José Manuel González-Páramo: Liquidity, funding and solvency – policy responses and lessons

Speech by Mr José Manuel González-Páramo, Member of the Executive Board of the European Central Bank, at the Universidad de Alcalá de Henares, Madrid, 16 January 2009.

*   *   *

1. Introduction

Ladies and Gentlemen,

It is a great pleasure for me to participate in this Conference of Universidad Alcalá de Henares, together with so many distinguished speakers, and share with you some considerations about the responses of the Eurosystem and other public authorities to the financial market crisis as well as on some of the lessons that we have drawn. I am very grateful to the organisers – Foro de Economía del Centro de Políticas Públicas UAH and, in particular, its director Rodrigo Rato – for giving me the opportunity to address you today.

After one year and a half from the start of the turmoil, the international financial system continues to undergo a period of severe adjustment. The global money and credit markets are still impaired by the effect of high uncertainty about the solidity of financial and banking institutions and their ability to withstand the consequences of both the vulnerabilities at the root of the current crisis (such as the exposures to the US sub-prime mortgage market) and new shocks stemming from the ongoing slowdown in economic activity. Indeed, the deterioration in credit supply conditions, together with falling asset prices, exceptionally high uncertainty and declining confidence, has fed back into economic activity, leading to a severe worsening of the outlook for economic growth in both developed and emerging countries.

Of particular concern for central banks is the persistence of tensions in global money markets, where market liquidity has come under severe stress and term interest rate spreads remain at levels that – though significantly lower than three months ago – are nevertheless elevated by historical standards. Other important segments of the global financial system, such as the markets for equities, bonds and commodities, have also entered a period of considerable turbulence and stress.

In my intervention today, I will focus on what the ECB has done from the beginning of the financial market turmoil to contribute to the smooth functioning of the euro area money markets and to mitigate funding shortages of euro area banks.

2. The financial market turmoil and policy responses from the Eurosystem

The turmoil over the last year and a half has hung on our economies like a dark cloud, prompting central banks and other public authorities to undertake measures that have in some cases been historically unprecedented in scope and number. As a somewhat anecdotal illustration to this point, I have recently noticed that a document kept by staff at the ECB listing the main actions taken by major central banks in response to the turmoil since September 2008 only, already exceeds thirty pages of concise descriptions of policy initiatives and specific interventions.

More generally, in order to understand the actions by central banks and other public authorities in response to the financial turmoil, it is better to position them against the background of the different moments of the turmoil in which they were taken. Indeed, it is possible to distinguish *three main phases* from the turmoil:

1. From its start in August 2007 to the rescue of Bear Stearns in March 2008;

2. From the post-rescue of Bear Stearns to the bankruptcy of Lehman Brothers in September 2008; and

3. from the bankruptcy of Lehman Brothers to date.

To the risk of oversimplifying, I would say that the first phase of the turmoil was dominated by concerns about market liquidity and their interaction with funding liquidity at individual institutions; during the second phase, it became increasingly evident that, as a result of protracted market and funding illiquidity, adverse liquidity-solvency spirals with the potential to undermine the viability of specific banking business models were at work; finally, following the default by Lehman Brothers, widespread concerns about the solvency of banking and other financial institutions have become predominant. Policy responses have evolved during the various phases of the turmoil so as to address the increasing difficulties.

2.1 First phase of the financial market turmoil: August 2007-March 2008

During the first phase of the turmoil, the Eurosystem responded to the challenges mostly through a combination of operational measures in the field of euro liquidity management and increased communication to the public. This phase also saw the start of significant international cooperation among central banks to mitigate funding shortages in the global money markets.

In line with its historical practice and institutional responsibilities, the *key objectives pursued by the Eurosystem's liquidity management* during this first phase were two:

1. to steer the overnight money market rate as close as possible to its central policy rate (the minimum bid rate in the main refinancing operations), so as to implement the monetary policy stance chosen by the Governing Council; and

2. to ensure the smooth functioning of the money market, also at term maturities, by facilitating access to liquidity to solvent credit institutions.

In particular, by pursuing the second objective, the Eurosystem aimed to contribute to re-establishing confidence among market participants and to safeguarding financial stability, while also supporting the appropriate functioning of the monetary policy transmission mechanism. Contributing to the stability of the financial system is among the tasks assigned to the Eurosystem by the Treaty establishing the European Union under Article 105(5). Ensuring the smooth functioning of the money market is crucial for central banks since the short-term segments of the money market represent the first step along the mechanism of transmission of monetary policy impulses, and their impairment may complicate the signalling and implementation of the desired policy stance.

What did the Eurosystem do in practice? In practice the Eurosystem engaged *in more active liquidity management and adjusted its modalities of liquidity provision to the* euro area banking sector.

As an illustration of more active liquidity management, let me recall our intervention right at the beginning of the market turmoil. The problems that originated in the exposure of many financial institutions worldwide to the US sub-prime mortgage market started simmering in international financial markets in the spring of 2007. In money markets the impact of the turmoil was initially felt mainly in the longer-dated unsecured inter-bank market and in non-government repurchase agreement (repo) transactions. Tensions eventually spilled over to the very short-term money markets (i.e. below one-week) in the summer, at first in the US dollar market, where banks – particularly, the European institutions – encountered difficulties in raising short-term liquidity, and on 9 August 2007 to the short-term euro money market.

After it became clear that there was the risk of an imminent gridlock in the euro money market, the ECB released a communication stating its readiness to contribute to orderly conditions in the euro money market. The ECB then put its money where its mouth is by providing EUR 95 billion on an overnight basis to the euro area banking sector through a fine-tuning operation conducted as a fixed rate tender with full allotment.

This operation marked the start of a new phase in which the Eurosystem would make some *adjustments to its liquidity supply practices* in two main directions:

1. Under its so-called front-loading policy, it modified the time profile for the provision of euro liquidity via the weekly refinancing operations within the reserve maintenance period; and
2. it made adjustments to the modalities of distribution across instruments, particularly by raising the maturity of its refinancing operations, increasing the frequency of fine-tuning operations and occasionally applying different tender specifications to some operations.

The *front-loading policy* was introduced to accommodate a change in the time pattern of liquidity demand from the banking sector *within* each reserve maintenance period, particularly with the emergence of strong precautionary demand in the early weeks of each period.

Indeed, under normal circumstances, the ECB calibrates its liquidity provision in order to satisfy the liquidity deficit of the euro area banking sector under the assumption that banks as a whole prefer to fulfil their reserve requirements smoothly, i.e. by holding – in aggregate terms – the same level of current account holdings with the central bank on each day of the reserve maintenance period. As a result, the ECB normally allots at the weekly main refinancing operations an amount of liquidity that is close to its "benchmark" estimate of the expected liquidity needs of the banking sector. This practice has functioned well in the past, when it has normally delivered short-term interest rates close to the target policy rate.

However, at the start of the turmoil, banks became increasingly reluctant to lend to each other on unsecured terms, both out of concerns about credit risk and out of fears of being confronted with adverse liquidity shocks and, as a consequence, preferred fulfilling their reserve requirements relatively early in the maintenance period.

In order to accommodate the increased demand for liquidity buffers by banks and also to prevent upward pressure on interest rates at the beginning of the reserve maintenance period, the Eurosystem increased the amount of liquidity supplied in the operations conducted at the beginning of the period, while later reducing it in the following weeks so as to keep the average supply of liquidity unchanged.

At the same time, the ECB decided to *increase the amount of refinancing provided via longer-term refinancing operations* with a view to smoothening conditions in the term money market. This decision was accompanied by a reduction in the amounts allotted at the weekly main refinancing operations in order to keep the total amount of outstanding liquidity constant.

Just to illustrate the importance of the shift in the maturity composition of the ECB's refinancing operations, let me quote a few figures. In the summer of 2007, just before the outbreak of the turmoil, the ECB typically provided about 2/3 of its euro liquidity (around EUR300 bn) via the main refinancing operations, with the rest (around EUR150 bn) via operations with a three-month maturity. At the end of the first phase of the turmoil, the relative importance of the operations was almost inverted (with MROs accounting for roughly EUR180 bn versus EUR270 bn for the longer-term operations).

As mentioned above, the ECB *increased the frequency of operations* to respond with greater sensitivity to shifts in the demand for reserves and also *occasionally adjusted the tender specification of its operations*, particularly on 9 August when – given the large amount of uncertainty about the severity of market illiquidity – it was deemed more efficient to move from the standard variable-rate tender without pre-announced allotment to a fixed-rate tender with full allotment. A key difference between these two tender specifications is that under full-allotment, the amount of liquidity provided is entirely driven by demand.

Similarly, in order to address concerns about funding shortages over Christmas and the year-end, on the occasion of the two-week main refinancing operation conducted on 18 December 2007, it was decided to shift from a variable-rate tender to a quasi-fixed rate with pre-announced full allotment.

As mentioned earlier, during this first phase the Eurosystem aimed to *keep the overall level of refinancing* provided to the banking sector at levels close to those prevailing just before the turmoil (roughly around EUR450 bn). This desire to stabilise average liquidity over the reserve maintenance period reflected the Eurosystem's longstanding policy of providing to the banking system only the amount of liquidity needed to smoothly fulfil their liquidity deficit over each maintenance period.

Explaining that the average level of refinancing provided to the market remained constant was also important to dispel some occasional confusion in press reports about the implications of the liquidity interventions of the ECB. In particular, press reports occasionally argued that the ECB had increased the amount of refinancing made available to the euro area sector based on somewhat impressionistic calculations and comparisons (e.g. by adding up allotment at overnight operations on different days or by comparing the scale of the ECB operation with those of central banks operating under completely different operational frameworks).

These reports were occasionally accompanied by warnings that in responding to the financial market tensions, the ECB and other major central banks may not be taking *"moral hazard"* considerations into account.

The ECB made it clear from the start of the turmoil that it attached large importance to the issue of the possible effects on future incentives and behaviour of banks of its actions, while noting that concerns about moral hazard should nevertheless not prevent from providing appropriate policy responses to the turmoil. More specifically, in the euro area concerns about sowing the seeds of moral hazard were mitigated by the observation that the ECB had not made changes to its existing operational framework from the start of the turmoil.

Indeed, although by changing the amounts and time patterns of liquidity provision and the occasional conduct of extraordinary refinancing operations, the ECB had departed from past regularities followed in the steering of liquidity conditions, it had not made structural changes to its existing operational framework that may be rightly or wrongly seen as aiming to provide relief to any specific financial institutions or sectors bearing substantial losses as a result of past imprudent risk taking.

Indeed, the ECB's more active management of liquidity conditions was achieved by making few changes to its traditional way of using instruments and tools that were already part of its operational arsenal from the start of the turmoil. Moreover, the focus of the ECB's interventions was to adjust aggregate liquidity conditions so as to continue to deliver the desired monetary policy stance and to provide support to the money market and banking sector from a systemic perspective rather than with the purpose of supporting specific institutions in trouble.

The ability to respond to the challenges posed by the turmoil using the existing toolbox reflected *three key features of the Eurosystem's operational framework*: (1) it grants access to central bank liquidity to a very large range of counterparties; (2) it accepts a rather wide spectrum of private and public collateral in its refinancing operations and marginal lending facility; and (3) it conducts open market operations on a relatively large scale, partly reflecting the level of reserve requirements. Thus, unlike other central banks, from the start of the turmoil the Eurosystem was in a position to reach a large number of financial institutions and to mitigate their funding liquidity risks, thereby providing support to the money market as a whole, without the need to make significant amendments to its framework. The large spectrum of assets accepted as collateral represented an additional channel through which the Eurosystem helped to mitigate the refinancing risk of categories of assets for which secondary market liquidity had basically dried up, since they could be used as collateral in credit operations of the Eurosystem.

The ECB's liquidity interventions were also accompanied by an *intensification of its communication policy*. A key objective of communication efforts was to reassure market participants and the public at large about the ECB's full awareness of the severe deterioration of liquidity conditions in money markets and its preparedness to act in order to preserve orderly conditions in money markets. In addition, increased communication was requested by the rather technical nature of issues related to liquidity management and the relative lack of familiarity of the general public with them, also in order to prevent and occasionally correct misunderstandings about the scale, modalities and objectives of the Eurosystem's liquidity operations.

As regards the objectives of such operations, it was important to continuously remind market participants and the financial press that, under the Eurosystem's institutional set-up (further reinforced by some changes to the operational framework in 2004), decisions on liquidity operations are separated from considerations on monetary policy stance. In fact, in the euro area changes in liquidity conditions are directed to implement the stance of monetary policy chosen by the General Council, as summarised by the ECB official rates (which are explicitly communicated to the public through the regular press release on monetary policy decisions), and under no circumstances can be interpreted as signalling changes in such stance.

From the first day it opened its doors, the ECB has stuck to this principle – the so-called *separation principle* – for reasons of accountability, transparency and efficiency in the implementation of its monetary policy. The need to remind the public of the separation between monetary policy formulation and implementation became essential in the course of the first phase of the turmoil against the background of strong inflationary pressures and rising risks to price stability.

In addition to operational responses on the euro market, the Eurosystem further strengthened its *cooperation with other central banks*, first by means of enhanced information sharing and collective monitoring of market developments and later on through coordinated steps to provide liquidity to euro area banks in what was, to my knowledge, the first systematic and multilateral initiative of central bank co-operation in the money market field, a market which is central to the implementation of a central bank's monetary policy.

More specifically, in order to address the concerns of euro area banks on the availability of their funding denominated in US dollars, in December 2007 the ECB agreed with the Federal Reserve System a currency arrangement (swap line) in connection with their US dollar Term Auction Facility (TAF). Under this agreement, two operations with a maturity of one-month amounting to USD 10 billion each were initially conducted, subsequently renewed in January and expanded in mid March to USD 15 billion each, while announcing that the USD funding operation would continue for as long as needed.

The TAF operations proved very successful, as they met with strong demand from market participants and succeeded in mitigating the liquidity shortages in the global term money markets.

2.2 Second phase of the financial market turmoil: March 2008-September 2008

The start of the second phase of the turmoil was marked by the rescue of Bear Stearns by JP Morgan with the support of the Federal Reserve. This event provided a clear example of the *potential impact of protracted market illiquidity on funding illiquidity and, ultimately, solvency* for individual financial institutions, whose business activities depended in many different ways from the viability and strength of the originate-to-distribute banking business model.

Such concerns related in the first place to large banks reliant on wholesale markets for the funding of their lending activities. Indeed, many large banks had become increasingly dependent on interbank borrowing, both unsecured and collateralised, short and long-term debt, and, as an ultimate line of defence, on the sale of marketable securities rather than on retail deposits, which made them vulnerable to the persisting of disruptions in financial markets.

Moreover, there was increasing concern that – as the experience of Bear Stearns had shown – the range of systemically relevant institutions had become broader, so that not only large traditional banks but also non-depository financial institutions, such as investment banks and primary dealers, played a systemic role in maintaining market liquidity in a broad range of unsecured and secured markets. If such institutions faced funding liquidity constraints, market liquidity would be widely affected, with potential negative repercussions for the banking sector and, ultimately, for systemic financial stability.

In the euro area the Eurosystem reacted to the deterioration in money market conditions by *intensifying its provision of euro liquidity* to the domestic banking sector and by *strengthening its cooperation with the Fed* in order to expand the supply of USD liquidity to the euro area banks. The focus of the Eurosystem during this phase was to support market liquidity as a means of mitigating funding liquidity, ultimately contributing to preventing that solvent institutions became unable to continue operating.

As part of the *enhancement of euro liquidity provision*, the Eurosystem continued to shift the maturity composition of its refinancing operations from the weekly maturities to longer-term maturities. Specifically, it increased the number of 3-month variable-rate tenders and diversified the maturity structure of its longer-term operations by introducing auctions with a 6-month maturity.

The gradual expansion in the size of longer-term refinancing operations aimed to mitigate funding risks by providing banks with a stable source of liquidity at term maturities, with a view also to preventing tensions in term markets from spilling over to the short-term money markets. Overall, the split between main refinancing and longer-term operations shifted slightly toward the second category in the course of the second phase of the turmoil. In addition, the average maturity of the refinancing operations rose as a result of the introduction of operations with a six-month maturity. By the end of this phase of the turmoil, the split between the longer-term refinancing operations between the three- and six-month maturities was EUR250 bn versus EUR50 bn.

In the course of this phase, the *scale of the joint initiative* among the Fed, the ECB (and the Swiss National Bank) was substantially expanded. First, in May 2008 it was decided to almost double the size of the allotment (to USD 28 bn) at the one-month auctions of USD liquidity, and also decided that the auctions would be regularly conducted with a bi-weekly frequency. At the end of August, the USD operations were further expanded, with the addition of operations with three-month duration (with allotments of USD 10 bn each, while reducing the allotment of the one-month operations to USD 20 bn). As a result of this expansion, in the summer of 2008, the cooperation between the ECB and the Fed in the context of the TAF made funding amounting to USD50 bn available to euro area banks on a regular basis, also at the problematic term maturities.

2.3 Third phase of the financial market turmoil: September 2008 to date

In September 2008 the financial market turmoil entered a *more critical phase* following the collapse of Lehman Brothers. In response to the renewed tensions, the Eurosystem stepped up its efforts to support the appropriate functioning of the euro money markets and to alleviate both the euro and the USD funding needs of euro area banks. In particular, it took some exceptional measures aiming to facilitate unlimited access by solvent banks against adequate collateral to euro and USD liquidity operations. In addition, the ECB adjusted its monetary policy stance in response to the change in the outlook for medium term price stability.

A key contribution to easing liquidity tensions in the euro money markets was provided by the decision on 8 October *to temporarily change the tender procedure* in the weekly main refinancing operations to fixed rate tender with full allotment, which – as earlier mentioned – implies that the allotment at the refinancing operations is fully determined by the level of demand. This was followed on 15 October by the decision, taken in the context of initiatives undertaken by the EU authorities, to temporarily extend the fixed-rate tender procedure with full allotment also to the longer-term refinancing operations.

As a result of these decisions, euro area counterparties can now borrow as much euro liquidity as they wish both at the weekly and at some key term maturities, against a set of eligible assets accepted as collateral that has also been temporarily expanded. *Other measures* taken in the last quarter of 2007 included the temporary expansion of the number of counterparties eligible to participate in fine-tuning operations and the introduction of a special term (roughly, one-month) refinancing operation.

The decision to temporarily relax the criteria for eligibility as collateral, while continuing to apply adequate risk control measures, was related to the significantly increased role played by the ECB in providing liquidity. During the first two phases of the turmoil (and a fortiori under normal circumstances), the wide range of assets eligible as collateral guarantees that availability of collateral does not become a constraint for banks' participation at the ECB's credit operations.

Indeed, historically, there has been a significant degree of over-collateralisation in the euro area. For instance, in 2007 the average value of eligible collateral posted with the Eurosystem exceeded EUR1.1 trillion, more than twice the average amount of outstanding credit at policy operations. However, since the start of the current phase of the turmoil, the amount of refinancing operations provided by the Eurosystem has significantly increased and now exceeds EUR800 billion at the euro liquidity operations (and also the size of the collateralised dollar operations has significantly increased). In addition, the increase in the average duration of the ECB refinancing operations implies that collateral may remain on average locked-in for longer periods. Thus, while a significant degree of overcollateralisation remains, it was regarded appropriate to temporarily expand the collateral set in order to further facilitate the access to euro liquidity of solvent banks.

Following the collapse of Lehman Brothers, the ECB further strengthened cooperation with other central banks in order to facilitate the access of euro area banks to liquidity in USD and Swiss Francs. On 18 September, the ECB announced the expansion of its USD liquidity operations in collaboration with the Fed by adding operations with an overnight maturity and increasing the size of the allotment at the existing one-month and three-month operations, overall more than doubling the overall size of its temporary USD liquidity provision (to USD 110 bn). This was followed by a further expansion to USD 240 billion at the end of September (with the introduction of a one-week operation).

Finally, on 15 October the ECB announced (together with Bank of England and the Swiss National Bank) that, in the context of its cooperation with the Fed to provide euro area banks with USD liquidity, it would conduct operations at the various maturities at fixed interest rates and with full allotment. On 15 October the Eurosystem also entered into an agreement with the Swiss National Bank in order to facilitate the provision of liquidity denominated in Swiss Francs to euro banks. At the same time, in the past few months the Eurosystem has signed agreements with the central banks of several European countries in order to improve the provision of euro liquidity to their banking sectors.

Overall, *the scope of the decisions taken in October 2008 should not be underestimated*. As a result of such decisions, euro area banks can now borrow from the ECB as much euro and USD liquidity as they wish, also at some key term maturities, of course against eligible euro-denominated collateral. The new set of temporary measures provide an important contribution to mitigating the funding risks of solvent banks in the euro area, while also contributing to restore confidence among market participants in the current environment in which money markets remain under stress and the traditional channels of liquidity transmission are impaired. While it is too early to assess the impact of such measures, there is evidence that these operations have had a positive on the term spreads, which have now moderated from the peaks recorded right after the Lehman Brothers' bankruptcy (though they still remain at high levels by historical standards).

The more recent measures by the ECB should also be seen in conjunction with the important initiatives (mostly based on capital injections in exchange for equity and on the provision of state guarantees) recently taken by *national governments* of the EU, US and other areas of the world to support their domestic financial and banking systems.

It is important to notice that, as a result of its enhanced liquidity interventions in euro and other currencies (notably, in USD) during the present phase of the turmoil, *the Eurosystem has significantly increased its involvement in financial intermediation in the euro area*. Indeed, the Eurosystem has moved from the situation before the start of the turmoil in which it provided banks only with as much liquidity as necessary to implement its monetary policy stance, with the intermediation being performed by the market, to the present condition in which it effectively intermediates liquidity flows among banks in order to mitigate dysfunctions of money markets.

To illustrate this point, it is useful to distinguish between gross and net liquidity provided by the Eurosystem. Under normal circumstances, there is no much difference between these two notions since the recourse to the deposit facility is limited and fine-tuning operations are not frequent. By contrast, there is at present a significant difference between gross and net liquidity, with the total level of refinancing provided by the Eurosystem exceeding EUR800 billion, against over EUR300 billion held by banks at the marginal deposit facility.

Taking up a significant intermediation role to guarantee the orderly functioning of our economy was essential in the wake of the collapse of Lehman Brothers, when an unprecedented deterioration in the degree of public confidence in the banking sector of most developed economies seemed to fundamentally undermine their ability to perform its institutional financial intermediation function. The gravity of the situation required prompt and extensive actions by central banks and public institutions, also through concerted initiatives.

And as long as money markets remain dysfunctional, it is crucial for the Eurosystem to continue to provide as much liquidity as needed in order to ease tensions in the impaired money markets, with a view to ensuring that access to liquidity of solvent banks is not disrupted, thereby also contributing to safeguarding financial stability. However, this is not the ideal long-term solution in a market-oriented economy like the euro area. It may discourage the resumption of normal inter-bank trading activity. It also potentially implies increased financial risks for the Eurosystem (which are nevertheless taken care of through adequate risk control measures). All of this explains why the Eurosystem looks forward to the reactivation of inter-bank lending and to banks resuming their traditional intermediation activity.

In this context, it was decided on 18 December to restore to 200 basis points the corridor of standing facility rates around the central policy rate (the rate of the main refinancing operation) that had been temporarily narrowed by 100 basis points at the height of the tensions in the global money markets following the collapse of Lehman Brothers, but may be creating disincentives to inter-bank lending.

Finally, it should be recalled that from the start of the current phase of the market turmoil, the ECB has significantly adjusted its monetary policy stance in response to changes in the outlook for price stability in the euro area.

On 8 October, the ECB announced a 50 basis point reduction (to 3.75%) in its key policy rate – the interest rate on the main refinancing operation – in a move coordinated with five other major central banks (Bank of Canada, Bank of England, the Federal Reserve, Sveriges Riksbank and Swiss National Bank). The decision to ease monetary conditions in the euro area (and, more generally, at the global level) was warranted by the previous moderation in inflationary pressures and inflationary expectations, partly reflecting weakening economic activity, a marked decline in the prices of energy and other commodities and increasing downside risks to future economic growth, in turn reflecting to a large extent the intensification and broadening of the financial turmoil.

This coordinated interest rate cut was unprecedented by historical standards and was very much welcomed as a sign of the strong commitment of the international central banking community to addressing the macroeconomic implications of the financial market turmoil.

Additional reductions by 50 basis points (to 3.25%) on 6 November and by 75 basis points (to 2.5%) on 4 December were decided against the background of a further alleviation of risks to price stability at policy-relevant horizons at a time of a rapid and significant deterioration in the outlook for economic growth in the euro area, and a further alleviation of upside risks to price stability at the policy-relevant medium-term horizon.

Taken together, these monetary policy decisions amount to a cumulative reduction by 175 basis point in the euro area policy rate in slightly less than two months. This pace of monetary loosening is certainly unprecedented for the euro area, but fully consistent with the ECB's strategy and with its primary mandate of delivering medium term price stability.

At yesterday's meeting, the Governing Council decided to reduce the ECB official interest rates by further 50 basis points (lowering the rate on the main refinancing operations to 2%). This decision was taken against the background of a continuing decline in inflationary pressures, particularly reflecting the deterioration of the economic outlook. Indeed, the latest economic data releases and survey information provide additional evidence that the euro area is experiencing a significant slowdown, largely related to the effects of the intensification and broadening of the financial turmoil, at a time when the level of uncertainty remains exceptionally high. Looking forward, both the economic and monetary analysis suggest that, after the latest decision, the outlook for risks to medium-term price stability in the euro area is broadly balanced.

3. Some lessons from the turmoil

One year and a half after the start of the turmoil, we can start drawing key lessons from the turmoil in a number of fields. Let me here focus on a selected number of issues related to liquidity management, the regulatory and supervisory frameworks of our economies as well as on domestic and international cooperation in various policy areas.

As regards *lessons for liquidity management*, in the past it was common wisdom among central banks that there is no unique way to implement monetary policy. However, the protracted turmoil in money markets and other financial markets over the last year and a half has shown that there are certain *key operational features that facilitate the implementation of monetary policy under stress*. In particular, in order to distribute reserves effectively when the inter-bank lending is impaired, central banks should be capable of providing access to collateralised lending operations to a wide set of counterparties against a broad range of collateral and on a large scale. Whether those features should become part of the regular operational framework or are introduced on demand in distressed market conditions is ultimately the choice of each individual central bank.

The turmoil has also demonstrated that, under stressed conditions in financial markets, global channels for distributing liquidity across borders may become seriously impaired, which is a major source of liquidity risk for international banks with funding needs in different currencies. As extensively discussed in this speech, during the current turmoil central banks have addressed this problem by substantially expanding the scope of their *coordinated liquidity injections*, which have played an effective role in easing tensions at the short-term end of the global money markets and in instilling confidence in market participants about the commitment of the world's major central banks to addressing such tensions.

Additional work is under way in the central banking community to investigate the opportunity of establishing regular cross-border mechanisms to counter problems in the international circulation of liquidity, especially at a time of emergency, for instance through the establishment of standing currency swap lines or the introduction of the possibility to accept foreign-currency denominated assets as collateral. Whereas such measures appear desirable in order to strengthen the ability of central banks to ease liquidity pressures for large internationally active banks under emergency conditions, they may also imply additional legal and financial risks for the conduct of monetary policy operations that need to be fully assessed before taking any decisions.

While cooperation in the field of liquidity management on an unprecedented scale has been certainly one of the hallmarks of public responses to the current turmoil, another example without precedents of central bank coordination was the decision by the ECB and other five major central banks to ease global monetary conditions on 8 October 2008. Commentators and observers have wondered whether this concerted policy decision may be the beginning of a new era of increased *international monetary policy coordination* in response to economic and financial globalisation.

It is important to stress that this coordinated interest rate cut was taken in a specific context and with a specific objective. There was extraordinary uncertainty at the time about the economic outlook and strong evidence that upside risks to price stability had diminished at the global level. The coordinated cut addressed the need to respond to a common shock that was being transmitted around the globe almost simultaneously. Through the joint communication, the international central banking community provided a signal of its strong commitment to responding to the macroeconomic implications of the financial market turmoil.

There is no doubt that over the past three decades the trade, economic and financial linkages among the different regions of the work have grown tighter and tighter, and of course policy-makers take this into account in the design of their policies. However, when talking about international policy coordination, it is important to define clearly what we mean. Policy coordination does not mean, of course that all central banks need to adopt the same policy stance for the entire world and certainly it cannot not be a surrogate for domestic macroeconomic prudence nor weaken the commitment of each central bank to its institutional objective. Indeed, I believe that the effectiveness of the coordinated monetary policy move on 8 October was very much enhanced by the public's trust in the commitment of each of the central banks involved to fulfilling its own mandate.

International policy coordination is better understood as the continuous cooperation and exchange of information at both staff and decision-making levels, shared experienced and mutual understanding and trust, which very much lies on the consensus among central banks that monetary policies geared towards domestic price stability, sound public finances and flexible economic structures create the conditions for long-term economic growth and financial stability.

As regards *lessons for our regulatory and supervisory frameworks*, there are key challenges that need to be addressed in order to prevent that the crisis that currently affects our economies may repeat itself in the future. In the current environment, the focus of reform efforts in this area is to formulate comprehensive policy responses to the financial market turbulence and to effectively and timely implement the agreed measures.

In this respect there are a number of reforms and initiatives that have been put forward at the European and international level, notably by the ECOFIN Council and the Financial Stability Forum (FSF), and have been more recently reflected in the declaration of the G20 summit on Financial Markets and the World Economy last 16 November.

As part of these initiatives, many efforts have been made to address *three key specific issues* that are of especial importance from a longer-term perspective:

1. mitigating procyclicality stemming from the current regulatory framework;
2. correcting distorted incentives that bias financial systems towards short-termism; and
3. enhancing transparency by improving the availability of data important from a financial stability perspective.

First, there is a need to *mitigate procyclical effects* stemming from the current regulatory framework. A number of potential sources need to be investigated, including capital requirements, accounting standards, banks' compensation schemes and provisioning regimes. In this context, important work is to be carried out by the FSF.

Second, the ongoing crisis is a most dramatic example of the tendency for financial markets and institutions to reward short-term profits at the detriment of long-term performance. The *excessive focus on short-term profits* has resulted in imprudent risk-taking behaviour and a significant underestimation of so-called "tail events", i.e. events that have low probability but imply high risks if they occur (that have turned out to be far less unlikely than previously assumed). In this context, there is a need to create an incentive framework that adequately assesses and rewards performance over the medium to longer term.

Third, the *availability of information* regarding the main risks to the financial system needs to be significantly enhanced. Information should be available concerning institutions, instruments and markets that are currently unregulated, but whose risk-taking behaviour gives rise to financial stability concerns, given their potential systemic impact. In particular, the turmoil has shown that there is a need for a more broad, frequent and timely exchange of information as well as strengthened cooperation and coordination among competent authorities, particularly among central banks, supervisors and regulators.

In the current context, there are a number of initiatives aiming at strengthening the cooperation among authorities on this front. For instance, *on the crisis prevention side*, there is agreement on the need to reinforce multilateral surveillance. To this end, the FSF and the IMF will intensify their cooperation with a view to enhancing the assessment of financial stability risks on a global scale. In the EU context, the same is envisaged for the Committee of European Banking Supervisors and the Banking Supervision Committee of the European System of Central Banks.

These initiatives should also be reflected at national level. Indeed, strengthening cooperation and exchange of information between central banks and supervisory authorities can effectively exploit the synergies between the macro- and micro-prudential approaches and contribute to establishing a more efficient framework for the identification and monitoring of risks to financial stability.

On the crisis management side, it is important to ensure that the central banks' operational framework is sufficiently flexible to deal with extraordinary situations and that cross-border arrangements among supervisors for dealing with weak banks are sufficiently robust. This is particularly pressing given the global nature of financial markets and the emergence of large cross-border groups spanning across a large number of jurisdictions and thus being supervised by a multitude of national authorities.

In the context of the increasing cross-border activities of financial institutions, coordination is particularly important, given that the institutional setting for financial stability remains predominantly based on national competences. Recent measures in the EU, including the compulsory establishment of colleges of supervisors for all cross-border banks, are important steps in the right direction.

Further substantial improvements can be envisaged, in particular as a result of the ongoing work by the High-Level Group set up by the European Commission under the chairmanship of Mr. Jacques de Larosière. This High-Level Group has been given the mandate to submit proposals to strengthen European supervisory arrangements covering all financial sectors by looking also at the allocation of tasks between the national and the European levels. It is expected to present its recommendations in February 2009, in time for the preparation of the Spring 2009 European Council.

The *Eurosystem's longstanding position* has been that there is no optimal arrangement for the organisation of supervision. Different models for the allocation of supervisory responsibilities can be envisaged and implemented. What really matters is that, regardless of the model adopted, there exists a very close and smooth interplay between the central banking and the supervisory communities. The experience of the Eurosystem during the market turmoil has very much confirmed how important it is for central banks to have a close working relationship with supervisors and full access to supervisory information in order to fulfil their institutional tasks.

Overall, there is room for improvement in the current institutional set-up for banking supervision in the euro area and, more generally, in Europe. In particular, measures could be envisaged in order to improve coordination mechanisms across countries, especially for large cross-border institutions. This is one of the issues that may be examined by the High-Level Group and has been discussed by the European Parliament. There are several hypotheses under discussion, including some involving an increased role of the ECB and the Eurosystem in banking supervision, but at the current stage the Governing Council has not taken a position. Article 105(6) of the EC Treaty explicitly mentions the possibility of assigning to the ECB specific tasks relating to the prudential supervision of banking institutions. In this sense, we are institutionally prepared to contribute to the implementation of future recommendations. However, as I have just mentioned, at the current stage there are still several options under consideration and the Governing Council needs to continue examining them before coming to firm conclusions.

More generally, the turmoil has also stressed the importance of *increased coordination* among all the relevant public authorities at the European and international level. Indeed, many governments have announced concerted action plans aiming to support financial systems that complement the initiatives in the field of liquidity management undertaken by central banks. These concerted plans reflect the increasingly consensual view that the global nature of the financial tensions requires a common understanding among governments of the factors at the root of the tensions and coordinated actions to address them.

The framework for such concerted action plans consists of some *common core principles* on how to address liquidity, funding and solvency problems (e.g. ensuring appropriate liquidity, facilitating the funding of banks through various means, providing additional capital resources to financial institutions, recapitalisation of distressed banks, ensuring appropriate implementation of accounting rules, and enhancing cooperation among European countries) agreed by the representatives of the countries signing the public commitments in the last few months by the G7 and G20, Ecofin and the governments of the euro area. The Statement from the G-20 Summit, which has importantly extended policy coordination to large emerging economies, has also indicated more general principles for the reform of the international financial systems and the improvement of the global financial architecture.

4. Concluding remarks

The current crisis affects key financial markets – the credit and money markets – that are essential for the orderly functioning of our economies. This is why from the start of the turmoil public authorities – both in the euro area and in other parts of the world – have reacted with determination to prevent the turbulences from undermining financial stability and destabilising our economic systems.

In particular, the Eurosystem has substantially enhanced its provisions of central bank liquidity in order to support the orderly functioning of money markets and prevent that solvent financial institutions of systemic relevance may be weakened by protracted market illiquidity. Central banks all over the world have also increasingly engaged in large-scale coordinated actions in order to support liquidity conditions in global money markets.

More recently, central bank actions have been accompanied by a number of systematic and comprehensive measures taken by national governments and parliaments, in a concerted fashion, in order to support the domestic and international banking and financial systems. Among these measures, we should single out the plans for recapitalisation of financial institutions and the provision of guarantees to the banking sector in a number of European countries.

The magnitude of the liquidity-provision schemes by the Eurosystem together with the large-scale actions plans by other public authorities have proved effective in avoiding a meltdown of global finance, particularly in the wake of the collapse of Lehman Brothers. However, there is no room for complacency as regards the structural strength of our financial systems and, by extension, of our entire economic systems.

While important work is underway to remove some of the factors at the root of the current crisis, it is crucial to increase our efforts to implement those urgent reforms, especially to the regulatory and supervisory frameworks, that are needed in order to anchor the global financial system and, ultimately, our economic welfare to sound foundations.