The European Central Bank and the Eurosystem

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The Eurosystem comprises the European Central Bank at its center as well as the national central banks of the twelve countries currently participating in monetary union.[1] The European Central Bank was established in July 1998, six months before the beginning of Stage Three of economic and monetary union. Although decisions regarding monetary policy are made centrally by the Governing Council[2] of the Eurosystem, the operational aspects of monetary policy—including open market operations, administration of the minimum reserve system, and management of the standing facilities—are undertaken in a decentralized fashion at the twelve national central banks.The main features of the Eurosystem's operating procedures are similar in many respects to those employed by the Bundesbank and other national central banks in the euro area in recent years.

Total assets of the Eurosystem as of December 2000 were about 836,000 million euros. Of these assets, lending to the financial sector, which was primarily in the form of repurchase operations, amounted to about 270,000 million euros—about one-third. The remaining assets are predominantly gold (about 14 percent), foreign currency claims (about 30 percent), euro-denominated securities (10 percent), and other assets (also 10 percent). Holdings of foreign currency claims in large part reflect the foreign exchange reserves of the Eurosystem; with the start of the European Monetary Union (EMU), all foreign exchange reserves in the euro area are held by the national central banks (NCBs), except for a fraction amounting to about 40 billion euros which the NCBs transferred directly to the European Central Bank (ECB). No foreign exchange reserves are held by euro-area finance ministries or treasury departments.

Policy Objective of the ECB

As specified in the Maastricht Treaty, the primary objective of the ECB is to "maintain price stability." The published definition of price stability is inflation of below 2 percent, measured as the twelve-month change in the harmonized index of consumer prices. In setting monetary policy, the Governing Council considers incoming information under two "pillars": the growth in a euro-area monetary aggregate in relation to a published "reference value," and a mix of other euro-area indicators defined as a "broadly based assessment of the outlook for future price developments." Among other things, this second pillar includes wages, bond prices, the yield curve, measures of real activity, business and consumer confidence, and the exchange rate. The ECB's focus in setting monetary policy is on area-wide price developments and activity, and not on developments in individual countries. The Maastricht Treaty grants the ECB full constitutional independence. It explicitly states that neither the ECB nor any member of its decision-making bodies shall seek or take instructions from European Commission institutions, from any government of any member state, or from any other organization or institution.

Operating Procedures[3]

Main Refinancing Operations

The Eurosystem provides liquidity to the euro-area banking system primarily through a weekly refinancing operation with a two-week maturity. This operation provides approximately 70 percent of the liquidity needs of the euro-area banking system. Additional liquidity is provided through longer-term monthly tenders that are conducted as variable-rate tenders with a three-month maturity; these tenders provide the bulk of the remaining needed liquidity.

Beginning with its first weekly tender settled on January 7, 1999, and up until June 28, 2000, the ECB offered only fixed-rate tenders at its weekly refinancing operations. This choice soon came under question when, at a typical Eurosystem refinancing operation, the amount bid far exceeded the amount allotted. As of late 1999, the resulting allotment rate was about 5 percent. The extent of overbidding became even more pronounced in 2000; by May 2000, the allotment rate averaged about 1 percent.[4] Euro-area credit institutions had an incentive to bid heavily for funds at the refinancing rate: The refinancing rate was generally lower than the euro-area overnight interbank interest rate average (Eonia), credit institutions were not restricted in the amount they could bid at a refinancing operation, and they were required to have collateral to cover only the actual amount allocated. By late May 2000, the aggregate amount bid in the refinancing operations exceeded estimates of total available collateral in the euro-area banking system.[5]

In June 2000, the ECB announced that, effective June 28, it would switch to using a variable-rate tender for its main refinancing operations. The ECB currently makes awards under an American-style auction, filling bids in descending order of the rate offered. The ECB announces a minimum bid rate, which serves as the primary tool to signal the ECB's policy stance. Since the switch to the variable rate tender, the allotment rate at the weekly refinancing operation has averaged a little over 60 percent, suggesting that the overbidding phenomenon was successfully removed by the new procedures.

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[1] The term European System of Central Banks (ESCB) includes the ECB and the national central banks of all fifteen European Union members. The national central banks of the member states that do not participate in the Eurosystem are members of the ESCB but have a special status; they are allowed to conduct their respective national monetary policies, and they do not take part in the decision-making regarding euro-area policy and its implementation. Initially, eleven countries adopted the single currency (the euro) in January 1999; Greece became the twelfth member effective January 2001.

[2] The decision-making bodies of the ECB are the Executive Board and the Governing Council.The Executive Board consists of the president and vice president of the ECB along with four other members. They are appointed by common agreement among the governments of the European Monetary Union (EMU) member states. The members of the Executive Board are also members of the Governing Council, along with the governors of the central banks of the twelve countries that have adopted the single currency. The primary responsibility of the Governing Council is the setting of monetary policy within the euro area. The primary responsibility of the Executive Committee is to implement monetary policy and to issue instructions as necessary to the national central banks.

[3] See "The Single Monetary Policy in Stage Three: General Documentation on ESCB Monetary Policy Instruments and Procedures." The European Central Bank, November 2000.

[4] ECB *Monthly Bulletins*, table 1.1.

[5] ECB officials noted early in 1999 that the overbidding and resulting low allotment ratio needed to be addressed. For example, ECB President Duisenberg noted at the March 4, 1999, press conference that "the phenomenon that the allotment percentage of the refinancing operations is very low and has even tended to become smaller, week after week, is a matter of concern." Options suggested to resolve the situation included switching to a variable rate tender, requiring banks to offer collateral at the point of placing bids as had been the procedure at the Bundesbank, setting a bidding limit for market participants, and announcing a minimum allotment ratio before the tender.

Standing Facilities

The Eurosystem also has two standing facilities to provide and absorb overnight money and to provide a corridor for the market-determined overnight interbank rate: the marginal lending facility and the deposit facility. The marginal lending facility provides overnight credit to all eligible credit institutions with sufficient collateral, and its interest rate usually serves as a ceiling for the overnight interbank rate. There is no stigma associated with borrowing at the marginal lending facility. However, such borrowing takes place at a penalty rate, in that the interest rate on the marginal lending facility is generally set 100 basis points above the minimum bid rate for the weekly refinancing tender. The overnight interbank rate usually trades close to the weekly refinancing rate, giving banks an incentive to borrow in the interbank market if possible. Intraday credit that is not repaid by the end of the day automatically rolls over to overnight lending through the marginal lending facility.

The second standing facility, the deposit facility, usually provides a floor for the interbank rate. This facility is available for banks to deposit excess funds that earn interest, although excess funds are not automatically swept into this facility. Normally, the interest rate on the deposit facility is 100 basis points below the minimum bid rate. Thus, in normal times, the corridor provided by the marginal lending and deposit facilities is quite wide, at about 2 percent. From January 4 through January 21, 1999, however, interest rates on the two standing facilities were set only 50 basis points apart, 25 basis points on either side of the refinancing rate, to help ease distortions in the money market during the initial weeks of operations under the single currency. Normally, use of the marginal lending facility is limited and supplies less than 0.5 percent of total lending to the euro-area banking system.[6]

Fine-Tuning Operations

The ECB may also conduct fine-tuning operations to make further adjustments to the amount of liquidity in the market, although such operations are rare. Additional instruments available for fine-tuning operations include outright open market purchases of tier-one assets (see below) and foreign exchange swaps. The ECB's November 2000 documentation does not specify what currencies it would use for such swaps but notes that it would operate only in "widely traded currencies and in accordance with accepted practice."

Structural Liquidity-Providing Operations

The ECB may also conduct structural operations to increase or absorb the amount of liquidity normally provided to the banking system. It may do so in the form of reverse transactions or outright purchases. Such operations are also rare. In practice, the ECB tends first to increase liquidity provided through the main refinancing operations. If it determines that the increased liquidity demand is not temporary, it will increase the amount provided through the longer-term refinancing operations. The amount typically provided through the longer-term refinancing operations has risen from about 15 billion euros each month in 1999—which results in an outstanding level of about 45 billion euros because these operations have a three-month maturity—to about 20 billion euros per month subsequently.

Eligible Counterparties

Counterparties to the Eurosystem's operations (including open market operations and use of the standing facilities) must fulfill eligibility criteria set by the Eurosystem. First, only institutions subject to the minimum reserve system are eligible. Counterparties must also be financially sound and should be subject to harmonized supervision by national authorities.[7] In the case of branches of institutions headquartered outside the euro area, they may be subject to nonharmonized supervision of a comparable standard. In addition, the November 2000 General Documentation notes that "counterparties must fulfil any operational criteria specified in the relevant contractual or regulatory arrangements applied by the respective national central bank or the ECB so as to ensure the efficient conduct of ESCB monetary policy operations." According to the ECB's *Annual Report 2000*, out of the approximately 7,500 euro-area credit institutions subject to the minimum reserve system, about 3,600 had access to the deposit facility, about 3,000 to the marginal lending facility, and about 2,500 could participate in standard open market operations. A limited group of about 200 institutions are eligible for fine-tuning oper-

[6] Use was higher (averaging a little under 3 percent of total Eurosystem lending to the financial sector) during January 1999, when the corridor was only 50 basis points wide. The marginal lending facility was also used fairly heavily over the century-date-change weekend. Although, in general, use of the standing facilities is limited, some use does occur almost every day.

[7] The ECB itself makes no judgment on the soundness of credit institutions; this is the responsibility of the individual national supervisory bodies.

ations. There is no particular significance to the fact that nearly two-thirds of the depository institutions do not have access to the standing facilities.[8]

Collateral

All credit operations of the Eurosystem (including access to the marginal lending facility) must be backed by sufficient collateral. The ECB designates collateral by two tiers. Tier one includes marketable euro-denominated debt instruments that fulfill uniform area-wide eligibility criteria specified by the ECB. Tier two consists of additional euro-denominated marketable and nonmarketable assets that are of particular importance to national banking systems and financial markets. The establishment of two tiers of collateral reflects the differences across NCBs of countries going into the euro area in the eligibility criteria for assets used in credit operations. In some countries, eligible assets were restricted to public debt and central bank instruments only, whereas other central banks accepted a broader range, including high-quality marketable and nonmarketable securities issued by banks and corporations. The ECB decided that full harmonization of practices before the start of the Monetary Union was neither practical—in part because the determination of which countries would be participating would not be known until fairly late in Stage Two—nor necessary for the efficient conduct of monetary policy. No distinction is made between the two types of collateral with regard to their eligibility for Eurosystem monetary operations, although only tier one assets are eligible for use in outright operations. To assure that information on the current list of eligible assets is readily available to all parties, the ECB lists eligible securities for tier one and tier two collateral weekly on its web site.

In practice, almost all collateral used by banks in the euro area is tier one, although the proportion has decreased a bit over time from about 98 percent in the early months of 1999 to about 96 percent in 2000.[9] General government securities make up a little over half of the eligible tier one assets; this share has declined from about 60 percent in early 1999 to about 56 percent in March 2000, in part reflecting the increased issuance of euro-denominated corporate securities. About 30 percent of eligible tier one assets are issued by credit institutions, with the residual issued by corporations. However, counterparties appear to *pledge* a higher proportion of securities issued by credit institutions: General government securities account for only about 47 percent of collateral pledged, about the same share as for securities issued by credit institutions.

The slight increase in use of tier two assets over time and the decrease in the share of government securities suggests that euro-area credit institutions have some preference for using less liquid securities as collateral for their transactions with the Eurosystem. Mastroeni (2000) notes that most marketable debt securities that are included in tier two are not actively traded in secondary markets. Liquidity of these instruments is low, as their issue size is small and they tend to be held by investors until maturity. Tier one securities issued by credit institutions as a rule are also somewhat less liquid than are government bonds.

Valuation and Risk Management

There are also differences across euro-area national central banks in their collateral management systems, with some using earmarking systems where each asset is specifically predeposited for a certain amount of credit, and some using systems where the asset pool in general is put forward. In pooling systems, tier one assets are subject to daily valuation. In earmarking systems, the valuation is carried out at least on a weekly basis, where the settlement date of the main refinancing operation is a valuation date. The Eurosystem applies an initial margin of 1 percent for intraday and overnight liquidity-providing transactions, and 2 percent for transactions with a longer maturity. In addition to the initial margins, haircuts are applied according to residual maturity of the asset. Haircuts for tier one assets are determined by the ECB; they range from 0 percent for assets with a residual maturity of less than one year to 5 percent for zero coupon bonds and strips with a residual maturity of more than seven years. Valuation haircuts for tier two assets are determined by the relevant national central bank and are at least as stringent as those applied to tier one assets. No initial margins or haircuts are applied to liquidity-absorbing operations.

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[8] Apparently, the majority of institutions have not found it necessary or convenient to obtain such access, just as a large fraction of depository institutions in the United States have not filed the necessary documentation to borrow at the discount window.

[9] Details on eligible collateral and collateral used are taken from Orazio Mastroeni, 2000, “The Collateral Framework of the Eurosystem: Some Evidence in the First Months of the European Monetary Union.” This paper was prepared for the ECB’s conference on the operational framework of the Eurosystem and financial markets, held May 5–6, 2000.