BANCO DE ESPAÑA

Tarragona, 24 May 2006

Opening Remarks

European Summer Symposium in International Macroeconomics (ESSIM).
Center for Economic Policy Research (CEPR) and Banco de España

José Luis Malo de Molina
Director General del Servicio de Estudios del Banco de España

It is a pleasure for me and for the Banco de España to welcome you to the CEPR Summer Symposium in Macroeconomics, which is hosted for the eighth time here in Roda de Bará. Let me first thank the organisers for their kind invitation to start the Symposium with these opening remarks.

We have been supporting this Summer Symposium from the outset because, like other central banks, we are very interested in promoting close links with academic researchers. In modern central banking rigorous analytical and empirical studies are of the essence.

I´d like to see this opportunity to address some issues related to the analytical strategy we currently pursue in the Bank of Spain.

As it is well known, the fulfilment of the core functions of a central bank requires a close monitoring of the performance of the economy and the elaboration of economic forecasts. The institutional mandate of a modern central bank usually involves the assessment of alternative policy strategies, the formulation of policy recommendations and the development of an effective communication framework. To carry out these tasks, the Banco de España has built up progressively over time a set of analytical tools, both through the compilation of far-reaching statistical information and the development of theoretical and empirical models. The path the Banco de España has followed in developing its analytical arsenal has run parallel to the changes in its institutional functions. In this respect, to mention just the most recent example, EMU membership has changed the nature of the Banco de España's responsibilities in the conduction of monetary policy and, at the same time, has entailed substantial innovations in its analytical practices.

The analytical methods used by Banco de España are in permanent evolution with the aim of incorporating advances that are in the forefront of economic research in order to meet the challenges posed by the evolving nature of macroeconomic problems.

In these remarks, I will focus on three main issues. First, I will provide an overview of the analytical work conducted by the Banco de España in support of its institutional mandate, placing special emphasis on the methodological aspects of this analysis. In this respect, I´d like to mention that we have recently published a book with the objective of drawing together and disseminating the analytical methods currently used by our institution to assess Spain's economic and financial situation. The effort made has been very useful to clarify the state of the art of our analytical practices and has contributed to improve transparency. As a second topic, and related to the same issue, I will comment on the use by central banks of the new generation of Dynamic Stochastic General Equilibrium models, now being developed in many Eurosystem central banks, including the Banco de España itself. Finally, I will refer briefly to the current research agenda of DG Economics, Statistics and Research.

* * * * *

Let me start by referring to some methodological aspects of our analytical work. Applied analyses may pursue a wide variety of goals that are determined to a large extend by the objectives of the institutions that undertake them. In the case of central banks, although their analytical concerns cover virtually all of the broad spectrum of applied economics, their specific focus is derived from their specific objectives and functions. Central banks must optimise their analytical capacities particularly in the areas of monetary policy and macroeconomic and financial stability. Consequently, analysis of price formation and inflation rate determinants and of the role of financial variables in the behaviour of economic agents is central in the analytical agenda of central banks.

Unquestionably, the analytical approach of central banks places special emphasis on the factors that affect the stabilising role of macroeconomic policies. This approach should not, however, be understood as a pre-eminence of short term analysis. Rather, it also focuses on issues such as the long-run determinants of growth, including the structural features of the economy; the microeconomic fundamentals underlying aggregate behaviour; and the institutional and regulatory framework in which markets, the public sector, households and firms operate. A rigorous theoretically-based analysis of the real economic situation cannot be addressed without a thorough knowledge of the institutional framework and its historical roots.

The specific focus of our analysis does not lead to the choice of one single methodology. Broadly speaking, our approach has much in common with the methods used in academic circles; particularly, the use of rigorous analytical instruments and of a broad range of empirical and econometric techniques. In the same vein, the Banco de España rather than adopting a particular methodological approach draws on a diversified analytical base, occasionally using competitive conceptual approaches on a complementary basis. This somewhat eclectic use of economic theory is, I think, a legitimate means of assessing a highly complex reality, as the available theoretical models are always based on simplistic assumptions.

Time series analysis and economic modelling designed for short- and medium-term macroeconomic forecasting are at the heart of our analytical work. The reason for this pre-eminence of the forecasting activity lies in the fact that economic policies, and monetary policy most particularly, must operate in an environment of incomplete information and high uncertainty. In this setting, the elaboration of economic forecasts is an essential input to minimise the risks in the formulation of economic policies.

Our forecasting system is based on a combination of different econometric models drawing on various methodological bases as the best way to exploit the available information and to narrow the margin of discretionary judgement. But, as even the best econometric models are simplified representations of reality incorporating certain shortcomings, economic forecasting at institutions like the Banco de España, is always a mix of results arising from econometric models and from the

experience and judgement of forecasters. More precisely, in the unavoidable absence of an universally optimal model for blending all of the ingredients for an economic forecast, the judgement of the analyst therefore intervenes in several phases of the forecasting process. That is the case in the selection of statistical information sources and quantitative prediction techniques, in the selection and specification of models, and in the design of methods to assess alternative results.

Before moving to the second topic, let me add a brief reflection on the implications of EMU membership for our analytical work. Although participation in EMU has change our direct role in the conduction of monetary policy, it has not altered our analytical responsibilities, which have became even more complex under the new economic policy framework. I'll mention two significant consequences from this change.

First, to contribute to the design and conduct of the single monetary policy, the Banco de España has assumed analysis of the euro area so as to obtain autonomous opinions on strategy configuration and decisions on interest rates in the area. In this connection, we also must monitor developments in the key European policies such as the Stability and Growth Pact (SGP), the overall stance of the economic policy, and the stability programmes and structural reforms, among others.

Further, owing to the requirements and the restrictions it entails, EMU membership introduces a certain shift in the focus of the analysis of the Spanish economy. Participation in EMU ensures the maintenance of a regime of macroeconomic stability and safeguards interest rates and financial variables from potential disturbances associated with episodes of uncertainty or imbalances in the national economic policy stance. But this protection does not preclude new disequilibria emerging, which, in a monetary union, cannot be combated with monetary policy instruments. Under these conditioning factors, analysis of the Spanish economy should particularly take into account the repercussions arising from the fact that the most appropriate monetary policy for the euro area as a whole may not coincide with what the domestic situation of the Spanish economy requires. Consequently, we must be prepared to act, in these circumstances, as the voice of the Eurosystem vis a vis the specific problems of the Spanish economy within the monetary union, to convey to agents and to the authorities the requirements derived from the common monetary policy. This is by no means an easy task that requires to be well equipped with a sound analytical arsenal.

* * * * *

Continuing with methodological issues, I will now move to the second topic of these remarks, namely, some reflections on the potential use of Neo Keynesian DSGE models for forecasting and policy simulation exercises.

As I said, we, as many other central banks and policy institutions, make intensive use of traditional macroeconometric models. This practice is maintained even in spite of the wide consensus attached in the academic world to the well-known Lucas Critique which states, as we all know, that standard macroeconometric models are unable to conduct policy simulations because rules governing macroeconomic developments depend on policy changes.

The use of standard reduced-form equation models for policy purposes has been sometimes justified on the basis of a possible lack of empirical relevance of the Lucas critique in forecasting exercises. But beyond this argument, which is far from being generally accepted, the recourse to standard macroeconometric modelling is explained by the unsuitability of alternative tools to satisfy the analytical requirements of policy makers. That is the case of univariate time series models or Vector Autorregresions (VARs) designed for unconditional forecasting or Real Business Cycle (RBC) models. These alternative models are generally poor in capturing the basic economic relations that should be used to introduce discipline in discussions held by policy makers and to explain decisions to the public.

In this context, Neo-Keynesian general equilibrium models seem to provide a very promising framework to conduct forecasting and policy analysis. They are micro-founded, rational expectations models, in which equilibrium conditions can be approximated by a set of explicit economic relations that resemble those of traditional macro-models -albeit with fully endogenous expectational terms. Moreover, price and wage stickiness makes nominal variables play a relevant role. These features justify the substantial effort made by many Eurosystem central banks –the Banco de España among them- in exploring the capabilities of the new generation of DSGE models.

The interest of central banks in the development of micro-founded models that are more robust to changes in the monetary policy strategy has grown in parallel to the increase in the potential exposure of the available macroeconometric models to the Lucas critique. On one hand, most central banks have changed in the recent past their objective function placing more weight on price stability. This policy shift has probably weakened the ability of standard macroeconometric models to fit the data and provide sensible forecasts. More importantly, participation in EMU has entailed a particularly redical change in the monetary policy regime, which has probably further exacerbated the difficulty in modelling output and inflation dynamics.

Nevertheless, although this new generation of DSGE models represent a promising avenue to assist central banks in their analytical tasks, the currently available models of this type don´t fit the data satisfactorily and are not able to describe the likely behaviour of the variables that make up the scenario on which central banks base their economic analysis and policy decisions. In short, the internal consistency required by these models have entailed, so far, an excessive simplification of the economy making it difficult for them to compete with richer –although less theoretically robust- standard macroeconometric models.

Therefore, at this stage it seems essential to search for more sophisticated DSGE models if they are to be used as a primary analytical tool for forecasting and simulation. In the meantime, central banks face the challenge of adequately handling the trade-off between unstable standard macroeconometric models and so far misspecified DSGE models. In this context, as I mentioned earlier, the adoption of a flexible combination of different approaches and tools, adjusted to the cross-equation discipline of a traditional macroeconometric model seems to be a wise strategy. I am certainly sure that some of the papers to be presented in this Symposium, whose attractive programme covers a wide range of issues, will be helpful to guide us in further developments of our analytical tools to conduct forecasting and policy analysis.

* * * * *

After all these methodological comments, let me say a few words about the research activities of DG Economics, Statistics and Research at the Banco de España.

The research agenda of DG Economics, Statistics and Research is designed essentially to deepen our knowledge of the workings of the Spanish economy in its European and institutional context, to the analysis of macroeconomic, monetary and financial stability issues, and to the development of econometric and statistical tools. Currently, the main research priorities are the positive and normative analysis of monetary policy, the identification of the sources of macroeconomic disparities in the euro-area, the housing market, the financial decisions of Spanish households, the evolution of productivity and its determinants, and the macroeconomic implications of current account deficits in a monetary union.

I hope that a better knowledge of our research agenda will strengthen the close links we maintain with the research community through a number of different channels. Conferences and seminars like this among others.

Among the services provided by the Banco de España to the research community, let me highlight the recent Spanish Survey of Household Finances. The EFF, for its Spanish initials, is a new survey conducted by the Banco de España and included in the National Statistics Plan. The main aim of this survey is to obtain detailed information on wealth and financial decisions of Spanish households. It is the only statistical source in Spain that allows the linking of incomes, assets, debts, and consumption at the household level. It was first launched in 2001 and the results for the first wave, 2002, were made publicly available at the end of 2005. Field work for the second wave, referred to 2005, is currently in progress. The results of this survey will provide an essential input for research on the financial behaviour of households that is an increasingly relevant issue for the conduct of economic policy.

If you have perceived a slight tone of marketing in my words that should be attributed to the fact that we are celebrating these days the 150th anniversary of the refoundation of the Banco de

España. The Spanish central bank was founded in 1782 (224 years ago) with the name of Banco de San Carlos (Bank of Saint Charles, the name of the King at that time) but it was reorganized with the new name of Banco de España in 1856. Among other events, we have organized an international conference on Central Banking in the 21st Century that will be held in Madrid in two weeks time on the occasion of the Governing Council meeting of the ECB also in Madrid. With the organization of this Conference, that will gather members of the ECB Governing Council and central bank governors from the rest of the world with distinguish academics, we have wanted to underline that economic analysis is at the heart of modern central banking.