Committee of Governors of the
Central Banks of the Member States
of the European Economic Community

Economic Unit

# A FRAMEWORK TO ASSESS MONETARY POLICY INSTRUMENTS AND PROCEDURES (MPIP) IN EC COUNTRIES

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## INTRODUCTION

This note provides a framework to assess the degree of similarity in Monetary Policy Instruments and Procedures (MPIP) in EC countries. While a thorough cross-country comparison lies beyond the scope of the note and further national expertise is required to complete and update information, the framework is illustrated by various country examples in order to derive some preliminary common or specific features.[1] The framework should be helpful in later discussion of the conduct of a single monetary policy, but it is not based on any prior assumptions about MPIP in Stage Three. The latter issue is touched upon only indirectly.

The note shows some convergence in MPIP of EC countries in recent years, particularly through a growing use of discretionary open market operations which are viewed as more flexible than standing facilities used on the banks' initiative. However, substantial differences persist, notably in the frequency of interventions and the selection of counterparties. The note has five sections. Section I characterises the background of the use of MPIP. Section II describes the main instruments, while Section III analyses more systematically the operational procedures. Section IV assesses the way MPIP together affect the markets. Section V summarises the main conclusions and suggests the follow-up.

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1 The note partly draws on the documents prepared by EC central banks for the BIS Contact Group (see reference list at the end). As similar information on all countries was not available, few comparative tables are provided. Luxembourg is not treated separately from Belgium.

## I. WHAT IS THE INSTITUTIONAL AND STRUCTURAL BACKGROUND OF MPIP?

The note focuses on the domestic money markets and not on capital markets, although in a few countries operations on capital markets are viewed as an integral part of monetary management.[2] Neither are thoroughly considered foreign exchange operations which tend, anyway, to be very similar as a result of increasing international integration. An assessment of MPIP requires a characterisation of their background, in particular:

- the monetary policy strategy, especially operational targets;
- the main factors affecting the demand for central bank money;
- the regulatory environment, namely the reserve requirements.

### 1. How are monetary objectives and targets set and steered?

There is full consensus among EC central banks (CB) to consider that the principal final goal of monetary policy is price stability. By contrast, intermediate targets are more diversified and typically consist of the exchange rate, of different (although increasingly harmonised) monetary aggregates, or of their domestic counterparts. However, while the choice of the intermediate target has implications on the way instruments are used (as shown later), there is no clear one-to-one relationship between this choice and the range of instruments available across EC countries. As regards operational targets, no EC CB targets the money base exclusively, with interest rates adjusting freely in case of shifts in the demand.[3] The common objections to this approach are the risk of excessive variability in interest rates and the uncertain economic effects due to the instability in the money multiplier. Neither does any EC CB pursue a pure interest-rate target, absorbing all shocks on quantities. Nevertheless, a money-market rate, hereafter called "short rate" (of a maturity ranging from the overnight to a few months depending on the country), is an important, or even the key, operational target in the daily management of

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2 For simplicity, the term "money market" is used in the note as a short name for the market of central bank money, and "banks" for all money-market participants, unless otherwise specified.

3 [As in the United States in 1979-82 and in Switzerland at times.]

monetary policy, even though attention is also paid to the developments in the money base[, particularly in some countries as Germany].[4]

The short rate is geared towards the intermediate and/or final objectives by marginal accommodation of the CB money which banks need for clearing purposes or to meet reserve regulations. This requires CBs to set the terms and conditions at which either they meet the market (net) demand or they absorb liquidity in excess of the demand in the money market, for instance by offering deposit facilities or by issuing or selling assets. The more stable (i.e. predictable) is the demand, the easier is its management, especially when attention is also paid to monitoring its volume. In sum:

**All EC CBs use a short rate as an important, or the key, operational target, notwithstanding the diversity in intermediate objectives. They manage this rate by setting the terms and conditions at which they accommodate the demand for CB money, which they may face or induce.**

## 2. What are the structural features of the demand for CB money?

Several structural factors determine whether there is a deficit or a surplus in CB money. Higher demands for cash by the public or for cash reserves by banks raise the demand for CB money, while increases in the CB credit to the Treasury and in (net) official foreign reserves enlarge the supply. The evolution of these factors is determined by the behaviour of money holders or of banks (in the absence of reserve regulations, which are analysed in the next section), by the extent of "monetary financing" of the government deficit, and by the developments in the balance of payments. So they are sometimes called "autonomous", as they lie beyond the "short-run control" of CBs.

Inspection of CB balance sheets does not easily reveal whether there is a structural deficit or surplus and the contribution of each autonomous factor, if only because the assessment should be made ex-ante, while balance sheets reflect ex-post equilibrium. Nonetheless, most EC countries seem to operate under a regime of structural deficit, often as a

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4 [And even though the room for manoeuvre in setting the level of the short rate varies mainly depending on the degree of capital mobility and of ERM constraint.]

result of reserve requirements and even though the need may be small as compared to the money base in some countries such as the UK. However, in Denmark for instance, a relatively low demand for cash and persistent current account surpluses have resulted in a regime of structural surplus in recent years. Greece, Portugal and sometimes Spain have also faced situations of chronic excess liquidity.

The stability of the demand for CB money is affected by the autonomous factors. All CBs try to forecast the market demand in order to reduce the impact of volatile movements on interest rates[, as in the UK,] and/or on money growth[, as in Germany]. Operations of the Treasury and of other public entities usually constitute the main source of short-run instability. CBs generally hold all the major accounts of the central government, whose variations may be very large and sometimes difficult to forecast. Yet, a few CBs manage Treasury operations to compensate for some shocks (e.g. by adjusting the timing of the bills issue in the UK, or by transferring flows from the Treasury account in Germany; see Supplement 5 in Annex I). Sharp variations in (net) foreign reserves may also be largely unexpected but their impact on money-market conditions can be closely monitored and offset if necessary, as they are usually settled with a lag of one or two days. The third and generally more regular factor is the demand for cash which typically follows well-known seasonal patterns, albeit with a random element. Nevertheless, changes in the demand for notes can result from financial innovation and deregulation and from currency substitution (or institutional changes, as recently experienced in the case of the German Monetary Unification). Most of these phenomena may become increasingly relevant as European integration proceeds and, particularly, in the proximity of Stage Three.

**Most EC CBs currently operate under a regime of structural, even if small, net demand for CB money. The main source of instability in CB money is operations on the Treasury accounts; variations in foreign reserves are easier to monitor, as they are generally settled with a lag, and the demand for cash is more regular.**

## 3. What is the role of regulatory requirements?

As noted above and shown in Table 1, reserve requirements (RR), with high coefficients and, hence, held in excess of the amounts banks would freely maintain, are used by several EC countries (e.g. Germany,

(Provisional) TABLE 1: CASH RESERVE SYSTEMS IN EC COUNTRIES

| | BELGIUM (a) | DENMARK | GERMANY | GREECE | SPAIN | FRANCE | IRELAND | ITALY | NETHER. (b) | PORTUGAL | UK |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. SIZE | .. | .. since 3.91 | ▓ | ▓ | ▓ | ⣿ | ▓ | ▓ | variable | ▓ | ⣿ |
| - as a % of M3H (mid-1992) | .. | .. | (5) | ? | ? | (0.5) | ? | (12) | ? | ? | ? |
| - as a % of GDP (mid-1992) | .. | .. | (3) | ? | ? | (0.3) | ? | (9) | ? | ? | ? |
| 2. COST (c) | .. | .. | ▓ | ⣿ | ▓ | ⣿ | ⣿ | ⣿ | ⣿ | ⣿ | ⣿ |
| - RATES % { Sight deposits | .. | .. | 6.6 to 12.1 | } | } | 1.0 | } | } 22.5 | .. | } | } |
| - RATES % { Time deposits | .. | .. | 4.95 | } 9.0 | } 4.5 | 1.0 | } 6.0 | }(decrease) | .. | } 17.0 | } 0.45 (1) |
| - RATES % { Savings/CDs | .. | .. | 4.15 | } | } | 0.5 | } | } 25.0 (increase) | .. | } | } |
| - REMUNERATION | .. | .. | NO | PARTLY | NO | NO | MARKET | PARTLY | MARKET | MARKET | NO |
| 3. AVERAGING PROVISION | .. | .. | YES | YES | YES | YES | YES | YES (d) | NO | YES | NO |
| - ELIGIBLE PERIOD (in days) | .. | .. | 30 (16-15) | ? | 10 | 30 | 30 | 30 | } | 7 | 180 |
| - MAINTENANCE PERIOD (") | .. | .. | 30 | ? | 10 | 30 (16-15) | 30 | 30 (15-14) | } variable | 7 | 180 |
| - (AVERAGE) LAG (") | .. | .. | 15 | 45 | 2 | 15 | 20 | 45 | } | 3 | 91 |
| - INTRA-DAY USE FOR PAYMENT | .. | .. | YES | YES | YES | YES | NO | YES (d) | (b) | YES | NO |
| 4. APPLICABLE TO: - NON-RESIDENTS | .. | .. | PARTLY | YES | YES | NO | YES | PARTLY | .. | YES | .. |
| - FOREIGN EXCHANGE | .. | .. | YES | NO | NO | YES | YES | YES | .. | YES | .. |
| 5. DEDUCTIONS: - CAPITAL AND RESERVES | .. | .. | NO | NO | NO | NO | YES | NO | .. | NO | .. |
| - VAULT CASH | .. | .. | PARTLY | YES | NO | YES | YES | NO | .. | NO | .. |

LEGEND: ▓ = HIGH ⣿ = LOW .. = Not applicable

(a) A minimum reserve system is legally available.

(b) In the Netherlands, the Money Market Cash Reserve is enforced whenever the market deficit threatens to fall beyond a given amount (about NLG 7 billion), for 1 week to 1 month, continuously applicable and remunerated at market rates. The Monetary Cash Reserve, based on net credit expansion, has fallen into disuse.

(c) Differences in cost are difficult to assess as other factors should be taken into account, e.g. "... subsidised funding through the discount window, the interest-free float, ...". (Deutsche Bundesbank Monthly Report, March 1990, pg. 21).

(d) Partially (±5% of required reserves).

Greece, Spain, Italy and Portugal) to induce or enlarge a structural market deficit in CB money.[5] A net borrower position of the CB is often seen as less comfortable for managing market liquidity because attracting deposits or issuing assets entails costs, while a large portfolio of assets may be needed by CBs to cope with the possibility of persistent sales.

RR may also help to stabilise the demand for CB money. Indeed, RR provisions which apply over averaged (and lagged) holding periods are intended to absorb shocks and to increase the interest-rate elasticity of the demand for CB money. Banks may, thus, manage their reserves more flexibly and take account of any change in the short rate when fulfilling their requirement, thereby reducing the need for CB intervention in the market, except usually by the end of the holding period. To this aim, RR must not be remunerated at market rates, but this entails distortions in banks' and private agents' behaviour and, hence, reallocation in resources, especially if coefficients are high. So, some CBs prefer not to resort to permanent RR for monetary purposes and use other regulations or instruments to induce or stabilise the liquidity shortage, when necessary, as in Belgium, Denmark, the Netherlands and the UK (see Supplement 1 in Annex I). All other EC countries use permanent RR, but there is a wide range of specific features in terms of coefficient size (e.g. smaller in France), averaging and lagged provisions for the holding period (shorter in Spain and Portugal), and remuneration (none in Germany, Spain and France; partial in Greece and Italy; at market rates in Ireland and Portugal). However, no EC country currently applies RR on the basis of banks' assets, in line with the ESCB Statute and in contrast with earlier practice to control lending.

As RR are viewed as regulatory instruments, provisions are not often changed. Recently, however, there have been cuts in coefficients in some countries, partly as a way to limit "disintermediation" and financial "delocalisation" which may penalise domestic banks. In the process towards EMU, convergence could lead to smaller average coefficients and/or to more similar remuneration.

**A majority of EC CBs use reserve requirements with averaged holding periods (typically with high coefficients and non-market remuneration) to ensure or stabilise the demand for CB money. The other CBs prefer**

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5 In addition to serve payment (and supervisory) purposes.

**to use other regulations or instruments to avoid distortions in banks' behaviour or to prevent financial disintermediation or delocalisation.**

## II. WHAT ARE THE MAIN INSTRUMENTS?

Several criteria may be used to categorise instruments; one standard distinction is between:

- standing facilities, i.e offered by CBs at posted rates and used on the banks' initiative, through pre-arranged bilateral links;
- and open market operations, i.e. conducted at the CB discretion but at the same conditions with all (or most) banks.[6]

Both types of instruments are envisaged in the ESCB Statute. Over the last decade, in line with the general move towards market-oriented approaches, a common feature of most CBs has been the increasing resort to open market operations as a substitute for standing facilities which are viewed as less flexible. Within this distinction, attention is also paid below to the way these instruments are used: regularly (for housekeeping operations) or occasionally (for fine-tuning operations); to provide either the bulk or marginal amounts of liquidity; and at rates different or not from market conditions (see the top half of Table 2).

**Most EC CBs have increasingly resorted to open market operations, conducted at their own discretion, as a substitute for standing facilities, offered at posted rates and used on the banks' initiative.**

### 1. For which purposes are standing facilities used?

Three major categories of standing facilities may be considered:

- regular lending facilities at rates set below market conditions;
- deposit facilities at minimum posted rates;
- marginal refinancing at high/penalty rates.

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6 [Typically, for a standing credit (or deposit) facility the supply (demand) CB curve is infinitely elastic, i.e. flat. In the case of the US open market operations in the early 1980s, the supply (demand) CB curve is vertical with the interest rate adjusting.]

(provisional) Table 2 : Main instruments and procedures

| | BELG. | DENM. | GERM. | GREE. | SPAIN | FRAN. | IRLA. | ITAL. | NETH. | PORT. | U.K. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| – STANDING FACILITIES | | | | | | | | | | | |
| . Regular credit (rare) | ☒ (below) | up to 3.92 | ▣ (below) | ? | .. | .. | .. | ☒ (market) | ▣ (below) | .. | .. |
| . Deposit facility | □ | □ | .. | ? | .. | .. | ☒ | .. | (a) | .. | .. |
| . Short-term overdraft (rate) | ▢ (penalty) | ? | ▢ (ceiling) | ? | □ | □ (penalty) | ☒ | ☒ (discount + penalty) | .. | □ (penalty) | ☒ (market) |
| – OPEN MARKET OPERATIONS | | | | | | | | | | | |
| . Outright transactions | □ | ▣ | □ | ☒ | .. | ☒ | .. | ☒ | □ | ▣ | ▣ |
| . Repos (domestic cash) | ▣ | ▣ | ▣ | □ | ▣ | ▣ | ▣ | ▣ | ▣ | ☒ | ☒ |
| . Repos (foreign exch.) | ☒ | ☒ | ☒ | ? | .. | .. | ☒ | □ | ☒ | □ | .. |
| – FREQUENCY (usually) | ▣ | ☒ | □ | ? | ☒ | ☒ | ▣ | ☒ | ☒ | ☒ | ▣ |
| – MATURITY RANGE | SHORT | MEDIUM | MED/LONG | ? | SHORT/MED | SHORT/MED | VERY SHORT | VARIABLE | VARIABLE | VARIABLE | VARIABLE |
| – AUCTIONS: fixed rate | ▣ (tender) | | □ | | □ (rep.) | □ | | | ▣ tender | ☒ | |
| Dutch | ⋮ | | | | ☒ tender | ☒ tender | ▣ | | □ | | |
| US | ☒ (repo) | | ▣ | | ▣ (tender) | □ | | ▣ | | ☒ | ▣ |
| – COUNTERPARTIES | | | | | | | | | | | |
| – Non banks | .. | .. | No in fact | □ | .. | □ | .. | □ | .. | .. | .. |
| – intermediaries | ▣ | .. | ☒ | | ☒ | ☒ | ☒ | ☒ | □ | ☒ | ▣ |
| – inter-bank exchange | ▣ | □ | □ | | ☒ | ▣ | ☒ | ☒ | | □ | ▣ |
| – SECURITY (.. uncovered operations | □ | .. | .. | □ | .. | .. | .. | .. | .. | .. | .. |
| . large-value payment | Multi-net | gross | gross/multinet | | multi-net | multi-net | gross | gross/multinet | Gross/multinet | | multi-net |

▣ HIGH IMPORTANT FREQUENT ☒ MEDIUM "intermediate" □ low limited rare .. not applicable (a) Netherlands: see Table 1

Multinet : multibilateral netting

(a) Regular lending at rates below market conditions

In most EC countries with large money-market deficits, lending facilities at rates below the market used to be the basic source of refinancing up to the 1980s. Nowadays, they provide a large share of the regular refinancing only in Germany (about one third of the total) and the Netherlands (more than half). The facilities are usually granted against collateral for rather long periods (several months) and are limited by quotas so that a need for additional liquidity is maintained. In Germany, the rediscounting of trade bills is granted at a rate which has tended for many years to be set well below market conditions, resulting in a subsidy for certain types of credit. The Dutch ordinary advances in current account provide a floor to market rates. If bilateral credit facilities at low rates, subject to individual quotas, are maintained in the process towards EMU, they will have to comply with competition principles across the EC.

In other EC countries, as in Italy, the amount of such facilities has been significantly restricted and/or their cost increased. In a few countries, they now play only a signalling role. For instance, in early 1991, Belgium revived the role of the discount rate, which had fallen into disuse, in order to accompany moves in German official rates and stress the commitment of the monetary authorities to maintaining the close peg to the Deutsche Mark. In the UK the minimum lending rate, which was discontinued in 1981 and reintroduced on rare occasions, was used in Autumn 1992 to bring about major "administered" changes in market interest rates.

**Lending facilities at rates posted below market conditions provide a significant part of the regular refinancing only in Germany and the Netherlands. They are subject to quotas in order to maintain a need for additional liquidity.**

(b) Deposit facilities at minimum posted rates

Deposit facilities may be offered by central banks as a way to mop up liquidity in the event of structural or temporary surpluses of liquidity. As a result, they may constitute a floor to money market rates.

For instance, the Banque Nationale de Belgique can absorb the excess cash of any credit institution, irrespective of the amount, but at low interest rates that depend upon the amount and on whether the counterparty is a primary dealer. The Danmarks Nationalbank remunerated

deposits at a rate which offered a floor for market rates until April 1992, when the facility became remunerated at market rates subject to a monthly average limit of 5% of the banks' own funds, so that it serves now only as a buffer (as RR would do). Deposit schemes are also available in some other countries, such as Ireland and, in principle, in Portugal, but they do not constitute a major instrument or have not been activated for a long period (for a somewhat similar facility in Germany, see Supplement 2 in Annex I).

**Deposit facilities (or equivalent schemes) may occasionally serve to mop up liquidity and provide a floor for market rates.**

(c) Marginal refinancing at high rates

An overdraft facility used to finance end-of-day clearing imbalances or sometimes as a channel for last-resort assistance is offered by all EC CBs, although in principle subject to their agreement. The facility is typically granted in limited amounts and at a rate above the market conditions. However, in Greece the facility is unlimited while in many other countries such as Germany and France it is, normally, limited only by the availability of collateral. In Belgium, Denmark and the UK, market rates are (or may be) applied.

Even if this source of refinancing remains marginal, its rate plays an important role in signalling the stance of monetary policy in some countries (see Section IV). This applies to Ireland, where it is the only "official" rate, but the best known example is the German Lombard facility which constitutes the upper boundary for movements in the very short-term rates, for instance near the end of reserve periods when it serves as a safety-valve. In some other countries, like France, specific CB operations play a similar role as shown in Supplement 3 (Annex I).

**Marginal refinancing facilities, generally at high rates, are provided everywhere to finance end-of-day clearing imbalances or to channel last-resort assistance. In some countries, a Lombard rate (or its equivalent) signals the upper boundary for money market rates.**

2. Which are the market operations conducted at the CB discretion?

Open market operations are increasingly practised by CBs because their terms and conditions can be adjusted without delay, discreetly and flexibly in terms of amount, timing and/or duration. They serve both as a

regular way of providing the bulk of the market need for liquidity and as fine-tuning instruments. Three categories of operations are usually identified:

- outright transactions (purchases or sales) in domestic assets;
- reversed transactions, such as repurchase agreements, using domestic assets as collateral;
- reversed transactions in foreign currencies.

(a) Outright market transactions in domestic securities

Outright transactions to manage the liquidity of the money market may be undertaken in most countries (bar Spain and Ireland), but they are carried out regularly and extensively only in a few countries, such as the UK, Denmark and Portugal. Every day, the Bank of England purchases bills outright from discount houses, thus relieving the usual shortage in the market that the Bank is able to enlarge and adjust through the weekly Treasury bill issue.[7] If a liquidity surplus is expected, the Bank may invite both discount houses and commercial banks to bid for specially-created bills. The discount houses may also make use of the possibility of offering eligible bills for sale to the Bank without invitation, although the discount rate can, then, be set at a penalty level. Since April 1992, the Danmarks Nationalbank issues two-week certificates of deposit (CD) each week and buys these back to supply liquidity when necessary. In Portugal, similar instruments at various maturities take place, particularly to mop up chronic excess liquidity.

Outright transactions may be frequent in France, while they are more occasional in Belgium, Germany, Italy or the Netherlands. They are typically conducted on Treasury bills and certificates, or on government bonds.[8] Operations on bonds, however, are usually not intended to signal the CB's view on the long-term structure of interest rates. Some EC CBs

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7 In fact, discount houses are invited to rediscount, at rates of their own choosing, commercial bills (nowadays more than Treasury, or local authority, bills) that they have already discounted. The Bank decides how much to buy on different bands of residual maturities (up to 91 days, but often up to 14 days) and at different rates bid by banks.

8 See also Supplement 2 in Annex I on specially-issued German Treasury paper.

fear interfering with developments in long-term rates on insufficiently deep markets[ or, even, being viewed as trying to circumvent limits on CB lending to government].

**Outright transactions on domestic bills are used regularly to induce and relieve liquidity shortages in the UK while in Denmark or Portugal CDs issued by the central bank play a similar role. They may be used frequently in France, but more occasionally in most other countries.**

(b) Reversed transactions in domestic securities

Reversed transactions consist in the purchase (or sale) of securities under a contract providing for their resale (or repurchase) at a specified price on a given future date. The reserve-supplying operations are called hereafter "repos" and the reserve-absorbing ones are called "reversed repos".[9] Although repos may be similar to outright operations on assets with short residual maturities undertaken in the UK, they are often considered as easier and more flexible to conduct, with less effect on the conditions in the market for the underlying asset. Hence, most EC CBs use repos as their main regular and/or fine-tuning instrument.

Regular repos account for about half of the refinancing in Belgium and Ireland, two-thirds in Germany and Italy, usually more in Spain and three-quarters in France, while in Denmark repos represent the main alternative to transactions on the CB CDs. They largely differ across EC countries in terms of frequency (from several times a week in Belgium and Ireland to every ten days in Spain), maturity (from one or a few days in Ireland to two months, at times, in Germany) and collateral or counterparty (see Supplement 4 in Annex I). In addition, repos or reversed repos, with generally shorter maturities, are increasingly used as supplementary tools for influencing or accommodating short-term market conditions in all EC countries (see Supplement 5).

**Reversed transactions in domestic securities (mainly repos) have become the main instrument to provide the bulk of, or to fine-tune, market liquidity in most EC countries, due to their flexibility in terms of frequency, maturity, counterparty and collateral.**

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9 Repos are called "matched sale/purchase transactions" (from the viewpoint of banks) in the American terminology.

(c) Reversed transactions in foreign currencies

Foreign exchange operations are normally geared to objectives for the exchange rate and their impact on bank reserves and money market rates may, thus, be considered as a constraint on the management of the domestic market liquidity. Nevertheless, they may be used to influence international flows of funds and absorb part of the impact of foreign shocks on domestic monetary conditions. In some countries, foreign-exchange swap transactions ("swaps"), i.e. a combination of a spot and a forward transaction, are viewed as standard tools to fine-tune the liquidity in the domestic money market, without exercising a direct influence on the exchange rate, i.e. in addition to their impact on liquidity.[10] Therefore, swaps are particularly suited to sterilise the impact of international capital flows on domestic conditions. They can also be very flexible in terms of maturity and volume and, in Ireland for instance, they can be settled on the same day. Swaps are, thus, a major instrument in Ireland and are used as a fine-tuning instrument in Belgium, Denmark, Germany, the Netherlands, Portugal and, more recently, Italy (see Supplement 6 in Annex I).

**Reversed operations on foreign currency (e.g. foreign exchange swaps) affect the domestic liquidity in the same way as operations on domestic securities and can also be carried out quickly and flexibly, without direct impact on the exchange rate. A majority of CBs use them, mainly in Belgium, Germany, Ireland and the Netherlands.**

## III. WHAT ARE THE MAIN FEATURES OF OPERATIONAL PROCEDURES?

Operational procedures vary across countries (see the bottom half of Table 2), mainly according to:

- the frequency [and the maturity] of operations;
- the degree of discretion in setting volumes or prices;
- the selection of counterparties [and the extent of intermediation in carrying out operations];
- the security of operations.

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10 Outright forward operations have a delayed effect on bank liquidity and have been used under special circumstances, e.g. in 1987 in the Netherlands.

1. What is the frequency [and maturity] of central banks operations?

The frequency of operations is often linked to their maturity and reflects differences in the financial environment and in the conduct of monetary policy, e.g. in the targeting strategy or in provisions for reserve requirements. Indeed, under normal circumstances, some EC CBs undertake every day as many regular (housekeeping) operations, with a short maturity, as other CBs carry out over a whole month at longer term.

At one end of the spectrum, the Bank of England intervenes several times a day. A large range of instruments may be used to offset the impact of net money-market flows, largely due to Government transactions, on the structure of short rates (up to three months, though especially the very short term). At the other end, the Bundesbank usually intervenes only once a week through tenders for one or two months (though they were reduced to two weeks in the autumn of 1992). Consequently, some volatility in the German overnight rate is accepted, except if it strongly affects longer-term rates or policy signals, in which case fine-tuning instruments are used. Volatility is also limited by the reserve regulations and the availability of standing facilities.[11] Operations of other EC CBs lie between these two polar cases. For instance, in Belgium and Ireland, the CB operates daily at the very short end of the market (mainly up to a few days), while France has tended to move from the German towards the British frequency, partly as a result of cuts in reserve coefficients.

Generalisation on the basis of recent experience is difficult. Still, the larger is the attention paid to the short rate - for instance, due to its impact on the exchange rate given ERM constraints for non-anchor countries and/or on economic activity in view of domestic considerations - rather than to medium-run developments in monetary aggregates, the more frequent are the interventions. At the same time, the resort to high and averaged RR as well as the role of standing facilities, which absorb liquidity shocks in particular from Treasury operations, appear to limit the volatility of the short rate, thus reducing the need for intervention.

The frequency of exchange of information between CBs and banks is difficult to appraise as it is rarely institutionalised. Nonetheless, in

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11 Actually, the overnight interest rate variability seems larger in the UK than in Germany, according to charts (in Annex II) and a study by B. Kasman (Federal Reserve of New-York Quarterly Review, summer 1992).

addition to daily contacts, formal gathering of information seem to be organised frequently by some CBs (e.g. by meeting with primary dealers once a month in Spain and France or every six weeks in Belgium), somewhat in contrast with practice in Denmark and Germany.

**The frequency of operations largely depends on the targeting strategy and on the structural and regulatory environment. Most EC CBs behave in between the Bank of England, which intervenes several times a day with a large range of instruments at short maturities, and the Bundesbank which normally offers mainly one-month repos each week.**

2. To what extent are rates and quantities set by CBs operations?

In the case of standing facilities, rates are posted by CBs and volumes are determined by the banks' demand, often subject to some country-specific quotas. In the case of market operations, auction procedures allow CBs to set rates and/or volumes more flexibly. Two (or three) auction procedures are typically identified. Banks may bid only for volumes at a pre-announced interest rate; these tenders are called "volume auctions" or "fixed-rate auctions". Alternatively, banks may submit bids covering both the amount and the rate (called "interest-rate auctions" or "variable-rate auctions"). In the latter case, funds may be allocated at the different rates bid by banks ("US style"), or at a uniform rate equal to the rate at which the marginal bid is accepted ("Dutch style").

In practice, one auction technique is followed under normal circumstances for regular tenders: the fixed-rate auction in Belgium and in the Netherlands for special advances; the interest-rate auction, either US style in most cases, or Dutch style in France for regular repo tenders and Ireland. The differences of techniques largely reflect different CB attitudes vis-à-vis market developments. Fixed-rate auctions make the CB views explicit, while variable-rate auctions, in particular US style, enable market expectations to be assessed better and rates to be more market-determined. In some countries changes in procedure according to the circumstances enable CBs to exploit the advantages of different types of auction, as in Belgium and Germany. The use of variable-rate auctions does not necessarily imply a higher variability in repo rates which, in practice, may be infrequently changed, as in Spain and France. In the UK, some rigidity is also apparent in the auction rates for outright bill

transactions, which serve as benchmarks for auctions undertaken in the next days and which "peg" the base lending rates of commercial banks.

Operations are typically centralised in CBs' headquarters, except in Germany where, in addition to standing facilities, part of the execution of auctions is managed locally, although with little discretion.

**While for standing facilities interest rates are pre-announced and volumes are determined by the banks (up to some limits), different auction techniques for open market operations enable CBs to set the rate and/or the volume. Most EC CBs tend to follow a given technique, even though some CBs may change them depending on the circumstances.**

3. How are counterparties selected?

The range and the number of counterparties to CB transactions partly reflect differences in the size and in the institutional features of financial markets. Most EC CBs operate mainly, if not exclusively, with banks. There are, however differences in the way market participants are defined, whether legally and/or technically: e.g. by the fact that they are subject to reserve requirements as in Spain and Portugal. In principle, several CBs may conduct certain open market operations with non-banks, but for efficiency and security reasons only a few CBs use non-banks as counterparties (see Supplement 7 in Annex I). Counterparties are always located within the CB's country. All CBs may operate with foreign banks located domestically, whether the latter are branches or subsidiaries of foreign firms.

The extent to which CBs operate with all market participants or only with some primary dealers or large banks (called "intermediaries" for simplicity hereafter) varies across countries and operations as a result of two factors. On the one hand, the move from standing facilities towards open market operations has reduced the role of bilateral links with market participants. On the other hand, the desire to improve operational efficiency may lead operations to be concentrated with specialised intermediaries. In the UK and Belgium, most operations are conducted with intermediaries. In France, intermediaries are used to collect bids for regular repos but the counterparties remain the banks (see Supplement 8). Most other CBs usually deal with any bank, at least in principle. Nevertheless, the banking sector may sometimes be very concentrated, as in Denmark. Furthermore, big banks and market makers may also be selected by

CBs for discreet operations or to bring about rapid changes in market conditions, as in the case of fine-tuning operations in Germany, Spain, France, Ireland, Italy and Portugal.[12]

There is a growing debate about the role of intermediaries. At a time when some countries are moving towards a system of specialised intermediaries, the UK system of concentrating operations through discount houses is queried by some analysts.[13] However, authorised dealers and market makers may remain essential for those EC markets which are viewed as insufficiently active and self-sustaining. The only requirement seems, therefore, that rules and discretion in the selection of counterparties comply with competitive principles, in particular Single Market provisions.

**The counterparties of CBs are essentially banks located domestically, including branches and subsidiaries of foreign firms, although many EC CBs can in principle operate with non-banks. While most operations are carried out through intermediaries in the UK and Belgium, other CBs use selected counterparties only occasionally, either to affect market rates more rapidly, or to influence market conditions discreetly.**

4. How are operations secured?

The security of operations is usually ensured by dealing only in prime-quality assets or by requiring collateral, as requested in the ESCB Statute (generally government paper but also private paper, as in Germany and France, or multiple-name bank CDs as in the UK). Unsecured transactions are not frequent, except in the foreign exchange markets and in the case of intraday facilities for banks, as in Denmark, Greece, Spain, Portugal and the UK, and of interbank deposits placed by CBs, as in Belgium and Greece. However, they are typically subject to limits fixed for each counterparty.

CB exposure depends also on the security of the settlement system and on the supervisory requirements. In spite of steps towards

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12 The resort to intermediaries may not be independent from auction techniques. In US-style tenders, the concern of banks to avoid over-bidding may lead them to channel their bids through a small number of well-informed participants, while in principle Dutch tenders make intermediaries less important to the success of the auction.

13 The US system of primary dealers for the capital market was also criticised after the Salomon Brothers' scandal in 1991.

harmonisation promoted by the relevant bodies, whether in the context of the G-10 or of the EC, country-specific features persist and depend on regulations, practices and the various degrees of involvement of CBs. In particular, large-value payment systems exhibit diverse characteristics in terms of safety provisions to reduce liquidity, credit and systemic risks and to regulate the finality and the revocability of payments (e.g. gross versus net settlement systems). Supervisory rules and practices are also not yet harmonised, for instance as regards the measurement of the liquidity of individual banks and the assessment of credit profiles (e.g. through credit registers or not). Although these features may be very important, the assessment of their implications for monetary policy procedures goes beyond the scope of this note.

**Most CB operations are secured, generally by government securities and sometimes by private paper. There remain large differences in the security of settlement systems and supervisory requirements.**

## IV. HOW DO MPIP AFFECT MARKET INTEREST RATES?

The financial environment, instruments and procedures, which have been successively analysed above, together determine how policy signals are given and how they affect the markets. Admittedly, the way in which MPIP convey policy signals cannot be assessed independently of the targeting strategy, of the autonomy, and of the transmission mechanisms of monetary policy: firstly, the intermediate target (if any) and the departures from it constitute the primary signal on the policy stance; secondly, capital mobility and ERM constraints reduce the domestic autonomy of monetary policy, so that liquidity conditions become largely endogenous and policy signals may be perceived by the market as reactions to shocks; thirdly, even if MPIP were similar across EC countries, differences in the monetary transmission mechanisms would affect the speed and the extent of their impact on markets (see Supplement 9 in Annex I). However, for simplicity, the rest of this section focuses on the role of:

- official or key interest rates related to various instruments;
- the resort to different procedures to affect market rates.

## 1. What is the role of official and key interest rates?

The simplest way to give policy signals is through changes in official rates, which are often those on standing facilities, or in rates associated with key open market operations. The latter may, indeed, have become more important than, for instance, discount rates which have lost some of their signalling role in many EC countries. For simplicity, "key rates" will indicate both types of interest rates.

The number of key rates used varies across countries and their role may change under certain circumstances. Nevertheless, two cases may be distinguished. Some countries use primarily one key rate to steer market rates and to signal (changes in) the stance of monetary policy, as in Greece, Spain, Ireland and the UK.[14] By contrast, other countries utilise several key rates, in particular Germany, but also Belgium, Denmark, France, Italy, the Netherlands and Portugal (see Table 3 and the charts in Annex II). In the latter group, one or two key rates provide a floor, a ceiling or a corridor to short-term market rates while another key rate may steer the shorter-run movements in market rates. When boundaries are signalled by the interest rates on standing facilities, they tend to be more rigid and more rarely overshot by very short-term interest rates (as with the German Lombard rate). When they are signalled by the interest rates of open market operations, they may accommodate more flexibly developments in market rates (e.g. the "floor" constituted by the weekly repo tender in France).

The advantages and drawbacks of each approach are difficult to assess independently of the institutional and financial environment. The use of a single key rate is simple but less flexible. When signals can be conveyed through different key rates, CBs may adapt their use in response to different market developments (as in France in September 1992 when only the upper boundary for five to ten-day repos was raised). However, in the case of a selected use of only one or some of the available key rates, there is a risk of blurring the policy message by giving signals which are

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14 In the UK, there is arguably no official rate, or conversely any rate at which the Bank deals may become an official rate, except when the minimum lending rate is reintroduced, but de facto the Bank of England "determines" the base lending rate of banks. In Ireland, the short-term facility tends to accommodate actual market developments.

27-Nov-92

TABLE 3: OFFICIAL OR "KEY" INTEREST RATES IN EC COUNTRIES
EXAMPLES OF ERM TENSIONS: END-AUGUST TO EARLY OCTOBER 1992

| COUNTRY | REFERENCE RATE | LEVEL AT 1ST OCTOBER | LEVEL AT END-AUGUST | CHANGES FROM END-AUGUST TO 1ST OCTOBER |
|---|---|---|---|---|
| B.L.E.U. | Discount | 8.00 | 8.50 | - 0.25 on 15.09.92<br>- 0.25 on 17.09.92 |
| | Tender | 9.00 | 9.70 | - 0.40 on 15.09.92<br>- 0.20 on 23.09.92<br>- 0.10 on 28.09.92 |
| | Current account advances | 9.60 | 10.20 | - 0.25 on 14.09.92<br>- 0.15 on 15.09.92<br>- 0.10 on 22.09.92<br>- 0.10 on 23.09.92 |
| DENMARK | Discount (and deposit facility) | 9.50 | 9.50 | - |
| | Certificate of deposit | 12.00 | 10.30 | - 0.15 on 15.09.92<br>+ 1.85 on 01.10.92 |
| GERMANY | Discount | 8.25 | 8.75 | - 0.50 on 15.09.92 |
| | Weekly repurchase agreement | 9.20 | 9.70 | - 0.50 on 16.09.92 |
| | Lombard | 9.50 | 9.75 | - 0.25 on 15.09.92 |
| GREECE | Overdraft (maximum) | 40.00 | 30.00 | + 10.00 on 18.09.92 |
| SPAIN | 10-day repo | 13.00 | 13.00 | |
| FRANCE | Repo tender<br>5-10 day pension facility | 9.60<br>13.00 | 9.60<br>10.50 | -<br>+ 2.50 on 23.09.92 |
| IRELAND | Short-term facility | 13.75 | 10.75 | + 3.00 on 28.09.92 |
| ITALY | Discount | 15.00 | 13.25 | + 1.75 on 4.09.92 |
| | Advances (discount and penalty) | 16.50 | 14.75 | + 1.75 on 4.09.92 |
| NETHERLANDS | Discount | 8.00 | 8.50 | - 0.25 on 14.09.92<br>- 0.25 on 16.09.92 |
| | Ordinary Advances | 8.75 | 9.25 | - 0.25 on 14.09.92<br>- 0.25 on 16.09.92 |
| | Special Advances | 9.00 | 9.70 | - 0.40 on 15.09.92<br>- 0.20 on 22.09.92<br>- 0.10 on 25.09.92 |
| PORTUGAL | "Liquidity injection" rate | 14.00 | 14.00 | |
| | "Liquidity absorption" rate | 16.00 | 16.00 | |
| UK | Base lending (or Minimum Lending Rate) | 9.00 | 10.00 | + 2.0 on 16.09.92<br>[+ 3.0 on 16.09.92](a)<br>- 2.0 on 17.09.92<br>- 1.0 on 22.09.92 |

(a) This change was cancelled before taking effect.

more difficult to interpret. This may also be the case if the role of key interest rates is progressively modified: for instance the rates applied to Bundesbank weekly repos have become much more significant in recent years, but public attention has continued to focus heavily on the official rates on standing facilities.

**Some EC CBs adopt the simple but relatively rigid approach of guiding market rates through one key interest rate. Many other CBs prefer to use several key rates to steer short market rates with reference to a floor, a ceiling or a corridor, set consistently with the policy stance, but sometimes at the risk of blurring the policy signals.**

## 2. How does the resort to different procedures affect market rates?

Under normal circumstances CBs may act more effectively if their intentions and actions are not totally explicit. For instance, CBs tend to fine-tune quantities to counter temporary shocks or undesirable movements in market rates without modifying key rates. To this aim, most EC CBs occasionally conduct operations with only a few selected banks or through country-specific channels, such as the temporary transfer of Treasury flows from the Bundesbank to banks. An adjustment in the quantity allotted through auctions is also a usual device to influence market rates without explicitly changing key rates, given the uncertainty in the banks' assessment of the liquidity needs of the market. However, in some countries such as Germany or Italy, volumes of regular repo tenders may be carefully watched by market operators (because their scaling down may oblige the banks to apply for advances at penalty rates) and, hence, they cannot be manipulated very discreetly.

In the event of tensions, especially in the exchange markets, procedures to fine-tune quantities without modifying key interest rates may be misinterpreted (see Supplement 10) and policy signals conveyed by changes in interest rates may be more effective. Changes in procedures, nevertheless, may reinforce the impact on market rates of policy signals conveyed through key rates. For instance, CBs may change their auction techniques, as in Belgium and Germany, and/or the maturity of their repo tenders. The Bundesbank may shift from variable- to fixed-rate tenders, to stabilise market expectations after a rise in the Lombard rate as in November 1990, or to reinforce the impact of simultaneous cuts in the official rates, as in mid-September 1992. In other cases, changes in the

timing of operations may significantly modify their impact. In the UK, lending at 2:30 pm, instead of 2:45 pm, is tantamount to a public statement as the rate is published (see Supplement 3). More generally, publication on the screen of information about CB operations tends to be used more frequently by some CBs than others and, hence, have a different effect.

**EC CBs use various procedures, in terms of frequency, timing, auction techniques, maturity, counterparties and information to affect market rates, either explicitly or discreetly. Under normal circumstances, discreet action is usually preferred, but in case of acute tensions explicit policy signals and the use of key rates seem more successful.**

## V. CONCLUSION: SUMMARY AND FOLLOW UP

### 1. Summary

This note has proposed a framework to assess the degree of similarity in MPIP and has applied it to EC countries. The assessment has considered in succession: (a) the institutional, structural and regulatory environment of MPIP; (b) the main instruments and operational procedures; and (c) the way in which the use of MPIP affects the market. The main conclusions can be summarised as follows:

(a) Some important features are common to the conduct of monetary policy of all EC central banks, in particular the use of a short-term interest rate as an important, or the key, operational target, which is managed by marginal accommodation of the demand for central bank money. However, differences exist in the way structural factors (especially the variability in Treasury operations) and regulations (e.g. the resort to substantial reserve requirements with averaging provisions) influence the size and the stability of the (net) demand for central bank money.

(b) There is some convergence in the main instruments and procedures, particularly with respect to the increasing resort to discretionary market operations (especially repos) as a substitute for standing facilities which are offered at posted rates and used on the banks' initiative. Differences relate less to the range of instruments available in each countries than to the procedures according to which they are used, particularly as regards

the frequency of operations and the resort or not to specialised intermediaries.

(c) Consequently, the way in which MPIP signal changes in the monetary stance and affect the markets varies across countries and circumstances. In particular, there are notable differences in the role and flexibility of key interest rates and in the use of explicit as opposed to discreet procedures to fine-tune quantities. Even if MPIP were similar, differences in the monetary transmission channels would affect the speed and the extent of their impact on the financial and real sector.

On the whole, differences among EC countries are often summarised by identifying two distinct "models", one exemplified by Germany and the other by the UK. In Germany, substantial and averaged reserve requirements play a key role in enlarging and stabilising the demand for central bank money. This demand is mainly accommodated by one-month repos conducted once a week with all banks. The repo rate contributes to steer the money-market interest rate flexibly within a corridor signalled by the rates on standing facilities, which are set in the light of developments in the monetary target and the associated medium-run stance of monetary policy. In the UK, in the absence of reserve requirements, the Bank of England intervenes several times a day to manage the structure of short-term interest rates (up to three months, but especially the short end) through a large range of open market operations[, in particular outright transactions]. These are generally channelled through a few specialised intermediaries in order to affect the key "base lending rate" of banks, which has a large and rapid impact on economic activity.

However, care should be taken to avoid overemphasising these two cases. Firstly, the current differences should not lead to underestimate convergence factors, in particular those brought about by the completion of the Single Market; secondly, the scope for discussion should be broadened to consider other potential models, for example drawn from the experience of non-EC countries.

2. Possible follow-up

Several steps may be envisaged to take this exercise forward:

(a) check and improve the information on the current situation across all EC central banks, for instance through a questionnaire, and

update the assessment regularly in order to appraise the extent and speed of convergence;

(b) obtain the views of central bank experts on the general relevance of the framework and amend it, if necessary, in view of a discussion about the conduct of a single monetary policy;

(c) at a later stage, derive the implications for:

- the minimum degree of harmonisation necessary to conduct a single monetary policy by the start of Stage Three;
- the extent to which the completion of the Single Market and the role of market forces may help in the process of convergence;
- the role of the authorities in this process (i.e. whether, how and when to intervene).

[Several working methods may be considered to complete this tasks, flexibly associating the Monetary Policy Sub-Committee and the Economic Unit [with other central bank experts], for instance via regular exchanges of views within ad hoc or informal meetings.]

## LIST OF REFERENCE DOCUMENTS

In addition to various official publications from EC central banks, annual reports, or internal papers, in particular those prepared in the context of the meetings of the BIS Contact Group on Money Market Operations and Domestic Capital Markets, the following documents have been helpful in gathering information:


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- MONETARY POLICY SUB-COMMITTEE (1990) "Special Report on the Operations of a European System of Central Banks", Committee of Governors of the Member States of the European Economic Community, December.
- PADOA-SCHIOPPA T. and F. SACCOMANNI (1992) "Agenda for Stage Two: Preparing the Monetary Platform", Centre for Economic Policy Research, Occasional Paper, No. 7.
- Temperton P. (1991) "Bank of England Operations in the Money Market", chapter 11 of "UK Monetary Policy: the challenge for the 1990s", MacMillan, London, pp. 161-175.

Annex I

26th November 1992

## SUPPLEMENTARY INFORMATION

### Supplement 1: Countries without permanent reserve requirements

In B.L.E.U. there is typically a shortage in the market every day in the absence of official liquidity-supplying operations; in case of surplus, a standing deposit facility mops up liquidity.

In Denmark, although the market is now generally in structural surplus, the system is brought into deficit by issuance of CB certificates bearing interest, while an averaging provision in the remunerated deposit facility serves the purpose of smoothing day-to-day fluctuations in interest rates.

In the Netherlands, the money market cash reserve is enforced whenever the market deficit threatens to fall beyond a given level (e.g. as a result of Treasury operations or of an increase in official foreign reserves, i.e. almost continuously in 1992). It bears a weighted interest rate which prevents banks from losing income.

In the UK, the demand for CB money is considered as rather stable and there is typically a small shortage in the market, due to structural factors or to adjustment in the weekly issue of Treasury bills. A non-remunerated cash reserve system, with very low coefficients, is continuously applicable (i.e. reserves have to be maintained every day, even though the holding period lasts for six months).

### Supplement 2: Specific liquidity-draining operations in Germany

Specific Bundesbank operations in the money market are classified as market operations but present some common features with standing facilities: on the one hand, the Bundesbank may decide to mop up excess bank reserves by selling specially-issued Treasury paper ("mobilisation" and "liquidity" paper up to a maximum amount); on the other hand, these operations are formally initiated by banks and are conducted at a rate which is preannounced, not changed as long as there is no excess supply, and hence signals a floor to short-term rates, as some standing facilities do in other countries. For instance, late September 1992, such paper with a

short maturity (up to three days) were issued and sold to withdraw part of the excess liquidity resulting from capital inflows.

Supplement 3: Standing facilities at high or penalty rates

In Denmark, the lending facility, whose penalty rate, together with the lower rate of the deposit facility, offered a corridor for short-term interest rates, was suppressed in April 1992.

In France, a role similar to the German Lombard facility is played by the five-to-ten day "pensions". Although the latter is a reversed transaction in government securities or commercial bills, it is continuously available for use on the initiative of banks (in addition to the overnight facility). It is only limited by the availability of collateral and normally sets the upper limit in the fluctuations of the day-to-day money market rate, unless reserves shortages are expected to be of a shorter duration than the pension maturity. In September 1992, however, market rates largely exceeded the pension rate as a result of an acute shortage of liquidity due to heavy central bank intervention in support of the French franc, and in spite of the extension of the type and the percent of collateral accepted for granting pensions.

In the UK, collateralised loans may be granted by the Bank of England at 2.45 pm, although at its own discretion and at unpublished rates. Yet, discount houses traditionally obtain the liquidity they need at rates which hardly exceed those set earlier. Furthermore, in case of market tensions, this facility may be replaced with lending at 2.30 pm at a published rate, generally for a longer period (typically seven days), which amounts to a public statement by the Bank of England about the desired level of money market rates.

[The examples above (as that in Supplement 2) suggest that the distinction between standing facilities used on the banks' initiative and market operations conducted at the CB discretion, or that between housekeeping operations and policy signals may sometimes be blurred.]

Supplement 4: Operational features of regular repos

In B.L.E.U.: bi-weekly tenders of seven-day funds for all credit institutions. In Germany: weekly tenders with banks, for one or two months (more recently two weeks only). In Spain: ten-day repos. In France: weekly tenders on Treasury bills or commercial paper for two weeks. In Ireland:

one-day to one-month repos, typically offered in the afternoon for next day settlement. In Italy, three-to-thirty day repos are usually conducted between five and seven times a month; the volume allotted matters generally more than the repo rate as it may oblige banks to apply to special advances which are granted by the Banca d'Italia at its own discretion under restrictive conditions, and at a penalty rate, potentially up to 175 basis points, above the discount rate. In the Netherlands, special advances, which legally consist of collateralised loans, normally granted for one to ten-day periods, are allocated under procedures comparable to repo tenders.

Supplement 5: Reversed transactions as occasional instruments

- In Belgium, repo tenders may be conducted almost every day with two or three-day maturities with (candidate) primary dealers.
- In Germany, "quick tenders" for three to ten-days with big banks relieve temporary liquidity shortages.
- In Spain, day-to-day repos with primary dealers help to regulate market conditions.
- In Greece, repos for one or two-month periods are infrequent, but they can be conducted with banks and non-banks.
- In France, overnight repos may be conducted at the CB discretion and reversed repos may be used to absorb excess CB money, although banks are prepared to lend to the Banque de France without collateral.
- In Italy, unwanted excess reserves are drained most of the time by reversed repos at interest rates set by market participants.
- In Portugal, daily repos may be substituted for the automatic supply of liquidity above a given threshold of the overnight rate, in order to keep the market short of reserves until the end of each reserve period and to monitor market rates as during the turmoil of September 1992.
- In the UK, though all daily operations may be viewed as fine-tuning, repos on bills (commercial or government) are carried out in case of large shortage, for various periods sometimes exceeding 91 days, to avoid the risk of running out of paper or to concentrate the maturity of the CB portfolio on a particular future date. Repos on long-term government bond (gilt-edged) can even be used in the event of an acute shortage.

Fine-tuning operations, different from repos, but conducted and reversed at a pre-agreed date on the CB initiative, may be used as a substitute for tender allocations: for instance, in Germany the temporary transfer of government deposits from the Bundesbank to banks may be used discreetly, e.g. to offset the liquidity effect of tax payments, to prevent an excessive rise in the overnight rate at the end of a reserve period for instance, or even to counter inappropriate expectations of a tightening in the monetary stance.

Supplement 6: Swaps versus repos in foreign currency

In Germany, undesired fluctuations in the CB balances of credit institutions, in both directions during a monthly minimum reserve period, are sometimes counteracted by swaps, as a kind of buffer, or by foreign exchange transactions under repurchase agreements. The latter have the same impact as swaps on the management of liquidity, but have a different effect on the Bundesbank balance sheet. In the case of a contractionary operation, a claim on the delivery of foreign assets held by the central bank is transferred for a limited period, but not the assets themselves so that there is only a compensating exchange of liabilities. However, it should be noted that CBs do not seem to follow the same accounting rules to report reversed, forward or future operations.

Supplement 7: Non-banks as counterparties

In Greece, non-banks are permitted to place bids in repo auctions, but only through banks. In France, non-banks such as money market funds might act as counterparties in the CB's outright sales or purchases of Treasury bills and bonds, but in fact bank market-makers are preferred. In Italy repos, generally at very short maturities, and outright purchases of securities can be conducted with non-bank primary dealers.

Supplement 8: Role of "Primary Dealers"

In the UK, domestic money-market operations are mainly conducted with seven discount houses (which are specialist banks undertaking market-making obligations in bills) and two securities traders (plus twenty gilt-edged market makers for selling government bonds to fund the government's borrowing requirement). Given the Bank's general preference

for conducting money-market operations in active secondary markets rather than through bilateral transactions with individual counterparties, the role of primary dealers is to facilitate interventions. This is viewed as permitting both a better diffusion of the Bank's actions and a better assessment of market expectations and reactions. In Belgium, too, the counterparties are now only fifteen primary dealers in repos, reverse repos, loans and deposits in the interbank market. Together, they account for over 90% of operations in the Belgian markets. In France, the Bank also uses primary dealers, for instance for repo tenders, which constitute the basic source of refinancing and are administratively centralised and presented by twenty-six main market operators.

## Supplement 9: Transmission channels of MPIP

Even if all EC CBs used the same MPIP, differences in the monetary transmission mechanisms would imply discrepancies in the extent and the speed of their impact through financial markets. Differences in the financial transmission channels may stem from various degrees of market integration and asset substitutability, as well as of intermediation and regulation (e.g. cartel-like behaviour). The impact of MPIP on the real sector is also influenced by country-specific features, such as the reliance on fixed as opposed to variable rates for lending and deposit, the structure of sectoral balance sheets, the degree of financial fragility, the role of tax treatment, etc.

According to studies on the transmission channels of interest rates, EC countries may be split into two broad categories.[15] In sum, on the one side, changes in the short rates in Ireland and the UK spread rapidly throughout the structure of lending and deposit rates and affect the stock of financial contracts, which are generally concluded at floating rates. On the other side are most other EC countries where, in particular, the bulk of lending is contracted at a fixed rate which is linked to long-term market rates, at the time the loan was granted. This limits the impact of changes in short rates, in particular if the latter are expected to be short-lived. However, as a result of financial deregulation,

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15 See the national contributions to the 1992 Ex-ante Report of the Monetary Policy Sub-Committee and the background paper prepared by the Economic Unit.

innovation and the progress towards the Single market, some countries (for example, France) may tend to move from the second towards the first category.

While differences in transmission channels imply that a similar change in the short rate differently affects nominal demand, capital mobility and ERM commitments may constrain the extent of differentiation in movements of the short rates. Therefore, conflicts between domestic and external concerns may hinder the room for manoeuvre of EC CBs in their use of MPIP and, hence, reduce the credibility and the "sustainability" of changes in short rates. Given the slow convergence in the process towards EMU, this may constitute a major threat on ERM stability. For instance, in the exchange rate crisis of September 1992, some CBs have been faced with the dilemma that changes in the short rate could be perceived as "too large to last" from the domestic view point and "too small to work" for stemming speculative attacks.

In Stage Three, when objectives for the area are common to all members of the Monetary Union and interest rate conditions are equalised by arbitrage for similar contracts (especially on the money market), persistent differences in financial structures and behaviour may also entail discrepancies in the impact of the single monetary policy throughout the area, even if MPIP are largely harmonised, thereby creating potential conflicts within the ESCB.

Supplement 10: Credibility, expectations and impact of MPIP

Several cases may be distinguished:

(a) The basic case, taken as benchmark, corresponds to a credible and unexpected action, which has a given impact on markets;

(b) The policy action is credible but partly expected and, thus, already largely integrated in market rates so that the magnitude of the impact is smaller (though with the same sign); for instance, the Bundesbank usually seeks to influence expectations in advance of changes in the official rates so as to limit the surprise element;

(c) The policy action is credible but totally discounted insofar as the CB only accommodates actual developments in market rates (as often with the short-term facility in Ireland or the discount rate in Italy); in this case the causality runs from market rates

to official rates; in an apparently similar case, there is a lag between the announcement and the implementation of the policy action, as for instance with a fixed-rate auction (e.g. in Germany, mid-September 1992), so that market rates may move before the key interest rate and causality apparently runs from the market rates to the CB rate;

(d) The policy action is credible but less than expected and hence less than already discounted in market rates, so that the latter may move in the opposite direction;

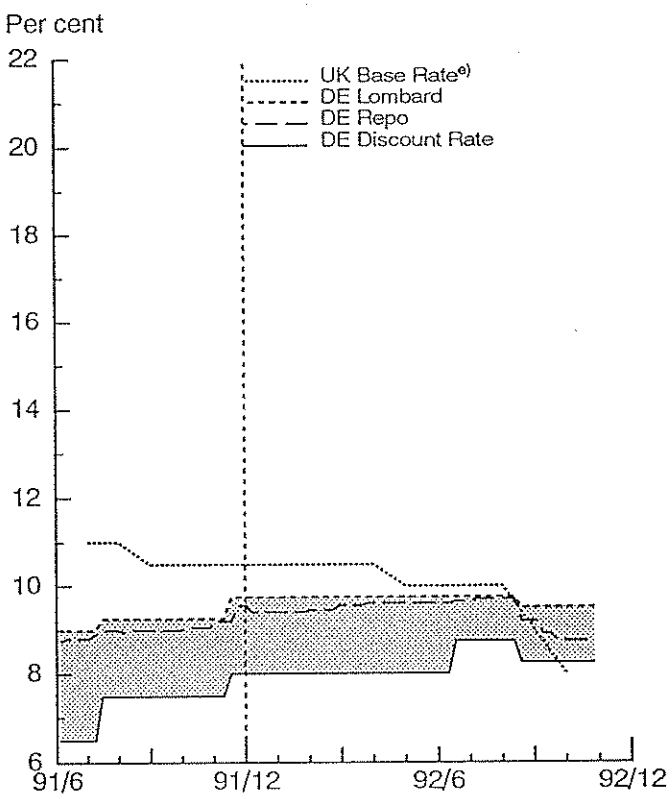
(e) The policy action is misinterpreted and leads to vicious circles: e.g in Germany on several occasions since 1990, expectations have pushed market rates at the Lombard ceiling, at which banks took up large amounts just prior to a repo tender, which was therefore scaled down and thus reinforced expectations of a tightening.

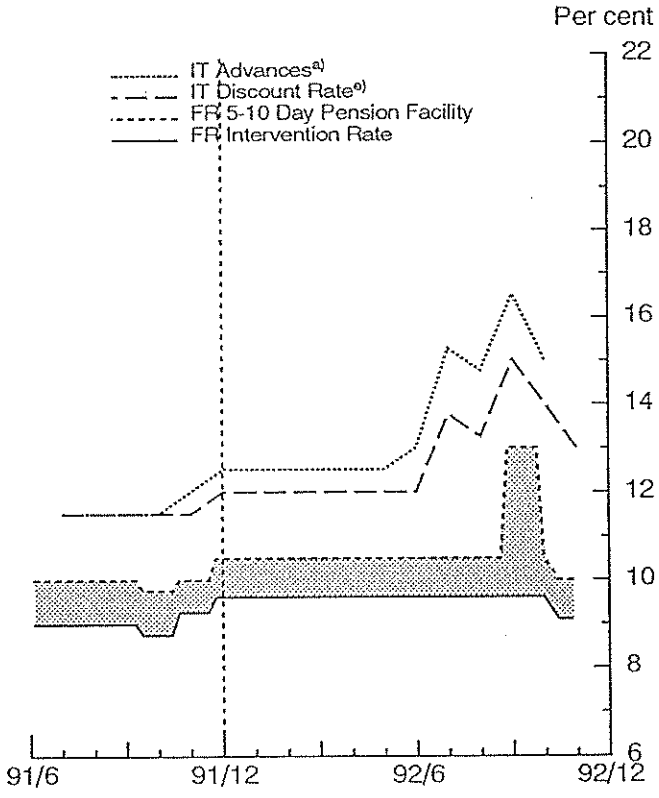
(f) The policy action is not perceived by the market and has no specific effect (as compared to an absence of action). In case of exchange rate tensions, CBs may discreetly scale down the liquidity needed in order to bring about an increase in market rates without raising explicitly key rates. However, if the credibility of monetary authorities is not fully ensured, the risk entailed by exchange rate depreciation and/or new capital controls may well account for the increase in market rates.

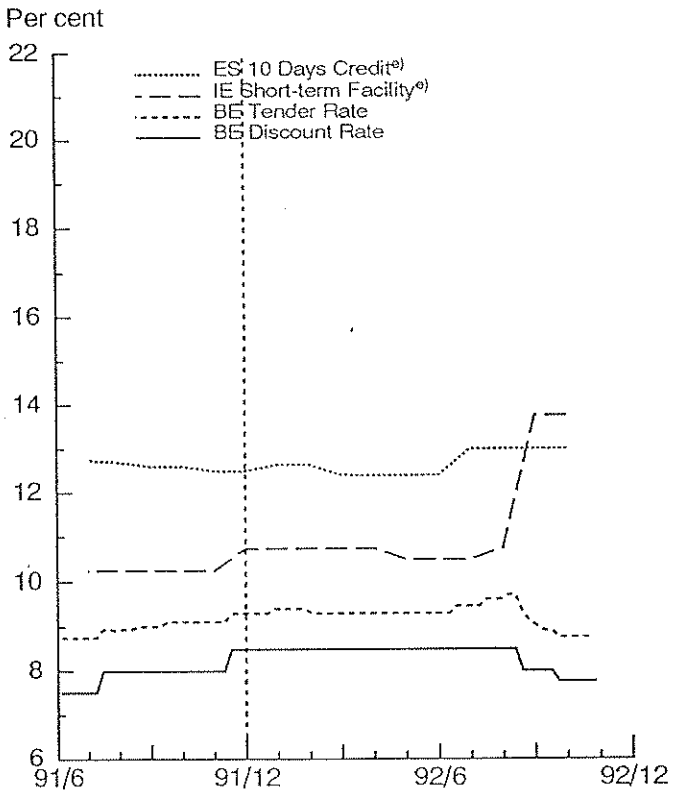
(g) The policy action is not credible and has a perverse effect. For instance, given the preference of CBs for discreet approaches under normal circumstances, explicit changes in key rates may become rare and, hence, be viewed by the market as instruments of last resort, perversely reinforcing speculative attacks, instead of calming them.

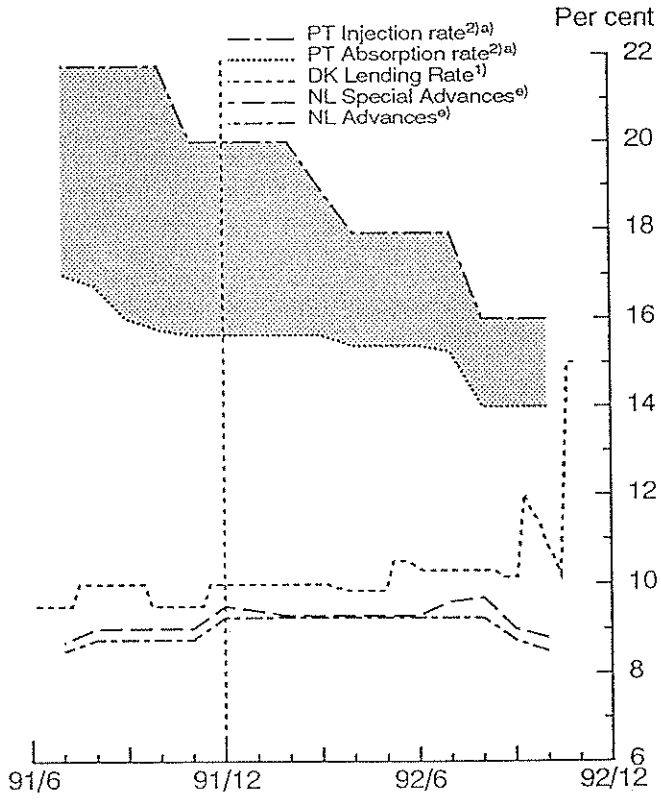
# OFFICIAL OR KEY INTEREST RATES*)

(end of week)




1) From April 1992 borrowing rate on certificates of deposit.

2) Rates on regular operations (one week).

*) In Greece, the maximum overdraft rate at 40.00 since the 18.09.92 was lowered to 35.00 on the 23.10.92.

a) Monthly average data.

e) End of month data.