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Intervention by

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Ladies and Gentlemen,

I. Introduction

Let me start by saying a few words of thanks and extending my best wishes to this great institution, which is celebrating 150 years of bearing the prestigious name of Banco de España. I would like to thank Governor Caruana and the Banco de España for organising this excellent conference and for inviting me to participate in this panel.

To kick off this conference, Alan Blinder has prepared an impressive survey which presents and assesses the main critical issues that are currently truly relevant for monetary policy-makers. He has demonstrated again an admirable ability to blend top academic research with good central banking practice and common sense to produce this insightful and stimulating review. Alan's list of 16 questions regarding monetary policy is fairly long and, indeed, somewhat longer than the list he presented in 1999 at the first ECB conference. This may seem discouraging and might suggest that not much progress has been made over the past six years. However, the two lists are not identical: some of the original questions have been resolved, and new ones have arisen. Therefore, there are still plenty of critical issues concerning the science and art of central banking that need to be addressed, and Alan himself provides answers to most of them.

Given the wide range of questions raised by Alan, I will inevitably have to be selective and do some cherry-picking, by focusing on issues that are more controversial or more interesting from my perspective, and that can also be discussed adequately in the limited time available. I will discuss a number of issues regarding the objectives and strategy of monetary policy, aspects of policy implementation including central bank communication and transparency, the relationship between monetary policy and financial markets, and the implications of globalisation for monetary policy.

II. Monetary policy objectives: some fundamental, strategic and analytical issues

I would like to begin by addressing some critical questions concerning the institutional design of monetary policy, in particular issues relating to monetary policy objectives. These include fundamental issues regarding the choice and ranking of policy goals, as well as other important subjects pertaining to the strategy and analysis employed in pursuing these goals.

A fundamental development in monetary policy-making over the past two decades has been the emergence of a strong consensus – or at least a general acceptance of the view – that the overriding aim of monetary policy should be the attainment and preservation of price stability. This view is shared by an overwhelming majority of central banks and academic economists. It is presumably also shared by the political authorities, as manifested by the legislation that has been enacted in many countries to enable central banks to pursue this objective. The roots of this consensus are (1) the greater appreciation of the benefits of price stability for durable economic growth and social welfare; (2) the recognition that monetary policy can effectively determine price developments over the medium and longer run, but cannot permanently and systematically influence economic activity; (3) growing evidence that independent central banks can pursue price stability effectively while minimising output volatility.

Despite the general agreement on the primacy of price stability as a monetary policy objective, there are differences of opinion on several related issues: (1) how this goal is linked and ranked relative to other policy objectives; (2) what is the appropriate strategy for policy formulation; (3) whether and how the concept of price stability should be defined in quantitative terms; (4) how to operationally specify a final policy target and in particular the measures of inflation and economic activity that central banks should aim to control. These differences are not inconsequential for the formulation and conduct of monetary policy.

The central bank's objective function

In examining these issues, Alan uses, for part of his analysis and assessment, an objective function for monetary policy that is often employed in academic work: a quadratic loss function that penalises a weighted average of the deviations of the inflation rate (π) from its target value (π^*) and the deviation of real output (y) or the unemployment rate (u) from their “equilibrium” or “natural” values (y^* , u^*). Although, as Alan acknowledges, this particular specification of policy-makers’ objectives is motivated (if not dictated) by “mathematical convenience” (in the theoretical analysis of monetary policy, given that it facilitates the derivation of results, especially under conditions of uncertainty, the fact is that it imposes unrealistic constraints on policy-makers’ preferences and does not appropriately describe the objectives of many central banks, including the ECB.

In the case of the ECB, the Treaty establishing the European Community states that “the primary objective of the ESCB shall be to maintain price stability” and that, “without prejudice to the objective of price stability, the ESCB shall support the general economic policies in the Community with a view to contributing to the achievement of the objectives of the Community”, which include a high level of employment and sustainable and non-inflationary growth. In the euro area, monetary policy goals are therefore not stated, and cannot be expressed in terms of their relative importance (which, in principle, cannot be captured by choosing the size of the parameter λ defining the relative weight), but are clearly specified in a hierarchical (or lexicographic) manner, which emphasises the overriding importance of price stability and also implies that policy should not be formulated in terms of an objective function which trades off inflation volatility against output volatility. The underlying proposition is that, in general, price stability contributes to reducing output volatility.

I should also briefly mention that the selected loss function does not seem to be able to capture the points raised by some economists concerning the potentially asymmetric costs of high and low unemployment, relative to its natural or NAIRU level. It is also unclear as to whether it can provide an appropriate representation of policy preferences for those central banks that have opted for an inflation-targeting strategy and at the same time aim to support a high level of economic activity. This observation partly relates to the specific functional form and partly to the results of Svensson (1997), who has shown that the parameters of a Taylor rule are not related in a straightforward way to the relative weight λ of inflation and output deviations from their target values.

Monetary policy strategy and the operational target for price stability

Given the choice and ranking of objectives, a key aspect of the policy framework is the strategy adopted for pursuing them, which involves decisions concerning the method of analysis and the quantitative definition and operational target for price stability. The approaches chosen by central banks differ, but they are converging. Many central banks have opted for an inflation-targeting strategy based on a single analytic model and aimed at an inflation rate of 2% or 2.5% as the midpoint of the target range. The ECB has adopted a more general and eclectic strategy that includes both economic analysis and monetary analysis. It has also adopted a quantitative definition of price stability – an increase in the price level that does not exceed 2% – and, given this definition, it aims to maintain inflation at “below but close to 2%”. The Federal Reserve has not yet formally

adopted a precise, operational price stability or inflation target (though implicitly a target for core inflation at 1.75%-2% has recently been used). We have found the selection and announcement of a quantitative definition of price stability extremely important for policy formulation as well as for guiding and anchoring inflation expectations to price stability. Moreover, it provides a yardstick for the assessment of the effectiveness of monetary policy and for democratic accountability.

However, despite the adoption of a quantitative definition of price stability to orient our policy, the ECB does not use the term “inflation targeting” to describe its own strategy – even if Alan tends to put us in the same camp. Presumably, there must be some real differences warranting this position, and indeed there are. First, for the Governing Council of the ECB, inflation projections based on a single model are not the only all-encompassing tool on the basis of which decisions and communication are organised; our projections are seen as important input to our economic analysis, but are strictly staff projections and one element of our economic analysis. A second major difference is that we assign an important role to monetary analysis in assessing the medium to long-term inflation trends and risks. A final point is that our policy framework has a medium-term orientation but we have eschewed specifying a fixed time horizon for our assessment of the outlook for price stability.

At the same time, there are no major differences in the practical implementation of monetary policy strategies among price stability-oriented central banks and, with regard to at least some aspects of the policy framework, remaining differences are diminishing. In recent years, for example, we have observed a greater focus by some inflation-targeting central banks on the medium and long-term horizon and on the role of money and credit growth in determining medium to long-term inflation trends and in influencing asset price dynamics.

Core versus headline inflation

Despite the convergence of many aspects of the monetary policy strategies, there are still important differences. One such difference is whether the operational target for inflation should be the headline or a core measure of inflation. Alan has declared that he is firmly in the “core” camp for several reasons. He argues that a central bank should aim at core inflation because (i) it cannot effectively control headline inflation given its inability to offset supply shocks; (ii) it can better forecast future headline inflation on the

basis of past core-inflation dynamics, and (iii) targeting core inflation is likely to result in more sensible monetary policy in the presence of supply (energy price) shocks.

In this debate, I am firmly in the “headline inflation” camp. Let me explain. To begin with, our responsibility as central bankers is to preserve the stability of the overall, general price level which determines the public’s purchasing power and social welfare. The inability to offset immediately supply-side shocks does not change this responsibility, while the medium-term orientation of our monetary policy clearly indicates that we do not aim to offset such unanticipated shocks over the short run. I believe it is important to differentiate the role of a core inflation measure in the definition of the central bank’s objective from its relevance and potential usefulness in the assessment of the outlook for price stability and the formulation of policy. With regard to the monetary policy strategy, the price index used to define the medium-term objective should be a comprehensive and credible measure of citizens’ purchasing power which cannot be criticised for being defined in an arbitrary manner. Core inflation measures fall short of this requirement because of the exclusion of important items relevant for the public and because of the degree of arbitrariness in the definition of core inflation.

Another issue concerns the use of an appropriate measure of core inflation as an information variable in the formulation of monetary policy. There are two pertinent questions: first, which measure of core inflation provides reliable information about domestic underlying inflationary pressures by removing short-term noise from headline inflation due to transitory shocks, and second, whether different measures of underlying inflation can better forecast developments in headline inflation.

Many concepts of core inflation have been proposed, such as HICP inflation excluding energy and food components, trimmed means of the HICP sub-indexes and model-based measures. While the proposed different core measures can be helpful in removing transient noise from trend inflation, there is no strong evidence in the euro area that a specific core inflation measure is a reliable tool for forecasting headline inflation at relevant horizons. Our experience and analysis leads to different conclusions than those derived from the US experience cited by Alan (see Blinder and Reis, 2005). In the euro area, the gap observed between headline and core inflation often closes with core inflation increasing and converging towards higher headline inflation.

For example, in the euro area in the period 1999-2002, a considerable positive gap opened up between the headline inflation and the underlying measure which excludes food and energy prices. However, following a period of strong demand growth, this gap was closed not by a significant drop in headline inflation, but by a delayed upward movement in this "core" measure. Following the indication of the core measure on this occasion would have been a costly policy mistake (see ECB, 2005).

This episode shows that the usefulness of core measures might be generally limited, and that medium-term inflationary pressures are very much related to various underlying causes and processes as well as to the nature and dynamics of the shocks affecting the economy. Consequently, the optimal monetary policy response cannot be determined on the basis of a simple rule relying on a measure of core inflation; it depends on the size, nature and persistence of shocks affecting the economy. And such shocks cannot, in general, be identified and their effects cannot be adequately assessed only by using a measure of core inflation.

A point that should be emphasised with regard to the appropriate response of monetary policy to supply shocks is that their ultimate effects on inflation and output dynamics will obviously and crucially depend on the reaction of economic agents, especially of the participants in product and labour markets, which is influenced by their expectations about the response of the central bank to such disturbances. The fact that no significant second-round effects have been observed in the recent past does not imply that they will not emerge in the future, if an accommodative monetary policy is maintained, especially as the economic recovery gains momentum. If a central bank adjusts the monetary policy stance only when second-round effects have become clearly visible, by relying on some measure of core inflation, its response will come too late and it is likely that a larger dose of monetary tightening would be required than would have been the case if it had adjusted earlier on the basis of its assessment of all pertinent risks to future headline inflation.

The strategy of the ECB, therefore, relies on a comprehensive analysis of the shocks affecting headline inflation as well as on a wide variety of economic indicators and methods of analysis in order to assess the outlook for price stability over the medium term. And, importantly, the medium-term orientation of the ECB's monetary policy strategy ensures that in our assessment we appropriately discount short-term volatility due to transitory supply shocks.

III. Central bank transparency and communication of future policy rates

The second big theme I want to address is central bank transparency and, in particular, Alan's suggestion that central banks should announce their conditional monetary policy plans, at least as part of their forecasts. When discussing the issues of transparency and communication, it is important to distinguish between general aims and principles, on the one hand, and practical and effective means of fulfilling them, on the other.

I fully agree with Alan on the importance of, and the reasons for, (maximum) central bank transparency and I partly share his view on the limits to (optimal) transparency. But I draw different conclusions about the usefulness of pre-announcing an explicit path for future policy rates over a period of one to two years. This is because of my different assessment of the nature and extent of the uncertainty we face, the quality of available information and the limitations to our analytical methods, which have implications for the effectiveness of Alan's proposed communication strategy.

A high degree of transparency is an essential element of the democratic accountability of central banks. Transparency also enhances the effectiveness of monetary policy by helping to guide the expectations of economic agents and bring them into line with policy objectives and actions. It is particularly important that markets and the public at large have a good understanding of the systematic and conditional conduct of monetary policy by the central bank, so that expectations about future price developments and the path of policy rates are in line with the central bank's mandate. For all these reasons, the ECB has always striven to be as transparent as possible and has tried to communicate clearly, and by a variety of means, its policy objective, its strategy, its assessment of the economic situation, as well as the outlook for price stability and the associated risks.

The limits of central bank transparency

Are there limits to the transparency of central banks? Alan's view on this issue is nicely presented by paraphrasing Einstein: "Every central bank has to be as transparent as possible, but not more so." The crucial issue is the meaning or interpretation of "but not more so". Alan argues that the meaning of this proposition is that the default option should be disclosure, unless there are good reasons for the central bank to maintain the confidentiality of certain information in its role of supervisor or fiscal agent.

In my view, there is another interpretation of the meaning “but not more than possible”, which takes into account the limitations of our analytical tools and the uncertainty surrounding the medium to longer-term outlook. This interpretation also relates to the second objective of transparency, which is to provide economic agents with useful information so as to enhance clarity and understanding about policy actions and to reduce pertinent uncertainty. If future policy actions over a fairly long time horizon depend on projections about the future paths of many exogenous variables that are inevitably characterised by uncertainty, as well as on various shocks that by definition cannot be anticipated, and, more importantly, when there is considerable uncertainty about certain structural or behavioural parameters of the economy, then providing explicit guidance on the future policy rates, conditional on the underlying projections and assumptions, generally involves risks that can undermine the usefulness of providing more information on the central bank’s policy intentions.

Let me elaborate on some of the risks. First, the general public may fail to fully understand that a pre-announced path of future policy rates is conditional and that changes in the state of the economy will require changes to this policy path. Eventual deviations from the previously projected policy path may therefore be viewed, at least by many who are not experts in monetary economics, as a failure of the central bank to follow its announced intentions. This could damage its credibility, even if it is conducting policy in an optimal manner. Second, the central bank is often faced with a high degree of uncertainty, including “Knightian” uncertainty, about the functioning of the economy and the response of economic agents to shocks and policy actions. Under such circumstances, it is difficult to determine an optimal or appropriate path of policy rates over a long time horizon and to agree about such a policy path in a policy-making committee, and to properly convey to the public all the conditions underlying such a path. Finally, I do not think that publishing a path of future policy rates, which is mechanically derived from an empirically estimated reaction function, would be helpful. On the contrary, it would be difficult to explain the difference between this path and the one decided by the decision-making body in the context of a forward-looking strategy with a medium-term orientation. Confusion rather than greater clarity may be the outcome of implementing such an approach.

For this reason, I suggest that a central bank should be as transparent as possible, but no more so than is realistically useful for enhancing the clarity and understanding of the

future monetary policy stance.¹ This does not mean that central banks cannot give qualitative guidance about the future policy stance by means of official statements, particularly in special circumstances when the size and balance of risks to the outlook for price stability dictates the provision of such guidance or when the central bank believes that market expectations about future monetary policy are deviating significantly from its policy intentions as determined by its own assessment.

However, I share some of Alan's considerations on the limits and drawbacks of macroeconomic projections based on a constant interest rate assumption. As you know, in order to improve the overall consistency and forecast quality of the Eurosystem staff macroeconomic projections, we recently decided to change the assumption about the future path of short-term interest rates that is incorporated in the staff projections. With the projections released today, we have started to produce macroeconomic projections that are conditional on the path of future interest rates expected by the markets, as embedded in the yield curve and in futures prices. This approach corresponds to the second option in Alan's paper and addresses the concerns expressed by eliminating an internal inconsistency and improving transparency. It will not solve all of his concerns, but it should mitigate some of them.

IV. Monetary policy and asset prices

I will turn now to the questions in Alan's list that concern the relationship between monetary policy and financial markets. In Question 14, Alan asks: how should central banks react to asset price bubbles? To answer this properly, I would need at least another 20 minutes. Unfortunately, I do not have that much time, but let me make two remarks.

First, I agree with Alan that asset price bubbles are difficult to identify in real time and are thus often only identified *ex post*. This notwithstanding, it appears to me that there are a number of tools that can help identify the emergence of bubbles. The ECB does not target asset prices, but pays close attention to asset price movements with a view to preserving the stability of consumer prices over longer horizons. In this regard, the role of money and monetary analysis in the ECB's strategy helps us to assess developments in asset prices and the degree to which they pose a risk to price stability over the longer term.

¹ This view is closer, though not identical, to that suggested by Mishkin (2004), p. 50.

Second, excessive appreciations and subsequent rapid reversals in asset prices could have very high costs for price stability and for the real economy. Therefore, a policy of only “mopping up after” – to use Alan’s terminology – could have worked on some specific occasions, but this may not always be the case while, at the same time, it might create moral hazard problems. In light of this, a central bank may want to consider a policy of carefully “leaning against the wind” under certain, clearly exceptional, circumstances. It would then adopt a somewhat tighter policy stance in the face of an inflating asset market than would otherwise be the case if confronted with a similar macroeconomic outlook under more normal market conditions. Given the uncertainty surrounding the appropriate monetary policy stance under such circumstances, it could consider to err on the side of caution by trying to avoid feeding the bubble with an overly accommodative policy. These issues, which have been extensively discussed, deserve further analysis and consideration.

V. The implications of globalisation for monetary policy and the global responsibilities of central banks

My final remarks relate to the last, very challenging and open question raised by Alan on the global responsibilities of the main central banks. This is an important question that cannot be answered in a simple, straightforward manner and in a limited period of time. And Alan does not provide an answer, either. I would like to pose, however, a set of related questions on the implications of globalisation for monetary policy. In a globalised economy, should the role and orientation of monetary policy be changed? Should the framework for analysis and policy formulation be amended? Is the required analysis for setting policy becoming more demanding? The direct and brief answers I recently gave to these questions are: no, no and yes to some extent.

It is sometimes argued that the monetary policy of a major central bank should help guide the domestic economy’s adjustment to the evolving global economic environment and the competitive pressures associated with globalisation; and that it should foster the adjustment of global imbalances and even assume responsibility for the smooth functioning of the global economy. In my opinion, globalisation does not affect the central role and overriding responsibility of central banks to preserve price stability “at home”. On the contrary, maintaining price stability in a rapidly evolving, globalised economy that may influence the dynamics of inflation in various ways becomes more

essential and challenging, particularly in situations where adverse inflation shocks or inflationary pressures in some economies are now more easily transmitted to others.

Consequently, if the primary objectives of monetary policy are unaffected by globalisation, the appropriate strategic framework for analysis and policy formulation should remain the same. However, the analysis required for policy formulation will have to carefully take into account the various effects of globalisation on the dynamics of inflation, economic growth and asset prices. For example: in the a globalised economy, traditional measures of core inflation are even more difficult to interpret and use as indicators of underlying domestic inflationary pressures; the estimates of potential output are more difficult to calculate in a robust manner; and the measurement and usefulness of output gaps are subject to greater uncertainty than is usually the case. Consequently, our role and responsibilities as central bankers are fundamentally the same in the globalised economy, but the performance of our tasks may be becoming more challenging. Having said that, I would agree that other pertinent issues raised by Alan deserve careful consideration.

VI. Concluding remarks

Clearly, there are many questions still to be answered, and challenges to be addressed. We should, however, also not forget that during the last two decades, industrialised countries have experienced a marked reduction in the average level of inflation and in the volatility of both output and inflation. I have no doubt that improved economic policies, and better monetary policy in particular, have contributed, perhaps largely, to this development, and despite the room for potential further improvements, as suggested by Alan. On this optimistic note, which befits such a celebratory conference, I should like to conclude.

Thank you for your attention.

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