Conference "CENTRAL BANKS IN THE 21ST CENTURY"
Banco de España, Madrid 8 June, 2006

Comments on "Monetary policy today: sixteen questions and about twelve answers" by Alan Blinder

By Vitor Constâncio
Banco de Portugal

Vítor Constâncio, Banco de Portugal

It is indeed a pleasure to comment on such a challenging and thought-provoking paper. Unfortunately, I will not have time to go through all the very pertinent questions raised in the paper, so my remarks will be selective. The combination of theoretical and practical aspects in the paper reflects the remarkable progress of the dialogue between the academic and Central Bank worlds in the past 15 years or so. Changes on both sides have contributed to that development. The emergence of a new benchmark macro model that eliminates the LM curve and clearly establishes the interest rate as the monetary policy instrument, as it had usually been the practice of Central Banks, helped the connection with the practical side of things. In its dynamic version the new benchmark combines the methodology of Dynamic Stochastic General Equilibrium models that came from the Real Business Cycles school with the new Keynesian nominal rigidities and gives sense to the effects of money on the real economy through a more realistic transmission mechanism. Monetary policy affects prices indirectly through its effect on optimising consumption, investment and labour market decisions in the context of real and nominal rigidities. The output gap, representing the degree of slack in the economy, plays an important role in the model as an important channel on inflation and as a policy target. This avoids the assumption of a direct effect of money through a pure liquidity effect and corresponds better to the stylized fact that policy influences first the real side of the economy and then prices. The new approach also assumes the possibility of optimal Central Banks behaviour when policy is determined by a rule that comes from an optimization exercise and responds to inflation and a theoretically consistent output gap. All this helped the dialogue to which Central Banks contributed by beginning to commit to a more precise policy framework that includes the need to focus on the importance of expectations and to attempt to influence them by becoming more

credible and transparent through appropriate communication. This led to what the author in his latest book calls the «quiet revolution» in central banking.[1]

At the same time, we have observed a remarkable convergence of Central Bank practices in conducting monetary policy. Even when they profess different strategies, one can identify a common denominator, a set of general principles that seem to have universal acceptance. I group these under five headings:

1 First, the main goal of monetary policy has been more clearly defined as being price stability, meaning a low medium term objective for the inflation rate. Other objectives may be added, explicitly or implicitly, with different or equal weights in the objective function, but there is now no ambiguity about the main concern of policy.

2 Second, to form a view about the economic situation and the risks for inflation, a full information approach is adopted, and this means analysing the complete set of information variables. As Wim Duisenberg (2000)[2] expressed it once: «Monetary policy-making in the euro area has to reflect the complexities and uncertainties which surround the transmission mechanism of monetary policy … These uncertainties imply that no single approach is likely to be entirely reliable. ...Reliance on a single indicator or forecast, or a single model of the economy or view of the world, would, in these circumstances, be extremely unwise. The strategy needs to incorporate the full range of relevant indicators and assess them in the context of a variety of different models». Even if the assessment is organized around two types of analysis, as it is the case in the Eurosystem, the aim is «the cross-checking of information in coming to its unified overall judgement on the risks to price stability»[3]. This is the way the issue is expressed in our May 2003 communiqué that clarified our basic policy framework. It also added that «the monetary analysis mainly serves as a means of cross-checking, from a medium to long-term perspective, the short to medium-term indications coming from economic analysis». It also stated: «Monetary analysis will take into account developments in a wide range of monetary indicators including M3, its components and counterparts, notably credit, and various measures of excess liquidity». This reference to many aggregates, including credit, is important, especially in view of the instability since 2003 of traditional money

[1] Blinder, Alan S. (2004) "*The quiet revolution: Central Banking goes modern*", Yale University Press.

[2] Duisenberg, Wim (2000) "From the EMI to the ECB" Speech delivered at the Banque de France's Bicentennial Symposium, Paris, 30 May 2000.

[3] "The ECB's monetary policy strategy" Communiqué of 8 May 2003.

demand functions for M3, an instability that impairs monetary analysis[4]. From the point of view of the convergence of policy practices that I mentioned, it is interesting to confront this with one of the criteria used by the Norges Bank, that epitome of inflation targeting, in «assessing whether a future interest rate path appears reasonable compared with the monetary policy objective». In fact, the 5th criterion asserts that «Interest rate setting must also be assessed in the light of developments in property prices and credit. Wide fluctuations in these variables may constitute a source of instability in demand and output in the somewhat longer run.»[5]

3 Third, it is well established that the short-term monetary interest rate is an instrument of monetary policy and not any quantitative monetary variable. In addition, the strategy of using intermediate targets for monetary policy has been abandoned and the instrument is related with the final targets as Benjamin Friedman (1990)[6] recommended many years ago as a more efficient use of information. Here, we should note that the notion of an inflation forecast as an intermediate target put forward by Svensson does not contradict this because the forecast variable is directly related with the final target of policy.

4 Fourth, according to the new benchmark model, the transmission mechanism goes first through the real economic decisions of households and firms and only with a longer lag on prices. Also, the model gives great importance to expectations of future values for the relevant variables. With forward-looking rational agents, expectations of future policy influence present decisions and so problems of credibility become relevant for monetary policy. This implies that policy must adopt a forward-looking approach and that a focus on expectations is required. However, it should be clear that this does not imply that policy should follow market expectations, since this could entail serious dynamic instability and indeterminacy problems. Quite the contrary in order to influence expectations, monetary authorities must embark on effective communication with other economic agents and become more transparent about their own decision-making process in order to establish credibility.

5 Fifth, in spite of granting more importance to a rules-based orientation of policy no central banker will deny the need for some discretion in

---

[4] See Avouyi-Dovi et al (2006) "La function de demande de monnaie pour la zone euro: un réexamen » Notes d'Études et de Recherche de la Banque d France.

[5] Norges Bank (2005) "Inflation Report" no.1/2005, March.

[6] Friedman, Benjamin (1990) "Targets and instruments of monetary policy" in B. Friedman and Frank Hahn (ed) "Handbook of Monetary Economics, Vol II,", North-Holand.

> conducting policy in the face of real life uncertainties. As Alan Blinder put it in his previous book on central banking: «Rarely does society solve a time inconsistency problem by rigid precommitement or by creating incentive-compatible compensation schemes for decision makers. Enlightened discretion is the rule».[7]

When mention is made of rule-based policy, we should not forget that there is a lot of confusion surrounding the word «rule». Theory talks about commitment to rules but that notion seemingly includes mere respect for a precise procedure in conducting monetary policy. Ben Bernanke and Frederic Mishkin (1997)[8] say, for instance, about inflation targeting that it «…does not represent an ironclad policy rule… Instead, inflation targeting is better understood as a policy framework». Even when Lars Svensson defines, for instance, «general or specific target rules» we see that he does not mean any sort of mechanical rule, but commitment to a framework that has been made more precise in some aspects but still allows room for exercising judgment.[9] In some circumstances, the «specific target rules» alluded to by Svensson may nevertheless be too rigid. The expression «constrained discretion» was coined to designate the current practice and at least for monetary authorities of big countries or big economic areas that is the name of the game.

The five points I have just described are not sufficient to characterize a policy framework and the missing details are the ones that are important to differentiate the various regimes in existence. I find that the questions raised by Alan Blinder in his paper concerning the «institutional design» and the «operating principles» as particularly apt to help us complete that task. As I will not comment on all those questions, I hope that my answers, plus the five points above help to convey my overall view on the way to conduct monetary policy.

Let me start then with the question about the specification of the objective function for monetary policy (Question 1). The formula presented in the paper is generally accepted and widely used and I have no qualms with it. Going further to a full specification of all the parameters is of course another mater. Fully specifying the objective function has been one of the recurrent recommendations

---

[7] Blinder, Alan (1998) *"Central banking in theory and practice»* The MIT Press, page 49.

[8] Bernanke, Ben and Frederic Mishkin (1997) "Inflation targeting. A new framework for monetary policy?" *Journal of Economic Perspectives,* 11, pp. 97-116.

[9] Svensson, Lars (2003) "What's wrong with Taylor rules? Using judgment in monetary policy through targeting rules" in *Journal of Economic Literature* 41: 426-77.

of Lars Svensson in the context of the inflation target regime[10]. The only pragmatic version of that regime is the so-called «flexible inflation targeting» that takes into consideration the stabilization of the output gap. Consequently, the demand for a full specification is a way of defending the inflation targeting framework from the accusation of being misleading as, in spite of its name, it includes other targets after all. That is alluded to by Alan Blinder in the paper when he suggests the regime could as well be called «unemployment targeting» (see page 18) but has been used to justify a harsher criticism of inflation targeting by Jon Faust, Dale Henderson and Benjamin Friedman[11]. It is true that Svensson formally demonstrated quite a while ago (Lars Svensson, 1997)[12] that, when you have a model that makes the output gap a major determinant of future inflation, to define a longer period to achieve a pure inflation target in a gradual way is the same as putting the output gap in the objective function. In addition, many inflation targeters have made it explicit that they have a «flexible» framework, meaning that they do consider an objective of stabilization of the output gap. One can even go as far as recognizing that any monetary policy strategy that accepts that an indicator of the slack in the economy, like the output gap, has a major role in the transmission channels of monetary policy, implicitly includes the stabilization of that gap as part of its intermediate goals. In effect, from a long term perspective, stabilizing the output gap is a way of ensuring the elimination of both inflationary and deflationary forces. Nevertheless, in the short-term a trade-off may exist between the two gaps, inflation from its target and output from its potential. That trade-off may be related with the desired speed at which the economy converges to its long-term equilibrium or may result from considering that it is welfare-enhancing to avoid too much volatility of output (see Laurence Meyer, 2001)[13]. If the possibility of a short-term trade-off is accepted then a specification of λ would be useful.

I do not believe that it is possible or desirable to announce a full specification of the objective function. First, I think that it would be impossible or misleading to get a value for λ from a collective decision-making body. More fundamental though, I think it would not be advisable for the reasons that stem from the

---

[10] See the previous note and Svensson, Lars (2003) "The Inflation Forecast and the Loss Function," in Paul Mizen, ed. (2003), *Central Banking, Monetary Theory and Practice: Essays in Honour of Charles Goodhart, Volume I,* Edward Elgar, 135-152. Also available in http://www.princeton.edu/svensson/

[11] Faust, Jon and Dale Henderson (2004) "Is inflation-targeting best-practice monetary policy? And Friedman, Benjamin (2004) Comment on Faust and Henderson in *Federal Reserve Bank of St. Louis Review,* Volume 86, Number 4, July/August 2004, pages 117-149.

[12] Svensson, Lars (1997) "Inflation Forecast Targeting: Implementing and Monitoring Inflation Targets," *European Economic Review* 41 (1997) 1111-1146. Also available on http://www.princeton.edu/svensson/

[13] Meyer, Laurence H. (2001) "Inflation Targets and Inflation Targeting" Speech made at the University of California at San Diego Economics Roundtable, in http://www.federalreserve.gov/

relationship established by Michael Woodford in his book[14] between consumer welfare and the form of the loss function to be adopted for monetary policy purposes. A major conclusion of his analysis is that the form of the loss function depends on the structure the economy considered in the model and on defining the transmission mechanism. Specifically, regarding the loss function in Blinder's paper, Michael Woodford shows that it is a reasonable approximation to the indirect consumer utility function if the following conditions are met:

a) There are no «welfare consequences of transaction frictions that account for the demand for the monetary base», which means the results apply to a «cashless limit» economy. Otherwise a term with an interest rate differential would have to be added to the objective function.

b) The only nominal distortion stems from sticky prices.

c) There are cost-push shocks.

d) Only monetary policy is considered. There is no consideration of cyclical fiscal policy.

Changes in this set-up may alter the form of the objective function. For instance, if there were no cost-push shocks, then there would be no trade-off between inflation and the output gap and the objective of the central bank would be just to eliminate the inflation deviation from its target. In the set-up under review, wages are considered flexible and prices follow the Calvo model of sticky prices, which implies that inflation variation results in distortions of relative prices and the welfare losses are proportional to the expected discounted sum of squared deviations of the inflation rate from zero. Nevertheless, as Woodford (2006) remarks, if different price adjustment schemes are assumed, the form of the function varies: «For example, if the probability of adjustment of an individual price is increasing in the time since that price was last reviewed - a specification that is both intuitively plausible and more consistent than the simple Calvo specification with empirical models of inflation dynamics - then welfare losses are proportional to a discounted sum of squared deviations of the current inflation rate from a moving average of recent past inflation rates, rather than deviations from zero. The goal of policy then should be to keep inflation from differing too greatly from the current "inertial" rate of inflation, which implies that inflation should not be reduced too abruptly if it has been allowed to exceed its optimal long-run level».[15]

In addition, many empirical analyses have shown that wage stickiness is very

[14] Woodford, Michael (2003) "Inflation stabilization and welfare" Chapter 6 of *"Interest and Prices"*, Princeton University Press.

[15] Woodford, Michael (2006) "Rules for Monetary Policy" in NBER Reporter: Research Summary Spring 2006, on http://www.nber.org/reporter/spring06/woodford.html

important for the inflation process. If this is recognized, again the trade-off between the two gaps will be different. As Olivier Blanchard and Jordi Gali (2005)[16] showed recently, when real wage rigidities are introduced what they call «the divine coincidence» of stabilizing together the two gaps disappears. In that case and «in contrast with the baseline NKPC model, the divine coincidence no longer holds, since stabilizing the output gap (γ -γ2) is no longer desirable. This is because what matters for welfare is the distance of output not from its second-best level, but from its first-best level. In contrast to the baseline model, the distance between the first- and the second-best levels of output is no longer constant».

As Woodford (2006) points out «If [prices and] wages are staggered in accordance with the Calvo specification, then the welfare-theoretic loss function includes a term proportional to the squared rate of goods price inflation and another term proportional to the squared rate of wage inflation each period. In this case, optimal policy involves a trade-off between inflation stabilization, nominal wage growth stabilization, and output-gap stabilization».[17]

Finally, there are two important issues related to the measurement and interpretation of the output gap. First, it is well-known that any output gap variable is very imprecisely estimated, particularly in real-time. Second, the theoretically consistent output gap that plays a central role in the New Keynesian literature bears little resemblance to the three empirical measures presented in the paper. The theoretical output gap is defined as the deviation of output from its equilibrium level in the absence of nominal rigidities. Given that the theoretically consistent output gap is model-dependant, this adds to the difficulty of defining a reliable and applicable objective function.

All this indicates that, as no Central Bank should be committed to a pure instrument-rule, in the same way it should not commit to and make public a precise objective function. In effect, if information changed about the transmission mechanism, the Central Bank should then have the opportunity of changing the parameters without facing the very difficult communication task of explaining that change.

Regarding the price index to use in the definition of the target for inflation I tend to sympathize with the author's position. To the arguments mentioned in the paper one could add that the same analysis by Woodford about the relationship between welfare and the loss function for monetary policy demonstrates that «If prices are adjusted more frequently in some sectors of the economy than in others,

---

[16] Blanchard, Olivier and Jordi Gali (2005) "Real wage rigidities and the New Keynesian Model" NBER Working Paper no 11806, November 2005.

[17] See note 15.

then the welfare-theoretic loss function puts more weight on variations in prices in the sectors where prices are stickier… This provides a theoretical basis for seeking to stabilize an appropriately defined measure of "core" inflation rather than an equally weighted price index».[18]

There are nevertheless important practical obstacles to the use of a sort of core inflation index. First, the communication difficulties would be very significant and the principle of accountability to public opinion would be compromised as the general population is used to headline inflation, which is the general index that appears as relevant for daily life expenditures. Second, it would be difficult to assess the relative degree of price rigidity of all the goods composing the HICP, in order to compute the "core" inflation aggregate. Actually, this core aggregate would only be theoretically adequate if price stickiness was the main nominal rigidity in the economy. Finally, I agree that a practical important implication of the choice of index is the degree of policy reaction to supply shocks that may affect the more volatile components that are normally excluded from a core index. In the Eurosystem we have dealt with the problem by allowing headline inflation to go temporarily above our definition of price stability without a monetary policy reaction when the increase in prices resulted from a recognized supply shock and second-round effects were not present. I think this is the appropriate way to deal with the question, and this puts me in the camp of those that Faust and Henderson (2004)[19] designate as LETers (Limited exploitable trade-off) instead of a NETer (Non exploitable trade-off) or, in the more colourful expression of Mervyn King, an «inflation nutter» aiming at reaching its target in every period. A strategy that is forward-looking and has a medium-term horizon for the achievement of its objective should be able to deal with this problem of supply shocks.

A final point about the objective function regards the consideration of other possible objectives of policy in the field of financial stability. The author's solution is to adopt a quasi-lexicographic approach: «The central bank minimizes (the objective function) unless serious financial instability arises, in which case it turns its attention to the latter» (page 11). This is coherent with the idea, defended in the paper in relation to asset price bubbles, that monetary policy should adopt a pure «mop up after» strategy when dealing with financial stability issues. I have doubts that this strategy is sufficient and I think that monetary policy should not forget completely about those issues in its regular functioning or at special turning points.

---

[18] See note 15. As Woodford notes, this result was first proven by Erceg, Henderson and Levin (2000) "Optimal monetary policy with staggered wage and price contracts", Journal of Monetary Economics, 46(2), pp. 281-313.

[19] See note 11.

There is some ambiguity about the definition of financial stability but two main meanings stand out. One, more fundamental, follows Mishkin (1991)[20] and defines financial stability as a situation where the financial system is able to ensure in a lasting way, and without major disruptions, an efficient allocation of savings for investment opportunities. In another sense, financial stability refers to absence of a major misalignment of asset prices that can threaten future disruption of markets and the real economy. Both meanings are of course connected as they point to the same notion of smooth financial institution and market functioning. Consequently, I also deal with Question 14 in this point.

Traditionally, the dominant view was that asset price booms were associated with a general inflationary climate that fostered speculation against a background of expansionary policies. However, since the late eighties we have witnessed various episodes that contradict that old notion. Two types of analysis of structural developments in the financial system provide some understanding of recent events and question the conduct of monetary policy.[21]

The first approach has been developed in the BIS research, in particular by Claudio Borio and Philip Lowe (2002) and William White (2006).[22] The main idea is that under present circumstances, monetary stability is not enough by itself to ensure financial stability and may even contribute to unstable prices of financial assets. This contradiction seems to stem from the very success of monetary authorities in guaranteeing price stability in a credible way. The coexistence of an environment of low interest rates with future inflation expectations, well-anchored in the low levels defined by central banks objectives, would allow credit expansion that would fuel asset prices increases. If valid, this view would be very disquieting to central bankers because the traditional view has been exactly the opposite, i.e., that stability of prices of goods and services would stimulate market participants to concentrate on the real factors that affect the fundamentals of valuation of financial assets, thus contributing to low volatility in their respective markets. This view, which is certainly basically valid from a long-term perspective, is nevertheless not incompatible with the possibility that a short-term trade-off may exist between monetary and financial stability. That may be the case in particular in periods of transition after a long period of disinflation or when monetary policy starts to change the interest rate cycle after a long period of

---

[20] Mishkin, Frederic S. (1991) "Anatomy of financial crises" NBER Working Paper no. 3934.

[21] In the following paragraphs, I use of parts of the text I delivered in another recent occasion. See "Finance and Regulation" a speech delivered on May 26th, on the occasion of the meeting of the European Association for Banking and Financial History (in http://www.bportugal.pt).

[22] Claudio Borio and Philip Lowe (2002) "Asset prices, financial and monetary stability, exploring the nexus" BIS working paper no. 114. White, William (2006) "Is price stability enough?" BIS Working Paper no. 205.

low rates.

The second view providing a broad explanation for the recent instability of asset prices has been put forward by Raghuram Rajan (2005),[23] in a recent noted paper. What came to be known as the "Rajan risk" is linked with the structure of incentives of managers and institutions in the new financial environment. The gain in importance of market-based non-regulated institutions and the reduced weight of traditional banking give prominence to compensation schemes more linked to returns which induces managers to enter into riskier transactions. Second, performances in these growing sectors of "investment institutions" tend to be measured essentially against peers and this fosters the herd behaviour already present in financial markets.

Both types of behaviour increase the probability of episodes of asset price misalignments. The system tends to assume more risks, including the so-called tail risk where probabilities are low but losses can be high. Who would have thought some years ago that pensions funds and insurance companies would become participants in the market for risk of default of other firms? On the other hand, hedge funds manage nowadays many more assets than in 1998 and are involved in less liquid markets. Additionally, their returns have become more correlated across supposedly different types of funds and this seems to indicate that they could be subject to the same type of risks in a period of tighter credit and stressful equity markets.

This points precisely to accrued risks in periods of monetary policy transition. Central Banks should not ignore this possibility and in fact they usually take into consideration financial stability issues for which they are mandated. This is one of the reasons that explains why they embark into gradualism, interest rate smoothing and manage turning points of policy at a measured pace. More generally, financial stability concerns should not be ignored in the decision-making process even in more normal periods. As I mentioned a few years ago «…even without defining precise targets, interest rate policy, in certain circumstances, should "lean against the wind" when it blows too strongly in asset markets» (Constancio, 2002)[24]. I do not recommend an aggressive approach to start bursting bubbles or to include a term with asset prices in the objective function, but we should not ignore the problem altogether when is starts to emerge, without having the illusion that monetary policy could provide the whole solution. The problem will have to be addressed by other instruments, like regulation and supervision. As far as monetary policy is concerned the full-

[23] Rajan, Raghuram G. (2005) "Has financial development made the world riskier?" NBER Working Paper no. 11728, November 2005.

[24] Constancio, Vítor (2002) "Policies and institutions for global financial stability" in 8th International Financial and Economic Forum, Vienna November 2002.

information approach that I described as one of the five main principles in the conduct of monetary policy may be particularly useful here. In particular, looking to developments in credit aggregates may be informative, precisely because, as suggested by research done in the BIS, buoyant credit expansion is normally – albeit not always[25]– associated with asset prices booms.

The existence of the sort of short-term trade-off that we are considering may create significant problems for the inflation targeting monetary policy regime. This framework is by definition very much attached to targets and forecasts for inflation as an almost exclusive basis for decisions, and therefore has difficulty incorporating other considerations into the decision-making process without losing some credibility. The notion that this can be overcome by extending the horizon of the inflation forecast by a number of years does not look realistic and has not been attempted. Very interesting, however, is the addition made by the Central Bank of Norway to the list of criteria to assess future interest rate policy that I mentioned earlier. The addition refers to the need of considering asset prices increases and aggregate credit growth. Of course, this criterion, although subordinate, only adds to the difficulty of the framework to fend off the accusation of having multiple objectives hidden behind a single denomination of «inflation targeting» without the transparency of disclosing the exact criteria that may justify a temporary deviation from the main target. A disclosure, let me add, that I would consider virtually impossible or unwise to make.

An important argument that Alan Blinder uses to defend his view on asset price bubbles is that the «mop up after» strategy «worked extraordinarily well» in the context of the stock market bubble of the late 90's. It should be remembered though that it worked well for the economy because of the very expansionary fiscal policy and the wealth effects on other asset markets (bonds and real estate) induced by the very aggressive monetary policy. The final result is that the so-called global imbalances are still with us and no one knows how their winding down will play out.

This discussion highlights the importance I attach to financial stability as one of the core mandates of any Central Bank. In this context, I agree with Blinder's conclusion that important supervisory responsibilities should remain with Central Banks (Question 5). This conclusion stems directly from the strong complementarities that exist between the macroeconomic prudential surveillance framework and microeconomic supervisory responsibilities. On the subject of the counterarguments based on the idea of a conflict of interest with monetary policy let me add just two comments. The first, that it is illusory to think that this

[25] For instance, in the case of Portugal we had high credit growth in the second half of the 90's but there were no asset price bubbles either in the stock market or in housing.

possible conflict would disappear just by separating and giving the two functions of supervision and monetary policy to different institutions. The second, to underline the fact that the possibility of that conflict does not exist in the euro area because National Central Banks that are responsible for supervision do not decide alone the single monetary policy and are not in full control of money creation.

On *transparency* (Question 2), I agree that the trend is irreversible in the direction of wider disclosure by Central Banks of their procedures. Transparency about goals and about methods can be beneficial to monetary policy because expectations are such an important channel of transmission. Expectations about future policy and future inflation affect today's decisions on wages and prices and those expectations depend on the economic agents' view of future monetary policy. So, I agree with the author on most of the points he makes about these issues. Regarding the methods of published inflation forecasts and the treatment to be given to the future path of interest rates, I think that taking into account the path indicated by the financial markets is an adequate solution. It is logically consistent, it is transparent and in the case of the Eurosystem cannot lead to any sort of dynamic inconsistency as in our framework the staff forecast is just one element, albeit an important one, in the whole information set that we consider in our deliberations. Contrary to the inflation-targeting regime, there is no commitment to a direct link between the projections and our decisions on interest rates.

On transparency regarding the decisions and the decision-making process, I share the arguments that justify in our case the non-publication of minutes with the indication of individual votes. The young age of our project and its supra-national nature would create risks of great pressure from national public opinions on the vote of national Governors. With time and the consolidation of our institutions, I am open to reconsider my opinion on this issue.

I have already expressed a number of opinions on the inflation targeting regime that should be enough to reach the conclusion that I do not favour the adoption of a fully-fledged version of that framework in big economic areas (Question 3). In relation to small countries and in particular emergent ones, I accept that the regime may be useful because it provides a level of commitment that fosters the required credibility for Central Banks. In the case of big developed areas without significant credibility problems, the regime, the way I see it, has some costs and unnecessary rigidity. This opinion is very much dependent on my definition of an Inflation Targeting Framework (ITF). Alan Blinder in his paper states that the «essence of inflation targeting is announcing a numerical value for π^* and being transparent about it». There are some definitions of an ITF that add very little to this requirement to characterize the regime, appending only aspects of transparency and communication regarding methods and decisions. If that would

be enough for a definition then the Eurosystem could be included as an inflation targeter, which would come as a surprise to many insiders. In fact, that definition is too broad to be useful. Lars Svensson, the author that best theorized the regime, distinguishes between «general targeting rules» that specify «the objectives to be achieved, for instance, by listing the target variables, the target levels for those variables, and the (explicit or implicit) loss function to be minimized», and «specific targeting rules» that specify «operational conditions for the target variables (or forecasts of the target variables)».[26]

These specific rules are essential to characterize a «flexible» inflation target regime and they may consist either in a principle, announced by several Central Banks, that the interest rate should be adjusted such that the resulting inflation forecast at an appropriate horizon (usually about two-years ahead) is on target, or they may specify operational Euler conditions for monetary policy. «In particular, an optimal targeting rule expresses the equality of the marginal rates of transformation and the marginal rates of substitution between the target variables in an operational way» (Svensson, 2003).

It is the important role attached to inflation forecasts and the commitment to move rates in reaction to them that really differentiates the ITF from other monetary strategies. My general assessment is that even if, as Svensson underlines, judgment exercised by the Central Bank enters into the elaboration of those forecasts, the scheme is not as totally clear as it proclaims to be and may be too rigid at certain moments.

As I have already mentioned, there is a difficult coexistence between the name «inflation targeting» and the multiple goals (real and/or financial stability) that are alluded to and with the claim of total transparency and credibility. The problem gains practical importance when we ask: how far and how long a deviation from the inflation target will be allowed to accommodate other objectives? There is no criterion (transparent or otherwise) to answer this question. Other regimes also leave a margin of ambiguity but do not claim that their credibility depends on their transparency and the precision of the rule they follow. Could it be that the ITF falls into the category of those who apply the sort of «folk wisdom» that maintains that Central Banks should "do what they do, but only talk about inflation".[27]

On the other hand, the strict link between forecasts and decisions can create credibility problems either when rates are moved beyond what the forecasts indicated as appropriate or when rates are moved only because of the forecasts

[26] See Svensson, Lars (2003) in note 12.
[27] See Faust, Jon and Dale Henderson (2004) in note 11.

even if other obvious aspects of the situation would justify a delay. Both situations have occurred in practical experience and may constitute a source of problems, especially if the interest rates considered for the forecast are the conditional indication of the decision-making body about its own future policy.

The operational problems related to gradualism and fine tuning (Questions 7 and 8) are very well dealt with in the paper. I agree that there are many and good arguments that make gradualism in moving interest rates the rational attitude to have. Keeping an option value in the face of a continuous flow of data and the objective of smoothing rates seem to me the most cogent ones. Regarding «fine tuning» I do not follow the paper in trying to keep open the possibility of Central Banks becoming somewhat bolder in pursuing it. In general, the arguments to be usually prudent in rate decisions rest on the pervasive uncertainty that constitutes the background of monetary policy. We have data uncertainty, parameter uncertainty and model uncertainty. There are methods to help us to overcome the consequences of these sources of uncertainty but they have great limitations and, in general, they lead to caution. The possibility of destabilising markets or the economy by taking quick and strong action is just too big to be risked. Naturally, extraordinary circumstances may well justify decisive action in a short period of time. Let me add another word of caution regarding methodology. It is not easy to decide if a Central Bank is being too cautious or not. Using Taylor-type estimated interest rate rules to assess and compare the behaviour of Central Banks in this regard can be misleading. The coefficients obtained are a mixture of structural parameters of the economy and an expression of the authorities' preferences. For instance, if prices are more sticky (as they are in Europe) interest rate moves have a bigger effect on the real economy. On the other hand, in that case fluctuations of inflation will more easily distort relative prices and lead to more welfare losses. These aspects may lead to an estimate of a Taylor rule with a somewhat low output gap coefficient that would not be solely the reflection of the authorities' preferences but the consequence of how the economy reacts. This means that we should be very cautious in accepting conclusions from this type of analysis, which is very common in trying to determine if some Central Banks are being more or less gradualist than others.

As for the problem of deciding if Central Banks should lead or follow the financial markets (Question 9) I totally agree with position expressed in the paper. Alan Blinder has written extensively on this question, stressing the risk of dynamic instability and the need for Central Banks to be independent from markets. I just want to add the remark that the alternative is not for Central Banks to be too ready to disappoint or surprise markets. Central Banks should be predictable. The point then is to be able to permanently explain the framework used to decide on monetary policy and influence market expectations. Good

communication is therefore essential and can produce the desired results, as happened last April when our communication was able to change market expectations that were being carried away by rumours. As Blinder says at the end of his latest book: «Going modern need not and should not mean relinquishing the role of leader to the financial markets. Monetary policy decisions are, in the end, public policy decisions and, as such, are not suitable candidates for privatisation»[28]. In paying tribute to the good work Alan Blinder has done in his writing about central banking I think that this is a very appropriate quotation to end my comments.

[28] See note 1.