

BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

Division of International Finance

REVIEW OF FOREIGN DEVELOPMENTS

May 23, 1967

Ruth Logue

Europe is a Wicksellian World:
An Inquiry into Imported Inflation

61 pages

This paper reflects the personal opinion of the author and must not be interpreted as representing the opinion of the Board of Governors. It was prepared primarily for internal circulation within the Federal Reserve System, and must not be cited, quoted, or reprinted without permission.

EUROPE IS A WICKSELLIAN WORLD: AN INQUIRY INTO IMPORTED INFLATION

Table of Contents

	<u>Page</u>
I. Introduction -----	1
II. The European Instruments of Monetary Policy-----	8
A. Summary-----	8
B. Cash Reserve Requirements-----	9
C. Liquidity Ratios-----	13
D. Open Market Operations-----	16
E. Foreign Exchange Policies-----	20
F. Discount Policy-----	23
G. Control of the Banks' Earning Assets-----	40
III. Prospects for the End of the Wicksellian World-----	46

Europe is a Wicksellian World: An Inquiry into Imported Inflation

I. Introduction

European central bankers claim that under a regime of fixed exchange rates, balance-of-payments surpluses cannot be prevented from being inexorably reflected in an expansion of money and credit. This situation resembles the expansionary side of Wicksell's pure credit economy, where the upward spiral of credit and prices, started by an inflow of gold, is stopped only when inflation has induced a fall in exports and an outflow of gold. Since the acceptance of Keynesian theories, balance-of-payments deficits are no longer expected to set off cumulative contractions, but on the expansionary side the picture is purely Wicksellian: because they cannot sterilize balance-of-payments surpluses, European countries become the helpless victims of imported inflation.

The notion that monetary policy cannot prevent balance-of-payments surpluses from producing inflation when exchange rates are fixed was ably questioned on theoretical grounds in 1964 by Professors Scott and Schmidt.^{1/} As proponents of the doctrine they were attacking, Scott and Schmidt cited Robert V. Roosa, Karl Blessing, Marius W. Holtrop, Milton Gilbert, Warren McClam, and Friedrich A. Lutz. Despite the Scott and Schmidt article, the doctrine of the inevitability of imported inflation still flourishes. Signor Guido Carli, Governor of the Bank of Italy, said to the Anglo-Italian Parliamentary Group on July 7, 1966:

^{1/} Ira O. Scott, Jr. and Wilson E. Schmidt, "Imported Inflation and Monetary Policy", Banca Nazionale del Lavoro Quarterly Review, No. 71 (December 1964), pp. 390-403.

"However, when the time comes to identify the causes of failure, nowadays central banks nearly always seek them outside their own sphere of influence, and an analysis of economic facts seems to confirm that there are serious limitations to the effectiveness of monetary policy You need only realize that the central bank has no direct instruments to face inflation imported from abroad."^{1/}

At the end of 1966 the President of the Bundesbank, Herr Karl Blessing, justified the retention of the coupon tax on purchases of domestic securities by foreigners on grounds of the danger of importing inflation:

"It is true that at the moment, the German economy is not affected by inflationary influences from abroad, as the current account balance of payments is more or less in equilibrium. On capital account however, the situation is different, and it would not seem appropriate to stimulate purchases of German securities by foreign investors. For if the abolition of the coupon tax should give rise to purchases of German bonds by foreigners on a large scale, the danger of imported inflation would again appear."^{2/}

Professor Schiller, the economic expert of the Social Democratic Party, foresaw the same danger and indicated that the draft economic stabilization law did not provide for defense against the import of inflation. He argued that the Bundesbank's open market policy should be reinforced.^{3/}

President Holtrop of the Netherlands Bank is one of the most uncompromising adherents of the doctrine of the inevitability of imported inflation:

^{1/} B. I. S. Press Review, No. 129, July 7, 1966, p. 1.

^{2/} B. I. S. Press Review, No. 241, December 14, 1966, p. 1.

^{3/} Deutsche Bundesbank, Auszüge aus Presseartikeln, No. 48, July 15, 1966, p. 5. Prof. Schiller subsequently became Minister of Economic Affairs in the Kiesinger cabinet.

"To end price inflation, therefore, the conclusion must be that the moderation of expenditure, the observance of monetary discipline and the adoption of structural measures directed to restoring equilibrium must start at home. But such action, in a world where countries are increasingly interlocked through trade, must be accompanied by a like policy elsewhere.

If these things are not done, the effect of the international monetary system based on maintenance of fixed exchange rates will inexorably be to transfer internal inflation from one country to another; and, in the event of structural disequilibria, that system will lead to monetary expansion in the surplus countries, as well as to income and price inflation, which will not cease until that inflation and the consequent rise in costs have gradually redressed the balance

If the surplus countries in such circumstances are unwilling to accept the consequences of these interrelationships, and if through their own policy they manage to repress domestic inflationary forces but are then confronted with obstinate balance of payments surpluses which entail an unacceptable trend towards inflation, only one course would remain open to them. This would be to sacrifice their parity of exchange, either through upward revaluation or by opting for a more flexible system of exchange rates."^{1/}

These gentlemen would probably regard the Scott and Schmidt article as simply irrelevant because the authors rule out consideration of legal and institutional constraints on a policy of sterilizing balance-of-payments surpluses. That is, they assume that if monetary policy instruments, in particular cash reserve requirements and open market operations, are theoretically useful they can be made legally and practically available to whatever degree necessary. Briefly, Scott and Schmidt argue that both primary and secondary deposits can

^{1/} De Nederlandsche Bank N.V., Report for the Year 1965, page 24.

be sterilized by use of either cash reserve requirements or open market operations, and that such a policy would not necessarily be vitiated by inflows of capital from abroad because the supply of such capital would not be perfectly elastic.

The Banca del Lavoro Quarterly Review published a rebuttal to the Scott and Schmidt article by Peter M. Oppenheimer, whose views were supported in the same issue by F.A. Lutz. Essentially, neither critic accepts Scott and Schmidt's refusal to debate legal and institutional constraints. Peter M. Oppenheimer admitted that a model in which national monetary policy could be used to fight inflation despite fixed exchange rates and an external surplus is possible, but contended that it would not be relevant to "current problems of stabilization policy."^{1/} Prof. F.A. Lutz adds, . . . "it is usual in economic discussion (unless there is some explicit statement to the contrary) to take existing laws and statutes as a datum".^{2/}

Scott and Schmidt did explicitly state to the contrary, but they undercut their own lofty theoretical position by implying that European central banks could have offset foreign exchange inflows if they had wanted to. As evidence of the hollowness of European complaints about imported inflation, Scott and Schmidt point out that in 1962 and 1963 the central banks of France, Germany, and the

^{1/} Peter M. Oppenheimer, "Imported Inflation and Monetary Policy: A Comment, Banca Nazionale del Lavoro, Quarterly Review No. 73 (June 1965), p.196. Actually Mr. Oppenheimer attributes this view to the authorities quoted by Scott and Schmidt, but he evidently also subscribes to it.

^{2/} F.A. Lutz, "World Inflation and Domestic Monetary Stability", Banca Nazionale del Lavoro Quarterly Review, No. 73 (June 1965), page 115.

Netherlands not only did not reduce their domestic assets, but in five out of six instances, actually increased them. This indicated to Scott and Schmidt that "in the eyes of the authorities, the expansion of central bank assets caused by the inflow of foreign exchange was not sufficient to meet the needs of the economy. In other words, insufficient inflation was imported."^{1/} Scott and Schmidt thus infer that the rise in the domestic assets of these central banks must have been the result of conscious policies, and that failure to offset the rise in foreign assets must also have been deliberate. In their reply to Mr. Oppenheimer they say as much: "Mr. Oppenheimer is quite correct in saying that we take central bank policy to be deliberate."^{2/} By implication then, they also seem to regard the offsetting of foreign exchange inflows as a practical as well as a theoretical possibility.

Scott and Schmidt touched upon, but dismissed as outside their scope, three possible practical constraints upon the effectiveness of European monetary policies: (1) that the legal limits to which cash reserves could be raised would be reached too soon; (2) that the central bank would have an insufficient portfolio of open market paper, and (3) that sterilization of inflows of foreign exchange would result in a higher level of interest rates than is regarded as tolerable. The Oppenheimer and Lutz criticisms suggest

^{1/} Scott and Schmidt, p.399. End-of-year figures from the Supplement to International Financial Statistics (IMF) were used in the calculation.

^{2/} Ira O. Scott, Jr. and Wilson E. Schmidt, "Imported Inflation and Monetary Policy: A Reply," Banca Nazionale del Lavoro Quarterly Review, No. 73 (June 1965), pp. 197-200.

that imported inflation cannot be checked primarily for just these reasons. In replying to Lutz and Oppenheimer, Scott and Schmidt go on to imply, however, that European central bankers lack the will to resist the imported inflation about which they complain: "According to the imported-inflation argument, monetary restraint will not work. Mr. Oppenheimer is saying that the authorities did not want it to work, which is a very different matter."^{1/}

The present article tries to explain why, in a sense, everybody is right. In general, the instruments of monetary policy available to the European central banks are inadequate to accomplish sterilization of balance-of-payments surpluses, and the prevailing political and sociological climate makes European central bankers reluctant to use the available instruments to the maximum extent possible, and also makes them reluctant to press energetically for better instruments. Moreover, European central bankers are hampered in the exercise of monetary policy by lack of agreement among themselves about how monetary policy works. All of these circumstances can be changed, and are, in fact, already in the process of change. Being mutable, institutional arrangements and practices, laws and statutes, and even the ideas of central bankers have never been regarded as outside the province of economic analysis and policy prescription though they are often abstracted from for purposes of analysis. This article undertakes first to present an analytic account of the development of European monetary

^{1/} Ibid. p. 200.

institutions in the postwar period from the point of view of their powers to control inflationary pressures, including those imported from abroad, and secondly, to develop a case for sterilizing balance-of-payments surpluses as an aid to the international adjustment process. That is, the author believes that offsetting the monetary effects of balance-of-payments surpluses is both theoretically and practically possible, and moreover would contribute in some situations to the preservation of the fixed exchange rate system. The theoretical case depends not only upon the Scott and Schmidt analysis, which is regarded as valid, but also upon the Wicksellian theory that the level of nominal interest rates depends in large part upon the rate of change in the price level.

II. The European Instruments of Monetary Policy

A. Summary

As is well known, most European central banks developed out of commercial banks and became government institutions for the control of money and credit only gradually. It is less well recognized in the United States that the process is far from complete. As recently as the end of World War II, the powers of European central banks over their national credit systems were mainly those that derive from the banks' customer relationship to the central bank. Central banks were thus largely limited to controlling the price and quantity of their own credit, i.e., their discount rates and discount windows. In some countries, moreover, tradition dictated a liberal policy with respect to the window, so that the central bank had effective control only of its discount rate.

Most European central banks had power to control foreign exchange transactions to protect their balances of payments. Controls over current account payments were relaxed when these countries joined the European Payments Union, and largely renounced when they adhered to Article VIII of the IMF. Most European countries retain a good measure of control over capital transactions, and though they regard such control as an important element of monetary policy, it is slowly weakening.

Shortly after the war, the powers of virtually all European central banks were strengthened and several of the banks were nationalized as well. The commercial banks of those countries that did not undergo currency reforms were required to observe liquidity ratios

which immobilized a large part of the government debt. With the exceptions of the central banks of England, Germany, and Austria, the postwar reforms did not give the central banks the power to impose variable cash reserve requirements.

In the 1960's, as a result of persistent inflationary pressures, several countries introduced cash reserve requirements on a restricted basis, and virtually all countries imposed restrictions on the growth of the commercial banks' earning assets or introduced legislation for that purpose.

The restricted nature of their money markets prevents all European central banks except the Bank of England from using open market operations as an effective instrument of monetary policy. However, several European central banks have used operations in the foreign exchange markets for the purposes of affecting domestic liquidity and money market rates, and thus as a kind of substitute for open market operations.

A more detailed and analytical exposition of European monetary policy instruments follows.

B. Cash Reserve Requirements

Except for Germany and Austria, whose postwar central banking laws were modelled to some extent upon those of the United States, the early postwar banking reforms did not give the continental central banks the power in their own right to impose cash reserve requirements. In some countries, e.g., Belgium and Switzerland, low fixed cash reserve requirements were imposed by

an institution other than the central bank, and only for the purpose of ensuring the liquidity and solvency of the banks. In some countries also, e.g., the Netherlands and Switzerland, cash reserve requirements could be employed as an instrument of monetary policy only by means of gentlemen's agreements between the banks and the central bank. In Sweden, the Government, not the central bank, is empowered to impose cash reserve requirements, but chose to do so only from 1950 to 1952.

In the 1960's however, something of a movement to cash reserves requirements, sparked mainly by dissatisfaction with the operation of liquidity ratios, developed in Europe (see p.13 below.) In Belgium the Banking Commission was authorized beginning in 1962 to set required cash reserves of up to 20 per cent of sight and short-term deposits and up to 7 per cent for long-term liabilities and savings deposits. The Italian Joint Ministerial Committee on Credit agreed in the spring of 1962 to a reform of the liquidity ratio system which included a provision to the effect that 10 per cent of the banks' excess of deposits over capital must be held in cash instead of either cash or Treasury bills as formerly. In France the Finance Minister announced in November 1966 that he would soon formally propose a system of compulsory minimum (cash) reserves to be kept by the banks at the central bank to replace the system of liquidity coefficients. The gradual introduction of cash reserve requirements was begun in January 1967 with a 1-1/2 per cent required ratio against sight deposits and 1/2 per cent against time deposits. In Switzerland the draft bill to enlarge the powers of the National Bank circulated in 1966 provides

for variable minimum cash reserve requirements related to the increase in deposit liabilities of the banks.

While these measures enlarge the list of European countries with cash reserve requirements either already or prospectively on the books, the provisions for implementation in Belgium and Switzerland indicate that in these countries the central bank will be somewhat circumscribed in the use of the new instrument. In Belgium the reserve ratios, fixed by the Banking Commission on the advice of the National Bank, require Government approval. So far, a minimum cash reserve requirement under the new regulations has been set only for the period mid-1964 through mid-1965, when the minimum ratio was set at 1 per cent of all deposits liabilities. In Switzerland the draft bill enlarging the powers of the National Bank makes imposition of the proposed cash reserve requirements against increases in deposit liabilities subject to agreement by either a nine-member commission drawn from the Swiss Bank Association or a ten-member committee of the Bank Council, a majority of whose 40 members are appointed by the Federal Council. In the Netherlands the gentlemen's agreement on cash reserves was, in effect, suspended in 1963 when the Netherlands Bank imposed direct controls on the rate of bank credit expansion and required cash deposits at the Bank to penalize excessive credit expansion. Recently (March 1967) the requirement of penalty deposits has been dropped, however. In several European countries, therefore, cash reserve requirements are not readily available to the central banks as an instrument of monetary policy, and their use is a matter for

political decision. Moreover, in Germany, Austria, and Great Britain the restrictive effect of cash reserve requirements has been undercut by the expansion of central bank credit in the forms of discounts and advances or open market operations. Consideration of this development belongs, however, more properly to the discussion of these instruments themselves.

There remains, however, the constraint mentioned in the Introduction -- that legal limits to the imposition of cash reserve requirements might be reached before the inflow of funds ceased. This might become a problem in the case of France and Italy, where the legal maximum against sight-deposits is 10 per cent, or in the Netherlands where the maximum is 15 per cent, but opposition on the part of the banking community is likely to be more of a constraint than legal maxima.

Among the habits and attitudes of mind that strongly constrain the ability of European governments to conduct effective monetary policy (for it is governments in most cases rather than central banks that have the power and bear the onus) is the feeling on the part of continental commercial bankers that cash reserve requirements deprive them of earning assets and thus constitute a form of highway robbery or at the very least deprivation of property without due process. Scott and Schmidt say, "Clearly, reserve requirements are not subject to a legal maximum at the parliamentary level."^{1/} They would have been closer to the mark if that sentence

^{1/} Scott and Schmidt, "Imported Inflation . . . ," p. 395.

had read, "Imposition of variable cash reserve requirements is theoretically not impossible at the parliamentary level." While not impossible, imposition of cash reserve requirements is politically difficult. The banks, which are powerful and well organized, have labeled proposals to impose cash reserve requirements as "dirigistic" -- a term of opprobrium in those liberal (in the European sense) circles that normally support free enterprise and financial rectitude. They have also claimed that cash reserve requirements would raise interest rates, which is as politically damning some parts of Europe as in some parts of the United States.

These attitudes are, however, also in the process of change. M. Debre has noted among the factors leading to the proposed introduction of cash reserve requirements in France, the diminished opposition of the banks. (He might also have noted the diminution of parliamentary democracy in France and the intention of President de Gaulle to do everything necessary to maintain the soundness of the franc.) In lobbying for an improved arsenal of monetary policy instruments, the central banks of Europe have been the principal educators in this process of changing attitudes.

C. Liquidity Ratios

After the end of World War II liquidity ratios, which had been used in several countries before the war as a means of insuring the liquidity and solvency of the banks, were adopted by a number of European countries as an instrument of monetary policy. Under these ratios the banks were required to maintain at a specified level

(which could be varied by the central bank in some countries) the ratio of certain liquid assets (usually government securities) to their short-term or total deposit liabilities. Among the European countries that have employed liquidity ratios for monetary policy purposes are Belgium, France, Italy, Sweden, The Netherlands, Austria, and the United Kingdom. Liquidity ratios, often called, "reserve requirements," were usually thought of as serving a double purpose. In the first and most important place, they served to keep off the market and out of the central bank a large part of the government securities acquired by the banking system as a result of wartime or early postwar inflations, and in the second place, they were thought of as a means of restricting the expansion of bank credit in the same way as cash reserves.

The liquidity ratios fulfilled the first purpose admirably -- that of immobilizing the banks' large holdings of Treasury bills -- but they did not prove an effective means of restricting the growth of bank credit. Although the banks bought Treasury bills to fulfill the required liquidity ratios as their deposits rose, national Treasuries were not required to sterilize the proceeds, and they rarely did so. The liquidity ratio system in effect in Belgium from 1946 until 1962 was described by the National Bank as "cycle-reinforcing."^{1/} In the rising phase of the business cycle, the more the Treasury received as a result of the liquidity ratio, which required the banks to place over 60 per cent of their short-term deposits in the prescribed liquid assets (mainly Treasury bills), the more it spent. Since

^{1/} Banque Nationale de Belgique, Bulletin d' Information et de Documentation, XXXIII, Vol. I, No. 2 (February 1958), p. 85.

the Government's possibilities for long-term borrowing were limited, it was exposed to receiving and to spending less should a downward phase of the cycle set in, accompanied by deposit contraction. In France a liquidity ratio, called the coefficient de trésorerie, originally required the banks to hold a percentage of their deposit liabilities in certain liquid assets, including Treasury paper, medium-term credits, and other kinds of private paper exempt from the Bank of France's discount ceilings. From 1961 through 1966 the prescribed ratio for holding Treasury paper was gradually reduced, and the ratio to be held in cash, medium-term credit and other credits raised proportionally. The system is due to be replaced eventually by strictly cash reserve requirements.

Required liquidity ratios are now widely regarded as ineffective in restricting the growth of bank credit, and they have been supplemented in most countries by direct restrictions of the growth of the banks' earning assets, and in several countries by cash reserve requirements. This has been true even in the United Kingdom where liquidity ratios have been retained. According to Prof. R.S. Sayers, ". . .this class of control (liquidity ratios and the 'Special Deposits' system) has been, so far purely ritualistic; owing to the flexibility of the banks' investments ratios the effective control is the regulation of advances, and not any liquidity ratio."^{1/} The use of liquidity ratios also had an

^{1/} R.S. Sayers, "The British Monetary Scene Since Radcliffe, Monetary and Credit Policy and the Banking Community, Lectures delivered at the Nineteenth International Banking Summer School, Bergen, Norway, June 1966, The Norwegian Bankers' Association (Stockholm, Sweden: Almqvist & Wicksell), pp. 108-109.

adverse effect upon the development of markets for short-term Government securities in Europe and therefore hampered the use of open market operations as an instrument of monetary policy.

D. Open Market Operations

Open market operations have not been used effectively as an instrument of monetary policy on the Continent of Europe for reasons that may be subsumed under two main headings: (1) the market for government securities or other paper suitable for operation is not sufficiently active and continuous to permit regular central bank transactions in sufficient volume; (2) the central bank lacks sufficient marketable paper.

The second reason afflicts those countries whose government budgets have usually been in surplus, or which have financed their deficits by borrowing long-term from the nonbank public or by borrowing abroad. Belgium, the Netherlands and Switzerland have been in this position at various times in the postwar period. Due to persistent inflationary pressures the central banks of these countries were never in a position to acquire an adequate portfolio of government securities by open market purchases. The central banks of these countries have at various times made special arrangements with their respective Governments to create open market paper,^{1/} but never in amounts large enough to do more than smooth market fluctuations. The central banks of these countries are also limited in their ability to create open market paper by

^{1/} In Belgium, responsibility for conducting open market operations is given to a separate Government agency, the Fonds des Rentes.

the fact that a high proportion of their assets is invested in gold, leaving them unable to pay interest on open market paper even if they were legally empowered to create it. Scott and Schmidt remark that, "a central bank could, in principle, create open market paper, in the form of its own obligations, without limit."^{1/} This is true only if the central bank has the cooperation of the Government, because double entry bookkeeping requires that the central banks' liabilities be balanced by claims on an entity other than itself. Such cooperation is, of course, quite possible, but in the countries in question it might be restricted by (1) the legal barriers of gold cover requirements for the currency and/or (2) ceilings on the Government debt to the central bank. Removing these barriers to open market operations could be politically difficult because they are regarded as essential defenses against inflationary Government budgets.

The first situation -- that is, a money market too narrow to permit effective open market operations -- is the most common, and in fact prevails throughout Europe, excepting Great Britain. Although the reasons for this lack of active markets in short-term securities vary from country to country, the prevalence of liquidity ratios is a common explanatory factor. This adverse effect of liquidity ratios upon the development of markets for Treasury bills was due to efforts to keep down the interest on the national debt by paying low rates on the securities held by the banks in fulfillment of the liquidity ratios. The ratios were initially set so as to immobilize virtually the entire amount of government securities held by the

^{1/} Scott and Schmidt, "Imported Inflation" p. 395.

banks and the same ratios were applied to marginal accretions of deposits. Initially also, the same low interest rates were paid on new acquisitions of Treasury bills. Subsequently, however, some of the countries (France, Sweden, Belgium, Italy) employing liquidity ratios separated the banks' holdings of Government securities into two tranches, one of which continued to bear a low rate, while the other tranche was supplied by auction at more flexible interest rates. In this way, a more active bank market for short-term Government securities has been developed in several countries, for example Sweden and Belgium.

It was hoped that nonbanks could also be induced to participate in the market for short-term Government securities, but this effort has not met with much success. Except in the United Kingdom and the Netherlands, banks and quasi-governmental financial institutions are virtually the only buyers of short-term Government securities. Among the factors that militate against the development of nonbank markets for short-term Government securities in Europe is the fact that banks pay interest on demand and other short-term deposits.

What passes for open market operations on the Continent are therefore conducted almost entirely with the banking sector. Consequently, such operations affect money market rates, but do not change the over-all liquidity of the banks appreciably. That is, because the banks are never drained of cash by central bank sales of open market paper to nonbanks, and because central banks are unwilling or unable to push the yield on open market paper above the yield on

commercial loans, the banks can be induced to substitute open market paper for day-to-day money and cash, but they cannot be induced to substitute open market paper for advances and other commercial loans to any significant degree. (See section on Discount Policy, p. 23).

The so-called open market operations of the central banks of Germany and France can hardly be distinguished from discount operations, because they take place at the initiative of the commercial banks. The Bundesbank varies the rate at which it sells Government and quasi-government securities on tap and repurchases such securities at prices set to yield slightly less than if held to maturity. In its "open market" operations, the Bank of France purchases certain Government and quasi-government securities from the banks under repurchase agreement at a rate slightly higher than the Bank's discount rate. The special ceilings or "limits" assigned to each bank for these operations actually constitute an addition to the banks' discount quotas at the Bank of France. The Netherlands made some use of open market operations prior to 1965, but mainly for market smoothing purposes since 1958. The operations of the Fonds des Rentes in Belgium and the National Debt Office in Sweden have been of a similar nature. From time to time the Swiss National Bank has placed with the large banks special Confederation securities which can be used as collateral for advances or sold back to the Bank in times of seasonal tightness. The banks have thus been deterred from repatriating funds from abroad on such occasions. The other European countries have made even less use of open market operations than the ones mentioned above.

E. Foreign Exchange Policies

In the 1960's several continental European countries have used monetary policy to prevent an influx of foreign exchange to the central bank. Reciprocally Great Britain, and to some extent the United States, have pursued policies to encourage inflows of foreign exchange. Also, the U.S. has tried to reduce conversion of foreign-held balances into gold. Continental policy usually had the purpose both of preventing both embarrassing increases in official reserves of gold and foreign exchange and of containing rises in the reserve bases of the commercial banks. The latter policy has had no counterpart in England and America in a necessary link between foreign exchange flows and changes in the reserve bases of the banks.

To some extent policies to prevent balance-of-payments surpluses have encouraged imports, foreign aid, and long-term investment abroad, but the major emphasis has been upon encouraging the banks to invest surplus funds abroad short-term and discouraging inflows of foreign funds. The Swiss National Bank, which is otherwise poorly endowed with instruments of monetary policy, has relied principally upon manipulation of in-and outflows of foreign exchange to control domestic liquidity throughout the postwar period. Toward the end of 1960, Germany adopted a policy of subordinating domestic anti-inflationary monetary policy to the need to align interest rates with those of other countries for balance-of-payments reasons. The Netherlands Bank abandoned the use of cash reserve requirements to sterilize unwanted balance-of-payments surpluses in the fall of 1963,

because "the resulting sterilization of liquidity would have led to sales of foreign exchange to it (the Bank) without effectively reducing the liquidity of the banks." ^{1/} From mid-1964 through the fall of 1966 (when the payments balance shifted into deficit), the Bank of France followed a policy of keeping interest rates and money market arrangements such that they would not attract funds from abroad. The swap facility introduced by the Bank of Italy in 1959 in connection with foreign borrowing by the Italian commercial banks has been used from time to time to facilitate foreign lending by the banks, and reduce lire liquidity.

Policies designed to promote the export and to prevent the import of funds have at times been based upon special swap facilities that reduced or eliminated the cost of forward exchange cover. Operations in the foreign exchange markets are regarded by the Netherlands Bank as a substitute for open market operations. According to the 1965 Report of the Bank:

The money market was further influenced through interventions by the Netherlands Bank in the foreign exchange market. During the first four months of the year money was taken out of the market; thereafter the influence of such transactions was on balance easing. A considerable number of interventions took the form of swap transactions, dollars being brought spot and sold forward The Netherlands Bank refrained during the year under report from buying and selling Treasury paper in the open market. ^{2/}

In an effort to keep interest rates low relative to those of other countries, discount and penalty rates have been kept lower and cash reserve and liquidity ratio policy easier than would have

^{1/} De Nederlandsche Bank, Report for the year 1964, p. 104.

^{2/} De Nederlandsche Bank, Report for the year 1965, p. 89-90.

been dictated by the needs of purely domestic monetary policy. Thus, measures to prevent the import and to encourage the export of surplus funds have entailed some easing of domestic monetary policy. The rise in the domestic assets of European central banks criticized by Scott and Schmidt has been in part because of efforts to cope with imported inflation rather than in spite of it.

Moreover, it is a real question as to whether the export of funds reduced the liquidity of the continental commercial banks to any significant degree, because the funds remained accessible to the banks for use when domestic monetary conditions tightened. In fact, the central banks of some countries have reversed the direction of the swap incentive in periods of seasonal tightness to encourage the banks to repatriate funds rather than let domestic money market rates rise to high levels and precipitate even larger movements of funds across the foreign exchanges. As in the case of open market operations conducted only with banks, the main effect of policies to influence the placement of funds abroad has been to smooth domestic money market rates. That is, central bank sales of Treasury bills where a nonbank market does not exist and measures to encourage banks to place funds abroad both take some downward pressure off domestic money market rates, and induce the banks to substitute somewhat less liquid assets for ones somewhat more liquid, but the banks' total holdings of essentially liquid assets are not thereby reduced in either case. In addition, funds placed abroad as deposits have been reloaned in the Euro-dollar market and thus contributed to or substituted for domestic liquidity in European countries.

Foreign exchange policies have probably slowed the rise in the gold and foreign exchange reserves of the European surplus countries, and on this account may be regarded as a successful, but short-run exercise in international cooperation. On the other hand, policies of warding off inflows of "hot" short-term foreign funds and of encouraging the export of surplus funds of residents does not appear to have been effective in the long run in reducing the inflationary impact of balance-of-payments surpluses. If, however, the international adjustment process is regarded as requiring monetary expansion on the part of surplus countries, the foreign exchange policies of the European surplus countries may be regarded as successful international cooperation on this score also.

F. Discount Policy

Discount policy is the oldest weapon of monetary policy, and it is now also somewhat "old fashioned," being no longer regarded in European central banking circles as a very effective instrument in itself. Not only has discount policy not been effective against imported inflation or the postwar monetary overhang, but it has also been ineffective in coping with inflation of current domestic origin. In other words, European central banks have not been able to control very well use of their discount windows. This failure of discount policy is a large part of the explanation of the phenomenon noted by Scott and Schmidt: namely that the domestic assets of central banks in certain surplus countries increased despite the presence of excessive inflationary pressures. Discount policy is also the analogue of present policies to cope with imported inflation. The development of central bank discount policy in Europe will therefore be analyzed in some detail.

The credit practices of European central banks are fraught with anachronisms. Since the statutory provisions with respect to discounting have changed very little since the 19th century and these incorporated 18th century commercial banking practices and theories, the discount policies of European central banks appear to be largely the result of inherited traditions rather than the conscious development of policies to meet modern requirements.^{1/} This appearance is not, however, an altogether accurate reflection of reality. Despite the retention of ancient forms and practices, the discount policies of European central banks have evolved considerably since the 18th century, and these have accompanied a roughly parallel development of monetary theory. The present day discounting policies of European central banks can hardly be understood except in terms of these developments.

In general, their statutes require European central banks to give preferential treatment to credit extended by means of discounting (in the specific sense of purchasing claims at a price below face value) short-term bills that meet specified standards with respect

^{1/} Unless otherwise specified, this paper follows the American practice of using the term "discounting" to mean "central bank credit at the initiative of the commercial banks" regardless of the form taken by the credit.

to purpose, maturity, and reliability of drawee and guarantors. As is well known, these provisions embody the conception of sound banking practice that has been given the name of "real bills" doctrine.^{1/}

According to this doctrine, expounded by Adam Smith in the Wealth of Nations, credit creation cannot be excessive if based on real commercial transactions. Lloyd W. Mints has pointed out that a rival theory of the best means to limit the circulating medium has been "the rate of interest charged by the banks, in relation to the rate of return to be earned on funds borrowed," which Henry Thornton presented in 1797.^{2/}

Throughout the 19th century and well into the 20th, central bank discount policy was justified by one or the other or both of these theories of credit control. In the first half of the nineteenth century the real bills doctrine held sway in part because some central banks, notably those of England, France, and Sweden were inhibited in their use of discount policy by usury laws. In England the usury laws were repealed in 1833 on bills of exchange of three months or under, and they were completely abolished in 1854.^{3/} In connection with the renewal of its charter in 1857 the Bank of France was relieved of the limitation of its discount rate to a maximum of 6 per cent.^{4/} The Swedish Riksbank was set free to vary its rates from 4 to 6 per cent

^{1/} Lloyd W. Mints, A History of Banking Theory in Great Britain and the United States (Chicago: University of Chicago Press, 1945), p. 9.

^{2/} Ibid. p. 10.

^{3/} Ernest L. Bogart, Economic History of Europe 1760-1939 (New York: Longmans, Green and Co., 1942), p. 175.

^{4/} Ibid. p. 188.

(later to 7 per cent) in 1856.^{1/} The Dutch and German state banks make use of a variable discount policy much earlier in the 19th century.^{2/}

In the second half of the 19th century, under the leadership of the Bank of England, use of the discount rate dominated central bank credit policy throughout Europe. Although given a subordinate position, the real bills doctrine appears to have survived as an important guiding principle of most European central banks until after World War II. It is often difficult to say exactly when the doctrine passed away in a particular country because it never had an official existence. The provisions with respect to discounting in the statutes of central banks are invariably permissive, not mandatory. The degree to which the discounting of paper that met eligibility requirements was mandatory for a central bank was, therefore, a matter of custom or tradition. The prevailing tradition on the Continent, as exemplified in the following passage from the diary of Emile Moreau, Governor of the Bank of France, was for the central bank to discount all eligible paper:

Thursday, November 25 (1926). I call in M. Mignon. I explain to him the reasons I have for thinking that a campaign is in preparation to accuse me of restraining the credits of the Bank to the national economy. I explain to him that we are doing nothing of the kind, that we take all the bankable paper, that is to say, legally eligible, that is presented to us, but we refuse, as the law prescribes, finance paper and kited paper. ^{3/}

^{1/} Sidney Homer, A History of Interest Rates, (New Brunswick, N.Y.: Rutgers University Press, 1963), p.273.

^{2/} Ibid. p.243-4 and 263-8.

^{3/} Emile Moreau, Souvenirs d' un Gouverneur de la Banque de France (Paris: Editions M.-Th. Génin, Librairie de Médicis, 1954), pp. 167-68. Translation supplied.

The only instance that has come to hand of a European central bank imposing quantitative limits on discounting for purposes of monetary policy before World War II was when the German Reichsbank rationed its credit in 1924 after money market rates had risen to 30-40 per cent for one month and to 60 per cent and over for day-to-day money. ^{1/}

In the postwar period, the permissive aspect of central bank credit was transmuted in the major European countries into either rather elusive informal restrictions based on the dictum that discounting is a privilege not a right, or into discount quotas, depending largely upon the magnitude of customary recourse to the central bank. ^{2/} In no case, however, does a quota impose an absolute ceiling on central bank credit. Each system of quantitative controls over central bank credit provides for some kind of "safety valve," usually at higher rates than under regular quotas.

^{1/} Bogart, 627.

^{2/} Repudiation of the real bills doctrine came earlier in the United States. On the insertion into the Federal Reserve Act in 1933 of a provision enjoining the Federal Reserve Banks to ascertain whether undue use is being made of bank credit for speculative and other unsound purposes and to use such information in determining whether to grant or refuse credit, E. A. Goldenweiser wrote:

Nevertheless, the amendment is significant for two reasons: (1) it lays the ghost of a theory, which at one time had considerable currency, that a Federal Reserve Bank has no right to refuse accommodation to an applying member bank if it offers acceptable security. This section on the law makes it clear that the Reserve Bank has full discretion in the matter. (2) It also shows emphatically that Federal Reserve responsibility does not end with a control of its own portfolio but extends to close scrutiny of the general course of credit, with a view to preventing unsound banking developments. Both ideas were clearly grasped by most of the System's managers in 1933, but their formal enactment into law may make the matter clearer to loan applicants and to the public.

E. A. Goldenweiser, American Monetary Policy, (New York: McGraw-Hill Book Company, Inc., 1951), p. 85

France introduced discount quotas as an instrument of monetary policy in 1948; Germany in 1952. In France, the main institutionalized safety valve is supplementary central bank accommodation at two progressively higher penalty rates called "hell" and "super-hell." In Germany, advances for very limited periods at a higher rate serve the same purpose. The Bank of Italy gives the banks credit lines which it varies according to the needs of monetary policy. The Swedish Riksbank imposes a penalty rate on borrowing by the banking system as a whole which exceeds four days and also upon borrowing that exceeds a specified proportion of each bank's capital and reserves. In 1964 the Danish National Bank imposed a penalty rate on borrowing that exceeds one-fourth of each bank's capital, and further restricted discounting at the basic rate to 30 days in the fourth quarter and to 20 days in other quarters of the year, after which a higher rate is also applied. ^{1/} In 1965 Norway introduced penal discount rates related to each bank's observance of the limits on the expansion of their earning assets. The Bank of Finland

^{1/} B.I.S. Press Review, No. 168, Aug. 31, 1964, p. 1.

has employed several systems of discount quotas and penalty rates since the early 1950's. The present system, introduced in June 1966, applies progressive penalty rates to discounting over quota and puts special limits on advances to banks exceeding their quotas. The Austrian National Bank maintains informal quotas on discounting and requires that borrowing in excess of these quotas take the form of advances, which bear a higher rate. The Bank of Spain has formal discount ceilings. The National Bank of Belgium has discount quotas which have never been effective, but which at least establish the principle that the Bank may reject discounts that exceed a bank's quota although the paper presented is otherwise eligible. The Netherlands Bank maintains that discounting is a privilege, not a right, and uses moral suasion to discourage excessive resort to its credit. The Swiss National Bank has fostered a tradition that the large banks should not borrow from the central bank, but has arranged swaps with these banks as a measure of international monetary cooperation. Thus all of the continental central banks outside of the Soviet bloc, except the Bank of Greece, employ some kind of quantitative restriction on discounting, but the degree of flexibility in these restrictive arrangements varies considerably among countries.

The Bank of England also restricts discounting, but by means of institutional arrangements that are quite different from those

on the Continent. Borrowing directly from the Bank of England is confined to 12 discount houses whose business is in turn confined to prime short-term assets, mainly Treasury bills. Until recently borrowing directly from the Bank was restricted by the fact that the rate at which the discount houses borrowed was the Bank's discount rate, which normally exceeded the rate of return on the assets held by the discount houses. Because it was unprofitable, the discount houses did not borrow from the Bank unless forced to do so. On the other hand, since the Bank of England supplied the bulk of the banks' reserves by means of open market operations, it forced the discount houses into the window only for purposes of signaling a change in interest rate policy. Since the fall of 1966, however, the Bank of England has frequently lent to the discount houses, not at the Bank rate, but at market rates. The reason for this development is reportedly a shortage of Treasury bills in the market. ^{1/}

On the Continent, where most of the banks' reserves are supplied by foreign exchange inflows and by discounting, the postwar period saw quantitative restrictions supersede eligibility requirements as the principal means of limiting discounting. The shift did

^{1/} "Managing the money market - Lender of first resort," The Economist, March 4, 1967, p. 853.

not, however, involve as great a change in discount philosophy as might be imagined. Eligibility requirements had always been thought to imply quantitative restrictions. After it was generally realized (a process requiring roughly 150 years) that in an inflationary situation the supply of good bills could be almost infinitely elastic at virtually any level of interest rates the central bank was willing to set, more overt quantitative controls were imposed. The basic attitude that to be on the safe side a central bank should be in a position to control both the price and quantity of its credit was essentially unchanged. Nevertheless, in the early postwar period the major continental central banks shifted from primary reliance on the discount rate to greater dependence upon regulating access to the discount window.

After the 1955-57 boom, disillusionment set in with respect to the efficacy of both window controls and discount rates as the principal instruments of monetary policy. The consensus of central bank technicians of the "Six" on the subject of discount policy was set forth in a 1962 report of the Monetary Committee of the European Economic Community entitled, "The Instruments of Monetary Policy in the Countries of the European Community," from which the following passages are taken:

In general, changes in Bank rate are considered as a means of influencing the demand of industry and commerce for credit; since Bank rate in varying degree affects the interest rates which the banks charge to borrowers, it largely determines the cost of money

However, the degree to which changes in Bank rate affect the economy depends partly on the business trend. When overall demand is very strong and firms have reason to expect this trend to continue for some considerable time, the mere raising of Bank rate may have little effect on their decisions. In such an economic situation the use of this instrument alone will not appreciably abate the demand for credit

As the manipulation of Bank rate is not sufficiently effective in certain circumstances in controlling the volume of bank advances and particularly in limiting the supply of credit in periods of excess demand and abundant bank liquidity, the monetary authorities in some EEC countries have introduced rediscount ceilings for banks

But in Federal Germany as in France, the efficacy of the rediscount ceilings depends on the volume of other liquid assets the banks have at their disposal, for instance in the form of open market securities of foreign currencies. 1/

Summing up, even in countries where the direct help of the Central Bank makes an appreciable contribution to bank liquidity, the "refinancing" policy, that is to say changes in Bank rate and rediscount ceilings, often appears somewhat ineffective unless it is supplemented by other measures directly affecting the available resources of banks. . . .

But conversely, the manipulation of discount rates and ceilings has often proved a useful adjunct to other courses of action. Thus under a policy of restricting bank liquidity a reduction of the rediscount ceilings may, as pointed out above, reinforce the effectiveness of the minimum reserve policy. 2/

1/ This paragraph is a revised translation provided by Mr. T. do Vries, Director of the Division of Monetary Problems, Commission of the European Economic Community, in a letter to the author dated Jan. 23, 1967.

2/ European Economic Community, The Instruments of Monetary Policy In the Countries of the European Economic Community, (Brussels: 1962), pp. 32-35.

This portion of the E.E.C. report on the instruments of monetary policy, which was probably written in 1961, is in effect a plea for flexible cash reserve requirements and open market operations. As mentioned above (pp. 9 and 16), the availability of these instruments has improved somewhat since 1961, but throughout Europe the total package of monetary policy instruments still appears to be inadequate to control either domestic or imported inflation.

A corollary of the E.E.C.'s need for "measures directly affecting the available resources of the banks" is rejection of the notion that monetary policy can be conducted solely by manipulating interest rates--what is known as "control by the rate." Raising Bank rate, the E.E.C. report says, may have little effect on business decisions when overall demand is very strong and firms have reason to expect the trend to continue. This situation results in the cumulative expansion of credit described by Knut Wicksell and Henry Thornton before him. But both of these scholars and other advocates of discount policy as a means of controlling the supply of credit thought that an upward spiral of credit and prices could be stopped by raising interest rates to the point where it was no longer profitable to take up credit for new investment. This was to be accomplished by raising the central bank discount rate. It is worth speculating on the reasons why the Europeans no longer believe such a policy to be feasible.

In the first place, mainly as a matter of convention supported by bank cartels, commercial bank lending rates in Europe are generally set two or three percentage points above the central bank discount rate. Rates on money market paper are commonly below the discount rate in most countries, ranging above it occasionally and rising to the level of rates for commercial bank advances only in crisis situations. Therefore, if commercial banks can expand their lending, it is always profitable to borrow from the central bank or liquidate money market investments. In a fully employed economy the resulting increase in the money supply is likely to exceed current increases in output and induce a rise in the general level of prices. If the increase in the central bank's discount rate is sufficient to raise commercial bank lending rates only to the new expected rate of profit (or "marginal efficiency of investment") business firms will continue to find it profitable to expand investment by borrowing (indirectly) from the central bank. If expectations of further price increases are generated, the central bank, if it is to check the inflationary spiral, must raise its discount rate to such a level that commercial bank lending rates exceed the expected rate of profit that incorporates the expected price increases.

Where there are no quantitative restrictions on central bank credit or where the reserve base of the banks continues to be augmented by inflows of foreign exchange, it seems virtually impossible to keep the central bank discount rate from lagging behind the rate necessary to force commercial bank lending rates above the expected

rate of profit. Initially, the central bank may not be aware of the price increases that are taking place. Delays in the computation of price indexes are unavoidable, and price indexes must be supplemented by information on the trend of imports. Even after the upward trend of prices become evident, it may still be difficult for a central bank to make a sufficiently large increase in the discount rate, because in so doing, the bank risks precipitating a crisis. This is not a step to be taken without careful consideration, which in turn consumes time while inflation proceeds apace, and so forth. Quantitative limitations on central bank credit serve to slow the expansion of credit and prices, and thereby enable the central bank to use a lower discount rate than would otherwise be necessary. A balance-of-payments deficit serves the same purpose.

The use of discount ceilings or quotas poses a number of practical problems, however. Quotas set according to a formula that is equitable with respect to interbank competition may have a built-in growth factor that at times hampers monetary policy. In Germany, the coefficients of the formula relating discount quotas to the banks' capital and reserves were revised downward several times because discount quotas were growing too fast. Secondly, discount quotas become a part of the banks' liquid assets, and hence very difficult for the central bank to reduce, especially when the banks have used up their margins within the ceilings. The E.E.C. reports speaks of restricting bank liquidity by reducing discount ceilings, but this has occurred in Germany only when the banks were

far below their ceilings, and in France only for the purpose of compensating for a large Bank of France loan to the Government. Thirdly, there is the paradox of all ceilings and quotas, which is that if the banks are pressing against their ceilings, the situation is as if the global ceiling were zero, and if the banks are below their ceilings, the supply of central bank credit is perfectly elastic within the available margin. In Germany changes in the substantial margins available to the banks within their discount ceilings were reported to exert for a time a kind of pneumatic pressure on bank lending out of proportion to the actual changes in discount margins. In 1965 and 1966, however, the Bundesbank was hampered in execution of its tight money policy by the banks making substantial use of their discount margins.

Discount quotas implicitly risk making central bank credit at the initiative of the banks a right not a privilege, at least within quotas, and probably beyond them in the psychology of the banks. Ceilings therefore become a matter of bargaining between the central bank and individual banks and between the central bank and the banking community. One gets this impression that this has been true even in France, where the largest banks are nationalized. Of course, some degree of bilateral bargaining always characterizes the relationship between the regulatory authority and the regulated industry in a democracy. In Europe, the relative bargaining power of the banks vis-a-vis the central bank is, in general, strengthened by the cartelization and relative concentration of banking.

Furthermore, the use of proportional representation as an electoral system on the Continent permits banking interests to be represented in national legislatures, usually through to so-called "liberal" parties more directly than is possible under an electoral system based on majority rule. While potentially all aspects of central bank relations with the banking system may be thrust into the political arena, discount policy, including by extension discount quota policy, is particularly liable in this respect because the discount rate is the best known to the public of central bank instruments of monetary policy. These are perhaps some of the reasons President Holtrop of the Netherlands Bank believes that "The limitations (of monetary policy) set by traditions are usually difficult to overcome."^{1/}

President Holtrop has also remarked that a tradition which makes access to central bank resources a privilege not a right puts that bank in a much stronger position than the central bank where the market has practically a right of access to its facilities.^{2/} It is interesting, therefore, that even at his bank, credit at the initiative of the banks has risen sharply in recent years, a period in which the Netherlands also has been sorely beset by inflationary pressures.

^{1/} Marius W. Holtrop, Monetary Policy in an Open Economy: Its Objectives, Instruments, Limitations, and Dilemmas "Essays in International Finance," No. 43, September 1963; (Princeton, New Jersey: Princeton University), p. 26.

^{2/} Ibid. 39.

By and large, the phenomenon remarked upon by Scott and Schmidt--that domestic assets of continental central banks increased along with foreign assets instead of offsetting them--continued to occur in 1964 and 1965, but except for France and Switzerland, not in both years (see Table 1, p.39). Foreign assets either declined in one of the years or, as in the case of Belgium, the Netherlands, and Sweden in 1964 and Italy and Norway in 1965, the rise in foreign assets held by the central bank was to some degree offset by declines in domestic assets. Nevertheless, in 1964 the domestic assets of the central banks of Germany, France, Italy, Switzerland, Austria, Denmark, Norway, Finland, and Spain increased along with fairly substantial rises in the foreign assets of those banks, and the same thing occurred in 1965 in the Netherlands, Belgium, Switzerland, and France. For the most part, the increases in the domestic assets of these central banks took place at the initiative of the commercial banks, or by means of "discounting." In some cases, the rise in domestic assets was not desired by the central bank and took place because the bank was unable to control "discounting" to the degree desired. In other cases, the rise in domestic assets was related to another goal of central bank policy; namely that of keeping interest rates within a specified range for balance-of-payments or other purposes.

Table 1.
Year-to-Year Changes in Foreign and Domestic
Assets of European Central Banks - 1964 and 1965
(data in billions of units of domestic currency)

	<u>Change, end 1964 over 1963</u>		<u>Change, end 1965 over 1964</u>	
	Foreign Assets	Domestic Assets	Foreign Assets	Domestic Assets
Austria (billions of shillings)	2.27	2.36	-.18	1.17
Belgium (billions of francs)	12.7	-1.4	7.9	1.9
Denmark (billions of kroner)	1.21	.95	-.43	1.21
Finland (billions of new markkas)	.199	.068	-.301	.267
France (billions of francs)	3.96	.21	3.09	1.26
Germany (billions of deutsche mark)	1.5	1.9	-0.7	3.1
Greece (billions of drachmas)	-.47	4.55	-1.04	4.18
Italy (billions of lire)	207	65	595	-161
Netherlands (billions of guilders)	.89	-.57	.24	.23
Norway (billions of kroner)	.23	.10	.64	-.05
Spain (billions of pesetas)	20.9	4.9	-3.8	23.0
Sweden (billions of kronor)	1.04	-.41	.01	.69
Switzerland (billions of francs)	.85	.06	.54	.01

Source: International Monetary Fund, Supplement to International Financial Statistics, 1966/67.

G. Control of the Banks' Earning Assets

For the control of inflationary pressures most European central banks now rely heavily upon direct controls over the level or rate of expansion of the earning assets of the banks. Such controls are presently in effect in England, Belgium, the Netherlands, Switzerland, Austria, Norway, Denmark, and Finland, and they have been employed in the past in France and Sweden. The proposed economic stabilization law now being considered by the West German parliament would permit the Bundesbank to set credit ceilings for the banks, and the proposal drafted by the Swiss National Bank to enlarge its powers would permit the Bank to impose upon the banks the credit ceilings which have in the past been the subject of "gentlemen's agreements."

Faux^{xe} de mieux is probably the main reason for adopting direct controls over the banks' earning assets. As indicated above, the instruments of discount rate and window policy, cash and liquidity ratios, open market and foreign exchange operations are either unavailable or haven't worked very well to control the expansion of domestic liquidity. Nevertheless, credit ceilings appear to have certain advantages that the less direct instruments of monetary policy either do not have, or have to a lesser degree. In some countries they have been used as a measure of selective credit control by according some kinds of credits a preferential expansion rate or complete exemption from the ceilings. The advantages and some of

the problems of overall credit ceilings were discussed by "Goran Ehrnrooth, Chairman of the Nordiska Föreningsbank, in connection with their introduction by the Bank of Finland in the spring of 1965:

Many other central banks in Western Europe have also decided to restrict the amount of credit granted by the banks by setting up a credit ceiling. In many respects, this monetary policy is undoubtedly more advantageous than the method of a rediscounting ceiling applied in this country. In adopting this new policy, the Bank of Finland may be said to be moving over from generally formulated stipulations to the open proclamation of objectives and intentions. The Central Bank has stepped forward and assumed the chief responsibility for the restrictive measures. This may be regarded as a step in the right direction.

The banks' clients have shown an increasing understanding in regard to the credit-granting restrictions as it has been possible to refer to clearer instructions than before. In many cases the mere knowledge of the existence of the restrictions has made clients refrain from applying for credit. Moreover, experience thus far has shown that the new system is a very effective monetary policy weapon. Technically speaking too, the credit restrictions are more easily followed than the rediscounting ceiling.

It must be stressed, however, that this system can be accepted only on condition that restrictions are realistic and sufficiently flexible to meet the requirements of the situation. This has been the case so far although it has been a moot point whether the percentage rates fixed are sufficiently high. In a country like Finland, where the credit market is tight, demand is always greater than supply. 1/

Mr. Ehrnrooth emphasizes the political usefulness of credit ceilings in fostering public understanding of the central bank's

1/ Goran Ehrnrooth, "The Foreign exchange reserve and the economic policy," Unitas, XXXVIII (No. 1, 1966), p. 4.

credit policy, thereby taking some of the burden of enforcing that policy off the banks. In addition to political appeal, simplicity, directness, and certainty appear to be the main attractions of credit ceilings.

Although results vary from country to country, the application of credit ceilings has not produced these virtues uncorrupted. The existence of overdraft commitments on the part of the banks makes it difficult to enforce a really restrictive ceiling on credit outstanding. Ceilings have been exceeded from time to time in most countries. Since the ceilings must be set by the central bank for some period in the future, the task of the central bank in setting limits that are "realistic and nicely adjusted to the situation" is not exactly simple. Although Mr. Ehrnrooth regards a credit ceiling as easier to observe from a technical point of view than a rediscounting ceiling, his discussion indicates that he probably has in mind a comfortably liberal ceiling. It appears that if a ceiling is really restrictive, it is likely to be overshot. The Netherlands Bank has penalized violations of credit ceilings by requiring interest-free deposits, which system gave the ceilings some flexibility while inducing the banks to minimize violations.

Neither are credit ceilings an unmixed political blessing. In Germany and Switzerland the proposals to give the central banks the power to impose such ceilings have been violently criticized by the banks. In July 1966 the Swiss Bankers Association accepted with various degrees of reservation all of the proposed revisions in

the National Bank's statutes except that giving the Bank the power to impose credit ceilings: "On the other hand, the Association remains opposed to any legislative power to fix maximum growth rates for internal credit, regarding this as an unacceptably severe impairment of business freedom, irreconcilable with the principles of a market economy and likely to lead to distortion of the competitive element in banking."^{1/} In a speech in June 1966, President Blessing of the Bundesbank defended the proposed economic stabilization law, noting that, "Substantial objections had been raised by private interests, in particular by the banks, to the proposed ceilings. They were criticised as measures of regimentation." Among the points made in rebuttal by President Blessing was that: "Currency policy has at all times, even in the heyday of liberalism, had an element of dirigisme in it."^{2/} One of the critics of the proposed introduction of credit ceilings in Germany, Herr Frohne of the Vereinsbank in Hamburg, claimed on the other hand that, "A system of credit quotas would produce an uncontrollable network of credit relationships outside the banking sector."^{3/}

It is also thought in some quarters that direct controls over the earning assets of the banks help keep interest rates down. According to the Swiss Finance Minister, M. Bonvin, "The advantage

^{1/} Bank of England, Foreign News Summary, August 1, 1966, p. 4 quoting Neue Zürcher Zeitung, July 26, 1966.

^{2/} Bank of England, Foreign News Summary, July 7, 1966, quoting Blick Durch die Wirtschaft, July 25, 1966.

^{3/} Bank of England, Foreign News Summary, March 16, 1966, quoting Frankfurter Allgemeine Zeitung, March 10, 1966.

of a credit ceiling is that it enables credit to be restricted without affecting liquidity and thus touching off an increase in interest rates.^{1/} Erik Hoffmeyer, Chairman of the Board of Governors of the National Bank of Denmark, has also indicated that the desire to avoid raising interest rates is a motive for introducing credit ceilings, but he doubts its validity:

It is well worth asking again whether it is possible to achieve an effect with this method (credit ceilings) without a substantial flexibility of interest rates. What is after all the difference between an acceptable rate of credit expansion governed by cash reserve requirements and one governed by voluntary cooperation. Is the difference more than optical?" ^{2/}

On the subject of the usefulness of credit ceilings as an instrument of selective credit control, opinion is similarly divided. On the one hand, the uneven and often undesirable impact of indirect methods of credit control on different sectors of the economy is given as the main reason for adopting differentiated credit ceilings.^{3/} On the other hand, doubts are raised both as to the wisdom of the authorities' decisions on credit allocation and the long-run possibility of effectively influencing the allocation of resources by selective credit controls due to the fungibility of financial resources.^{4/}

^{1/} B.I.S. Press Review, No. 174, Sept. 8, 1964, p. 2.

^{2/} Erik Hoffmeyer, "Monetary Policy with Special Reference to Co-operation between the Authorities and the Banks," Monetary and Credit Policy and the Banking Community, (Stockholm, Almqvist & Wicksell), p. 77.

^{3/} Knut Getz Wold, "Selective Measures of Monetary and Credit Policy," Monetary and Credit Policy and the Banking Community (Stockholm: Almqvist and Wicksell, 1966), p. 53.

^{4/} Ibid. p. 67.

The commonly accepted disadvantage of credit ceilings is that they adversely affect interbank competition by penalizing aggressive and efficient management and rewarding the lazy and inept. In the above cited speech defending credit ceilings President Blessing of the Bundesbank said that they "obviously could be used only for a short time as otherwise the competitive structure of the credit system would be disrupted." When Governor Brunet of the Bank of France wrote to the Professional Association of Banks in June 1965 informing them that the credit ceiling imposed in February 1963 would be lifted, he said, "This decision, justified by present circumstances, tends to re-establish the normal competitive conditions between the banks." ^{1/} In Norway, the system of ceilings is reported to have encouraged an increase in new financial institutions, whose heterogeneous character and lack of representative organizations made it difficult to include in the voluntary agreements on credit ceilings. ^{2/}

Thus credit ceilings, upon which European central banks now place the greatest reliance for regulating the rate of bank credit and monetary expansion, are for emergency, temporary use. They tend, however, to be applied after prices have been rising for some time and after other measures have failed to contain inflationary pressures. Their widespread use in Europe indicates dissatisfaction with the classical instruments of monetary policy -- to the extent that they have been tried.

^{1/} France, Conseil National du Cr dit, Annexes au Vingti me Rapport Annuel, p. 20. (Translation supplied.)

^{2/} World, p. 65.

III. Prospects for the End of the Wicksellian World

Thus the central banks of Europe are still ill-equipped to use either cash reserve requirements or open market operations to sterilize balance-of-payments surpluses, although as a whole the availability of both of these instruments has improved somewhat since 1961, when Prof. F. A. Lutz delivered the Wicksell lectures in which he set forth the proposition that maintenance of fixed exchange rates and avoidance of imported inflation are incompatible. Neither liquidity ratios nor discount policy can be used for offsetting purposes, and foreign exchange policy is only a temporary palliative.

In general the only really effective and politically acceptable method now used by the European monetary authorities to combat imported inflationary pressures is to wait for inflation to produce a balance-of-payments deficit, and then allow the deficit to restrict the liquidity of the banks. This is the sense in which Europe is still a Wicksellian world. The following passage from a speech by Herr Blessing in November 1966 sums up the state of the central bankers' art:

In earlier years inflationary pressures were mainly caused by substantial balance-of-payments surpluses. But, having become accustomed to inflation, Germany itself then contributed to the turning of the inflationary spiral. The German Federal Bank was unable to prevent this development, because the commercial banks' liquidity reserves made a substantial expansion of credit possible. The warnings sounded by the Bank passed unheeded, until some two years ago the German economy moved into a dangerous state of imbalance. Prices rose more than at any time since the Korean war, and the balance of payments moved increasingly into deficit. If a severe financial crisis was to be avoided, the central bank had no choice but to apply the brakes -- an action that had become possible as a consequence of the balance-of-payments deficit. In this connection, it should be remembered that the contraction in liquidity resulting from the balance of payments had at least as much effect as the restrictive measures taken by the monetary authorities. ^{1/}

^{1/} B.I.S. Press Review, No. 228, November 25, 1966, p. 1.

The picture drawn by President Blessing is of the classical adjustment process. The extent to which European central banks are committed to this process either as an ideal of economic efficiency or as a form of international cooperation is not clear. Although the remarks of continental central bankers seem to suggest that they would prevent the import of inflation if they could, the inhibiting factors may include the conviction that offsetting policies would hinder the international adjustment process. Whether offsetting payments surpluses is desirable has been a hypothetical question for continental central banks in the 1960's because of their conviction that such a policy is practically impossible: Several countries lack the necessary monetary policy instruments, and in any case it is generally believed that interest rate effects make offsetting surpluses inherently self-defeating.

Hypothetical questions, which public officials do well to avoid, at least in public discussion, are, however, the stock-in-trade of the academic community. A convenient array of the views of outstanding economists on the international adjustment process is available in the collection of papers prepared for two joint conferences of official experts of the Group of Ten and academic economists in the early part of 1966. ^{1/} With one notable exception, the economists who touch upon the subject of offsetting assume that such a policy is feasible in both directions, and all judge it to be appropriate in some circumstances.

^{1/} William Fellner, Fritz Machlup, Robert Triffin and Others, Maintaining and Restoring Balance in International Payments (Princeton, New Jersey: Princeton University Press, 1966).

In the lead-off paper, William Fellner disparages the idea that "letting precisely the relative money-contracting effect of the deficits and the relative money-expanding effects of the surpluses come through is the most desirable way of promoting the adjustment process." ^{1/} Harry G. Johnson assumes not only that offsetting is feasible but that it is standard operating procedure: "These definitions assume that the monetary authority normally offsets any effects of a payments surplus or deficit on the money supply by selling or purchasing domestic assets." ^{2/} In his paper on the capital account, Fritz Machlup assumes the availability of offsetting techniques, but notes that their use interferes with some parts of the adjustment process: "The adjustment function of this process of external financing can, however, be nullified by 'internal financing' or offsetting transactions of the monetary authorities." ^{3/} Such offsetting policies are not ruled out, however, because the adjustment process in question may itself be a counterflow that postpones "real adjustment (adjustment of the trade balance to match the capital balance)." ^{4/} James Tobin proposes that the adjustment obligations of countries be defined in terms of targets for employment, growth, and the rate of price increase. ^{5/} In his

^{1/} William Fellner, "Rules of the Game, Vintage 1966," Maintaining and Restoring Balance . . . , p. 17.

^{2/} Harry G. Johnson, "The Objectives of Economic Policy and the Mix of Fiscal and Monetary Policy under Fixed Exchange Rates," Maintaining and Restoring Balance . . . , p. 145.

^{3/} Fritz Machlup, "The Capital Account in the balance of Payments," Maintaining and Restoring Balance . . . , pp. 169-170.

^{4/} Ibid., p. 169.

^{5/} James Tobin, "Adjustment Responsibilities of Surplus and Deficit Countries," Maintaining and Restoring Balance . . . , p. 205.

schematic presentation of adjustment obligations and corresponding financial rights and responsibilities, countries with high rates of increase in money costs or prices and with low rates of unemployment may take restrictive monetary and fiscal measures and have no special obligation to lend their surpluses.

Unlike his colleagues, however, Tobin raises the question of the adequacy of monetary policy instruments to accomplish these purposes: "But it must be assumed that each member of the group commands monetary and fiscal instruments adequate to manage total demand and fulfill its adjustment obligations. If, for political, constitutional, or traditional reasons, this assumption is not met by various members of the group, the system cannot work!" ^{1/}

The introduction to the present paper set forth statements by European central bankers to the effect that they are unable to sterilize balance-of-payments surpluses. The second part of the paper contends that the instruments of monetary policy available to European central banks are indeed inadequate for this purpose, but observes that they have become somewhat less so in the last few years. Although the international adjustment process may not now work, as Prof. Tobin suggests, because the monetary (and fiscal) instruments of several of the participating countries cannot manage total demand this does not mean that the adjustment process cannot be made to work by improving those instruments. European monetary institutions have changed considerably in the postwar period, and in several countries further changes

^{1/} Ibid. p. 209.

are under active consideration. The third part of this paper discusses some recent developments in European thought about how monetary policy works, and the prospect that these ideas may lead to further improvements in monetary policy instruments and eventually to disappearance of the Wicksellian World. The analysis focuses upon connections between the rate of inflation, interest rates, and the capital account in the balance-of-payments.

The rate of inflation is now frequently mentioned by European central bankers as a principal cause of high interest rates. In commenting upon the recent exhortation by certain Finance Ministers for lower interest rates, Sir Leslie O'Brien, Governor of the Bank of England, said:

The level of interest rates reflects the facts of life -- the overall levels of demand in different countries; the rates of inflation; the pace of expansion of government expenditures; the balance in applying restraint between fiscal and monetary policies; the nature of the system of taxation; the inter-relations between different countries' balances of payments; world-wide trends in the supply of capital and demand for it; the list, of course, is endless. 1/

Although the list may be endless, the items on it vary in importance, and it is interesting to note that the first three items of Sir Leslie's list relate to aggregate demand. Another example is contained in a report of the Economic and Finance Committee of the European Parliament

1/ Bank of England, press release, dated January 30, 1967.

on monetary policy in the European Economic Community dated November 28, 1966: "Excessive rates of interest are due principally to inflationary tendencies in many countries of the Community." ^{1/}

It has, of course, long been known that prices and interest rates tend to rise concomitantly. Keynes called the phenomenon "Gibson's Paradox," after A.H. Gibson, who had written a series of articles on the subject in Bankers' Magazine. ^{2/} The same relationship had, however, been noted by earlier writers, including Tooke and Nasse in the middle of the 19th century. ^{3/} The generally accepted explanation for the fact that prices and interest rates move in tandem, provided originally by Thornton, and elaborated upon by Mill, Wicksell, and Fisher, runs in terms of credit expansion causing the money supply to outstrip production, causing prices to rise, resulting in higher profits, which in turn induce further credit expansion, which, however, is extended at higher rates, reflecting the increased demand and rising prices.

^{1/} Parlement Européen, Documents de Séance 1966-67 (no. 138, Nov. 28, 1966), "Rapport fait au nom de la commission économique et financière sur l'activité future de la Communauté dans le domaine de la politique monétaire et la création d'une union monétaire européenne." Rapporteur: M. Hans Dichgans; translation supplied.

^{2/} John Maynard Keynes, A Treatise on Money (London: Macmillan and Co., 1930), Vol. II, p. 198.

^{3/} Nasse, "Ueber den Einfluss des Kredits auf der Tauschenwert der edlen Metalle," Zeitschrift für die ges. Staatswissensch., vol. xxi., 1965, p. 146, quoted in Knut Wicksell, Interest and Prices, trans. R.F. Kahn (London: Macmillan and Co., 1936), p. 88, and M. Blaug, Economic Theory in Retrospect (Homewood, Illinois; Richard D. Irwin, Inc., 1962), p. 560.

It is now recognized in European banking circles that inflows of capital from abroad are attracted by the high interest rates which are due to the inflationary process, as the following passage from the previously cited report on monetary policy in the E.E.C. illustrates:

... But so long as there is no immediate danger of devaluation, an excessive rate of interest, due to inflation, pulls in foreign capital which reinforces tendencies to inflation. ^{1/}

High profits rates due to inflation as well as high interest induce inflows of foreign capital, so long, as the passage quoted above points out, an exchange risk is not incurred. But capital inflows augment gold and foreign exchange reserves, and thus for the time being conceal the developing exchange risk. A similar analysis, starting a little farther back on the chain of causation, is provided by Prof. Eugen Böhler of Switzerland:

The financing of rearmament in America is closely linked with inflation in Europe. The American dollars that find their way into Europe as a result of the balance-of-payments deficit in the United States are not used directly to purchase goods in America and are left as dollar deposits in Europe and used as a basis for credit creation. In this way investment for reconstruction and integration has been financed on an inflationary basis, which has had the effect of increasing business profits and artificially accelerating growth. This in turn has attracted American capital desirous of participating in the high profits, so aggravating the American balance of payments deficit and prolonging it. The disproportionate increase in investment in Europe and the varying rates of inflation from country to country have also stimulated world trade, with the result that inflation has been exported. ^{1/}

^{1/} Bank for International Settlements, Press Review, Oct. 14, 1966, p. 3.

Professor F.A. Lutz has provided an analysis showing that investments in any particular country yield different real rates of return to owners residing in countries with different annual rates of price inflation, and that these different yields may induce capital movements that are not warranted by the real differential productivities of investment in different countries.^{1/} The two main conclusions that Professor Lutz draws from this analysis are (1) that different rates of inflation may deprive international capital movements of their economic justification, and (2) that the control of international capital movements by means of establishing interest differentials may be impractical. As an example of the latter difficulty, he cites the disastrous internal consequence of raising interest rates in a country, such as the United States which is not undergoing inflation but experiencing a capital outflow, to the level of interest rates in a European country whose interest rate level "contains a component reflecting the rising price trend."^{2/}

Taking into account Professor Lutz's earlier rejection of offsetting policies as impractical (see p.4 above), it appears, according to his analyses, that under a regime of fixed exchange rates central banks of surplus countries are doomed to have inflation if they do as well as if they don't try to offset. Under the situation of full employment that characterizes most European countries, attempts to offset balance-of-payments surpluses will allegedly raise interest

^{1/} Fredrich A. Lutz, "Money Rates of Interest, Real Rates of Interest, and Capital Movements," Maintaining and Restoring Balance . . ., pp.161-166.

^{2/} Ibid. p.163.

rates, which will induce self-defeating capital inflows. Failure to offset will, however, also produce inflation, which will also raise interest rates and induce capital inflows, which will result in further inflation.

The policy prescriptions offered by Professor Lutz are "a stable world price level, or at least, identical rates of inflation; or, if neither of the two goals can be achieved . . . floating rates."^{1/} The E.E.C. report on monetary policy also prescribed an anti-inflationary policy:

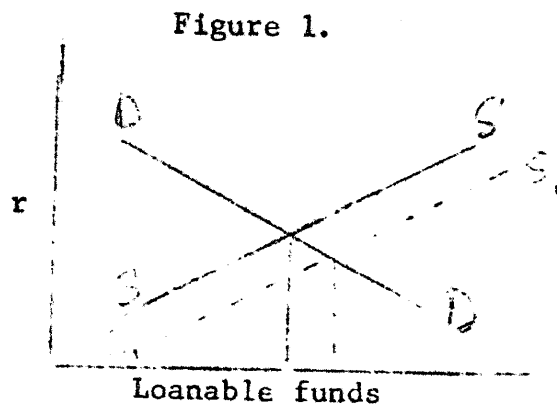
Such undesirable inflows of capital can be fought only by eliminating the inflationary elements in our interest rates by struggling against inflation.^{2/}

Imported inflation is to be checked by first eliminating the primary domestic inflation that induced the undesirable capital inflows. This position implies a reversal of the policy prescription that most European central bankers now offer for the prevention of imported inflation, at least that which derives from imports of capital. Since under fixed exchange rates an inflationary climate constitutes a kind of "attractive nuisance" that sucks in capital from more stable countries, countries with the more rapidly rising price levels and higher interest rates should curb their inflations, instead of exhorting countries with lower interest rates and less rapidly rising prices to take restrictive actions.

^{1/} Ibid. p. 166.

^{2/} Parlement Européen, Documents de Séance, translation supplied.

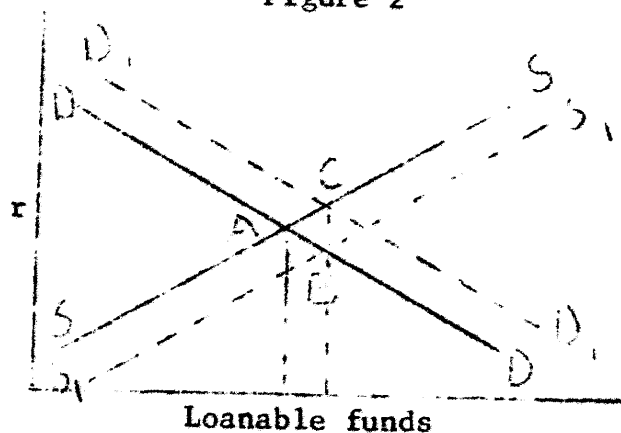
The apparently contradictory result that offsetting and failure to offset both have the same consequence comes from failing to distinguish between moving along a stable demand function and a shift in that function. It is the contention of this paper that offsetting need not raise interest rates if done before the inflow of funds is allowed to work itself out in an expansion (shift to the right) of demand. The situation is illustrated in figure 1, which depicts an increase in the supply of loanable funds, which is plotted (together with the demand for such funds,) against some indicator of the level of nominal short-term interest rates.



A balance-of-payments surplus which adds to the cash base of the banks will initially shift the supply function downwards from SS to S_1S_1 and lower interest rates, but sterilization of that surplus will raise interest rates only to the level prevailing before the inflow of funds, provided the demand function does not also shift.

On the other hand, in a fully employed economy, and given reasonably optimistic expectations, an increased supply of loanable funds will be utilized, causing prices to rise and shifting the demand function for money to the right, as in figure 2 below:

Figure 2



The observation that higher interest rates follow offsetting measures is depicted when the level of interest rates follows the path A, B, C. If the central bank could prevent a further inflow of funds attracted by the high interest rates at C, sterilization of the original inflow would pull the demand function back to its original position, and bring interest rates back to A.

This analysis is based upon the Wicksellian notion that the demand for money depends largely upon the supply. It is, of course, highly simplified, leaving out considerations of shifts in production and savings, hoarding and dishoarding, fiscal policy, and a host of other things. Support for believing that it is not necessarily an over-simplification is supplied by Professor Machlup:

"Emphasis on money supply and money creation is often rejected as being based on an old-fashioned "quantity theory" instead of a modern income-and-expenditure approach. Yet the relation between newly created money and additional demand is so simple that there should be no place for dogmatism."^{1/}

^{1/} Fritz Machlup, "In Search of Guides for Policy," Maintaining and Restoring Balance , p.38.

According to this analysis, balance-of-payments surpluses can be sterilized without raising interest rates if primary deposits arising from foreign exchange inflows are quickly blocked by the central bank. This is the policy which Professor Lutz said was practically out of the question because, "an attempt to prevent even this primary expansion would imply forcing the commercial banks to call in loans or sell securities at the same rate at which foreign exchange was being sold to them."^{1/} If sterilization of primary deposits is out of the question, it need not be for the reason of calling in loans. As Scott and Schmidt point out, if the central bank requires 100 per cent cash reserve requirements against marginal accretions to deposits, no expansion of loans based on those deposits can take place. The Norwegian credit control law of 1965 in fact authorized 100 per cent reserve requirements against increases in foreign deposits.^{2/}

Due to the narrowness of money markets, open market operations would be less suitable for sterilizing inflationary inflows of foreign funds than variable cash reserve requirements. The central bank is aware of the volume of foreign exchange being turned over to it, and could adjust marginal reserve requirements accordingly. The proposed revision of the statutes of the Swiss National Bank provides for variable cash reserve requirements against increases in deposits. Most of the other central banks of Europe have also accepted variable

^{1/} F.A. Lutz, International Payments and Monetary Policy in the World Today (Wicksell Lectures, 1961, Stockholm: Almqvist and Wicksell, 1961), p. 37.

^{2/} Erling Petersen, "Monetary Instruments Affecting the Commercial Banks," Monetary and Credit Policy and the Banking Community . . . p.45.

cash reserve requirements as desirable in principle, though for the most part the permitted range of variation is not sufficient to offset large surpluses.

The policy mix often recommended for surplus countries with problems of excess demand is tight fiscal and easy monetary policy, on the theory that with such a combination of policies interest rates will be lower than with easy fiscal and tight monetary policy. In terms of figures 1 and 2, under the former combination of policies, easy money would lower the supply curve, SS, but since the Government would take away the excess demand that the banks had created, the demand function would not shift to the right, and the interest rate level would remain at B. In effect, the velocity of money would decrease while the supply increased. The practical difficulties of applying fiscal policy flexibly to offset the monetary effects of balance-of-payments surpluses would appear, however, to exceed even those of sterilizing those surpluses in the first place.

Several of the economists participating in the Group of Ten Symposium emphasized the importance of prompt action to prevent ex ante the development of major imbalances of aggregate demand. At the present time neither the fiscal nor the monetary policy instruments of European countries are capable of being used to control excess demand very promptly, whatever its source. Since excess demand is the well-nigh universal problem, the most promising possibilities, by no means exclusive, would appear to be the institution of more flexible systems of taxation and more flexible cash reserve requirements for financial institutions.

Without these better policy instruments Professor Tobin's conditions for maintaining fixed exchange rates will not work. Probably any conditions for minimizing imbalances in aggregate demand by essentially autonomous domestic means would also require better or additional policy instruments. Whether and what kind of policy instruments can be developed to manage aggregate demand are at bottom, however, political questions involving problems of income distribution.

Better monetary and fiscal policy instruments are needed to manage aggregate demand in virtually every country, not just in Europe, and in all countries they are politically difficult to secure. Scott and Schmidt imply that European central bankers have not wanted monetary restraint to work.^{1/} The reverse is more likely to be true. Because it is their job, central bankers want monetary restraint to work, but almost no one else does. The job of the central banker has very little political support. Business men and other voters like easy credit and low interest rates. Bankers like to see their earning assets expand. Consumers like low interest rates too, and while they don't care for inflation, relatively few are dependent upon fixed incomes. Governments find it much easier to increase expenditures than to find the revenues to pay for them, and governments also very often have a decided preference for low interest rates.

Most European central banks are now government regulatory agencies and their governing boards and staff are civil servants.

^{1/} Scott and Schmidt, " ... A Reply," p. 200.

Nevertheless, central banks have difficulty in mustering political support for monetary restraint because they are identified in the public mind with support of banking interests, and most particularly with support of high interest rates. One major stumbling block to obtaining more effective monetary policy instruments in Europe and to using the available ones effectively to contain inflation is the almost universal conviction that measures to restrict credit expansion entail high interest rates. Public understanding of the facts that the level of (nominal) interest rates depends very much on the rate of inflation or deflation, and that restriction of the availability of credit is not necessarily synonymous with high interest rates should result in greater public support of anti-inflationary policies. One way, then for central banks to secure better policy instruments would be to educate the public, not to mention economists, to think in terms of real interest rates.

This paper argues that the international adjustment process under a regime of fixed exchange rates could be improved if European countries in particular acquired better policy instruments for managing aggregate demand. For the most part, however, monetary and fiscal policy instruments can be changed only by means of slow and uncertain political processes. In the meantime, the gyrations of the Wicksellian world of imported and exported inflation may lead, as predicted, to flexible exchange rates.

However, even if flexible exchange rates ensured the attainment of international equilibrium (a debatable question which is outside of

the scope of this paper), better monetary and fiscal policy instruments would still be needed in Europe for the purpose of achieving a greater degree of domestic economic stability. Under present circumstances the obstacles to achieving a greater degree of economic stability in Europe and elsewhere are more political than technical. These circumstances may change, however, if it becomes clear that the alternative to maintaining domestic economic stability by all of the countries concerned is flexible exchange rates, but that flexible exchange rates are no substitute for domestic economic stability.