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The Formulation of Monetary Policy in EMU

By

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The views expressed in this paper are not necessarily held by the Bank and are the personal responsibility of the authors.

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1.   Introduction[1]

The selection of the founder members of Economic and Monetary Union (EMU) constitutes a momentous step in the history of European monetary integration. While the participants have been decided upon, there still remains a number of important questions on how EMU will work in practice. This article considers how monetary policy may be conducted within EMU, focusing on the main strategies under consideration.

Monetary policy in the euro currency area will be formulated and implemented by the European System of Central Banks (ESCB), comprising the European Central Bank (ECB) and the National Central Banks (NCBs). The ECB will come into existence at the start of July 1998, replacing its forerunner the European Monetary Institute (EMI). The ESCB has been mandated by the Maastricht Treaty to ensure price stability[2] within the euro area. This narrowly defined objective is protected from political interference by statutes based on an international treaty which only member states acting collectively can alter. This confers the ESCB with a high level of independence in the pursuit of its objective. However, the Treaty also states that "without prejudice to the objective of price stability, it shall support the general economic policies in the Community". Given that the newly formed ESCB will have no track record in the fulfilment of its price stability objective, it is imperative that credibility is established at

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[1] The authors would like to acknowledge helpful comments by Michael Casey and Peter Charleton.
[2] Price stability is selected as an objective since it is considered to be an important factor in achieving a high and rising level of living standards.

the start of EMU. The ESCB will have to choose the monetary policy strategy that will best deliver the credibility required.[3]

This article presents a framework for monetary policy in which the various monetary strategies available to the ESCB can be assessed. The main focus is on the candidate strategies recommended by the EMI - monetary aggregate targeting or direct inflation targeting or some combination of both. The agreed instruments and procedures that form part of the tactical toolkit of the ESCB are examined within the context of these strategies. In the next section the various monetary strategies available for the euro area are reviewed. Section 3 considers the options available to the ESCB in combining elements of both candidate strategies. The implementation issues which arise are considered in Section 4. The final section presents some tentative conclusions.

2. The Choice of Monetary Strategies

The start of EMU will constitute a substantial regime shift for monetary policy formulation in the EU. As a trading block, the euro area will be relatively closed in contrast to the structure of its participant countries, while internationally it will be of a comparable size to the USA. These constitute important factors in deciding upon a strategy for monetary policy within EMU.

A suitable strategy for monetary policy should satisfy a number of criteria (EMI, 1997a). The strategy should be *effective* in meeting the objective of price stability; the

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[3] The actions of the ESCB need to be credible in order to convince the public that the price stability objective will be met. Otherwise, the public will anticipate inflation in their setting of prices and wages so fulfilling their expectations of rising prices.

processes of setting targets and decision making should be *transparent* to the public; the formulation and communication of the targets should be such as to hold the monetary authority *accountable* to the public for its actions; it should have a *medium-term focus* to lock-in inflationary expectations, while retaining some discretion in responding to short-run deviations from the target; as far as possible there should be *continuity* with the experiences of the strategies used by the participating NCBs and finally it should be *consistent with the independence[4]* of the ESCB.

As the stylised representation in Figure 1 outlines, the ultimate target of each strategy is price stability.[5] However, in order to pursue this objective an intermediate target and/or indicator is utilised.[6] Intermediate targets for monetary policy are required due to the uncertainty that arises between the use of monetary policy instruments and the ensuing effectiveness in achieving the objective of price stability. This uncertainty results from the long lags and complexity in the transmission of policy actions and the resultant impact on inflation. In addition, intermediate targets can both guide the policy decisions of the monetary authority and facilitate the communication of policy actions to the public.

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[4] In addition to independence from political influence, monetary authorities should also assert their autonomy with respect to financial markets. As Blinder (1998) argues, following financial markets too closely can "lead the central bank to inherit precisely the short-term horizon that central bank independence is meant to prevent".

[5] Price stability literally means no change in prices which implies a zero inflation rate. However, it has been found internationally that the true rate of inflation is below the measured rate in many countries (see for example, Boskin *et al.,* 1997). This suggests that an inflation rate of zero would imply price deflation, hence a rate somewhere between 0-2% would be considered broadly consistent with price stability.

[6] An intermediate target is a variable that policymakers choose to focus on when the ultimate target is difficult to monitor and control by contemporaneous policy actions. Indicators are variables that provide information on current or future behaviour of the objectives.

Figure 1:   Monetary Strategy Options for the Euro Area
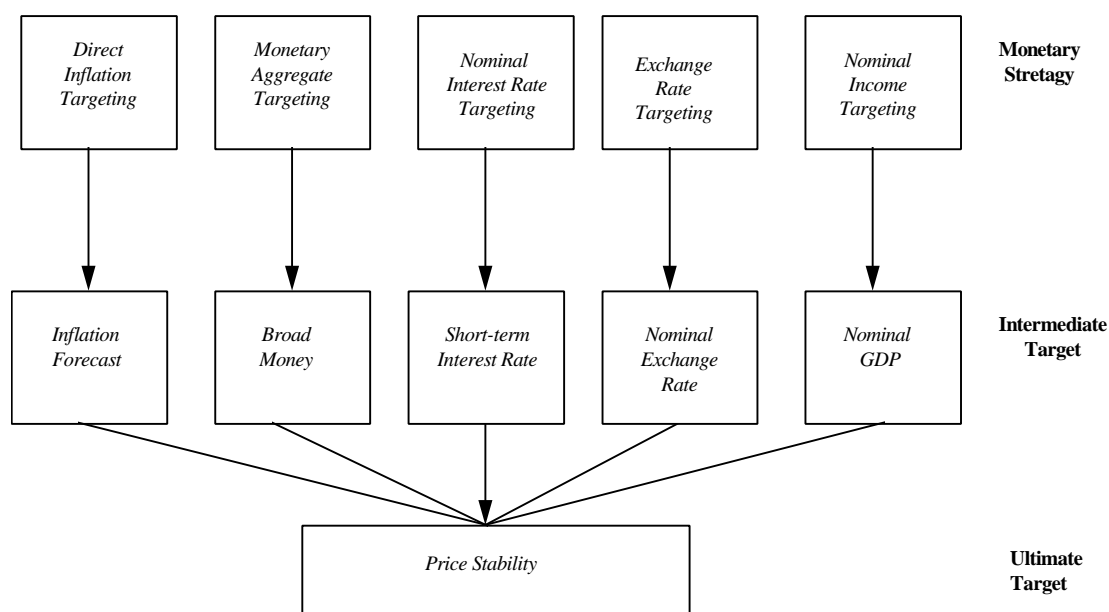
The EMI considered five possible strategies for monetary policy within EMU. These strategies were interest rate targeting, nominal income targeting, exchange rate targeting, monetary aggregate targeting and direct inflation targeting (EMI, 1997a).[7]

2.1   Interest rate targeting

An interest rate targeting strategy involves the use of a short-term interest rate as an intermediate target for monetary policy. Since the short-term interest rate is the primary operating target[8] used by most monetary authorities, changes in this variable can be instantaneously and accurately measured. However, it is the real, or inflation adjusted, rate of interest which is of most relevance to economic decision making. Given the difficulties which arise in the identification of an equilibrium real interest rate

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[7] For a review of the candidate monetary strategies in the euro area, see Devine and McCoy (1998*a*).
[8] An operating target is the variable or instrument that policy-makers try to control in order to achieve an intermediate target.

consistent with price stability, the effectiveness of such a strategy is reduced. Hence, the targeting of interest rates is generally considered to be inappropriate by the EMI and is not being proposed as a monetary strategy in the euro area.

2.2 Exchange rate targeting

The exchange rate has been a commonly used target variable, notably among the smaller EU countries within the ERM. The pegging of the exchange rate to an anchor country with a strong reputation for price stability and with which the country has strong economic links is considered particularly appropriate for a small open economy. The main attributes of this strategy are that exchange rates are accurately and immediately measured; they are widely understood by the public; they respond almost immediately to changes in the operating target, which is usually the interest rate, and they have a broad impact on the economy. However, in the context of EMU, this strategy is not considered suitable given the size and international importance of the new euro area and the extent of intra currency-area trade.

2.3 Nominal income targeting

The use of a nominal income, or GDP, target has been advocated to address the concern that focusing solely on price stability may be at the expense of output stabilisation in the short-run. However, a nominal income target is difficult to measure and control since estimates of income growth can be imprecise and prone to change over time. Furthermore, political complications may arise if the announced target is perceived to be too low in which case the monetary authority may be accused of being 'anti-growth'. Finally there is a danger that a nominal income target may be

misinterpreted as the ultimate goal of the ESCB, whereas the primary objective is the maintenance of price stability.

The EMI, using the general principles set out above, decided that interest rate targets, exchange rate targets and nominal income targets were inappropriate for the purpose of a monetary strategy for the ESCB. The choice of strategy has been narrowed down to monetary aggregate targeting or direct inflation targeting. As will be discussed in the next section, a consensus seems to be emerging that a combination of both these strategies will be used, given their similarities in practice. However, in theory the differences between monetary aggregate targeting and inflation targeting are considerable.

2.4   *Monetary aggregate targeting*

Under monetary aggregate targeting, the monetary authority targets the supply of a monetary aggregate, usually a broad measure of money which includes cash and bank deposits. The supply of the monetary aggregate is kept on a predetermined growth path, based on the monetarist quantity theory of money, which states that inflation arises from the growth in money. The targeted growth in the monetary aggregate is determined from estimates of real potential growth in the economy, any trend in the velocity (turnover) of money and an inflation rate deemed consistent with the price stability objective.

Traditionally monetary aggregate targets were perceived as 'money rules' which served to increase the transparency of monetary policy and limit the discretion of the monetary authority. However, in the 1980s the process of financial innovation and the

liberalisation of capital markets resulted in the disintegration of previously stable relationships between money and prices. As a result there has been a substantial shift internationally away from the use of monetary aggregates as the sole focus of monetary policy actions.

Monetary aggregate targeting has the advantage that it holds the monetary authority accountable for liquidity growth, the variable that it presumably can exert most control over. However, this depends on the stability of the money demand relationship in the euro area. While recent studies[9] suggest that euro area-wide money demand functions exhibit very satisfactory statistical properties in terms of stability, these results are not conclusive.[10] The regime shift which will accompany the onset of EMU is likely to weaken further the relationship between money and prices.[11]

2.5   *Inflation targeting*

Inflation targeting in theory requires the central bank to set monetary conditions such that activity levels in the economy are consistent with the price stability objective.[12] In its purest form, direct inflation targeting has no intermediate target since the monetary authority focuses on the ultimate target of inflation control. However, in practice, the monetary authority following this strategy has to adjust interest rates such that the

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[9] See, for example, Browne *et al*. (1997), Artis *et al*. (1993).

[10] There is the possibility of 'aggregation bias' in these findings, where the sum of the money demand functions has less volatility than its individual component parts, casting doubt on the applicability of the econometric results obtained for a single money demand function for the euro area.

[11] In addition to the regime shift, the adoption of the money supply as a target variable can in itself lead to the breakdown of the predictable link between money and inflation. This is an example of Goodhart's Law.

[12] For a detailed analysis of the issues relating to an inflation targeting strategy, see Devine and McCoy (1998*b).

forecasted inflation rate, which becomes *de facto* an intermediate target, is in line with the ultimate target of price stability.[13] In assessing the appropriate level of interest rates, the monetary authority monitors all economic variables that influence inflation, including the growth of money. This contrasts with a monetary aggregate targeting approach where the focus is limited to controlling the growth of money.

Inflation targets may be better in coping with structural changes since they do not rely on a stable relationship between any specific economic indicator and inflation. This would be an advantage for the ESCB in the initial phase of EMU. However, this advantage may be undermined if the inflation objective is missed due to factors outside the control of the ESCB thereby reducing its credibility. For instance, price factors such as those resulting from high national wage agreements or significant commodity price changes. In order to ensure credibility, an inflation targeting strategy requires considerable analysis and explanation to ensure the necessary transparency of monetary policy actions. In particular, a detailed explanation of the transmission mechanism between policy instrument changes and inflation is required. In the broad monetary union decided upon, the considerable divergence in the economic cycles of the participating countries and the differences which persist in monetary transmission mechanisms will make transparency, in particular, difficult to achieve in the short-run.

3   A Combined Target Monetary Strategy

In practice, considerable overlap exists between the ESCB's candidate strategies of monetary aggregate and inflation targeting. Both pursue the same objective of price

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[13] Svensson (1997) argues that the inflation forecast is an ideal intermediate target where this variable is easier to control and observe than actual inflation, and it facilitates the transparency of monetary policy.

stability, they are both forward looking and they both employ a wide variety of indicators in determining the appropriate stance of monetary policy. No monetary authority has practised the pure form of monetary aggregate targeting. The Bundesbank, which has long championed monetary aggregate targeting, also monitors a range of economic indicators on which it bases its policy decisions. However, a particular emphasis is placed on monetary aggregates in its public pronouncements.[14] Likewise, those countries that pursue an inflation target, in addition to a wide range of economic and financial indicators, also monitor money aggregates in the assessment and formulation of monetary policy actions. Therefore, since in practice neither strategy is pursued in its pure form it is necessary to consider some combination of these strategies.

In determining the appropriate target for monetary policy two main considerations arise. The first is the extent to which a stable and predictable relationship exists between the intermediate target chosen and the final objective of price stability. The second is the degree to which the intermediate target is controllable by the monetary authority. In the context of the ESCB choosing a monetary strategy it is unlikely that either an inflation targeting strategy or one focusing on monetary aggregates will clearly dominate the other at the start of EMU.

The key challenge facing the ESCB will be the establishment of credibility with respect to achieving its final objective of price stability. Hence, it is particularly important that whichever strategy is employed is accompanied by a high degree of transparency,

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[14] A number of studies have concluded that the actions of the Bundesbank are better described as inflation targeting rather than monetary targeting (see Bernanke and Mihov, 1997, and Clarida and Gertler, 1996).

where the actions of the ESCB are communicated and explained to the public. Balanced against the need for transparency in monetary policy actions there will be an equally important need for flexibility in the conduct of monetary policy. This is a direct result of the high degree of uncertainty concerning the stability of economic and financial relationships which will prevail at the start of EMU, arising partially from the ensuing regime shift. While the ESCB will want to maximise the credibility which arises from adhering to a pre-specified strategy and communicating its actions within that strategy, it will also need to incorporate a high degree of flexibility to cope with unexpected monetary developments. If flexibility is absent any credibility gained from a specific strategy will be lost in the event of excessive deviations from its stated target.

A strategy capable of delivering the flexibility required would be one that encompasses elements of both inflation targeting and monetary aggregate targeting. This hybrid strategy could fall somewhere along a spectrum of options between 'pure' inflation targeting and 'pure' monetary aggregate targeting (as outlined in Figure 2). While it is possible that the ESCB could opt not to announce any explicit intermediate target, so allowing for maximum discretion in policy choice, this would diminish both transparency and accountability.

Figure 2:   Hybrid Monetary Strategy Options
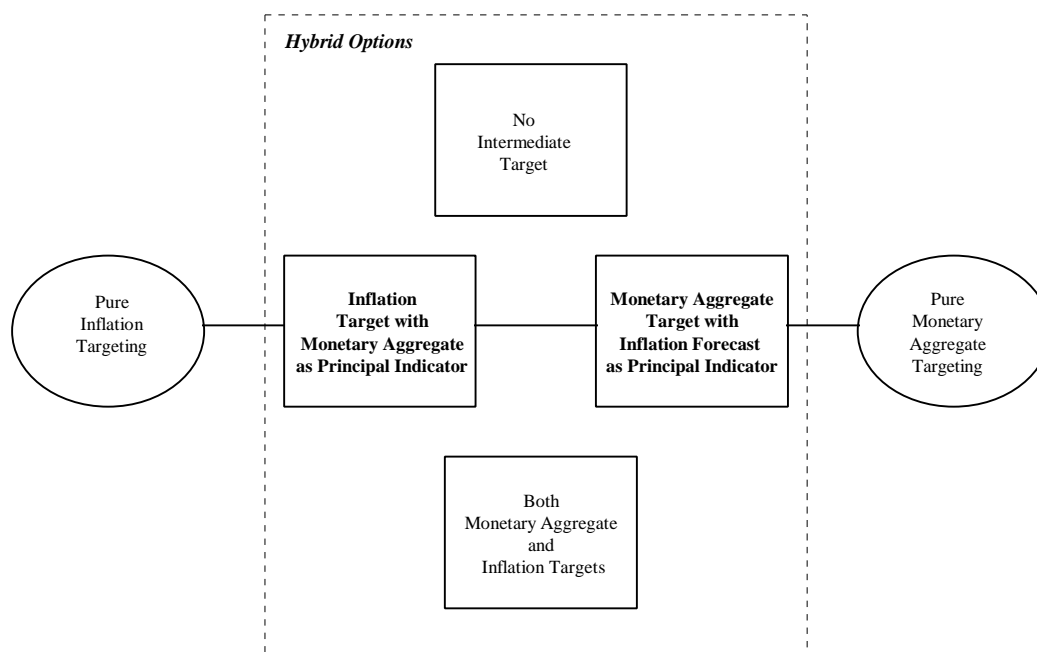
An alternative option would be to announce two intermediate targets, one for a monetary aggregate and the other for forecasted inflation. By allowing for some discretion, this approach may overcome the problem that strict adherence to one target rule may be overly restrictive when specific shocks arise. However, the task of ensuring that the pursuit of both targets remained mutually consistent would be onerous. In addition, the transparency of monetary policy decisions would be severely impaired, exacerbated by the fact that it would significantly raise the possibility of sending conflicting signals to both the financial markets and the public.

A more eclectic approach would involve two other hybrid options. One of these hybrid options would have a monetary aggregate as the intermediate target with the inflation forecast as a principal indicator. The other hybrid option would focus on the

inflation forecast as the intermediate target and the monetary aggregate as a principal indicator. The principal indicator may take precedence over the intermediate target in determining policy actions when a predefined set of circumstances occur.

The advantage of these options, combining an intermediate target with a principal indicator, is that the strategy incorporates a mix of a simple rule with discretion. This is preferable to the monetary authority having complete discretion or adhering to a fixed rule.[15] The issues raised in implementing these combined strategies are considered in the next section.

## 4   Implementation of Monetary Strategies

The operational framework for the conduct of monetary policy in EMU has been designed to be applicable to whatever strategy is finally chosen. In designing this framework the EMI have indicated that it should fulfil certain requirements to enable the ESCB to carry out its tasks effectively.[16] Such requirements include that the framework should provide the means through which the ESCB can control its operating target; monetary policy instruments should adequately and precisely enable the ESCB to signal the stance of monetary policy; it should be capable of providing and withdrawing liquidity, and influencing the structural position of the banking system vis-à-vis the NCBs.

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[15] Meyer (1998) notes that "good policy should be systematic or rule-like, even when it is not formally tied to a specific rule".

[16] For a more detailed analysis of the issues addressed in this section, see EMI (1997a, 1997b).

In attaining the ultimate target of price stability the ESCB will pursue a monetary policy strategy as outlined above. Depending on the strategy selected an intermediate variable is targeted to overcome the difficulties associated with the length of the transmission mechanism from monetary policy actions through to price stability. This target variable is attained through steering the operating target, which is currently envisaged to be a market determined short-term interest rate. In controlling the operating target a range of monetary policy instruments and procedures are employed. At this stage it is envisaged that the procedures and instruments which the ESCB will have at its disposal will include open market operations, two standing facilities, and a system of minimum reserve requirements. This evolution of the stages of monetary policy through to the ultimate target of price stability is outlined in Figure 3. The implementation issues which arise at each stage are discussed below.

Figure 3:   A Monetary Policy Framework

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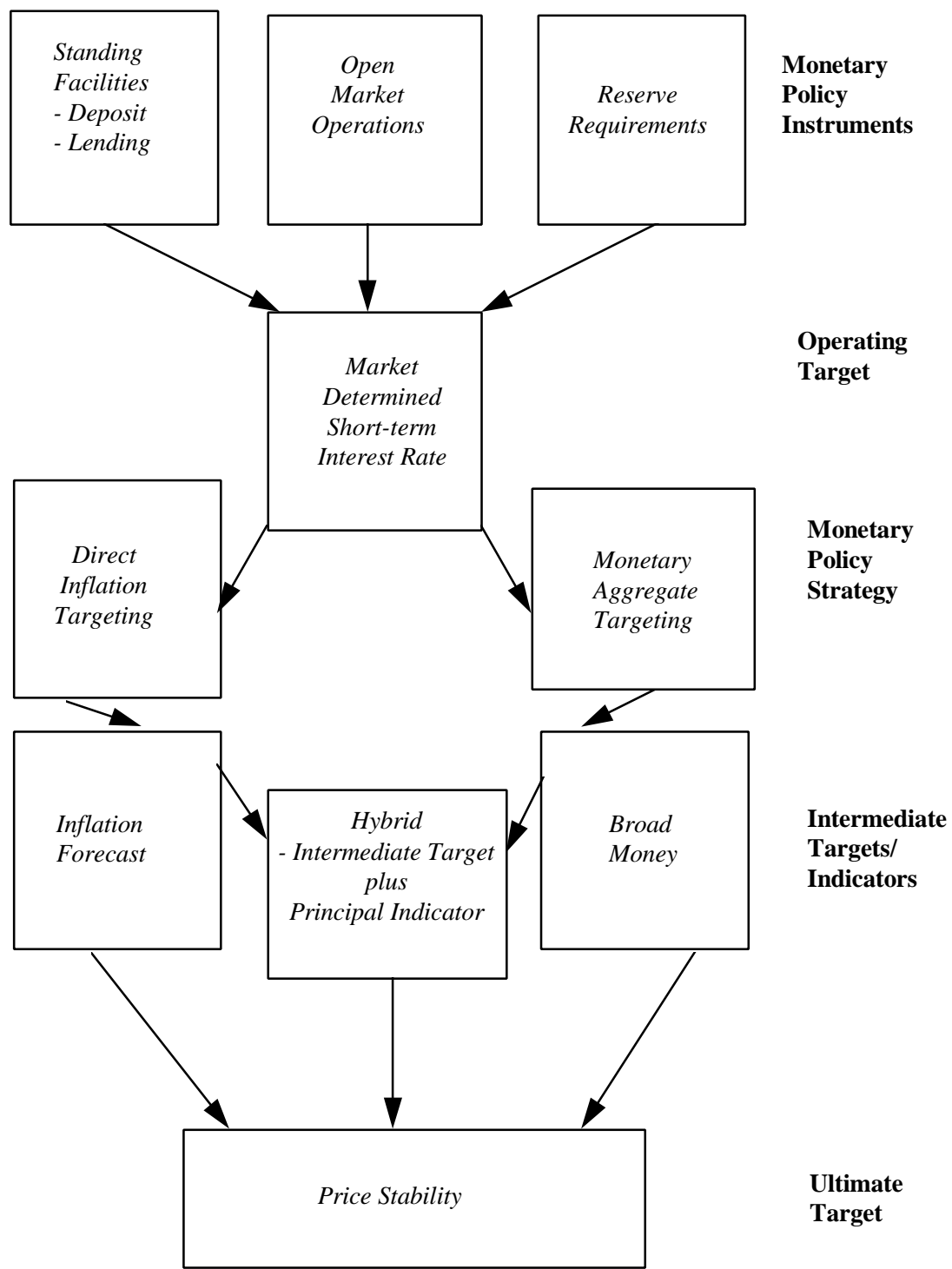
4.1 Monetary policy instruments

The main operating target of the ESCB will, under normal circumstances, be a market-determined short-term interest rate. Open market operations will fulfil the function of steering interest rates, controlling liquidity, and signalling the stance of monetary policy. In accordance with the principle of decentralisation the NCBs will play an important role in implementing open market operations. The main policy instrument will be a two week repurchase transaction agreement (repo), executed on a weekly basis. This will be supplemented with a three month repo, fine tuning operations (quick tender repos, foreign exchange swaps) and structural operations (issuance of debt certificates, outright transactions).

Standing facilities will consist of a marginal lending facility and a deposit facility, thereby providing an effective corridor for market interest rates which should limit the volatility of these rates. In complement to open market operations these standing facilities will also fulfil a function in signalling the general stance of monetary policy.[17]

While there is no consensus as to the desirability of minimum reserve requirements, it is a distinct possibility at this stage that the counterparties of the ECB will be required to hold reserves with the NCBs.[18] If employed minimum reserve requirements would fulfil three functions: where an averaging provision is included, financial institutions are able to average their holdings of required reserves over the maintenance period and

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[17]Given the depth of modern financial markets, which assimilate and respond to new information very quickly, it will be important at the start of EMU that the ESCB clarifies to the market how to interpret changes in rates determined or influenced by the ESCB. This is necessary to avoid sending conflicting or erroneous signals to the market.

[18] While the selection of counterparties for monetary policy procedures has not been finalised, it is envisaged that the ECB will generally be dealing with a very wide set. It will probably include all the banks in the EU, and possibly some non-bank financial institutions.

hence money market interest rates are more stable; they either create or enlarge a structural liquidity deficit thereby facilitating liquidity management[19]; they tend to increase the interest elasticity of money which is particularly relevant in the control of a monetary aggregate.

The transmission of interest rate changes to economic activity is likely to differ quite substantially between the member countries in the euro area. This may be particularly acute in the early stages of monetary union, which could make for difficult decisions on the appropriate operating target level. Recent research by Dornbusch *et al.* (1998) and Ramaswamy and Sloek (1998) agree that output in the various economies have different sensitivities to interest rate changes, although they disagree on the groups of economies that most sensitive.[20]

4.2 Candidate Monetary Strategies in Practice

The EMI has outlined a number of key features which will be part of any strategy implemented by the ESCB, irrespective of the precise definition of the final strategy chosen (EMI, 1997b). These include:

- the public announcement of a definition of price stability, which is currently envisaged to be in a range of 0-2%;

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[19] In a study of the EU-wide structural position of the banking sector vis-à-vis the ESCB, Escriva and Fagan (1996) conclude that a structural *deficit* will prevail which makes this function of reserve requirements less important. However, if there is a significant shift away from coins and banknotes towards electronic payments in EMU then the ability of the ESCB to create or enlarge a structural deficit could become increasingly relevant (Enoch *et al.,* 1997).

[20] Ramaswamy and Sloek (1998) find that the full effect of interest rate changes on output take twice as long to occur but the impact is twice as big in a group of countries, including Austria, Belgium, Finland, Germany and the Netherlands, in comparison to group including France, Italy, Portugal and Spain. In contrast the Dornbusch *et al*. (1998) study finds that the impact is greater and persists longer in Italy than in both Germany or France, while the impact is much less in Spain compared to these three countries.

- the setting of targets publicly such that the performance of the ESCB can be assessed;

- the monitoring of a broad set of indicator variables which offer relevant information concerning future price stability;

- the production of regular inflation forecasts and other general economic forecasts;

- monetary aggregates should have a prominent role either through a publicly announced target or monitoring range.

While differences persist between the various strategies in a theoretical context, these differences are much less substantive in practical implementation.[21] Given that a wide range of economic and financial indicators are monitored in both strategies, it is the precise role assigned to these variables which serves as the main distinction. Consequently, the communication of monetary policy intentions and actions to the public depends on the strategy chosen. It is this communication that influences inflationary expectations and the credibility of the ESCB.

In the pursuit of a 'pure' monetary aggregate targeting strategy, a money aggregate serves as an intermediate target. The monetary authority publicly announces a prespecified range for the growth in the targeted aggregate. Monetary policy decisions are then based on deviations of actual money growth from that targeted, where monetary policy actions are explained to the public in the context of trends in the monetary aggregate.

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[21] See Blinder (1998) for an excellent synthesis on the theory and practice of central banking incorporating the perspectives of both academic economists and practising policymakers.

In its purest form an inflation targeting strategy is defined as one which aims to target inflation directly without the use of a specific intermediate target. In this scenario the monetary authority announces a target range for inflation which must be attained within a given time horizon. Where deviations arise between forecasted inflation and the target value the monetary authority acts accordingly to restore inflation to its predetermined path. While the inflation forecast serves as an intermediate indicator in this case, it can also be used more explicitly as an intermediate target variable in itself.[22] A wide array of variables are employed in compiling the inflation forecast, including monetary aggregates. The communication of monetary policy actions to the public thus involves explaining deviations in actual inflation from that targeted, but a broader information base is utilised in doing so.

A hybrid strategy, as outlined in Section 3, incorporates a high degree of flexibility enabling the monetary authority to respond in an appropriate manner to shocks as they arise, without losing credibility due to missing the prespecified target. For example, the strategy may use a monetary aggregate as the intermediate target, but this could be supplemented with an inflation forecast as a principal indicator. In the event of a destabilising shock to the monetary aggregate, the ESCB would switch to the principal indicator in explaining its policy actions to the public. In the opposite case with the inflation forecast as the intermediate target, considerable uncertainty regarding the inflation outlook would result in the focus of public communication switching to the monetary aggregate.

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[22] One of the key limitations of an inflation targeting strategy is the observed difficulty in accurately forecasting inflation (Cecchetti, 1995). Furthermore, Issing (1998) notes that using an inflation forecast as a target for monetary policy has implications for the accountability of the monetary authority. This is due to the complexity involved in the public's assessment of monetary policy actions in the context of the inflation forecast, as opposed to the actual inflation rate.

It will be at the discretion of the ESCB to determine to what extent it wishes to pre-empt its response to certain shocks. This may involve either announcing a pre-specified response or a switch to the principal indicator in the case of hybrid strategy. This may enhance its credibility but at the expense of some flexibility.

4.3   Specification of Intermediate Targets/Indicators

Irrespective of the precise role assigned to either inflation or money in the monetary policy strategy, the ESCB will have to assign relevant definitions to each variable. Furthermore, the width of the target band will also have to be specified i.e. upper and lower bounds within which inflation is targeted, as will the time horizon over which the ESCB must attain the target.

- *Target/Indicator Variable*

In choosing a relevant monetary aggregate to target there are certain "*a priori* conditions" which must be met, such as liquidity in transactions and suitability for deposits (EMI, 1997b). Thereafter, the choice depends on the empirical properties of the aggregate, such as its inherent stability and the extent to which the aggregate is controllable by the monetary authority.[23]   Table 1 presents a summary of the guideline/indicator variables currently employed in the EU.

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[23] In response to financial innovation and the liberalisation of capital markets in the 1980s the definition of money employed by various countries has changed. Currently the Bundesbank and the Banque de France focuses on a broad measure of money, M3. In Spain a composite measure of money, ALP, is monitored in conjunction with the inflation target.

If the inflation variable was to assume a monitoring function in the ESCB, rather than a target role, this would allow the ESCB some flexibility in the choice of an appropriate index. However, where a target range for inflation is announced then it is important for the purposes of accountability that a specific index is chosen. A suitable price index in this instance is one which is timely, widely known and understood, and rarely revised. To-date retail price indices, adjusted for various components which are viewed as either excessively volatile or which may be prone to supply shocks, have been most popular in inflation targeting countries. An alternative target which has been suggested is the GDP deflator, due to the close links between this index and potential output. However, the deflator is little known, is published with a significant lag, and is generally subject to significant revisions. Finally, the availability of a harmonised CPI (HICP) in the euro-wide area may prove to be an appropriate index for the purpose of monitoring and/or targeting inflation.

- *Band Width*

In choosing an appropriate band width for the target range, a trade-off arises between a band that facilitates flexibility in the conduct of monetary policy and one which maximises credibility. A wide band allows the monetary authority considerable flexibility in addressing shocks, but credibility may be diminished. In contrast, a band which is too narrow may result in excessive deviations from the target which also diminishes credibility. In this respect, the EMI has noted that the target range should take account of the controllability of the target variable and its stability or otherwise.[24]

- *Time Horizon*

The choice of an appropriate horizon within which the target is to be attained also requires a balance such that it is neither too long or too short. The long lags which exist between monetary policy actions and their impact upon the final target, necessitate that the horizon chosen is sufficiently long. However, given that one of the functions of a target is to lock-in inflationary expectations it must be sufficiently current to be of relevance to decision makers. In addition, if the horizon is too short, the monetary authority may be forced to respond to shocks which may otherwise dissipate in the long-run, in an effort to reach the target within the specified time frame.

- *Public Communication of the Monetary Policy Strategy*

The key distinction between the various strategies in the context of their practical implementation is the extent to which different variables are prioritised in communications with the public. This communication with the public is critical to any monetary policy strategy, where credibility is established and inflationary expectations formed on the basis of how monetary policy actions are explained and presented. Furthermore, communication with the public is necessary for transparency and accountability purposes.

The ESCB will have to decide the manner and means by which it will explain its decisions and actions to the public. To-date the EMI have commented that the publication of a target and details of its derivation would be desirable, in addition to

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[24] Where a range, as opposed to a point, for a target is chosen, it has been argued that inflation expectations tend to focus on the upper bound of the range. Hence, Finland has adopted a point for its

explanations of deviations from the target and the policy responses of the ESCB. However, it is yet to be decided whether or not the ESCB should publish its own inflation forecasts. While the publication of such forecasts enhances transparency, the complexity involved in their estimation can impair the extent to which they are comprehensible to the public. Other difficulties arise such as the risk that published inflation forecasts may influence wage and price setting arrangements, and the extent to which financial market indicators used in the compilation of the forecast are themselves conditional on the perceived stance of monetary policy. Irrespective of whether the actual inflation forecast itself will be published, the EMI has stated that some form of publication regarding inflation developments and trends is also desirable.

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inflation target, and in the UK and Sweden, a point is specified accompanied by a margin of +/- 1%.

5   Conclusions

With most of the necessary elements now in place for EMU, the choice of monetary strategy for the euro-area has yet to be decided upon. The ESCB has been given a clear objective of achieving price stability within EMU and the requisite independence to pursue this goal. The strategy for monetary policy in the euro area will have to provide a transparent and coherent guide to policymaking in order to establish the credibility of the ESCB.

The strategies under consideration have been narrowed down to monetary aggregate and direct inflation targeting. The distinction between these strategies is generally overstated. It can be argued that a monetary aggregate targeting strategy is a limiting case of inflation targeting since the latter uses a wider array of information, including money. A simple choice between monetary aggregate targets and inflation targets depends upon the predictability of the demand for money compared to the accuracy of the forecasts of inflation. However, due to the substantial restructuring of financial markets in response to EMU, the money relationships necessary for monetary aggregate targeting may become unreliable. Likewise, the use of inflation targeting will be hampered by the uncertainties introduced by substituting a single currency for several currencies thereby rendering inflation forecasting more difficult. These factors make it unlikely that the ESCB will rely exclusively on either monetary aggregate targeting or inflation targeting but rather on some combination of both.

Regardless of the strategy decided upon, the monetary framework will incorporate certain key elements. Such elements include the public announcement of a definition of

price stability, the presentation of specific targets against which the ESCB's performance can be assessed, and the generation of forecasts of inflation and other relevant economic variables. In addition, the operational framework within EMU has been designed to encompass whatever strategy is chosen. It is envisaged that the operating target will consist of a short-term interest rate, where the monetary policy instruments used to steer this target will consist of open market operations, standing facilities and possibly reserve requirements.

It is unlikely at the outset of EMU that the ESCB will be in a position to rely solely on one strategy. The most likely scenario is an eclectic one which combines elements of both strategies. Therefore, the choice may be either targeting monetary growth, while placing major emphasis on actual inflation developments, or targeting inflation, while giving a prominent role to money as an indicator. The important distinction in deciding on which target predominates lies in the presentation and communication of the policy actions to the public.

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