
European Monetary Union: Operating Monetary Policy

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The Maastricht Treaty provided a road map for the unification of the currencies of European Union members. But unification requires that monetary policy be operated by a single monetary institution, and many operational issues must be addressed.

THE MAASTRICHT Treaty establishing the European Union (EU) requires EU members to satisfy a number of criteria before joining the economic and monetary union (EMU) (see box). With the start of EMU, expected in 1999, the currencies of participants will be irrevocably locked and, in time, replaced by a single currency, the euro.

A single currency has to be managed by a single monetary institution. The monetary authority for the system—the European System of Central Banks (ESCB)—will be made up of the European Central Bank (ECB) and the national central banks (NCBs) of the countries that participate in EMU. To pave the way for a European central bank, the European Monetary Institute (EMI) was set up in 1994. Its responsibilities include developing the framework for monetary and exchange rate policy, the ESCB's operational rules and procedures, and the statistical database; preparing the groundwork for issuing EU banknotes; and

promoting efficient payments across countries' borders. The EMI will be replaced by the ECB when a decision is taken to move to economic and monetary union.

Maintaining price stability will be the ECB's primary objective, but the Maastricht Treaty defines only in general terms how the ECB should operate: there should be open markets with free competition; the ESCB cannot finance public deficits or buy government securities in the primary markets; and the execution of its operations should be decentralized so that recourse can be made to the NCBs "to the extent deemed possible and appropriate."

The EMI has been focusing on monetary policy strategy, procedures, and instruments. Operating monetary policy will require a uniform stance throughout the monetary union, defined as the equality of interest rate levels in the EMU interbank market. To make this work, monetary policy formulation has to be centralized; instruments and techniques should be harmonized so that monetary policy signals are uniform across countries; and sufficient possibilities for EMU-wide arbitrage should be available so that interest rate changes can be transmitted quickly and uniformly throughout the monetary union. This last condition requires, at a minimum, a same-day EMU-wide payment and settlement system to support wholesale transactions.

Operating monetary policy in the EMU raises two basic questions: what variable(s) should serve as target(s) to reach the price stability objective, and what instruments should be used to reach the target(s)?

Regarding targets, discussion seems still to be open as to whether the ESCB will

make use of an intermediate monetary target or will use an alternative, in particular, a direct inflation target. In many EU countries in recent years, especially because of widespread financial innovation, there has been a breakdown of the relationships between money and inflation. These relationships are also likely to be uncertain in the early days of the EMU. Nevertheless, the apparent success of the monetary targeting approach used in Germany might give added credibility to the ECB at the start-up of the EMU if it adopts a similar framework. Also, recent studies of money demand relationships have tentatively shown a stable money demand at an aggregate European level. Besides, inflation targeting is relatively untested and therefore may not be a good option at the outset of policy operations of a new monetary institution.

Whatever the decision on which variable to target, there is general agreement on the use of the short-term interest rate as the operational target. There is also a general feeling that a money target and an inflation target could be operated with essentially the same set of monetary instruments. Indeed, a number of EU countries have shifted from one to the other in recent years without this of itself leading to a fundamental change in monetary instruments.

As for the selection of instruments, the EMI, guided by the ESCB statute, has put forward a number of criteria: efficiency and effectiveness, market conformity, equal treatment with respect to all groups of financial institutions that have access to the ESCB, simplicity and transparency in support of the other criteria, decentralization to the extent possible, and continuity

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in the transition to the new operational framework.

The principle of decentralization deserves some attention. While monetary policy *formulation* in the EMU must, by definition, be centralized, there is an ongoing discussion regarding the degree to which *implementation* can be decentralized. An argument in favor of decentralization is that because the NCBs know local financial markets well, they can implement monetary policy more effectively. There is also a desire to maintain a role for the NCBs, partly because there may be a linkage between the monetary operations of an NCB and prospects for financial markets in that country. But not all instruments are candidates for decentralization. Management of reserve requirements and standing facilities can clearly be conducted on a decentralized basis, but there is less experience with decentralization of open market operations.

Instrument frameworks

The ESCB could use three types of instruments: reserve requirements, standing facilities, and open market operations (OMOs). The choice among them depends to a large extent on views regarding the respective roles of the central bank and the markets in stabilizing the system. At one extreme, interest rates are targeted very narrowly. With little use of the self-stabilizing properties in the system, the ESCB would have to operate frequently in the market to achieve the target. At the other extreme, the authorities set a corridor within which interest rates can fluctuate (they effectively set interest rate bounds), and the self-stabilizing properties of the system will reduce the frequency of the central bank's discretionary interventions in the market. In practice, most EU central banks have been operating somewhere between these models. For instance, the Bundesbank sets interest rate bounds and intervenes in the markets to manage movements within these bounds.

Reserve requirements. Deposits that banks are required to hold with the central bank to back their own deposit liabilities—reserve requirements—fulfill two monetary functions: monetary control and money market management. As a monetary control device, reserve requirements help stabilize the relationship between reserve money and broader measures of

money (this is usually called the money multiplier) and increase the extent to which the demand for money responds to a change in interest rates in case of less than full remuneration of the required reserves. The money market management function consists of inducing or enlarging the banks' demand for reserves and, when reserve requirements only need to be met on average during the holding period, limiting the effect of daily reserve fluctuations on money market interest rates. Less volatile

requirements may be given some consideration, although the level of reserve requirements in the EMU could be lower than that prevailing in some of the major countries until a few years ago.

The design of reserve requirements is related to their role. If much weight is placed on their monetary control function, the reserve requirement ratio (the ratio of banks' required reserves held at the NCB to banks' deposit liabilities) should be non-negligible, and the reserves should not be fully remunerated. However, the market management function can be fulfilled with a relatively low ratio; indeed, averaging the ratio around zero would be a feasible option that would limit some of the instrument's drawbacks. If reserve requirements different from zero were imposed, there would be no monetary reason preventing the authorities from remunerating them. Other issues in the design of reserve requirements—on what base and for which period they should be calculated, and for how long they should be maintained—are unlikely to cause any great difficulty. However, there is the issue as to whether the ESCB/ECB statute—which says that only credit institutions, defined as those institutions that both accept deposits and extend credits, are required to hold reserves—might not be too restrictive from a monetary policy point of view. A wider definition would be "financial institutions," which include mutual funds and, in some countries, postal financial services.

A related issue is the degree to which a commercial bank would be able to choose in which NCB it would maintain its required reserves. The Maastricht Treaty provisions for the sharing of NCBs' profits may make the NCBs relatively relaxed about the distribution of required reserves between them. Nevertheless, there may be concern that freedom to choose could lead banks to shift to those centers where relatively large amounts of financial business are undertaken, spurring the shift toward these centers. In any case, even if they can choose, uniformity of reserve requirements will reduce banks' incentive to micromanage the location where they satisfy the requirement.

Standing facilities. These are central bank financing facilities for commercial banks that can be activated at their

When will economic and monetary union begin?

The Maastricht Treaty on European Union states that members of the European Union (EU) should decide before the end of 1996 whether the majority of member countries meet the specified convergence criteria to start Stage 3 of the Economic and Monetary Union and whether it is appropriate to enter Stage 3. If so, a date will be set for Stage 3 to start. Stage 3 is defined as the ultimate stage of economic and monetary union wherein the currencies of the participating EU countries are irrevocably locked and replaced by a single currency, the euro. To enter Stage 3, members must meet four convergence criteria: achieve a high degree of price stability; have a sustainable government financial position; observe the normal fluctuation margins for their exchange rate provided for by the exchange rate mechanism of the European Monetary System (EMS) for at least two years without devaluation; and achieve a long-term interest rate indicative of durable convergence and the country's participation in the EMS.

If a decision to start Stage 3 has not been taken by the end of 1997, the Treaty states that it should start at the beginning of 1999 with those members that have satisfied the convergence criteria. It has now been agreed that starting before 1999 will not be feasible. There has even been some discussion about postponing the start beyond 1999. The Treaty contains provisions that would permit Denmark and the United Kingdom to "opt out" of Stage 3.

money market rates, in turn, reduce the need for frequent central bank intervention.

The recent widespread trend to lower reserve requirements reflects increasing recognition of the implicit tax that unremunerated reserve requirements entail, which may encourage customers to bypass the banking system (a process known as disintermediation). With financial deregulation, the scope for disintermediation, including offshore, has been growing. However, those countries that continue to maintain a monetary target, in particular, Germany, are concerned to have available the monetary control capability of reserve requirements, although they too have generally lowered the level of reserve requirements in recent years. If the ECB adopts a monetary target, monetary control arguments for reserve

discretion. There are three types: marginal lending facilities (a Lombard facility) at above-market rates; lending (discount) facilities close to or below market rates; and deposit facilities.

Combining standing facilities to establish a "corridor" to guide interest rate movements has considerable appeal. Such a corridor could clearly signal the stance of monetary policy. Changes in the rates on the standing facilities would generally signal a substantive policy change, while changes in interest rates deriving from open market operations might rather reflect day-to-day developments and indeed, in some cases, purely technical factors. At present, a majority of EU central banks use a combination of such standing facilities. Preparatory work has been undertaken to establish two standing facilities: a marginal lending facility and a deposit facility. The combination of a Lombard and a deposit facility would provide a symmetrical arrangement to clear the interbank market at the end of the day; liquidity can be injected at the ceiling rate and absorbed at the floor rate.

The width of the band—an issue still under discussion—has consequences for the intensity of the central bank's presence in the market, and for the depth of the money markets. A fairly wide band would reduce the frequency with which the central bank would need to intervene through open market operations, as well as the frequency of recourse by the commercial banks to the central bank's standing facilities.

The possibility has not been excluded that the ESCB could supplement its instruments with additional modalities for providing liquidity to the markets, for instance through a special refinancing facility with a maturity of a few months. This aspect is still under study.

Open market operations. OMOs are to be the key instrument in steering day-to-day developments in the money markets. They are seen as the main instrument for providing or withdrawing liquidity, steering interest rates, and, if needed, performing signaling functions. Decisions have still to be made on issues such as decentralization, which institutions can participate (counterparties), and remote access.

There are regular OMOs, which may take place at prespecified intervals (e.g., weekly or biweekly), and fine-tuning OMOs that could be done at any time, according to short-term liquidity developments. Repurchase agreements (repos, or reverse repos—agreements to purchase or

sell a security and to resell or repurchase it at a specified time in the future at a specified price) will be the preferred technique in conducting OMOs because they increase the central bank's flexibility with respect to the maturity of its interventions, reduce the impact on the market prices of the underlying securities, and circumvent more easily the potential problems that might otherwise arise with respect to the choice of eligible securities. However, the

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ESCB may use other techniques such as outright sales, foreign exchange swaps, issuance of central bank paper, and collection of fixed-term deposits.

In a decentralized execution of OMOs, the ESCB can take advantage of each NCB's knowledge of the local markets. Thus, under the instructions of the ECB, the NCBs would organize the bidding process, passing on bids received to the ECB for allocation decisions.

The principle of equal treatment in the statute of the ESCB points to using the widest possible range of counterparties for the central bank's OMOs. Often, only those institutions subject to reserve requirements are allowed to act as a counterparty to the central bank in OMOs.

Whatever the definition of eligible counterparties, there is also the issue of "remote access," that is, whether an NCB can be accessed by an EU bank established outside the national borders of the NCB. The principle that all banks recognized in one member state are authorized to do business in all member states can be understood to imply that all financial institutions could participate in auctions organized by central banks in other countries. While the principle of remote access is in line with the principles of the single market, central banks could create such an environment that there would be little reason for banks to seek it.

Payment system

An important element of the preparations for monetary union is the construction of a payment system to support achievement of pan-Union uniformity of interbank interest rates. This requires that settlement of large-value, cross-border transactions, in particular those associated

with the ESCB's operation of monetary policy, can be made on a same-day basis. A two-stage approach has been adopted to achieve this requirement: first, creating national large-value, real-time gross settlement (RTGS) systems with certain defined conditions in each EU member, and second, interlinking these systems at the EU level.

Each NCB is committed to introducing a large-value, real-time gross settlement system by mid-1997. For some NCBs, this involves redesigning their existing system, for others, building a new one. Work is also under way to develop an interlinking system, which, together with the national RTGS system, will be denoted the Trans-European Automated Real-Time Gross Settlement Express Transfer (TARGET) system. Much progress has been made in this area, and the required deadlines seem within reach.

The TARGET system will offer payment services at a speed similar to those offered domestically. The system will enable participants in the national RTGS systems to exchange domestic and cross-border payments in euro in the same way. TARGET will be based on real-time settlement and will, therefore, eliminate most settlement risks typically associated with net settlement systems. In contrast to national payment arrangements, TARGET will have two settlement agents: at the one end, the NCB that credits the account of the payee, and at the other end, the NCB that debits the account of the payer. However, the system does not create any delay in the transfer of funds, despite the existence of two settlement agents.

The TARGET system will be designed to operate only in euro. This raises questions for the start of EMU, when national currencies will still be circulating. The preferred solution seems to be that the system will convert national currencies into euro at the outset of the transaction, and will convert back at the end.

Interestingly, the TARGET system will be available to all member NCBs, even in countries that are not in the EMU at the outset, although, as noted above, only for transactions in euro. Access to the single-currency, large-value payment system may provide an incentive for banks and enterprises in non-EMU countries to undertake cross-border transactions in euro, which could lead to switching into euro even in those EU countries not in the EMU. If costs of financial operations are lower in EU countries outside the EMU area than in those inside, financial institutions may shift

their business to centers where it is relatively more profitable to centralize their treasury operations.

The issue of remote access is also relevant in the design of the payment system. While it would be difficult to resist remote access to payment facilities, conditions of access to particular NCBs, and hence the rules of operation of the various RTGS systems, could be so harmonized that there is no particular incentive for remote access.

Decisions on a number of technical and policy issues have still to be made. While harmonization of operating rules seems desirable in principle, some questions remain to be addressed. As regards opening hours, for instance, there is a concern that maintaining shorter hours in some countries may lead to a switch to those EU centers with longer opening hours. Also, any attempt to restrict hours might lead to a shift of business out of the EMU.

Regarding design of a uniform pricing system, pricing should cover the development costs of the system and be uniform across the EMU. However, development costs have been quite different across countries. The Scandinavian countries, for instance, essentially already had their RTGSs in place. A uniform price will be set for each transaction using the interlinking system, to avoid having banks source their transactions to minimize payment costs.

With these issues likely to be resolved soon, there is the prospect of the imminent introduction of a payment system throughout the EU that should represent the state of the art in terms of technology and payment risk analysis.

External issues

Under the Maastricht Treaty, the foreign exchange regime is to be determined by the Council of Ministers after consultation with the ECB, with the endeavor to reach consensus consistent with the price stability objective. The ESCB will be responsible for foreign exchange operations. It is widely held that the EMU will adopt a floating rate regime, at least at the outset.

Since not all EU countries may be able to join the EMU at the outset, the question arises as to which type of exchange rate arrangement should be established to link the non-EMU currencies to the euro and whether, in such an arrangement, as under the present European Monetary System (EMS), there should be provision for short-term credit facilities.

As pointed out earlier, it is not impossible that in countries that do not join the

EMU at the outset, there could be increasing use of the euro, particularly in the smaller countries. If this happens on a large scale, it would reduce the monetary independence of the countries affected and could also influence EMU monetary policy.

The models for the execution of foreign exchange operations are broadly analogous to those for domestic monetary operations: a centralized model in which the ECB carries out interventions from one single deal-

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ing room, and a decentralized system in which NCBs receive instructions from the ECB and undertake the actual interventions in their home markets.

The statute of the ESCB has stipulated an upper limit on the amount of the NCBs' foreign reserves that can be called up by the ECB. It is expected that the external debt-service needs of EMU members will be the major factor determining the level of the remaining national reserves (foreign exchange working balances). NCBs will be subject to ECB guidelines to ensure that they manage reserves in such a way that their actions in the foreign exchange markets do not interfere with the Union's monetary and foreign exchange policies.

Conclusion

The prospect of the EMU has led the EU central banks to put substantial efforts into examining the optimal design of instruments to operate a market-responsive monetary policy. This is taking place against a background in which the conditions of operating monetary policy are very different from those of even a few years ago: financial liberalization, facilitating the movement of financial flows; information system developments, enabling policy signals to be transmitted instantly across entire regions and across financial sectors; a deeper understanding of the implications of central bank independence and price stability as the primary policy objective; and finally, the increasing recognition of the interdependence between the effective operation of monetary policy and an adequate payment system infrastructure.

Although there is no decision yet as to whether a monetary aggregate should be used as an intermediate target, it seems to be agreed that short-term interest rates

should be the operational target. The ECB will operate on this target using some combination of reserve requirements, standing facilities, and OMOs. The relative emphasis placed on these instruments is likely to depend on a number of factors:

- the degree to which it is held that the ESCB can rapidly establish its credibility by adopting essentially the same instruments as are at present used by the country considered the most successful in its monetary policy in the EU—generally regarded to be Germany;

- the degree of concern over the various possible distortionary effects of reserve requirements. The more these matter, the smaller the emphasis likely to be placed on this instrument;

- the nature of the signals the monetary authorities wish to give to the market—if they wish to give continuous signals, they may rely on OMOs; but if they wish to limit market signals to discrete administered changes, they might seek to establish an interest rate corridor and intervene primarily by moving the bounds of the corridor; and

- the desirable degree of decentralization—if decentralization has a high priority, this may point toward a self-stabilizing system where OMOs may be undertaken rather infrequently.

The development of a pan-EU payments system is an integral part of the preparation for the EMU. Considerable work has been undertaken to develop RTGS systems in the member countries and to link these national systems. A number of issues are under consideration, including remote access and the degree of harmonization needed in the operating procedures of the pan-EU payments system.

These discussions are likely to have important implications for the conduct of monetary policy in other countries too. For instance, the Maastricht Treaty's provisions on central bank independence are already influencing central bank laws in other parts of the world. The resultant withdrawal of some EU central banks from their traditional function of acting as banker to the government may also come under wider consideration. The development of the RTGS system is likely to spur the development of such systems in other countries, in parallel with work done in wider groupings of countries such as the Group of Ten. Decisions reached on the choice of monetary instruments are likely also to have a considerable influence well beyond the countries of the EU. F&D