and in helping delineate the solutions to the present situation that address the main mechanisms underlying recent events which in my view are fairly well understood by now.

Factors underlying the recent financial market turbulences

Emerging from the myriad of problems associated with the US housing market correction, the sharpness and speed of the current turbulences' contagion to unrelated market segments revealed vulnerabilities with a nature and complexity that had not always been well understood. Already known to market participants and policy makers alike well in advance of the turbulences, **three broad factors** reinforced one another in a way that almost nobody could have foreseen. Prior to the July 2007 rude awakening of financial markets participants, observers and regulators at large, these broad elements contrived a convergence that resulted in the upward spiralling of asset prices, further leveraging, increasing complexity and shrinking transparency. In closer immediacy, they

together also shaped the particular mechanisms that unleashed the turbulences, and the gradual amplification that characterised it.

It is by now well recognised that the **first factor** – and the driving force behind the substantial rise in financial leverage – was a significant excess of savings over investment in the global economy which, in time, drove an increasingly aggressive “hunt for yield”. The ensuing surge of asset prices provided a spiralling, and in perspective temporary, environment of steadily rising financial market liquidity. As has been argued by many in the international community, the period just preceding the current financial turbulences shares the characteristics of previous historical episodes, whereby there is a sudden and widespread recognition and recoil from underlying credits whose quality was in fact worsening for years. The various amplifiers that characterise modern financial systems which contributed to driving leverage up – the most notable being associated with the originate-to-distribute model of finance – also magnified the uncertainty about the extent of the imminent downturn, driving a massive run on riskier assets.

No account of the vulnerabilities that resulted in this period of turbulences is complete without identifying the ubiquity of interlinkages both within and across financial systems as a **second important element**. I share the view that modern financial intermediation has proven that it has the potential to effectively spread risk and it has undoubtedly promoted economic efficiency and made capital available to productive sectors that would have otherwise not had access to any. Alas, the evolution of the financial system not only facilitated an expansion of the array of financial instruments available to investors, it also seeded the fragility that later materialised in the unprecedented speed and reach of contagion during the unwinding of leverage. Testimony of this evolution, even when compared to just a decade ago, are the speed and degree of complexity of today’s capital flows; the relative variety, obscurity and interrelationship of many classes of financial instruments; and the intertwined relationship of a growing variety of financial institutions.

The complexity in the “originate-to-distribute” financial intermediation model clearly placed a heavy burden not only on the ability of investors to assess the risks they were taking, but more importantly also on the risk management procedures of large financial intermediaries. The “shadow banking system” that rapidly emerged as an excrescence of the formal banking sector – unlike its better understood and regulated sibling – rested on a poorly understood system of credence (provided by rating agencies) and the false perception that the only way for asset prices was upward.

Abundant liquidity and financial complexity provided respectively the driving force and the landscape underlying both the process of financial leveraging and its eventual unwinding. The weaknesses unearthed include, as a **third and essential element**, financial players’ incentive structures. Strictly speaking the purpose of the financial system is to write, manage and trade claims on future cash flows for the rest of the economy, a purpose that increasingly fell victim to a game for fees, short-term profits, and arbitraging regulation. Indeed, most remarkably ex-post, the “shadow banking sector” did not have to set aside capital against the risk of things going wrong, as eventually they did when euphoria turned into sobriety.

The mechanics of the unwinding process are by now also well understood. Following one substantial shock to a single market segment (the US sub-prime related credit), the process of adjusting risk positions in the financial sector was hindered by a – in some cases complete – breakdown in the price discovery process across instruments owing to the lack of understanding of the distribution and magnitude of risks underlying the various financial instruments. In turn, the unprecedented system-wide dry-up of liquidity driven by reductions in position-taking by major financial intermediaries fed back into the overall uncertainty, thus escalating measured risk and frustrating the very same efforts towards risk reduction. Indeed, the magnifying glass turned against those with business models most heavily relying on it, who found themselves confounded by the sheer magnitude and speed of the confidence implosion. That this set of institutions extends well beyond the banking sector, is yet another reminder of the magnitude of the challenge that lies ahead.

The response of the central banking community to the liquidity problems

The Eurosystem makes a clear distinction between setting the monetary policy stance to maintain price stability and its liquidity decisions taken in the course of implementing this stance. This distinction serves to isolate signals of the monetary policy stance from the noise introduced by liquidity movements and volatility in very short term rates. Since the onset of financial tensions in August 2007, the actions of the ECB have remained in line with this principle.

In both “normal” and “turbulent” times, the primary **aim of the Eurosystem’s open market operations** is to keep the overnight rate as close as possible to the minimum bid rate. During the recent period of turbulences some institutions, even if solvent, had difficulties in accessing liquidity in the interbank market, and individual banks faced higher uncertainty about their liquidity positions, which led to volatile and somewhat unpredictable demand for liquidity. For this reason, open market operations aimed also at ensuring the continued access of solvent banks to liquidity and at smoothing the functioning of the money market.

In these circumstances, in order to continue steering very short term interbank money market rates to the minimum bid rate, it has been necessary to supply liquidity in a way which has allowed credit institutions to fulfil their reserve requirements relatively early in the maintenance period. That is to supply a relatively large amount of liquidity early in the maintenance period and a correspondingly smaller amount later in the maintenance period, so that the total amount of liquidity over an entire maintenance period is unchanged. This so-called “frontloading” of reserves is different from the practice followed in normal times, when liquidity was supplied evenly throughout the reserve maintenance period, so that its supply was the same in the beginning and at the end of the maintenance period.

Moreover, liquidity on different days of a reserve maintenance period was no longer substitutable during the turbulences, and short-term interest rates were no longer necessarily linked to liquidity conditions on the last day of the maintenance period, tending rather to behave as if each individual bank perceived its distribution of liquidity

shocks as strongly biased to the tight side, even if this was of course not the case at an aggregate level.

As a response to the changes in liquidity demand, the Eurosystem implemented since August 2007 several, but relatively minor, changes to the way in which it supplies liquidity, while maintaining its framework for monetary policy implementation unchanged. **First**, as mentioned above, the Eurosystem has adjusted the distribution of liquidity supplied over the course of the maintenance period, by frontloading the supply of liquidity at the beginning of the period and reducing it later in the period. Note that liquidity is here defined narrowly as the banking system's current accounts held with the Eurosystem. Roughly speaking, current accounts are equal to the difference between the outstanding amount of liquidity-providing open market operations and the liquidity-absorbing autonomous liquidity factors, which are those items of the Eurosystem balance sheet which are not under control of the central bank, the most important one being banknotes in circulation. Both in normal times and during the turbulences, the ECB has steered the aggregate amount of current accounts so that on average in the maintenance period they are equivalent to reserve requirements.

Second, the Eurosystem during the turbulences has used somewhat differently its open market operations for supplying liquidity to the banking system. More specifically,

- (i) The use of fine-tuning operations has been more frequent than in "normal times". Indeed, in certain phases of the turbulences, it was necessary to adjust the liquidity situation frequently in order to keep the very short term interest rates close to the minimum bid rate notwithstanding the highly unstable and unpredictable liquidity demand.
- (ii) The amount of refinancing provided via longer-term refinancing operations (LTROs) was increased significantly, initially through operations with a three-month maturity and, since April 2008, also through operations with a six-month maturity. The amount of refinancing provided via the one-week main refinancing operations (MROs) was reduced correspondingly, so that the total amount of outstanding refinancing remained unchanged. This extension in the average maturity of refinancing operations contributed to reduce the future liquidity needs of the banking system and is assessed to have had, to some extent, a tempering effect on term interest rates.

Throughout the period of financial market turbulences, the ECB has promptly communicated to the market its liquidity policy intentions and explained its actions, which helped reassuring the market on the readiness of the ECB to take adequate measures when necessary.

As a result of this liquidity policy, the Eurosystem maintained control over short-term money market rates, as indicated by the fact that the average level of EONIA has remained close to the minimum bid rate even if its volatility has at times been higher than in normal times. Moreover, the Eurosystem's liquidity policy has supported banks' access to liquidity and the general functioning of the euro money market, without the need to

make, as mentioned above, any structural change to its operational framework for monetary policy implementation.

The ECB did not have to implement any measures as regards the range of eligible collateral, because it already accepted a broad range of collateral and it granted a large number of counterparties access to the refinancing operations. In fact, we consider that the operational framework of the Eurosystem has, for these reasons, provided notable stability during the turbulence and has effectively supported the implementation of monetary policy. The operational and collateral framework of the Eurosystem has served us and the market well during the ongoing financial market turbulence. The collateral framework, which has been in place since the start of the EMU, has proven robust, in particular during the current financial market turbulences. Due to this built-in flexibility and robustness, the Eurosystem could effectively step in when intermediation in interbank markets deteriorated. Moreover, the share of deposited collateral not used to cover credit from monetary policy operations has remained large on an aggregate level, suggesting that availability of collateral has not been a constraint on the Eurosystem's counterparties in the wake of the turbulences.

It is important to recall that, as the turbulences went on, central banks strengthened their cooperation, first through enhanced information exchange and collective monitoring of market developments and later on by coordinated steps to provide liquidity.

As an example of joint actions between central banks during the turbulences, in December 2007 the ECB agreed with the US Federal Reserve to grant loans in dollars with a maturity of one month to euro area banks, against collateral eligible for Eurosystem credit operations, in connection with the Federal Reserve new US dollar Term Auction Facility (TAF). The Eurosystem loans were financed through a currency arrangement (swap line) with the Federal Reserve, and granted at a fixed rate equal to the marginal rate of the simultaneous Federal Reserve tenders. The first two operations, for an amount of USD 10 billion each, were settled in December 2007 and renewed in January 2008. Similar operations were also carried out by the Swiss National Bank. These liquidity-providing operations did not have a direct effect on euro liquidity conditions, but were conducted to address the funding of euro area banks in US dollars and aimed at improving global funding conditions.

Since these coordinated actions, the G-10 central banks have continued to work closely together and to consult regularly on liquidity pressures in funding markets. Owing to continued pressures observed in the money market, the ECB, as well as the Swiss National Bank, resumed in March 2008 the US dollar liquidity providing operations in connection with the Federal Reserve Term Auction Facility, every second week for as long as needed, and for an increased amount of USD 15 billion each. This amount was further increased to USD 25 billion each, on 2 May 2008.

It is important to stress that the action in connection with the TAF marked, to my knowledge, the first systematic and multilateral central bank co-operation in the money market field, a market which is central to the implementation of a central bank's monetary policy.

Key lessons and policy initiatives

Substantial weaknesses in the functioning of financial institutions and markets were revealed by the episodes of turbulence, the high level of volatility and overshooting on a number of markets. The convergence of such diverse factors embodies the first “real magnitude” stress-test of today’s global financial system. In retrospect, the shock to the global financial system following the burst of the internet bubble was, all things considered, relatively modest. The challenge ahead lies in preventing the system from feeding on itself through a spiralling process of leveraging. Financial complexity is an inevitable consequence of increasingly complex and global economic activity, and we must find ways of working out the necessary checks and balances.

Various streams of work co-ordinated at the EU level aim at strengthening the supervisory and financial stability arrangements – including the introduction of a European mandate to national supervisors, the clarification and strengthening of the functioning of the committees of supervisors at the level of the 27 nations, the wider use of colleges of supervisors to reinforce the supervision of cross-border banking groups and the approval of a Memorandum of Understanding on cross border cooperation in financial crisis situations between all relevant authorities in the EU (namely supervisory authorities, central banks and finance ministries). Similar reflections have been launched in the US, for example let me mention the recent proposals issued by U.S. Treasury Secretary Paulson to strengthen the US financial regulatory structure, and are being considered in other nations.

Equally or more importantly has been the agreement at an international level on the appropriate methodology to identify the common lessons on a co-ordinated basis on both sides of the Atlantic as well as on both sides of the Pacific. The present episode of turbulence is a global phenomenon, and thus only a global response can be effective. After the Asian crisis, at the initiative of G7 Finance Ministers and Central Bank Governors the Financial Stability Forum (FSF) was created as the informal grouping where a synthetic diagnosis of the state of global finance could be carried out with a view to identifying the potential weaknesses affecting the international financial system and areas for improvement. The FSF “Report on Enhancing Market and Institutional Resilience” recently presented to the international community – and in particular to the G7 and to the International Monetary and Financial Committee of the International Monetary Fund – presents a number of policy recommendations to avoid the recurrence in the future of similar financial stresses. It is remarkable that we have a consensus at the international community level on implementing these recommendations with determination and in line with the recommended timeline. The community of central banks will be particularly alert for these recommendations to enter into force. In this context, allow me to recall those recommendations that have been identified as immediate priorities:

- Financial institutions should fully and promptly disclose their risk exposures, write-downs and fair value estimates for complex and illiquid instruments in their upcoming mid-year reporting. They should do so consistently with leading disclosure practices as set out in the FSF report.

- The International Accounting Standards Board (IASB) and other relevant standard-setters should take urgent action to improve the accounting and disclosure standards for off-balance sheet entities and to enhance guidance on fair value accounting, particularly on valuing financial instruments in periods of stress.
- Financial institutions should strengthen their risk management practices, including rigorous stress testing, under the support of supervisors' oversight. Financial institutions should also strengthen their capital positions as needed.
- By mid-2008, the Basel Committee should issue revised liquidity risk management guidelines and IOSCO should revise its code of conduct for credit rating agencies.

I should also recall those main areas where important recommendations have to be implemented either by end-2008 or at the latest by 2009, namely revising capital requirements under Pillar I of Basel II (e.g. certain aspects of the securitisation framework), strengthening management and supervision of liquidity risk for banks, ensuring effective supervisory review under Pillar II, enhancing transparency and valuation, improving the quality of credit ratings for structured products, strengthening authorities' responsiveness to risk and enhancing robust arrangements for dealing with stress in the financial system.

Now, expeditious and effective implementation is of the essence. Both should be facilitated by the fact that many recommendations are made by those authorities and entities mandated to apply them.

Overall, I would like to underline two broad lines of actions which cut across many recommendations by the FSF.

Firstly, augment transparency, as it is not only necessary to make the markets more efficient and to optimise the allocation of capital, but it is also the best insurance policy against irrational herd behaviour and unjustified contagion in times of stress. The present turbulences have, once more, demonstrated that opacity regarding the stance of markets, financial instruments or financial institutions is a recipe for catastrophe. In the prelude to an episode of uncertainty and turbulence, absence of transparency inevitably triggers contagion and negative herd behaviour – we saw this at the heart of the Asian crisis, we very much also see it at the heart of the present episode. Transparency is essential both for financial instruments – sophisticated structured products, asset-backed securities, etc. – and for the financial institutions themselves. The absence of pertinent, credible and reliable information drives market participants to assume the worst possible hypothesis on those financial instruments or institutions at stake and to act accordingly.

Secondly, reduce pro-cyclicality, as it embodies two important features of global finance that are particularly adverse from a financial stability standpoint, namely an emphasis on short-term considerations and an asymmetry in the response given to booms and busts. While in normal times the elements of pro-cyclicality built into global finance are less obvious, acute episodes of boom and bust make these factors particularly visible. Human nature being what it is, it is probably at the heart of the spontaneous pro-cyclical attitude of market participants triggering successive bipolar phases of exuberance and despair.

But it is also true that some elements of the regulatory framework for the financial system as well as the behaviour of public authorities may contribute to augmenting the amplitude of the fluctuations. We can find such elements of pro-cyclicality in the set of new rules for capital adequacy for banks as well as for insurance companies which are more risk-sensitive, in the accounting rules and in the attitude of the supervisory authorities inclined to tighten prudential standards more in times of difficulty than during the preceding boom phases. I expect that the planned work of the international community in this area will provide a welcome contribution to reducing the degree of potential pro-cyclicality associated with the functioning of global finance.

I thank you for your attention.