ASSESSING THE MUTUAL COMPATIBILITY OF NATIONAL MONETARY POLICIES

INTRODUCTION

The purpose of this note is to examine some definitional and methodological issues which arise in the context of establishing a common framework for the monitoring of monetary policies of Community central banks. When setting up a framework which can assist the Committee of Governors in its consultation before the national authorities take decisions on the course of monetary policy, two basic questions need to be answered: how should compatibility of national monetary policies be defined and which approach should be used to assess whether they are compatible. Both questions raise extremely complex issues and the suggestions made in this note should be considered highly tentative. In any event, there can be little doubt that the exercise of assessing the appropriateness and compatibility of policy stances cannot be mechanistic but will have to be largely judgmental and flexible.

After recalling briefly in the first section the monetary policy implications of Stage One of Economic and Monetary Union (EMU) and the procedure for ex-ante consultation recommended by the Raymond Group and the Alternates, the note addresses in Section II the question of how to define compatibility of monetary policies, offers in Section III some suggestions on how to proceed when assessing compatibility and points in Section IV to some areas of future work aimed at developing further the monitoring framework. The final section presents preliminary conclusions.[1]

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1   Three annexes are attached: Annex I lists a number of indicators; Annex II describes a provisional application of the step-by-step approach suggested in this note; Annex III presents a summary description of monetary policy channels and effects.

I   MONETARY POLICY IMPLICATIONS OF STAGE ONE AND THE PROCEDURE FOR POLICY CO-ORDINATION

The conduct of national monetary policy in Stage One must be viewed in the context of three important developments. Firstly, following the removal of capital controls and the progressive realisation of the internal market programme, the Community will establish a single financial area in which all monetary and financial instruments circulate freely, and banking, securities and insurance services are offered uniformly throughout this area. Secondly, there will be growing emphasis on exchange rate stability, partly because all currencies are expected to participate in the Exchange Rate Mechanism (ERM) and partly because efforts should be made during this Stage to increase the effectiveness of adjustment mechanisms other than parity changes; however, exchange rate realignments are still possible. Thirdly, the ultimate responsibility for monetary policy will rest with the national authorities.

These three characteristics of Stage One indicate that the Community is likely to be faced with the well-known dilemma of having to reconcile free capital movements, exchange rate stability and autonomous monetary policies. This is the fundamental rationale for closer co-ordination of national monetary policies. Only if the authorities succeed in this endeavour will it be possible to maintain in the longer run a single market for financial services and a reasonable degree of exchange rate stability. In addition, closer monetary policy co-ordination will improve the setting of the collective monetary stance at the Community level thus helping strengthen the profile and credibility of Community central banks and thereby enhancing the announcement effects of policy changes.

It is against this background that the Raymond Group and the Alternates have suggested the following five-stage procedure for policy co-ordination:

- The first ex-ante exercise should be undertaken in November 1990 on the basis of a forward-looking report from the Monetary Policy Sub-Committee.

- In the exercise, Governors will discuss national projections and monetary policy objectives for Community countries and assess these against Community goals. The Committee's advice will then

form an additional and important input in national fora, where responsibility for planning and implementing monetary policy remains in Stage One. No publicity will be given.

- Following the Governor's meeting and national discussion, announcements of the national monetary policy strategies for 1991 (and further ahead if possible) will be made in late November or December if feasible.

- Some publicity should be given to the Committee of Governors' co-ordination exercise following the national announcements.

- Ex-post surveillance exercises will be undertaken regularly to assess whether corrective action is necessary.

Taking this procedure as a starting point, it appears crucial to establish criteria on which the compatibility of national monetary policies can be evaluated and to develop a method for making this judgement.

II   CRITERIA FOR THE ASSESSMENT OF COMPATIBILITY OF MONETARY POLICIES

While Stage One clearly limits the scope for autonomous national monetary management, this should not have adverse consequences for the principal task of monetary policy, i.e. the attainment of price stability. This must remain the fundamental criterion for evaluating the appropriateness of national monetary policy.

However, while the need to achieve an inflation rate close to zero is recognised by all Member States, it is also accepted that this final goal cannot - at least not by some countries with relatively high inflation rates - be reached within the period for which the exercise of monetary policy co-ordination is carried out in the framework of the ex-ante consultation. The realisation of price stability in all Community countries must be viewed as a long-term goal which also lays the foundations for enduring exchange rate stability. Thus it should just serve as a point of orientation rather than a strict criterion for the assessment of policy compatibility in the short run.

Indeed, if there are large deviations from price stability in some or all Community countries, two different considerations would argue in favour of monetary policies promoting a gradual downward convergence of inflation rates. Firstly, a rather sharp tightening of monetary policy tends to produce adverse and potentially costly output and employment effects. Secondly, for currencies participating in the ERM an attempt to

reduce inflation by maintaining sufficiently high interest rates might be thwarted by increasing capital flows, if market participants assume that nominal exchange rate parities remain unchanged. This latter consideration only reaffirms that in an environment of free capital movements and de facto exchange rate stability there is little room for autonomous monetary policy - a situation which in fact has increasingly been experienced by countries participating in the ERM.

If, as a consequence, it has to be accepted that monetary policy in each country cannot be expected to reduce rapidly inflation to close to zero or, at least, to the level of the best performing country, two operational criteria will have to be taken into account when assessing compatibility: firstly, are expected price performances converging towards the long-term goal of price stability and, secondly, does this process take place without major exchange rate tensions arising?

The first criterion is met if there is satisfactory evidence that the proposed monetary policies are consistent with the expected price performance during the period under review, and that the projected rates of inflation exhibit downward convergence. With regard to the second criterion, it should be acknowledged that major exchange rate tensions are undesirable insofar as they may jeopardise the process towards both price stability and EMU. This criterion is, however, much more difficult to apply since it should take into account the considerable uncertainty regarding the short-term interrelationship between money, prices and exchange rates. Indeed, past experience has shown that inflation differentials may not, in certain cases, threaten exchange rate stability for some time, although they may lead to an increasing fragility associated with the emergence of fundamental competitiveness problems.

In summary, the criteria for evaluating the compatibility of proposed monetary policy stances should be a clear evidence of convergence of inflation towards the long-term goal of price stability and some reasonable assurance that major exchange rate tensions will not arise. If these two criteria are not met satisfactorily, there would be a strong presumption that policies are not sufficiently compatible and that in the framework of the ex-ante consultation one or several countries should alter their envisaged policy stance.

III   THE ASSESSMENT OF MUTUAL COMPATIBILITY OF NATIONAL MONETARY POLICIES

1.   Intermediate monetary targets and final objectives

In the context of the recommended five-stage procedure, the Raymond Group emphasised the role of intermediate monetary targets in assessing the compatibility of national monetary policy stances. Indeed, basing the assessment predominantly on a few key intermediate targets, such as some comparable monetary aggregates, would have considerable advantages: for example, it would greatly facilitate the communication of policy intentions to the general public and it could be seen to foreshadow a move to a Community-wide target in the future. However, as noted by the Raymond Group, there are, at present, various factors which render it very difficult to base a cross-country comparison of the monetary policy stance solely on intermediate monetary variables.

Firstly, there exist differences in the statistical coverage of monetary variables which limit their comparability. Secondly, owing to the diversity of national financial structures and transmission mechanisms of monetary policy and the environment of rapid change, there are differences in the informational content of national monetary targets and indicators as evidenced by the different experiences in the Community countries. Thirdly, there is a risk, not merely for small countries, that, given de facto fixed exchange rates in the ERM and free capital movements, money supply targeting does not take sufficient account of the impact of capital and reserve flows. An analysis of the behaviour of domestic and external counterparts of the money stock will be of great help in dealing with this issue, but nevertheless the present state of information for all member countries is not enough to permit a fully consistent appraisal in an ex-ante exercise.

For these reasons an assessment of the compatibility of monetary policies, which would rely solely on currently-used (or relatively quickly established new) intermediate monetary targets is not at present possible. As regards the forthcoming ex-ante consultation of the Committee of Governors, a broader approach including other financial and economic indicators is therefore proposed.

Given the criteria for assessing compatibility developed in the previous section, it would seem appropriate - at least in the first ex-ante

consultation in November - to place particular importance on an analysis of national and Community-wide inflation performance which is explicitly or implicitly associated with the proposed monetary policy stance and intermediate monetary targets.

In order to give some practical guidance for following such an approach, it is suggested to base the examination of the compatibility of monetary policies on four questions:

- How much progress towards convergence on price stability was made recently and remains to be made?
- Are national and Community-wide inflation forecasts consistent with the national policy setting and the assumptions about the external environment?
- Are annual inflation objectives converging towards the long-term goal of price stability?
- Is the relative stance of monetary policy in the Community consistent with the preservation of exchange rate stability?

In trying to answer these questions it will be necessary to analyse a variety of economic indicators (A detailed list is given in Annex I). However, it should be noted from the start that only five (inflation, money growth, output, interest rates and budget deficit) are used systematically as main indicators in each assessment.

While the first question essentially deals with a review of the initial situation and the progress to be made, the other three questions address more directly the issue of whether monetary policies are mutually compatible and, if not, which adjustments might need to be made. Strictly speaking, only if it is possible to give a positive answer to each of the last three questions will there be a reasonable degree of certainty that policies meet the compatibility criteria set out in the previous section. If the answer to any of the last three questions is negative, there would be reason to review the proposed monetary policies (and their underlying assumptions) and possibly to recommend an adjustment.

(a) <u>How much progress towards convergence on price stability has been</u>
<u>made recently, and remains to be made?</u>

In order to establish a link between the ex-ante co-ordination of
monetary policies and the initial situation, the first question that should
be asked is how much progress has recently been made and remains to be made
in reducing actual and underlying inflation rates and inflation
differentials. In the process of answering this question it will become
clear which countries or groups of countries are close to the final goal of
price stability and how large the inflation differentials are which still
have to be eliminated. On a preliminary evaluation, the natural indicators
to be used are CPI inflation rates. However, special attention should be
paid to the fact that CPIs differ from country to country and that they do
not measure correctly underlying inflation. The additional inflation
indicators (GDP deflator and unit labour costs) and measures of underlying
inflation (e.g. CPI excluding energy and food items, expenditure tax
changes, mortgage rate effects; or trend CPI, etc) as well as the
corresponding differentials among countries should be considered.

Any assessment of the initial situation regarding the evolution
of observed inflation rates relative to the final goal has to be
complemented with an examination of the factors which influenced the past
performance. To this end, the analysis should be supported by using
indicators which provide information about past failures in bringing down
inflation, such as the meeting or not of monetary growth targets, the
extent of demand pressures, external imbalances, losses in international
competitiveness, and the evolution of the external environment.

(b) <u>Are national and Community-wide inflation forecasts consistent</u>
<u>with the policy setting and the assumptions about the external</u>
<u>environment?</u>

This question deals with the important issue of consistency
between price objectives explicitly or implicitly contained in national and
Community-wide forecasts and the proposed monetary policy stance during the
period under review.

Given that national authorities are in the best position to
project domestic economic developments and also have the best knowledge of
statistical relationships between intermediate monetary targets and final
goals, the discussions under this heading should not in general question

the internal consistency of national projections. At the same time, some checking of whether the projected rate of price increase is broadly in line with the proposed monetary policy setting and assumptions regarding other policies or whether there is possibly "too large a normative element" in the forecast should not be ruled out.

A more important task, however, would be to verify whether all Community countries have based their projections and future policies on broadly similar assumptions about external economic conditions and developments during the period under consideration. In this context, particular attention should be given to growth of output in the rest of the world, commodity prices, exchange rates vis-à-vis non-Community currencies and international interest rates. In order not to complicate excessively the exercise, it might be sufficient - at least for the purpose of the first ex-ante consultation - to focus on the oil price, the dollar exchange rate, dollar interest rates, and, as a crude proxy for growth and inflation outside the Community, US GNP growth and CPI inflation.

(c) Are inflation objectives converging towards the final goal of price stability?

Once there is reasonable assurance that national projections are based on roughly similar assumptions about external developments and that proposed national monetary policies are broadly consistent with the price objectives for the period under review, attention should shift to an assessment of whether the expected national and Community-wide price performances meet the criterion of downward convergence of inflation rates. This is the main aspect to be considered in this step of the analysis.

The answer to this question can basically be derived from a comparison of the relevant price indicators, which should provide information on whether convergence towards price stability is proceeding at a faster or slower pace than in the recent past, taking external influences into account. For this purpose, both actual and "underlying " inflation rates should be considered. Once again, the main variables to be used as indicators are changes in national CPIs and inflation differentials between countries.

This analysis may also be supplemented by a more normative assessment of whether the speed of convergence is adequate, given the Community's goal to prepare the ground for moving to Stages Two and Three

of Economic and Monetary Union. Should the extent of downward convergence in inflation rates be regarded as insufficient and, hence, should the stance of monetary policy be judged as inappropriate on the basis of indicators listed in Annex I and especially of intermediate monetary aggregates, then the need for either a general or a relative tightening ought to be considered.

If countries with high rates of inflation propose a monetary policy which is considered to be inconsistent with progress during the period under review, the onus of policy adjustment should presumably fall on them. In the light of modified assumptions and the corresponding price evolution, a new assessment could then follow, possibly leading to an agreement on the compatibility between inflation prospects and the goal of price stability. However, such an assessment is not only technically very demanding (and therefore perhaps to be tackled only at future ex-ante consultations), but also politically sensitive as it would involve judgements about individual countries' ability to achieve a better performance.

(d) <u>Is the relative stance of national monetary policies consistent with the maintenance of exchange rate stability?</u>

While the proposed national monetary policies and the corresponding price objectives may be in conformity with the goal of inflation rates converging in a downward direction, gradual progress may not necessarily be compatible with the desire to maintain exchange rate cohesion in the ERM. This is the principal issue to be dealt with under this heading.

Given the tenuous relationship between money, prices and exchange rates (see Annex III), especially for the relatively short period for which a judgment has to be made, this is certainly the most difficult part of the ex-ante consultation. Indeed, unless there is strong evidence, for instance, in the form of strikingly diverging monetary policies or imminent dangers from large-scale imbalances built up in the past, economic analysis will probably allow only an assessment with a high degree of uncertainty. Nonetheless, efforts will have to be made to arrive at an educated guess about the risks of future exchange rate tensions in the light of the proposed monetary policy stances.

Much of the analysis will have to focus on longer-term developments, mainly because there is some (weak) empirical evidence about the linkages between price and exchange rate developments. In addition, it is important to examine accumulated and expected cost inflation differentials and to assess the extent to which these differentials have been compensated by nominal exchange rate adjustments and changes in relative productivity. Clearly, if these indicators point to a growing divergence between individual countries' competitive positions there is a significant danger that growing external imbalances will develop. While it may be true that, in a context of full capital mobility, the expectation of unchanged nominal exchange rates in the short term and the existence of sufficiently attractive interest rate differentials may allow countries to finance current-account deficits by private capital flows, the market will eventually come to expect a devaluation of their currencies.

In light of the above, it may be useful to look at variables like past and expected changes in competitiveness, past and expected current-account evolution and financing, and the domestic/external counterparts of money growth, giving special consideration to past and expected changes in national official net foreign asset positions. Moreover, some attention should be paid in ERM countries to their currencies' scope for movement in the band as well as to expected interest rate differentials.

If inflation rates converge sufficiently but there is a substantial risk of exchange rate tensions, the complex issue of which countries should adjust policies would emerge. In essence, this situation raises the question of how to distribute the burden of adjusting the relative policy stance, although given the final Community goal of price stability the onus of policy adjustment should presumably fall on high-inflation countries. This would involve an examination of the extent to which high-inflation countries have room for tightening without encountering undue output and employment costs. If that were to prove impossible, it may then be explored whether low-inflation countries have scope for easing their monetary policies without jeopardising their price performance. Past experience has shown that it is very difficult to find a generally acceptable answer to the above questions.

If the scope for national monetary policy choices is severely limited by an inadequate policy mix, the assessment of the most appropriate

adjustment(s) in the relative stance of monetary policy is likely to be complicated further. Indeed, although the ex-ante consultation is designed to assess the compatibility of national monetary policies, it may well be that a final judgment will rest on assumptions about changes in policies other than monetary policies.

If it proves impossible both to reach an agreement on how monetary policies should be adjusted and to muster adequate support from changes in non-monetary policies, monetary policies should not be judged to be mutually compatible.[2] In such an event, and without any change in policies, a realignment has to be considered. In this consideration, attention should be paid to the effectiveness of the proposed realignment in correcting the underlying imbalances in the absence of other policy changes, as well as to its effects on the present and future convergence of member states towards the final goal of price stability.

2. Main difficulties for the exercise

As suggested in the introduction, the present proposal to develop the co-ordination framework should not be interpreted in a too mechanistic way. A very cautious and pragmatic approach will have to be followed, given the uncertainty and complexity of economic relationships in the short and longer run.

Some of the difficulties of such an initial exercise have already been highlighted when considering the option of sole reliance on the use of intermediate monetary targets, as a consequence of their uncertain informational content in an environment of rapid structural change. This is exemplified by clear instances of overshooting of intermediate monetary targets without this reflecting or triggering inflationary tensions. Similarly, large but temporary bilateral external imbalances could lead to significant reserve flows between two countries and to offsetting deviations from money targets in the short run, highlighting the importance of analysing domestic and external counterparts.

In addition to the caveats expressed throughout this note, attention has also to be paid in case of an external shock to the appraisal of the overall monetary policy stance in the Community and of intra EC

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2   See Annex II for a limited application of the framework.

compatibility. If a shock affects all or most of the Community Member States, the mutual compatibility of monetary policies may be especially difficult to assess. The extent and length of (non) accommodation to a shock for the Community as a whole, and for individual economies (which are likely to be influenced to a differing extent) will modify the path toward stability and, moreover, affect the credibility of monetary policies. Appropriate policy responses will depend on various factors, for instance, whether the shock was expected or not, whether it is seen as (and actually is) temporary or permanent and whether it has well-known or uncertain (a)symmetric effects on each country. Indeed, these questions may be particularly important in the context of the first ex-ante consultation, if present disturbances in the oil market and the uncertainties regarding the prospects for growth in the United States persist.

IV   FUTURE WORK FOR IMPROVING THE CO-ORDINATION FRAMEWORK

1.   Harmonisation of monetary aggregates

Since at the present stage the intermediate monetary targets used in national monetary policy formulation differ with regard to both their definition and their relationship to final objectives, they have to be supplemented by other indicators when evaluating policy stances across Community countries. However, efforts should be made to improve in the future the informational content of intermediate monetary targets and, in particular, their comparability.

The harmonisation of monetary aggregates would be a first step towards producing statistical data which comply as strictly as possible with agreed uniformity criteria. But even if definitions were to be fully harmonised, there would still be differences across countries in terms of the informational content of the single aggregate, since the stability of the relationship between intermediate monetary and final variables is affected by the structural and institutional features of individual countries' financial systems. Some of these problems should be expected to become less severe as the Community proceeds with the implementation of the internal market programme.

During the transition towards a fully integrated financial market harmonised intermediate targets may, however, provide diverging signals in the individual countries. Therefore, the monitoring of such changes seems

an important area for future work, which could also include more technical analyses of the demand for money at the national and Community level.

2. Informational requirements

Even if monetary aggregates are harmonised and take on a predominant role in the ex-ante consultations, there will still be a need for data on other economic and financial variables. Annex I presents a minimal set of indicators which is considered necessary at present for assessing compatibility. As can be observed in this Annex, the most widely used indicators are prices, monetary aggregates, output, interest rates and budget deficits.

The complete list of indicators is tentative and further work will have to be done on two fronts: firstly, the choice of variables will have to be reassessed in the light of experience, with a view to which indicators provide poor or ambiguous information and should therefore be omitted; secondly, further analysis is required to identify the preferred statistical procedures for obtaining synthetic indicators.

As a general point, it is worth stressing that a more thorough and timely exchange of information will significantly enhance the scope and effectiveness of the ex-ante co-ordination process. In some cases, use of the Commission forecast and independent national forecasts could provide useful supplementary information. At a later stage, some technical analysis might be undertaken in order to examine the usefulness of more formal, e.g. econometric, models.

3. Ex-post exercise

As an integral part of the coordination exercise, actual outcomes, with special reference to inflation, are to be compared on a regular basis with those foreseen in the previous ex-ante exercise in order to identify the reasons for divergence and to examine the need for policy adjustments. However, it should be kept in mind that the co-ordination of policies is meaningful only in the context of a medium-term perspective, and that over-reactions to transitory shocks should be avoided thus allowing previously agreed monetary policies to become fully effective.

As the ex-post exercise adds new information, it should help to form a better opinion about necessary policy adjustments and their implications for the country concerned and the Community as a whole. If the

required adjustments are beyond the control of the monetary authority - for instance, when monetary policy is overburdened - the consequences should be brought to the attention of governments.

An important aspect of the co-ordination of monetary policies is that it should help to strengthen the credibility and authority of central banks. In this context the ex-post exercise assumes particular importance as markets will focus closely on the comparison between targets/forecasts and actual outcomes. One important consequence of this might be that central banks will have to explain their policies to the general public in even more detail than in the past. For example, the attainment of targets may increase the volatility of some variables, which even if unavoidable, may in the absence of satisfactory explanations have a negative impact on markets' attitude towards the exercise. Moreover, in some circumstances, e.g. in the event of shocks, it might prove useful to account for the non-fulfilment of monetary targets, even when the inflation objective was in fact attained.

V   SUMMARY AND CONCLUSIONS

1.   As a complement to the Special Report by the Raymond Group and the follow-up by the Committee of Alternates, this note suggests both criteria and a method for assessing the mutual compatibility of national monetary policies within the framework of Stage One of EMU. In the long run monetary policies are considered to be mutually compatible if they achieve price stability and, thereby, also lay the foundations for exchange rate stability. However, with a view to the more short-term perspective of the ex-ante consultation and taking into account initial divergences and constraints to reaching price stability within the period under review, a more "operational" criterion is proposed: monetary policies are regarded as mutually compatible whenever they promote the downward convergence of inflation rates and differentials without major exchange rate tensions arising.

2.   Since national intermediate monetary targets differ at present both as regards their statistical definition and their informational content, the compatibility of monetary policies cannot be solely assessed on the basis of a comparison of monetary aggregates. Therefore, while intermediate monetary aggregates remain an important indicator, they will have to be supplemented by a limited set of other economic and financial

indicators in order to evaluate progress towards price stability. Although indicators and empirical analysis will play an important role in the exercise, the final appraisal of the compatibility of monetary policies will inevitably have to be judgmental. Experience and future work along the lines proposed in the note should improve the framework.

3.   In order to provide some practical guidelines on how to proceed, the note suggests following a set of sequential steps in the analysis. These involve an examination, for each member country and for the Community as a whole, of (a) recent progress towards convergence on price stability; (b) consistency of inflation forecasts with proposed monetary policy and the assumptions on the external environment; (c) convergence of proposed inflation objectives towards the long-term goal of price stability; and (d) consistency with exchange rate stability.

4.   Monetary policies will be judged to be compatible only if there is sufficient evidence from the analysis under steps (b) to (d) that the compatibility criteria are satisfied. Otherwise, adjustments will be needed. If no agreement can be reached on the necessary adjustments of national monetary policies and/or other policies, national monetary policies should not be judged to be mutually compatible. In such an event, a realignment has to be considered, carefully examining its effectiveness in correcting existing imbalances in the absence of other policy changes, and its effects on the present and future convergence of member states towards the final goal of price stability and a successful EMU.

INDICATORS FOR THE CO-ORDINATION EXERCISE

Table 1 presents a list of indicators which each country should ideally provide so that the ex-ante monetary policy co-ordination exercise is performed as effectively as possible. However, voluntary additions are encouraged whenever it is felt that the extra information is particularly relevant to describe the particular features of some countries. The proposed list is also meant to offer a guideline towards improving the comparability of national submissions, which at present sharply vary in terms of coverage, accuracy, detail and timeliness of information.

The list of indicators is organised in four subsets (columns in Table 1) corresponding to the four questions outlined in the main text under section III; namely: a) evaluation of recent progress, b) consistency with the underlying assumptions, c) convergence towards price stability, and d) consistency with exchange rate stability. In many cases, variables contain information relevant to different parts of the exercise.

Some variables are labelled for convenience "main" - as opposed to "auxiliary" or "supplementary" - with the purpose of identifying the minimal set of necessary information to answer each of the above questions and of indicating relative priorities within an inevitably long list. Since this distinction is largely judgmental and does not do justice to country-specific issues, it should therefore not be interpreted too literally.

Since the present work is still at a preliminary stage, it is premature to define too precisely the way each indicator should be calculated. However, the need and difficulty to synthesize the most appropriate information should not be underestimated.

Inspection of Table 1 reveals that most of the suggested indicators were used routinely in the preparation of the material for meetings by the Raymond Group and were also recommended in the Special Report. Some differences can however be noted. Additions mainly refer to external assumptions and some forward-looking perspective to certain

variables, which are currently considered only on an ex-post basis. Such additions ultimately stem from the emphasis on targets and forecasts which is implied by the ex-ante nature of the co-ordination exercise. They also reflect the importance attached to the consistency check of the hypotheses on the external conditions faced by different members.

TABLE 1

QUESTIONS	a Evaluation of recent progress	b Consistency with the underlying assumptions	c Convergence towards price stability	d Consistency with exchange rate stability
INDICATORS				
1.Inflation				
- CPI (actual and underlying)	*	*	*	*
- rates				
- differential with lowest EC				
- GDP deflator	o	o	o	
- Unit labour costs (wages)	o	*	*	
- Deviations from CPI forecasts	o			
2. Activity				
- Real GDP and/or Industrial production	*	*	*	*
- Potential GDP and/or Capacity utilisation	*	*	*	*
- Domestic demand	*	o	o	o
- Unemployment	o		o	o
3. International Competitiveness and Balance of Payments				
- Real effective exchange rate (based on CPI, PPI and ULC) against	*			*
- ERM countries				
- 21 industrial countries				
- Current account balance / GDP	*		o	*
- Structure of autonomous capital flows	*			*
- Foreign exchange intervention	*			*
- External debt/GDP	o			o
4. Policy				
- Monetary aggregates (actual and target)	*	*	*	*
- broad money				
- narrow money				
- domestic and external counterparts				
- Exchange rate position vis-à-vis	*	*		*
- ECU				
- DM				
- Short-term (market and intervention) interest rates	*	*	*	*
- Budget deficit/GDP	*	*	*	*
- Primary budget deficit/GDP	o		o	o
- Public debt/GDP	o			
5. External conditions				
- Oil price	*	*	o	
- US $ exchange rate vis-à-vis	*	*	o	
- ECU				
- DM				
- US GNP	o	o	o	
- US CPI	o	o	o	
- $ short-term interest rate	o	o	o	

NOTES
- "*" denotes variables used as main indicators for the corresponding criterion, "o" auxiliary or supplementary;
- in column a, "o" or "*" refer to the past and present. Present is to be intended as the latest available data at the time of submission and provisional estimate for the current year. Past values can be either the average of the last four years or the total change in this period;
- In columns b to d, "o" or "*" refer to forecasts for the next year (and longer if possible).

A LIMITED APPLICATION OF THE FRAMEWORK

This annex provides a preliminary and limited application of the proposed framework. Using the national submissions for Raymond Reports numbers 36 (November 1989) and 37 (March 1990) and the Reports themselves, an attempt has been made to apply the recommended analytical steps retrospectively, using the information available in autumn 1989[1]. In the time available it has not been possible to conduct this hypothetical exercise for all Community countries, and consequently the Annex concentrates on the three largest ERM members (Germany, France and Italy), and the United Kingdom as a non-participant in the ERM. It has also proved to be very difficult to produce an accurate assessment because of the absence of detailed information on projections and plans in many national submissions[2]. As emphasised in the main text, the introduction of a strengthened co-ordination framework should lead to a significant increase in the exchange of information on forecasts between Community Central Banks.

1. How much progress towards convergence on price stability has been made recently, and remains to be made?

Fuelled by the rapid pace of economic growth, and associated pressures on capacity, the rate of inflation had risen through 1989 in the four countries, moving the Community further away from the agreed goal of price stability. Measured consumer price indices exaggerated the pick up in Germany (where expenditure taxes had been increased) and in the UK (where the rise in mortgage rates had increased the housing component significantly), whilst in France a cut in VAT rates had given rise to an opposite bias. Nevertheless, even if adjustments were made to estimate

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1   In some cases, later information has been used, for example because details of forecasts and of plans for intermediate objectives (when applicable) were not contained in the Autumn report.

2   For example, little or generally no information was given on the external assumptions underlying each national projection, ruling out any possibility of performing a broad consistency check.

underlying inflation, the upward trend was clear. Except for France, there had been little improvement in inflation differentials with Germany after taking account of measurement problems. Moreover, convergence if any, had been to a higher rather than a lower level.

Inflationary pressures, were also signalled by strong growth in monetary aggregates in Italy and the UK which were increasing above targets, and by a continued rapid rise in credit in France (although the targeted aggregate, M2, was well under control), whilst in Germany the Bundesbank wished to dampen monetary growth and were concerned about the strong build-up of Deutsche Mark deposits offshore. Current account imbalances had widened further. The German current account surplus had risen to around 5% of GNP, with the increase particularly marked against other Community countries, whilst the Italian deficit had increased significantly (albeit only to 1.25% of GNP). Outside the ERM, the UK deficit had deteriorated to around 4% of GNP. Significant fiscal imbalances remained within the Community.

To combat the inflationary threat, monetary policy had been tightened in several steps in all countries, although within the ERM, limits to the degree of possible differentiation of the monetary stance had been reached on occasions. Italy, with high interest rates, was attracting strong capital inflows, putting upward pressure on the exchange rate and causing difficulties for monetary management. Although the strong lira added further impetus to the disinflationary process in Italy, it was leading to a rise in imported inflation in the low inflation countries. Associated with this, Italian firms were rapidly losing competitiveness against low inflation countries, a perverse movement from the perspective of reducing current account imbalances in Europe.

2. Are national and Community-wide inflation forecasts consistent with the assumptions for policy setting and the external environment?

Information was not supplied on the assumptions for the external environment as recommended in Annex I; thus no consistency check could be made.

There are also limitations on the availability of data on some of the domestic assumptions underlying the national forecasts, which render an assessment of the internal consistency difficult. Nevertheless, some of the

national inflation forecasts would seem to contain a normative element designed to influence private sector expectations. In the absence of assumed policy changes, or a strong expectational effect, they may be regarded as rather ambitious. For example, in the three ERM countries, GNP growth in 1990 was forecast at around or a little above estimates of potential, whilst at the same time inflation was expected to fall back significantly. A particularly striking case was the government forecast of 4.5% inflation in Italy which was predicated on a very optimistic assumption for wage growth. This, as the Banca d'Italia noted, implied a change from past experience, and the projection sat a little uneasily with the expectation of sustained growth of over 3%. In Germany the 1990 monetary target was based on an increase of 2% in prices, whilst the government forecast was 2.5% (and noted by the Bundesbank as ambitious) and German economic research institutes were forecasting 3% inflation around the same time.

It would have been useful to know whether any implicit domestic policy changes which could affect other Community countries were integrated in the forecasts.

3.   Are inflation objectives converging towards the final goal of price stability?

In all four countries, the tightening of monetary policy through 1988 and 1989 was expected to lead to a slowdown in growth and a decline in consumer price inflation during 1990. There were also expectations of some progress in reducing measured inflation differentials. For example, Italian inflation was expected to decline by around 2% points, UK retail price inflation by around 1.75% points (in the year to the fourth quarter), whilst the decline in German inflation was between 0.5% and 1%. However, extreme caution would have been necessary before an optimistic conclusion could have been drawn on prospects for inflation convergence. Adjustments had not only to be made for normative elements, but also for the special factors discussed above (such as the timing of any assumed interest rate changes in the UK). Using the Commission forecast as an additional guide would have led to a much less sanguine view, both on the prospects for reducing the level of inflation and differentials in 1990. As a result, the Raymond Group drew rather pessimistic conclusions in Reports 36 and 37.

In the three largest ERM countries, GNP growth was expected to slow to only around or above estimates of potential in 1990, raising the

question as to whether monetary policies were tight enough. A further tightening might have allowed faster progress towards price stability to be made, whilst the short-run loss in output might simply have eliminated excess pressure on capacity. The issue is also highly relevant in the UK case, where overheating had been most severe. Although domestic demand growth was clearing slowing through 1989 and was expected to stagnate in 1990, nonetheless it is difficult to gauge whether the projected disinflationary pressure was the maximum that could be tolerated. Supply side conditions, judged by indicators such as unemployment (taken from the Commission forecast), were expected to remain very tight.

4. **Is the relative stance of national monetary policies consistent with the maintenance of exchange rate stability?**

As the responses to the previous questions have indicated, only a limited reduction in underlying inflation differentials was expected in 1990. Even on the most optimistic assumptions, the gaps between German inflation on the one hand and Italian and UK inflation on the other were likely to be around 2.5% and 4% points respectively. Short term interest differentials were much wider than this. Using end October 1989 figures, the lira-Deutsche Mark differential was 4% points, the sterling-Deutsche Mark differential around 7%, whilst the French franc-Deutsche Mark gap had widened to over 2% from a low of 1.5% at the end of September. Little narrowing in current account imbalances was forecast for 1990. The German surplus was expected to remain around 5% of GNP, whilst the relatively small deficits in France and Italy were expected to stabilise. Some fall in the high UK deficit was foreseen.

Concentrating on ERM countries, it is difficult to judge ex-ante whether or not the policy stance in 1990 would have been compatible with exchange rate stability. In the absence of offsetting exchange rate changes the sustained inflation differential would imply a further loss in Italian competitiveness and an additional gain in Germany. Concern over the adverse effects on competitiveness of the strong lira in 1989 was one factor behind the Italian decision not to participate in the round of monetary policy tightening in October, when most ERM members raised their intervention interest rates by 1%. This decision to reduce the very high interest differential in favour of lira assets, led to a progressive weakening of

the currency despite foreign exchange rate intervention, until the decision to enter the narrow band was made in January 1990. The projected current account deficits for 1990 both for France (of around 0.5% of GNP) and Italy (of around 1.25% of GNP) do not seem in principle unsustainable, although more detail on expected financing flows, and of trends over a longer horizon might have enabled a more robust conclusion to be drawn. Nevertheless, the conjunction of the large German current surplus and the persistent inflation differentials are symptoms of inadequate convergence and a source of vulnerability.

5. Policy recommendations

The appropriate policy recommendation to foster more rapid convergence and reduce the risk of exchange rate tensions, would have been a tightening in the high inflation countries, in this case, Italy. As the inflationary threat in Germany was already serious, no support from a German easing could have been suggested. But a dilemma immediately arises. In the autumn of 1989 the interest differential between lira and Deutsche Mark assets was reduced, as noted above. If it had been maintained, or even increased, then it is likely that the lira would have remained strong as capital was attracted into Italy, and the gain in competitiveness associated with the depreciation in the late autumn would not have occurred. But it is nevertheless hard to argue that higher Italian interest rates would have reduced potential tensions, and indeed the opposite is perhaps more likely, which could have caused serious difficulties for monetary control as additional inflows were induced. This discussion is of course conjectural, but highlights an important and difficult issue. Should high inflation countries utilise the margins in the ERM band to run as tight a monetary stance as possible, or does the associated competitiveness loss increase the risk of a subsequent realignment?

Support from tighter fiscal policy in Italy would have reduced the overburdening of monetary policy, as has long been recognised, and indeed the Budget plan to hold the nominal budget deficit constant in 1990 and to produce a primary surplus (i.e. net of interest payments) by 1992 implied a significant tightening in Italian fiscal policy was in prospect. In the short run, however, monetary policy was likely to bear the brunt of the need to dampen domestic demand, suggesting that a bumpy ride for the ERM could not be ruled out.

The Bundesbank delegates to the Raymond Group in autumn 1989 considered that the magnitude of external imbalances within Europe were a symptom of a fundamental rather than a conjunctural problem, and that the persistence of accumulating inflation differentials not offset by nominal exchange rate changes would add to the difficulties. A realignment was recommended as a solution. Other delegates felt that this would jeopardise future exchange rate stability, and that a greater contribution from fiscal policies was needed to promote convergence.

SUMMARY DESCRIPTION OF MONETARY POLICY
CHANNELS AND EFFECTS

Any summary of the main monetary policy channels and effects first requires agreement on some basic assumptions and recognition of the limits of such an exercise (§1). Bearing these in mind, a simple way to disentangle intricate monetary mechanisms between the financial and real sectors and between domestic and international effects consists of focusing in turn on the major links between: the main monetary variables (money, interest rate and exchange rate) (§2), the latter and the key variables in the real sector (§3), foreign monetary policy and the domestic economy (§4).

1. Basic assumptions

The most common paradigm to assess monetary policy effects (as integrated in most large-scale models) assumes:

- slowly adjusting prices, even if they fully adjust in the long run (money neutrality)
- some inertia in expectations, even if they are forward-looking,
- the existence of a causal link between variations in money and aggregate demand, even if the converse is also true.

As a result, monetary policy affects not only prices but also quantities (real variables) at least in the short run. Therefore disinflation may turn out to be costly in terms of output in the short run, although price stability is a pre-condition for stable and sustained growth.

However, there is no easy way to determine the stance of monetary policy, especially when associated with changes in fiscal policy. In addition, the "long and variable effects" of monetary policy heavily depend on the degree to which changes in the monetary stance are expected, credible and transitory, as well as on the extent to which economic and financial openness and deregulation are increasing.

2.   Money, interest rate and the exchange rate

Domestic monetary policy effects on financial markets can be synthetically analysed through the links between money, interest rates and the exchange rate, leaving aside the rôle of non-market instruments (ceilings, etc.) and "equilibrium" credit rationing resulting from the microeconomic behaviour of the banking sector.

Regardless of how an increase in money supply may occur, a temporary monetary expansion has generally a short run "liquidity" effect which lowers nominal (and real) interest rates. However, the more this change in the stance of monetary policy is both anticipated and permanent, the sooner there will be an increase in the inflation premium included in nominal interest rates, whilst real rates return to their previous level. Even in the short run, however, the ex-post announcement of an unanticipated increase in monetary growth may actually raise nominal interest rates. This movement, which is independent of the downward liquidity impact on interest rates of the money already injected in the market, may be explained according to alternative mechanisms, highlighting the role of expectations. For instance, one approach assumes that this money increase, perceived as permanent, will immediately affect inflation expectations, and hence nominal interest rates, while real rates remain constant. Alternatively, another approach is based on the assumption that monetary authorities are credible and expected to react soon to compensate for this unanticipated transitory shock, triggering an "expected liquidity effect" on real and hence nominal interest rates.

Expansionary monetary policy generally gives rise to a depreciation in the nominal, and also real, exchange rate, the latter at least in the short run. Nominal depreciation is mainly due to incipient capital outflows related to the short-run (liquidity) decrease in interest rates and eventually to the long-run (expectation) increase in inflation, so that the neutrality of money results. Since neutrality only holds in the long run, this may allow changes in the real exchange rate to be maintained for a long period of time. An "overshooting" of the exchange rate may be explained by the fact that goods prices adjust less rapidly than financial asset prices. A permanent increase in money growth pushes down nominal and real interest rates, triggering a nominal and real exchange rate depreciation due to incipient capital outflows. Since in the long run

(expected) higher inflation will push back up nominal interest rates, as well as the nominal exchange rate although to a depreciated equilibrium value, interest rate parity leads first to a downward overshooting of the nominal and real exchange rate.

3. Domestic monetary policy and the real sector

In the short run, there is no direct and close link between domestic monetary policy and prices. Moreover, even in the medium run, money affects prices partly through the effects of nominal and real exchange rate changes on imported costs, the terms of trade and competitiveness but also partly through demand pressures.

The latter quantitative effects are triggered by the impact of exchange rate and interest rates on aggregate demand components. While exchange rate especially affects imports and exports and thus the current account, interest rates have most impact on domestic components of aggregate demand. This occurs mainly through a generally dominant and unambiguous negative substitution effect (cost of capital or borrowing), a more disputable negative wealth effect (and liquidity constraint), sometimes partly offset by a positive income effect for creditors. Residential investment and stock-building often turn out to be most sensitive to interest rates in the short run; in contrast, business investment and consumption (except for durable goods) react less or only in the longer run. These cumulative effects on aggregate demand components in turn modify prices through a mark-up on costs; this is mainly because wage determination is commonly represented through some version of the "expectation augmented Phillips curve", according to which nominal wage inflation depends on inflation expectations and demand pressures, usually reflected in some measures of the output gap, the unemployment rate, or capacity utilisation.

4. Foreign monetary policy and the domestic economy

International interdependence makes the assessment of foreign monetary policy effects on the domestic economy all the more important.

Generally, an expansionary foreign monetary policy is considered as having a negative impact on domestic economic activity ("beggar thy

neighbour" policy). This is mainly because the foreign monetary policy causes a real appreciation of the domestic currency, implying a deterioration of domestic trade balance and a decline in domestic output.

There are cases, however, where spillover effects may not be deflationary in case of a foreign monetary expansion. Expansionary spillover effects of foreign ("locomotive") monetary policy may arise from various mechanisms. For instance, monetary expansion in large countries may directly reduce the world rate of interest; or if the domestic demand for goods depends on wealth, then the domestic exchange rate appreciation may lower domestic inflation and increase the real value of monetary assets; it may also raise directly domestic wealth, when the domestic economy has a net debt position in foreign currency.

As a result, a need for co-ordination mainly stems from the existence of spillover effects of foreign monetary expansion, the main features of which can be summed up as follows:

- the price spillover is likely to be negative;
- the output spillover is more likely to be negative when capital mobility is high and the real exchange rate very sensitive to monetary policy; however, it may be positive, especially if monetary expansion occurs in a large country or group of countries.