

## Berichte

### What Monetary Policy for the European Central Bank?

By Peter Bofinger, Würzburg

The creation of the European Central Bank provides the challenging opportunity to design a policy regime that reflects the state of the art of economic theory. In order to support this process Peter Bofinger and Richard Portes organized a joint Centre for Economic Policy Research (London) and Irving Fisher Society (Würzburg) conference in Königstein on June 9/10, 1995. The conference brought together central bankers from many countries as well as prominent academics.

In his paper "*How Can the European Central Bank Become Credible?*" Alex Cukierman discussed various options to enhance the credibility of the ECB. One major issue is the effect of Central Bank Independence (CBI) on credibility. Empirical studies show that inflation is lower the higher the degree of legal independence of the central bank. But the author expects that legal independence alone will not assure perfect credibility under all circumstances as legal and actual independence are seldom perfectly correlated. Thus, it is necessary to supplement legal independence by additional factors like fiscal policy etc. Discussing possible conflicts between financial and price stability, Alex Cukierman concluded that in the case a central bank prefers to achieve both there is no long-run trade-off. But, due to free rider problems guidelines are necessary for the distribution of seignorage among countries. As the establishment of credibility is enhanced by fiscal constraints the author argued that the Maastricht Convergence Criteria for fiscal policy point in the right direction. However the criteria for the inflation rate and the interest rates are of secondary importance because in the long run they are determined by the stance of fiscal and monetary policy. As credibility is fostered by nominal targets, Alex Cukierman recommended for the ECB a rule that combines a base target and an inflation target.

*Lorenzo Bini-Smaghi* made the general criticism that CBI can hardly be assessed only on the basis of objective criteria. He regarded seigno-

rage not as a central problem for EMU because the ECB is bound to follow the principles of open market economy and competition. In contrast to Cukierman he is of the opinion that the inflation criterion is important due to the fact that credibility would be jeopardised from the start on if the primary objective of maintaining price stability is not achieved. As the transition process is full of risks it has to be ensured that financial markets believe the process, thus a strong political support is necessary. Lorenzo Bini-Smaghi also stressed the importance of accountability because if central bankers are not accountable for the things they do, independence does not matter.

In the discussion *Manfred J. M. Neumann* pointed out that even without legal accountability the Bundesbank is accountable to the public. *Otmar Issing* supported Neumann's view. Since in Germany the Bundesbank law could be changed by a simple majority of parliament, the Bundesbank feels the need to explain its policies. *Stefan Collignon* discussed the issue of becoming versus being credible. If the ECB model takes over the Bundesbank model than it is credible for everyone. But you have to show how you get from here to there. *Leonardo Leiderman* did not agree that accountability is needed for price stability. Any policy maker is accountable to the public. This is not a question of accountability, but a dynamic game with three parties, the ECB, the public and the government. *Mervyn King* referred to the problem that one country might be affected by a severe recession. The political legitimacy would be questioned and the politicians would claim for exit. This divorce danger should be discussed already now.

In their paper "*The Strategy of Monetary Targeting: Can The German Experience Provide a Model for the ECB?*" *Manfred J. M. Neumann* and *Jürgen von Hagen* analysed the Bundesbank's monetary policy concept and its transformability to the ECB. To achieve its objective to price stability, the Bundesbank announces a monetary target range for M3 derived from the equation of exchange. Combining the price gap approach and the derivation of the monetary target shows that the actual inflation rate will exceed the medium-term targeted inflation rate in times of business cycle up-swings, when actual output lies above potential output and actual velocity lies below its trend value. On this basis the authors discussed the actual performance with the help of estimated reaction functions for the period 1979 to 1994. The two undershootings and five overshootings during that period happened in times of strong exchange rate movements. In addition, the Bundesbank deviated from the monetary target to fight excess inflation or – interpreted in the light of the price

gap model – to smooth the business cycle. The estimation results also show that the mid-point target determines the long-run growth of money supply, but it has little predictive power for the money growth in any particular year, and that the Bundesbank tolerates on average an inflation bias. Nevertheless, Neumann and von Hagen recommended the concept of monetary targeting for the ECB. It anchors inflationary expectations, provides sufficient flexibility to react to unanticipated shocks, it can easily be understood and it can be used as a shield against notorious demand for easy money.

In his comment *Otmar Issing* mainly agreed with the description of the Bundesbank's monetary policy concept and the conclusion to apply this strategy to the ECB. For the ECB he sees the danger in a lack of credibility, because it is a completely new institution. To overcome this problem it should take over as much credibility from its predecessors as possible, which includes a clear concept of monetary targeting. The needed stable European money demand is an empirical question. Financial innovations might be a risk, but this is also true for interest rate targeting. Like Neumann and von Hagen *Otmar Issing* disapproved of the concept of direct inflation targeting. Non-monetary causes of inflation in the short-run would endanger the ECB's credibility.

In the discussion *Leonardo Leiderman* remarked that the M3 target of the Bundesbank does not seem to be a very serious target, because of the frequent deviations and the necessary explanations to the public. For the ECB he fears a serious credibility problem as the cost of target deviations. *Carlo Monticelli* emphasises that according to his own studies an area-wide money demand is stable, but one cannot say whether it will resist the major regime shift of a monetary union. *Ernst-Moritz Lipp* stresses the importance of the transition phase between the fixing of parities and the conversion into a single European currency. For the interim period he expects major shifts of assets, which make monetary aggregates an unreliable basis. *Lorenzo Bini-Smaghi* asked how the Bundesbank could remain credible in spite of missing 50% of its monetary targets. The ECB is not in the same position but will be under very strong scrutiny right from the beginning. *Alex Cukierman* suggests a concept that combines monetary and inflation targets. This is costless as long as both variables move in the same direction. For contradictory developments a rule has to be formulated to stick to the low end of the target. *Mervyn King* believes that a comparison of central bank council meetings of the Bundesbank, the Fed and the Bank of England would reveal a lot of similarities despite of the different monetary concepts.

*Leonardo Leiderman* presented a joint paper with *Lars E. O. Svensson* on “*Inflation Targets*”. As the main reasons for this approach, he stressed the need of nominal anchors for price-setters and the disappointment with monetary and exchange rate targeting. The main characteristics of inflation targets are an explicit quantitative target and the absence of intermediate targets. The main advantage of inflation targets is their high transparency and the crystallisation of price stability as the main goal of monetary policy. On the other hand the controllability of inflation targets is less than of monetary targets, so a trade-off exists between transparency and controllability. In several case studies (New Zealand, Canada, Britain, Sweden) the author showed that so far the performance of this approach is positive. However, there has not been a test of the inflation target regime over a whole business cycle, so it is too early to provide a complete judgement of inflation target regimes. For the European Central Bank *Leiderman* proposed the model of the Bundesbank, which he sees as a special case of an inflation target regime, but with an explicit inflation target of 2% ( $\pm 1\%$ ).

*Mervyn King*, who discussed the paper, pointed out that the shift towards inflation targeting has been undertaken in a lot of countries in order to constrain discretionary behaviour and to give policy makers the right incentives for a suitable outcome. Like *Leiderman*, he sees the main argument for adopting inflation targets in the clear obligation to promote price stability. On the other hand he criticised that inflation targeting promises more to the public than can be held. Monetary targeting might be a better concept because the central bank is able to control a monetary aggregate and can be held responsible for failing its objective.

*Alex Cukierman* explained that there will always be an inflationary bias in public expectations because of public uncertainty in judging whether inflation target preannouncements are a commitment of policy makers or just a forecast and because of the well known arguments of *Barro and Gordon*. *Frederic Mishkin* pointed out that information about monetary targets are available earlier than information about inflation, so central banks are able to adjust their policies timely. *Georg Rich* emphasised the important role of transparency of inflation targeting to the public. He stated that inflation targeting forces the central bank not only to tell the public what to achieve but also how to achieve it. This raises transparency and includes showing the public the necessities of monetary policy in order to achieve its objectives. *Peter Bofinger* pointed out that a theoretical framework for inflation targeting is still lacking so that its transmission process rests on a black box.

The literature on the term structure of interest rates, as an indicator of monetary policy, has mainly focused on the United States. In their conference paper “*The Term Structure of Interest Rates and its Role in Monetary Policy for the European Central Bank*” Arturo Estrella and Frederic S. Mishkin presented evidence on the applicability of the term structure within a core-set of European countries. Their econometric research addresses two questions: Can the central banks in Europe control the term structure and does the term structure have predictive power for future inflation and real activity? Their results support the fact that central banks can control to a large extent the term structure through interest rate policy instruments. Hence, the spread between the long- and short-term interest rates contains valuable information about the monetary stance. Concerning the second question, the empirical findings show that the spread has predictive power for both real activity and inflation with horizons of one to two years for the former and longer horizons for the latter. The authors conclude that the term structure does play a useful role as an indicator of the tightness of monetary policy for the European Central Bank (ECB). Furthermore, the term structure could also be a predictor of real activity and inflation in Europe. However, Arturo Estrella and Frederic Mishkin point out that the ECB should not depend on the term structure as its only indicator. In addition, according to the *Lucas’ Critique*, a policy change in Europe (e.g. establishing an ECB) is likely to alter the structure of the European financial markets.

In his comment *Eduard Bomhoff* stressed the notion that the ECB should use the term structure of interest rates as one of many indicators for monetary policy, e.g. next to oil- or housing-prices. He mentioned three short-comings of the paper: first the problems of making tests for monetary policy within the fixed exchange rate system of the EMS, second, the lack of an underlying theory, i. e. why the term structure is a good indicator for monetary policy; third, the problem of differentiating interest rate volatility. Eduard Bomhoff concluded that as the forecasting message of the term structure is very important, the ECB should look at it carefully. However, the term structure would not give any recipes for monetary policy.

In the discussion, *Warren Oliver* stressed the need to analyse aggregate interest rate data and compare it with other indicators like money. He also mentioned the high level of sensibility of the results using different techniques of estimation. *Jürgen Kröger* asked why France is part of the core countries although she imposed direct credit controls in the mid eighties, making the term structure less reliable. *Otmar Issing* explained

why the Bundesbank resisted to use the German term structure as a policy advice, because it is partly influenced by the US or the world interest rates and not by the Bundesbank itself. *Alex Cukierman* gave importance to the way the public interprets a policy change of the central bank. Lowering the short-term interest rate can either be viewed as a permanent or a temporary loosening of monetary policy. To *Leonardo Leiderman* a term structure represents the inflation scarce of the markets and if the term structure is only useful for obtaining information, a less restrictive approach (e.g. through stock market data) should be taken. The predictive power of the term structure is, according to *Manfred J. M. Neumann*, rather poor. Probabilities of less than 50 % are not significant enough. He also underlines the missing theoretical discussion on the term structure. Instead of using the term structure for forecasting purposes, *Peter Bofinger* suggested to employ a real short-term rate, because its effects on the real economy are much clearer than for the term structure.

Starting from a Political Economy point of view *Peter Spencer* shows in his paper “*Should the ECB Adopt a Divisia Monetary Aggregate?*” that there is a strong theoretical necessity for monetary targeting because of the ECB independence and the federalism within the EU. For the selection of a monetary aggregate as an intermediate target Peter Spencer lists four criteria: admissibility, stability, simplicity, and controllability. He mainly focused on the criterion of admissibility: An admissible aggregate can be received if the marginal rates of substitution between any two components of the aggregate are independent of the values of any variable outside the aggregate. This condition is met if the prices of the components vary proportionally. This so-called Hicksian Composite Good (HCG) Theorem allows it to add all non-interest bearing financial assets within a national financial system (vertical aggregation) and over these systems if the exchange rates are fixed (horizontal aggregation). But especially in the case of the vertical aggregation of non-interest-bearing and interest-bearing financial assets one has to prove if the latter are substitutes for the former in making transactions. By using a nonparametric test in order to check whether or not a subset of national financial assets forms a weakly separable group in the potential member countries of the EMU, Peter Spencer found admissibility only of German M3 and UK M4 components. However, he concluded that this ensures admissibility for the whole EMU bloc because of the dominant size especially of Germany. For the aggregation of these components Peter Spencer preferred a Divisia monetary index because it takes the

different asset characteristics much better into account than a simple sum transaction measure. Finally, Peter Spencer showed that a Divisia measure is also superior to the simple sum measure as far as one considers the stability and the controllability criterion.

In his comments *Karl-Heinz Tödter* focused on the two central points raised by Peter Spencer: He shows that the identification of an admissible asset group is not as easy as Peter Spencer suggested. The controversial empirical results in the literature and the somewhat questionable conclusions give evidence for the low statistical power of the nonparametric tests. Regarding the aggregation procedure *Karl-Heinz Tödter* also showed firstly, that there are some restrictive assumptions behind the micro foundations of the Divisia measure. To derive the Divisia aggregate one is restricted to use a time-additive separable utility function of a representative consumer. Secondly, there are various measurement problems which are related to the construction of the Divisia aggregate: One has to find a convention for the benchmark rate and one has to make some adjustments to avoid negative user costs. One needs a measure for the own rates of return. As the standard Divisia formula does not take into account uncertainty and risk aversion one has to adjust the formula. One also has to observe how fast portfolio adjustments will take place. Sometimes it will be necessary to smooth the user costs due to the existence of adjustment costs or learning processes. Last but not least, financial innovations can influence the statistical properties of the Divisia monetary aggregate thus this measure gets a bias.

In the discussion *Mike Dueker* asked, if an admissible flow of monetary services receives some relevance for an intermediate target especially if there are no exact rates of return for the various components available. Taking up this question *Alex Cukierman* argued that the main interest of central bankers should lie in the explanation power of the monetary aggregate for the price level. The admissibility of an asset collection in terms of a representative consumer utility function or the violation of a nonparametric test has no meaning for this central point. It answers in no way the question for the best nominal aggregate to achieve price stability. Seen in this way *Carlo Monticelli* stressed the point that in spite of the theoretical arguments in favour of the interest weighted aggregates there is no empirical evidence for their superiority. On the other hand *Georg Rich* emphasised that there is no absolutely whether-or-not decision between Divisia and simple sum. The Divisia aggregate can serve as a good additional monetary indicator.

In their paper "*Which TARGET for Monetary Policy in Stage Three? Issues in the Shaping of the European Payment System*" *Curzio Gianinni and Carlo Monticelli* concentrated on the strong link between the payment system and monetary policy. The establishment of an integrated market for central-bank money across member countries is an indispensable requirement for the conduct of the single monetary policy in Stage III. This, however, can only be attained if it is supported by the integration of national payment systems. To ensure the minimal degree of integration and harmonisation the EMI has just designed a system labelled TARGET (Trans European Automated Real-Time Gross Settlement Express Transfer). It consists of a real time gross settlement system (RTGS) in each country participating in the Monetary Union. It is based on the market principle, the decentralisation principle and the principle to follow a minimum approach. To implement TARGET nevertheless successfully, the active support of central banks, a clear perception by market participants of the benefits of RTGS and consistency with the instruments and procedures of monetary policy are required. In this respect, the key issue is how to satisfy the increasing liquidity needs which RTGS systems are likely to imply.

In his comment *Eduard Hochreiter* emphasised the need to establish the integrated payment system at the beginning of stage III. If this will not be the case, different interest rates are possible, because the arbitrage process will not work. A further problem in his opinion – especially in the light of the market principle – is the authors' proposal to promote RTGS by regulations or subsidies. Finally, he assumed that there will remain some fragmentation in the financial markets because of specific knowledge of local banks and preferences by the local population.

In the discussion *Alex Cukierman* raised the question whether an integration of international capital markets is different from national integration only in a quantitative or also in a qualitative way. *Stefan Colignon* recommended to do payments in ECU when TARGET is implemented. *Manfred J. M. Neumann* put forward the potential disadvantage that intraday operations may induce higher volatility on money markets. *Klaus Friedrich* remarked that there is a danger of too much regulation.

*Georg Rich* presented the paper "*Does the European Central Bank need Minimum Reserves?*". After an overview over the historical experience with reserve requirements he focused on the monetary policy aspects of reserve requirements. They may strengthen the central banks' ability to control the money supply but they can as well cause several



distortions. Rich concluded that reserve requirements do not necessarily strengthen central-bank control of either the money supply or the ultimate target variables of monetary policy. The principal reason for various central banks to insist on reserve requirements are operational aspects of monetary policy. Ample commercial-bank holdings of reserves enable central banks to limit their role to a lender of truly last resort. For the ECB Rich came to the conclusion that modest reserve requirements might be needed in order to facilitate ECB operations.

*Martin Klein* agreed that reserve requirements should belong to the tool kit of the ECB. He emphasised that reserve requirements reduce the probability of central banks to turn into lenders of last resort. Without reserve requirements the central bank would slip into an undesirable equilibrium. Klein suggested that reserve requirements might have positive effects under aspects of industrial policy. Since small banks hold excess reserves while reserve requirements tend to be binding for large banks, reserve requirements could serve as a compensation for potential disadvantages of small banks on the larger European market.

In the discussion *Peter Spencer* mentioned that England succeeded in dispensing with reserve requirements. Significant moral-hazard problems did not arise. *Lorenzo Bini-Smaghi* questioned the applicability of the UK-system to Europe. *Axel Siedenberg* maintained that there are no convincing reasons for required reserves. In case of their instalment, they should be interest-bearing. *Volbert Alexander* emphasised the close connection with the discussion concerning the optimal European payments system. Knowledge of the monetary policy instruments available to the central bank is an essential prerequisite for this issue. *Jacques Mélitz* stressed the trade-off concerning the reserve ratios. Reserve ratios should be low in order to avoid distortions. At the same time they are to provide adequate buffer stocks. Moreover reserve requirements do not solve the moral-hazard problem. Even in case of existing reserve requirements the central bank might be forced to become a lender of last resort.

In the last paper of the conference *Jürgen Jerger* and *Lukas Menkhoff* investigated “*Refinancing Policy Options of the European Central Bank*” (ECB). The authors evaluate the available instruments with respect to the goal of efficiency, competitive neutrality and subsidiarity and use these results to formulate the outlines for a refinancing policy concept of the ECB. The most important element of their proposal is a recommendation for standing facilities. To ensure the necessary flexibility in controlling unexpected money market situations some open market operations

are helpful. In addition, the authors recommend an unlimited marginal facility to accommodate an upward liquidity demand shock. According to Jerger and Menkhoff, limiting the ECB to these three instruments would contribute to an understandable and credible stance of European monetary policy.

In his comment *Jacques Mélitz* emphasised that the question of how to control the money stock is not investigated in the paper. He added that different techniques of intervention in Europe exist and that these need to be unified. After the European unification process has taken place, decentralisation is not sensible. Jacques Mélitz also discussed the issue of standing facilities critically.

The discussion focused largely on the interpretation of the concept of subsidiarity. Jürgen Jerger and Lukas Menkhoff discussed operational subsidiarity and subsidiarity within the banking sector. *Richard Portes* and *Lorenzo Bini-Smaghi* put forward that the principle of subsidiarity is not correctly interpreted by the authors in this context. *Detlev Rahmsdorf* stressed the role of commercial banks as well as the role of a volume tender and favoured decentralisation. *Manfred J. M. Neumann* criticised that decisions at the local level and the interbank market are not investigated in the paper.