

English edition

Information and Notices

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I

(Information)

COUNCIL AND COMMISSION

TWENTY-FIRST REPORT ON THE ACTIVITIES OF THE MONETARY COMMITTEE

FOREWORD

The purpose of this report is to give a brief account of the activities of the Monetary Committee in the course of 1979.

During the year, the Committee held 10 sessions and the working parties drawn from its own members or set up at its initiative met on several occasions. A list of members as at 31 December 1979 is annexed.

The report was adopted as at 31 December 1979.

I. INTRODUCTION

1. The expansion of world economic activity was again only moderate in 1979, with growth rates of production and world trade similar to those of 1978. The imbalances in the current balance of payments positions of the major country groupings widened: on the one hand the OPEC surplus increased sharply, in contrast to a fall in 1978, and on the other the combined OECD balance moved back into substantial deficit and the position of the non-oil developing countries deteriorated further. This overall picture, however, masks sharp individual differences, with the deficit of the United States being substantially reduced while the Japanese and German positions swung strongly from surplus to deficit.

2. In the Community, the process of gradual econ-

omic recovery has been shaken by the turbulent situation in the world economy, caused in particular by the rise in oil prices. The real rate of growth was poorer than had been anticipated, remaining about the same as in 1978, but the rise in the level of unemployment flattened out. Inflation performance also worsened; not only did the Community average increase, but the gap between the individual rates of inflation also widened. The development of inflation was mainly due to a worsening in the terms of trade as a result of higher oil and other commodity prices. In addition, this also affected the balance of payments of Member States: the Community as a whole moved from a substantial current account surplus in 1978 to a deficit in 1979.

II. COMMUNITY ACTION AND THE ACTIVITIES OF THE COMMITTEE

3. On 13 March 1979, the European Monetary System formally came into force, and the main work of the Committee during the year involved overseeing and monitoring the functioning of this new system.

4. In the context of the EMS, the Committee undertakes periodic examinations and surveillance of de-

velopments towards convergence in each Member State with particular reference to monetary policy and exchange rate policy. As a result, the Committee concentrated its attention on three principal matters:

(a) surveillance of the functioning of the EMS;

(b) improvement in coordination of economic policies in Member States;

(c) examination of developments towards convergence.

5. Surveillance of the functioning of the EMS involved the Committee in detailed examinations of fundamental aspects of the system. At its June meeting it held a wide-ranging exchange of views on the system's functioning to date, after which the chairman was requested to present an oral report to the Council of 18 June. In this report, he indicated that the Committee felt that the system had functioned satisfactorily, but that much progress still had to be made in improving the coordination of policies.

At its September meeting it held an exchange of views on the six-month review of certain operating procedures of the EMS, in accordance with the resolution of the European Council of 5 December 1978. The specific points dealt with in this review were:

- the weights of currencies in the ECU;
- the functioning of the divergence indicator;
- the imbalances accumulated by divergent debtor or creditor countries.

The chairman made a brief oral report to the Council which enumerated the technical problems which had arisen during the first six months of the EMS, but the Committee did not recommend any modifications to the system which it felt was working well, in the light of the limited experience which had been accumulated up to that date. It was also indicated that the Committee would continue to examine the operation of the system on a regular basis. At the meeting of 17 September the Council noted that neither the chairmen of the Monetary Committee and of the Committee of Governors nor the Commission suggested any amendments to the system. It took note of the conclusion of the work on the review of the EMS called for by the European Council in its resolution of 5 December 1978 and, noting that the system had functioned satisfactorily, declared this review completed.

6. At its January meeting, the Committee held a detailed exchange of views on strengthening the coordination of economic policy. For its part, it agreed that it would carry out its examinations of economic and monetary policy with the aim also of assessing the compatibility of policies between Member States. These examinations are based on papers prepared by the Commission departments who regularly submit to the Committee short economic policy reviews. These are analytical papers containing a review of the previous quarter's developments and, on the basis of the most recent forecasts, an assessment of the outlook for the next quarter.

7. The Committee decided that it would intensify its practice of regularly examining the economic and monetary policy of Member States, with greater emphasis on quantified analysis. During the year it carried out detailed examinations of the economic situation in Italy, France, Ireland, Germany, Denmark and the United Kingdom. In addition, at every meeting, in the context of its regular 'tours d'horizon', it monitored developments in the economic situation of Member States, discussed recent policy changes, and heard a brief report from the members appointed by the Commission on the most recent forecasts of the outlook for the Community.

8. The resolution of the European Council of 5 December 1978 on the establishment of the EMS also provided that 'the provisions and procedures thus created' would be consolidated into a final system. 'This system will entail the creation of the European Monetary Fund as announced in the conclusions of the European Council meeting at Bremen on 6 and 7 July 1978, as well as the full utilization of the ECU as a reserve asset and a means of settlement.'

In accordance with this provision the Committee began work on the problem of the European Monetary System after the transitional phase. At its April meeting it held an initial and detailed exchange of views on this complex subject (see twentieth report on the activities, Annex I, Appendix: 'The Fund in its final form'); it continued this work throughout the rest of the year. At the meeting of the Council of 17 December 1979, the chairman presented an oral report on the progress of work on this matter and summarizing the main questions on which decisions will have to be made, as well as those areas where considerable technical work still remains to be done. The Committee will continue work on this subject in 1980.

9. As usual, the Committee devoted a significant proportion of its time to international monetary questions, in preparation for the Interim Committee meetings in March and October, the annual meeting of the International Monetary Fund in October, and the meeting of the Group of Ten deputies in May. The main questions with which the Committee had to deal this year were: the proposals for a substitution account, the renewal of the general arrangements to borrow, and international liquidity.

10. The Committee also examined various other matters such as the recourse by the Danish authorities to Article 73 of the EEC Treaty to forbid the sale of Government bonds denominated in Danish krone to non-residents, on the quota to be attributed to Greece in the Community's credit facilities, and several proposals to change the conversion rates for national currencies into units of account for the purposes of the common agricultural policy.

III. WORKING PARTIES OF THE MONETARY COMMITTEE

11. The working party on the harmonization of monetary policy instruments, a joint group of the Committee and the Committee of Governors, met several times in 1979. It completed its work on intermediate objectives, with a detailed study of the possible obstacles to their harmonization, the conclusions of which are contained in its 'Second report' (Annex I), examined by the Monetary Committee at its June meeting. The report considered it useful to have a common analytical framework, recording in flow-of-funds form the main aggregates used by the various Member States as intermediate objectives (as well as other financial variables), which could be employed to facilitate comparisons between Member States and, possibly, to predict monetary and financial variables at Community level and as a technical instrument to assess the *ex ante* consistency of monetary policy of Member States.

The Committee approved the report's recommendations and agreed to the further work on the suggested framework. In the first stage, work will concentrate on a thorough testing on an *ex-post* basis.

12. The working party on the harmonization of monetary policy instruments also adopted a further report on 'Certain questions relating to monetary policy instruments' (Annex II). This report examines the question as to whether the use of certain instru-

ments could harm neighbouring countries through its external repercussions. The report notes that any difficulties which the use of different monetary policy instruments might possibly cause are hard to distinguish from the difficulties arising from the persisting differences between Member States in economic performance and in the priorities of economic policy as well as from external shocks to the Community's exchange rate system; basic factors might, however, be accentuated in the short-term by instrumental differences. The report recommends that, when considering major monetary actions, each country take account of the likely impact on neighbouring countries of the alternative instruments available to it and assess the consequences of the envisaged action for the smooth functioning of the EMS.

13. The working party on securities markets met three times in 1979 and continued to examine developments in the capital markets of the Member States and in the international bond markets and also discussed capital market policies. It furthermore began detailed studies on two topics: the variability of interest rates and the right to cancel contracts, and the treatment of savings in equities and measures taken to encourage it. It intends to complete its work on these topics during 1980.

LIST OF MEMBERS AND ALTERNATES OF THE MONETARY COMMITTEE

Chairman

Mr J. van Ypersele de Strihou Chef de Cabinet du Premier ministre (Brussels)

Vice-Chairman

Mr S. Andersen Gouverneur — Danmarks Nationalbank
(Copenhagen)

Mr N. Jordan-Moss H. M. Treasury (London)

Mr P. Jaans Commissaire au contrôle des banques (Luxem-
bourg)

Members

Mr M. J. Balfour Bank of England (London)

Mr F. Boyer de la Giroday Director in the Directorate-General for Eco-
nomic and Financial Affairs — Commission of
the European Communities (Brussels)

Mr J.-M. Camdessus Chef du service des affaires internationales à
la direction du Trésor, ministère de l'économie
(Paris)

Mr R. de la Genière
(until 15 November 1979) Premier sous-gouverneur de la Banque de
France (Paris)

Mr K. Hansen
(until 16 January 1979) Director general — Det Økonomiske Sekretar-
iat (Copenhagen)

Mr M. Horgan Department of Finance (Dublin)

Mr G. Janson Directeur de la Banque nationale de Belgique
(Brussels)

Mr R. Kirsch Conseiller de gouvernement, ministère des
finances (Luxembourg)

Prof. G. Magnifico Banca d'Italia (Rome)

Dott. U. Mosca
(until 26 April 1979) Director-General for Economic and Financial
Affairs — Commission of the European Com-
munities (Brussels)

Mr T. O'Grady Walshe Central Bank of Ireland (Dublin)

Mr T. Padoa-Schioppa
(since 11 July 1979) Director-General for Economic and Financial
Affairs — Commission of the European Com-
munities (Brussels)

Dott. S. Palumbo Consigliere del ministro del Tesoro (Rome)

Mr K. O. Poehl Vizepräsident der Deutschen Bundesbank
(Frankfurt am Main)

Drs. A. Szasz Directeur van de Nederlandsche Bank NV
(Amsterdam)

Mr N. Ussing
(since 17 January 1979) Det Økonomiske Sekretariat (Copenhagen)

Dr H. H. Weber Ministerialdirektor — Bundesministerium der
Finanzen (Bonn)

Dr A. H. E. M. Wellink Thesaurier-generaal bij het Ministerie van
Financiën (The Hague)

Chairman of the Alternates of the Monetary Committee

Mr H. Baquias
(until 10 July 1979) Sous-directeur à la direction du trésor, minis-
tère de l'économie (Paris)

Alternates

Drs D. H. Boot	Onderdirecteur van de Nederlandsche Bank NV (Amsterdam)
Mr S. Boyer-Søgaard (since 17 January 1979)	Danmarks Nationalbank (Copenhagen)
Mr P. J. Bull	Bank of England (London)
Drs F. A. Engering	Ministerie van Financiën (The Hague)
Dr W. Flandorffer	Ministerialrat, Bundesministerium für Wirtschaft (Bonn)
Mr M. Emerson	Director in the Directorate-General for Economic and Financial Affairs — Commission of the European Communities (Brussels)
Mrs M. Hedley-Miller	H. M. Treasury (London)
P. Jurgensen (since 11 July 1979)	Sous-directeur à la direction du Trésor, ministère de l'économie (Paris)
Mr G. Lefort	Directeur général des services étrangers de la Banque de France (Paris)
Dott. S. Masera	Banca d'Italia (Rome)
Mr D. McCutcheon	Department of Finance (Dublin)
Mr G. Reynolds	Central Bank of Ireland (Dublin)
Mr J. Roelandts	Chef du service des accords internationaux de la Banque nationale de Belgique (Brussels)
Dr W. Rieke	Deutsche Bundesbank (Frankfurt am Main)
Mr M. Schmit	Inspecteur des Finances (Luxembourg)
Mr J. Thomsen (since 17 January 1979)	Det Økonomiske Sekretariat (Copenhagen)
Mr N. Ussing (until 16 January 1979)	Det Økonomiske Sekretariat (Copenhagen)
Mr J. Vanormelingen	Administration de la Trésorerie (Brussels)
Mr P. Zimmer	Commissariat au contrôle des banques (Luxembourg)
Dott. A. Zodda	Ministero del Tesoro (Rome)

Secretariat

Mr A. Kees
Mr G. Lermen
Mr A. Chapman

*ANNEX I***SECOND REPORT OF THE WORKING GROUP ON
HARMONIZATION OF MONETARY POLICY INSTRUMENTS**

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I. INTRODUCTION

1. In its first interim report, the working group examined and compared the intermediate objectives of monetary policy applied by Member States, seeing them as an important reference point for the coordination of monetary policy in the Community ⁽¹⁾. To improve and extend mutual understanding of intermediate objectives, the group indicated two research themes for its future work:

- an analysis of developments in each country in terms of the intermediate objectives pursued in the other member countries,
- the transmission mechanism and related structural problems.

2. Accordingly, the group examined the statistical series in each country which most closely correspond to the intermediate objectives adopted in the other member countries. While the study helped to make the intermediate objectives of each country easier to understand and evaluate, it became apparent that problems of theory, definition and availability of statistical series impeded in certain cases the quantification in one country of intermediate objectives adopted in others.

3. The group's study of the transmission mechanism drew on the available studies of the relationships between the financial variables (money, credit, interest rates) which are directly influenced by the actions of the monetary authorities, and the final objectives of economic policy. A synopsis of the group's work on this subject is annexed.

4. The working group closely examined the choice of intermediate objectives in the light of differences of financial structures. The aim was to test, on the basis of quantified data, the validity of some of the explanations in the first interim report for the different intermediate objectives set by Member States.

The work carried out by the group also led to a more precise evaluation of the importance of other elements, such as the institutional aspect and the theoretical approach, in the choice of intermediate objectives.

5. Throughout its studies the group concentrated its attention on quantitative intermediate objectives. As a consequence, the policy of countries, such as Belgium, which most of the time do not express their objectives in quantitative terms because they want to retain more freedom for their interest rate policy, is only partially covered.

6. The report begins by studying the financial structures to provide more background for the intermediate objectives and to prepare the introduction of a common framework of analysis. The report then turns to the obstacles to the harmonization of intermediate objectives. It discusses obstacles in the existing systems:

- differences in financial structures,
- institutional factors.

It goes on to consider the differences between the approaches to economic analysis in each country:

- differences in theoretical approaches,
- each country's assessment of the transmission mechanism linking intermediate to final objectives.

It then studies the influence of the external position.

The report ends with some recommendations aimed at developing a practical tool which should facilitate progress towards coordination of monetary policies. Such a development is of particular relevance in the context of the European Monetary System.

II. FINANCIAL STRUCTURES AND INTERMEDIATE OBJECTIVES

7. The study of financial structures has been carried out with the aim of arriving at a better understanding of the different intermediate objectives by placing them in a broader and uniform financial context. The working group has concentrated mainly on (total

domestic) credit and on the money supply (particularly on the broader concepts of M_2 and M_3), endeavouring to shed light on the accounting and functional relationships that exist between both these aggregates and among their different definitions. The broader concepts of money supply (M_2 and M_3) have received particular attention as monetary authorities of the Member States do not generally consider M_1 as an appropriate intermediate target, though it may at times be useful as an indicator. The broader concepts of credit and of money supply appear to be generally more stable in relation to income than narrower aggregates such as M_1 . Nevertheless, the phenomenon of substitution which influences narrower aggregates

(1) 'Coordination' is the process whereby countries discuss their policy approaches and objectives and adjust them to be compatible. Policy approaches and objectives are 'compatible' if their successful implementation in one country does not prevent the implementation of a policy approach or objective in another country. 'Harmonization' is taken to mean that a uniform concept, such as harmonized M_2 (M_2H), is used to define the stance of monetary policy.

more than wider aggregates still leads to some short-term fluctuations in the latter. The trends of the wider definitions of credit and money supply are moreover often parallel, though the outstanding amounts are very different.

A. Accounting relationships: global credit, DCE and money

8. The more commonly used intermediate objectives may be analyzed with the aid of Table 1 which shows the accounting and functional relationships existing between the quantitative intermediate objectives applied by Member States (in this analysis the concept of central bank money applied in Germany is replaced by M_3).

9. *Global credit* of domestic and foreign origin in its widest definitions is made up of the sum of items 1 to 5, namely of all the funds obtained by public and private sectors from the financial intermediaries, the capital market and abroad. Other definitions of credit are given by the sum of only certain components of this total. Global credit gives rise to the formation of new financial assets: money, other deposits, securities and foreign assets (items 8 to 12 of the table), the difference between global credit and total formation of private sector financial assets being represented by the balance of payments on current account.

Global credit also reveals certain structural features of the economy; its absolute value is a function of the net financial position of the various sectors (households, enterprises and public sector). As a consequence, in principle, the higher the public sector's deficit and the greater the difference between investment and self-financing on the part of enterprises, the larger the amount of global credit; differences in the borrowing requirements of the public sector and of enterprises are therefore the main explanation of the differences in global credit *vis-à-vis* GDP within the Community as presented in Table 1. Nevertheless, to some extent, the absolute amount of global credit (and, for that matter, of harmonized M_2), is also related to the intra-sectoral lending and borrowing which passes through financial intermediaries or the financial markets; this intra-sectoral relationship is particularly marked in the field of residential construction, where households are both lenders and borrowers of funds for construction. The concept of global credit does, however, exclude transactions, such as trade credit, which do not pass through financial intermediaries or the financial markets.

10. The concept of total credit used in Italy corresponds to the sum of items 1 to 4 of Table 1, equivalent to *total domestic credit*⁽¹⁾. In Belgium, when

credit norms are adopted, they are applied only to items 1 and 2 to that part of item 3 accounted for by financial institutions: equivalent to domestic credit to the private sector. Nevertheless, the setting of credit norms in Belgium is based on a global credit approach which takes into consideration the public sector deficit and an estimated supply of funds to the private sector from the domestic capital market and from abroad; if developments in these elements differ from estimates used in the setting of the credit norms, then the credit norms are changed. Consequently, the difference in credit targets between Belgium and Italy is one of form and not of substance.

11. The concept of *domestic credit expansion* (DCE) adopted in the United Kingdom and in Ireland corresponds to item 1 plus that part of item 4 which is not covered by placing securities with non-bank private sectors. For Denmark, one must also take into account the substantial indirect support given at times by banks to other financial intermediaries and to enterprises (i.e. to the sectors of items 2 and 3) through purchases of their bonds.

DCE represents the domestic counterpart of money creation. In setting a target in terms of DCE the authorities aim to have an effect on the balance of payments by acting on domestic liquidity and in this sense therefore the adoption of DCE implies an approach which has much in common with those adopting a broad money stock objective.

12. Unlike Belgium and Italy, most countries believe that the composition of financial assets (especially the importance of money *vis-à-vis* non-liquid assets) is of paramount importance in the transmission mechanism; as a consequence, they consider the evolution of *money supply* as most indicative of the thrust of monetary policy. (This implies, of course, that monetary authorities have proper instruments and regulations for controlling money supply, in the sense of moving it in the desired direction and of keeping it on a certain growth path, although short term fluctuations cannot be avoided.) These countries also emphasize the importance of the evolution of money supply in influencing expectations about inflation and the exchange rate.

Certainly, domestic expenditure is also influenced by non-monetary factors and, therefore, it is possible for a high degree of liquidity to build up without affecting prices immediately; nevertheless this constitutes an inflationary potential which may threaten stability once conditions change. Analysis of the past experience with monetary movements may reveal the existence of such a potential.

The definition of money supply nevertheless varies considerably from country to country; this problem will be dealt with in paragraphs 17 to 19.

(1) However, the concept of credit, in the economic policy conditions laid down for Italy, excludes the issue of shares in order to bring about a better balance between firms' indebtedness and own resources.

B. Application of the accounting relationships

13. Table 1 presents the average yearly data from 1973 to 1976 for global credit and the formation of private sector financial assets in each member country as a percentage of GDP. In the period considered the flow of total domestic credit as a proportion of GDP varied a great deal between member countries, Germany and France recording the lowest ratio to GDP (9 to 12 %) and Ireland and Italy the highest (22 to 25 %). It is obvious that these differences reflect, more than the stance of monetary policy, differences in structures (such as the public sector deficit and the degree of enterprises' self-financing, as will be seen in III A).

Nevertheless, such structural features may create problems for the implementation of monetary policy, and may have a bearing on inflation and balance of payments equilibrium.

14. DCE does not appear directly in Table 1, but a proxy can be obtained by adding to the nationally de-

financed money creation during the period (item 8) the destruction of liquidity provoked by the deficit of the balance of payments on current account (item 6) and the net non-bank capital outflows (items 5 and 12).

In the average of the period, DCE represented 53 % of total domestic credit in the United Kingdom, 55 % in Denmark, 63 % in Ireland and 84 % in Italy. In fact, the larger the share of money supply on the total of financial assets (see Tables 1 and 2) the larger the proportion of DCE on total domestic credit.

15. Table 1 also shows that during the period money supply represented a large part (and at times, the largest part) of the formation of new financial assets. In general the larger the proportion of global credit to both public and private sectors which goes through deposit-taking institutions, the larger the share of money in total financial assets. However, account must be taken of the fact that in some countries (as in Germany) a substantial part of deposit-taking institutions' liabilities have an extended maturity and are therefore not counted as money.

TABLE 1
GLOBAL CREDIT AND THE FORMATION OF PRIVATE SECTOR FINANCIAL ASSETS
 (1973/76 average in % of GDP)

	Germany	Belgium	Denmark	France	Ireland	Italy	Nether-lands	United Kingdom
1. Bank credit to the private sector	4.9	3.1	3.9	5.5	7.6	7.9	6.9	4.5
2. Credit by other intermediaries to the private sector	1.3	4.2	11.1	3.9	2.5	6.4	4.6	3.0
3. Share and bond issues by enterpr.	0.4	0.7	0.3	1.8	0.6	2.3	0.8	0.9
4. Public sector deficit (1)	2.2	5.1	1.0	0.3	11.6	8.3	3.8	7.8
Total domestic credit to domestic sectors (1)	8.8	13.1	16.3	11.5	22.3	24.9	16.1	16.2
5. Capital inflow to non-bank private sector	1.4	1.5	3.1	0.3	2.6	0.7	1.7	
Global credit to domestic sectors	10.2	14.6	19.4	11.8	24.9	25.6	17.8	16.2
6. Current account surplus (+) or deficit (-)	1.4	0.8	-3.3	-1.2	-4.1	-2.2	3.2	-2.5
7. Others and adjustments	0.1	0.7	-0.8	0.7		-1.2	0.6	
Total formation of private sector financial assets	11.7	16.1	15.3	11.3	20.8	22.2	21.6	13.7
8. Money supply on national definition (2)	(3.7)	(8.8)	(7.4)	(6.7)	(11.1)	(18.8)	(3.7)	(5.7)
9. Money supply on harmonized definition (M ₂ H)	3.6	8.8	7.4	10.2	14.3	18.9	8.8	9.6
10. Other deposits, treasury bonds	5.0	5.2		0.1	5.0	1.5	7.8	0.1
11. Shares and bonds	1.8		6.9	1.1	0.6	1.2	1.7	3.6
Total domestic assets	10.4	14.0	14.3	11.4	19.9	21.6	18.3	13.3
12. Foreign assets of non-bank private sector	1.3	2.1	1.0	-0.1	0.9	0.6	3.3	0.4
Total formation of private sector financial assets	11.7	16.1	15.3	11.3	20.8	22.2	21.6	13.7

(1) Including external financing, which is significant only in Denmark and Ireland.

(2) Monetary aggregate (M₂, M₃) which each State considers most significant.

The analysis of the relationship between financial assets may be furthered on the basis of stock figures (Table 2).

TABLE 2

Outstanding private sector financial assets as a percentage of GDP (end 1975)

	D	B	DK	F	IRL	I	NL	UK
Money supply on national definition	(47)	(74)	(53)	(54)	(67)	(111)	(35)	(39)
Harmonized M ₂	47	72	53	78	87	112	62	70
Other private sector holdings with credit institutions	45	24	32	17	1	19	8	9
Private sector holdings of securities issued by private and public sector	18	27	12	22	20 ⁽¹⁾	21	32	59
Total	110	123	97	117	108	152	102	138
Harmonized M ₂ as % of total	43	58	55	67	81	74	61	51

(¹) Only marketable government securities.

Differences in the relation of total financial assets to GDP between countries are much less marked for stock data than for flow data in the period 1973 to 1976. It follows that the divergences between countries regarding sectoral surpluses and deficits are to be attributed mainly to recent developments.

16. The liquidity ratio as measured by relationship in percent between harmonized M₂ and nominal GDP, varies from 111 in Italy to 47 in Germany. The proportion of harmonized M₂ in the total of private sector financial assets exceeds 50 % in every country except Germany; this indicates that in most member countries financial savings are very liquid.

17. The table also shows considerable differences in some countries between the national definition of money supply and the harmonized definition; this is seen by expressing the nationally most significant money aggregate (M₂, M₃) as a percentage of the harmonized definition. At the end of 1977 these percentages were:

D	B	DK	F	IRL	I	NL	UK
100.7	106.5	100	67.5	73.8	99.4	57.8	48.1

Member countries generally have a preference for a wider definition of money supply, close to harmonized M₂. Institutional reasons may to some extent explain the use of a narrower aggregate in France and

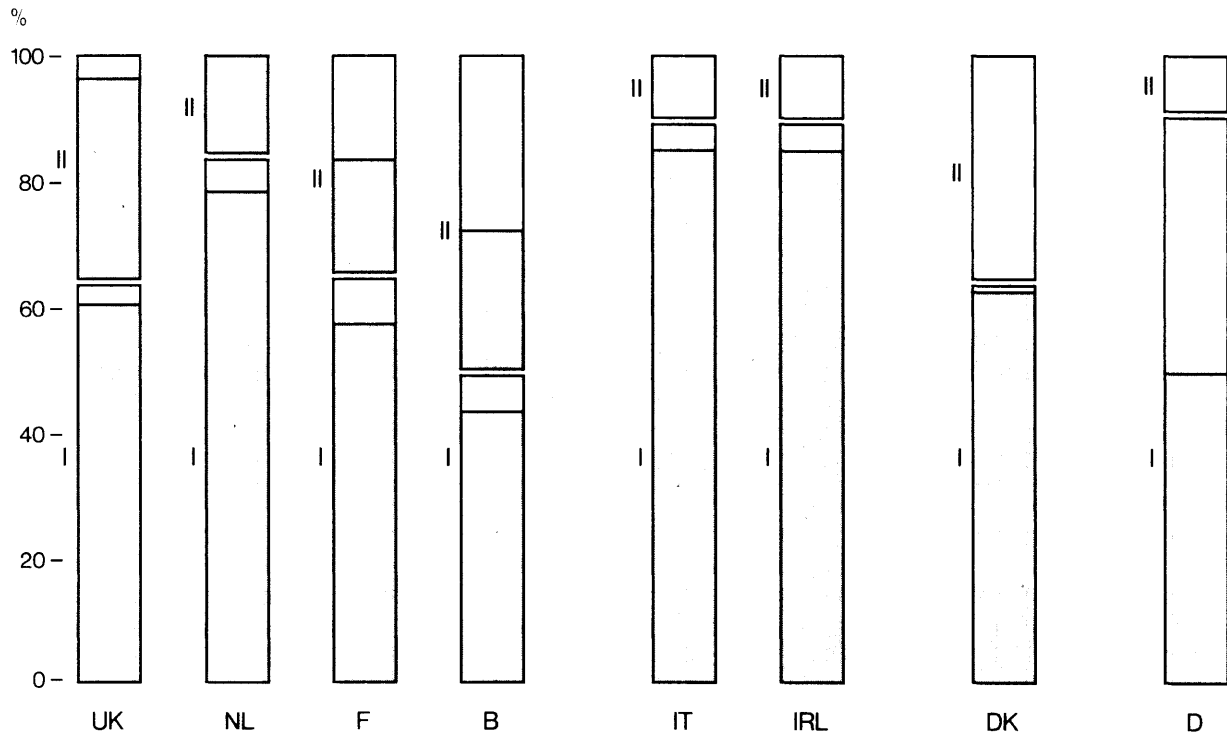
in the United Kingdom (see paragraph 26). In the Netherlands monetary authorities prefer a narrower monetary aggregate mainly on theoretical grounds.

18. Differences in the financial structure can however have important implications for the definition and the significance of the money supply. In Germany, M₃ (which is similar to harmonized M₂) represents approximately 50 % of the liabilities of the banking system *vis-à-vis* the private sector; conversely in the United Kingdom, the definition of M₃ roughly corresponds to the total liabilities of the banking system, while if one applied the same definition as that of German M₃ (or harmonized M₂) in the United Kingdom, this aggregate would include liabilities of other financial intermediaries of various types, such as building societies. In such cases, in addition to differences in the financial structure there are differences relating to the definition of the banking system.

19. Even if a common definition of money supply (such as harmonized M₂) were to be taken for all countries, in each country this would correspond to a different proportion of credit institutions' liabilities, as well as a different proportion of the banking system itself. The scheme on the following page illustrates this point through the relative importance of banks and other credit institutions in each member country, as well as their contribution to money creation, as measured by harmonized M₂.

LIABILITIES OF CREDIT INSTITUTIONS 'VIS-A-VIS' THE PRIVATE SECTOR

(percentage on total assets, end 1975)



I monetary institutions (including treasury as issuer of notes and coins and components of secondary M).

II other credit institutions.

□ M₂H = notes and coins, demand deposits, other assets of a maximum maturity of one year.

□ other assets.

III. EXAMINATION OF POSSIBLE OBSTACLES TO THE HARMONIZATION OF INTER-MEDIATE OBJECTIVES

A. Financial structures

20. The examination of structural data allowed the group to take a closer look at the phenomenon of substitution. It may be noted that, despite the fact that money supply normally represents a very large share of total financial assets in all Member States (see Table 2), there remains a considerable margin for substitution between money and other financial assets. The analysis of the years under review and the comparison of intermediate objectives showed that some substitution took place in all countries (with the possible exception of France), causing at times through interest induced shifts significant distortions to the trend of the money supply.

While in Italy and Belgium substitution led to the rejection of money supply as an intermediate objective (in Belgium's case it is rejected as an operational variable when the authorities have a quantitative intermediate objective), in the United Kingdom, the Netherlands and Germany, where substitution was also important, the authorities saw insufficient reason in this not to adopt money supply as an intermediate objective.

21. Faced with the phenomenon of substitution, the authorities may, indeed, adopt the concept of global credit, but such a decision is probably a sign that they regard the liquidity of the economy (as measured by money supply and its variations) of minor impor-

tance. If, on the other hand, liquidity is considered of great importance as an intermediate objective or as an indicator, statistical adjustments are made or specific measures taken to maintain the validity of the indicator of liquidity. In 1977, the Netherlands bank developed a small econometric model to correct the M₂ series for switches between savings deposits (included in M₃) and time deposits (only in M₂). Since April 1978, this adjustment is no longer necessary as a new M₂ definition was adopted excluding all time deposits by private individuals up to Fl 500 000; in Germany the analogous large scale distortion of the M₂ series in 1973 to 1974 was one of the reasons for adopting the concept of central bank money which mirrors the wider concept of M₃. In the United Kingdom, one of the aims of the introduction of the 'supplementary special deposits scheme' in 1973 was to stop interest arbitrage transactions between bank lending and time deposits, inflating both (a phenomenon known as the 'merry-go-round').

22. As with substitution, no specific evidence was found for an influence of the size of the public deficit on the choice of the intermediate objective. The public deficit was at times very large in countries which use credit as an intermediate objective as well as in those which use the money supply.

23. Furthermore, the size of the private sector's indebtedness *vis-à-vis* the financial intermediaries (see Table 3) does not seem to constitute a decisive ele-

ment in the choice of intermediate objectives, as shown by the situation in the two most 'credit-oriented' countries. In Belgium, total credit to the private sector is actually lower than the Community average; in Italy, while the flow figures for 1973 to 1976 are in fact rather high, the stock figures show that at the end of 1975 the outstanding credit was not significantly different from that in France or in Germany. Only in Denmark may one say that some attention is paid to global credit due to the fact that a large part of this credit is granted by non-bank credit institutions.

24. In conclusion, differences in structures do not seem to have a major influence on the choice of a particular intermediate objective; nevertheless, study and comparison of financial structures is essential in order to understand the significance of the objectives in different financial contexts.

B. Institutional factors

25. One aspect of institutional differences which may be relevant for intermediate objectives relates to the type and extent of the controls exercised by the authorities over financial intermediaries. Controls, in the sense of instructions given to financial intermediaries, are generally closest over the banking system; whereas the coverage of controls over other financial institutions varies among member coun-

TABLE 3

CREDITS TO THE PRIVATE SECTOR

	Germany	Belgium	Denmark	France	Ireland	Italy	Netherlands	United Kingdom
1. Credit to private sector (1973 to 1976 average flows in % GDP):								
— by banks	4.9	3.1	3.9	5.5	7.6	7.9	6.9	4.5
— by other financial intermediaries	1.3	4.2	11.1	3.9	2.5	6.4	4.6	3.0
Total	6.2	7.3	15.0	9.4	10.1	14.3	11.5	7.5
2. Claims of credit institutions on private sector (outstanding amounts in % of GDP at 31 December 1975):								
— credit	73	53	90	72	50	75	45	47
— securities	2	4	2	8	5	7	2	6
Total, end 1975	75	57	92	80	55	82	47	53
Memorandum item:								
Total, end 1965	60	47	102	45	41	59	30	43

tries. The statistical data available reflect these differences in control and supervision. Such differences in controls can be correctly evaluated only by taking into account that the relative importance of non-bank financial intermediaries as well as the nature of their operations (for instance, the degree of liquidity of their liabilities) vary widely from country to country. Some major aspects of these differences have been sketched out in paragraphs 18 and 19.

26. For example, the choice in France of M_2 , an aggregate which roughly represents the liabilities of the banking system, is accounted for by both historical and institutional considerations. Until recently only banks could offer chequing accounts whereas most of the so-called liquid savings were placed with other financial institutions. Because of this dichotomy, the French monetary authorities have always adapted their instruments and determined their targets so as to take account of the activities of the banking system. Although at present the same kind of financial assets is often held by both banks and non-banks, enlarging the scope of monetary policy to the latter would create serious problems — availability and consistency of data, implementation of credit ceilings or reserve requirements.

In the United Kingdom the choice of sterling M_3 , an aggregate between M_1 and M_2H which excludes national savings and deposits with building societies, or on the other side of the balance sheet, the choice of DCE, is influenced on the one hand by its close relationship with fiscal policy (via the component in public sector borrowing met other than from the non-bank private sector), and on the other hand by the fact that monetary controls (reserve ratios and the supplementary special deposit control over the growth of banks' liabilities) do not extend beyond the commercial banks, and that statistics for other financial flows are not available on a basis consistent with the banking figures.

27. The influence of institutional factors on the choice of intermediate objectives should not however be over-estimated. In general, these differences do not influence the choice of the type of aggregate (credit or money) but whether a narrow or broad definition of the aggregate is adopted. Moreover, the monetary authorities in each country have at their disposal the type of controls (and data) they esteem useful for the implementation of monetary policy. It may therefore be argued that in general the choice of intermediate objectives does not depend on the type and the extent of the controls available, but rather that these controls and the intermediate objectives are both determined by the way monetary policy is conceived in each member country. As a consequence, institutional differences represent an obstacle to harmonization only in the short run.

C. The theoretical approach

28. The work of the group demonstrated that the theoretical approach is an important element in the choice of intermediate objectives. (It should be noted that this approach also influences the direction of research in a country and therefore, to some extent, the results of the study on the transmission mechanism.) The intellectual framework for fixing norms, either for money or for global credit, is different in the two cases: a norm in terms of money supply implies the use of such concepts as velocity of circulation, liquidity ratio and/or demand for money; a credit norm, on the contrary, suggests a comparison of, and a search for coherence among, sectoral deficits and surpluses, including the position of the foreign sector.

29. Views underlying the attitude of the authorities in the Member States lie between the pure Keynesian and monetary concepts. The group feels that a strong influence on the choice of intermediate objectives is exerted by traditional and historical concepts in the various countries. Generally speaking, countries such as Belgium and Italy, which adopt total credit as an intermediate objective, stress the short-term relationship between credit and total demand; countries which use money, on the contrary, concentrate on the more long-run relationships between money stock and GNP or prices.

Theory has demonstrated that a monetary policy based on a quantitative monetary target may be consistent with a Keynesian framework of analysis, if economic disturbances have their origin in the real sector. A fall in investment leading to a reduced growth of bank credit (and of money supply) will lead the monetary authorities to take action in order to lower banks' interest rates if they are pursuing an objective expressed in terms of a monetary aggregate, thereby encouraging a recovery of investment (and so behaving in a counter-cyclical way). A further indication of the theoretical stance of the authorities may be found in the criteria applied (e.g. velocity of circulation) for quantifying the target in terms of money supply.

30. Even though the theoretical differences should not be underestimated (a narrowing of such differences being considered desirable), it seems that at least at a practical level the two positions are not irreconcilable.

A clear example of this possibility is offered by the methodology followed in the United Kingdom, where the money supply is forecast on the basis of a flow-of-funds account, and is then tested with reference to the implication of the forecast for the velocity of circulation.

D. The transmission mechanism linking intermediate to final objectives

31. The group has examined the mechanisms by which the intermediate objectives of each Member State have their effect on the final objectives of economic policy, both in order to throw some light on the appropriateness of the intermediate objectives presently adopted, and in order to provide some general insight into the effects which the actions of monetary authorities may be expected to have. The findings — whether based on econometric research or on operational experience — are those at present considered by the national authorities to be the best available and take due account of the complexities of each national situation. The results of this investigation are annexed to this report.

32. Two types of mechanism dominate:

- The first, with general or pervasive effects on expenditure as a whole, is a result of reactions on the part of economic agents to 'disequilibrium' money holdings: their attempts to run down unneeded money balances (or to build up holdings considered too low) directly increase (or reduce) the flow of nominal expenditure in the economy. Problems however arise in trying to distinguish equilibrium from disequilibrium holdings and in quantifying the desire to hold money balances; the latter will depend in part on the extent to which money is a savings medium (or portfolio asset) or even the predominant savings medium in an economy.
- The second type of transmission mechanism has a selective effect on expenditure, acting through the rate of interest and other conditions at which credit is available, to influence those types of expenditure which are largely financed by credit, especially the various forms of real investment.

Both types of mechanism may be present, and in general probably will be present, in any one country.

Transmission of either type will change both real demand and, probably, the price level, and then have an indirect effect on the current account of the balance of payments; but changes in interest rates and the availability of credit will have more immediate, and probably larger, effects on external capital flows.

33. In *France*, the first type of mechanism has been clearly identified, but the level of interest rates has not been demonstrated to affect industrial fixed investment in that country. The preference of the French authorities for an intermediate objective expressed in terms of M_2 thus receives support from the empirical evidence. On the other hand, there is evidence that both types of mechanism operate in the

United Kingdom and the *Federal Republic of Germany*. Researchers in both countries have identified the factors which determine the demand for money (in the United Kingdom, the demand for money narrowly defined (M_1)). It also appears that industrial fixed investment, stock-building and residential construction are influenced in both countries by the cost of capital. In the United Kingdom it has been noted that the broadly defined money stock has an influence on the exchange rate and, through asset prices, on inflation.

It might therefore seem that the authorities of the Federal Republic and the United Kingdom have the option to express their intermediate objectives in terms of interest rates. In fact, however, empirical work does not enable a 'correct' level of nominal interest rates to be identified at each juncture in either country, and the authorities, fearing that a policy based on interest rates might be too accommodating towards inflationary pressures, have preferred to frame their intermediate objectives in terms of monetary aggregates: sterling M_3 in the United Kingdom and central bank money in the Federal Republic.

34. The experts of two Member States presented evidence that at least in the short run the supply of total credit stands in a much closer relation to expenditure than does the money stock. On this basis it must be concluded that both *Belgium* and *Italy* are justified in framing their quantitative intermediate objectives in terms of credit; in both these countries action by the monetary authorities has a major impact on the various forms of real investment. In *Denmark* there is some evidence of a stable demand for money, but the authorities adopt an intermediate objective expressed in terms of domestic credit in order to ensure a certain amount of foreign borrowing by Danish firms.

35. There was a general feeling in the group that research in this area is still surrounded by uncertainties and inevitably conditioned to some extent by the theoretical pre-suppositions of national authorities, but with these reservations it can be concluded that the available evidence in general tends to support the type of intermediate objective adopted in each member country and in no case indicates that it is inappropriate.

36. While tentative conclusions can be drawn about the effect of monetary policy on nominal expenditure in all member countries, the timing of that effect and its division between changes in real output and changes in prices are less certain. They depend in part on factors outside the scope of monetary policy, including the behaviour, in conditions of imperfect competition, of those having some influence over the level of costs and prices, both current and prospective. Undesirable effects of monetary policy on real

output will be minimized if economic agents are fully aware that the monetary authorities will not accommodate excessive rates of inflation.

37. Monetary conditions in a country may have a considerable effect on its external accounts. If measures taken by the monetary authorities induce changes in prices and real incomes, they will probably thereby have an indirect impact on the current account of the balance of payments; but in practice the impact of interest rate changes on short-term capital flows will be more pronounced and more immediate in many cases.

38. In many countries, and in particular in Belgium, Denmark, the Netherlands and Ireland, the external capital flows provoked by a change in the stance of monetary policy can offset its impact on the domestic economy to some extent, but all member countries have some scope for an independent monetary policy.

E. The external position

39. The external position of a country may also influence the choice of intermediate objectives. In fact, the type of objective adopted and the figure put upon it have a relationship with the country's external equilibrium in its twofold aspect of the balance of payments and the exchange rate. Mainly deficit countries adopt a credit objective: they limit credit expansion in order to control the external deficit, trying to avoid exchange rate adjustments as devaluation fuels inflation. They therefore have an implicit target for their exchange rate.

In particular, an objective in terms of domestic credit expansion implies that the monetary authorities do not offset any destruction of liquidity which stems from a deficit of the balance of payments larger than forecast (of course, this also implies that at the same time monetary authorities intervene on the market in order to defend the exchange rate); in this way a kind of automatic stabilization is introduced in the system, because the deficit of the balance of payments then automatically tightens internal monetary conditions, restoring equilibrium through the current and capital

accounts. A global credit objective limits the creation of total financial assets but the authorities remain free to choose its composition between liquid and non-liquid assets. This composition determines the actual degree of monetary restriction.

Nevertheless, in some cases targets in terms of credit aim at influencing, for balance of payments reasons, also the distribution of credit by domestic and external sources; in Denmark for instance credit policy and targets aim at keeping total domestic and external credit within limits compatible with a gradual reduction of the current account deficit, while at the same time encouraging the private sector to cover part of its borrowing requirements abroad, in order to finance the deficit on current account. In Ireland the setting of an intermediate objective in terms of domestic credit is designed to achieve a particular evolution of the official external reserves.

40. On the other hand, countries which have an objective expressed in terms of the money stock are mainly surplus countries which wish to limit the inflow of money from abroad in order to maintain price stability: they may therefore accept a float of the exchange rate, an actual appreciation of the national currency helping to reduce the rate of inflation.

In any case, even surplus countries may, for internal reasons (an excessive appreciation of their currency may curb exports) be forced to counteract too sharp an appreciation of their currency by intervening on the market; in this way, a dilemma may arise between control of the exchange rate and expansion of the monetary aggregates. In the case of the 'snake' countries, the commitment to intervene in the market in order to stabilize the exchange rate can, at least in the short-run, provoke serious problems for the control of the money supply.

41. There are instances where external considerations influence not so much the general choice of one type of intermediate objective compared with another, as the actual figure put to the objective once the choice of a particular type of intermediate objective has been made.

IV. CONCLUSIONS

42. A large majority of the group believes quantitative intermediate objectives should be given a central role in the coordination of monetary policies as part of overall economic policies to improve convergence. This coordination would from a practical point of view be greatly facilitated if it were possible to define the stance of monetary policy in terms of the same intermediate objective, e.g. M₂H. The group's studies

indicated however that such harmonization would encounter a number of obstacles that are summarized in the following paragraphs.

43. *Institutional and structural* differences present some obstacles to harmonization on the practical level, at least in the short-run, because the powers available to central banks and in particular the insti-

tutions to which they extend are the result of historical tradition, which is often difficult to change. However, in view of the extensive arsenal of instruments already available in all member countries this natural delay in legislative or other action should not be a major obstacle to harmonization.

Whereas the obstacles arising from these institutional differences could over time be eliminated through appropriate legislative action, the same does not apply to structural differences in the financial system itself. A national parliament may be willing to extend the central bank's powers of control to institutions so far not subject to such control but they are unlikely to change for the sake of harmonization the institutional set-up of, for example, housing finance, on the model of some other member or a 'Community' model. Changing financial structures may be even more difficult.

44. As far as the *theoretical approach* is concerned the choice between total credit and money as intermediate objective does to some extent seem to reflect differences between more basic 'Keynesian' and 'monetarist' orientations. The group has found, however, that no extreme positions are represented among the underlying attitudes of the authorities in Member States. Consequently some narrowing of this divergence should be possible and, at least on the practical level, the two positions should not be irreconcilable.

45. The evidence presented by the experts of Belgium and Italy on the *transmission mechanism* in their countries indicates that at least in the short run the supply of total credit stands in a closer relation to expenditure than does the money stock. Accordingly, at the present stage of harmonization these members would seem justified in framing their intermediate objectives in terms of total credit of domestic origin.

46. The choice of an intermediate objective is influenced by the *country's economic position*, in particular its balance of payments situation and the size and openness of its economy.

— As noted earlier, countries in balance of payments deficit usually choose total domestic credit

or the domestic counterparts of M_2 (DCE) as their intermediate objective whereas surplus countries prefer a measure of money supply. In this way monetary policy aims to strengthen the balance of payments of deficit countries and to neutralize the effect on domestic liquidity of a balance of payments surplus. This difference in approach would, however, seem to be one of the easiest to reconcile. If, for instance, a deficit country selects DCE as its intermediate objective, it would probably have some idea of the expected current account deficit and desired level of private borrowing abroad and thus be able to derive an implied outcome for monetary growth from a DCE target.

— The size and openness of an economy would seem to influence not so much the choice of an intermediate objective as the possibility of a certain quantified target because potential foreign exchange movements will be larger relative to the size of the domestic economy in a small open economy. This does not, however, prevent an *ex ante* coordination of economic policies on the basis of quantified targets but subsequent deviations must be acceptable in particular if they are caused by unforeseen foreign exchange flows. Furthermore this limits the possibilities of achieving an 'announcement' effect as the authorities would run the danger of losing credibility if they were strongly committed to a publicized target that could not be achieved.

47. While the group's analysis has shown that differences in the choice of intermediate objectives depend on many factors, none may be identified as dominant.

48. The groups feels that, owing to the obstacles mentioned, harmonization of monetary policy is difficult to attain in the present environment and is a longer term goal that might harm economies if at present implemented. Until further progress is made towards economic and monetary union, coordination is recommended as an essential element to improve understanding and to prepare for final harmonization. The group stresses the need that coordination of monetary policies should be seen as part of wider efforts to improve coordination more generally.

V. RECOMMENDATIONS

49. The group believes that, as a step towards harmonization of monetary policy, coordination should be improved by the greater exchange of information between countries. An analytical framework along the lines presented in Annex I, linking sources and uses of financial assets, could be useful in this respect. By placing the principal intermediate mone-

tary objectives of all countries into a common framework, comparisons would be facilitated.

50. With reference to the functional relationships mentioned in paragraph 10 and given the importance of coordination, it is recommended that, for example, countries using credit as an intermediate objec-

tive should also consider the development of the money supply as a relevant criterion for monetary policy; conversely, countries using money supply targets would consider credit developments as relevant to the real sector of the economy. This is in fact the situation — though to a different degree — already in existence in the member countries. Implementation of this recommendation might take the following form in determining the amount of its intermediate objective a member country takes a total view of money, credit and the real sectors of the economy. In so doing, the country aims at consistency of the amount of its concept of money and the amount of credit as taken from estimated real demand in the various sectors. Demand-for-money studies could assist in determining the relative importance of the various relevant criteria.

51. The aim of the analysis proposed in paragraph 49 might be a common effort to forecast the scheme's main aggregates. Some of this material, e.g. the public sector deficit and the balance of payments on current account, is already available to the Commission in the context of the preparation of the economic budgets and the annual economic review of

the situation in the Community and could be made available to the working group. The financial forecasts made available for the framework would be kept in strict confidence and not made public. Of course, an individual country would be free to publish its own forecasts to obtain an announcement effect.

52. The framework will be valuable for the exchange and interpretation of information which is a necessary basis for coordination, even though it is acknowledged that there are problems inherent in forecasting monetary and financial developments.

53. The group will investigate⁽¹⁾ the extent to which the framework provides a technical means for judging the *ex ante* consistency of the monetary policy of Member States.

⁽¹⁾ In the opinion of some members it may however turn out that the difficulties of gauging financial flows are such that any judgment on consistency based on these forecasts would be highly tentative and, where financial forecasting methodology is not yet sufficiently well-developed, possibly unreliable.

APPENDIX 1

TABLE OF THE CREATION OF FINANCIAL ASSETS AND OF THEIR COUNTERPARTS

CREDIT	GLOBAL CREDIT	CREDIT COUNTERPARTS OF M ₂ NATIONAL
A. Credit to private sector	<input type="text"/>	<input type="text"/>
1. from monetary institutions
2. from other credit institutions	
3. from private sector	
B. Credit to general government	<input type="text"/>	<input type="text"/>
1. from monetary institutions
2. from other credit institutions	
3. from private sector	
TOTAL DOMESTIC CREDIT	<input type="text"/>	
C. Credit from non-residents	<input type="text"/>	<input type="text"/>
1. to private sector
2. to general government sector
GLOBAL CREDIT	<input type="text"/>	
CREDIT COUNTERPARTS OF M ₂		<input type="text"/>
D. Current balance of payments	<input type="text"/>	<input type="text"/>
E. Miscellaneous	<input type="text"/>	<input type="text"/>
TOTAL	<hr/>	<hr/>
ASSETS	PRIVATE SECTOR FINANCIAL ASSETS	M ₂ NATIONAL AND OTHER ASSETS
F. M ₂ national		<input type="text"/>
G. M ₂ harmonized	<input type="text"/>	
H. Other deposits with credit institutions	<input type="text"/>	<input type="text"/>
I. Securities issued by credit institutions	<input type="text"/>	<input type="text"/>
J. Securities issued by private and general government sector	<input type="text"/>	
K. Claims on non-residents	<input type="text"/>	<input type="text"/>
TOTAL	<hr/>	<hr/>
<i>Pro-memoria:</i>		
L. Credit to private sector from general government	<input type="text"/>	<input type="text"/>

APPENDIX 2

THE TRANSMISSION MECHANISM

1. Item 5 of the group's terms of reference requires the members to study the links between liquidity and the real economy of Member States, and the group has therefore given considerable attention since the appearance of the interim report to elucidating the transmission mechanisms by which monetary phenomena have their impact on inflation and real output in the Community. In this part of its work the group's attention has thus been focused on the relationships between the intermediate objectives of monetary policy and the final objectives at which policy aims in the real economy, but account has been taken of the fact that official action designed to influence quantitative intermediate objectives (for example, a rise in the official re-discount rate) can have direct implications for the wider economy. The experts of each member country have submitted papers setting out what is known about transmission in the Member States and have answered a questionnaire prepared by the Commission. On many points these contributions were extremely tentative and it was, indeed, remarked at one point that we are still in a pre-scientific age in this matter. The following paragraphs first set out the main mechanisms, which might on theoretical grounds be expected to be present in any country and then examine the extent to which they have been identified in each Member State, relating these findings to the policies currently adopted by national authorities.

2.1. It is unlikely that the economic agents in any country will at any time be indifferent to their holdings of money. Their attempts to spend unwanted money balances (or to replenish holdings considered too low) will not, of course, directly change the money stock but they will increase (or reduce) the flow of nominal expenditure until it reaches a level at which existing money holdings correspond to desired holdings, if such an equilibrium can be reached.

These changes in nominal expenditure may correspond to changes in real output, to changes in the price level or to some mixture of the two, depending on the level of unused capacity in the economy, and the behaviour, in conditions of imperfect competition, of those having some influence on the level of costs and prices. Much therefore depends on whether the desire to hold money balances is stable and quantifiable. Elementary theory suggests that it will be some function of nominal expenditure, the yield of money holdings and the yield of competing assets. Considerable care has to be taken in identifying these last factors: if a narrow definition of money is applied in an economy in which non-monetary savings media predominate, a rise in the general level of interest rates may reduce the demand for money, whereas in a country in which bank deposits are virtually the only form in which savings are held a rise in the general level of interest rates may increase the demand for money (at least on a broad definition).

Reactions to disequilibrium money holdings may be expected to cause *general, pervasive* shifts in expenditure. Attempts to identify demand-for-money equations are, however, bedevilled by the problem of distinguishing equilibrium from disequilibrium holdings: the German experts drew attention to this problem and no member of the group specifically claimed to have resolved it.

2.2. The major counterpart of the money supply is bank lending and the monetary conditions of an economy are expressed not only in the level of the money stock but also in the interest rate at which (and the conditions in which) bank credit is available, and the repercussions in the bond market. The cost of borrowed funds is one of the determinants of the profitability of fixed investment by private firms, and may also influence the behaviour of public bodies which for various reasons set a limit to the debt service charge which they will incur. Short-term interest rates have a strong influence on the profitability of holding stocks. It is frequently said that interest rate costs have a large influence on residential construction, but the underlying problem is often that specialized financial intermediaries fail to adjust their deposit rates and therefore suffer discontinuities in their intermediation.

Interest rates in general may change either as a result of changes on the supply side in the bank credit market or as a more direct response to central bank action relating to the money market. If the interest rate mechanism fails for one reason or another to clear the market for bank credit in restrictive phases of monetary policy, then credit rationing will occur, but by either route the effect on demand is obvious. The transmission mechanism discussed in this paragraph is clearly not pervasive in its effect but is concentrated on the various forms of real investment, with perhaps some effect on expenditure on consumer durables.

2.3. The wealth of households has frequently been said to be one of the determinants of both average and marginal propensities to save and money is one of the constituents of gross non-human wealth. To the extent that the counterpart of the money stock is real capital formation (or government borrowing if certain conditions are fulfilled) money is also a component of net wealth, which has been held to have more influence on expenditure than gross wealth. A further type of wealth effect has become important in recent years: high rates of inflation have reduced the real value of holdings of bonds and deposits below desired levels and provoked increases in savings flows intended to restore the real value of household wealth — the result has been an increase in the demand for some components of the money stock in some countries. A similar temporary increase in savings flows may be provoked by the monetary authorities when they raise interest rates and produce a fall in bond and share prices leading economic agents to feel a need to replenish their stocks of financial assets.

2.4. The analysis so far has been conducted in terms of signals transmitted impersonally by the market, but many of the actions of a country's monetary authorities are in the public domain and attract publicity. If economic agents believe that such actions will have a certain effect they may adjust their behaviour accordingly and, in fact, make those effects more likely. If it is believed that monetary policy has set a certain limit to the growth of nominal output, those having some influence over cost and price changes may adapt their behaviour so that the impact of official action on real output is minimized, the adjustment occurring in the rate of price increase.

2.5. Monetary developments may have various effects on a country's external transactions. Induced changes in real expenditure and the price level may have an effect on the current account of the balance of payments after a certain delay, but for many countries the impact of interest rate changes (or shortage of credit) on the capital account, and particularly on movements of short term capital, will be more important. If the authorities are indifferent to the level of the exchange rate, then the impact on demand and the price level of exchange rate changes induced by capital movements may represent an important part of the transmission mechanism; but if their general objectives include a certain set (or range) of exchange rate relationships then the scope for an autonomous monetary policy may be severely limited. Much will depend on the existence of market linkages between the interest rates which influence international capital flows and those paid by the various categories of domestic borrower.

3. Most of the mechanisms outlined in section 2 apply in each member country, only wealth effects not being identified in some cases; but the mechanisms vary greatly between countries in relative importance and in the lags which intervene before they become effective, mainly because of institutional differences. The following paragraphs summarize what is known both on the basis of the accumulated experience of national authorities and on the basis of econometric research. No member country has claimed to be able to represent the national transmission mechanism adequately within a complete and detailed econometric model of the national economy.

3.1. The Federal Republic of Germany

There is a substantial body of evidence indicating a close relationship between the money stock and nominal GNP in the Federal Republic. (Interest rates also influence the demand for money, but interest rate elasticities have generally been found to be lower than those identified in the USA). This evidence is considered to give a better guide to the medium term effects of a steady monetary expansion than to the effects of short term fluctuations.

Studies of the effects of interest rate changes imply that monetary factors have a directional (or selective) rather than a pervasive effect on expenditure. According to these studies interest rates on bank loans and bonds respond quickly to changes in the stance of monetary policy and in their turn have a marked effect on investment in plant and machinery, on stockbuilding, on the building of houses to rent and on the spending of certain public sector bodies.

The Federal authorities do not consider that they are in a position to know at each juncture what the interest rate should be. They do, however, consider that the medium term development of certain monetary aggregates is clearly related to the medium term growth of nominal GDP. Among those aggregates the focus of attention is the stock of central bank money because it is closely associated with the Bundesbank.

The announcement of monetary targets is intended to have a direct effect on the behaviour of economic agents. Whether or not adherence to an optimal rate of growth of central bank money in the medium term produces a satisfactory equilibrium in the general economy depends on factors

outside the scope of monetary policy, including the level of wage settlements.

A change in the rate of growth of central bank money has in general a fairly rapid effect on real GDP (0 to 3 quarters) and a more delayed effect on prices (4 to 8 quarters).

3.2. France

The transmission mechanism in France differs notably from that in the Federal Republic of Germany. In particular, the level of *interest rates* does not have a marked effect on plans for fixed industrial investment in France — although monetary conditions may influence the timing of their execution — and the effect of interest rates on housebuilding for owner occupation only becomes evident when they reach unusually high levels. The cost of credit does however have some effect on borrowing by consumers (notably for the purchase of cars) and its availability has an effect on stockbuilding.

Investigations of the demand for money in France based on data older than the oil crisis indicated that this demand was a stable function of the price level, of interest rates and of income (or wealth), but recent experience has shown that these studies failed to identify an important cyclical element. The French authorities remain convinced that the broadly defined money stock (M₂) has an important and pervasive effect on nominal expenditure and therefore express their intermediate objective in terms of that aggregate. Changes in the money stock have their effects after lags ranging between six and 15 months. The sluggish nature of the response of the demand for bank credit to interest rates means that the bank credit market does not clear easily, and the authorities therefore frequently use credit ceilings in order to achieve their objectives for the money supply.

On the other hand, interest rates and the availability of credit at home do have a strong influence on the capital account of the balance of payments. The authorities feel able to take advantage of this mechanism because changes in money-market interest rates needed to avoid tensions in the foreign exchange market have only a muted impact on the domestic economy.

3.3. Italy

The linkages between the money stock and nominal expenditure in Italy are unstable. Bank deposits in that country (including current accounts) yield interest and constitute an important savings medium: the demand for money shifts when there is a shift in the preferences of savers between bonds and money, and such changes in preferences have not been easy to predict in recent years. Because the money stock includes large precautionary holdings, households will maintain consumption expenditures when monetary policy is restrictive by activating those holdings.

On the other hand, the flow of credit has a strong and predictable effect on stock-formation, on fixed industrial investment, and, after a longer lag, on housebuilding. Further, the authorities have a great deal of control over the supply of credit. Restrictive official action quickly leads to a fall in bond prices, aggravated by a perverse reaction by households who hesitate to buy bonds on a falling market. In these circumstances the banks hesitate to off-load bonds

(and incur capital losses) in order to make new loans, the special financial institutions hesitate to raise new bond finance and industrial firms hesitate to make their own bond issues: industrial firms thus face a squeeze across the whole range of their sources of finance. Neither the banks nor the special institutions raise their loan rates to clear the credit market; the mechanism which comes into play is therefore one of informal credit rationing.

Because this very effective channel of transmission exists the Italian authorities express their intermediate objective in terms of the supply of credit; and because there is a high degree of substitution between bank loans and bond market finance, they express that objective in terms of global credit of domestic origin. They are, however, aware that their expansionary actions have much less impact than their restrictive measures because banks hesitate to reduce their borrowing and lending rates as the country moves out of recession.

In so far as monetary conditions influence real output there will be a marked impact on the current account of the balance of payments, since the income elasticity of demand for imports is high in Italy. Neither monetary conditions generally nor the rate of interest in particular has a noticeable effect on long term capital movements in the balance of payments, but short term interest rates have an effect on trade credit and banking funds and through the consequent behaviour of the exchange rate have an impact on the rate of inflation.

3.4. The United Kingdom

The evidence for a predictable influence of the money stock on nominal expenditure in the United Kingdom has not been very clear-cut in recent years, but the latest results do point to a stable demand for M_1 . The existence of a stable demand for broader monetary aggregates is suggested by a study indicating that consumption of non-durables is influenced by changes in the personal sector's liquid assets.

Some progress has also been made in identifying particular channels of transmission. Recent work on the financial environment of firms indicates that both industrial fixed investment and stock building are sensitive to the cost of capital. The demand for *housing* is greatly influenced by monetary conditions, but to some extent this is due to the fact that the building societies adapt their deposit rates rather slowly and thus provoke wide fluctuations in the proportion of the savings flow which passes through their intermediation. Personal consumption has been influenced by changes in hire purchase terms control. Monetary conditions also have indirect effects on imports and exports, while interest rate changes have a direct and rapid effect on net property income from abroad. In overall terms, a rise in interest rates of one percentage point may be expected to reduce GDP by 0.25 % in real terms, most of the effects occurring after a lag of 4 to 8 quarters, with an effect on inflation (probably achieved through higher unemployment and by influencing inflationary expectations in the financial markets) following after a rather longer lag.

Such a rise in interest rates would, of course, have a significant effect on the capital account of the balance of payments and thus provoke upward pressure on the exchange rate.

While interest rates thus play an important role in the process by which the United Kingdom economy adapts to a change in the monetary aggregates, those aggregates are themselves the key variables and the United Kingdom authorities therefore express the principal intermediate objective in terms of one of them (sterling M_3). If, however, the external reserves are under pressure, domestic credit may be expanding faster than money supply in circumstances in which it is manifestly undesirable for it to do so; this justifies the attention which has been given in the United Kingdom to domestic credit expansion (DCE).

3.5. Ireland

Monetary conditions in Ireland are strongly influenced by the existence of a fixed exchange rate relationship with the United Kingdom. Small movements in Dublin inter-bank interest rates can provoke large capital flows and large firms can borrow abroad when credit is short at home. These phenomena impede the transmission to the real economy of impulses which the authorities may wish to be felt, but they do not completely preclude an independent monetary policy.

Such research evidence as is currently available points to a pervasive rather than a selective impact of monetary conditions on the real economy. Recent work suggests that there is a stable demand-for-money function, the elasticity of broadly defined money (M_3) with respect to nominal GNP being slightly greater than unity. No significant interest rate elasticity has been identified. These results are perhaps reinforced by work showing that the stock of M_2 held by the private sector is strongly related to consumption expenditure. M_2 may here be a proxy revealing the effect of wealth holdings. On the other hand there is little hard evidence of any effect of interest rates on the various forms of capital formation. The openness of the Irish economy means that there is a strong external influence on the price level, but there remains a significant sector producing non-tradeable goods and services whose prices are theoretically open to the influence of monetary policy.

The Irish authorities have traditionally been concerned with the growth of credit and its impact on the official external reserves. In recent years, given the adequacy of the external reserves and the desirability of highlighting the monetary implications of government financing, greater attention has been focused on the money supply rather than credit as the intermediate objective of monetary policy. At present, however, the issue of reserve adequacy is becoming increasingly important and monetary policy is in consequence becoming more oriented towards the control of domestic credit.

3.6. Denmark

The demand for money seems to be a fairly stable function of nominal income and interest rates (effective bond yield). The elasticity estimates are with regard to nominal income close to unity and with regard to the bond yield 0.06 in the short run and 0.22 in the long run. As in the Federal Republic of Germany and the United Kingdom, certain channels of transmission have been identified. Both industrial fixed investment and stock-holding are influenced by the bank lending rate, and the effective bond yield exercises a considerable influence over housebuilding. These interest rate ef-

fects make themselves felt after a lag of rather more than a year.

The relative stability of the demand for money and the small size of the elasticity with respect to interest rates, at least in the short run, would appear to suggest that Denmark's intermediate objectives should be expressed in terms of the broadly-defined money supply, but the existence of a considerable foreign short-term debt as well as the need to reduce — and in the meantime to finance — a large current account balance of payments deficit requires the authorities to pay particular attention to the domestic counterparts of M_2 (and also to consider total credit of domestic origin) in order to encourage Danish firms to borrow abroad. Interest rate policy is used to achieve the same end.

3.7. Belgium

Studies of short term fluctuations in the liquidity of the economy indicate that, in the case of households, (and using a number of definitions of liquidity) there is some influence on real expenditure after one year and on nominal expenditure after two years. Expenditure by firms shows some reaction to net liquidity (sector's M_2 + open credits — short term debt, as a ratio of sector's nominal expenditure) after a delay of 4 to 5 quarters. On the other hand the expenditure of firms responds much more rapidly, significantly and predictably to changes in their indebtedness, while households also show some reaction to credit conditions, both through the effect of interest rates on housebuilding and through the effect of hire purchase regulations on consumer durable spending. The induced changes in expenditure have an important effect on the current account of the balance of payments since the income elasticity of demand for imports is high.

The Belgian authorities therefore consider that the linkages of credit supply to the real economy are much stronger than

those involving either the money supply or total liquidity; during periods of demand pull inflation and restrictive monetary policy, they therefore express their intermediate objectives in terms of the volume of credit given to the private sector; the resulting financial impulses are selective in their effects, having their initial impact on investment (plant, machinery, stocks and housing); during periods of sluggish economic activity and cost push inflation, they frame their intermediate objective in terms of interest rates. Given the openness of the Belgian economy, the level and variations of interest rates are, however, limited by conditions prevailing on foreign financial markets.

3.8 The Netherlands

One set of work in the Netherlands indicates that the effects of monetary conditions are clear, but not very strong: an increase of 1 point in the liquidity ratio (which is currently in the region of 40) increases output of the company sector by 0.8 %, employment by 1.2 % and the consumer price index by 0.3 % after 8 quarters, with very little of this effect becoming apparent after 4 quarters. A reduction in the discount rate of one percentage point has a similar effect on output, but a much smaller one on employment and prices. It appears from work on the demand for money that inclusion among the explanatory variables of a cyclical indicator has produced a stable function indicating a long-run real income elasticity of 0.85 and an interest elasticity of 0.2.

In the Netherlands interest rate changes have a large and rapid effect on many types of capital flow in the balance of payments.

The available evidence goes some way to justify the adoption by the Dutch authorities of an intermediate target expressed in terms of the ratio of liquidity to net national income.

*ANNEX II***REPORT ON CERTAIN QUESTIONS RELATING TO MONETARY POLICY INSTRUMENTS**

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INTRODUCTION

1. At its meeting on 13 February 1979 the Committee of Governors of the EEC central banks invited the working party to consider two questions:

- What are the reasons for the differences between member countries in the instruments of monetary policy?
- Do specific difficulties arise as a result of the differences?

2. At its meeting on 13 March 1979 the Committee of Governors specified that:

- The working party should base its study on point 4 of its mandate from the Committee of Governors and the Monetary Committee in 1974⁽¹⁾. Priority should therefore be given to consideration of those instruments which, when used by one country, have repercussions on another country;
- studies by the working party under point 3 of its mandate⁽²⁾ should be confined to the search for incompatibilities between EEC member countries involving the use of monetary policy instruments;
- the studies should consider the importance of the smooth functioning of the EMS, even though it

was recognized that there was limited scope for monetary policy on its own in this context.

3. On the basis of these requests and specifications, the working party has drawn up the present report in three main chapters:

- Chapter I presents some considerations on the choice of monetary policy instruments; some explanation of differences between the EEC countries in the instruments used are also given;
- Chapter II considers in essentially theoretical terms and with the help of simplifying assumptions whether differences in the use of monetary instruments cause difficulties in general, and in particular for the functioning of the EMS;
- Chapter III presents a summary of the report and some conclusions and recommendations with regard to better coordination in the instrumental field.

4. The present report, however, is not exhaustive and the group is prepared to look more deeply at questions which the Monetary Committee and the Committee of Governors might consider to be of interest in the light of their discussion on this report and the former committee's consideration of the working party's second report (dated 17 January 1979).

I. CONSIDERATIONS ON THE CHOICE OF MONETARY POLICY INSTRUMENTS

5. The working party took Article 9 of Council Directive 74/121/EEC of 18 February 1974 on stability, growth and full employment in the Community⁽³⁾ as the starting point for its consideration of the choice of the sets of monetary policy instruments available to member countries.

6. The working party noted that not all countries were even now in a position to operate on all the

measures listed in the Article. Furthermore, the Article did not specify the appropriate instruments, but only instructed the Member States to provide their monetary authorities with the instruments and power needed to implement the measures itemized.

7. Since the formulation of the Directive in 1974, the monetary authorities in member countries have continued to use a wide range of instruments. The criteria for assessing the efficiency of these instruments has, however, been influenced by a shift in the emphasis of monetary policy. Whereas priority was originally given to instruments best suited to achieve prompt results, medium-term objectives have progressively become more important for monetary policy, with the monetary authorities, particularly in the major countries, aiming at steady growth in the monetary aggregates. Nevertheless, prompt action might still be required in the context of the common exchange rate system. In practice some countries have relied mainly on instruments which operate directly

⁽¹⁾ Point 4 of the mandate stipulates that 'the group will study the instruments required by each member country for its monetary policy, with a view to ensuring compatibility between the instruments used and their conformity to commonly defined objectives'.

⁽²⁾ Point 3 of this mandate stipulates that 'the group will examine the conditions under which monetary policy instruments have been put into effect in recent years and the results obtained. They will study how far a progressive harmonization of these measures could be realized'.

⁽³⁾ See Appendix 1.

on key aggregates — for example, credit ceilings — while others have favoured instruments such as changes in official lending rates and measures affecting bank liquidity for controlling money market conditions (see Appendix 2 on the set of instruments available in each member country). There are considerable differences in the type of credit ceiling and instruments affecting money-market conditions adopted by the various countries. In selecting the instruments to be used to best achieve their national objectives, monetary authorities have frequently adapted to meet current needs instruments used either at an earlier date or in other countries.

8. It would appear that the wide-ranging differences in the choice of instruments stem mainly from features of the environment in which monetary policy is implemented and the way monetary policies are conceived in different countries. Four closely inter-related factors were identified as being significant:

(a) Strategy of the monetary authorities

9. Most countries now operate on a medium-term objective of steady monetary expansion, for example a deceleration of monetary growth from present levels or a reduction in the liquidity ratio. The use of a credit ceiling is consistent with this approach, as is illustrated by the example of France, but is not essential, as is the case in Germany. In France the medium-term aim is to ensure that the rate of money supply growth does not exceed the nominal growth rate of the economy. A credit ceiling is therefore selected and fixed at such a level as to be compatible with this objective. In effect the credit ceiling represents the limit of tolerance of the monetary authorities in their medium-term strategy. In Germany the medium-term objective is embodied in a money supply target that is enforced by operating on money market conditions. The differences in instruments illustrated above, despite a broadly similar medium-term strategy of the monetary authorities, stem from fundamental differences in approach: on the one hand a belief in the need for specific controls at the limit of tolerance, and on the other hand a reliance on implicit guidance ('moral suasion') to economic agents and on the use of the price mechanism.

10. Differences in monetary strategy are also seen in the various responses to pressing difficulties, such as a foreign exchange crisis. Some countries show a readiness to respond promptly through sharp interest rate adjustments, others prefer to take the initial strain through changes in the level of foreign exchange reserves. Still others apply selective controls to reverse, for example, the impact of leads and lags on inflows or outflows of foreign exchange.

(b) Financial structure

11. The financial structure has considerably influenced the choice of the instruments of monetary policy. For example, in France the authorities have found direct controls through a credit ceiling to be particularly effective when implementing a restrictive policy since by far the largest element of the counterparts of M_2 — the significant monetary aggregate — consists of bank lending to the non-bank private sector. Even so, the value of credit ceilings is confined to periods of restrictive monetary policy and other instruments — mainly indirect ones such as interest rate adjustments — are still required as part of an expansionary policy.

12. In some other countries, notably Germany and the Netherlands, banks' balance sheets also comprise a sizeable volume of non-monetary liabilities. The tightening of money market conditions in Germany aims not only to slow down the expansion of bank credit through higher bank lending rates but also to bring about shifts from monetary to non-monetary liabilities through changes in relative interest rates. In the Netherlands, these shifts are brought about by the use of a net credit ceiling.

13. Another example is the Supplementary Special Deposits Scheme ('corset') which was introduced in the United Kingdom in 1973 to limit the banks' ability to manage their liabilities, since they had tended to react perversely to a tightening of monetary policy by bidding more aggressively for deposits. Such a scheme is particularly relevant where the liabilities of the sector to which it applies or can be applied are the main constituent of the monetary aggregates chosen as an intermediate target — as is the case in the United Kingdom.

(c) Institutional differences

14. In some countries the monetary authorities do not have at their disposal the legal powers to use particular instruments, for example credit ceilings. In some cases this may have to be regarded as a long-term factor since the lack of such instruments reflects basic policy principles associated with institutional arrangements and the economic system. Important considerations in this context are the relationship between the government and the central bank and the competition and allocational effects accompanying the use of particular sets of instruments.

(d) Wider economic considerations

15. Several considerations concerning the wider economic implications of using certain instruments

affect the choice of the monetary authorities. In order to retain some autonomy of monetary policy, a preference has been shown, especially by small open economies participating in a stable exchange rate system and where interest rate policy is constrained by external considerations, for the use of credit ceilings in conjunction with some capital controls. The very size of exogenous impulses which monetary policy has to cope with — such as the past level of inflation or the size of the government deficit — may also induce the monetary authorities to supplement money-market instruments with administrative controls.

16. The reluctance in some countries — France, for example — to resort to sharp upward adjustments in interest rates, and hence the recourse to credit ceilings instead, reflects *inter alia* concern over the problem of banks' transformation rates. Where banks are dependent on short-term liabilities, but their assets are of longer maturity, there is a danger that volatile interest rates, and especially sizeable increases, could undermine the stability of some banks.

II. DIFFICULTIES ARISING FROM THE CHOICE OF DIFFERENT MONETARY INSTRUMENTS

1. IDENTIFICATION AND MEASUREMENT OF DIFFICULTIES

18. In order to identify difficulties arising from differences in the choice of monetary policy instruments, the working party studied price (interest rate) and availability effects of three alternative instrumental approaches as well as the response of capital flows to these effects. The three alternative approaches, which have been simplified⁽¹⁾ to assist the analysis, are:

- the indirect control of a monetary or credit aggregate (approach a),
- a gross credit ceiling (approach b),
- a net credit ceiling (approach c).

19. *Approach a*: the central bank operates on money market conditions. This is done by the use of open-market policy, modification of compulsory reserve ratios and re-discount ceilings and manipulation of official lending rates.

20. *Approach b*: the growth rate of all bank credits to residents is limited by a ceiling⁽²⁾.

⁽¹⁾ For this reason, these instrumental approaches are not identical with current national approaches.

17. Whereas the foregoing arguments tend to support the use of gross credit ceilings, in particular in countries where sole reliance on the interest rate mechanism would lead to very high bank lending rates, it was noted that such controls also impede the free operation of competition between banks, leading to distortions in the distribution of credit and in the price of corporate financing (allocation effect). These considerations have led some monetary authorities to favour reliance on interest rate mechanisms as the principal channel of monetary control. Other authorities only use gross credit ceilings in an emergency, tolerating domestic side-effects (e.g. the difficulties created for small enterprises by a sharp squeeze). Still other authorities believe that these undesirable side-effects can be avoided through selective credit ceilings or net credit ceilings since the latter will leave the availability of credit unchanged and give small enterprises access to capital market finance through their banks (see paragraph 21 below).

21. *Approach c*: a net credit ceiling scheme where the restrictions apply only to the growth of bank credits financed from monetary resources; for example, in the Netherlands there is no limit on gross credit expansion as such, to the extent that banks can finance lending by increasing their long-term, nonmonetary liabilities⁽²⁾.

22. The interest rate and availability effects of these three alternative instrumental approaches were examined in the case of a tightening of monetary policy because alternatives b and c are essentially restrictive instruments, even if in practice they often remain in force when monetary policy is not restrictive.

23. To facilitate the analysis in paragraphs 24 to 29, certain simplifying assumptions were made:

- that three countries (A, B, C), using the alternative approaches, participate in an exchange rate system such as the EMS and that the system as a whole is in equilibrium;
- that the developments in the different countries have no impact on interest rates outside the common exchange rate system;

⁽²⁾ Credit ceilings (gross and net) were taken as applying to all credit, both in domestic and foreign currencies, to residents.

- that capital controls are not considered as possible instruments;
- that exchange rate expectations will remain unchanged.

While these simplifying assumptions were needed in order to isolate possible difficulties due to the choice of instruments it should be kept in mind that fundamental economic differences and exchange rate expectations will often exert a much stronger influence on international capital movements. In fact the sensitivity of present-day exchange markets is such that any new information which seems to indicate a change in economic performance, or in the stance of economic policy, is rapidly incorporated into expectations and reflected in capital flows. For example, in the case of foreign exchange crises, exchange rate expectations may thus build up to such an extent that the more normal availability and price effects of the different instrumental approaches may either be reversed, offset or accentuated. Another example which has not been taken into consideration in the analysis is the announcement effect of monetary policy measures.

(a) Price and availability effects of alternative instrumental approaches

24. In approach a, the tightening of money market conditions will spread to other interest rates in the economy even if the size of interest rate changes is not precisely predictable as market forces can offset or accentuate the impact of tightened money market conditions. Subject to this reservation, bank lending rates will normally increase. At the same time, deposit rates, especially rates on large deposits, will also rise; in countries where the banks' balance sheets also include a sizeable volume of non-monetary liabilities there will be a shift from sight deposits (which are normally non-interest bearing) and finally short-term deposits to longer term deposits and bank bonds not included in money supply. Furthermore, a tightening of money market conditions will also affect capital market rates especially if banks in the short term reduce their purchases of securities rather than their direct lending.

25. Instrumental approach a, however, works not only through price effects; it may also have a certain availability effect in so far as the message conveyed by the central bank's action leads the banking system to assess the risks on its lending more cautiously and subsequently to tighten its criteria for the selection of borrowers. The greater this effect the smaller the interest rate changes needed to slow down the expansion of bank lending. On the other hand, the size of

the necessary interest rate rise is also a function of the time horizon of the monetary authorities. The more rapidly they want to bring monetary growth back to its desired path, the more drastic the tightening of money market conditions has to be.

26. Approach b relies mainly on availability effects. As the central bank does not act on money market conditions and therefore the refinancing cost to the banking system will not change immediately, initially there is little incentive for banks to raise lending rates. Instead, the banks may ration credit either by allocating selectively the reduced credit available or by reducing proportionally customers' borrowings. Nevertheless, the imposition of the credit ceiling may also have a price effect if banks use the method of pricing out excess demand. The experience of countries which have used gross credit ceilings shows that all these kinds of behaviour can be observed, although the relative importance varies from country to country. Since in the case of approach b banks' liquidity will undergo no change, capital market rates will in general not be affected initially by a tightening of monetary policy. There may even be a fall in these rates as banks place in the market the liquid funds they cannot lend because of the credit ceilings. In the longer term, however, this tendency is reversed as the corporate sector increases its recourse to the capital market, but this necessitates some substitutability between bonds and bank loans.

27. The functioning of approach c has much in common with that of approach a in its effects on bank lending and capital market rates. In the Netherlands, for example, banks may expand gross credit without limit as long as they cover the excess over the net credit ceiling percentage by a corresponding increase of their non-monetary liabilities. Consequently they are encouraged to bid aggressively for non-monetary funds, i.e. long-term deposits, savings deposits and funds from the bond market, pushing up longer term interest rates. The interest rate structure will be changed in favour of long term assets held with the banking system and this will tend to slow down the growth rate of liquid holdings by the economy. Unlike approach a, approach c does not imply a tightening of money market conditions and therefore has less impact on banks' funding costs and subsequently on their lending rates.

(b) Circumvention of monetary policies by the business sector

28. In the case of all three approaches a tightening of monetary policy will entail circumvention of the

interest rate and availability effects of these policies by the business sector. Two possibilities are offered to the business sector: to borrow abroad (which in certain cases is in fact an aim of the authorities) or from other domestic financial sources.

29. The incentive to borrow abroad will be particularly strong in the case of approach b where availability effects are predominant. Credit demand will be inelastic, especially in the short run, and the borrower may be forced to accept the going foreign interest rate as well as the exchange rate risks involved. Furthermore, banks which see the expansion of their lending activity restricted by the existence of credit ceilings may help their customers in borrowing abroad by granting them credits through their foreign branches and by issuing guarantees in their favour.

30. The price effect of approach a will also provoke borrowing abroad by enterprises but increased lending rates will provide an incentive to borrow abroad only if the interest rate differential between domestic and foreign interest rates is substantial since enterprises may be reluctant to break the relationship with their domestic banks and to accept an exchange risk because of only a small or temporary difference in the cost of borrowing. In approach c the increase in lending rates is smaller, so the incentive to borrow abroad will also be small.

31. The recourse by enterprises to domestic financial sources other than bank credit (financial disintermediation) will occur mainly in approach b. The characteristics of financial structure will also play a determinant role in the process of exhausting other existing financial sources (for example commercial credit, borrowing from insurance and pension funds) and of establishing new parallel markets (for example direct lending between enterprises). In general such new markets will only develop if restrictions on credit actually bite for a long time. The size of financial disintermediation, however, will also depend on whether there are substantial imbalances in individual and sectoral liquidity positions.

(c) Response of capital flows to the price and availability effects of alternative instrumental approaches

32. Section b shows that in all three cases restrictive monetary policies will induce capital inflows via the domestic business sector, appearing either in the capital balance or as leads and lags. For the reasons

given earlier, the incentive to such capital flows may be stronger in the case of approach b than in the other cases unless the price effect is substantial.

33. With regard to external capital transactions of other sectors of the economy, the differences between the instrumental approaches are more marked. Under the condition of full interdependence of capital markets, the rise in capital market rates resulting from the use of approaches a and c will attract financial investments by non-residents, whereas this will not occur in the case of approach b unless the relevant rates show a tendency to rise following the abovementioned attempts by the business sector to circumvent restrictions on bank lending.

34. As far as banks' foreign transactions are concerned, instrumental approaches of types a and c give rise to short-term and long-term capital imports by the banks. When credit ceilings of type b are in operation, the banking system may even be inclined to invest abroad the funds which cannot be used for its lending activity, unless specific rules are applied to the banks' foreign position.

35. The sensitivity of capital flows to price and availability effects will, however, be reduced by obstacles to free capital movements. Despite an international interest rate differential, non-residents may not invest on a particular capital market if the assets offered on this market are not suitable for them. There are also discriminatory measures which prevent foreigners from buying bonds issued on domestic capital markets.

36. Regulations applying to the foreign positions of the banking system are in force which would, in the case of approach b, prevent banks from exporting capital. Capital imports by banks can be prohibited or made relatively unattractive in various ways e.g. fixing very high or 100% reserve requirements on the increase of banks' foreign liabilities; banning the sale of bank bonds to non-residents; defining a net credit ceiling so that borrowing abroad of monetary and non-monetary liabilities cannot be deducted, as is the case in the Netherlands.

37. In all three cases capital inflows are stimulated, but the lags involved for capital flows to react to the various approaches are, however, different, as are the channels through which the capital flows. In approach a non-residents will react promptly to changed money market conditions, resulting immediately in capital inflows via the banking system. In approach c, where inflows will principally take the form of purchases of capital market instruments, the time lag will be longer, assuming that the interna-

tional interdependence of capital markets is less perfect than that of money markets. In approach b the availability effect will bite on residents more than the price effect (i.e. increase in bank lending rates) of approaches a and c, and capital inflows will go mainly to the non-bank private sector. The magnitude of these effects will depend, however, on the specific economic conditions in which the various approaches are adopted; the response will therefore not be the same in all countries.

38. In the interest of ensuring the smooth functioning of the common exchange rate system a major question will also be the extent to which the capital flows described above will occur between the member countries themselves or between each of them and the rest of the world. If all three countries tighten their monetary policy, and if this action has no impact on the monetary situation in the rest of the world, capital inflows via the business sector may stem essentially from the rest of the world. Enterprises in country B will not borrow in countries A and C but rather on markets outside the common exchange rate system, where borrowing costs are lower. On the other hand, enterprises in countries A and C will not borrow from banks in country B as lending rates are higher than on third markets and as the rising trend in the exchange rates of jointly floating currencies *vis-à-vis* the rest of the world may give an incentive to borrow on third markets.

39. The induced differentials in money market rates (countries B and C *vis-à-vis* country A) and in capital market rates (country B against countries A and C) would, however, entail a shift in financial investment and result — to the extent that the abovementioned obstacles to capital flows will be surmounted — in some capital outflows from countries B and C respectively. Shifts in financial investment from the rest of the common exchange rate system will also tend towards country A. Thus countries B and C will have to tolerate an upward adjustment of money and capital rates or incur reserve losses to keep their currencies within the fixed margins with country A. If the policies in B and C aim at maintaining low interest rates, this change in stance would be an example of a harmful side effect for these countries stemming from instrumental differences.

2. POSSIBILITIES OF AVOIDING DETRIMENTAL SIDE EFFECTS ON NEIGHBOURING COUNTRIES AS A RESULT OF THE USE OF CERTAIN INSTRUMENTS

40. One of the questions which were examined in this context was whether a net or gross credit ceiling could be used, for a short period, to avoid the increase in domestic short-term interest rates deriving from instrumental approach a and possibly causing difficulties for neighbouring countries in a fixed exchange rate system. To this end, a gross credit ceiling would have to be operated in such a way that its availability effect does not lead to capital inflows. Since a net credit ceiling does not have such an availability effect it does not have the same drawback.

41. The group examined whether the avoidance of capital inflows could be achieved without having recourse to capital control measures if the monetary authorities extend the credit ceiling to credits granted by banks' foreign branches and to guarantees enabling or facilitating borrowing abroad by residents.

42. It came to the conclusion that the efficiency of these measures would be subject to the extent to which residents depend on cooperation of the domestic banking system when borrowing abroad; if the business sector is integrated in the international markets, then such measures will at best only block a part of the foreign funds, and the need for capital controls will persist. Such controls have been seen to be far from efficient and raise various problems at a national and Community level. The extension of capital controls would conflict with the obligation arising under the Treaty of Rome⁽¹⁾ and with the move towards stronger monetary and economic integration.

(1) Article 67 states that: 'Member States shall progressively abolish between themselves all restrictions on the movement of capital belonging to persons resident in Member States and any discrimination based on the nationality or on the place of residence of the parties or on the place where such capital is invested.'

III. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

43. The working party noted that the criteria on which the efficiency of monetary policy is judged have been influenced by the shift in the emphasis of monetary management in member countries in the recent past: from a prompt, short-run type of action (still retained in cases of emergency) to a more medium-term orientation of monetary policy. Four factors were identified as being significant in explaining the differences between member countries in the instruments of monetary policy: the strategy of the monetary authorities, the financial structure, the institutional set-up and considerations concerning the wider economic implications of using certain instruments. In practice, countries have in general shown preference either for instruments which operate directly on key aggregates — e.g. credit ceilings — or for 'indirect' instruments, such as the manipulation of money market conditions, or for a combination of both.

44. In order to identify the possible difficulties arising from differences in the choice of monetary policy instruments, the working party studied in a model the price (i.e. interest rate) and availability effects of three alternative instrumental approaches adopted simultaneously in three countries, as well as the response of capital flows to these effects. The three approaches examined were the indirect control of monetary or credit aggregates through the control of money market conditions, the use of a gross credit ceiling and that of a net credit ceiling (see paragraphs 19 to 21).

45. In accordance with its mandate, the working party concentrated on interest rate and availability effects of three instrumental approaches. It noted that capital flows are induced not only by interest rate differentials or by availability effects, but also respond to market perception of the basic factors affecting exchange rate expectations. Any difficulties which the use of different monetary policy instruments might possibly cause are hard to distinguish from the difficulties arising from the persisting differences between Member States in economic performance and in the priorities of economic policy as well as from external shocks to the Community's exchange rate system. Basic factors might, however, be accentuated in the short-term by instrumental differences.

46. The working party agreed that the three instrumental approaches differ in the relative importance of their price and availability effects: availability effects are especially marked in the case of a gross credit ceiling system, whereas net credit ceilings and

indirect instruments differ especially with regard to their impact on money market conditions. In all three cases capital inflows are stimulated, but the lags involved for capital flows to react to the various approaches are different, as are the channels through which the capital flows. In approach a non-residents will react promptly to changed money market conditions, resulting immediately in capital inflows via the banking system. In approach c, where inflows will principally take the form of purchases of capital market instruments, the time lag will be longer, assuming that the international interdependence of capital markets is less perfect than that of money markets. In approach b the availability effect will bite on residents more than the price effect (i.e. increase in bank lending rates) of approaches a and c, and capital inflows will go mainly to the non-bank private sector. The magnitude of these effects will depend, however, on the specific economic conditions in which the various approaches are adopted; the response will therefore not be the same in all countries. The working party therefore concluded that whereas the relative size of capital flows induced by the three instrumental approaches cannot be determined in advance, the disturbing effects on other Community countries resulting from one approach may be more serious than if another approach is selected.

47. In a country with an appreciating currency a gross credit ceiling would help to reduce the inflow through the banking sector but would entail increased capital inflows through the business sector. For a gross credit ceiling to be effective, capital controls or other specific regulations would have to be imposed. Capital control measures, however, would raise various problems at a national and Community level and other disincentives have not been very effective. On the other hand, a net credit ceiling which does not have such an availability effect would have to be defined in such a way as to avoid induced capital inflows through the capital market.

48. The working party finally noted that possible difficulties might stem not only from differences in the instruments of monetary policy, but also from those in the timing and intensity of their use, especially given the announcement effect of monetary measures on exchange rate expectations. Even if identical instruments are used, the result may be very different if one country reacts sharply to undesired monetary and economic developments while another one prefers a more flexible approach. The working party therefore thought it important that, when considering major monetary actions, each country should take account of the likely impact on neigh-

bouring countries of the alternative instruments available to it. In particular, countries should assess the consequences of the envisaged monetary action for the smooth functioning of the EMS. Problems of timing and principle can make prior consultations on specific changes in instruments difficult. But policy consultations concerning monetary policy developments generally — in particular discussion of the past impact of such changes and consideration of possible future effects — in the relevant Community fora can lead to an improved understanding of the policy re-

quirements and financial structures of neighbouring countries. Greater understanding of the different effects of particular instruments would mean that potentially harmful effects on neighbouring countries could also be avoided, or at least mitigated. Moreover, it could increase the efficiency in domestic terms of monetary policies pursued in the different EEC member countries by avoiding tensions in the common exchange rate system. In fact, such tensions generally are an obstacle for all participating countries to achieve their monetary policy objectives.

*APPENDIX 1***COUNCIL DIRECTIVE 74/121/EEC OF 18 FEBRUARY 1974 ON STABILITY,
GROWTH AND FULL EMPLOYMENT IN THE COMMUNITY***Article 9:*

'Member States shall take the measures necessary to enable them to take prompt action on the various elements covered by the policy of the monetary authorities, particularly money supply, bank liquidity, credit and interest rates.

For this purpose, Member States shall confer upon their monetary authorities, in so far as the latter do not already have them, at least the instruments and powers to enable them to apply, where necessary, the following measures:

- imposition or modification of reserve ratios applying to the liabilities of monetary institutions;
- imposition or modification of reserve ratios applying to the credit granted by monetary institutions;
- recourse to an open market policy with wide scope for action, including the use, as necessary, of short-, medium- and long-term securities;
- modification of the re-discount ceilings with the central bank;
- modification of the various interventions rates practised by the monetary authorities.

In addition, the monetary authorities shall, as far as possible, be invested with the instruments and powers enabling them to implement the following measures:

- modification of the borrowing and lending interest rates paid or charged by public credit agencies;
- imposition or modification of conditions for consumer credit, hire-purchase sales and mortgage credit;
- quantitative or qualitative credit control.'

APPENDIX 2

THE INSTRUMENTS OF MONETARY POLICY IN MEMBER COUNTRIES

For homogeneity and comparability, the instruments have been classified into four categories:

- (i) Instruments through which the authorities supply the markets with central bank money: open market operations, re-discounting, advances and swaps. Open market operations, unlike re-discounting and advances, affect the 'non-borrowed' reserves of the banks. However, as an OECD publication⁽¹⁾ observes: 'the distinction between the effects of the two instruments must not be overdone; there are forms of open market operations which do not differ significantly from changes in central bank lending'.
- (ii) Compulsory reserves on deposits by and credit to residents.
- (iii) Measures directly affecting bank assets or liabilities:
 - (a) measures aimed at directly limiting the expansion of banks' balance-sheet items: 'encadrement', the 'corset';
 - (b) measures which oblige banks to affect part of their resources in favour of certain aims: minimum holdings of securities, qualitative or selective guidance.

The two measures are often combined: quantitative credit controls have, for example, been often used on a selective basis.
- (iv) The control of external operations, particularly from the point of view of their impact on liquidity.

BELGIUM

1. The central bank supplies the banks with central bank money through re-discounting operations and advances. There is a re-discount ceiling, and its variation is an important monetary policy instrument. Rates under re-discount ceiling 'A' are at times different from rates under ceiling 'B' and also differ according to whether the advances are granted within the monthly quotas or outside them.
2. Compulsory reserves are imposed only during periods of restriction; the coefficients are fairly low.
3. Quantitative credit control measures are applied during periods of restriction, usually for a short time. The last time controls were applied they lasted for only three months, from October to December 1978. The controls were highly selective, and their main purpose was to protect the Belgian franc. The 1975 controls included compulsory penalty reserves if limits were exceeded.

⁽¹⁾ OECD — 'The role of monetary policy in demand management', Paris 1975, p. 29.

Minimum holding of securities representing the national debt is an important monetary policy instrument; it enables the treasury to obtain financing from sources other than the central bank, and thus to avoid an excessive expansion of bank liquidity.

4. Regulation of the banks' external position.

DENMARK

1. The banks have access to borrowing from the central bank under a system of borrowing limits. This system was introduced in 1975 replacing various traditional borrowing facilities. The limits are fixed quarterly as a percentage of each bank's capital and reserves, and indicate the average amount that may be borrowed in the quarter. The facility is divided into three (from April 1979 into two) brackets to which ascending rates of interest are applied. In addition the Nationalbank has occasionally supplied overnight funds via the money market when the banks' borrowing requirements exceeded the level foreseen when the borrowing limits were fixed. The central bank also offers the banks a deposit facility, so far within an average amount of 5 % of the bank's capital and reserves. Interest is paid corresponding to discount rate minus 3 %. Central bank deposit certificates at three, six and nine months are issued when necessary to mop up excess liquidity. They have not been issued since 1976.
2. There is no permanent fractional reserve requirement. Special deposits were called in 1975 and 1976 in order to absorb excess bank liquidity. The deposits were released in 1977.
3. Credit commitments by banks and savings banks have been subject to quantitative controls since 1970.
4. The banks are required to keep their net external position (net claims on correspondents, etc.) within a net asset position corresponding to 15 % of capital and reserves and a net liability position corresponding to 5 % of capital and reserves. The banks are occasionally permitted to hold foreign exchange exceeding the upper limit in cover of forward liabilities. From 1972 to 1976 the central bank occasionally intervened in the forward market for foreign exchange.

GERMANY

1. The market is supplied with central bank money through re-discounting, 'Lombard' advances, domestic open market operations and, occasionally, special transactions in the exchange market. Quantitative ceilings are placed on banks' re-discount facilities at the central bank, while 'Lombard' credit serves essentially as a temporary source of funds. Interventions in the bond market have been sporadic. The Bundesbank has an ancillary instrument for influencing bank liquidity at its disposal, in that it can in-

fluence the way in which cash surpluses of the central government are distributed between the central bank and the commercial banks.

2. The compulsory reserve system represents a very important policy instrument in Germany. Coefficients are often adjusted to influence the current level of bank liquidity, vary banks' dependence on Bundesbank assistance as they expand their earning assets, and change the cost of banking funds. These coefficients vary according to the importance of the credit institutions concerned. On 31 March 1979, the coefficients were about 13 %, 9.5 % and 6.5 % respectively for sight deposits, time deposits and savings deposits. The highest figures ever recorded for these coefficients are about 20 %, 14 % and 9 % for resident holdings of sight, time and savings deposits respectively. Compulsory reserves do not bear interest.

3. In 1970 reserve requirements were applied for several months on the increase in liabilities (40 % for sight and time deposits and 20 % for savings deposits).

4. To ward off capital inflows, differential reserve ratios have, at times, been applied for resident and non-resident deposits. Legal maximum reserve ratios are fixed at 30 %, 20 % and 10 % for resident holdings of sight, time and savings deposits respectively, while reserve requirements on non-resident deposits can be raised up to 100 %. The External trade and payments act and supplementary regulations enable the Federal Government to place restrictions on capital movements, the payment of interest on non-resident deposits, and impose a reserve requirement (non-interest bearing 'Bardepot' holdings with the Bundesbank) on non-bank foreign borrowing. The Federal Government must act in consultation with the Bundesbank, and the latter issues authorizations and determines 'Bardepot' ratios respectively in agreement with the Federal Ministry responsible.

FRANCE

1. There are two types of open market operations: (a) invitations to tender ('appels d'offres') against commercial paper (short-term, negotiable with the Banque de France), with varying frequency in the course of a month (one to three calls per month); and (b) open window operations on a sale-and-repurchase basis ('pensions') of treasury bills held on current account or of medium-term certificates issued by the Crédit Foncier de France and the Crédit National.

There has been no re-discounting at the official bank rate since 1971, except for medium-term credits for exports to the EEC (FF 2 000 million at the beginning of 1979) during exceptional periods when the money market rate was higher than the official rate. However, open-window operations involving large amounts take place at preferential rates with the mobilization of medium-term foreign claims on non-Community debtors.

2. A system of ordinary compulsory reserves at constant rates against banks' liabilities is applied: at present, 4 % against residents' sight deposits, 0 % against savings deposits (time deposits, savings accounts etc.). Highest past rates were 17 % on sight deposits and 7 % on savings deposits, in 1974; the maximum reserve ratio against liabilities author-

ized by the Conseil national du crédit is 25 %. Compulsory reserves at constant rates against credits distributed by banks and financial institutions, deducting credit not subject to controls (see below), are also required. At present, the rate is 0.5 % of the total amount distributed; the highest past rate was 33 % of the increase in credit distributed; the maximum reserve ratio against credits authorized by the Conseil national du crédit is 50 %.

Ordinary compulsory reserves are not directly used for controlling monetary creation by the banks. Their main purpose is to weigh on bank liquidity, by obliging banks either to maintain central bank refinancing at the same level — particularly by sterilizing the increase in their liquidity due to an inflow of foreign currency, as in September 1978 — or to have increasing recourse to such refinancing. The reserves act through the banks' accounts on the rates effectively charged to borrowers.

3. Banks whose credit growth rate exceeds the norms fixed by the authorities are required, as a penalty, to place 'supplementary reserves' with the Banque de France. The ratio for such reserves is steeply progressive the further outstanding credit is in excess of the recommended norms, and is applied against the total amount of outstanding credit subject to controls, thus acting as a strong disincentive to exceeding the limits. Since the beginning of 1979, the norms have been set for a six-month period; they furthermore are differentiated according to the size of the institution concerned. For each bank, the basis for calculating the supplementary reserves is obtained by deducting from the total amount of outstanding credit subject to the requirement:

- (i) any changes in own funds and bond issues;
- (ii) the difference between the amount of credit authorized and the amount granted over the previous six months (carrying over of unused potential credit).

It should be noted that a quarter of the credit granted by banks and financial establishments (export credits, subsidized housing, certain investment credits and so on) is exempt from the supplementary reserves requirement. However, a percentage of the increase in credit in these exempted categories (except for the increase in advances in foreign currency) has been included in the basis for calculating credit subject to upper limits, so as to increase control over total credit. The percentage included was 15 % in 1978; it is 20 % in 1979.

There also is a minimum required holding known as the 'minimum portfolio of medium-term claims and bonds', the latter with less than seven years to maturity. At present, the minimum holding must represent 7 % of the liabilities used as a basis for calculating ordinary reserves; the maximum rate authorized by the Conseil national du crédit is 25 %.

4. Banks may not present a net foreign exchange position, nor may they lend French francs to non-residents (except for 'buyer' credits). Ordinary compulsory reserves against deposits by non-residents may be applied. In 1973, these reserves were 100 % of the increase in such liabilities since the beginning of the year, the maximum authorized by the Conseil national du crédit, but the requirement was suspended in 1974.

IRELAND

1. The banks are supplied with liquidity through temporary re-discounting of exchequer bills and agricultural commodities intervention bills and by temporary advances against the security of government stocks. The cost of resort to the central bank is varied as a function of market interest rates and the rate of growth of private sector credit. The main source of liquidity in recent years to the banks has been the change in official external reserves, which also reflected government borrowing abroad.

2. A system of primary and secondary liquidity ratio requirements is operated by the central bank. Primary liquid assets comprise the sum of a bank's holdings of notes and coins and balances with the central bank (including reserve bonds and statutory deposits), while secondary liquid assets comprise a bank's holdings of government paper (including exchequer bills and re-discounts); relevant resources comprise the sum of a bank's current and deposit accounts and net external liability (adjusted for any exemptions that have been granted by the central bank), less balances with and lending to all other licensed banks within the State. The primary liquidity ratio is the ratio of primary liquid assets to relevant resources. The current minimum prescribed ratio is 13 % for associated banks, North American banks, merchant banks and industrial banks and 10 % for the category 'Other banks'. The secondary liquidity ratio is the ratio of secondary assets to relevant resources: the current minimum prescribed ratio is 30 % for associated banks and 10 % for all other licensed banks. The levels of the ratios have not been changed very frequently.

3. Quantitative credit controls were suspended in 1972 when liquidity ratios were introduced. Direct credit controls were subsequently reintroduced and in March 1979 the central bank issued a guideline providing for an 18 % increase between February 1979 and February 1980 in bank lending to the private sector⁽¹⁾. Provision is made to secure the attainment of this guideline by requiring individual banks with excessive rates of increases in credit during the period to place supplementary deposits at the central bank at non-remunerative rates of interest.

4. Since February 1979 there is no monetary policy limitation⁽²⁾ on domestic lending by banks denominated in foreign currencies and funded by capital inflows through banks; any increase in such lending is excluded from the credit guideline. Forward cover facilities are available in respect of external borrowings that are directly related to trade. Individual banks' open positions in foreign currencies are controlled and there is also a limit on the extent to which a bank may hold spot foreign assets against forward liabilities in foreign currencies.

⁽¹⁾ The private sector is defined for this purpose to include State bodies and local authorities.

⁽²⁾ Exchange control approval is required and is usually granted for borrowing for productive purposes.

ITALY

1. Controls of the amount of monetary base creation through:

- (a) open market operations in long- and short-term government securities, both on the new issues and secondary market;
- (b) refinancing of commercial banks with:
 - (i) ordinary advances, subject to a ceiling, and
 - (ii) special advances and re-discounting, penalty rates are applied to banks which use these operations in excess of certain limits;
- (c) regulation of the banks' net external position.

2. Controls over the uses of monetary base through:

- (a) changes in the coefficient of compulsory reserves to be held in base money against deposits. Since February 1975, compulsory reserves have represented 15.75 % of the increase in current and saving deposits;
- (b) the import deposits scheme, first introduced in 1974 and, in a revised version, again in 1976, according to which non-interest-bearing deposits, equal to a certain percentage of the value of imports, had to be held for a certain period with the central bank.

3. Control of securities issues, which require official permission by the Interministerial Committee on credit and saving (CICR).

4. Direct credit controls in the form of:

- (a) 'floors' on securities investments, first introduced in 1973 and asking banks to invest a fixed proportion of the increase in deposits during the reference (at present 6.5 %), in certain types of securities;
- (b) 'ceilings' on the expansion of bank loans, introduced in 1973 with selective purposes and then used as tool for controlling both the amount and the composition of bank credit. At present they are set on a rolling basis at 12 or six months' intervals.

THE NETHERLANDS

1. Recourse to the central bank can take the form of re-discounting of eligible paper or of advances. Recourse at official rates is restricted to limits which are set for periods of normally about three months. Recourse exceeding these limits is in principle not allowed and granted only against penalty rates of interest.

The central bank can affect money market conditions through:

(a) (temporary) easing actions:

1. granting of special loans;
2. open market purchases of treasury paper (not used since 1971);
3. Purchases of dollars under resale agreements (swaps).

(b) (temporary) tightening actions:

1. cash reserves;
2. open market sales of treasury paper (portfolio zero since 1971);
3. sales of dollars under repurchase agreements (swaps).

2. A system of liquidity reserve requirements was introduced in 1973. The system comprises two reserve requirements, one against long-term and one against short-term liabilities of the banks. The former is in principle constant: the latter may be varied in order to affect the level of free liquid reserves. Reserve assets according to the system are claims on the central bank and — mainly — treasury paper. The system can be applied in a merely accompanying manner (light phase, in which a free margin of liquid reserves is maintained) and in a restrictive manner (severe phase, in which the free margin becomes negative). The severe phase has up till now never been applied. In view of the prolonged application of direct credit restrictions, both reserve requirements have been lowered to two-thirds of their former level (of 6 and 10.5 % respectively), effective April 1978.

3. The central bank is entitled to apply direct credit controls. Such a system was introduced in May 1977. At present a net system is in force: it applies to the increase in short-term credit to the private sector and long-term credit, as far as these are not financed by long-term non-monetary liabilities (reserves, capital market borrowing, deposits of two years or longer, (genuine) savings deposits). This means that there is no limit on gross credit expansion as such: the controls apply only to credit financed from monetary resources. Banks exceeding the credit restriction can be obliged to place non-interest bearing deposits with the central bank. For 1979 the net credit ceiling is 8 % for each individual bank: in addition an allowance of in total 1 % of net credit was distributed among smaller banks.

4. Regulation of the banks' net external position: in principle no net foreign liabilities allowed.

UNITED KINGDOM

1. The monetary authorities seek to influence short-term interest rates and bank liquidity through open market operations. These operations are carried out via the discount market rather than with the commercial banks directly. In general, the Bank mops up a surplus of funds in the market

by selling treasury bills and meets a shortage by buying treasury or local authority bills or by lending at minimum lending rate; this latter action in turn affects short-term interest rates more generally. Between October 1972 and May 1978, treasury bill rate was normally the basis for the determination of minimum lending rate, but MLR has been determined by administrative decision since then, though market developments are still taken into account. Re-discounting is automatic.

2. A 12.5 % reserve ratio was introduced in 1971 with the implementation of the 'Competition and credit control' regime. Reserve assets are either cash at the Bank of England or assets which the Bank of England are prepared to convert into cash either through open market operations or by lending secured against them (such as treasury bills and lending at call to the discount market). The system allows the banks wide freedom of manoeuvre since they can bid up deposit rates and then acquire reserve assets; to some extent they can also create such assets, by lending at call to the discount market. Thus the UK does not operate on the reserve assets ratio as a means of controlling the money supply directly.

Special deposits, in the form of a deposit with the Bank of England interest on which is paid at treasury bill rate, are also called from time to time. These are usually a relatively low percentage of eligible liabilities (highest past rate 3.5 %) and can be used as a technical smoothing operation to avoid undue fluctuations in short-term interest rates.

3. The supplementary special deposits scheme has also been imposed from time to time. This places a limit on the growth of the banks' interest-bearing eligible liabilities; if growth is in excess of this limit, the banks have to place non-interest-bearing special deposits with the Bank of England. The rate set when the scheme was reimposed in June 1978 was 5 % of an excess not exceeding 3 %, 25 % of an excess between 3 % and 5 % and 50 % of an excess of over 5 %. This system is clearly similar to a system of credit controls, but one of the aims of the scheme is to limit the growth of banks' liabilities, while leaving them free to choose their asset structure.

Qualitative guidance on the direction of bank lending has also been given fairly regularly over the last 15 years, generally so as to ensure that sufficient finance was available for manufacturing investment and exports while restraining lending to persons and property companies. Hire purchase terms control has also been in force laying down minimum deposit and maximum repayment periods for lending for certain categories of goods; the banks have been asked to observe the same conditions for personal loans.

In September 1973, a limit of 9.5 % was placed on the rates paid by banks for small deposits of under £ 10 000. This was to avoid small savings being attracted to banks largely at the expense of building societies, at a time when it was thought inappropriate for the mortgage rate to be increased.

4. Ceilings are placed on individual banks' overall open position in foreign currencies and on the amount of spot assets which may be held against forward liabilities in foreign currencies. Provision has also been made for differential

rates of call for special deposits on domestic and overseas deposits, so that the rate of call related to overseas liabilities can be either higher or lower than that applied to total eligible liabilities if this is necessary for purposes of domestic monetary policy. In practice, this provision has never been used.

5. In addition to the instruments described above, the Bank of England also operates actively in the gilt-edged market. The prime objective by now is to sell sufficient stock so that the monetary targets are met, but the authorities are also concerned with the longer-run structural health of the market.

THE INSTRUMENTS OF MONETARY POLICY IN EEC MEMBER COUNTRIES

(situation in May 1979)

	Belgium	Denmark	Germany	France	Ireland	Italy	Netherlands	United Kingdom
(i) Instrument through which authorities supply the markets with central bank money								
Open market operations:								
— on short term securities	—	—	in use	in use	—	in use	not since 1971	in use
— on long term securities	—	—	in use	not since 1971	in use	—	— ⁽²⁾	in use
Re-discounting:								
— re-discount rate	in use	in use	in use	in use	in use	in use	in use	in use
— re-discount quotas	in use	in use	in use	not since 1971	—	—	in use	—
Advances	in use	in use	in use	in use	in use	in use	in use	in use
Swaps	—	—	in use	—	—	not since 1969	in use	—
(ii) Reserve requirements								
Compulsory reserves ⁽¹⁾								
— on deposits	not since 1974	not since 1971	in use	in use	in use	in use	not since 1963	—
— on credits	not since 1974	—	—	in use	in use	—	in use	—
Liquidity ratios as monetary instruments	—	—	—	—	—	—	—	in use
(iii) Measures directly affecting bank assets or liabilities								
Cross credit ceilings	not since 1978	in use	—	—	in use	in use	not since 1972	not since 1971
Net credit ceilings	—	—	—	in use	—	—	in use	—
Corset	—	—	—	—	—	—	—	in use
Minimum holdings of securities	—	—	—	in use	—	—	—	—
(iv) Control of external operations								
Special compulsory reserves on non-bank foreign borrowing	not since 1974	—	not since 1974	—	—	—	—	—
Temporary deposits with the central bank on purchase of foreign currency by non-bank residents	—	—	—	—	—	not since 1977	—	—
Regulation of payment of interest on non-resident deposits	not since 1973	—	not since 1974	not since 1973	—	—	not since 1976	not since 1971
Two-tier market	in use	—	—	not since 1974	—	—	—	—
Two-tier market for special capital transactions	—	—	—	—	—	—	—	—
Regulation of the external position of banks	in use	in use	— ⁽³⁾	in use	in use	— ⁽²⁾	not since 1974	in use

⁽¹⁾ Excluding supplementary reserves to be placed with the central bank if norms under (iii) are not respected.

⁽²⁾ Actually not in use.

⁽³⁾ In Germany a number of measures have been taken to ward off capital inflows through the banking sector:

- licensing of transactions with non-residents on domestic money market paper, of repurchase agreements and of bonds: partly in use;
- special reserve requirements on non-residents' deposits: not in use since 1978;
- withholding tax on non-residents' income from domestic bonds: in use.