FUNDAMENTAL REAPPRAISAL OF THE DISCOUNT MECHANISM

THE DISCOUNT MECHANISM IN LEADING INDUSTRIAL COUNTRIES SINCE WORLD WAR II

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Prepared for the Steering Committee for the Fundamental Reappraisal of the Discount Mechanism Appointed by the Board of Governors of the Federal Reserve System

The following paper is one of a series prepared by the research staffs of the Board of Governors of the Federal Reserve System and of the Federal Reserve Banks and by academic economists in connection with the Fundamental Reappraisal of the Discount Mechanism.

The analyses and conclusions set forth are those of the author and do not necessarily indicate concurrence by other members of the research staffs, by the Board of Governors, or by the Federal Reserve Banks.

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Foreword*

The original objective of this study was to acquaint the Steering Committee with discount policies and techniques used by the central banks of the most important advanced industrial countries, in particular since World War II. Given this objective, there was a need for pulling together from the individual country studies which constitute Part II, and for organizing along comprehensive lines, endeavors to modify and refine the traditional discount mechanism. Since interest was focused on the role of discounting as a tool of monetary policy in relation to other tools, and on techniques rather than results, no attempt was made to appraise the efficiency of discount policy in each country. Moreover, such an endeavor would have required review and evaluation of a wide range of factors which far exceed the resources and time available for this study.

Given the considerable differences in the framework in which the discount mechanism operates here and in the countries covered, the first part of the study attempts to bring out at least the main differences in institutional and policy environments that must be kept in mind when analyzing the potential of the discount mechanism in the U.S. against the background of foreign experience. In view of the general objective of this study, the review is not limited to policies and techniques in use

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now, since in some cases discarded or radically modified arrangements represent interesting variants, and the reasons for dropping or changing the original techniques cast light on the problems encountered.

PART I. THE DISCOUNT MECHANISM AS A TOOL OF MONETARY POLICY

INTRODUCTION

Generalizations concerning the role played since World War II by the discount mechanism in the monetary policy of eleven leading industrial countries surveyed in this study[1] are difficult to make. In each case, discount policy has been shaped by the specific characteristics of the country, its financial structure, the evolution of its economic philosophy, and its actual postwar experience. Generalizations must be distilled largely by rationalizing the reasons for observed differences in policies and their evolution over time. The specific role played by the discount mechanism has depended in each given case on the policy objectives of the central banks, and in particular on the way in which these banks have supported government economic policies other than those designed to defend the internal and external value of the domestic currency and to insulate it, to the extent possible, from disruptive influences from abroad. Concern with the widening and proper functioning of capital markets, including assisting in the financing of the public sector, has grown in importance since the end of World War II, along with an older concern with stimulation of exports.

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1. Austria, Belgium, Canada, France, the Federal Republic of Germany (West Germany), Italy, Japan, Netherlands, Sweden, Switzerland, and United Kingdom. In this Report, completed in 1967 "foreign central banks" or "other banks" always refers to these eleven countries. Parenthetical references in Part I are not intended to be exhaustive, but merely to refer the reader to one or two specific examples that can be found in the country chapters in Part II.

The way in which discounting is used in each country at a given time generally depends less on theoretical considerations and preferences, than on policy objectives, institutional realities, possibilities, and constraints. In particular, it depends on the variability of foreign exchange surpluses or deficits, availability of alternative control mechanisms (such as cash reserve requirements, liquidity ratios, and open market operations); the ability of banks to make short-run adjustments through their investment portfolios, and the smoothness with which excess reserves are distributed through the interbank market. The choice of instruments to implement policy goals normally depends on the trade-offs in terms of positive and negative side effects, and most importantly, the degree of precision that may be expected from relying on any one of them, singly or in combination, to achieve the desired effect.[1] Moreover, in each of the countries surveyed, the role currently played by the discount mechanism reflects not only the policies of the central bank with regard to the means it chooses (or has at its disposal) to influence the cash position of banks, but also the willingness of banks to make full use of the discount facilities available.

Against the background of foreign experience our discount mechanism, no less than our entire monetary and banking system, appears as a unique case rather than merely a variant among many quite similar systems.

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1. The authority for monetary controls is in some countries quite diffused. Different agencies may have the authority to set the discount rate, liquid assets ratios or credit and reserve ceilings and to determine eligibility requirements (or give final approval to such actions). Their actions are not always perfectly coordinated, even when elaborate coordinating agencies or arrangements exist.

PROVISION OF CENTRAL BANK CREDIT AT THE INITIATIVE OF THE BANKS

Discounting is the oldest instrument of central bank policy. For a long period it was practically the only such instrument; together with advances, it is still the most important avenue for changing the reserve base at the initiative of commercial banks. The flexibility inherent in discounting has preserved its usefulness even where the range of tools available to the central bank has been expanded considerably. Our review of foreign experience encompasses both discounts and advances, even though in none of the countries surveyed are the two methods of obtaining reserves strictly equivalent in terms of cost, as in the United States.

Basically, central bank policy becomes effective by affecting the liquidity of commercial banks, through it the liquidity of the entire economy and, in the last analysis, the level of real activity and the country's international payments position. Changes in bank liquidity are normally reflected in market rates, which are usually closely related to the volume of borrowing from the central bank, and in the volume of money and credit.

Central bank policy may aim primarily to influence either market rates or the volume of money and credit. The choice between basic approaches to monetary controls depends in each country on specific conditions, including institutional arrangements and linkage processes, as well as on prevailing monetary views. Foreign experience provides illustrations for both basic approaches and a number of variants.

An example of the first basic approach is found in countries where the authorities aim at a level of short-term rates consistent with domestic and external objectives. The discount rate is then used as an anchor for the entire structure of interest rates. It is left to the

market to determine how much it wants to borrow at the discount rate.[1] The alternative approach is to place primary reliance on the regulation of the volume of reserves rather than on their price. Access to reserves may be governed by quantitative controls in addition to restrictive eligibility requirements. Such controls are tantamount to nonprice rationing and they may be designed to achieve multiple objectives. Countries relying on quantitative controls to influence the cash position of banks may nevertheless assign to the discount rate an important role in regulating international capital movements or otherwise use changes in the rate to support quantitative and related control techniques; but, basically, administrative discipline rather than price becomes the main tool of monetary management.

Whenever alternative means for injecting and absorbing reserves are available to the central bank, it can combine the use of these tools in various ways in order to achieve the desired effects. The central bank can pursue its rate or reserve base aims by absorbing or supplying bank cash and/or by varying mandatory (or negotiated) reserve requirements. More specifically, it can either (1) control (and vary) conditions under which banks may obtain additional reserves at the discount window (through rate, qualitative or quantitative controls, or through some combination of these three means) but refrain from modifying the resulting volume of borrowing; or (2) adjust the quantity of reserves obtained at the initiative of the banks

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1. A variant is to consider the discount rate as the upper limit of the proper range of short rates, and to make it effective by open market or foreign exchange operations when market rates tend to fall away from it. Another variant is the tying of the discount rate to a market rate which becomes the focus of central bank control.

to its own targets by undertaking offsetting (or supporting, as the case may be) operations through other channels. The desire of commercial banks to adjust their cash position through the discount window thus always depends on the volume of reserves made available to the market by other means by the central bank. One of the significant aspects of the closer integration of monetary management with overall public economic policy since World War II has been an effort in several countries to shift the initiative for injecting (and withdrawing) reserves from commercial banks to the central bank.

Operations at the discount window can influence the supply of money (by affecting the reserve base or through the rate effect, or both) only if the banking system is forced to borrow. Central banks use various ways to force banks to seek additional cash from it in order to make the rates on discounts and advances effective. Specific techniques include operations in exchange markets, open market sales of securities (United Kingdom), increases in reserve requirements (Austria) and reductions in discount quotas to force banks to seek accommodations at the higher rate on advances (West Germany). To achieve sufficiently tight control over bank cash, the central bank must be able to calculate with a good deal of precision the timing and amount of open market or foreign exchange operations required to achieve the desired rate effects. By denying the full amount of reserves required to support seasonal, cyclical, or secular expansion of bank credit (for instance, by abstaining from purchasing securities in the open market) the central bank will force the banking system into the discount window (the classical case being

the United Kingdom, where, however, the borrowing is undertaken indirectly, through discount houses). The volume of discounts, interpreted in relation to changes in the central bank's securities portfolio and to changes in relevant cash and liquidity ratios, will be a direct indication of the state of monetary stringency.

Reference to "refinancing" at the central bank, commonly encountered in some countries when referring to all forms of central bank credit created at the initiative of commercial banks, realistically depicts a state of affairs in which a considerable part of credit in use by the private economy is, in the final instance, provided through the discount window, and cash positions of banks are sufficiently tight so that banks must go to the central banks for refinancing during periods of seasonal or cyclical pressures. In countries where rediscounting is insignificant (either in relation to bank cash, or as a means of making seasonal adjustments in it), the reason is usually traceable either to the prevalence of conditions of excessive liquidity due to foreign exchange inflows or postwar monetary overhangs (Austria, Switzerland, and for part of the past decade, in Sweden) or other circumstances that have reduced the importance of the discount policy role.

Indeed, the ability of a central bank to use rediscounting as the main tool of monetary control depends on the commercial banks not having a large volume of assets giving automatic or semiautomatic access to central bank credit. In the immediate postwar years, there was everywhere an overhang of war-generated liquidity. In subsequent years, and in varying degree, the individual countries covered by this study benefited from balance-of-payments surpluses--in large part the

counterpart of our deficits--and at times from speculative inflows of foreign capital. Thus, over long periods, many central banks were confronted with the problem of controlling excess liquidity in their banking systems, and, in particular, neutralizing the effects of foreign exchange surpluses. In such circumstances, the need for the commercial banking systems of most of the countries covered, and in particular those of continental Europe, to obtain liquidity at the discount window was much reduced. Indeed, in many countries the size of balance-of-payments surpluses was during extended periods much too large to be neutralized through adjustments in discount operations or, for that matter, by the use of the entire range of available instruments of monetary policy. In several countries the central problem of monetary policy since World War II has been to limit the monetization of the inflow of foreign exchange. Thus, since World War II in most of the countries covered by the present study rediscounting and advances have provided only a small, and in many cases, an insignificant part of the funds serving to offset seasonal and cyclical fluctuations in the cash base and to meet growth requirements. Although excess liquidity and opportunities for obtaining funds abroad tended to reduce sharply the need for obtaining them from the central bank, a complete atrophy of the discount function (similar to the U.S. experience in the period after the Great Depression and well into the postwar years) did not develop. This was due to the wider seasonal swings in foreign exchange surpluses and in circulating currency, a less developed interbank money market and a lesser use of open market operations.[1] The following

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1. Development of an impersonal national market for reserves reduces the need for borrowing from the central bank, as does concentration of banking and the growth of branch-banking systems.

table indicates that, in contrast to the United States, in most of the countries covered, changes in foreign assets have been since the return to convertibility a very important, or even predominant source of changes in central bank assets; in some countries this was true even in the earlier period.

Changes in Central Bank Assets

	Period	Net Foreign Assets	Domestic Assets
		(in billions of national currency units)	
Austria	1958-66	12.4	3.9
Belgium	1958-66	65.9	5.5
Canada	1958-66	1.0	0.2
France	1958-66	34.0	1.4
Germany, Repub, of	1958-66	11.0	13.3
Italy	1961-66	1,057.0	2,733.0
Japan	1958-66	503.0	1,390.0
Netherlands	1958-66	5.1	1.0
Sweden	1958-66	2.8	2.2
Switzerland	1958-66	7.1	0.1
United Kingdom	1958-66	0.5	1.2
U.S.A.	1958-66	16.8	171.7

Source: I.M.F., International Financial Statistics.

Discounts

Central banks of the countries surveyed (and elsewhere) have retained traditional forms and practices by giving preferential treatment to credit extended by means of discounting promissory notes. The continuing prominence of rediscounting abroad reflects in part the

continuing, although perhaps diminishing, survival of the trade bill as an instrument for short-term credit accommodation. This fact is, in turn, traceable in some countries to the more significant role played by foreign trade.

Regulation of access to the discount window is traditionally based on eligibility requirements with regard to purpose, maturity and credit standing of drawee and endorser. Terms and conditions, including eligibility requirements and maturity, are usually specified in broad terms by legislation and administered by the monetary authorities, which set policy objectives and promulgate various operating rules. In most countries, the applicable discount rate depends on the nature of the paper offered (in some cases this applies to advances as well). While the stress is on the self-liquidating character of the paper discounted, there is no tendency to question the ultimate use made of the funds supplied or to consider lending for productive purposes more appropriate than other uses. However, eligibility rules by themselves are of limited significance in controlling the aggregate volume of discounts so long as commercial banks dispose of a more-than-adequate volume of paper to replace any specific items judged substandard. Similarly, the prior-authorization procedure (in France and Belgium) is by itself an insufficient means of controlling discounts, so long as credit demands are strong enough to produce alternative requests to replace rejected applications.

The ability to rediscount a particular credit is usually an important factor in determining bank attitudes toward loan applications. In particular, the status of the trade bill at the discount window has been an important factor in preserving its role. In a few countries,

changes in eligibility requirements have been used as a tool of monetary control (Japan). Varying eligibility requirements in accordance with policy objectives gives the central bank additional flexibility but--as in other instances--policy requirements may not be consistent with other considerations, such as safety.

While the "real bills" doctrine is the common origin of the discount function in all countries, the degree to which it has weathered the changes in credit needs and financial structure that have occurred since the Great Depression varies from country to country (Belgium being perhaps an extreme case of survival). The actual administration of the discount window is now everywhere sufficiently subordinated to overall objectives of monetary policy so that access to the window does not provide an escape from monetary restraint. Indeed, the applicable legislation of several countries gives the central bank wide discretionary powers to regulate access to discount facilities and to vary conditions under which it will make discounts. These powers generally permit the central bank to refuse (usually without having to give any reason) accommodation even when the commercial bank can submit stipulated adequate paper. This discretionary power may lend considerable effectiveness to the central bank's overall ability to influence commercial bank behavior. In effect, discounting assumes the role of an enforcement mechanism, as some central banks make it clear that access to the discount window depends on compliance with overall objectives of monetary policy and such compliance is frequently the price for extending the discount privilege to nonbanks. In some countries, however, access to the window within ceilings and quotas is considered by the commercial banks as a right.

Review of paper offered for rediscounting gives central banks a view of the credit policies followed by commercial banks. This is important because in most countries with large numbers of commercial banks central banks have few or no direct and current contacts with these banks, except at the discount window. In countries where central banks provide at all times a large proportion of bank reserves through the window, the need to renew the discounted portfolio affords the central bank a means for continued surveillance of the commercial banks' lending.

In many cases, compliance by commercial banks with the wishes of the central bank is also reinforced by its various supervisory powers and the threat of requesting additional powers if voluntary cooperation is not forthcoming. Institutional arrangements to obtain compliance may involve a "gentlemen's agreement", periodic conferences between the head of the central bank and heads of the large commercial banks, or formal "window guidance" as in the case of Japan.

Advances

While rediscounting of trade bills remains in many of the countries covered an important channel for supplying central bank credit to the private sector of the economy (and disregarding direct lending to a shrinking inherited clientele of merchants and other nonbank borrowers), foreign central banks have found it necessary to broaden discounting techniques and to introduce additional ways to provide credit for reserve adjustment purposes. Advances against collateral originally played the role of a safety valve, but more recently they have become in some countries the normal way for obtaining short-term accommodations at the central bank. Other more recent techniques include repurchase

agreements[1] and direct purchase of acceptances. Such credit may be extended either at the initiative of the central bank, or at the initiative of borrowers (as in the case of money market dealers in Canada, within credit lines established for them). While Federal Reserve Banks have not made discounts for decades, the distinction between discounts and advances is still maintained in most foreign countries and in some serves to differentiate between access to the discount window as a right and as a privilege.

Advances ("Lombard credit") are often made on collateral not eligible for rediscounting, such as long-dated government debt. The required collateral may be limited to government securities (as in West Germany and Belgium) or to a limited list of specified securities. There is little uniformity in the ease of resorting to advances as an alternative to rediscounting and to the relative cost of these two modes of central bank credit. In some cases the rate structure and other terms and procedures are designed to make central bank advances available at a penalty rate to banks when they have reached their discount ceilings (West Germany) or have run out of paper eligible for discounting. In line with traditional "real bills" thinking, advances are made usually for very short periods only. Sometimes it is more advantageous to borrow for a shorter time at the (typically higher) rate on advances when such loans can be paid off without restriction (West Germany). Even when the applicable

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1. The need for repurchase agreements arises primarily when conditions applicable to regular discounting are excessively restrictive (when paper offered must have a specific minimum maturity, or discounts are made for the remaining life of the instruments only) or when the borrower cannot be expected to dispose of an adequate volume of eligible paper (as in the case of Canadian money market dealers).

rates for discounts and advances are identical, other terms may favor one of the two, as in the case of the United Kingdom where the fact that advances can be obtained for shorter maturities than discounts makes them a less expensive source of funds (to the discount houses, in the given case), provided, in accordance with its policy (rate) objectives, the Bank of England is willing to make advances at the given time (the opposite is true in Canada where advances are made for a minimum of 7 days only).

In most of the countries surveyed advances are regarded as a less normal, or less desirable, way of providing reserves and such accommodations are extended at a higher rate (as in West Germany and Austria, for instance) and/or for a limited time only. Advances at the bank rate may be made up to a ceiling (which may be confidential, as in Canada) set for each bank; advances for additional amounts may be made at a penalty rate (as in Canada, where this rate is subject to case-by-case negotiation). The rate on advances (or its equivalent which represents the highest rate at which banks actually borrow from the central bank) tends to set an effective ceiling on money market rates.

Some countries have gone to considerable lengths to maintain the conceptual and operational distinctions between discounts and advances.[1] In others (as in Italy and the Netherlands) advances rather than discounts have become the more common technique for extension of central bank credit, in particular where the use of advances is encouraged by making them available on essentially the same terms as discounts. Greater reliance on advances reflects, by and large, changes in the

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1. In West Germany, discounted bills, but not advances, qualify as cover against note issues.

structure and techniques of bank lending as well as the shifting away from the "real bills" doctrine. On the whole, advances may be regarded as the method likely to grow in relative importance over the years ahead.

WIDENING OF THE RANGE OF OBJECTIVES AND TOOLS OF MONETARY POLICY

In all of the countries surveyed, the scope of official economic policies has broadened since World War II to include objectives similar to those defined in, or implied by, our Employment Act of 1946; in several countries the use of the discount mechanism has been adapted in various ways to the new policy objectives. Indeed, for this and other reasons, some of which are discussed below, in most of the countries surveyed, the discount mechanism has undergone considerable change over the last quarter of a century and no country currently relies on it as the sole tool of monetary policy. Adaptation of the traditional discount mechanism (including the shift from rediscounts to advances) to new needs and conditions has been accompanied by the development of new tools of monetary management, many of which were pioneered by the Federal Reserve System.

In considering the evolution of the discount mechanism since World War II one must keep in mind that the countries covered by this study, with the exception of Canada, Sweden and Switzerland, have gone through a difficult period of postwar reconstruction in which various types of direct controls were used, some of which have been continued beyond that period. Because of the urgency of reconstruction, financial aspects tended to be pushed into the background; monetary policy was expected to make a contribution by facilitating and implementing attainment of targets set in capacity, output and technological terms.

Such implementation frequently involved subsidy-level interest rates, "direction" of credit, and use of rediscounting as a means of financing specific activities in preference to budget financing or as a substitute for private capital formation. Indeed, the evolving condition and new challenges which emerged after World War II caused several of the central banks surveyed to seek broader powers and to develop new tools of monetary management rather than to try to meet them by relying on the adaptability of the discount mechanism. In most countries, the discount mechanism has been increasingly supplemented by other tools of monetary management; in particular, constraints on the use of rate changes led to the further development of old and the introduction of new policy tools and techniques.

The need to supplement the discount window by other control mechanisms can be traced in part to changes in the structuring of commercial bank portfolios (with a declining proportion of discountable paper), to various constraints which tended to limit the latitude for using the discount rate as a rationing device and the tendency of commercial banks to make excessive use of the discount window in view of the willingness of their customers to borrow at rates considerably higher than the discount rate. In several countries, the discount window was inadequate to deal with the consequence of huge and fairly persistent balance-of-payments surpluses. The need for new tools was felt keenly in cases where external and internal considerations were flashing conflicting signals with regard to the discount rate. As a result, the discount mechanism has undergone considerable change, of which resort to quantitative limitations, and thus diminished use of the rate, is the most significant. It became clear

after World War II that the politically acceptable range within which the discount rate could be varied had narrowed and that a number of developments tended to inhibit free and sufficiently frequent use of discount rate changes. These reasons may be summarized as follows:

(a) Fear that the signal would be overinterpreted.

(b) Fear that large rate fluctuations would produce disruptive effects on the market for government securities and, more generally, on capital markets.

(c) Fear that automatic linkage between the discount rate and bank lending and/or deposit rates would tend to produce levels of interest rates that would be politically unacceptable.

(d) Fear of inducing undesirable international capital flows that would offset intended domestic effects of rate changes.

Because of these restraints on a flexible use of the discount rate, nonrate rationing of reserves and manipulation of reserves acquired through balance-of-payments surpluses became supplementary and, in some cases, an alternative tool of monetary control. Variable cash reserve requirements, liquidity ratios, and open market operations have been introduced since the war in a number of countries as additional monetary tools, but they remain of limited significance (particularly for day-to-day control of reserve availability). Most of the countries surveyed (the United Kingdom and Canada being, of course, the conspicuous exceptions) have not succeeded in developing a broad and active market for short-dated government debt that would provide a main avenue for supplying and absorbing bank reserves, and their Treasury bill markets (where they exist) are extremely narrow. Liquidity adjustments (as well as Treasury debt operations) frequently involve direct dealings between the central bank and commercial banks, rather than impersonal transactions through the market. In several

countries, special Treasury instruments (usually a special series of Treasury bills, not available to the general public) are issued to commercial banks, at rates deemed appropriate by the authorities, rather than set by market bidding (and are repurchased at posted rather than market rates, as in West Germany).

Because of the unavailability or limitations of new monetary tools, means were sought in most of the countries covered to achieve greater monetary restraint through nonprice rationing at the discount window and, in some countries, to shield certain sectors (e.g. export financing, municipal borrowing, home mortgages, etc.) from the effects that would have resulted from price rationing. Regulation of access through quantitative limitations on borrowing (rather than tightening eligibility requirements) became a policy tool, making availability of eligible paper a necessary, but not sufficient, condition for access to central bank credit, thus moving away from the automatism of the "real bills" doctrine.

Eligibility and collateral requirements for discounts and advances have always tended to influence the assets composition of commercial banks' portfolios (and, presumably to a lesser extent, of other financial institutions having direct or indirect access to the discount window). In several countries, restrictive features have been added to the discount mechanism with a view to restraining excessive use of central bank credit and to channelling bank credit into priority uses (France, Japan). Excessive credit demands and insufficiency of internal funds to support high rates of capital formation characterized the economies of the countries studied during much of the post-World War II period. In general, post-World War II monetary

policies of these countries (with the exception of the United Kingdom and Canada) have endeavored to limit and regulate access to the discount window by specific rules, including quantitative provisions (allowing in some cases for procedures which amounted to little less than direct extension of credit for purposes having national priority), in particular in countries where reluctance on the part of banks to be in debt to the central bank was small or nonexistent. This led to the establishment in several countries of discount ceiling quotas for individual banks. Some countries have gone even further by establishing direct ceilings for bank credit expansion; other countries have endeavored to keep growth of bank credit in line with official objectives through informal directives.

In some countries the discount window has been used as a tool of credit allocation, usually by compartmentalizing discount procedures and by establishing a whole hierarchy of rates from preferential to penalty. Central bank credit has been also quite widely used as a supplement or even as an alternative to budgetary financing in implementing a variety of officially-sponsored programs, including implementation of national investment plans. In such cases, institutional arrangements have been made for formally meeting the requirement that discountable paper be of short-term. Such use of the discount mechanism for stimulating investment, including provision of central bank credit on a semipermanent basis, has been due to shortcomings in capital market structure and processes, and not to the inherent superiority of discounting as a means of achieving policy objectives in this field. Other examples of use of discounting as a means of financing governmental programs are

found in Switzerland (financing of defense stocks of raw materials) and Italy (agricultural price-subsidy programs).

The discount mechanism thus has grown in complexity in part because in many countries it is now impressed into the service of other objectives for which the use of the mechanism of discounting offered certain advantages, both technical and budgetary. The need to resort to a variety of artifices to fit the letter of the requirements of the discount window arose, in part, from the inflexibility of banking legislation of various countries and the unwillingness or inability of governments to introduce desirable changes.

New techniques had to be introduced to sterilize the inflow of foreign exchange and to adjust monetization of domestic assets to variations in balance-of-payments surpluses. Central banks have endeavored (paralleling similar efforts with regard to meeting domestic challenges) to develop alternative policy tools that would diminish reliance on the discount rate to prevent or correct imbalances in international accounts and, in particular, to cope with wide swings in foreign exchange flows. Since foreign commercial banks usually keep part of their liquid assets abroad, mainly in the form of interbank balances and money market assets (subject to applicable foreign exchange control regulations), in several countries regulation of foreign exchange holdings of commercial banks has become one of the most important tools of monetary policy. Since the re-establishment of convertibility in 1958, closer integration of financial markets of the Western World and the growing importance of banks and other financial institutions operating across national borders, borrowing from foreign branches and in foreign money markets, including in more

recent years, the Eurodollar market, have provided commercial banks with additional access to liquidity in periods of temporary strain and thus further reduced the need to seek accommodation at the central bank.

A common objective of measures adopted in individual countries has been to control commercial bank access to liquidity resulting from foreign exchange inflows, and, more generally, to develop a foreign exchange policy that would support other tools of monetary controls. Among the control tools used, forward-exchange operations aiming at keeping funds from flowing in or out through a forward premium or discount (Italy), and manipulation of reserve requirements against foreign deposits (West Germany, Switzerland) have proven to be of considerable effectiveness. A variety of techniques has been applied in several countries to cope specifically with international capital movements, including prohibiting payment of interest on foreign deposits (Italy, Switzerland). Furthermore, some central banks have been able to control commercial banks' access to foreign borrowing, including limits on the amount of foreign currency claims or liabilities that banks (and nonbanks) can take, and to regulate net positions in foreign currencies.

GENERAL CONTRASTS WITH THE UNITED STATES

On the whole, in the countries covered the discount mechanism has been relied upon more heavily since World War II than in the United States to achieve domestic and external monetary policy goals by influencing the supply of credit, the cost of money, and the market pattern of rates. In the absence of significant alternatives, in most of the countries surveyed discounts and advances are a normal means for

adjusting bank liquidity positions. In some countries, discounting is considered a normal source of a considerable part of the banking system's cash reserves rather than merely a safety valve, available normally only for a very short period, pending adjustment of bank assets and liabilities. Still other central banks insist that funds should be sought at the discount window only to meet seasonal and other specific temporary and reversible needs.

Before reviewing in more detail the various technical details of the discount mechanism in the countries covered by this study, it might be useful to comment on some of the more important differences in the setting in which monetary policy operates in these countries. They range from forces which cause fluctuations in the reserve base to institutional factors in the financial area and beyond. But quite generally, access to central bank credit is embedded in each case in a somewhat different set of policy considerations, institutional arrangements, and procedures than in the United States.

In all of the countries surveyed, foreign trade accounts for a much larger proportion of gross national product than in the United States. International considerations are traditionally a main focus of monetary policy, and day-to-day management of foreign exchange reserves requires considerable official attention. Since, in the other countries, commercial banks keep part of their liquidity abroad, mainly in the form of interbank balances and money market assets (and subject to applicable foreign exchange control regulations), in several countries regulation of foreign exchange holdings of commercial banks is one of the most important expressions of monetary policy. Extension of foreign currency loans (by the central bank or by the

separate foreign exchange institution typically managed by the central bank), swap arrangements and forward exchange transactions are among the techniques used to influence the liquidity position of domestic banks. Management of foreign exchange reserves supplies some of the day-to-day flexibility that otherwise would be lacking because of the limited scope (or absence) of open market operations and a variety of factors reducing the flexibility of other policy tools.

Bank credit accounts for a much larger share of domestic credit flows in the countries surveyed than in the United States; it would lead us too far afield to examine the underlying reasons. Among them, the relative narrowness of capital markets, the larger part of capital formation that bypasses them, the pre-emption of a considerable part of savings by the national government and semigovernmental institutions, the lesser importance of financial intermediaries (in some cases a direct effect of earlier disastrous inflations) would apply to a different degree for each given country. But in all of the countries surveyed, the predominant role of commercial banks in credit markets, especially in serving credit needs of private business, usually results in more direct transmission to the central bank of fluctuations in credit demands.

Another significant difference is that in many of the countries studied, an important segment of the commercial banking system is nationalized (as in France and Italy) and that public or quasi-public credit institutions have access to the discount window. While nationalized commercial banks are usually operated in much the same way as those privately owned and do not enjoy any preferential treatment at the discount window, subtleties may be involved that are difficult to

detect. The specialized quasi-public credit institutions usually combine several activities, including centralizing temporarily redundant resources for national networks of similarly specialized financing institutions and providing rediscount facilities for them, as well as attracting certain types of savings and channeling government funds into long-term investment. Giving such institutions direct access to the discount window broadens the original function of the discount window by using central bank credit to implement certain priorities set by national economic policies. This widening of the discount function has no direct counterpart in the United States, but neither has the underlying involvement of the national government in influencing the direction of investment flows and using the central bank to implement or support a broad range of specific economic policies, including the diversion of central bank resources to nonbudgetary financing.

A related structural difference is reflected in the origin of the paper reaching the discount window.[1] In several of the countries surveyed, large segments of industry are nationalized, while other important units involve some degree of government participation or sponsorship. Municipal ownership of public utilities is widespread, and communications as well as important railroads, airlines, and shipping lines are usually government-owned, directly or indirectly. Contractors and other suppliers of government-owned enterprises (such

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1. It may also be worth noting that while almost since its inception the Federal Reserve System has been engaged in developing the acceptance market, it has chosen to monetize acceptances through open market purchases rather than through discounting, while in the other countries paper arising from foreign trade is not only typically an important part of discounts but in some cases also enjoys preferential terms.

as shipyards) enjoy official support which may extend to special facilities at the discount window. In many countries with a significant public sector (and in particular in France and Italy, but also in Japan where government tutelage, rather than outright ownership is involved), the use of the discount mechanism as a means of directing credit has become a significant and integral part of central bank policy. Thus, a considerable proportion of assets owned by commercial banks (whether privately or publicly owned) consists of loans (and other credits) to public enterprises, even though the form of the accommodations extended (and the eligible paper which they generate) may be indistinguishable, on the surface at least, from that used to accommodate private borrowers. In effect they represent credits extended to official entities, or those guaranteed by government institutions or instrumentalities frequently set up for the purpose of implementing specific government policies.

Also in contrast to the United States, most of the central banks of Western Europe (having evolved from commercial banks) continue to have some private clientele which has access to central bank resources through direct discounting (but in some cases also through advances, as in West Germany, Italy, and Switzerland). Direct lending to private borrowers (even to individuals, rather than to business borrowers, as in Italy) is in most cases a carryover from the time when the central banks were privately owned. The newer central banks (Canada) have never engaged in such activities and the other banks are trying to close them out.

By and large, the relative volume of direct lending through discounts or advances is negligible and is not done with any policy

purpose in mind, except in the United Kingdom where the Bank of England continuously acquires a certain volume of bills "to be in touch with the market" and to ascertain the quality and composition of bills being offered in the market. Since this Report is concerned with the use of the discount window by foreign central banks as a tool of monetary policy, we shall not discuss techniques for discounting paper of private customers.[1]

Foreign central banks do not administer the discount window on the basis of rigid rules on the public record (and, hopefully, uniformally interpreted and understood by all), comparable to Regulation A, as issued in 1955. The notion of "appropriate borrowing" is not encountered in foreign experience. While the stress on the self-liquidating character of the discounted paper is quite general, there is no attempt to question in this context the actual use made of the funds supplied or to consider lending for productive purposes more appropriate than other uses.

Only a few of the central banks surveyed base the administration of the discount window on the assumption that commercial banks are reluctant to borrow (and to stay in debt), even though, in fact, banks prefer to obtain liquidity elsewhere and come to the central bank only as a last resort. In most countries surveyed, commercial

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1. We shall also pay only passing attention to discounting of, or lending on, government securities undertaken either to accommodate the Treasury in periods when its expenditures exceed receipts, or to cover budget deficits, since such activities do not fall under the heading of credit policy (although monetary policy must, of course, cope with the resulting reserve creation). In some countries, central government borrowing takes the form of advances from the central bank rather than of marketable paper. In most countries, legislative safeguards exist to protect the central bank against abusive use of its facilities to cover budgetary deficits directly or indirectly.

banks tend to regard access to the discount window as a right rather than a privilege (within applicable limitations, such as quotas) even though the central bank normally has discretionary authority. This attitude, confirmed by their actual experience, is traceable in some cases to the availability in their portfolios of specific types of paper which the central bank must discount automatically, and more generally to the inherent function of the central bank as the "lender of last resort."[1] All central banks recognize their role as lender of last resort to be crucial, and discounting continues to be widely used to implement this role. Even in countries which use discounting ceilings or where alternative means for injecting liquidity on a massive scale (for instance, through open market operations) are available, central banks do not see how they can refuse to lend at some price as long as the formal requirements with regard to collateral or eligibility are met.

In countries where cash reserve requirements exist, quasi-permanent borrowing by individual banks is tantamount to an offset to such requirements.[2] In countries where they do not exist, but where banks' endeavor (or are expected) to maintain conventional liquidity ratios, resort to the discount window reduces, in effect, the borrowing bank's primary liquidity position. Thus, frequency of borrowing by individual

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1. In some countries at least (Italy being perhaps the most conspicuous example), access to the discount window was, originally, considered to be a quid pro quo for the note privilege of the central bank.

2. Borrowing in excess of applicable reserve requirements has severely affected the usefulness of this monetary tool in several Latin American countries.

banks, and the aggregate amount of discounts and advances outstanding, are in all countries an important element in interpreting (and influencing) the central bank's policy posture.

The United States is almost unique (Canada and Switzerland being other important examples) in limiting direct access to the discount window to commercial banks (provided they are members of the System) and in denying it to other money market participants (except for non-bank dealers in Government securities). Foreign central banks interpret their role as lender of last resort more broadly; as a result, a variety of financial institutions other than commercial banks usually have direct access to central bank credit. Some of the central banks surveyed extend (depending on historical and institutional factors) discount privileges or advances to most or all of the following groups: public and quasi-public credit institutions, central bodies of such sectoral credit institutions as national groupings of savings banks, farm credit associations and credit unions (Italy), municipal savings banks (Italy, Japan), credit cooperatives (Netherlands), and stock brokers who act as dealers in government securities (Canada, Netherlands), and private borrowers. Such access may be available at all times (although, in fact, rarely resorted to) or under specific conditions.

Access to the discount window is determined by law and/or administrative decisions; in none of the countries surveyed can banks elect to escape regulation by the central bank through a "nonmember" status and thus not to have direct access to the discount window. By and large, applicable reserve (and liquidity) requirements abroad are administered more flexibly than in the U.S. Greater flexibility in

meeting legal reserve requirements and/or liquidity ratios frees commercial banks (as well as central banks) abroad from some of the problems of day-by-day reserve management which are rooted in our system of administering member bank reserve requirements.

Because of the prevalence of nationwide branch-banking systems, and the virtual absence of secondary financial centers,[1] some of the problems of reserve management inherent in our fragmentized commercial banking system do not exist to the same extent in the countries studied.[2] While important regional, and even local, banks exist in most countries studied, there is nowhere a counterpart of the reserve management problems typical for thousands of our banks. This does not necessarily mean that offsetting of a much larger part of the local and regional day-to-day fluctuations in the demand for, and supply of, banking funds within the nationwide branch system significantly diminishes overall seasonal variations in the demand for cash. Other forces operating in the opposite direction may be equally significant. For instance, bank cash positions in the countries surveyed are more exposed to fluctuations in the public's demand for cash since a much larger portion of the money supply than in the U.S. consists of currency. Fluctuations in currency in circulation affect bank reserves one-for-one, but fluctuations in deposits only fractionally.[3]

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1. With some exceptions, however; but even Canada and the Netherlands each has no more than one additional money market of real significance.

2. While there are some parallels (the United Kingdom comes first to mind) to the limitation of the impact of our policy actions on member banks, the problem of "non-membership" is not duplicated abroad.

3. Currently, between one third and one half of the money supply of Italy, France, Germany still consists of currency, and there is little reason to believe that the composition of the marginal demand for cash is different from its average composition.

The main objective of day-by-day discount operations is to neutralize the effects of seasonal and cyclical factors on the money market (in other words, to provide normal seasonal reserves and to accommodate, within broad policy considerations, cyclical swings in reserve use), and in some to provide for secular growth. There does not seem to be in the countries surveyed any specific philosophy or policy with regard to the way in which the cash base of the banking system should be enlarged to provide for secular growth. In part, this may be an overhang from the real bills doctrine which, at least implicitly, assumed that growth of "commerce" would generate an enlarged flow of bills to the central bank. More importantly, in most of the countries studied inflows of foreign exchange and--intermittently--government deficits focused attention on the means for controlling excess liquidity rather than the need to provide banks with reserves to assure adequate monetary growth. On the whole, however, it is proper to conclude that discounting is generally considered the residual mechanism through which overall availability of reserves is adjusted to longer-run growth requirements.

Most central banks use the discount mechanism to minimize day-to-day and week-to-week fluctuations in money market rates and gyrations due to tax payments, end-of-month and similar recurrent periods of stress. Usually, offsetting other recurrent influences on the money market, such as fluctuations in the Treasury balance with the central bank, equally belongs in the category of routine activities. The extent to which the discount window is used to regulate bank reserve positions on a day-by-day basis depends on institutional factors and on the availability of alternative mechanisms in each given country.

Specific situations are discussed in several country reports; the broad generalization is that there is no general preference to use discounting when other channels, such as intervention in foreign exchange markets or open market operations, are available.

Indeed, in most of the countries surveyed, day-by-day adjustments in reserves take place mainly by manipulating foreign assets and through the domestic interbank money markets. However, nowhere is the interbank money market as developed and so actively used as in the United States, and only a limited amount of interbank lending takes place in an impersonal money market. There is no close counterpart of our correspondent banking system which involves some interbank borrowing on the basis of credit lines. Except for the United Kingdom and Canada, nonbank participation in the money market is in most countries either nonexistent (by tradition or formal arrangements) or of marginal importance (as in the Netherlands). Even open market operations are in most countries conducted only between the central bank, commercial banks, and a limited number of other private financial institutions, including dealers in government securities and government and quasi-public institutions active in the capital market.

The development and routine use of open market operations has been thwarted in many countries by the narrowness of the market for government securities. The activity of a market for government debt depends a good deal on the size, structure, distribution, and origin of the public debt; considerable differences in this respect exist among the countries surveyed. In none of these countries is the (central) government debt so widely held and actively traded as in the United States. Most of these countries (exceptions: United

Kingdom and Canada) have not succeeded in developing a broad and active market for short-dated government debt that would provide a main avenue for supplying and absorbing bank reserves.

Where open market operations for adjustment purposes are not feasible, and various means of regulating the impact of flows of foreign exchange are insufficient, central bank intervention for balancing out end-of-period positions and for fine tuning of the money market (where this is an objective) has been attempted through other means, including, typically, outright transactions and repurchase agreements with the call-money market. In some cases, such adjustments take the form of special arrangements at the discount window at the initiative of the central bank (see France) and which perform a function similar to repurchase agreements in the United States. Even in those countries in which open market operations have become part of the range of policy instruments used by the central bank, such operations are in some countries not a continuous process, and are not necessarily undertaken "at the market;" indeed, transactions may be consummated at rates posted by the central bank (as in West Germany), or negotiated in each case (as in Japan), so that both sales and purchases usually take the form of special transactions. In some cases, prior transformation of book credits to the government into marketable securities is necessary to open the way for open market sales.

The traditional reliance on discounting, together with the fact that banks as a whole are continuously "in the Bank" for considerable amounts, has tended to inhibit the development of open market operations even where suitable securities and appropriate market arrangements are available. When banks acquire excess cash, they tend to

reduce their borrowing (or sell funds in the interbank market, obviating the need for banks with deficiencies to borrow), so that the central bank does not need to sell securities in the open market to mop them up. Conversely, in countries where commercial banks are almost continuously borrowers from the central bank, they have little inducement to hold eligible securities, the yield on which is usually lower than the discount rate. Thus, in many countries, the pivotal assets, for the purpose of reserve adjustment, are not the lowest yielding government securities (such as Treasury bills), but the lowest-yield paper which is automatically rediscountable (such as medium-term paper in France).

RATE POLICY

We can now proceed to the discussion of the changes introduced in the traditional discount mechanism since World War II, and which, in many cases, go back to modifications introduced during the Great Depression of the thirties. Discussions of rate policy will be followed by sections on quantitative controls and on the use of the discount window as a tool of selective control.

The discount rate is first of all the cost at which cash may be obtained from the central bank. The use of the discount window has a time as well as a rate dimension; a widely used technique is to require discounts to be for a certain minimum period in contrast to the U.S., where more emphasis is placed on maximum terms. Banks normally endeavor to borrow at the cheapest cost, depending on the availability of required collateral and on applicable terms (such as minimum duration of a given accommodation).

Responsibility for setting the discount and related rates (such as the rate on advances) usually rests with the Board of Directors of the central bank, although in some cases this responsibility is lodged with a separate monetary authority (such as the Monetary Policy Board in Japan). Prior consultation with the Treasury is usual in view of the generally close relationship between the two institutions or, less frequently, as a result of specific legal requirements (as in the United Kingdom).

The minimum amounts by which rates are typically changed differs from country to country and reflects tradition and trade uses as well as policy objectives. In general, changes are normally made by a minimum amount of 1/2 per cent, but some banks also use 1/4 per cent steps, and there is some tendency to make increases by the larger and decreases by the smaller amount. (In Japan, rates are changed by 0.365 per cent or multiples thereof, this figure being the equivalent of a rate of one-thousandth of one per cent per day.) Decisive action is usually symbolized by moves of a full percentage point in either direction, and, in recent years, there have been examples of moves by larger amounts (United Kingdom) to cope with serious external disequilibria. By and large, moves undertaken for external reasons involve changes by relatively larger amounts than those for purely domestic reasons, in particular if the central bank tends to follow rather than lead market developments.

Borrowing from the central bank usually involves a hierarchy of instruments carrying successively higher rates (and/or related terms tending to raise the real cost of borrowing), so that availability of specific categories of collateral determines the marginal cost of

borrowing. This is true even when quantitative limitations are applied at the window. As long as adequate collateral of a given category is available within the banking system, the rate which it carries (such as the "Lombard" rate in West Germany) tends to become the effective ceiling on money market rate fluctuations. The cost of marginal borrowing from the central bank (whether determined by eligibility requirements or quantitative restrictions) tends to determine market rates, unless conditions are sufficiently easy to drive market rates below the lowest applicable central bank lending rate. When commercial banks are uninhibited from making the fullest possible use of credit facilities offered (the reluctance to borrow not being a significant aspect of behavior in most foreign countries), the restrictiveness of any given discount rate depends on a number of circumstances, including the terms of borrowing and the relation of the discount rate to market rates (or, more generally, the cost of alternative sources of funds). Because of the signal role of the discount rate and/or its relative inflexibility, and because certain bank deposit and lending rates are tied to it, in actual practice in some countries discounts and advances are made at rates below or above the official rate, as policy requires.

All countries covered by the present study have a multiple-rate structure for central bank credit, even though public reference is typically made to "the" discount rate which, indeed, is the key to the whole structure of official rates. A multiple-rate structure is applied either by relating rate to the characteristics of the paper discounted (or accepted as collateral), or by establishing a progressive (stepped) rate structure designed to make more expensive

any borrowing for longer periods or for larger amounts. In the first case, the discount rate may be differentiated according to the type and/or maturity of collateral, or by different institutional classes of borrowers.

When a whole family of rates is used instead of a single discount rate, subsidiary rates may be linked to the main rate in a variety of ways, by fixed or variable differentials; alternatively, subsidiary official rates may be linked to a significant market rate (for instance, the Treasury bill rate) as well as to the main discount rate. Such multiple-base linkage offers greater flexibility for adjusting the cost of borrowing to market conditions without requiring frequent changes in the discount rate itself (as in the case of the double-base system for lending to money market dealers in Canada). More generally, under a multiple-rate structure with variable differentials, changes in the structure of effective rates can be made more frequently than in the basic discount rate.[1]

Progressive rate structures are used essentially to reduce administrative problems at the window. In some cases, progressive rates are applied without using discount quotas, and in some countries it is indeed believed that such rates are an alternative to quantitative regulations. Foreign experience includes a great variety of examples of (a) progressive rate structures as a function of size of borrowing (related to capital, reserves, assets, or some other magnitude) and duration of borrowing (Sweden, France); (b) posted or negotiated rates

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1. For instance, from December 3, 1959 to April 8, 1965, one or more of the specific rates for discounts or advances of the Bank of France were changed 17 times, whereas the basic discount rate was changed only eight times.

for borrowing in excess of basic quotas (Japan, France); and

(c) preferential rates for specific types of instruments or categories of loans (France).

When the central bank endeavors to keep its discount rate always above important market rates, or to make the effective cost of borrowing higher than comparable borrowing in the market, such rate is usually referred to as a "penalty rate."[1] If a central bank has a progressive rate structure, all rates above the basic rate are usually considered penalty rates. The central bank may operate in the call-money or government securities market with the specific purpose of keeping market rates below a certain penalty rate level.

Penalty rates are also used as a sanction to support other tools of monetary control, such as abservance of liquidity ratios (Sweden); penalty rates may be charged to banks which fail to comply with such ratios or to penalize relending (charging penalty rates to banks which sell reserves). Penalty rates are also used as a means of regulating borrowing above quotas or as an additional restraint in the absence of quotas. Continuous (or excessively frequent) borrowing may be reduced by applying penalty rates after a set period or for repetitive recourse to the window within a determined period; in the last case, penalty rates may apply to an individual bank (Canada) or to all banks, for instance, as soon as one single bank's borrowing exceeds a set duration (five days in Sweden). In some cases, the penalty rate is graduated in such a way as to become practically prohibitive beyond a certain margin

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1. In the context of this Report, the term "penalty rate" refers to a level in relation to market rates, and "progressive rates" to the structure of rates. Usually, at some point, rate progression reaches a penalty level.

above the normal quota (currently, the "superhell" rate in France) or so high as not to be used (currently in Japan). The principle that access to central bank credit should always be available--though at penalty rates--is thus preserved, but the ultimate penalty rate is used mainly to encourage banks to adjust their reserve positions through borrowing in the open market or by selling securities. A policy to maintain the penalty rate status of discount rates may lead to periods of excessive ease when reserves are supplied through open market operations to prevent a rise in market rates when raising the discount rate appears inappropriate (Canada).

In several countries, willingness to borrow at a cost higher than the basic discount rate has been interpreted (in France and Japan, for the second tranche of progressive rates) as prima facie evidence of extreme tightness. The central banks of these countries have made it a policy rule in such cases to relieve pressure by injecting reserves through open market operations or by other means in order to avoid high marginal rates (such as the "superhell" rate in France and the second-tier penalty rate in Japan) and to avoid pushing up money market rates to excessively high levels. Foreign experience also suggests that a progressive discount rate structure tends to produce discontinuities in the rate curve around the steps, and that the steps may thus pose problems for monetary policy.

In many countries, deposit and/or lending rates (or important segments of the rate structures) are automatically tied to the discount rate. Such linkages have come into existence in a variety of ways: as a result of the Great Depression, under war emergencies, as part of control measures instituted by totalitarian governments, or

as a result of pressures on the part of bankers' associations, with or without official review and/or sanction. When lending rates are rigidly linked to the basic discount rate, the cost of discounting at higher (including penalty) rates cannot be passed on readily to customers; the resulting pressure on profit margins constitutes an additional restraint for meeting customers' loan demands. Tying may have a certain degree of flexibility, with margins in relation to the discount rate being varied from time to time, or bank rates, following changes in official rates, regularly, but not automatically, and perhaps with a delay. In some countries at least, undercutting of stipulated minimum rates, as well as concealed additional charges, depending on credit conditions, are not unknown.

Rigid tying of deposit and lending rates to the discount rate is inimical to flexible use of the discount rate for monetary policy purposes. As already mentioned, some countries have tried to resolve the problem by lending to banks at rates which were in effect higher or lower than the official discount rates. In recent years there has been a tendency to loosen or remove such traditional or institutionalized linkages.

QUANTITATIVE CONTROLS

Most of the countries surveyed have not been able to place exclusive reliance on the discount rate for controlling the total quantity of reserves, i.e., to rely on rationing through rate alone and keeping an "open window" at that rate. Those who traditionally relied on regulation through rate (like the United Kingdom) have found it necessary in recent years to make considerable use of moral suasion, aiming at quantitative limitation (but avoiding overt, rigid control) of

commercial bank lending, and applying to a steadily widening circle of credit institutions. Even those central banks which have continued to place exclusive or primary reliance on the rate have found it necessary in recent years to make accommodations at the discount window more flexible; a recent example of the need for greater flexibility to differentiate between the cost of discounts relevant for the international flow of funds and for regulating the domestic money market without changing the rate was provided in the United Kingdom.

Some of the countries surveyed have gone further to limit the growth of bank credit by a variety of quantitative restrictions. Quantitative controls may apply to reserves (usually, to the aggregate volume of discounts), to assets, or directly to bank liabilities. They may be geared (as in France) to credit targets specified in national economic plans. Various techniques to limit bank credit expansion directly have been used at different times in various countries. Direct control of total rediscounts, reserves, and/or loan volume, is usually supported and reinforced by various forms of moral suasion (with Japan as a conspicuous example). Controls may involve fixed limits for loans or total assets or maximum permissible rates of increase during specified time periods. Alternatively, the ratio of loans to deposits, or some other total among a bank's assets or liabilities is made subject to regulation. Demand at the discount window may be also controlled by freezing a certain volume of eligible assets in bank portfolios through the imposition of liquidity ratios.[1] The central bank can vary the list of assets which qualify for

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1. In other countries, such as West Germany and Switzerland, liquidity ratios are imposed for other than monetary policy reasons.

inclusion; it can furthermore stipulate minimum percentages of specific assets (such as Treasury bills) to be held within the overall liquidity ratio. An outstanding example was the (variable) liquidity ratio ("coefficient de tresorerie") in France.

Some central banks use discount quotas (credit lines) as a means of influencing directly the total volume of bank credit. They are the fulcrum against which rate policy becomes effective. Discount quotas are typically used in countries where alternative monetary policy tools (such as open market operations) to control the reserve base are not available, or cannot be used meaningfully and/or where variable cash reserve requirements are not available to control the credit multiplier. In several countries, they have proven inadequate to achieve this goal and have had to be subsequently supplemented by ceilings on total loan volume or other quantitative controls. Still other countries have concluded that only a direct control over bank credit would achieve their policy goals, but have retained discount quotas as part of the control mechanism. Indeed, a central bank which directly controls the total volume of bank credit may downgrade the role of discount quotas, or dispense with them altogether, and supply reserves readily (but take into consideration reserves acquired from, or absorbed by, other sources) as long as credit expansion remains below target limits.

Quotas to regulate the volume of discounts are set--and modified--on the basis of broad policy considerations. Such quotas may be set for total borrowing from the central bank, or separately for discounts alone (as in West Germany after 1952); and additional but separate

credit lines may be established for advances.[1] Additional quantitative limitations may apply to the permissible amounts of specific types of assets within the total discount quotas. In fact, discount quotas may be equivalent to credit lines with no questions asked, or conditional on conforming with the wishes of the central bank or on the observance of specific, stated ground rules.[2]

Quantitative regulation of access to the discount window always raises questions of equity and flexibility. Setting of discount quotas for institutions (and their subsequent administration) must steer between excessive generosity, which might interfere with the conduct of monetary policy, and excessive restrictiveness; in the latter case, the problem of above-quota accommodations becomes chronic. Quotas may be geared to bank capital, liabilities, past changes in selected balance sheet items, or a variety of other variables.[3] Techniques used for setting and changing discount quotas for individual institutions range from complex formulas (as in West Germany) to informally determined across-the-board percentages[4] (as in the case of advances in

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1. In several countries in which dealers in government securities are an important element in the mechanism through which monetary policy is implemented, separate lines of credit may be established for them. A related reason for such credit lines is the endeavor to develop a national capital market.

2. Access to central bank credit depends, of course, on availability of proper collateral in an individual institution's portfolio.

3. The smaller banks may be given special consideration in setting or administering discount or loan quotas.

4. In at least one country (France) revisions of ceilings are negotiated with the banks involved.

Italy). Various approaches have been developed to revise ceilings in the light of growth requirements and, in some countries, changing policy objectives.

Discount quotas need to be adjusted upward over time to keep in step with the growth of the economy and its expanded credit needs since the variables on which they are based, such as capital funds, will not necessarily grow at the same rate as the needs which the quotas are designed to meet. Such adjustments may be automatic or subject to discretionary determination.

Quotas may be left unchanged for long periods (as in Canada) or recalculated frequently on the basis of formulas (monthly, in West Germany, quarterly in Japan), or administered informally, in the guise of approximate guidelines (as in Italy). Attempts to reduce the area of administrative judgment and/or to provide for gradual increases of quotas by linking them to such balance sheet items as short-term liabilities (and medium-term liabilities, if the borrowing financial institution is a savings bank) foundered on the hard fact that any addition to reserves leads to secondary credit expansion which, in turn, provides the justification for a further rise in the quota. Indeed, any automatic linking of quotas to bank assets or liabilities (or other growth variables) carries with it the danger of an automatic inflation of quotas. Obviously, when quotas are based on capital accounts, some degree of manipulation by individual banks is possible by increasing such accounts.

A certain degree of flexibility is generally provided by permitting banks to exceed overall discount quotas at a penalty rate or under special conditions, or by exempting from the quota

certain categories of paper (such as medium-term paper covering approved financing of equipment or of exports), or by establishing additional quotas for specific categories of credit instruments. It can also be provided by granting or negotiating temporary supplementary quotas for purposes (to meet end-of-month and similar periods of money market pressures) and amounts specified in advance, or by negotiating such quotas on a case-by-case basis to accommodate specific situations (West Germany). Such flexibility is essential where the central bank does not possess adequate alternative tools for meeting exceptional or unexpected situations.

Overline credit can take the form of (temporary) supplementary quotas at regular rates granted for specific reasons and for limited periods (West Germany). Normally, however, borrowing above the quota is available at a penalty rate only and subject to quantitative restrictions or "window guidance." The cost of above-quota accommodation may be stepped in such a way as to become, in effect, prohibitive beyond the first "tranche" above the basic quota (France). Instead of penalty rates, borrowing beyond ceilings may involve merely the obligation for proper downward adjustment in subsequent periods.

Under a system of discount quotas, tighter monetary policy usually has a pervasive effect, since banks which are close to exhausting their leeway under quotas tend to lay off bills with banks in a more comfortable position. As a result, total borrowings tend to rise toward the aggregate quota ceiling, market rates tend to rise, and this tendency is reinforced as some banks begin to borrow at penalty rates. In effect, while offering additional accommodation at a

penalty rate and under restrictive conditions, as a privilege rather than as a right, the central bank counts on the rate to inhibit credit expansion beyond the limits set by quotas.

The effectiveness of discount quotas depends on a skillful combining of quantity and rate controls. But it also depends on the availability and cost of alternative sources of reserves and on the volume of liquid assets the banks have at their disposal, as well as on whether or not the balance of payments is generating a significant surplus. From the point of view of monetary policy,[1] the main advantage of a formal quota is that it reduces problems of day-to-day discount window administration by stating to each bank unequivocally how much it can borrow within the framework of established discount window philosophy. In fact, a discount quota becomes the amount which an individual bank feels it can borrow as a right, as long as it adheres to clearly stipulated ground rules. To a large extent, administrative problems are shifted from the control of total borrowing to the control of "overline" borrowing.

The use of discount quotas as a tool of monetary control involves, in addition to giving access to central bank credit outside and above such quotas, at least two groups of problems, (a) the role of the "unused margin" and (b) changes in quotas to implement policy.

(a) One of the widely recognized limitations of quotas is the stated or implied right to their continuous and full use which, except for the cost involved, in effect, amounts to an equivalent reduction of

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1. As distinct from the use of rediscount quotas to protect the central bank from possible losses as a result of excessive lending to individual banks (as in West Germany before 1951).

cash reserve requirements or prescribed liquidity ratios. Usually there are considerable differences in the actual use that various categories of banks make of credit lines available to them. On the other hand, the actual effectiveness of discount quotas depends, in part, on the willingness of banks to exhaust them quickly and to rely on additional accommodations when needed, or on the unwillingness of the central bank to permit their continuous use. In some countries banks tend normally to make only partial (but typically substantial) use of credit lines and to shift to fuller use when official credit policy become more restrictive.[1] The attitude of banks toward utilization of quotas thus becomes an element in setting their overall level. In formulating its day-to-day operating objectives, a central bank must take into account the willingness of banks to further reduce the leeway under credit lines. On the other hand, under a system of discount quotas, the margin between the quota ceiling and current borrowings tends to become an important consideration in determining a commercial bank's lending policy.[2]

The attitude of central banks toward interbank trading in excess reserves is not uniform. In most European countries borrowing to relend is considered consistent with the normal use of lines of credit, as relending (in fact, though an interbank money market) is recognized as part of the adjustment process; in others (such as Sweden), it is not. Borrowing in order to relend in the interbank market and/or for buying bills from banks which have exhausted their quotas is common.

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1. This is even true when, as in Italy, banks are expected to repay their advances completely from time to time and not to return to the window immediately.

2. Italian and West German banks even include the unusued margin in computing their liquidity positions.

Even when a penalty rate is involved, banks with unusued margins may still have a strong inducement to discount for the purpose of lending to the market (France). Foreign central banks do not uniformly frown upon or penalize relending at a profit.

(b) Discretionary changes in credit lines are used:

i. to meet special situations (such as their reduction to offset foreign borrowing in West Germany in 1964).

ii. as a sanction against nonobservance of the rules of the game or for noncompliance with the express wishes of the central bank. (For instance, in West Germany; in France, in 1965, the governor in his capacity as Vice-Chairman of the National Credit Council, in a published letter to the Banking Association, threatened to reduce quotas of banks which expanded credit too rapidly).

iii. as a countercyclical measure.

The central bank can achieve greater ease or tightness by merely changing aggregate quota ceilings (provided such action is made public or at least is communicated separately to each bank involved; and thus varying the amount of the "unused margin" (Japan).

iv. for ordinary business reasons, such as failure to meet bank examination standards, deterioration of bank management, or because of adverse developments in the financial position of the borrower (West Germany).

Thus, the role of discount quotas as a tool of credit control depends on prevailing bank attitudes toward them; these, in turn, will depend in large part on whether, under what conditions, and at what cost, a given category of credit institution can expect to obtain

central bank credit beyond the unused portion of the quota. Uncertainty about bank attitudes toward this unused margin is, indeed, one of the basic difficulties of operating with discount quotas. West German experience suggests that these attitudes may also not be consistent over time.

SELECTIVE CONTROLS THROUGH THE DISCOUNT WINDOW

In countries in which discounting is used as a means of selective credit control designed to influence the distribution of bank credit (France, West Germany, and Japan being the most important examples) certain types of loans may be exempt from overall quota ceilings, or benefit from specific additional quotas.[1]

Typically, certain types of investment and export credit are favored, and preferential discount rates may apply to such paper (as in France). Conversely, low-priority activities may be discouraged by eligibility, quantitative or cost restraints at the window. In some countries discount rates are structured in such a way as to encourage specific categories of lending, or of lending on specific terms. The structure of rates at the window thus becomes an indirect means of influencing portfolio composition.

Distributive considerations (selective controls) may also be given effect within overall discount (or credit) quotas by giving preference to certain categories of paper, either through automatic access to the discount window (frequently after prior approval of credit by the central bank) or through preferential rates (or a combination of such

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1. As an alternative to using the discount mechanism directly as a means of qualitative credit regulation, it may be used indirectly to enforce compliance with selective credit policies applied through other techniques (West Germany, Italy).

techniques). In fact, such policies amount to direct central bank financing of favored economic activities, provided the selective devices used to achieve this purpose prove effective; evidence on this point is contradictory. Sometimes a privileged status is given to credits that private lenders would not have undertaken without what amounts to a take-out commitment by the central bank (France); private credit is thus, at least temporarily, substituted for central bank credit or Treasury resources. Such discounting has the double aspect of selective credit controls (credit direction) and creation of additional bank liquidity. The favored assets become, in effect, instruments of secondary liquidity giving their holder automatic access to central bank credit at his option, since they can be converted into reserves without prior notice.

Extension of preferential treatment to specific types of credit (or instruments) usually involves obtaining a preliminary authorization, usually in the form of a certification by affixing a "stamp" or "visa" from the central bank or the proper primary discount institution (see below), which is tantamount to a commitment to discount the particular loan on presentation, at the holder's option.[1] "Stamped bills" (Japan) or "visaed bills" (France), kept in the portfolio of the original lender (commercial banks), are, in effect, instruments of secondary liquidity since they can be converted into cash without question at any time. After obtaining an official seal of approval,

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1. More generally, in some countries commercial banks may obtain, in the form of a "visa" or "stamp" the central bank's advance certification that a particular credit is eligible for discount. Some central banks review in advance all bank loans, or all credits above a certain amount to determine their eligibility at the window (Belgium). Such review usually amounts, in effect, to screening and tends to have some selective control aspects.

banks may be more willing to hold such paper in their own portfolios than they otherwise would. Indeed, the giving of advance approval has been used in some countries (in particular, when coupled with the availability of preferential discount rates) to induce commercial banks to enter new fields of lending (medium-term loans) or to expand their assets in specific areas in line with overall government economic policy. In effect, an unconditional agreement to discount through the technique of formal advance agreements permits the central bank to add, at its own direction (and under certain conditions, in a discriminatory manner) to the liquidity of the banking system. In some countries, discounting of certain instruments outside quotas has impaired central banks' control over overall credit expansion. Some central banks have found it necessary to put an outside (global) limit on the volume of such preferred paper which it would discount (West Germany); for a special technique to restrict rediscounting of exempt paper see the chapter on France.

Pursuance of multiple policy goals by countries using quantitative credit tools at times results in complex schemes under which the overall effectiveness of ceilings is undermined by various exceptions. More generally, the use of the discount mechanism as a tool of selective credit control tends to render more difficult implementation of overall monetary policy, in particular when the discount window is used to stimulate particular activities.

INDIRECT ACCESS TO THE DISCOUNT WINDOW

Access to the discount window does not have to be direct. Through the interposition of a discount market (as in the United Kingdom), some part of the reserve surpluses and deficits is evened out at a cost which

may be below the official discount rate, if warranted by money market conditions. Obtaining central bank credit through discount houses helps to conceal the identity of the deficient bank, at least temporarily (Canada).

In other countries, in some cases as a result of the financial crisis of the 1930's, special primary discount institutions were created, which, in turn, rediscount with the central bank. Indeed, in periods of stress, traditional eligibility requirements have frequently proven to be too rigid to permit effective injection of required liquidity. The solution adopted in some countries was the creation of separate official institutions for the purpose of rediscounting paper not eligible at the central bank's discount window. These institutions usually also borrow in the call or short-term money market and from the central bank, and have access to its rediscounting facilities.

On the other hand, some countries have created institutions specializing in medium-term financing through discounting of credits originating in specific activities considered deserving of official support[1] (typically, export trade, but also public construction, equipment financing, and others). These institutions, which normally are government-sponsored, also have access to rediscounting at the central bank to the extent that they are unable to finance their activities from their own funds or by borrowing in the money market and from special resources, such as Treasury deposits or long-term funds raised in capital markets (Belgium). By changing conditions under

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1. The German Privatdiskont A.G. is a good example.

which it makes such rediscounts, or by varying the ceiling for such rediscounts, the central bank has a potentially powerful means of controlling the activities of these public investment and primary rediscounting institutions; frequently, however, there is little room for discretionary policy because the central bank is expected to implement government policies carried out by the specialized institutions.

In fact, both types of primary discounting institutions are a conduit for central bank credit on the basis of collateral of a maturity or quality not acceptable for regular central bank operations. The official rediscounting institution may provide the additional endorsement ("name") required to make the instrument rediscountable at the central bank. It also normally examines the loan application and issues advance discount commitments without which the original lender would not make the loan, or would accommodate the borrower at a higher rate only (France). Typically, short-term instruments (eligible at the discount window) are issued against a portfolio of debt instruments of longer maturity; this procedure is known as "liquefying" or "mobilizing" long-term assets. An alternative technique is for these institutions to hold medium-term paper until it moves close enough to maturity to become eligible at the discount window.

Both types of special discount institutions have in common that they:

(a) provide credit for certain government economic policies without directly involving the central bank;

(b) extend credit on terms that are more flexible with regard to maturity, collateral, and quality than available from the central bank;

(c) give additional flexibility to the conduct of credit policy, in particular when expansion is desired;

(d) contribute to broadening credit and capital markets by substituting their own credit for that of their borrowers, by borrowing short to discount medium-term debt, and in other ways.

In some respects, these specialized central credit institutions resemble similar government credit institutions in the United States which also use borrowed or Treasury funds to finance certain sectoral activities (such as housing). In contrast, foreign specialized credit institutions often use the discount technique for providing official financial assistance. They have extensive direct dealings with commercial banks, and usually cooperate closely with their respective central banks.

Credit activities of primary discount institutions require adequate and continuous coordination with overall objectives of credit policy. These institutions are usually subject to direct and close supervision by the Ministry of Finance, and there is normally little room for policy conflicts. To meet this problem, several countries have created special coordinating bodies, such as the National Credit Council in France.

UNIFORMITY OF ADMINISTRATION

Uniform administration of the discount facility does not pose significant problems abroad because of the centralized nature of central banks, even in Germany, where the "Landeszentralbanken" are the closest counterpart of Federal Reserve Banks that can be found abroad. Discounts are usually available at all branches of the central bank, whether they are few (as in the United Kingdom) or relatively numerous (as in Italy or France). Uniform discount administration is assured by issuing rules and regulations to regional and local offices. When necessary, quotas are assigned to each office to assure that the

aggregate amount of discounts does not exceed policy ceilings determined by the head office. Daily reporting of discounts and advances made (and maturing) permits the head office to exert tight and current control and to make quick changes in individual branch office quotas when necessary.

Because of the prevalence of branch banking, a large proportion of the paper originating locally is discounted at the head office of the central bank through the main office of a branch-banking system which typically centralizes eligible instruments. This is not necessarily true where headquarters of some of the leading national branch-banking systems are not located in the capital (as in Japan) or where important regional branch systems exist (as in France, Italy, and West Germany).

Uninhibited access to the discount window, and central bank transactions undertaken to bridge short-term swings in reserve availability, permit banks in most countries to reduce the demand for excess reserves to zero.[1]

CONCLUDING REMARKS

While remaining a very important tool of monetary policy, discounting has lost its central position since the banking crises of the thirties, and even more clearly since World War II. In almost all the countries surveyed, central bank policy has come to rely more heavily on tools other than discounting.

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1. Also, in some countries, the reserve ratio needs to be observed only on specified control days, such as the end of the month. The absence of the need for meeting cash reserve requirements within relatively short periods reduces the pressure for developing detailed and up-to-date data of the kind on which the Federal Reserve System bases its elaborate and continuously revised projections of reserve needs and availability.

Several developments contributed to reducing, though to a varying degree, its original significance, including conditions of excess liquidity and changes in the institutional environment. These in turn, required the forging of new monetary tools (in some cases, following their development in the United States) and--in some countries at least--led to closer integration of monetary management with overall economic controls and planning. It is, indeed, not improper to speak of a "politization" of the discount rate, as practicable limits for discount rate variation, and in some cases conflicting domestic and balance of payments considerations, tended to reduce the scope of rate regulation.

In some countries in which progress toward developing flexible and effective open market operations has been slow, a tendency can be discerned to regard variable reserve requirements as an alternative. By and large, however, there has been some disenchantment with the potency of flexible reserve requirements as a tool of monetary control and, as a result, a tendency to introduce or expand direct controls. In the larger continental countries, in particular, but also in Japan and in several other countries, direct quantitative regulation of bank liquidity and/or bank credit has become an integral and important part of monetary controls.

Rediscounting with the central bank (or obtaining advances) remains the only routine means for adjusting short-term fluctuations in reserve positions. Inability to use open market operations as a main tool of monetary policy, as well as difficulties encountered in developing adequate new tools of monetary policy (such as variable

reserve requirements, or even fixed reserve requirements) have tended to keep the discount function as an important tool of monetary policy, along with the management of liquidity of external origin.

Even when the average amount of reserves provided to the banking system as a whole through the discount window is relatively small, its marginal role may be important. Similarly, the significance of changes in the discount rate may be considerable, even though they affect directly the cost of only a small fraction of reserves in use, because bank deposit and lending rates are geared to it, and for maintaining equilibrium in international accounts. With its rationing function much reduced, the discount rate has become in several countries mainly a peg for manipulating the structure of a variety of commercial bank and other rates.

In some countries (Netherlands, Belgium), the rate still has an important domestic signal function through its announcement effect, but it has been lost in others, mainly because changes have always been very infrequent (Italy) or because of tying (as in Canada, 1956 - 1962). With the exception of Canada and Switzerland, where discounts and advances are of quite marginal significance, although for different reasons, discounting continues everywhere to be an important tool of central bank policy and, in some countries, has become an important avenue for achieving economic objectives of government policy outside the credit field. In these countries, the discount window was broadened, not primarily because it was judged a more powerful means for controlling money and credit, but because it provided a convenient way for achieving certain government

policy objectives. To some extent it appeared as a natural way of utilizing the money-creating power of the central bank to meet some of the new challenges of the post-World War II era and to provide another indirect way for government guidance of the economy--by now an unquestioned principle in all countries surveyed.

Many countries expect to achieve greater policy flexibility by developing open market operations and a more sophisticated management of fluctuations in foreign reserves, rather than from a rejuvenation of the discount mechanism. But understandably, current central bank attitudes toward the present and future role of discounting vary.

In view of the numerous modifications which the discount mechanism has already undergone in most of the countries surveyed, it seems safe to assume that it is likely to evolve further, as conditions change and new challenges arise. Only history will show in what countries, and in which way, changes in the setting and objectives of monetary policy and the gradual emergence of other tools of monetary management will change the relative role of discounting as a tool of monetary policy.

PART II. THE DISCOUNT MECHANISM IN INDIVIDUAL COUNTRIES

INTRODUCTION

This part consists of eleven chapters describing the essential aspects of the discount mechanism in the eleven countries covered by this study. The general aim has been to limit detail to what seemed essential to bring out the framework in which the discount mechanism is operating in each of the countries covered, to identify its relation to other tools of monetary control, and to describe in some detail specific processes and techniques. The general emphasis is on post-World War II developments; no attempt has been made to trace in detail the evolution of the discount mechanism in each of the eleven countries. In some cases, it seemed, however, useful to describe policies or techniques supplanted in the meantime. No attempt has been made to keep the structure and coverage of the individual chapters uniform.

It has not proven possible to present a comparative analysis of the role of discounting in quantitative terms without adding considerably to explanatory material. It was therefore concluded that it was of little use, given the objective of the study, to present limited and not always entirely comparable data.

A U S T R I A

Contents

I. INTRODUCTION

After recovering national independence Austria had little choice but to closely integrate with the international economy and to live with the ebb and flow of international capital. Austria's basic monetary control problem derives from its relative smallness in the international economy, more particularly, from the smallness of the cash base of the banking system in relation to possible changes in the central bank's international assets. Thus, to take only one example, the $600 million equivalent increase in such international assets in the five years ended December 1965 was equivalent to two-thirds of the cash base at the beginning of the period. To maintain monetary control under such conditions requires powerful tools but the Austrian authorities are not well equipped even with traditional monetary control tools. The discount mechanism plays only a subordinate role in monetary policy which is primarily implemented through official ceilings on the volume of bank credit.

In rudimentary money and capital markets, the central bank's open market powers are virtually useless as a means by which to handle the effects on the cash base of changes in the central bank's holdings of international assets. Likewise, the central bank's authority to vary reserve requirements is narrow in scope, certainly too narrow to freeze the commercial banks into the reserve balances that they can and have acquired as the result of surpluses in the country's balance of payments.

Realizing their predicament, the authorities have not employed the discount rate for domestic monetary control purposes. Discount rate changes have become rare; thus the last time the discount rate was

changed was in 1963. However, borrowing at the central bank is controlled to some extent, both discounts and advances being regarded not as rights, but as privileges. In recent years, changes in cash reserve ratios have been made more frequently than those in central bank rates, while open market operations have been initiated only recently, and on a small scale.

Having little influence over the cash base, the authorities implement their monetary policy primarily through direct controls over bank credit. These controls include both compulsory liquid asset ratios and, more important, the so-called voluntary credit ceiling agreements between the Ministry of Finance and the banks. The ceilings apply to all types of credit both to the government and to the private sector, exceptions being made only for special categories such as export credit. The ceilings are set in terms of percentages of the banks' total liabilities and net worth. Since the agreements are voluntary, there are presumably no formal limits on the extent to which the percentages can be changed. No penalty is imposed for violation of the ceilings, but the latter have not been exceeded by the banks, taken altogether. When total bank credit did, in fact, approach the ceiling during 1966, the ceiling was raised.

II. THE BANKING SYSTEM

The Austrian National Bank is half government-owned, the other half of the stock being held by bodies representing the interests of business and employees and partly by credit institutions and insurance companies. Its Board of Directors is appointed by the government and the President of the Republic appoints its chairman. The Board of Directors appoints the General Manager, his deputy and four

managers, to conduct the day-to-day affairs of the Bank and to implement its monetary policy decisions. A Commissioner appointed by the Ministry of Finance attends the Board's meeting for the purpose of assuring that policy actions taken are in conformity with the law. The formulation and implementation of monetary policy has, in recent years, involved close cooperation between the central bank and the Ministry of Finance which is vested with certain important monetary control powers. The authorities deal with a banking system that is highly centralized. Two large commercial banks operate a nationwide system of branches; several commercial banks serve various regions of the country, in addition to a variety of specialized credit institutions.

III. RESERVE REQUIREMENTS

Reserve requirements (which cannot exceed 15 per cent of total deposit liabilities) apply to a broad range of credit institutions[1] and are to be fulfilled in the form of direct or indirect deposits with the central bank or with the Postal Savings Bank. Reserve deficiencies which individual credit institutions have occasionally incurred, carry with them a penalty or fine that amounts up to 3 per cent above the discount rate. These deposits are counted as part of the liquid assets held under credit-control agreements with the Ministry of Finance. At the beginning of 1968 the reserve requirements were for larger banks, 10 per cent against demand deposits, 8 per cent against time and savings deposits with maturities of less than twelve months, and 7 per

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1. These institutions are: commercial banks, savings banks, mortgage banks, urban and rural cooperative credit societies, and the Postal Savings Bank.

cent against time and savings deposits with maturities of twelve months or more; for other banks the corresponding ratios are 6, 5 1/2 and 5 per cent.

Savings banks or urban and rural credit cooperative societies which are affiliated with a central credit institution may hold their required deposits with that institution, which in turn is required to hold equivalent deposits with the Austrian National Bank. Similarly, commercial banks and other credit institutions, such as mortgage banks, may deposit their reserve balances with the Postal Savings Bank which in turn is required to make an equivalent deposit with the National Bank.

The reserve ratio has been moved in both directions. In the period 1962-1965, reserve requirements were raised four times. This was done more to absorb some of the liquidity generated by international reserve gains than to force the credit institutions to the discount window, and during the three-year period 1962-1964 rediscounts and advances actually declined. Since June 1965 the minimum reserve requirements were lowered twice (apart from a temporary reduction by 2 percentage points for November and December 1966 only). However, since 1965, the credit institutions have increased their borrowings because the balance of payments has been in deficit.

IV. THE DISCOUNT MECHANISM AND ITS EFFECTIVENESS

Credit policy in Austria

In its current state of evolution, monetary policy is more concerned with controlling the volume of credit by direct means rather than by indirect means, such as variations in the cost of borrowing from the National Bank. Austria has an open economy and, with a convertible currency, there are few outright restrictions on capital

movements. As a result, the domestic credit situation can be heavily influenced by the state of the international accounts. In time of surplus, the monetary authorities are faced with the task of immobilizing a liquidity inflow, which, considering the limited size of financial markets, can readily take on massive proportions. This was the problem during the years 1961-1964 and the monetary authorities used practically every tool at their command in an effort to absorb the liquidity. The discount rate was lowered at one point, with the hope that funds would move out of Austria in search of higher interest rates elsewhere. But, lowering interest rates at a time of considerable inflationary potential is tricky business, and the monetary authorities tended to rely more heavily on other instruments--such as credit ceilings and liquidity ratios--which more directly affect the volume of credit. Even in the 1966 turnaround, when credit institutions borrowed heavily from the central bank, there was only one minor move to raise the cost of central bank credit. This was a 1/2 percentage point increase in rates charged on advances (effective July 1, 1966) which, however, was taken in conjunction with an increase in the credit ceiling (by two percentage points of liabilities). Otherwise, the National Bank seems to have discounted quite freely, allowing the credit ceilings to provide the basis for restraint. Since 1960, the relation of discounts and advances to total reserves and other cash held with the National Bank has fluctuated widely, mostly as a function of fluctuations in foreign reserve holdings, ranging from over 30 per cent in 1960 to less than 3 per cent four years later.

The central bank credit facilities

Legally, all credit institutions which are subject to mininum reserve requirements have access to National Bank facilities and,

for historical reasons, some private firms or individuals also may discount and obtain advances. The restraint on the credit institutions' ability to discount and borrow depends mainly on the volume at their disposal of paper eligible for rediscounting or as collateral against advances. Eligibility requirements are drawn very broadly.

The paper eligible for rediscounting includes schilling-denominated commercial bills and promissory notes signed by two parties known to be solvent, and payable within three months, and all securities and assets that are accepted as collateral against advances. Such assets are gold coins or bullion, bonds listed on the Vienna Stock Exchange, promissory notes and bills denominated in Austrian or specified foreign currencies that mature within six months from date of granting the credit, or rediscounting and warehouse receipts issued by officially authorized warehouses. Other assets eligible for central bank discount are bills and promissory notes of enterprises owned by the federal, state and local governments (in Austria the publicly-owned sector is quite substantial); and the federal, state and local governments can obtain advances using as collateral Treasury certificates--up to a legal limit of $1 billion. Bills arising from export transactions that are induced by the export promotion program are rediscountable at a preferential (lower) rate.

In order to determine whether bills offered are rediscountable, the Bank's Board of Directors appoints an outside Committee of Scrutiny, the members of which are expected to be familiar with conditions in trade, industry, handicraft or agriculture. The Scrutineers advice, however, is not binding.

The only quantitative restraints and ceilings apply to government borrowing (including state and municipal governments) and to export promotion bills (currently $2.5 billion), which are not subject to bank credit ceilings and which are discountable at a perferential rate; otherwise there are no explicit limits to rediscounting or granting loans at the stated rates for discounts and advances. The National Bank nevertheless maintains informal quotas on discounting, watching the volume of discounts by each credit institution. When an institution's discounting is considered as bordering on the excessive, further borrowing by that institution is required to be in the form of advances (at a higher cost). The legal basis for this informal control is the provision by which the National Bank can refuse rediscounting without statement of reason.

The effect of central bank rates on the interest rate structure

During the twelve-year period since the National Bank was organized in its present form, the discount rate has been changed only six times, between a range of 3 3/4 and 5 per cent. Yet, despite the limited use of central bank rate changes, the National Bank considers them important because they can serve as a widely recognized signal of the authorities' view of the direction in which monetary and credit conditions should move and because of their possible effects on the domestic interest structure. Changes in the central bank discount rates are usually accompanied by changes in the rates on advances granted by the Bank and are sometimes instrumental in affecting credit institutions' lending rates. Rates on advances depend on the type of collateral; the differential between the discount rate and the rate on advances is

smaller if the collateral is a federal government obligation. This differential is currently 1/2 and 1 percentage point, respectively.

There is, however, no rigid link between the discount rate and credit institutions' lending rates, which may move in response to other influences as well. Nevertheless, following the reduction in the discount rate to 4 1/2 per cent in June 1963, the monetary authorities negotiated an agreement with the credit institutions to reduce the cost of credit by 1/2 to 1 percentage point and this relationship apparently still holds.

V. OTHER POLICY INSTRUMENTS

Credit ceilings

Under the Credit Control Agreement (originally made in 1957, last revised in July 1966), the authorities have set ceilings on the credit institutions' loans and advances; these ceilings are stated as fixed proportions of a credit institution's net worth and liabilities. Credit is defined as all-schilling loans on current account, acceptances, advances to the public authorities, advances against mortgages, and loans to credit institutions which are excluded from a similar agreement. Discounted and rediscounted bills are included in this definition of credit, but export promotion bills, ERP bills,[1] and certain other types of financing are excluded. Net worth is defined to include not only paid-in capital and reserves, but also pension reserves (which usually expand more rapidly than capital and regular reserves). Liabilities consist of schilling deposits of Austrian and nonresident depositors and

1. "ERP bills" arise from loans made for industrial and other development purposes by the National Bank out of a revolving fund consisting of the schilling counterpart of Marshall Aid to Austria.

promissory notes. Deposits belonging to Austrian credit institutions which participate in this or similar agreements are not considered liabilities for the purpose of extension of credit. The maximum level of schilling deposits of foreign credit institutions to be included in liabilities for this purpose was limited to their level of December 31, 1963. This means that additional schilling deposits by foreign credit institutions cannot be added into the base used to determine the credit ceilings.

Since July 1966 the ceiling for commercial banks is equal to 70 per cent of liabilities plus 75 per cent of net worth.[1] While the net worth ratio has been unchanged since April 1957, the liability ratio was reduced between 1962 and 1964 at three successive times, and has only recently (July 1966) been raised again. Thus this tool was frequently used in response to changes in monetary conditions. Individual banks and other credit institutions have from time to time exceeded their credit ceilings, but credit expansion of all credit institutions has remained below aggregate ceilings, and only recently has the margin for expansion been reduced substantially.

Liquidity ratios

Liquidity ratios, originally established for the protection of depositors, have in recent years been employed on occasion for monetary policy purposes. The ratios, established by the Ministry of Finance, prescribe the form in which a certain proportion of assets have to be held and is set in terms of the credit institutions' liabilities. The latter are defined as all-schilling deposits of Austrian and foreign

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1. Net worth is defined to include paid-in capital and reserves (also pension reserves) reduced by the value of certain assets, as there are real estate, buildings and permanent investment in other enterprises.

depositors (including credit institutions), promissory notes and acceptances. Currently, "primary" liquid assets are defined as vault cash and deposits with the National Bank and the Postal Savings Bank, and their ratio to liabilities is presently 10 per cent. "Secondary" liquid assets are defined as securities acceptable by the National Bank as collateral for advances and bills eligible for rediscount, as well as net foreign assets; the liquidity ratio on "secondary" assets is currently 30 per cent. Any deficiency in primary liquid assets incurs a penalty charge equal to the discount rate, but the penalty for a deficiency in secondary liquidity is only 1 per cent.

Open-market operations

Article 54 of the National Bank Law empowered the central bank to undertake open-market operations for the purpose of regulating the money market. Nevertheless, in view of almost continuous balance-of-payments surpluses, the National Bank actually did not use this authority until 1965, except for two special transactions in 1962. In 1965, the parliament adopted a law which provided for the conversion of the central bank's claims on the government--up to an amount of 3 billion schillings--into 2 per cent Treasury certificates (with maturities from three months to two years) for use in open-market operations, and this authority has been used. A favorable balance-of-payments situation and the lack of money market facilities so far has restricted the scope of open-market operations, but since October 1966 the Austrian National Bank has operated as a buyer in the open market. Fixed interest-bearing securities which fall due within one year from the purchase date are eligible for such purchases.

Moral suasion

Moral suasion has been used by the authorities from time to time. Examples are the agreement with most categories of credit institutions to reduce the cost of credit to the nonbank public, and the agreement with selected banks in 1964 not to repatriate foreign assets. A recent example (August 1966) was a letter to the credit institutions from the Ministry of Finance reminding them that according to the Credit Control Agreement, credit could be granted only for economically justified purposes, and that consumer credit at that time was not economically justified unless all credit demands for investment purposes had been satisfied.

B E L G I U M

Contents

I. INTRODUCTION

In Belgium, monetary policy is administered by the National Bank, under the direction of the Minister of Finance; open market operations are executed by the Fonds des Rentes, which is administered jointly by the Minister of Finance and the Bank, and which, when other means of financing prove insufficient, can obtain advances from the National Bank.

At the end of World War II, bank liquidity was very high, as the banks had accumulated a very large portfolio of short-term Treasury certificates. In order that the authorities might control credit expansion, the banks were required to maintain liquidity ratios that had to be satisfied by holding Treasury certificates, thus preventing massive liquidation to meet loan demands.

For a number of years after the war, credit demand pressures on the part of business and industry never was long-lasting, and could be regulated quite easily by variations in the cost of credit achieved through changes in official rates. On the other hand, the liquidity ratios had the indirect effect of supplying funds to the Treasury when inflationary pressures resulted in an increase in bank deposits, and the opposite effect in the case of deflationary trends; they thus defeated their purpose. For that reason, towards the end of the fifties and at the beginning of the sixties, they were successively modified and ultimately abolished.

In recent years, credit demand on the part of business and industry has been extremely active during certain periods and it has not been possible to control this credit expansion exclusively by the manipulation of the National Bank's rates. Moreover, the monetary authorities could

not expect to influence significantly the volume of bank credit to the private sector by acting upon bank liquidity. The banks have, in effect, many possibilities for obtaining resources for such lending, including redeeming their short-term government securities and rediscounting loans.

Indeed, a large proportion of trade bills is rediscounted. Domestic trade bills that meet the eligibility conditions of the National Bank can be rediscounted with that institution. Furthermore, the Institut de Reescompte et de Guarantie (IRG) operates as a primary discounting institution. Foreign trade acceptances, previously certified by the National Bank, (see below) can be discounted at the IRG or, when their remaining term is less than 120 days, at the Bank. Moreover, the banks can negotiate on the market any bills that may or may not be rediscountable at the National Bank, in particular through the IRG, which acts as a broker for the greater part of the bills that it does not acquire for its own account, i.e., for uncertified bankers' acceptances and uncertified trade bills, and for medium-term investment credits. Finally, the banks can obtain from the National Bank advances against government securities for very short periods.

As during recent phases of very active credit demand on the part of business and industry, expansion could not be kept within desirable limits merely by raising interest rates, nor could it be influenced by action upon bank liquidity; the National Bank established, for certain periods, guidelines for maximum bank loan expansion, which it requested the banks not to exceed. For a time, these recommendations were supported by a 1 per cent currency reserve ratio. Whenever the National Bank has set credit expansion guidelines for the banks, the competent

supervisory authorities have made similar regulations with regard to other financial intermediaries. The two-layer discount mechanism (IRG and National Bank) in which two sets of discount rates are used at each level, gives the monetary authorities greater flexibility in controlling the volume, composition, and cost of central bank credit, while a safety valve is provided through secured advances for very short periods.

Belgium is a clear example of the inadequacy of the discount mechanism in a small country to control domestic liquidity in the face of strong foreign and international influences. The new control tools have been used sparingly (thus the highest reserve ratio imposed was 1 per cent of deposits). While discount and other domestic operations have usually tended to offset effects of international factors in bank liquidity, the total contribution of reserves of foreign origin to bank liquidity (mostly related to government borrowing) in the period 1960-66 has by far exceeded the volume injected by discount operations.

II. INSTITUTIONAL FRAMEWORK

The organic law of the National Bank of Belgium dates back to 1850 when it was founded as a joint stock company. Since 1935 the Bank has also offered some central banking services to Luxembourg (which joined in economic union with Belgium in 1921), but these have been only partially used. The National Bank's activities have been gradually modified by various laws and royal decrees adopted since the end of 1938. The most important were the 1948 laws, under which the government acquired half of the capital stock of the central bank and which introduced important changes in the Bank's organizational structure.

The National Bank possesses most of the usual central bank powers. The bank's discounting power is, however, limited to maturities of four months or less, and its open market powers are circumscribed by legal limitations on the Bank's holdings of government debt.[1]

Special official institutions, participate in the actual operation of three of the main instruments of monetary policy, i.e., rediscounting and lending on collateral, open market operations, and the setting of various minimum liquidity and reserve ratios. In the field of rediscounting, the central bank determines policy, but the Institute for Rediscount and Guarantee (IRG) operates as a primary discounting facility for certain credit instruments. This latter institution, whose capital is supplied by the commercial banks, operates as a para-governmental organization, under a board of eight members appointed by the government.[2] It was established in 1935 in an attempt to prevent a repetition of the difficulties of the early 1930's, when the banks were unable to meet demands for cash by rediscounting with the central bank because much of the paper they held was ineligible for rediscount, for maturity or other reasons.

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1. The limit, set in an agreement between the Bank and the government, is B.F. 44,333 million (including 34 billion representing consolidated war debts), plus an amount equal to the Bank's capital, reserves, depreciation, and pension funds (in mid-1967 this amounted to B.F. 5,510 million). This ceiling is to be raised by B.F. 6.2 billion in Sept. 1968 and will be reviewed after three years. There are also provisions for a supplemental credit line in certain contingencies, such as a heavy postal check withdrawals.

2. While there is no statutory requirement that any of these members shall be representatives of the National Bank, at the moment three of the board members in fact are.

Bank operations are supervised by the Banking Commission. Public credit institutions are under the supervision of the Minister of Finance, and private savings banks under that of the Central Small Savings Office (Office Central de la Petite Epargne), of which the Governor of the National Bank is the president. Liquidity and reserve ratios are imposed by the Banking Commission, after governmental approval; the National Bank makes recommendations for those ratios which are set with a policy objective. Credit ceilings have been imposed on a "voluntary" basis since 1964 by the National Bank on the deposit banks and by the Finance Ministry on government credit institutions and insurance companies. Ceilings for lending by savings banks are set by the agency supervising this sector.

The Securities Stabilization Fund was established in 1945 to regulate the market for long- and medium-term government securities. At a later date, the Fund's power to engage in open market operations was extended to short-term government paper. It is jointly managed by the National Bank and the government. Whereas, in the first few years, the Fund financed itself primarily by borrowing on the day-to-day loan market, since 1957 it has been issuing its own securities to commercial banks and, more recently, to other financial institutions.

The Banking Commission was established in 1935, but its authority to set capital and liquidity ratios was first used in 1946. The liquidity ratio, which was designed to freeze bank claims on the government resulting from World War II was eliminated in 1962; since then a reserve ratio has been intermittently imposed by the Commission.

The extent to which the specialized agencies can expand rediscounts and open-market purchases without involving central bank credit,

directly or indirectly, is of course limited. By providing highly liquid assets to banks and other credit institutions and by acquiring and trading in short- and medium-term commercial obligations (in the case of the IRG) or government obligations (in the case of the Fund), the IRG and the Fund have undoubtedly contributed to the development of the money market and the markets for commercial paper and government securities in Belgium. Nevertheless, the ability of the IRG and the Fund to finance their operations outside the central bank--in the day-to-day market, for example--is immediately dependent on bank credit and ultimately on central bank credit. In Belgium, where about 50 per cent of the money supply consists of currency issued by the central bank, the banks have exceptionally little leeway for credit expansion without the support of the central bank. In fact, in recent years IRG and Fund operations have been supported indirectly by the central bank in one way or another.

The private banking system consists of about 80 commercial banks; the three largest, Société Générale de Banque, Banque de Bruxelles, and Kredietbank, are country-wide branch systems that account for two-thirds of all commercial banking assets. There are several medium-sized banks (such as Banque de Commerce and Banque Lambert) and a few small banks which are of importance in specialized fields, such as the diamond trade, public works, industrial finance, and consumer credit.

Public financial institutions include the government-operated postal giro system, which has substantial deposit liabilities, and a nationwide public savings bank (Caisse Générale d'Epargne et de Retraite). The latter channels savings of individuals into government

bonds, construction, and medium- and long-term loans to industry, while the former serves exclusively as a source of Treasury financing. Crédit Communal de Belgique makes loans to local governments on the basis of deposits of municipal funds, but more than half its resources are obtained by issuing bonds. Finally, the Société Nationale de Crédit à l'Industrie (SNCI) raises funds by issuing government-guaranteed bonds to make medium- and long-term loans to industry.

These public credit institutions, whose combined assets are about equal to those of the commercial banks, have an important impact on the money market and on banking practices. Since they bank exclusively with the National Bank, their operations affect directly the credit base of the commercial banks. This impact is mitigated, however, by the public institutions' sizable purchases of bills and acceptances, originated by the banks, and placement of free balances in the day-to-day market. Competition from public credit institutions has caused the banks to enter new fields; for example, the success of the postal giro system has stimulated the banks to broaden their branch banking facilities, and the thriving term loan business of the SNCI has led to expansion of medium-term loans to industry by the commercial banks.

III. THE DISCOUNT MECHANISM

The National Bank extends credit to the commercial banks, the IRG, and to a number of other government credit institutions, largely by rediscounting commercial bills and bankers' acceptances. Trade bills must bear three Belgian names (including one Belgian bank) and meet the Bank's quality and maturity standards. Rediscounts are made for a minimum of ten days, and discounted bills are kept until maturity, but these provisions do not apply to rediscounts for the

benefit of the IRG. The Bank's lending rates distinguish (as of the end of 1966) seven categories of discountable paper (depending on certification and payment provision status) and include three different rates on advances.

The discounting procedures provide for a prior certification for bills and acceptances arising from foreign trade, which assures eligibility for rediscounting when the bill comes within 120 days of maturity (the maximum term legally permitted for central bank discounting). The Bank's review is designed primarily to assure: (a) that an identifiable commercial transaction is covered by the bill, and (b) that the term of the bill is consistent with the period of time needed to complete the underlying transaction which may range up to several years.

Discount quotas are set for individual banks on the basis of their capital and reserves, separately for certified and other bills.[1] As a matter of fact, quota ceilings have been reached in exceptional circumstances only. The National Bank has almost never refused to discount bills satisfying the qualitative eligibility requirements. As a matter of policy, the National Bank does not do any direct discount business in Brussels with private firms, but it does engage in discounting in most of its agencies, where special discounting committees consisting of wealthy individuals not only scrutinize, but also endorse (for a fee) the paper offered.

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1. They are computed as multiples of capital funds for the two main categories of discountable paper: domestic commercial bills and foreign trade bills and acceptances. The quota for certified bills is communicated to the banks.

Advances provide liquidity at a higher cost and for very short periods only. Advances to banks against collateral of government securities (including Treasury certificates and certificates of indebtedness of the Securities Stabilization Fund) accounted in recent years for less than 5 per cent of total central bank credit. These loans can be repaid after one day, and the central bank will not allow these credits to be utilized for more than a few days.

The IRG operates as a rediscounting agency for certified bills and acceptances. It finances these operations in part by funds borrowed (with government guarantee) from the day-to-day money market as well as by rediscounting eligible paper with the central bank. It purchases (or rediscounts) bankers' acceptances and trade bills certified by the central bank within two years of maturity; for bills within the 120-day limit, it offers more favorable terms than the central bank. It also provides the third name necessary to make the paper discountable at the central bank. Prior to 1962 a very large proportion (85 to 90 per cent) of bills and acceptances certified by the National Bank were offered to the IRG. Since 1962, when the high liquidity ratios which had required large bank holdings of government securities were eliminated, banks gradually found themselves able to retain some eligible paper for longer periods in their own portfolios, sometimes discounting it as it approached maturity. Nevertheless, in 1966 approximately 70 per cent of paper certified by the National Bank was still originally acquired by the IRG.

The IRG also makes a secondary market (as an intermediary) for commercial paper, primarily not certified by the National Bank, with maturities ranging from a few days to five years. Some of the paper traded in this market meets the requirements of the National Bank and therefore could be eligible for rediscount with the central bank. The IRG operates within a ceiling for its holdings of non-certified paper and promissory notes of banks. The IRG acts as broker for 30 to 40 per cent of all paper offered to it, which it places with deposit banks and public credit institutions, and as principal for the rest.[1]

The IRG finances its operations by borrowing in the day-to-day market, by rediscounting with the central bank, and by selling outright and under repurchase agreements bills of long maturity.[2] It alone amongst the money market participants, is a borrower only. Deposit banks are usually small net lenders; other government and

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1. The IRG also extends credit lines to banks for general use and to finance manufacturing operations, customers receivables, and public works. This was originally one of its main purposes, but its rediscount business has grown in the postwar period to become its principal function. The ceiling for these credits, which are not discountable at the National Bank, established by the directors of the IRG, was at the end of 1966 10.5 billion Belgian francs. Between 1958 and 1964, less than 10 per cent of these credits were taken up; in 1965 and 1966 the proportion increased, reaching 30 per cent for the latter year. The IRG charges 1/2 per cent commission for these credits and remits half of this fee for unused credits.

2. Financial commitments of the IRG are limited by the amount of the government guarantee on IRG obligations, which now stands at B.F. 20 billion; this guarantee covers not only borrowing in the day-to-day market but also contingent liabilities created by credit lines extended to banks, whether or not taken up by them, liabilities under repurchase agreements and, most important, the contingent liabilities inherent in its endorsement of commercial bills and bankers' acceptances rediscounted with the central bank.

quasi-governmental financial institutions are on both sides of the market, but are heavy net lenders; the Securities Stabilization Fund is sometimes a substantial lender and sometimes a substantial borrower.

Of the bills and acceptances acquired by the IRG and not subsequently sold in the market, the proportion rediscounted with the National Bank has fluctuated in recent years between 32 and 73 per cent. The cost of credit available from the IRG tends to follow market rates. When the IRG has to increase its dependence on central bank financing, its discount rates approach more nearly the official discount rates. IRG intermediation adds considerable flexibility to the cost of central bank credit and the volume of central bank credit made available to the banking system directly or indirectly. For example, between July 6, 1964 and June 3, 1966, the official discount rate was unchanged, but the schedule of IRG rates was altered 14 times.

The discount rates set by the National Bank and the IRG (which adjusts its rates to conform with central bank rates, albeit sometimes with a lag) occupy key positions in the short-term interest rate structure. Since the deposit banks tend to rediscount about one third of their portfolios of bills and acceptances, rediscount rates in the secondary market move with the rates set by the central bank and the IRG. In fact, banks often quote interest rates in terms of the National Bank discount rate. Bank deposit rates are set by agreement between the National Bank and the Belgian Banking Association.

IV. RELATION OF THE DISCOUNT MECHANISM TO OTHER MONETARY CONTROL TOOLS

The main monetary tools now in use, in addition to the discount mechanism, are open market operations, reserve ratios, foreign exchange operations, and credit ceilings.

Since 1959, the authority of the Securities Stabilization Fund to conduct open market operations has been extended to short-term securities with a view to influencing overall monetary operations (it was limited to medium- and long-term securities previously). The Fund influences liquidity of the monetary system by increasing or decreasing its borrowing from the National Bank and by making or withdrawing deposits with that Bank. While its open market operations are often quite large, the extent to which they inject or withdraw central bank credit into or from the banking system is not. These operations have been of considerably smaller magnitude than discounting, save in 1961.

Reserve ratios were introduced early in 1962, as one of the moves to increase the central bank's control powers. The Banking Commission has agreed to set required cash reserves of up to 20 per cent of sight and short-term deposits and up to 7 per cent of other liabilities and savings deposits, if requested to do so by the central bank. A one per cent ratio was in effect from mid-1964 to mid-1965.

Foreign exchange operations have also been experimented with as a means of influencing domestic liquidity. In 1966 for instance, the National Bank sold on the "free" foreign exchange market part of the proceeds of the government's foreign borrowing in order to reduce the domestic liquidity affects of such borrowing by encouraging capital outflows. Most outward capital flows and certain

other payments must be effected via the "free" as opposed to the "official" market. Operations of this market, which is fed by the proceeds of inward capital flows, set limits to capital outflows; any official additions to the supply of "free" foreign exchange might encourage capital outflows, but it is not clear how effective an incentive this proved to be when tight money markets at home were favoring borrowing abroad.

Beginning in January 1964 the central bank began to apply direct restrictions on bank credit expansion by setting "voluntary" credit ceilings for individual banks (they were in effect from January 1964 to July 1965 and again from April 1966 to June 1967), while related ceilings on other credit institutions were set by other authorities, as indicated on page 5. In general, however, moral suasion has not been entirely effective.

C A N A D A

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I. INTRODUCTION

In Canada, monetary policy is a major expression of official economic policy which has an influence on the level of aggregate demand and on flows of capital into and out of the country. Economic developments and credit conditions in the United States are of considerable importance for Canada, and the relationship of its interest rates to those of the U.S. is an objective of, but also a limiting factor on, monetary policy.[1] Interest rate spreads do, however, vary considerably both at the short and at the long end. There is also considerable scope for the occurring of differences in monetary conditions through the effect of variations in the mix of monetary, fiscal and debt management policies on the availability of money.

Having well-developed money and capital markets and a centralized banking system that operates on the basis of stable cash ratios, the Bank of Canada employs open market operations and the discount mechanism as its principal monetary policy tools. However, for a number of reasons, discussed below, the banking system normally makes use of the discount window only as a last resort; the most important instrument of monetary management is central bank open market operations. The principle underlying discount policy in Canada is well stated in

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1. Furthermore, since July 1963, as a counterpart for the exemption from the U.S. Interest Equalization Tax on new issues of long-term securities and exemption from guidelines affecting the amount of investment by U.S. financial institutions in Canadian securities, an agreement between the two countries sets a target (which has been modified several times) for limiting the level of Canadian international reserves.

the following excerpt from the submission of the Governor of the Bank of Canada to the Royal Commission on Banking and Finance:[1]

> The present arrangements under which such advances may be obtained are designed to limit the Bank's role as lender of the last resort to exceptional circumstances and to encourage the chartered banks to use, whenever practicable, alternative methods of adjusting their cash reserves in the markets such as calling day-to-day loans or selling securities.

The discount window has never been an important and continuous source of funds for the Canadian banking system, except in particular circumstances of short duration. Several reasons account for this fact, the chief one being the ease with which the banks can adjust their cash positions by calling loans from money market dealers, selling securities in a well functioning money market and, to some extent, by converting short-term foreign assets into Canadian dollars. Other reasons are the concentration of banking reserves in eight branch-bank systems so that cash losses of some branches are offset by the cash gains of others; the method of computing cash reserve requirements, which gives the banks considerable flexibility in adjusting their reserve positions; and finally, some reluctance to borrow toward the end of the reserve period because such borrowings are revealed in the month-end statement of assets and liabilities published for individual banks.

The conduct of open-market operations is facilitated by the fact that government securities are available in a broad range of maturities. They are widely held and traded by banks, other financial institutions,

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1. Bank of Canada, Evidence of the Governor of the Bank of Canada before the Royal Commission on Banking and Finance, May 31, 1962, p. 148.

and the general public, and constitute the most important asset in the Bank of Canada's own portfolio. Additional tools of monetary management are shifts of government balances between the chartered banks and the central bank,[1] and "moral suasion". The most significant use of the latter tool took place in 1956 when the banks voluntarily agreed to maintain a 7 per cent secondary liquid asset ratio. Also, since the Bank of Canada has no legal power to control credit selectively, it has on occasion exerted a selective influence on credit extension through moral suasion.

II. THE INSTITUTIONAL FRAMEWORK

The Bank of Canada, the youngest central bank among those covered by the present study, is vested with customary central banking powers. It is fully owned by the Canadian Government and its Board of Directors is appointed by the government.

The banking system is highly centralized. Eight chartered banks form the nucleus of the commercial banking system and operate nearly 6,000 branches and/or offices throughout the country. In addition, the financial system includes a variety of other institutions which carry on certain forms of banking business: savings banks, mortgage loan companies, credit unions and consumer credit companies, some operating nationally, some serving whole provinces, others more limited areas.

Until July 1967 the law required the chartered banks to hold vault cash or central-bank deposits equal to 8 per cent of their total

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1. The manipulation of government balances by the Bank of Canada--with the approval of the Finance Minister--provides a technique for smoothing fluctuations in bank liquidity resulting from payments into and out of the government's account at the central bank and, in addition, serves as an important instrument for short-term adjustments in bank reserves. The share of government deposits placed with each bank is determined by a formula worked out by the banks themselves.

Canadian dollar deposit liabilities.[1] Under a voluntary agreement with the Bank of Canada, these banks held also an additional secondary reserve, consisting of day-to-day loans and Treasury bills equal to 7 per cent of their total Canadian dollar deposit liabilities, thus making for a "required" liquidity ratio of 15 per cent. In addition, the chartered banks normally held a liquidity cushion consisting of additional Treasury bills, day-to-day loans, other loans to investment dealers and brokers callable on demand, and a large portfolio of Government of Canada bonds concentrated mostly in the shorter maturity area. Under the new Bank Act which became effective May 1, 1967 the required reserve ratio (still to be held in the form of vault cash or central-bank deposits) has been raised to 12 per cent for demand deposits and lowered to 4 per cent for time-deposit liabilities, and the Bank of Canada's power to vary them has been removed. The Bank of Canada was given the power to require the banks to maintain their statutory cash requirements over a semi-monthly instead of monthly period. Also, the Bank of Canada has been empowered to impose a variable secondary liquidity ratio ranging up to 12 per cent of total Canadian dollar deposit liabilities, to be held at the commercial bank's discretion in any mix of cash reserves in excess of the mininum requirements,

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1. Actually, the Bank of Canada had the power to raise the cash reserves to 12 per cent, but never used it. There is provision for a penalty of 10 per cent per annum on any cash reserve deficiency but the banks are always careful not to have deficiencies.

Treasury bills and day-to-day loans; the Bank of Canada has now set this ratio at 7 per cent.[1]

There is no equivalent to the Federal funds market in Canada. The chartered banks normally adjust their cash reserve positions by calling in day-to-day loans or by disposing of holdings of government securities. These banks have also some scope for obtaining temporary liquidity from foreign sources by drawing down their foreign assets (consisting mostly of call loans, short-term securities, and deposits with foreign banks) or by increasing their short-term foreign currency liabilities and converting the proceeds into Canadian dollars. However, their elbow room to use this channel as a source of domestic liquidity is limited to some extent by the tradition of keeping their net foreign assets position roughly in balance.

III. REDISCOUNTS AND ADVANCES

Central bank credit is available to the chartered banks and the two federally-chartered Quebec Savings Banks through rediscounts and collateral advances, and to money market dealers,[2] under repurchase agreements. The Bank of Canada has the power to make short-term advances to the federal and provincial governments, but in practice, such advances have been extremely rare.

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1. As with the old Act, deposit liabilities in currencies other than Canadian dollars are not subject to explicit reserve requirements. The new Bank Act (article 72) states that the banks must maintain "adequate and appropriate assets against liabilities payable in foreign currencies."

2. There are about 15 money market dealers including the largest investment dealers, which have entered into arrangements giving them the right to obtain central bank accommodation at their initiative.

Availability of central bank credit

Although rediscounting of commercial paper is an important feature of Canadian banking operations, the commercial banks as a matter of practice obtain central bank accommodation through collateral advances because they hold a large portfolio of government securities which can be used as collateral.

The Bank of Canada has the power to make advances to commercial banks and to Quebec Savings Banks on such terms and conditions as it desires. The lending authority of the Bank covers a wide range of paper acceptable as collateral,[1] but in practice all advances have been secured by government paper.

The Bank of Canada does not put an explicit ceiling on commercial bank borrowing from the central bank. However, it can reduce the attractiveness of such borrowing by progressively increasing the discount rates on consecutive advances in any one month. The first advance to a chartered bank in any calendar month (up to a certain confidential amount specified for each bank) is made at the official discount rate, which is a penalty rate in that it has always been above the rates on day-to-day loans and short-term Treasury bills. A second advance in the same calendar month, or a renewal of an advance, or an advance in excess of the specified amount, may bear

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1. Acceptable collateral, as defined in the Bank of Canada Act, consists of federal and provincial government securities; United Kingdom securities within six months of maturity; United States Government securities; most bills of exchange and promissory notes endorsed by a chartered bank; Canadian municipal securities; securities issued by a local school authority (corporation or parish trustee); mortgages; gold or silver coin or bullion or documents of title relating thereto.

interest at a negotiated rate above the discount rate. Advances are made and renewed for multiples of seven days and the banks are charged the full interest for seven days even if repaid earlier.[1]

Central bank credit to money market dealers

Money market dealers may obtain central bank accommodation by selling government securities with a maturity of 3 years or less to the Bank of Canada under an agreement to repurchase them within a maximum period of 30 days. The price at which these securities are resold to the dealers is such that they incur a cost equal to the so-called money-market rate (see next paragraph) or the discount rate, whichever is lower. In contrast to the chartered banks, money market dealers are not required to pay interest for any minimum period of time and, in practice, the agreements are usually outstanding for only a day or two. They are given lines of credit on the basis of their volume of business, inventories, and alternative sources of financing. The credit lines of dealers were designed in such a way as to assure liquidity of the day-to-day loans through which the commercial banks provide finance to the dealers.

Relationship of the discount rate to banks' deposit and lending rates

For the first twenty years of the Bank of Canada's operations, the discount rate was of little significance and was changed only three times. However, after a short-term money market developed in 1954 and the use of advances rose substantially under tightening credit conditions, the Bank of Canada made frequent increases in order to keep the

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1. The terms of access to central bank credit will be reviewed before the semi-monthly reserve averaging period becomes effective.

discount rate above market rates. In 1956, the Bank of Canada shifted to an automatic technique for setting the discount rate known as the "tied rate", which is unique in the history of central banking. During the period 1956-62 the Bank of Canada's discount rate was fixed weekly at a margin of 1/4 of a percentage point above the latest weekly tender rate for 91-day Treasury bills.

The tying of the discount rate in Canada reflected a central bank philosophy that the discount rate should not be used to lead or influence market rates or as a means of indicating the views of the central bank with regard to changes in economic conditions or of a new posture in monetary policy.[1] The main reason for tying the discount

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1. The Bank of Canada wanted to attach no policy significance to these adjustments in bank rate, and hoped to minimize any disruptions to the economy that changes or expectations of changes might cause. According to a press release issued at the time of the institution of tied rates:

> ...the bank rate is not changed arbitrarily or with a view to bringing about other interest rate changes. On the contrary, it has been desired since the development of the money market ...that the bank rate should be kept in line with other interest rates and should move when they do, but not usually otherwise. The present technical change in the method of setting the bank rate from week to week is intended to clarify this relationship and remove what has evidently been a source of some public misunderstanding.

Four years later this opinion still prevailed. The Governor of the Bank of Canada wrote in the 1960 Annual Report:

> It will be apparent that there is no past history in Canada of having changes in the bank rate made with a view to influencing other interest rates, or as a means of indicating the views of the central bank with regard to changes in economic conditions or monetary policy. The Bank's view has been that moving the bank rate would not be the best method of giving such indication, which if they were to be given at all, would be the subject of public statements.

By pegging the bank rate in this manner, the Bank of Canada appeared entirely willing to avoid using it for policy purposes. This impression was convenient at a time when monetary constraint was being aggressively used for the first time, and when the Bank came under strong criticism for causing the substantial rise in Canadian interest rates.

rate to the weekly bill tender rate in 1956 was to assure its penalty character; the resulting gradual changes in the cost of central bank credit were thought to be preferable to frequent changes by discretionary amounts. Tying permits raising the cost of central bank credit unobtrusively in situations when it might be difficult to obtain support for a discretionary rate increase. Indeed, the tying technique was introduced following a period in which six successive increases occurred within 14 months. However, rigid linkage amounts, in effect, to giving up direct control over the discount rate and substituting for it indirect control of the market (Treasury bill) rate to which it is tied. Since the Bank of Canada could substantially influence the bill rate (and thus the entire structure of short-term rates) through managing cash reserves and by varying the amount of such bills it purchased at the weekly auction, it kept a good deal of indirect control over the rate which automatically determined the discount rate. During the period in which the discount rate was tied, the Bank of Canada had a substantial portfolio of Treasury bills, and, in effect, did not follow a neutral policy (by merely rolling over its bill portfolio).

While indirect management of the discount rate proved effective in normal periods, it was considered inadequate to achieve an immediate, substantial increase in the cost of money when it appeared necessary to the authorities in June 1962 to counteract a threat to the exchange value of the Canadian dollar, and it was abandoned at that time as part of a program to deal with a foreign exchange crisis. The Bank of Canada has concluded since that time that the fixed rate provides an important element of stability in the money market rate

structure that had been missing during the era of the tied discount rate. Discussions between the Bank of Canada and the government at a time when changes in the rate are contemplated may on occasion bring consideration of monetary policy into sharper focus. At other times, changes in the discount rate merely confirm basic policy changes that have been having effects on market interest rates for a considerable time.

Since the reintroduction of a fixed discount rate in June 1962, the Bank of Canada has had, in effect, two discount rates. The Bank extends advances to the chartered banks at the fixed rate, and enters into repurchase agreements with money market dealers at the money-market rate (which is still set weekly by the central bank at 1/4 of a percentage point above the 91-day Treasury bill rate) or at the fixed rate, whichever is lower. Since the fixed rate has always been kept above the 91-day Treasury bill rate, money market dealers either way obtain central bank accommodation at what is in fact a penalty rate.

The rationale behind the use of a double-base discount rate is that it gives the central bank more flexibility in its operations. There may be times when, for example, the central bank may wish to see short-term rates move lower without the necessity of taking an overt rate action that might be construed as signaling a shift in the basic direction of monetary policy. In these circumstances, the use of a separate money-market discount rate provides the money market dealers with the assurance that they will obtain central bank credit close to current (and declining) money-market rates rather than at the unchanged (and higher) Bank rate which would tend to counter the

downward pressures on short-term rates. Obviously, if in times of rising interest rates the spread between the fixed discount rate and the Treasury bill rate becomes less than 1/4 per cent, the dealers will opt to get cheaper accommodation at the fixed rate, and therefore the double-base discount rate would in effect become a single rate.

The fixed discount rate was set at 6 per cent in 1962, following a serious foreign-exchange crisis, as part of a comprehensive stabilization program designed to restore balance-of-payments equilibrium. Subsequent changes in the Bank of Canada's discount rate have been made quite frequently, for both internal and external reasons, including the interest-sensitivity of private capital flows between the U.S. and Canada.

There is no direct link by law or custom, and therefore no fixed spread, between the central bank discount rate and commercial bank loan and deposit rates. However, until May 1, 1967 bank lending rates were limited under the Bank Act of 1954 to a rate of interest or discount no higher than 6 per cent per annum on domestic loans.[1] Thus, rate movements in the money and capital markets above 6 per cent tended to cause pressures on the chartered banks, which on such occasions were faced with difficult problems of nonprice rationing.

Testifying at the Royal Commission hearings in 1962-63, Governor Rasminsky opposed a direct statutory linkage between the central bank discount rate and commercial bank lending or deposit rates, pointing out the disadvantage of interest rate rigidities in

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1. To some extent the banks had gotten around this limitation by various service charges.

financial markets. Under the new Bank Act effective May 1, 1967, the ceiling on commercial bank lending rates was lifted to 7 1/4 per cent for the balance of the year, and was eliminated altogether after January 1, 1968.

Quantitative role of central bank credit

Between 1958 and 1967, the yearly averages of commercial bank borrowing from the central bank ranged from 0.001 per cent to 0.26 per cent of the chartered banks' required reserves. During the same period, the yearly averages of government securities held by the central bank under repurchase agreements with money market dealers ranged in absolute amounts from Can. $2.4 million to Can. $7.6 million, and as a ratio of chartered banks' required reserves from 0.24 to 0.69 per cent. During the same period, the ratio of commercial bank borrowing at the central bank to their loans to the private sector averaged less than 0.03 per cent.

F R A N C E

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I. INTRODUCTION

France, like most other Continental European countries in which international economic transactions play a major role, has found the regulation of the cash base of the banking system complicated by the effect of external influences on bank liquidity. Since 1958, the expansion of the cash base of the banking system in France has been brought about very largely by increases in official holdings of international assets. In the six years ended December 1966, when there was a reversal in France's external payments position, official holdings of international assets trebled and accounted for nearly four-fifths of the expansion in the cash base. In these circumstances, the curtailment of inflows of foreign funds was a major policy objective which the central bank fostered by keeping the banking system supplied with sufficient cash to maintain Paris money rates low relative to those in major centers abroad. Prior to that time, the cash base of banks had been enlarged mainly by discounting at the Bank of France, or by some very large loans by the Bank to the government.

Due to the difficulty of reducing or offsetting bank liquidity supplied by surpluses on international transactions, French monetary authorities have recently relied heavily on direct controls over bank credit expansion to control inflationary pressures. Open market operations of the kind employed in the United States have never been a factor in supplying funds to the banks in France. A major objective of French monetary policy has also been to influence foreign exchange flows implemented by regulating interest rates on the Paris money market. For this purpose, policy instruments developed to control discounting were used and elaborated upon. Such success as has been

achieved in restraining inflows of foreign funds is attributable not so much to regulation of the foreign exchange position of banks or prohibition on paying interest on foreign-owned franc balances as to employment of other monetary policy instruments to minimize money market stringencies that might attract funds from abroad.

Because the existing monetary policy instruments were not well adapted to the relatively new situation of large payments surpluses, and for other reasons, French monetary authorities have made important changes in policy instruments and banking regulations in the last several years. Cash reserve requirements were introduced to supplement and eventually to replace required liquidity ratios. The number of channels for central bank credit has been somewhat reduced and the related structure of rates simplified. Efforts are being made to reduce the importance of rediscounting commercial bills as a means of obtaining Bank of France credit. Efforts are also being made to develop an active market in short-term government securities so that the Bank of France can engage in open market operations, which have long been inhibited by long-standing taboos against central bank lending to the government as well as because of the underdeveloped state of the money and capital markets. All of these changes affect in some way the regulation of rediscounting at the Bank of France, which is basic to the French system of monetary controls.

Rediscounting at the Bank by the banking system, which includes public and semipublic financial institutions, is restricted by a system of ceilings and liquidity ratios, and by a prior authorization procedure. There have been numerous changes since the early fifties in provisions designed specifically to achieve quantitative limitations on expansion of bank credit.

Since discounting within ceilings is considered a right rather than a privilege, commercial banks use fully what is in effect a line of credit at the central bank. Beyond this line all rediscounts are made at a much higher rate--currently 2 1/2 per cent above the ordinary discount rate.[1] In recent years the Bank of France has supplied liquidity to banks with the objective of keeping market rates below this ultimate penalty rate and within a range compatible with foreign exchange policy objectives.

For a long time, flexible liquidity ratios, under which banks were frozen first into Treasury bills and later also into a wide variety of paper that was exempt from discount ceilings, were used as an important tool to control access to the discount window and to facilitate adjustment of the banks' cash positions. Until recently, they were manipulated jointly with special techniques at the discount window developed to avoid end-of-month stringencies. One of such ratios is still in force, but it is scheduled to be abolished gradually.

The discount mechanism has been also used as a means of selective credit control, in particular to support medium-term financing of housing and industrial equipment expenditures and exports. Qualitative credit controls in France make use of moral suasion and a procedure of prior authorization by the Bank of France to make certain credits automatically eligible for rediscount.

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1. From 1951 through 1967 banks could rediscount up to 10 per cent of their ceiling at an intermediate penalty rate called "hell" rate. The highest levels at which the two penalty rates ("hell" and "superhell") were set were 8 and 12 per cent, respectively, in 1958 when the discount rate was 5 per cent.

II. INSTITUTIONAL STRUCTURE

Monetary authorities

Responsibility for formulating monetary policy is shared by the Bank of France and the National Credit Council (N.C.C.), which was established by the same 1945 law that nationalized the Bank of France and the four largest commercial banks. The President of the N.C.C., which has 43 members, is the Minister of Finance. However, the Governor of the Bank of France is the de facto head of the Council and generally the presiding officer at its meetings. In addition to these two officers, the N.C.C. consists of representatives of several government departments, public and semipublic financial institutions, and various economic and social interests; it has its own small secretariat drawn from the staff of the Bank of France.

Technically, the Bank of France has primary responsibility for decisions affecting its own operations only--mainly related to rates and terms for rediscounts and advances. In these matters the N.C.C. may only advise the Bank. On the other hand, matters that require action by the banks, as for example, maintenance of liquidity ratios, are technically the responsibility of the Council which is concerned with banking practices. In practice, the Council acts through the agency of the Bank of France.

In addition to being responsible for monetary and banking control measures, the N.C.C. provides a medium for coordination of views on the objectives and techniques of monetary policy. In this process, leadership is provided by the Bank of France, but ultimate responsibility rests with the government.

A similar working relationship obtains between the Bank of France and the Banking Control Commission, which was set up by the nationalization law primarily to establish rules for protecting the liquidity and solvency of the banks, and to supervise the adherence by banks to banking regulations. The members of the Banking Control Commission are the Governor of the Bank of France, who is its ex officio president, two representatives of the government, one representative of the commercial banks and one representative of bank employees.

Structure of the banking system

The principal credit institutions that are classified as banks are the banques de dépôts (deposit banks), banques d'affaires (investment banks), banques populaires (cooperative credit societies catering to the banking needs of small manufacturers, traders, and artisans), caisses de crédit agricole (agricultural credit cooperatives), and the Banque Francaise du Commerce Extérieur (French Bank for Foreign Trade) which finances foreign trade on its own account and also assists other banks in such financing. The deposit, investment, and long- and medium-term credit banks are under the jurisdiction of the Banking Control Commission and are known as the "registered banks." Their assets comprise nearly 70 per cent of the assets of the banking system as a whole.[1]

The former distinction between deposit banks, which could not accept deposits with a maturity of more than two years, and investment

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1. At the end of 1966 the Banking Control Commission supervised 250 French banks in metropolitan France with assets of 146.7 billion francs ($29.7 billion), of which 197 were deposit banks, 33 were investment banks, and 20 were long- and medium-term credit banks. In addition, the Banking Control Commission had under its jurisdiction 10 French banks operating overseas, 43 foreign banks operating in France, and 12 banks operating in Monaco.

banks, which could not accept deposits for a shorter maturity, was virtually eliminated on January 1, 1966. (The two types of banks remain, however, subject to different regulations with regard to investments in shares.) The deposit banks perform all, and the investment banks some, of the functions that would be classified in the United States as commercial banking, but the latter also engage in activities undertaken by investment banks in this country. The seven discount houses are classified as deposit banks. The four largest deposit banks were nationalized in 1945, and two of them were merged recently.

Savings institutions (Caisse d'Espargne) have no direct access to central bank credit. However, nearly all of the funds of the savings institutions are deposited with the Caisse des Dépôts et Consignations which reinvests them in approved securities, so that in the normal course of their business, no need for rediscounting savings bank assets arises. The Caisse also manages the liquid funds of the social security system and pension fund reserves. It has access to central bank credit. The banques populaires and the agricultural credit cooperatives have their own central rediscount institutions[1] (the Caisse Centrale des Banques Populaires and the Caisse Nationale de Credit Agricole, respectively).

Several semipublic intermediate financing institutions play a very important role in the French banking and credit system and have rediscount privileges at the Bank of France. They include the Credit National, which provides long- and medium-term financing to public and

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1. Additional financial establishments that may make loans, but do not accept deposits from the public, include the following main categories: sociétés financieres (financial societies, which do mainly an investment management business), stock brokerage houses, and instalment credit firms.

private enterprises from funds acquired primarily by the issuance of bonds; the Credit Foncier de France, with its subsidiary, the Comptoir des Entrepreneurs, both of which grant mortgage credit from funds derived primarily by the issuance of bonds; the Caisse Centrale de Crédit Hôtelier, Industriel et Commercial, which provides medium-term credit for the banques populaires, and the Caisse Centrale de Crédit Coopératif, which is the central institution of nonagricultural cooperative credit institutions. Only the Comptoir des Entrepreneurs (which supplies credit to contractors of major public works projects) is a substantial discounter with the Bank of France of paper that it originates; the other institutions merely rediscount paper that has been previously discounted with them by banks or their member institutions. Thus, in effect, there is a two-tier discounting, with specialized discount institutions dealing with a large number of primary credit institutions, mostly of purely local significance, and rediscounting credits with the Bank of France, as needed; in some cases, they discount their own short-term notes drawn against a portfolio of discounted medium-term paper.

Indeed, an outstanding characteristic of the French banking system is its heavy reliance for liquidity upon rediscounting, either at the Bank of France or at the semipublic financial institutions. This circumstance had its origins in the traditional willingness of the Bank of France to rediscount freely, and the high proportion of cash in the money supply, which makes the banks quite sensitive to liquidity drains. All registered banks (see above) may in principle open a discount current account at the Bank of France, and in practice many banks have several such accounts distributed among their branches. The Banque

Francaise de Commerce Extérieur may also discount directly with the Bank of France. The banques populaires may have an account with discount facilities at the Bank of France, but individual agricultural credit cooperatives may not.[1]

Structure of liquid assets

The structure of short-term assets acquired by French banks depends to some extent upon the kind of business that they are permitted to conduct, upon the standards of eligibility for rediscounting and advances from the Bank of France, and the kinds of paper the Bank may purchase on the open market. Moreover, prior to their abolition at the end of 1967, two separate liquidity ratios imposed by the N.C.C., one prescribing minimum holdings of Treasury bills (planchers), the other a broader liquidity ratio (coefficient de trésorerie), constituted an additional and important tool of credit control (see below).

About 80 per cent of all commercial bank credit is extended in the form of discounted trade bills. Largely as a result of the heavy reliance of banks upon the Bank of France as a source of loanable funds, and the conditions imposed by the Bank for such accommodation, a major part of their business consists of discounting short-term bills. Bank credit is extended to the private sector largely in the form of discounts of commercial bills, acceptances, warrants, and cross endorsements of promissory notes, all of which are described in French banking statistics as "discount of bills." At the end of 1964, "private paper"

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1. For many years, the Bank has not accepted new private customers. It now has only about 800 accounts of nonbank, nonfinancial enterprises, and for about 15 years the Bank has also systematically discouraged the credit demands of these private customers.

(autres effets) constituted over 50 per cent of the total assets of registered banks. At the large deposit banks this ratio was closer to 60 per cent, and even for investment banks it was nearly 40 per cent. A considerable part of private paper consists, however, of loans to government-owned enterprises, such as railroads, aircraft factories, etc. Short-term government securities comprise about 7 per cent of total assets of registered banks, and cash and deposits with the Bank of France and the Treasury, 2 per cent of total assets. Most of the nonliquid assets of the deposit banks were advances and overdrafts. Customers are expected to use overdrafts to meet only marginal requirements because such credits cannot be the basis for obtaining central bank credit.

Other than resorting to the central bank directly, individual French banks can increase their domestic short-term (under one year) borrowing only through the Paris money market. The main suppliers of funds to the money market are the commercial banks, stockbrokers, the various semipublic institutions that manage large amounts of funds, as well as the Bank of France.[1] The banks lend their unemployed resources, and when rates are firm, rediscount at the Bank of France within discount ceilings for the purpose of supplying the funds so acquired to the money market. French banks may also borrow abroad.[2]

III. THE INSTRUMENTS OF MONETARY POLICY

During most of the postwar period a principal objective of monetary policy in France was to direct bank credit into approved uses and

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1. See pages 106-07.

2. Until January 31, 1967 they were required to maintain a balanced position in foreign exchange on spot and forward combined. Their borrowings of a foreign currency were required to equal loans in the same currency to either residents or nonresidents.

to control its expansion. In mid-1964, keeping money market rates below the level that would attract inflows of funds from abroad became another major objective. With the development of a current account deficit in 1966 the emphasis shifted to keeping capital from flowing out, and subsequently interest rate policy has been adapted to the state of the foreign balance.

At first French monetary authorities sought to control expansion of bank credit by restricting its monetization through ceilings on central bank credit and liquidity ratios. But in 1958 ceilings were introduced to control directly expansion of bank credit to the private sector. Such ceilings were in effect for about a year and again from February 1963 to June 1965. The suspension of formal limits on credit expansion was accompanied in 1965, however, by an admonition from the Governor of the Bank of France to the effect that the limits would be reimposed retroactively if credit expanded at too fast a pace.

Rediscount ceilings

Ceilings as a measure of generalized credit control on rediscounting at the Bank of France were introduced in September 1948. Originally, rediscount ceilings were associated with each bank's discount current account at the Bank of France, but were effectively restrictive for small banks only. The ceilings apply to rediscounts at the basic discount rate only. At first banks were required to bring their rediscounts within the ceilings only at the end of the month, but since 1951 they have been required to keep within the ceilings at all times.

Individual bank's rediscount ceilings were initially set at approximately the level of rediscounts outstanding on September 30, 1948. The global ceilings have risen subsequently because of adjustments in the

ceilings of individual banks, and on a few occasions the ceilings have been raised across-the-board for reasons of overall policy.[1] Currently, each bank's discount ceiling is fixed on the basis of a complex formula that takes into consideration mainly a number of quantitative factors (such as deposits, assets and capital accounts).

Several kinds of paper are exempt from rediscount ceilings: in particular, bills representing medium-term credit to finance housing, industrial equipment and exports (approved through the prior authorization procedure; see below), grain storage bills and short-term foreign trade bills. Although ultimately rediscountable at the Bank of France, most paper representing medium-term credit must be discounted first with one of the intermediate financing agencies. When the system making medium-term credit rediscountable at the Bank of France was first introduced in the early postwar years, it was expected that the intermediate financing agencies, which are collectors of savings, would hold the bulk of this credit to maturity. In the 1950's claims upon the resources of these agencies were so great, however, that the agencies were constrained to pass on to the Bank of France the bulk of the medium-term credit instruments discounted by them.

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1. Most notably, the rediscount ceilings were raised by nearly 25 per cent in the inflationary period of 1955-57 and then lowered by about 35 per cent in the second half of 1957 for the purpose of offsetting the monetary effects of new advances granted by the Bank of France to the Treasury at that time. From 1957 to the end of 1959 the rediscount ceilings were stable at a level of about 4.3 billion francs. Since 1959 the global rediscount ceilings have risen somewhat every year until at the end of 1965 they totaled about 7 billion francs.

The Bank of France requires as a condition for rediscounting that its prior authorization be obtained for bills representing purely financial transactions and for certain medium-term paper. The exemption from discount ceilings of certain categories of credit mentioned in the preceding paragraph served to promote certain activities by preferential credit arrangements. The institution of the coefficient de trésorerie (see below) was, in effect, a way of making these types of credit in practice not freely discountable at the Bank of France, for only paper held above the level required to satisfy the coefficient could be rediscounted outside the ceiling. In addition to exemption from discount ceilings, export credits have benefited from a preferential discount rate of 3 per cent since 1957. At the end of 1960, just before the inauguration of the coefficient, banks held nearly 5 billion francs of this paper discountable at the Bank of France outside of the ceilings, and were thus in a position to almost double the volume of their rediscounts without having to pay the "hell" rate. The coefficient forced the banks to hold about 90 per cent of this otherwise rediscountable paper in their portfolios, although the Bank of France, in exempting this paper from the ceilings, had given an implicit commitment to rediscount it.

Liquidity ratios

Prior to 1967, banks were not required to keep any particular cash reserves, but they were subject to two related liquidity ratios. Both of these ratios had essentially the same initial purpose: to force banks to hold assets that would otherwise have provided the basis

for an excessive expansion of credit, in the first case by rediscounting them or by letting the short-term government securities run-off, and in the second, by rediscounting at the Bank of France outside of ceilings.[1]

For nearly two decades a required liquidity ratio was used to immobilize large bank holdings of Treasury bills inherited in large part from World War II and early postwar deficits. The so-called Treasury "bill floor" (plancher) was instituted in 1948 and required banks to hold Treasury paper in an amount not less than 95 per cent of their holdings as of September 30 of that year, and to place 20 per cent of their subsequent increase in deposit liabilities in such securities. This rate was fixed at a uniform 25 per cent of deposit liabilities in 1956, and was reduced to 20 per cent in 1961. An improvement in government finances made it possible to gradually reduce (between 1961 and 1966) the Treasury bill floor requirement, which French monetary authorities long regarded as providing the Treasury with an inflationary source of financing. The floor was abolished effective September 1, 1967.

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1. For purposes of safeguarding the solvency of banks, a different agency, the Banking Control Commission, prescribes a ratio of liquid assets to short-term liabilities (rapport de liquidite). It defines liquid assets for this purpose as cash, deposits with the Bank of France and the Treasury, deposits with banks and correspondents (including call loans), Treasury bills, and similar securities drawn on or guaranteed by certain government agencies, such as the railways, bills and acceptances discountable at the central bank, coupons collectible and in suspense accounts, claims on foreign exchange dealers and stock brokers, subscriptions to securities, securities that are eligible to guarantee advances from the Bank of France, and other securities that are traded on the public securities markets. The last item may comprise at most only 5 per cent of short-term liabilities. This scheme was intended to apply to all classes of banks, but a specific ratio (60 per cent) has been prescribed only for the deposit banks. The investment banks are expected to be made subject to the liquidity ratio some time in the future.

In 1961, an additional liquidity ratio, the coefficient de trésorerie, was introduced.[1] It required the banks to hold a percentage of their deposit liabilities in certain liquid assets, including cash, Treasury paper held to meet the floor ratio, and just those kinds of paper that could be rediscounted at the Bank of France outside of the banks' ceilings. The coefficient had an upper limit of 36 per cent, and its lower limit was the floor ratio for Treasury bills but, in fact, the coefficient was varied only between 30 and 36 per cent. Thus, as the banks were allowed to reduce their holdings of Treasury bills, they were required to hold larger amounts of medium-term or other paper exempt from discount ceilings. The coefficient was a powerful tool for controlling access to the discount window; indeed, when in use it was regarded as the principal instrument for controlling the liquidity of banks. While the main purpose was to prevent excessive use of Bank of France credit, the ratio was frequently lowered by a few points in order to allow the banks greater access to the central bank in periods of tightness due to temporary factors, such as end-of-month cash drains. Such temporary reductions served to keep money market rates from rising above a level that would attract inflows of funds from abroad. While the liquidity ratio (coefficient de trésorerie) originally was intended both as a credit-rationing device (with preferential treatment for government securities) and as a quantitative credit-control device (since it limited the discounting of medium-term paper), in the recent past it was used primarily for

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1. Although the coefficient de trésorerie could have been fixed separately for each class of bank, the same ratio was applied to all banks.

short-run quantitative control purposes (being altered eight times in 1966 alone). Although formally abolished in January 1967, the coefficient de trésorerie was replaced at that time by a similar liquidity ratio known variously as the coefficient de retenue or the portefeuille minimum. Since the abolition of the coefficient de trésorerie left banks with considerable holdings of medium-term credits discountable at the Bank of France outside of their discount ceilings, the new ratio, which requires the banks to hold a portfolio of such medium-term credits equal to a certain percentage of their liquid liabilities, was designed to prevent banks from making use of this excess liquidity. During 1967, the required ratio was reduced several times and by October it had reached 16 per cent. It is expected that the portefeuille minimum will be further reduced, and eventually abolished, in the next few years when rediscount ceilings and cash reserve requirements will be relied upon to control bank liquidity.

Cash reserve requirements

The two liquidity ratios mentioned earlier were designed primarily to control pressures at the discount window, and at this they have been fairly successful. They are being gradually supplemented by legal reserve requirements, which became fully effective in October 1967. Under the new system, the Bank of France may require banks to maintain at the central bank cash balances of up to 10 per cent of their deposit liabilities. In introducing the new reserve system, the Finance Minister gave the following three reasons for the change: (1) alignment of French monetary control techniques with those in other major countries; (2) removal of major constraints on the kind of assets which banks may hold; and (3) desirability of developing a free market in government securities, a necessary precondition to achieving French objectives to make Paris a major European capital market.

Open market operations

Prior to January 1967, the Bank of France used two kinds of supplementary accommodations to cushion short-run fluctuations in bank liquidity, both of which were referred to as "open market operations". One was used to meet the day-to-day needs for funds of about 50 leading banks which had been given an open market "limit" or quota at the Bank of France, in addition to the rediscounting quotas (or ceilings). Each such bankcould draw automatically on Bank of France credit at the basic discount rate up to a limit which in practice was set at about 10 per cent of its discount ceiling. Such drawings took the form of sales to the Bank under repurchase agreement of paper already on deposit with the Bank. These en pension sales, which were negotiated through the discount houses,[1] actually constituted an additional line of central bank credit.

The other kind of "open market operation" was used solely to meet end-of-month strains in the money market when cash payments for wages, salaries, and rents tended to reduce the liquidity of the banks. The technique is similar to that described above, but only 10 to 12 of the most important banks were involved; the rate for such exceptional accommodation, which on occasion reached a substantial volume, was usually set by the Bank above the basic discount rate. Using estimates of sources and uses of funds, supplemented by personal contact with the discount houses and the 10 largest banks (which absorb 85 per cent of the funds made available), officials at the Bank of France made

1. Each bank uses one specific discount house for its operations in the money market, including interbank sales of funds and "open market" operations of the Bank of France.

projections of the volume of funds needed at the end of the month and asked banks to deposit the necessary collateral. Unlike the Bank's rates for regular operations, which are fixed in advance and remain unchanged for long periods, the rates charged for end-of-month repurchase operations were fixed by the Governor on a day-to-day basis. Although both kinds of operations were always used to ease money market pressures and were ostensibly at the initiative of the banks, in the second kind of operation the Bank of France took the initiative in estimating the amount of funds needed to keep market rates within the desired range. Since January 1967, the Bank of France has been using one single rate in all open market operations.

Direct restrictions

Direct restriction of certain kinds of credit is also an important instrument of monetary policy in France. Credits to the nationalized industries are restricted to the level of 1958 by the Caisse Nationale des Marchés de l'Etat, whose endorsement is required to make such credits negotiable. Residential construction credits are restricted by a 1964 agreement, signed by the Minister of Finance, the Governor of the Bank of France, and the Governor of the Crédit Foncier, according to which the total volume of outstanding special construction loans would be progressively reduced and new authorizations for such loans also would be held within an annual ceiling.[1]

In addition to controlling certain categories of loans, the volume of credit extended by the entire banking system to any individual borrower is controlled (see below, page 123).

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1. The original intention to reduce such loans from 10 billion francs at the end of 1964 to 8.4 billion francs at the end of 1968 was later (August 1967) largely nullified by raising the ceiling to 9.5 billion francs.

Moral suasion

Direct government ownership of large segments of industry and of commercial banking offers various opportunities for implementation of official policies. To relate credit policy to overall goals of government economic policy the Commissioner General of the Plan issues credit guidelines on behalf of the N.C.C. The latest one issued, on September 12, 1963, asked that credit not be extended for speculative purposes, including land speculation, and that priority should be given to export industries, to those industries being exposed to new foreign competition by reduced tariffs, and to those projects designed to rationalize production. How effective moral suasion and the prior authorization procedure have been in directing credit into approved channels is hard to say.

IV. TECHNIQUES ON REDISCOUNTS AND ADVANCES

Access to central bank credit

Bank of France credit in the generic sense of financing or refinancing the private sector may be extended in various forms. The techniques used include rediscounts of Treasury and specified private short-term paper held by businesses, banks, financial establishments, and public and semipublic financing institutions; purchases of short-term (up to 7 years) private and Treasury paper, with or without the sellers agreeing to repurchase; advances to the public as well as banks against collateral of certain long-dated securities of public agencies. From 1939 until March 1968, the Bank also offered advances to banks only for up to 30 days against collateral of certain short-term public securities. As more fully described above, rediscounting at the Bank by the banking system, including the public and semipublic

financial institutions, is restricted by a system of ceilings and liquidity ratios, and by a procedure requiring prior authorization.

The Bank of France may not directly discount paper for the Treasury and it is forbidden to operate in the market "for the benefit of the Treasury." Central bank credit to the government must take the form of loans, which require ratification by the legislature in the form of a convention, or treaty, between the Bank and the government. But outstanding government bonds can be used as collateral for advances and Treasury bills may be purchased outright by the Bank of France.

Many of the legal provisions governing the extension of credit by the Bank of France reflect the view, entirely common at the beginning of the nineteenth century, that the bank of issue should engage in normal commercial banking. Thus it is still technically possible for a member of the general public to rediscount securities or commercial bills at the Bank or obtain an advance, provided the paper presented for rediscount or as collateral meets all of the eligibility requirements. Except, however, for a few private customers of long standing, Bank of France credit is, in practice, granted only to banks, certain public and semipublic financial institutions, and a few registered financial establishments,[1] of which only the instalment credit establishments generate any appreciable amount of discountable paper. The Bank may, however, refuse any request to rediscount or make advances even when eligibility requirements are met, except when grain storage

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1. For list of the specialized credit agencies, see the 19th Annual Report of the National Credit Council for 1964, page 190.

bills guaranteed by the National Cereals Office are presented for rediscount or when Treasury bills are presented by the nonbank public.

In addition to direct discounting for private business accounts (which is small), and rediscounting for banks and other financial institutions, the Bank of France makes secured advances, but at a rate higher than the discount rate. Until December 21, 1967, when the facility was withdrawn, the Bank also made advances to the banks for thirty days at a rate that was often below the discount rate; these advances were, however, subject to very low ceilings.

Eligibility requirements

To be eligible for rediscount at the Bank of France, Treasury bills, commercial bills of exchange and other commercial paper must have a remaining maturity of three months or less and bear three good signatures (the third signature may be replaced by a pledge of securities or goods); the Bank also may require additional guarantees.[1] Bills corresponding to a loan of money or line of credit without any immediate connection with the transfer of goods or services ("finance" bills) require prior authorization of the Bank in addition to the same guarantees as commercial bills. Medium-term credits for specified purposes (housing, industrial equipment, exports) become eligible by a process in which the originating bank obtains the required third signature from the appropriate intermediate financing agency through a transaction involving the deposit of the original documents with it

1. A decree issued in December 1966 authorizes banks to make short-term nonguaranteed loans based on the general credit standing of the borrower rather than on individual commercial transactions. Legislation is in preparation to empower the Bank of France to rediscount such two-name instruments (rediscounting is now limited to paper bearing three names--the debtor, the creditor, and the banker).

and drawing of short-term notes by the originating bank against the collateral of the medium-term paper. These notes are then sold to the Bank of France under repurchase agreement. Effective January 1, 1966, the Bank of France extended to seven years from five the maximum original maturity of certain kinds of medium-term credit for equipment and construction that it would admit for rediscount, providing that the remaining maturity was only three years.

The securities eligible for purchase and sale by the Bank of France in the "open market" are negotiable short-term (two years or under) public securities and private bills eligible for rediscount at the Bank. In practice, the securities bought by the Bank for its so-called "open market" operations are bonds and notes of the French Railways and the Caisse Nationale des Marchés de l'Etat, bankers' acceptances, and paper previously approved for rediscount.

The cost of Bank of France credit

The cost of marginal borrowing by the banking system from the Bank of France is reflected in the money-market rate for day-to-day money secured by private bills and, since the abolition of the plancher and the coefficient, Treasury bills. This rate reflects in turn the degree of demand for central bank credit. The Bank of France has a hierarchy of rates and there is a corresponding order in which the banks present different kinds of paper to the Bank (or to the intermediate financing agencies) to obtain cash. Short-term export paper, which benefits from a preferential rate of 3 per cent, and is accepted without limit outside the discount ceilings, is normally presented first. Next comes medium-term export paper, which provides funds at a cost of 3.10 per cent, including the commission of the Banque Francaise du Commerce

Extérieur. As a result, at the end of 1966, the Bank of France held 83 per cent of all outstanding short- and medium-term export paper.

The next category of paper to be discounted at the Bank would be ordinary commercial paper which, within applicable ceilings, is discounted at the basic discount rate, and thereafter grain storage bills guaranteed by the Office National Interprofessional des Céréales and equipment credits to nationalized industry guaranteed by the Caisse Nationale des Marches de l'Etat, both at the discount rate. Finally, the banks would discount equipment credits to private industry and medium-term construction credits at a cost of 3.95 per cent, which includes the 0.45 per cent commission of the Crédit National or the Caisse des Dépôt.

The level of money market rates depends upon the degree of utilization of central bank credit facilities. When many banks have unused margins for rediscounting within the ceilings, the rate for day-to-day money secured by private bills tends to fluctuate closely around the basic discount rate, since banks with surplus funds may employ them to reduce their rediscounts at the Bank of France or to lend in the money market. As rates become firmer, banks with unused margins within the ceilings will rediscount at the Bank of France for the purpose of lending to the market. When all, or nearly all, banks are up to their discount ceilings at the Bank, rates for day-to-day money will tend to move up first to the rate for rediscounting medium-term paper at the intermediate financing agencies and then (prior to October 1967) to the "hell" rate and to the rate for exceptional advances as money market conditions tighten.[1]

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1. Before mid-1964 money market rates rose in periods of extreme tightness to the "superhell" rate, but subsequently, by means of its "exceptional" end-of-month operations the Bank made the "superhell" rate, in effect, inoperative.

Since the beginning of 1967, the Bank of France has intervened in the money market on the buy side to avoid a decline in market rates below levels which authorities consider appropriate. In times of boom conditions, with high and rising interest rates, the Bank has raised the whole structure of its rates (excepting for export paper), and correspondingly lowered it when inflationary pressures have eased. One or more of the Bank of France's rates for discounts or advances has been changed seventeen times in the last eleven years ending 1966, but the basic discount rate was changed only eight times during this period. Two of the three increases were by 1 percentage point while four of the five reductions were for 1/2 of 1 per cent each. On several occasions the size and timing of the changes were influenced by balance-of-payments considerations at variance with the requirements of the domestic situation.

Bank of France credit practices

As a rule, routine rediscounting[1] takes place at the Bank of France up till 11:00 a.m. After that hour the Bank of France intervenes in the open market, either by selling or by buying eligible paper under en pension (repurchase) agreements in order to achieve its rate objectives.

Bills discounted outright must have at least 90 days to maturity, and such discounts must be for the remaining life of the paper.

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1. Local or regional banks normally discount with their Paris correspondents; thus a good deal of the paper originating throughout France is submitted for rediscount or repurchase operations in Paris.

Repurchase agreements, on the other hand, are made on paper with periods to maturity ranging from 15 days to 2 years, and under present Bank policies may be for as short a period as two days. Paper which is not eligible for discounting because of maturity can be sold under a repurchase (en pension) arrangement and repossessed later by the borrowing bank and then rediscounted when it comes within the 90-day maturity range.

Banks inform the discount house, through which they ordinarily operate in the money market, early in the day whether they will have excess funds or whether they will need to borrow. First, each discount house conducts an internal operation that is comparable to intermediation in Federal funds in the United States. Then banks still short of funds will arrange to sell paper en pension to the Bank of France through the discount houses. If the market is firm, banks with a margin under their discount ceilings will also borrow from the Bank in order to lend to other banks.

Of the approximately $30 billion of short- and discountable medium-term credit extended to business and individuals by the French banking system at the end of 1966, about 84 per cent ($25 billion) was backed by bills. The heavy reliance upon bill financing is due to the fact that Bank of France credit is most cheaply and readily available on the security of short-term bills. Since the abolition of the plancher and the coefficient (see pages 111-113), Bank of France credit operations are based upon Treasury bills as well as upon private paper. The examining and processing of private collateral to determine whether it meets eligibility requirements and for other reasons requires employing a large staff.

The bulk of paper discounted within ceilings is related to normal sales transactions and is always acceptable as long as it fulfills the applicable maturity and signature conditions. Rejection of particular credits which fail to meet these conditions can have no effect upon monetary conditions because the right of each bank to rediscount up to its full quota is not questioned and the supply of eligible paper is more than ample to make up for any rejections of substandard paper.

In addition to three valid signatures and the meeting of proper maturity requirements, the Bank requires that its prior authorization be obtained in order to discount finance bills and medium-term credits as well as all credits that will bring the volume of loans in whatever form to any one enterprise to over 10 million francs ($2 million). This last requirement makes a considerable volume of ordinary commercial paper subject to the prior authorization procedure which is quite cumbersome.[1] For each credit coming under this procedure, the borrower must submit to its bank a file ("dossier") which must include (1) balance sheets of the firm for the last three years; (2) an estimate of the value of trade credits, inventories, and investments; (3) a statement of all bank accommodations already obtained;[2] and (4) plans for

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1. The Bank of France and its branches examine about 43,000 credit dossiers a year, and the entire procedure requires a minimum of two months for each dossier. Once a credit is approved, however, bills can be drawn on it and discounted at the Bank of France with no more delay than is required for commercial paper.

2. The Central Risks Office (Service Central des Risques), which is attached to the General Discount Department of the Bank of France, collects and collates data on the total volume of credit furnished to any given borrower on the basis of monthly reports by banks and other financial institutions. The information is available to the Discount Committee for its decisions to grant central bank authorization. The overall amount of credit outstanding to any borrower is also communicated each month to those banks and financial institutions which have reported a credit in the name of that borrower, although information as to the source of the borrower's other credits is not divulged. The Central Risks Office also tabulates the data according to the purpose of each credit in order to provide information on the extent to which the qualitative credit guidelines of the National Plan have been followed.

use and repayment of the credit applied for, together with evidence showing that no alternative means are available for raising the required funds. This dossier is studied by the Discount Department of the Bank of France (or one of its branches if the credit is small enough and presents no complications) not only to ascertain the quality of the loan, but also from the standpoint of whether it conforms to current guidelines on the allocation of credit in accordance with the National Economic Plan.

Linkage of lending and deposit rates to central bank rates

Neither the lending nor the deposit rates of the banks are now formally linked to the lending rates of the Bank of France. The system of minimum commercial bank lending rates was abandoned at the beginning of 1966 after a period of several years in which the connection with the Bank of France discount rate was progressively loosened. The N.C.C. does set maximum interest rates payable by banks and financial institutions on sight and time deposits and certificates of deposit (bons de caisse) but not in any fixed relationship to movements in the Bank's discount rate. In general, however, changes in maximum rates payable on deposits have followed with some lag changes in money market conditions. Similarly, the heavy reliance of the banks on Bank of France credit (at the end of 1965 the Bank financed over 20 per cent of short-term and medium-term credit to the economy) makes it inevitable that bank lending rates should reflect the cost of borrowing from the Bank of France.

F E D E R A L R E P U B L I C O F G E R M A N Y

Contents

I. INTRODUCTION

In the Federal Republic of Germany the authorities have sought means to maintain monetary control without resorting to direct restriction of international capital movements. To this end, they have modified the traditional monetary policy instruments and introduced other tools. Flexible reserve requirements have been employed during periods of monetary restraint to discourage net borrowing abroad: requirements against net liabilities of German banks to nonresidents have been set at substantially higher levels than those against gross domestic deposits.[1] The discount mechanism has been employed in a similar fashion. The ceiling on the amount that each bank may discount at the central bank may, at the authorities' discretion, be reduced by an amount equal to the increase in a bank's foreign borrowing above a specified level. The authorities have also, at various times, employed swaps between the central and commercial banks to encourage the latter to hold balances abroad rather than to sell them to the Bundesbank.

The Bundesbank's principal monetary policy tools are flexible cash reserve requirements and discount policy. Due to the narrowness of the money market, the Bank does not conduct open market operations on its own initiative but influences the market for the so-called "open market" paper by adjusting its posted selling and repurchase rates. The scope of flexible reserve policy is limited, however, by the range within which reserve requirements can change. Moreover, the restrictive effects of increases in reserve requirements have been offset to a considerable extent by sales of open market paper to the

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1. In addition, there is a 25 per cent withholding tax on interest earned by foreign holders of West German securities.

Bundesbank at the initiative of commercial banks, as well as by discounting. Central bank purchases of open-market paper are, however, subject to a global ceiling, and ceilings apply to discounts available to each credit institution. The third way in which banks adjust their cash positions is by obtaining advances against securities--the so-called Lombard loans--from the Bundesbank at a rate which is usually 1 per cent above the Bank's discount rate. Unlike discounting within ceilings, advances are regarded as a privilege, not a right, and they are permitted to remain outstanding only for very short periods.

In periods when the Bundesbank has been attempting to enforce monetary restraint, the authorities have tightened up discount policy not only by increasing the discount rate, but by reducing the coefficient by which the discount ceilings are established (as a multiple of net worth) and thereby reducing the commercial banks' quotas at the discount window. The Bundesbank's experience, especially in the past seven years, indicates that the currently available policy tools can at best achieve only a gradual, indirect and delayed effect on the lending activity of credit institutions and that their use is subject to inhibitions arising from official concern with rate levels in capital markets. Consequently, the Bundesbank has sought at times the power to impose quantitative ceilings on credit institutions' lending to the non-bank sector. The Bundesbank has also been among the strongest advocates of legislation under which expenditures and revenues of the Federal, state (Laender), and local governments would be brought into a framework of coherent fiscal policy; considerable progress in this direction was achieved by the passage of the Stabilization Law of 1967. On the whole, however, the German experience since the shift to convertibility reveals the limitations on use of monetary policy during periods of substantial trade surplus and unrestricted international capital flows.

II. THE BANKING SYSTEM

The Bundesbank is wholly owned by the Federal government and its Council is appointed by it. It is an autonomous institution and legally it can pursue a policy independent of the Federal government. In fact, a close relationship is maintained between it and the cabinet and, more specifically, the Ministers of Finance and Economic Affairs.

The Bundesbank succeeded in 1958 the Bank Deutscher Länder (which operated along very similar lines) and its organization is patterned on that of the Federal Reserve System, consisting of a head office (in Frankfurt) and eleven central banks (Landeszentralbanken) of the individual states (Laender) which constitute the Federal Republic.[1] The head office handles all transactions with the Federal government, as well as open market operations, foreign exchange transactions, and other transactions with foreign countries and organizations. In addition to those of the Federal government, all state government accounts, with insignificant exceptions, are held with the central bank system.

The commercial banking structure is dominated by three large institutions with networks of branches throughout the country. There are also about 100 banks whose operation is restricted to a single state, region, or locality, as well as a large number of other more specialized institutions mentioned below.

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1. The Laender central banks serve as offices of the Bundesbank in each Laender and carry out the policy decisions reached by the Central Bank Council. Each Laender central bank acts as the fiscal agent to its Laender and carries out on its own responsibility central banking operations such as accepting central bank balances, establishing rediscount quotas, and providing central bank credit at the stated rates for rediscounts and advances with all credit institutions within its geographical area.

III. THE DISCOUNT MECHANISM

Access to central bank credit

Central bank credit is available to all credit institutions subject to minimum reserve requirements (see below page 135); however, central bank credit facilities are used more extensively by commercial banks than by any other type of institution. The normal avenue for obtaining central bank credit is to discount eligible paper within quota limits. The discount credit at the central bank is considered by the credit institutions as a source of liquidity which is available at the stated rate as a matter of right. In contrast, the Bundesbank considers the more expensive advances against securities a privilege to be granted only for very short-term balancing out purposes ("bridging credit").

Access to Bundesbank credit depends on an institution's having paper eligible for rediscounting or as collateral against advances ("Lombard credit"). Eligible commercial bills have to be endorsed by three parties "known to be solvent" and the bills must mature within three months of the Bundesbank's purchase date. Bankers' prime acceptances which serve to finance foreign trade, promissory notes of the Import and Storage Agencies, and exporters' bills endorsed by a bank and by the Export Credit Company are also discountable. However, the Bundesbank specifically excludes bills used to finance instalment sales, construction projects, and purchase or manufacture of building materials.

"Lombard credit" (advances) constitutes a safety valve, even though, in principle, advances against securities are not granted as a matter of right, but as a privilege, but the frequency of its use

does not alter the contractual terms on which it is made available. Advances are designed to meet only very short-term requirements (usually at month end) arising from day-to-day cash flows. Assets that can serve as collateral for advances include bills of exchange eligible for rediscounts, Treasury bills and bonds of the Federal government, Laender governments, or the Federal Special Funds that appear in the Debt Register and equalization claims (bank claims on the Federal government arising from the currency reform of 1948). Normally, government securities are used as collateral. However, the granting of advances depends not only on the availability of the acceptable collateral, but also on the would-be borrower's financial condition, the purpose of the borrowing, and the general credit policy of the Bundesbank.

Limitation on the availability of central bank credit

West German credit institutions tend to accommodate their customers with loans as long as they are able to supplement their resources by using central bank credit, even if in the process they become increasingly sensitive to restrictive monetary policy. Each credit institution's access to the discount window is limited by its discount quota which is established by the central bank of the Laender in which its head office is located. Originally, the discount quota was imposed for the purpose of protecting the central bank's exposure. It was realized only later (in 1951) that the quota might be useful in controlling credit. The quota depends in the main on the type of credit institution and on its equity capital. It is currently determined as a fixed multiple of an institution's net worth and is reviewed frequently. (The method for the computation of quotas has not been published. However, any institution can easily ascertain the amount of its quota.)

Since quotas increase automatically with the growth of bank equity funds, the coefficients have been reduced from time to time to avoid excessive credit expansion. The most recent such across-the-board reduction in quotas occurred in May 1966. In fact, across-the-board reductions in quotas have become a policy tool.

Quotas may be reduced depending on the individual institution's record of compliance with the rules and regulations of the Bundesbank and the Federal Banking Supervisory Office as well as for other reasons.

Since September 1964 the Bundesbank has been using reductions in the discount quota in order to discourage credit institutions from borrowing abroad. The discount quota of each credit institution has become subject to reductions by the amount of its foreign borrowing in excess of the average amount outstanding at month end during January-June 1964. (Borrowing abroad to finance imports is not counted against the discount quota.) In effect, quotas of a considerable number of banks are subject to deductions at one time or another, with some deductions clearly amounting to sanctions.[1]

Since credit institutions cannot discount in excess of their quotas under any circumstances, they seek, in practice, to maintain a substantial leeway. Bank attitudes with regard to quotas are, however, subject to change. For instance, in 1965-66 banks exhausted the leeway under credit lines more rapidly than officials of the Bundesbank had expected on the basis of previous experience.

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1. At the beginning of 1967, roughly one-third of the rediscounting institutions reporting daily to the Bundesbank had some kind of deduction from their regular quotas in force for one or another reasons, but these penalty deductions involved mostly the quotas of small banks and cooperative lending institutions, and deductions totaled only about 5 per cent of aggregate total of regular quotas.

Supplementary quotas for amounts up to 25 per cent of the regular quota and for periods up to six months may be obtained for several specific reasons. Reasons for temporary supplementary quotas include the following: (a) short-term seasonal financing bulges in agricultural areas; (b) peaks in foreign trade financing, chiefly in terms of extension of export credit; (c) special assistance to institutions located near the Iron Curtain, to assist them in adjusting to the loss and disruption of their normal trade areas; and (d) assistance to banks engaged in entrepôt trade.

In addition to advances, granted for very short periods only, credit institutions may also obtain central bank credit outside the discount quota by selling prime bankers' acceptances (indirectly) to the Bundesbank or by selling to it instruments arising from the extension of medium- and long-term export credit. Prime bankers' acceptances can be sold to the Privatdiskont A.G. which, in turn, rediscounts them with the Bundesbank without limit.[1] Bank holdings of such assets constitute secondary liquidity because they can be immediately converted into cash.

Rate policy

The Bundesbank discount rate is uniform and has been changed with some frequency. The Lombard rate is kept at a penalty rate level (usually one per cent above the discount rate) and normally constitutes a ceiling on money market rate fluctuations. The discount rate was frequently changed between 1957 and 1961; for instance during 1959-60,

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1. A global limit of DM 1 billion set in May 1966, at a time when such rediscounts rose sharply in response to restrictive monetary policy, has been lifted in the meantime. However, this move was partly offset by enlarging the quota for the purchase of exporters' bills endorsed by the Export Guarantee Company by DM 600 million to DM 900 million and subsequently (in 1967) to DM 1.8 billion.

the discount rate was raised three times in a span of 9 months from 3 to 5 per cent. This was done in an effort to restrict the impact of a large foreign trade surplus on domestic liquidity. However, such a boost in domestic interest rates encouraged a massive inflow of capital. This development forced the German authorities to reverse their monetary policy in November 1960, and the discount rate was reduced in three successive steps to 3 per cent by May 1961. Balance-of-payments considerations prevented the Bundesbank from any further change in the discount rate until January 1965, when rising interest rates abroad reduced the danger of inducing a further large inflow of foreign capital, and subsequently rate changes were made more often. For example, during four months in 1967, the discount rate was lowered four times, each time by 1/2 percentage point.

The repercussions of frequent discount rate changes on the capital markets have complicated implementation of Germany's monetary policy. The effects of such changes are transmitted to the capital market through the commercial banks, most of which are active in the securities markets as underwriters, brokers and dealers, and buyers for their own account, using their security portfolio as a buffer whenever changes in monetary policy occur. The Bundesbank has found it necessary from time to time to support the prices of bonds issued by government agencies in order to offset the capital market effects of policies aimed essentially at the money market only. Until August 1967, support operations were undertaken for the account of the various agencies whose securities were involved rather than for the Bundesbank's own account. While such purchases did not add to the volume of central bank credit outstanding, but merely shifted balances at the central bank from the government

agencies to the banking system, such operations tended to ease commercial bank reserve positions and thus to offset restrictive monetary policy. Since August 1967 the Bundesbank has been also engaging in open market operations in long-term securities for its own account.

The relationship between central bank rates and rates in the credit and capital markets

Practically all money rates are, or until recently were, linked to the Bundesbank's discount rate. The Bundesbank's rate on advances against securities always changes with its discount rate and is usually 1 percentage point above the discount rate. Also, until April 1967 credit institutions' rates on loans and deposits were formally linked to the discount rate. Ceilings on credit institutions' lending rates were set by the Federal Banking Supervisory Office and varied directly with the discount rate. Business loans were 4 1/2 percentage points above the discount rate and bills discountable at the Bundesbank were 3 percentage points above the discount rate. The linkage of deposit rates to the discount rate was less direct, and changes in deposit rates usually lagged behind changes in the discount rate. On April 1, 1967 the legal ceiling on lending and deposit rates was removed in order to let market forces set these rates.

Borrowed reserves in relation to total reserves of credit institutions

German credit institutions have relied heavily on Bundesbank credit facilities. In order to finance a continuously expanding credit supply to the private sector, rediscounting and other borrowing at the Bundesbank increased whenever the foreign balance or the Bank's foreign exchange operations restricted bank liquidity. This occurred, for instance, when the Bundesbank offset the accumulation of its foreign assets (1959, 1960), and when the Bundesbank chose not to offset the decline in its foreign asset

holdings (1962), as well as when the restrictive monetary policy was reinforced by a decline in official foreign asset holdings (1964-1965).

The increasing importance of discounting in periods of reserve shortage is reflected not only in the level of central bank credit and in its share in the credit institutions' total reserves (which may rise to one fifth or one third), but also in its rising relation to loans granted to the private sector, and to the Bundesbank foreign assets portfolio.

IV. OTHER TOOLS OF MONETARY POLICY

Minimum reserve ratios

The central bank is authorized to set variable minimum required cash reserve ratios against all sight, time, and savings deposits. These ratios apply to a variety of credit institutions which accept such deposits: (1) commercial banks, (2) the postal check and savings banks, (3) giro institutions, (4) savings banks, (5) central organizations of industrial-agricultural credit cooperatives, (6) industrial and agricultural credit cooperatives, (7) installment credit institutions, (8) credit institutions with special functions (such as the Reconstruction Loan Corporation). Mortgage banks are exempt (as of July 1, 1965) from the requirement to hold minimum reserve balances with the Bundesbank.

Reserve assets consist only of nonearning balances with the Bundesbank, and they can be counted toward the liquid assets that have to be maintained under other laws.[1] The statutory maximum

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1. Credit institutions have also to observe certain guidelines concerning their liquidity and solvency. These are expressed as ratios of prescribed assets to prescribed net worth and liabilities. These ratios are administered by the Federal Banking Supervisory Office and are not used as an instrument of monetary policy.

reserve ratios are 30, 20 and 10 per cent against sight, time, and savings deposits, respectively. Established reserve ratios vary not only with the type of deposit but also with the type of depositor and the location and size of the credit institution, so that the number of specific ratios applicable at any given point of time is quite considerable.[1] They are changed quite frequently. Any reserve deficiency is subject to a fine of 3 percentage points over the rate on central bank advances.[2] Since November 1959 the reserve ratios have been changed across-the-board by an equal per cent (not equal percentage points) in order to maintain the same structure of reserve ratios. Independent manipulation of reserve ratios against nonresident deposits (and allowing, at times, for bank borrowing abroad to be counted as an offset against such liabilities) has been used to regulate the liquidity of the banking system.

Open market operations

The Bundesbank's short-term open market operations are passive in nature due to the narrowness of the money market, and other factors which limit the scale on which the authorities can operate. Open market

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1. During a short period (the second half of 1960), increases in deposit liabilities above a base period level were also subject to (higher) marginal reserve requirements.

2. Reserve requirements are computed on the basis of the monthly average of deposit liabilities outstanding on four statement days (the 23rd and the last business day of the preceding calendar month, the 7th and 15th of the current calendar month). The reserve period, which is the current calendar month, permits individual credit institutions to average out sharp oscillations. This is especially important in Germany where there is no equivalent to the American "tax and loan account".

operations are undertaken only directly between each credit institution and the Bundesbank which restricts itself to changing from time to time its buying and selling rates for Federal Treasury bills and bonds as well as short- and medium-term securities (of up to two-year maturity) of certain government agencies. The decision of how much to buy or sell at the posted rates, which are changed somewhat more frequently than the discount rate, is left to the credit institutions. The credit institutions have come to regard their holdings of this "open market" paper as secondary liquidity (most open market paper was created by issuing securities to replace--"mobilize"--book claims against the Federal government arising from the postwar currency reform. The amount of "mobilization" paper is limited to DM 8 billion, but within this limit credit institutions have been able to counteract, at least temporarily, the Bundesbank's policy aiming at the level of free reserves.

I T A L Y

Contents

I. INTRODUCTION

The Bank of Italy appears to have no clearly defined discount policy; there are no formal policy statements or regulations setting forth its objectives in this area. Discount policy is administered flexibly, and day-to-day policy depends to a large extent on the effect that Treasury operations and balance-of-payments developments have on bank liquidity. Moreover, the emphasis appears to be on changes in credit availability effected through other means rather than the discount rate, which has remained unchanged since June 1958.

Discount policy nevertheless occupies an important place in the monetary policy arsenal of the Bank of Italy. Accommodation is mostly in the form of advances rather than rediscounts. The Bank has broad discretionary powers in implementing its discount policy, with respect both to form of accommodation and type of asset accepted. These powers give the Bank considerable leverage in directly controlling the expansion of credit. The monetary authorities maintain control over liquidity available to Italian banks from their foreign balances by instructing the banks to maintain their net foreign-exchange position vis-a-vis foreigners at specified levels and granting at times at its discretion cost-free forward-exchange cover. Finally, the Bank of Italy also has substantial control over a third source of bank liquidity--i.e., the volume of Treasury bills held in excess of the banks' compulsory reserve requirements.

The central bank's obligation to support the government's budget is one major loophole in its control over liquidity. However, to date, the moderation of the government in employing its power to obtain

credit from the central bank has prevented any serious slippage in monetary control. Reserve requirements, introduced originally in 1926 as liquidity ratios for the protection of depositors, have been used since World War II also as a tool of monetary policy. The use of this tool has proven cumbersome because of the complex formula used to determine reserve ratios (see page 148). Their effectiveness is also limited by the fact that these reserve requirements can be satisfied in such a way as to yield a return fairly close to market rates.

II. THE INSTITUTIONAL FRAMEWORK

Overall monetary policy is formulated by the Interministerial Committee for Credit and Savings. It consists of the Minister of the Treasury (its chairman), six other ministers,[1] and the Governor of the Bank of Italy and meets seven or eight times a year. Its policy decisions are embodied in decrees signed by the Minister of the Treasury or in regulations issued by the Bank of Italy. Thus, the discount rate is established by a decree of the Minister of Finance acting upon recommendation of the Governor of the Bank. Execution of monetary policy is entrusted to the Bank of Italy, which has a network of regional branches.

The Bank of Italy is owned by five categories of institutions all of which are in whole or in part publicly owned.[2] Although the government itself has no direct voting participation in the central bank's capital or in any of its governing bodies, the Bank of Italy is in effect under the control of the Treasury. However, the stature and prestige of the Bank's Governors have given it considerable autonomy and great weight in policy decisions in the whole area of government financial policy.

In the international field, the Bank of Italy's functions are complemented by the Exchange Office (Ufficio Italiano dei Cambi), which--

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1. Budget, Foreign Trade, Industry and Commerce, Public Works, State-owned Enterprises, Agriculture.

2. These institutions are: savings banks, public law banks, banks of national interest, social security institutions, and insurance institutions.

though nominally an independent public body--is in effect an affiliate of the Bank. The Exchange Office carries out most of its domestic operations through the Bank of Italy's branches, which act as its agents. The Italian lira it needs to acquire foreign exchange is supplied to the Exchange Office through an unlimited line of credit from the Bank of Italy.

The Italian banking system grew over the years into a heterogeneous conglomerate of institutions (some of them nearly 500 years old and (pioneers of banking) which are not easily fitted into precise classifications according to type of activity. All of them engage to a greater or lesser extent in short-, medium-, or long-term lending. A distinction drawn by the Banking Law of 1936, further sharpened by a 1963 amendment, divides the Italian credit system into two sectors. One sector consists of banking institutions that take most of their deposits as "short-term savings" (defined as demand deposits and savings and time deposits with a maturity of one year) and are forbidden to accept deposits with more than eighteen months' maturity. The other sector consists of institutions that accept medium- and long-term savings of no less than eighteen months' maturity, but, with one exception, raise most of their funds by issuing bonds in the capital market. The former are called "credit institutions" (aziende di credito) and the latter "special credit institutions" (istituti speciali di credito).

The credit institutions, which are fully under the Bank of Italy's supervision, number about 1,300 (with over 9,000 branches); of these about 350 account for about 99 per cent of total deposits. Certain categories of these credit institutions--Cooperative People's Banks, savings banks, and joint-stock banks and private banks--belong to group institutes established by them to hold part of the members' liquid reserves and to provide them with services--such as issuing

bank drafts (assegni circolari),[1] clearing operations, technical assistance, and to representing them in dealing with the Treasury and other branches of the government.[2]

The special credit institutions number about 70, of which some 15 are engaged in mortgage credit, 12 in agricultural credit, and the rest in industrial credit and miscellaneous activities.

III. CENTRAL BANK CREDIT

Central bank credit is available to all the credit institutions and group institutes, and also to private industry and individuals.[3] The central government, but not the local governments, has direct access to Bank of Italy credit.

Accommodation to credit institutions and group institutes

Central bank accommodation to credit institutions and group institutes takes three forms: advances on collateral, rediscounts of commercial paper and Treasury bills, and "deferred payments" at the clearing house.[4]

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1. Assegno circolare is an instrument very widely used by the public in Italy, where the practice of payment by check for general payments is virtually nonexistent.

2. On June 30, 1966, total liabilities and net worth of the group institutes amounted to lire 1,320 billion ($2.1 billion equivalent), most of which are presumably assets of the member institutions.

3. In principle, special credit institutions, except those extending credit to agriculture, have no direct access to central bank credit. However, under unusual circumstances they may obtain advances on collateral, on the same terms as nonbank borrowers; the volume of such advances has been insignificant--less than 0.5 per cent of the Bank of Italy's total advances in recent years.

4. A fourth type of central bank accommodation consists of the rediscounting of Storage Agency Bills, i.e., bills issued to finance the government's farm price support program (particularly the price of wheat). These bills are first discounted with the credit institutions at rates ranging from 5.5 to 6.5 per cent per annum, but are automatically eligible for rediscount at the Bank of Italy, and are for the most part passed on to the latter. Such rediscounts have risen from lire 383 billion at the end of 1958 to lire 714 billion at the end of November 1966. Thus, in this instance, the Bank of Italy acts as agent for the government, and discount policy is presumably adjusted to take account of the automatic rediscounting of Storage Agency Bills. Consequently, the discussion in the text is confined to "ordinary" rediscounting.

The accommodation granted by the Bank of Italy is mainly in the form of advances on collateral. These are made on the basis of lines of credit which the Bank opens in favor of the banks against securities deposited with it when the line of credit is established. The paper eligible as collateral consists of government and government-guaranteed securities, mortgage bonds, and bonds of "equivalent rating."[1] The line remains open for four months and is renewable. The commercial banks are not expected to draw the credit at once and remain fully indebted for the duration of the credit period; rather, it is expected that there would be a continuous flow of drawings and repayments. In 1967, the Bank of Italy introduced a new credit instrument--advances on collateral with a fixed maturity of 8, 14 or 22 days, which, when granted, must be drawn in full. In every other respect, they resemble the line-of-credit advances.

The second type of accommodation consists of rediscounting of commercial paper and Treasury bills. In practice, the bulk of paper consists of commercial bills, since the banks prefer to keep Treasury bills for other operations. Bills presented for rediscounting must have a maximum of up to four months to maturity from the day it is taken up by the Bank of Italy, and bear the signature of at least two persons known to be solvent. In normal times rediscounting is a marginal item in the total of the banks' borrowing from the central bank. In case of tightness, banks will first use their credit lines for advances, and only when these are running

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1. This category comprises bonds issued by important official financing institutions such as "Istituto Mobiliare Italiano", other special credit institutions, and the nationalized enterprises (IRI, ENI, and ENEL).

short will they resort to rediscounting.[1] Italian banks as a group borrow continuously from the central bank, which is always prepared to meet seasonal and cyclical needs.

Collateralized advances as well as rediscounting is available as a privilege, subject to the discretion of the Bank of Italy. The Bank has established individual credit ceilings for lines of credit and fixed-maturity advances for each bank, as well as for local branches of banks with a national network of offices. As a rule of thumb, these ceilings are set at 5 per cent of the bank's total deposits, but they are occasionally reviewed and revised. Branch managers of the Bank of Italy, who are intimately acquainted with the needs of the local banks, have a certain degree of discretion in increasing these ceilings, but refer decisions concerning substantial upward revisions to the main office. An individual bank does not know what its ceiling is, and the Bank of Italy does not discuss the 5 per cent figure publicly. There is no ceiling for rediscounting. Aggregate advances and rediscounts have never reached 5 per cent of total deposits of all banks.

Finally, a minor avenue of central bank credit open to banks has been a system of "deferred payments" (prorogati pagamenti) for meeting adverse clearing balances at the local clearing houses operated by the Bank of Italy. Such accommodation is granted--normally for one day

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1. Excluding rediscounts of Storage Agency Bills, ordinary rediscounting is relatively insignificant compared to advances on collateral; however, in times of liquidity pressures (for instance, most of 1963 through early 1964), the relative share of rediscounting has tended to increase. In normal times, total central bank credit was very small in proportion to the banks' lira loans to the private sector (less than 1 per cent) and relatively small in proportion to the banks' required reserves (3 to 6 per cent).

and exceptionally up to four days--to clearing house members against collateral of the kind accepted by the Bank of Italy for regular advances.[1] Since the introduction of fixed-maturity advances, however, recourse to "deferred payments" as an extra source of funds has been officially discouraged and since July 1967, there has been no end-of-month outstanding balance.

The large banks generally prefer to obtain central bank credit through collateralized advances, rather than rediscounting, mostly because the former method is generally more flexible and less costly but also because they do not want their customers to know that they needed to have recourse to central bank credit. Bank of Italy rates for rediscounts and advances have been identical since 1950, but, in the case of advances, interest is charged only on outstanding debtor balances and banks have the option of repaying the loan at any time, whereas rediscounts are outstanding for the remaining life of the paper. Large banks resort to rediscounting at the central bank chiefly to meet unusually heavy withdrawals and sharp increases in drawings under confirmed credit lines. The smaller banks resort to rediscounting more frequently.

Accommodation to the central government and private individuals

Since 1948 the Bank of Italy has been required by law to grant the Treasury unsecured short-term overdraft facilities of up to 14 per cent of the original ordinary budget appropriations as well as supplementary expenditures approved by Parliament. The Bank of Italy is also authorized to subscribe without limit to securities issued or guaranteed

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1. In normal years these deferments (year-end basis) did not amount to more than 0.5 per cent of the banks' required reserves. During the 1963-64 "squeeze" they amounted to nearly 2 per cent.

by the state. It also rediscounts special paper issued in connection with the government's agricultural support programs.

Discounts by the Bank of Italy for private individuals were forbidden by law in 1936; however, there are no legal bars to the Bank making advances on collateral to private customers on Treasury bills, bonds issued or guaranteed by the government, bonds of mortgage credit institutions, Italian and foreign legal tender gold coins, gold bonds, foreign government securities payable in gold, and raw and processed silk. The Bank of Italy intends to eliminate the remaining private accounts as quickly as feasible, but it wants to retain the legal authority to make direct loans for emergency purposes. In 1958 advances to individuals still amounted to 14 per cent of total advances, but have subsequently declined, and were about 1 per cent in the last three years.

The relationship of bank deposit and lending rates to the discount rate

The volume of commercial bank borrowing at the central bank is influenced by availability rather than cost. In principle, there are no obstacles to large and frequent changes in the discount rate, but for several reasons, chiefly the lack of an organized and interest-sensitive money market, the central bank prefers to rely more on other controls to regulate credit in the economy. The Bank of Italy's discount rate was last changed in June 1958, after having been unchanged for eight years.

The Italian interest rate structure is regulated under a voluntary "Interbank Agreement" which sets minimum lending rates and maximum

deposit rates.[1] It went into effect in February 1954, and while it has been renewed annually with slight amendments, it is generally believed that the established rates are now frequently exceeded for medium- and large-sized deposits. Because of the boom conditions that characterized the Italian economy in much of the postwar period, the banks have generally enjoyed a "lender's" market. Thus it appears that the minimum rates have frequently been exceeded (reportedly by up to 3 per cent).

Maximum rates payable on deposits stipulated in the Interbank Agreement are not directly tied to the discount rate. However, since changes in the discount rate are accompanied by changes in Treasury bill rates (and in the rate paid by the Bank of Italy on compulsory reserves), the banks adjust deposit rates to remain competitive with Treasury bills.

By contrast, minimum lending rates are directly linked to the official discount rate (but vary according to the type of lending). The commercial banks' discount rate for commercial paper is set by the Agreement at 1.50 per cent above the official discount rate. Since June 1958 the minimum lending rates for prime customers have been 5 per cent for discounts of paper up to four-month maturity, and 7 per cent plus a quarterly commission of 0.125 per cent on the highest debit balance outstanding for collateralized loans.[2]

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1. The enforcement of the Agreement is entrusted to a special committee--presided over by the President of the Italian Bankers Association and including representatives of the major banking groups--which may impose penalties of up to a hundred times the amount paid to a depositor (or charged to a borrower) above (or below) the maximum (or minimum) agreed rate.

2. Until recently when Euro-dollar rates were still below Italy's domestic minimum lending rates, the Italian banks, to meet competition of foreign banks, had kept rates on foreign currency loans to their prime customers below the rates on lira loans.

The temptation of credit institutions to borrow from the central bank in order to relend at higher rates, thereby profiting through rate differentials, is countered by the tight control exerted by the central bank over the volume of its credit. No type of paper, other than Storage Agency Bills, is automatically eligible for rediscount or as collateral for a loan. The Bank of Italy determines how much credit it wishes to extend in the light of prevailing monetary policy and then scrutinizes every credit application individually.

IV. OTHER INSTRUMENTS OF MONETARY POLICY

Other important instruments of monetary policy are controls over maximum expansion of bank credit and manipulation of the commercial banks' net foreign assets position. The monetary authorities also set and vary reserve requirements, engage in open-market operations, and may impose ad hoc direct and selective controls, such as those over securities issued by both the banking and the nonbanking sectors.

Different reserve requirements apply to individual categories of banking institutions and types of liabilities, and the reserve coefficients are to some extent progressive. Reserve requirements are satisfied in the form of interest-bearing deposits with the Bank of Italy for the first 10 per cent of total deposit liabilities in excess of net capital resources and the balance, at the option of the Bank, by holding additional cash balances, Treasury bills or certain long-term securities. Changes in the ratios are infrequent and this tool is not used vigorously.[1] Also, open-market operations are still a potential rather than an actual instrument of monetary management, since an

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1. Reserve requirements for credit institutions were changed only once (in 1962) since being modified in 1947; those for savings banks and First Class Pledge Banks have not been varied since they were introduced in 1958; and those for Rural and Artisan Banks have been varied only once (in 1955) since being introduced in 1932. However, from time to time the Bank of Italy has used this instrument as a countercyclical weapon by changing the types of financial assets that can satisfy the requirements (e.g., mortgage bonds were included recently to boost the depressed construction sector).

important institutional reform in November 1962, aimed at establishing an organized money market, has not yet produced any significant results. Recently, however, the Bank of Italy has been dealing with banks in long-term securities on a fairly large scale.

Direct controls over private credit flows

Direct controls over the banks' loan expansion are implemented both under legal authority and through moral suasion. The latter is particularly effective due to the wide discretionary powers which the Bank of Italy already enjoys in rejecting or accepting applications for rediscounts or advances and the large proportion of state ownership of many leading banks.

The Bank of Italy must give prior authorization for accommodation (and loan renewals) by a commercial or savings bank to any one customer when such accommodation brings the customer's total liability to the bank beyond the so-called "legal limit on credit" (limite legale di fido), defined as one-fifth of the paid-up capital and reserves of the lending bank. Introduced in 1926 to safeguard depositors, the scope of this rule has been considerably extended in the postwar period as inflation greatly reduced the capital/deposit ratio of banks.[1] The exercise of this power has been useful, at least at certain times, as a tool of monetary policy. It enables the Bank of Italy to exert a selective and restrictive influence on the quantity and quality of bank credit and enables commercial banks to resist local political pressures for funds to support local government spending. For example, of all lira denominated loans to the private sector outstanding at the end of 1962 and

1. Whereas in 1938 the capital/deposit ratio was about 12 per cent, it dropped to less than 2 per cent in 1947 and was still not much more than 3 per cent in mid-1966.

1963 about 25 per cent were approved by the Bank of Italy, and over 70 per cent of these were granted by the big banks. This instrument has been used to prevent speculative inventory-building during boom periods and to ensure that short-term credits are not used for long-term financing of fixed investment.

The "legal limit on credit" of course varies greatly in amount from one institution to another and rises as a bank's capital resources increase. Therefore, while effective for small- and medium-sized banks, the usefulness of this instrument is limited in the case of the few banking giants. Limitation of the large banks' lending is achieved mainly through moral suasion. As a result of the close relationship the central bank has with these institutions, in most of which the government owns a controlling interest (directly or indirectly through holding companies), the Bank of Italy has obtained their cooperation in slowing down loan expansion, or in applying more stringent "qualitative" criteria.

Finally, direct control over flows of credit in the economy is enhanced by the authority of the Bank of Italy to give (concurrently with the Ministry of the Treasury and subject to approval by the Interministerial Committee) or withhold approval of all issues of shares and bonds (with the exception of bonus shares) made through the intermediary of institutions subject to the Bank of Italy's supervision, or if the securities are to be listed on the stock exchange.[1] This

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1. The power to authorize special credit institutions (see page 141) to float bond issues is vested with the Governor of the Bank of Italy.

requirement extends also to bonds issued (other than mortgage bonds) by credit institutions. Authorization may be delayed or speeded up in line with current objectives of monetary policy.

Manipulation of commercial banks' net external position

The manipulation of the commercial banks' net foreign exchange position, which has been used vigorously since August 1960, has become one of the most significant tools of monetary management. The authorities can affect this position by instructing banks to adjust their net foreign exchange holdings vis-a-vis foreigners to specified levels and thus bring about outflows of funds when they wish to reduce the banks' domestic liquidity and permit inflows when domestic liquidity is desired.

J A P A N

Contents

I. INTRODUCTION

The Japanese authorities (the Bank of Japan in close cooperation with the Ministry of Finance) are well equipped to control external sources of liquidity and to maintain monetary control through their power to regulate the cost and availability of central bank credit, the more so because the Japanese banking system, being chronically in need of liquidity, is heavily dependent on the central bank. Broad exchange control powers enable the authorities to exercise a significant influence over changes in the central bank's holdings of international assets and thus over changes in the cash base that result from movements in the balance of payments. Commercial banks' foreign borrowing is "guided" by the central bank.

Discount policy plays a central role in Japanese monetary policy, although the Bank of Japan to some extent also employs flexible cash ratios and open market operations to achieve its aims. Under conditions that have existed since the end of World War II there has been only a very limited scope for use of cash reserve ratios. Access to the discount window is considered a privilege. A scale of rates is established according to the type of paper offered by the borrowing bank. Ceilings are set on the amount that will be lent to individual banks at the basic discount rate, and a penalty rate is applicable to borrowing in excess of the ceiling. The structure of discount rates, the range of paper acceptable, and ceilings on borrowing, all are subject to change--and indeed are frequently changed--in accordance with the authorities' monetary policy objectives, which, in turn, are closely geared to overall economic policy.

The authorities' control is strengthened by the close links that exist between the structures of discount and market rates. The Bank of Japan determines the maximum rate below which commercial bank lending rates are permitted to fluctuate. Within this range, the prime bank lending rate, which is the minimum rate charged by commercial banks on commercial paper eligible for rediscount at the Bank of Japan, is at present set by the Banking Association at a level no higher than the basic discount rate. The authorities also control the rate that banks may offer in the market for short-term deposits.

Other policy instruments include so-called "window-guidance," under which the authorities have, from time to time, used moral suasion, developed into a system of close supervision of each bank's day-to-day activities, to influence the commercial banks' lending policies. They also include selective credit controls, such as those over the financing of securities and imports (there are no specific monetary controls applied to consumer and housing credit).

In November 1962, the Bank of Japan reintroduced discount ceilings and began to buy and sell securities.

Until fairly recently, the traditional instruments of monetary policy appear to have been considered adequate to deal with both domestic and external disequilibria. However, since 1964, increased reliance began to be placed on fiscal measures for implementing overall economic policy.

II. THE INSTITUTIONAL FRAMEWORK

The Bank of Japan is, in fact, operated as part of the government's economic administration in close liaison with the Ministry of Finance. Some 55 per cent of its capital is owned by the Ministry of Finance, the

remainder by local authorities, financial institutions, and other private corporations and individuals. The Bank is managed by the Governor, the Vice Governor, and the Board of Directors; the directors are usually selected from the Bank's senior staff. Overall policy is determined by a Policy Board consisting of the Governor, four outside members (required to be experienced in banking, industry, commerce, and agriculture) appointed by the Cabinet, and approved by both houses of Parliament, and two direct representatives of the government. This Board is not concerned with the Bank's management on a current basis.

The banking system is dominated by 13 so-called "city banks" which operate branches throughout the country and account for 60 per cent of the assets of the banking system. In addition, there are some 65 local commercial banks and a variety of other trust banks, long-term credit and other specialized banks, mutual savings and loan banks, credit associations, and agricultural credit cooperatives.

The outstanding feature of Japan's financial structure is the extremely low ratio of the banks' liquid assets to total assets and the heavy indebtedness of the commercial banks to the Bank of Japan. This "overloaned" situation resulted from the inflationary aftermath of World War II, which led to high debt-equity ratios for Japanese industry generally. Virtually the entire debt consisted of short-term bank loans. While correction of this weakness in the banking system and business has been a policy objective, there has been a reluctance to permit long-term interest rates to rise to a level that would have promoted the development of an adequate supply of long-term capital to reduce dependence on short-term bank loans; hence a large proportion of private investment continues to be financed through commercial bank

credit, and the banks' cash reserves are in turn replenished through credits from the central bank.

Cash, deposits with the Bank of Japan and other financial institutions, call loans, and credit extended to financial institutions, represent the liquid assets of the banking system as a whole. Its liquidity is affected greatly by Treasury operations. All funds of the Japanese Government are held on deposit in the Bank of Japan. The proceeds of tax collections are immediately deposited in it. The proceeds of government borrowings are likewise immediately deposited in the Bank of Japan. Thus, the liquidity of the commercial banks is adversely affected when the government receives taxes or when it borrows. The Japanese public likes to hold currency, and therefore, its demand for additional currency increases the pressure on the liquidity of the commercial banks. Thus, liquidity of the commercial banks is adversely affected when the government receives taxes or borrows and when the public increases its holdings of bank notes.

The banks maintain liquid asset ratios which they deem suitable; there are no required ratios. Deposits with the Bank of Japan to meet legal reserve requirements--the maximum of which at present is 1 per cent of deposit liabilities--are of minor importance. In recent years liquid assets, including such deposits, have ranged between 2.5 and 3.6 per cent of the banking system's total assets, with the bulk accounted for by vault cash[1].

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1. During 1958-64, liquid assets of the city banks averaged 1.8 per cent of their total assets, while local banks' holdings during the same period averaged 6.9 per cent. The city banks hold only small amounts of claims on the government readily convertible into cash. At the end of October 1965, $57 million equivalent, or less than 1 per cent of total assets, was held in this form. Since then, holdings of long-term paper have increased.

The reintroduction of ceilings on commercial bank rediscounts and advances in November 1962 stimulated the city banks to search aggressively for sources of investable funds, especially in the call-loan market. During 1963-64, when Japanese monetary policy was restrictive, the proportion of the city banks' resources obtained in the call-loan market expanded significantly. On the average during 1960-65, 58 per cent of the funds borrowed by the city banks came from the Bank of Japan, 29 per cent from the call-loan market, and 13 per cent from other financial institutions. The call-loan market is supplied by local banks, trust banks, and mutual loan and savings banks. In the same period, city banks supplied less than 2 per cent of loanable funds to the market, but borrowed more than 65 per cent of the available funds.

III. CENTRAL BANK TECHNIQUES

Availability of central bank credit

It has been the practice of the Bank of Japan to restrict its rediscount facilities to commercial banks, even though the law does not limit its extension to any specific category of borrower. However, lately, there has been a tendency to expand the range of financial institutions with access to central bank credit. Private corporations and individuals have not in practice had access to the Bank of Japan's facilities.

Rediscounts and advances

Rediscounts and advances are the main source of central bank credit in Japan. Individual banks borrow from the central bank on a continuous basis; the main borrowers are the city banks, both as regards to volume and duration of borrowing . Local banks borrow less

and for shorter periods. The level of the discount rate structure, the range of instruments eligible for rediscounting and as collateral for advances, and the ceilings on borrowing from the central bank at the regular rates--all are subject to change in accordance with Japanese monetary policy.

Commercial bills,[1] including notes drawn by specified selling organizations, and export trade bills, are eligible for rediscount at the applicable rate. Government bonds and bills, government-guaranteed bonds, bank debentures, specified municipal and corporate bonds, rediscountable commercial bills, export trade bills, and other general bills considered suitable by the Bank of Japan are eligible as collateral for loans.

The rate structure is fairly complex. The Bank of Japan presently maintains five "basic money rates," depending on the type of paper discounted or pledged as collateral.[2] Discounted commercial bills are charged the Bank of Japan's "basic discount rate," which is subject to frequent change, usually in conjunction with the whole range of rates. The rates applicable to export paper are lower than the basic rate, whereas the rates applying to advances secured by specified government securities are higher.

Export financing is a very important part of bank lending in Japan. About half of all export financing is through commercial bank paper,

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1. Two-name paper either drawn or accepted by a purchaser of goods for resale in settlement of the purchase and payable by the buyer.

2. Prior to September 1967, when import trade bills and overdrafts ceased to be eligible for discounting, the structure consisted of seven basic money rates.

which is rediscountable provided the remaining maturity does not exceed three months and there is a supporting letter of credit. Although much foreign trade is financed abroad, exports before shipment are financed domestically, and rediscounts of and advances on these bills have been substantial.[1] This rate structure makes the discounting of export bills the preferred means of obtaining central bank credit although, presumably because of a shortage of such bills, the banks borrow from the central bank mainly through advances.

Penalty rates

The Bank of Japan has used a system of ceilings on discounts and advances and of "penalty" rates on borrowing-above-the-ceilings more or less continuously since 1912. In the post-World War II years, the system has involved the application of three levels of rates: basic rates on discounts and advances, and two sets of higher rates on borrowing exceeding specified percentages of a (frequently revised) ceiling for each bank. Because of the commercial banks' heavy reliance on central bank credit, particularly during the early postwar reconstruction period, the maximum penalty rates, rather than the relatively low basic rates, determined the actual cost of borrowing.

The discount rate structure has been subject to several major changes in recent years. In March 1957 the complex penalty rate system was replaced by one single set of penalty rates. These arrangements were continued under the "New Monetary Adjustment Measures" that were introduced in November 1962. At that time the

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1. Until September 1967, commercial banks could also obtain overdrafts at the Bank of Japan, but this facility was little used because the last rate was 1.09 percentage points above the basic rediscount rate.

Bank of Japan began more active operations in government securities in order to facilitate the adjustment of commercial banks' reserve positions (see page 9). Such open market operations, together with adjustments (so far, with one exception, downward) in the commercial banks' ceilings on discounts and advances have, for all practical purposes, eliminated commercial bank borrowing from the Bank of Japan in excess of individual discount ceilings. Since the end of 1962, therefore, a rising proportion of central bank credit to the banking system has been provided through increases in the Bank of Japan's holdings of securities. Discounts and advances have declined somewhat in relative importance although they have continued to expand in absolute terms.

Ceilings on discounts and advances

When ceilings for central bank credit (discounts and advances combined) were reintroduced in 1962, the total ceiling was set at the level of total borrowing at that time from the Bank of Japan by the 10 city banks subject to ceilings, and each bank's ceiling was fixed at the amount of its actual borrowing. However, after 1964, the ceilings of individual banks were determined as a percentage of the total ceiling. The percentage applicable to a particular city bank depended upon its capital, deposits, and the amount of money borrowed by it in the call-money market. Finally, since August 1967, a more complex formula has been in effect. A fixed factor is applied to capital funds (including surplus and undivided profits), and from this figure the amount of borrowing in the call-money market and from the Bank of Japan is subtracted. A percentage of this aggregate is assigned to each bank. The new method gives an advantage to banks with large and increasing capital funds. At present, the ceiling is revised every three months.

In determining credit ceilings, the Bank of Japan excludes export financing credits. It also excludes certain credits granted by it to the city banks which, in turn, made loans to two companies organized in 1965 for the purpose of stabilizing the stock market (see page 13). The proceeds of the loans by the Bank of Japan were available to the borrowing banks to reduce their regular borrowing. Thereafter, the ceilings of these banks and the total overall ceiling were cut by approximately the amount of such special loans.

Within the credit ceiling applicable to each bank, central bank loans and discounts are not formally limited in duration nor are the rates charged by the central bank changed with the term or the frequency of such borrowing. However, in practice, individual loan agreements often specify a maximum and a minimum time to maturity. These maturities are determined by the central bank; they vary from 2 days to 3 months, depending on the authorities' assessment of the projected cash needs of the individual bank.

Other monetary policy instruments

An important change in implementing monetary policy in the postwar period was the expansion of open-market operations. Although open-market operations had been conducted for some time on a small scale for strictly limited purposes, it was not until 1958 that the Bank of Japan began to sell bills held in its portfolio to local banks in order to absorb surplus funds. Since 1960 open-market purchases of government-guaranteed bonds have been undertaken to offset the tightening effects of seasonal inflows of funds to the Treasury. In November 1962 the Bank of Japan began more active sales and purchases of securities, but these operations are still of limited significance

due to the shortage of outstanding government securities.[1] However, large amounts of seven-year government bonds have been issued since 1966, mainly to banks, and purchases of such bonds by the Bank of Japan in 1967 almost equaled that year's increase in note circulation.

Commercial bank interest rates

The Bank of Japan, in conjunction with the Ministry of Finance, has the authority (under the Temporary Rates Adjustment Law of 1947) to set maximum lending and deposit rates for all banks. At present, the prevailing commercial bank rates on deposits are at the ceiling set by the authorities. Lending rates, however, are determined within the Bank of Japan's maximum rates (which have not been changed since 1957) by interbank agreement through the Banking Association. Effective rates are currently lower than maximum rates; for instance, in January 1968 the rate for discountable prime bills--lowest in the rate range--was 4.75 per cent, while the maximum rate was 6.21 per cent, i.e., the same as the central bank's basic rediscount rate. Changes in the "prime" or "standard" lending rate follow almost automatically changes in the discount rate. The rates payable by commercial banks on deposits are not linked to the discount rate. They tend to change very infrequently; only one change has been made in the last ten years.

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1. In December 1965, the Bank of Japan, in addition, introduced a repurchase system for foreign-exchange bills (denominated in United States dollars) against which previously the central bank had extended loans. Credit supplied to each bank under the repurchase agreements is subject to a separate ceiling determined by the central bank. Reportedly this arrangement has so far not been used by the Bank of Japan, which considers it as a safety valve to give commercial banks access to foreign exchange, mainly dollars, to meet their external commitments.

IV. RELATIONSHIP OF REDISCOUNTING TO OTHER INSTRUMENTS OF MONETARY POLICY

Although authority to impose flexible reserve requirements was granted to the Bank of Japan in 1957, it was not used until 1959. The central bank has authority to impose separate ratios on time and all other deposits, for the latter category up to a maximum of 10 per cent. Since their introduction, reserve requirements have been changed six times, mostly to reinforce the effect of discount rate changes. In July 1965 (the most recent change) the required ratios ranged between 0.25 per cent and 1.0 per cent, the exact ratio applicable to a particular commercial bank depending on the amount and category of its deposit liabilities. There is a uniform penalty on all reserve deficiencies, levied at a rate of 3.65 percentage points above the basic discount rate. Although there are no formal liquidity ratios, window-guidance includes guidelines on liquidity.

Moral suasion in the form of "window-guidance" is used by the Bank of Japan as a form of credit control, particularly in periods of monetary restraint. The central bank advises the commercial banks regarding their lending policies and other uses of funds; in addition, this advice is used by the banks as a guide in dealing with customers. Until May 1963, a formal system of window-guidance was based on a monthly review of commercial banks' lending, on which detailed reports were submitted to the central bank, and on projections of sources and uses of funds. In January 1964, monetary policy was tightened, and thereafter window-guidance was based on a three-month review of the commercial banks' lending and on guidelines that limited all banks to explicit and uniform rates of credit expansion. In April 1965 the review period was extended to six months, and in June 1965 the formal

system of window-guidance was abandoned, since at that point the Bank of Japan considered the commercial banks' cautious attitude under conditions of domestic sluggishness effective enough to curtail lending; but it has been applied again since September 1967.

The authorities regard window-guidance as a temporary and supplementary monetary tool to be applied especially when monetary restraint is indicated. The Bank of Japan believes that in ordinary circumstances the lending activities of commercial banks ought to be left to the banks' own judgment and discretion, and that adequate guidance is provided by their knowledge of, and desire to cooperate with, overall government economic policies.

The banking system's high reliance on central bank credit suggests that the importance of window-guidance should not be underestimated. Nevertheless, one of its important elements is the authorities' emphasis on its use to persuade the banking system to accept market discipline. Window-guidance does not involve the use of formal penalties; it is carried out on the basis of the relationship between the central bank and individual commercial banks, and depends on the latter's cooperation and desire to avoid expression of official criticism, which in Japan is a major factor shaping business behavior. There is no set procedure for window-guidance, which may be applied to individual banks or through general directives to all commercial banks.

The Ministry of Finance has also the power, under the Securities Transactions Law, to impose margin requirements on securities transactions; the Bank of Japan is authorized to control the conditions of lending by financial institutions to securities companies. While the Ministry's authorization has been actually applied, that of the Bank of

Japan has not. Other credit control instruments, such as predeposits for imports, are administered by the Ministry of International Trade and Industry with the agreement of the Ministry of Finance.

Toward the end of 1964 the persistent weakness in the stock market prompted the Bank of Japan, together with other financial institutions, to undertake extensive support operations. This support took the form of central bank credit--on an unspecified emergency basis and reportedly amounting to about $1 billion equivalent--to quasi-governmental stock-buying and holding agencies.

V. QUANTITATIVE ROLE OF CENTRAL BANK CREDIT POLICY

The private sector's heavy reliance on central bank credit is a main feature of Japan's financial structure. In individual years since 1958, central bank loans and discounts have accounted for between 4.6 and 11.7 per cent of bank loans to the private sector. Foreign-exchange inflows are the other principal source of liquidity for the banking system. However, open-market operations have become gradually more important since November 1962; indeed, in the four years ended September 1966, the Bank of Japan's holdings of securities increased substantially more than its discounts and advances.

N E T H E R L A N D S

Contents

I. INTRODUCTION

In recent years, the Netherlands has relied heavily on direct credit controls and on management of liquidity of external origin. The discount mechanism, as well as all other indirect instruments of monetary policy, has played a secondary role in monetary management, because until recently the liquidity position of the banks was in general very ample and because these positions were very different from bank to bank.

The Netherlands Bank has been hindered in its efforts to achieve internal monetary stability by the conflicting requirements of external policy. This conflict between domestic and external policy objectives has resulted in the subordination of indirect means of monetary control in favor of direct controls over bank credit expansion. Variation of the cash reserve ratio was discontinued because, in the words of the Bank, "the resulting sterilization of liquidity would have led to sales of foreign exchange to it without effectively reducing the liquidity of the banks."[1] On the same grounds, open market operations have not been used restrictively to any significant degree.

The discount mechanism performs essentially as a safety valve, serving to accommodate the banks in meeting seasonal swings in their cash needs caused by changes in the bank note-circulation, the balance of payments, or government financial operations. Changes in the discount rate serve in the main to signal changes in the economic situation. In general, the Bank's discount rate is a ceiling for the rates

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1. Netherlands Bank, Report for the year 1964, p. 104.

on short-term Treasury bills and call money. The main focus of monetary policy in the Netherlands is, however, upon the availability of credit rather than upon interest rates.

II. STRUCTURE OF THE BANKING SYSTEM

The table below shows the number of total assets, as of the end of 1967, of the registered credit institutions supervised directly or indirectly by the Netherlands Bank.

Type of institution	Number	Total assets (Millions of guilders)
Commercial banks	105	26,600
Central institutions of the agricultural credit banks*	2	12,353
Unaffiliated agricultural credit banks	21	310
Security credit institutions	60	147
General savings banks	229	7,038

* With 1,254 member credit banks and 1,268 member savings banks.
Source: Netherlands Bank, Report for the year 1967.

Although the Netherlands has a large number of commercial banks, a very large proportion of commercial banking business is done by a relatively few banks, and the concentration of banking has been considerably reinforced by important mergers that have taken place after 1964. Branch banking is highly developed. In the spring of 1968, the three largest banks in the Netherlands controlled about three-fourths of the assets of all commercial banks.

The money market is probably less important in terms of total turnover relative to the size of the country than the money markets of

the United States and the United Kingdom. Participants on both sides of the money market are commercial banks, the bill brokers (discount houses), and the two central institutions for agricultural banks. The central government and local authorities appear in the market mainly as borrowers and the two giro transfer services, institutional investors, savings banks, and large business firms appear mainly as lenders in the market. In the past the Netherlands Bank intervened occasionally on one or the other side of the money market, but since the spring of 1964 the Bank has not engaged in open market operations.

The commercial banks may obtain funds from the money market, which is concentrated in Amsterdam, either by borrowing at call or by selling Treasury bills; but the former is quantitatively more important. Since 1958, after the beginning of convertibility, when the banks began to invest abroad on a large scale because of the interest incentive, repatriation of funds has become an important means for adjusting cash positions.

The higher level of interest rates abroad has been the main factor inducing the commercial banks to keep a substantial proportion of their liquid assets in foreign investments. During the early 1960's the Netherlands Bank discouraged the banks from repatriating funds to meet temporary tightness in the money market. In 1965, however, the Bank ceased to buy Treasury bills from the bill brokers under repurchase agreement, and offered instead to sell dollars forward, often without charging a premium, while simultaneously making spot purchases. As explained in the 1965 Annual Report of the Netherlands Bank, "The banks were thus enabled to acquire guilders by temporarily repatriating funds from abroad instead of by temporarily parting with Treasury paper."

III. THE MECHANISM THROUGH WHICH MONETARY POLICY OPERATES

The instruments of monetary policy

The Netherlands Bank is charged (by an Act of 1948) with responsibility for regulating the value of the guilder in such a way as to be most conducive to the welfare of the country, and (by an Act amended in 1956) with supervising the credit system.

The instruments of monetary policy available to the Bank are: control over the volume of central bank credit in the forms both of borrowing by the credit institutions and of open market operations; operations in the foreign exchange market; control over borrowing from or lending to foreigners; variation of cash reserve requirements; and direct limitation of the volume of credit extended by banks and other credit institutions.

In its use of discount policy, open market and foreign exchange operations, the Bank is empowered to act without consulting either the government or the credit institutions. Two other principal instruments of monetary policy--variation of cash reserve requirements and credit guidelines--can be employed in practice only by securing the voluntary cooperation of the credit institutions. Although the Act for the Supervision of the Credit System (as amended in 1956) empowers the Bank to issue general directives to the credit institutions on cash reserves and on lending policies for the purpose of regulating the value of the guilder, it can do so only after failing to secure the necessary voluntary cooperation. In such case, the Bank's directives to the credit institutions must be approved by the Finance Minister and ratified by the legislature within three months, after

which they may have a maximum validity of two years. The Bank has never found it necessary to issue general directives implementing monetary policy to the credit institutions.

The Bank is also empowered to issue general directives of unlimited duration to the banks and other credit institutions for the purpose of ensuring their liquidity and solvency and these directives sometimes have an effect on the credit situation. For example, in 1964, the Netherlands Bank issued a directive to the savings banks requiring them to keep 10 per cent of deposits with a high rate of turnover in the form of primary liquid assets, i.e., cash and sight deposits in other banks.

Although the Netherlands Bank is authorized to undertake open market operations and impose cash reserve requirements, it currently makes no use of these policy instruments. Whereas formerly the Bank eased temporary pressures in the money market by purchasing Treasury bills from bill brokers under repurchase arrangement, the Bank's present policy is to employ operations in the foreign exchange market for the same purpose.

An agreement between the credit institutions and the Netherlands Bank concerning maintenance of minimum cash reserves is still formally in effect. The agreement, concluded originally in 1954, provides that the commercial banks and the central institutions of the agricultural credit banks maintain balances at the Netherlands Bank, as prescribed by it, ranging up to 15 per cent of deposit liabilities, with the first 15 million guilders of deposits exempt. However, the required cash ratio has been zero since September 1963, when the Netherlands Bank established direct and specific limits on credit expansion that involves the possibility of interest-free compensating deposits at the Bank. The required cash reserve ratio was reduced to zero because, given the tightening effect of the increase in the bank note circulation, the maintenance of the cash reserve ratio would have led to repatriation of funds from abroad rather than to an effective reduction in the domestic liquidity of the banks.

Direct controls over the rate of credit expansion was the principal instrument of monetary policy between 1960 and 1967. Agreement with the organizations representing the banks and agricultural credit institutions on a general formula for restricting credit expansion was first reached by the Netherlands Bank in 1960. This formula was to be applied when necessary, and the permitted rates of expansion were to be determined at such time..

The agreement on credit restriction was activated in June 1961, suspended at the beginning of 1963, and reactivated in September 1963, and has since been renewed, after consultation by the Bank with the representative organizations, at 4-month intervals. The permissible expansion of lending was expressed in terms of a formula relating the 3-months' moving average of each bank's outstanding loans to its average lending in the first half of 1963. Variations in the permissible rates of credit expansion were made to take into account seasonal movements in lending.

The agreement on credit restrictions applied only to short-term lending to the private sector, that is, to loans with a maturity of under two years. The Netherlands Bank acted to close the loophole for long-term lending on May 1, 1965 when, after consulting with the representative organizations, it requested the banks not to let the increase in their long-term assets exceed the increase in their long-term liabilities.

Under the original agreement, banks which exceeded the prescribed limits were requested to hold at the Netherlands Bank an interest-free deposit which could average 100 per cent of the amount of excess lending; this remained in the Netherlands Bank for one month.

Application of penalties was further tightened in June 1966 when the Netherlands Bank reached agreement with the representative organizations concerning the withdrawal of certain exemptions granted in the computation of the compensating deposits from those banks which exceeded their ceilings for three successive months, or during four months in a period of six months. The Bank required that under certain circumstances the deposits be maintained at the prescribed level at all times instead of requiring merely that the average monthly level of deposits comform to the requirement. At the end of 1966 the Bank expressed its wish that the banks should restrict short-term lending to local authorities so as not to exceed the average amount of such credit for 1966.

Changing economic conditions and especially the easing of demand pressures brought about a change in the Netherlands Bank's policy in 1967. The requirement of compensating deposits for exceeding the credit ceiling to the private sector was removed in March, and the ceiling itself was abolished in June.

Discount policy is used mainly by the Netherlands Bank to signal a change or intensification of its monetary policy and, at times, to influence commercial bank lending rates. Although there is no formal linkage between central bank and commercial bank lending rates, changes in the former tend to be reflected in the latter.

The Netherlands Bank also uses administration of foreign exchange controls and its authority to operate in the foreign exchange markets to influence domestic monetary conditions. From time to time the Bank intervenes in the forward exchange market in order to encourage the commercial banks to increase or decrease their holdings of foreign exchange, thus exerting an indirect effect upon the domestic liquidity of the banking system and on conditions in the money market.

Under the Foreign Exchange Control Decree of 1945, the Bank may also order the commercial banks to restrict their foreign borrowings. In 1964, for instance, the Bank directed each bank authorized to deal in the foreign exchange markets not to permit its foreign liabilities to exceed its foreign assets by more than 5 million guilders. ($1.4 million). Under the same decree, foreign capital issues and loans to nonresidents also require a license from the Netherlands Bank. The Bank thus regulates foreign issues in accordance with the requirements of domestic monetary policy, at times withholding approval for a long time or refusing it altogether.

IV. REDISCOUNTS AND ADVANCES

Access to central bank credit

All "registered" credit institutions, including savings banks, as well as bill brokers have access to central bank credit. However, the Bank accommodates savings banks only on the condition that they refrain from making new investments while they are indebted to the Bank. The Bank also has a smaller number of private customers, who occasionally take a secured advance from the Bank at a rate of one per cent above the rate charged credit institutions for similar advances.

Local authorities have access to the discount window, but their access is subject to formal quantitative restrictions.[1] These restrictions appear to be directed more at restraining short-term borrowing

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1. Only those local authorities whose floating debt does not exceed 25 per cent of current revenues are allowed access to the Bank's credit facilities.

by local authorities than at reducing the amount of such paper actually discounted or used as collateral for advances from the Bank.[1]

The Netherlands Bank regards access to its credit as a privilege, not a right, and the credit institutions are expected not to use its facilities on a continuous basis. The Bank has no formal guidelines governing the amount of credit that the banks and bill brokers may take up, and relies upon moral suasion to keep use of its credit within bounds. Banks and other credit institutions have traditionally resorted to central bank credit only to a small extent.

Credit is made available through discounting eligible paper as well as in the form of advances at a higher rate. The Bank may refuse credit to prospective borrowers and it has at times made access to its resources dependent upon the conduct of the borrowers. Generally the banks try to manage their cash positions in such a way that they have no need to borrow from the Netherlands Bank. However, the tradition against such borrowing tends to break down when the banks are subject to very strong liquidity pressures. Apart from the local authorities, there are no formal quotas or ceilings, nor is there an official maximum duration for advances. However, the Netherlands Bank does exert moral suasion on banks making excessive use of its credit facilities.

The Netherlands Bank may discount bills of exchange and promissory notes having two signatures and having a maturity in accordance with the customs of trade, bills and notes of the Netherlands Treasury, and

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1. The national government has in general no access to the discount window, but the Netherlands Bank can, at its own initiative, buy Treasury bills directly, as it did, for instance, in the summer of 1968, to avoid seasonal pressures in the money market. The Bank is also authorized by its statutes to grant an interest-free line of credit up to gld. 150 million ($41 million).

debenture bonds redeemable within six months. The Bank may not grant unsecured credits or advances. However, the range of assets that the Bank may accept as collateral for advances is quite broad, since it includes all discountable assets, plus other securities, merchandise, warehouse receipts, and coin and bullion. The Bank itself has set a limit of 105 days on the maturity of short-term securities (Treasury paper, commercial bills and bank acceptances) that it will accept for discount.

In addition to the discount rate--its rate for discounting bills of exchange--the Bank specifies rates for three other kinds of transactions: discount of promissory notes; interest on loans and advances to private customers; and interest on loans and advances to others. The principal effective rate is the rate on advances to others, which category includes banks and bill brokers. This rate is regularly the same as the rate for discount of promissory notes, and both rates are generally 50 basis points higher than the discount rate. The rate for advances to private customers is regularly one percentage point higher than the rate for advances to banks and bill brokers.

Commercial bank practice with respect to central bank credit

Borrowing from the Netherlands Bank by the banks, bill brokers, and local authorities often takes the form of secured overdrafts (advances on current account). These advances are obtained mainly against the security of Treasury bills and notes which the banks have in safekeeping at the Netherlands Bank. Such overdrafts accounted for 62 per cent of the 273 million gld. of average outstanding borrowing by the Bank's nongovernmental customers in 1967; the remainder represented discounts of Treasury paper and bank acceptances. Although

they are legally eligible, in practice the Bank rarely discounts commercial bills or accepts them as collateral for advances as long as the borrower has short-term Treasury paper in its portfolio. The preference of banks for advances, despite the fact that the rate is 50 basis points higher than the Bank's discount rate, stems largely from the fact that an advance can be for as short a period as one day. The banks normally need recourse to the central bank only for short periods, and discounts at the Bank must be for a minimum of 10 days.

Banks having debit balances at the check clearings obtain virtually automatically advances from the Bank to cover them; normally the banks repay within the same day and there is no charge. Banks obtain funds for repaying advances from the Bank by borrowing in or recalling funds from the call-money market, by selling Treasury bills, or by converting foreign exchange.

Netherlands Bank credit taking the form of open-market transactions was used restrictively but infrequently in recent years. Because the major factors influencing the money market, such as the foreign balance, Treasury receipts and expenditures, and seasonal cash drains tend to affect the liquidity of banks and bill brokers in the same direction at the same time the volume of central bank credit often fluctuates sharply from week to week, and even from day to day.

One reason for the negligible recourse to the Netherlands Bank through the middle sixties was that whenever tightness in the money market threatened to induce the banks to repatriate funds held abroad, the Netherlands Bank would temporarily lower the required cash ratio. The fact that banks could average their balances at the Netherlands Bank over a reserve period in order to conform to the required cash

ratio also served to deter recourse to central bank credit because banks could draw down their large balances at the Netherlands Bank to meet temporary liquidity drains. In 1963, the required ratio was reduced in three steps to zero, where it has since remained.

In the period after the cash ratio became inoperative, banks were required to keep deposits at the Netherlands Bank only if they exceeded the prescribed limits on credit expansion. On the other hand, as a result of the decline in the banks' foreign investments and the increase of bank note circulation, the average amount of borrowing from the Netherlands Bank has increased in the past few years, so that the ratio of bank borrowing to cash balances rose sharply.

Linkage of commercial bank lending and borrowing rates to central bank rates

In setting their lending rates, banks are not restricted by either regulations or formal conventions. Neither are the banks required to inform anyone except their customers of their lending rates. Lending rates apparently tend to run from 2 to 2 1/2 percentage points higher than the discount rate of the Netherlands Bank. It is also reported that the banks will not usually lend at less than 5 per cent, so that changes in the Netherlands Bank's discount rate below the 3 per cent level have little effect upon commercial bank lending

rates; the bank's discount rate has not, however, been below this level since November 1959.

Similarly, no formal regulations govern rates paid on deposits. As a consequence of sharp competition in this field between the banks, especially in recent years, these rates are relatively high.

Changes in the rates of the Netherlands Bank are often made in concert with other monetary policy measures. The fact that commercial bank lending rates tend to follow changes in the Bank's discount rate reflects not a direct causal link between these rates, but rather the whole complex of monetary policy and the economic climate in which that monetary policy is made.

S W E D E N

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I. INTRODUCTION

Monetary policy in Sweden is the responsibility of the central bank, but its implementation is considerably assisted by the operations of the National Debt Office. Both are official bodies responsible to Parliament.

The Swedish discount mechanism, supported by a variety of other policy tools, is an effective instrument for influencing the cash base of the banking system. Furthermore, broad exchange control powers enable the Riksbank to restrict foreign financial borrowing by Swedish residents, although not commercial borrowing associated with trade, and hence to restrain unwanted increases in the central bank's international assets and the associated injections of liquidity into the cash base when the Swedish external balance on current account is not in surplus.

The Riksbank primarily influences the overall volume of bank credit by prescribing the terms of its advances to commercial banks, by open market operations in cooperation with the National Debt Office (which is responsible for management of the government debt), and by recommending liquidity ratios which, for all practical purposes, are binding. Advances by the Riksbank to commercial banks are normally made at the discount rate, or at one point above the discount rate if the banking system, collectively, has been in debt for more than five days. Furthermore, and even higher penalty rate (currently twice the discount rate plus 3 per cent) is imposed on individual banks which borrow excessively in relation to their capital accounts or which do not meet the recommended liquidity ratio. The penalty rate is particularly effective in controlling the banks' borrowing because

of large swings in the commercial banks' cash liquidity associated with an extreme bimonthly pattern of government receipts and expenditures.

Sales of Treasury bills and government bonds are conducted primarily by the National Debt Office. Such transactions are the most important instrument used to reinforce the impact of changes in the official discount rate. The overall effectiveness of open-market operations as a restrictive device is limited by the absence of specific cash reserve requirements for the banks, prescribed or traditional; because the market for short-term government securities outside the banking sector is insignificant; and because in periods of very high demand for credit, sales to the banks might require rather high interest yields.

In certain circumstances the liquidity ratio offers a partial substitute for reserve requirements because under certain conditions the penalty rate may be charged on advances when the liquidity ratio is not observed. On the other hand, its use as a monetary tool is limited because it is also designed to influence the distribution of credits in favor of securities of the government and specified mortgage institutions.

II. THE MECHANISM THROUGH WHICH MONETARY POLICY OPERATES

Legal status of the central bank

The Riksbank, a fully government-owned institution, is expected to implement the government's economic policy as enunciated in the budget message and accepted by Parliament. It administers foreign exchange control. It also performs a number of banking and other functions for the government. As the government's banker, it makes

funds available to the National Debt Office[1] and receives deposits from that Office and from the central government--but not from central government business enterprises or from local governments. It acts also as depository for the Investment Reserve System, which is independently administered by the Labor Market Board. Fluctuations in the balances of this System, which was established in the 1930's and expanded in 1955 as a means by which to foster, through the constitution of tax-favored reserves, countercyclical capital spending, have in recent years accounted for the bulk of the movement in the funds of other depositors.

The Riksbank works closely with the National Debt Office with a view to integrating debt management and general monetary policy. On the other hand, the Riksbank's role with respect to Investment Reserve funds is passive; the Bank maintains no direct working relationship with the administering board.

The banking system

The banking system is highly centralized. It consists of five large nationwide banks (one of which is government owned), and nine regional banks. Of the five large banks, four have branches throughout the country, while one is active in the Stockholm area only. There are, in addition, two specialized central institutions which serve as lenders of last resort for savings banks and agricultural credit associations, respectively.

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1. The National Debt Office is an official body with the same legal status as the Riksbank. It administers the public debt and is responsible for managing the funding and borrowing operations of the central government.

The banks adjust their liquidity, in the first instance, by buying and selling government securities and foreign exchange. Daily residual adjustments are made by borrowing in the day-to-day market (in which the banks, the National Debt Office, and some other financial and non-financial institutions participate). Borrowing against collateral at the central banks is a last resort.

III. THE DISCOUNT MECHANISM

Central bank credit to the commercial banks is in the form of advances against collateral, which may be Treasury bills or bonds quoted on the stock exchange; in fact, Treasury bills and government bonds predominate.[1]

The rate that the central bank charges on advances is a key determinant of the interest rate structure. Published commercial bank loan and deposit rates customarily move with the official discount rate. In periods of tight monetary policy, however, advances are actually made at rates commonly somewhat higher than published rates.

Advances are normally made by the central bank to meet only temporary needs of the banking system. Banks may obtain advances (against bill or bond collateral) at the published discount rate for a minimum period of three days--provided the banking system as a whole has not remained indebted for more than five days. On the sixth day on which the banking system, taken as a whole, remains indebted to the central bank, all borrowers remaining or becoming indebted to the

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1. The only discounts, strictly speaking, which the Riksbank makes are not for banks but for nonfinancial business concerns. The amount of such direct lending is not significant.

Bank must pay interest at a rate one percentage point in excess of the discount rate. Some time must elapse with no bank borrowing before the published discount rate is again applicable.

In addition, a penalty rate amounting to the official discount rate, plus 3 per cent, has been intermittently applied to individual banks whose borrowing from the Riksbank was high relative to their capital and/or to banks not observing recommended liquidity ratios (see below). The relationship of the penalty rate to the basic discount rate has been changed several times in recent years. Usually a lower effective penalty rate applies to banks that observe the prescribed liquidity ratios. To make the restrictive effects aimed at by the penalty rate system fully effective, banks are prohibited from borrowing at the basic rate in order to relend to other banks. If the Riksbank suspects any such transactions, it can apply the penalty rate to the total amount borrowed from it by the "channelling" bank.

The National Debt Office also may supply liquidity to the banking system. This Office, as noted above, has authority to borrow at the central bank and, since 1964, has been empowered to lend in the day-to-day market. Such lending has been made to even out the swings connected with the bimonthly tax collections; the National Debt Office operations are always carried out in consultation with the Riksbank.

On the other hand, the National Debt Office borrows extensively in the short-term market every other month between the 10th--when the central government transfers funds to the local authorities (which

deposit them with the banks)--and the 20th--when tax payments are made to the central government. The effect of these borrowings is to smooth out money market conditions since the banks have a surplus of funds at the same time. By contrast, after the 20th of the month tax collections cause a squeeze on the banks which tightens up to the end of the month and then gradually weakens. It is during this bimonthly squeeze that the banks are usually forced to get advances from the Riksbank, thus providing the Riksbank with its best opportunity to restrain commercial bank lending through the use of the penalty rate.

IV. RELATIONSHIP OF DISCOUNTING TO OTHER INSTRUMENTS OF MONETARY POLICY

Central bank lending to commercial banks in integrated with other monetary policy tools, especially minimum liquidity ratios and open-market operations. The Riksbank also has the power to set variable reserve requirements up to 15 per cent of deposits, but used it for the first time in December 1967. The central bank operates in the foreign exchange market to maintain the external stability of the krona. However, administration of foreign-exchange controls aims at assisting domestic monetary policy, by insulating the Swedish credit market to some degree from markets abroad.

Controls over the distribution of credit

The Riksbank exercises considerable control over the distribution of long- and short-term credits--by setting liquidity ratios applicable to commercial banks, by prescribing the "desirable" holdings of

government securities and credits to the housing sector for other financial institutions (such as insurance companies and savings banks), and by control over bond issues. Although a 1962 law gives the Riksbank compulsory powers in these fields, the bank appears to prefer the voluntary approach, leaving its legal powers in reserve.

Liquidity ratios have been designed to assure priority for government borrowing and for the financing of residential construction; they are also closely related to the cost of central bank lending, since banks not conforming to the recommended ratios have on occasion been charged penalty rates on their borrowing from the central bank. In addition, liquidity ratios serve to reinforce the pressure on banks to curb lending financed by open market sales of long-term securities. Since liquidity ratios serve two different purposes, they have not been used flexibly as a tool of monetary policy. In fact, the "recommended" liquidity ratios have been left unchanged since 1961.

The liquidity ratio varies with the size of the bank; the size classification has been gradually reduced from five groups in 1952 (with considerable variation in the liquidity ratio), to two (with only a moderate difference in liquidity ratios). Since 1961, the agreed liquidity ratios have been 30 per cent for the larger and 25 per cent for the smaller banks.

While in certain circumstances, the liquidity ratio, combined with the penalty rate on advances, may fulfill the same role as legal reserve requirements, it is not an adequate substitute for variable reserve requirements designed to sterilize unanticipated increases in bank liquidity and because it alters the distribution but not the volume of the banks' earning assets. In December 1967, the Riksbank for the

first time used its power to impose reserve requirements. The ratio in force from January 2 to mid-February was 2 per cent of deposits for the five big banks and 1 per cent for other banks and a higher central bank discount rate was in effect over the same period.

Operations in government securities

Government securities operations are conducted by the Riksbank, and more importantly, by the National Debt Office in consultation with the Riksbank. Indeed, central bank credit is injected into and withdrawn from the Swedish economy by both types of operations, inasmuch as the National Debt Office obtains needed funds from the Riksbank by means of securities transactions, and also keeps its funds on deposit with the central bank.

Such operations are used to strengthen the effectiveness of changes in the official discount rate. Thus increases in the discount rate are frequently accompanied by National Debt Office refinancing into longer-term government bonds, in order to put the banks' cash and liquidity position under pressure. Further, a change in interest rates offered by the National Debt Office on new long-term government security issues complements changes in the official discount rate as a pace-setter for changes in market rates of interest.

The mix of monetary instruments in implementing policy

The discount mechanism in Sweden is used primarily to meet the extreme bimonthly squeeze on bank liquidity caused by the pattern of tax receipts and expenditures. Annual average net borrowing (indebtedness minus sight deposits) of the commercial banks from the Riksbank in the 1959-67 period has generally increased as monetary policy tightened (with the exception of 1964 when there was a large external

surplus) and decreased as it eased, with a strong underlying upward trend in average gross borrowing by the banks.

At the same time, changes in the Riksbank's holdings of government securities--which largely reflect transactions with the National Debt Office--have been used to cushion swings in external assets and Investment Reserve Deposits. The net impact of all three accounts has tended to expand the banking system's reserves each year, as has net changes in all the Riksbank's assets and liabilities (including advances and government current-account deposits) affecting bank liquidity. In general, the amount of funds supplied by all such Riksbank transactions has varied roughly with the posture of monetary policy. Furthermore, commercial bank credit appears to have responded to monetary policy with considerable sensitivity.

Overall, it would appear that the tools of the Swedish monetary authorities are adequate to control domestic credit in the face of farily wide fluctuations in Sweden's external position. In fact, since 1962, central bank operations have had the effect of adding to liquidity at an increasing rate, relatively unaffected by fluctuations in the Riksbank's foreign exchange holdings.

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I. INTRODUCTION

In Switzerland, perhaps more than in any other of the countries surveyed, the inflow of international capital has vitiated monetary control through traditional instruments generally, and particularly through the discount mechanism, and has led the authorities to rely mainly on direct controls over bank credit. The stability of the currency, combined with the country's international neutrality, has made Switzerland a major refuge for flight capital. Consequently, its banking system has become highly liquid: the banks' holdings of cash and liquid assets far exceed minimum required ratios, which in any event are not employed for monetary policy purposes. Although the central bank is equipped with limited open market powers, which it uses to deal with end-of-month pressures in the money market, its portfolio of marketable securities is tiny relative to the cash balances and other liquid assets of the banking system. Partly because of the liquid state of the banks, but also for domestic political reasons and above all to discourage further capital inflows, the Swiss central bank has held its discount rate among the lowest in the world, and has thus fostered an interest rate structure that is low relative to those of other centers. Hence, the major Swiss banks hold a substantial proportion of their assets abroad and adjust their cash positions mainly through exchange operations. Access to central bank discounts and advances is regarded as a privilege, and the authorities encourage the large banks, at least, to rely on their own resources rather than to resort to central bank credit. In practice, such borrowing is relied upon to only a minor extent for adjusting the banks' cash position.

Until the early 1960's, monetary policy in Switzerland was strongly reinforced by Confederation budget surpluses that were partly sterilized. In the last few years, however, budget surpluses of the Confederation were substantially lower, and both federal and cantonal expenditures rose sharply.

The Swiss monetary authorities have been concerned about the feebleness of the available instruments of monetary policy, and have not found the reliance on voluntary agreements with the banks (see below, page 4) entirely satisfactory. In his report to the 1966 annual meeting of stockholders of the National Bank, President Schwegler said, "The method of voluntary arrangements available since 1960 met with only limited success." The government has therefore proposed to enlarge the National Bank's powers substantially. The most important new powers sought are as follows: (1) variable minimum cash reserve requirements related to the increase in deposit liabilities of a bank and differentiated according to whether the depositor is a resident or nonresident; (2) power to impose credit ceilings, which are to be set in relation to the growth of real national product; (3) open market sales by the National Bank of its own obligations; and (4) authorization to engage in forward foreign exchange operations.

II. THE BANKING STRUCTURE

The Swiss banking system is considerably less centralized than those of other European countries surveyed. Half of its assets are held by 240 cantonal, mortgage, and savings banks, and loan associations. However, there are five large banks whose assets at the end of 1966 comprised 35 per cent of the total assets of the banking system. These large banks, and certain "other" banks hold the bulk of the

system's foreign assets, the total of which was officially estimated in the fall of 1967 at $5.4 billion equivalent, an amount twice as large as the entire cash base (bank balances at the central bank plus currency in circulation) at the time.

The power to regulate Swiss monetary affairs is diffused, reflecting the country's constitutional arrangements. Although the Swiss National Bank has certain of the powers normally vested in the central bank, the federal government retains important regulatory powers. The procedure for the adoption of new monetary legislation is cumbersome: such legislation must often be ratified by popular referendum.

The central bank is owned to the extent of 40 per cent by private stockholders, the rest by the cantons, the cantonal banks, and other public law corporations. The influence of the stockholders is very limited, the management of the bank being appointed for the most part by the Federal Council. The Bank advises the federal authorities on monetary policy and administers measures decreed by the Federal Council.

III. THE INSTRUMENTS OF MONETARY POLICY

Since many of the tools of monetary policy are not available to the Swiss National Bank for indirectly influencing credit conditions, chief reliance has been placed on direct controls on credit expansion and foreign capital flows and, more recently, building activity.

The Swiss National Bank has the power to grant or deny access to its credit facilities, to set its rates, to buy and sell foreign exchange spot and short-term securities, and to veto credits of one year or more to foreign borrowers in amounts over 10 million francs ($2.3 million). Except for the last one mentioned, these powers of the National

Bank have been rendered ineffectual by a persistently high degree of money-market liquidity, which results largely from Switzerland's position as safe-haven and intermediary for foreign funds. The liquidity of the market has prevented the National Bank from building up an open market portfolio and also has made it unnecessary for the banks to make much use of the discount window. Consequently, monetary policy in the postwar period has been put into effect primarily by means of voluntary "gentlemen's agreements" between the banks and the National Bank.

In 1955 and 1956, for instance, gentlemen's agreements provided for holding minimum balances at the National Bank. Other gentlemen's agreements have aimed at checking the inflow of foreign funds by prohibiting payment of interest on foreign deposits, and by providing that several months' notice be given for withdrawal. In the spring of 1962 the Bank concluded an agreement with the banks restricting the growth of bank credit, which agreement was renewed in 1963, given the force of law by the Federal Assembly in 1964 and ratified by referendum in 1965. In 1965 the banks also agreed not to assist the investment of foreign capital in Swiss real estate or mortgages and to sell Swiss securities to foreigners only to the extent that Swiss securities have been sold by foreigners to the bank concerned.

Cash and liquidity ratios are prescribed by a separate agency, the Banking Commission, which may waive the requirements in individual cases, but does not vary them according to the needs of monetary policy. The required cash and liquidity ratios are intended to provide standards relating to the liquidity and solvency of the banks, and are not used as instruments of monetary policy.

Swiss banking conditions in the postwar period have been characterized by a high degree of liquidity, as a result of balance-of-payments surpluses, and the liquidity of the banks has therefore considerably exceeded the amounts necessary to meet the ratios prescribed by the Banking Commission. At the end of 1966 the prescribed ratio of cash assets to total deposit liabilities, including medium-term bank bonds, averaged 2.4 per cent for all banks, whereas the actual ratio maintained by the banks averaged 6.6 per cent. Similarly, the prescribed ratio of cash assets to short-term liabilities averaged 7.4 per cent, whereas the actual ratio was 20 per cent, and the prescribed ratio of cash and liquid assets combined to short-term liabilities was 44 per cent, and the actual ratio was 73 per cent. The liquidity ratios must be met at all times, but there are no penalties for noncompliance, and the available statistics refer to year-end statements, which include a considerable amount of "window-dressing" to increase the apparent cash-asset ratio.

Other than borrowing from the National Bank, the principal source of short-term borrowing open to Swiss banks is the interbank call-money market. Usually, the large banks are lenders in the call-money market and the cantonal banks and other categories of banks are borrowers; the market is small. Until recently the large banks were accustomed to adjusting their cash positions mainly by liquidating short-term foreign investments across the foreign exchange markets. Due to seasonal patterns in cash payments and also the desire of banks and other institutions to show a good cash position on their balance sheets at the end of June and December, and to a lesser extent at the end of the first and third quarters, the Swiss banks have in the past

repatriated sums running into several hundred million dollars. Because this process of window-dressing and other end-of-the-year transactions had an unsettling effect on the foreign exchange markets, the Swiss National Bank in the past few years has arranged swap transactions with the banks, swapping, in turn, the dollars received with the Bank for International Settlements or foreign central banks. Furthermore, in circumstances where foreigners (nonresidents) rather than Swiss banks were putting funds into Switzerland, the National Bank passed on to the banks for investment purposes, on a swap basis, rate-secured balances of foreign exchange which it had taken over from foreign central banks within the framework of swap transactions.

The Swiss National Bank does not conduct open market operations in the sense of buying and selling securities in the market. In its endeavor to offset certain foreign flows, however, the Bank has placed securities ("rescriptions") of the Confederation directly with the banks and sterilized the proceeds, charging interest costs to its own account. To relieve itself of part of the cost of these sterilization transactions, the National Bank has purchased U.S. Treasury securities of the foreign currency series (Roosa Bonds). Rescriptions can be used as collateral for loans by the National Bank to tide the banks over periods of stress at the end of the month, quarter, or the year; or, alternatively, when the maturities are within the proper range, the National Bank may repurchase them for the same purpose. These open market operations have had the effect of smoothing money market rates, but they are not regarded as having restricted bank liquidity significantly.

IV. TECHNIQUES OF CENTRAL BANK POLICY ON REDISCOUNTS AND ADVANCES

Eligibility requirements

Paper eligible for rediscount by the Swiss National Bank includes Swiss bills and checks bearing at least two independent signatures of known solvency, Federal treasury bills, cantonal and communal Treasury bills endorsed by a bank, Swiss bonds, and Federal Debt Register claims. All discountable paper must have a maturity of three months or less.

The collateral for advances by the National Bank may be Swiss bonds, Federal Debt Register claims, discountable bills, and gold in bars or coins.

Access to central bank credit

The Swiss National Bank is not restricted by law as to whom it may grant credit. The Bank has authority to make advances to the Federal government but, primarily because the government's budgetary position has been strong, such advances have been negligible in recent years. As a carry-over from earlier times, business firms other than banks have accounts at the National Bank and may discount private bills with it. New accounts are not opened for business firms except in special circumstances, and the list of firms having access to direct discounting at the National Bank is being gradually reduced by closing accounts of firms that have not borrowed for a number of years.

About 20 agricultural cooperative organizations also have accounts at the Bank and can discount with it the paper of their members. Direct lending to these organizations is in line with the general Swiss policy of supporting agriculture.

In general, the National Bank is not obliged to grant credit to any customer, whether business firm, bank, or government. However, in response to a request from the government, the Bank has undertaken to discount automatically bills financing the "compulsory stocks" of essential raw materials, foodstuffs, and fodder.

Official rates

In the postwar period, the rates of the Swiss National Bank for discounts and advances have been changed six times--the first increase following more than 20 years of stability. In general cases, the rate changes followed trends in money market rates that had been developing for several weeks or months. Officials of the Bank consider that the role of the discount rate is to "sanction" market rate changes, and the Bank has only exceptionally used the discount rate to lead the market. The National Bank's lending rates are always well below commercial bank rates for loans and advances, which constitute the bulk of the business of the commercial-type Swiss banks. Advances by the Bank are subject to call at 10 days' notice or less.

In addition to the basic discount rate, the National Bank sets special rates for two kinds of compulsory stock bills--those financing storage of food and fodder and those financing the storage of other strategic materials. The commercial banks discount the compulsory stock bills at the same rates as does the National Bank, which endeavors to set the rates at the lowest level that will induce the banks to hold the bills. Since 1957, when they were introduced, the rates for discounting compulsory stock bills have been sometimes above and sometimes below the Bank's official discount rate. The Bank's rate for advances always exceeds the discount rate by either a full or half of a percentage point.

Commercial bank practice with respect to central bank credit

All banks have accounts at the National Bank, but normally only the small banks borrow in the form of discounts or advances. The National Bank has fostered a tradition that the large banks should rely on their own funds and not borrow from the central bank.

In recent years, over three-fourths the relatively small amount of National Bank credit in use has taken the form of rediscounts of bills (mostly commercial bills, including compulsory stock bills) since the discount rate is always below the rate for advances. In relation to total bank credit, the maximum level of National Bank discounts and advances in recent years has been on the order of 1/2 of 1 per cent.[1] National Bank credit tends to rise at the end of each calendar quarter due to window-dressing, and the range of fluctuation is fairly large. In 1967 average outstanding National Bank discounts and advances amounted to Sw.F. 143 million, compared with a weekly peak of Sw.F. 248 million.

In the last few years, the needs of the banks for cash assets for end-of-year purposes were met to a great extent by foreign currency swaps arranged by the National Bank rather than through borrowing from it.[2]

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1. The supply of bills held by the banking system is ample: at the end of 1966 (the latest date for which information on all banks is available) the banks held Sw.F. 5.5 billion of bills, of which about half were eligible for rediscount, while the largest amount of bills held by the Swiss National Bank on a weekly statement date in the last five years was Sw.F. 252 million (on June 30, 1965). Similiarly, the amount of paper held by the banking system eligible to be used as security for advances from the Bank vastly exceeds the current level of such advances.

2. These swaps, under which the Bank buys foreign currency assets from the banks spot and sells them forward, are not shown in statistics.

Linkage of central bank rates to commercial bank lending and borrowing rates

Commercial bank minimum lending rates are set by interbank agreement; they are not set with reference to the discount rate of the National Bank. Commercial bank minimum lending rates are not published.

There is no formal link between deposit rates and central bank lending rates, but in deciding to change the discount rate the National Bank considers the trend and level of bank bond and deposit rates along with call-money rates. The rates paid on bank time deposits, other than savings deposits, are set in the market and fluctuate from week to week. Medium-term bank bonds, however, are sold on tap at a given rate which can be changed only after two weeks' notice to the National Bank. The rates on these bonds therefore fluctuate less than time deposit rates, but they conform to the general trend of deposit rates.

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I. INTRODUCTION

In the United Kingdom, monetary policy is implemented largely by control of interest rates. The British discount mechanism is used primarily to give the authorities (a term used in the United Kingdom to convey the notion that the Bank of England acts as an agency of the government) control over interest rates in the London money market, which is regarded as necessary in order to achieve broad objectives of national policy and to protect the international position of sterling. Since, in contrast to the United States, the British Treasury does not maintain large working balances, meeting day-to-day financing requirements of the government is an important objective of monetary policy. Ordinarily, the discount mechanism is administered with a view to preventing sharp fluctuations in Treasury bill rates because wide swings in bill rates would be communicated to the bond market and would adversely affect the government's funding of longer-term debt. The discount mechanism, which links the large banks to the central bank through the discount market also provides a means for influencing the employment of short-term banking funds, and this aspect of the discount mechanism is obviously also a matter of considerable concern to the authorities.

Control of money market rates involves strictly limiting access to the Bank of England's discount window. Access is granted only to a select group of specialized intermediaries--the twelve recognized discount houses. In return for this privilege, the discount houses submit a syndicated bid and undertake to cover the weekly Treasury bill tender, thus assuring the central government that its short-term financing requirements will be met. For its part, the Bank of England's strategy at the weekly Treasury bill tender is designed--by manipulating the

amount of bills offered and by means of open market operations--to keep the discount market initially "short" of cash so that the authorities then have the option of providing assistance through open market purchases or through more costly (to the discount market) rediscounts or loans from the Bank. The Bank may (see page 215) charge a rate above or below the discount rate. Enforced borrowing by the market at the discount window is thus a device by which the Bank of England can, when necessary, make clear to the market that it would like to see rates held firm or rising. To such signals, which are also transmitted via frequent personal contact with Bank of England representatives, the market normally responds by maintaining or raising the interest rate at which it bids at the next tender. Having achieved the desired result, the Bank of England can permit borrowing to disappear because the amount of borrowing is not by itself an indicator of market conditions. A failure to obtain the response sought can be expected to lead to sustained or intensified central bank pressure and further costly borrowing by the market at the central bank.

Open market operations in the gilt-edged securities market are designed to pursue broad quantitative credit policy objectives as well as to reinforce the effectiveness of rate policy. Through such operations, pressures on the banks' cash are passed on to the discount houses, whose liabilities largely consist of secured call-loans from the banks. In the face of calls from their creditors, the discount houses obtain relief through recourse to the discount office, an accommodation which the central bank, of course, cannot refuse. Thus,

at least in the short-run, pressures on the banks' cash positions have tended to be offset by the provision of reserve balances through the discount window, without relieving pressure on their liquidity.

Under these circumstances the maintenance of monetary control depends primarily on the extent to which the authorities are willing to employ interest rate policy to attain their objectives. The means by which the authorities can influence the interest rate structure are powerful. Established conventions link many bank lending and money market rates to the central bank discount rate, thus providing the authorities with a lever for raising or lowering the entire spectrum of short-term money rates, as well as bank lending rates. If used boldly, official interest rate policy can exert a significant influence on credit flows. However, for a number of domestic and international reasons, the range within which the discount rate can be moved is limited. Since the end of World War II, the traditional modus operandi of British monetary policy has been supplemented by direct and quantitative controls. The controls, however, have been operated in a very informal fashion, deriving their main strength from the authority which the Bank and its governor enjoy and the willingness of banks and of other financial institutions to cooperate, in part, to avoid their formalization with the attending rigidities and overt sanctions.

To supplement rate control, the authorities have sought various means to regulate the level of total liquidity held by banking and nonbanking institutions, and further to regulate the amount of credit supplied by the banking community. For example, to backstop their interest rate policy, the authorities lay some stress on their control

over banks' holdings of liquid assets by means of required liquid asset ratios and "special deposits" at the Bank of England. These liquidity controls are formally applicable only to the London clearing and Scottish banks. The Bank of England expects other banking institutions to maintain liquidity standards suitable to their particular pattern of business. The impact of a special deposit call (or conversely release of deposits) is spread by Bank of England open market purchases (or sales) of Treasury bills to other categories of liquid assets.

Nevertheless, a number of factors in recent years have reduced the strategic importance of liquidity controls over the banking system. First, the clearing banks themselves often have been able to readjust their portfolios by selling government securities to obtain needed liquid assets. In addition, a resurgence of commercial bill finance has provided the banks with a means of extending credit while at the same time improving their liquidity positions, because many commercial bills qualify as liquid assets. This growth of the banks' holdings of commercial bills is the result of a number of factors. To some extent it reflects the growth of consumers' instalment credit extended largely by finance houses which rely on commercial paper to obtain liquidity. To cope with the tendency of the clearing banks to augment their liquid asset holdings through transactions with the nonbank public, and the tendency for peripheral institutions to expand into any credit gap left by curbs on the major banks, the authorities have gradually widened the group of institutions

to which it issues credit directives. These directives (in fact, "requests") have been used to impose both quantitative restrictions and qualitative guidance on lending (including commercial bill finance) by almost all banking institutions.

II. THE INSTITUTIONAL FRAMEWORK

The Bank of England

The Bank of England is also the chief adviser to the central government on all domestic and international monetary matters, but the government has considerable direct influence on its policies. The Bank is perhaps more deeply involved than most other central banks in assuring day-to-day financing of Treasury operations and in the management of the public debt.

Until the end of World War II, the linkages that made possible the expression of official government policy through the central bank action were largely, although not entirely, informal. The Bank of England Act of 1946, which transferred the Bank's capital stock to the Treasury, also formalized the basic relationship linking the Bank of England with the central government. The Governor, Deputy Governor, and the Court (equivalent to a Board of Directors), consisting of sixteen members, are now appointed by the Crown. Most importantly, the Act gave the central government the statutory power to obtain central bank compliance with its policies by issuing directives to the Governor of the Bank of England, after due consultation with him. But long before the 1946 legislation, it had been established that no change in the central bank discount rate would be made without prior approval of the government. The Bank of England Act

of 1946 also gave the central bank the power, subject to Treasury authority, to issue general directives to any banker; in fact, the Bank of England has never found it necessary to issue a formal directive in order to secure compliance by the financial community.

In addition to official and foreign central bank accounts, the Bank of England maintains accounts for various types of banking institutions, among which the London clearing banks are the most important. Until recently it has been the policy of the Bank not to open any new accounts for private customers and to gradually liquidate those going back to the time when it engaged in commercial banking business. Recently, however, the Bank has invited certain city firms, among them some leading jobbers (dealers) in gilt-edged securities, to open accounts with it.

The discount ("Bank") rate is established by the Court of the Bank of England with approval of the Chancellor of the Exchequer. Changes in Bank rate, as the discount rate is called, are traditionally announced on Thursdays, shortly before noontime, and departure from this tradition has occurred in crisis situations only. Changes in the central bank discount rate are made either to increase the authorities' room to maneuver in their day-to-day management of the money market, or to give a lead to the financial community on general economic policy, or both.

The Bank of England discount rate establishes the pattern of rates over the entire spectrum of the money market and for bank loans and deposits. This pattern of rates is implemented in part through formal agreements. For example, the London clearing banks, by agreement, currently pay 2 percentage points below Bank rate on deposit

accounts[1] and generally charge 1/2 to 1 point above Bank rate on prime loans, but no less than 5 per cent. Nonclearing banks, finance houses and local authorities normally pay close to the Bank rate for 3-month time deposits, although during periods of stringency the rate on such deposits has exceeded the Bank rate by about 1 per cent or more.

The central bank rate establishes the minimum cost to the discount market of call loans from the clearing banks (normally 1 5/8 points below the Bank rate). It also establishes a ceiling for the Treasury bill rate and, by convention, a lower range within which the discount market may bid for Treasury bills at the weekly tender and at the same time expect official open-market operations to keep the money market on an even keel. In the recent past, for instance, the authorities have usually been willing to see the Treasury bill rate within a margin of 1/2 to 3/4 of a point below Bank rate. At the same time, such a spread has given the discount market enough maneuvering room at the weekly tender to garner an amount of bills sufficient to enable it to meet the liquid asset needs of its main customers, the clearing banks.[2]

Open-market operations in the money market are then designed to keep short-term rates within the desired range. In the long-term

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1. Accounts not directly subject to check, but callable at 7 days notice. The clearing banks do not offer any longer maturities.

2. At least once in the recent past the Bank of England has acted to move the Treasury bill rate unprecedently close to the current central bank rediscount rate in order to keep short-term interest rates internationally competitive. On one other occasion it used the exceptional technique of lending above the central bank discount rate to produce this result. Earlier, the Bank of England had used similar devices in its rediscount procedures in order to achieve specific objectives.

market, apart from the secondary effects of operations on short-term rates, the authorities have considerable influence on longer-term interest rates, given the existing debt management arrangements. The Bank of England has control over the supply and terms of sale of medium- and long-term government securities, some of which are almost always available to the public from the securities held in the Issue Department. Moreover, debt management operations are a continuous process; large maturing issues are usually purchased in advance of maturity by the Bank of England, and sales of long-term issues are made whenever possible. However, the authorities' desire to avoid sharp swings in long-term interest rates has been an important limiting factor in their open-market operations.

Official funding operations operate, whenever conditions permit, to help keep total short-term liquidity within desired limits. In implementing debt management policies the authorities automatically offset the effects of flows of foreign currency based liquidity. Official purchases or sales of sterling through the Exchange Equalization Account are reflected in reduced or increased issuance of Treasury bills, respectively, which is integrated into the Bank of England's daily management of the money market, thus returning to or absorbing from the market the cash element of the foreign-exchange flow.

The banking structure

The banking structure of the United Kingdom is quite complex. It was formed when Great Britain was the most advanced industrial country of the world, the center of world trade, the leading financial power and the center of the British Commonwealth, and when London was

the most important and active financial market in the world. While the banking structure of the United Kingdom is characterized by numerous traditional influences, it has been quite responsive to new challenges, and there have been numerous innovations since World War II. Since the Bank of England does not provide credit to commercial banks directly but only through the intermediation of a special group of institutions described in the following section, it may suffice to give a very broad view of the banking system.

The London clearing banks form the core of the banking system. In 1967 their number was reduced through mergers from 11 to 8. All of them have extensive networks of domestic branches and most of them own foreign branches, agencies or subsidiaries as well. Clearing banks hold about 85 per cent of domestically owned (but only about 5 per cent of foreign currency) deposits and extend about two-thirds of domestic loans. The Scottish banks and the banks in Northern Ireland mainly serve local needs, although they do place significant amounts of cash at short call in the London money market. There are also a large number of other "nonclearing" banks, including merchant banks and a diverse group of banks whose main activities are overseas, and banks of overseas origin. Many of these institutions--of which there are 200--are active in taking foreign-currency deposits (mainly dollars, but other convertible currencies also) and relending them abroad or swapping them into sterling assets. They are also important in providing credit through the acceptance of domestic and international sterling bills of exchange. In aggregate, their deposits (including those denominated in foreign currencies) are less than half those of the clearing banks, but they account for over 90 per cent of lending to nonresidents.

The structure of commercial banks' liquid assets

The London clearing banks, by long-established tradition, maintain minimum cash and liquidity ratios. These ratios were originally adopted, and still are maintained, for prudential purposes, but they also have become a means of implementing monetary policy. Indeed, the Bank of England expects the clearing banks to adhere to ratios which have evolved as a matter of custom. The clearing banks keep 8 per cent of their total deposits in the form of cash--i.e., coin, notes and balances with the central bank, as closely as possible on a day-to-day basis. In addition to their required cash reserves, the clearing banks currently must keep an additional 20 per cent of their total deposits in the form of specified liquid assets--i.e., money at call and short notice (loans to the money market and loans to others with maturities up to 28 days), United Kingdom Treasury bills, commercial bills, or specified refinanceable export credits. The Bank of England has varied the liquidity ratio only once--in 1963--and banks themselves determine in what proportion to hold each type of these assets, depending on the type of business they are engaged in. No other category of banking institution is required to keep balances on deposit at the central bank, although most nonclearing banks do maintain very small balances for convenience. When the Cash Deposit Scheme proposed in 1968 comes into operation, all banks concerned will have special accounts at the Bank of England to meet its requirements.

The standards of liquidity which the Bank of England expects the Scottish and Northern Irish banks to maintain are similar to, though somewhat more flexible and less explicit than, those which apply to the clearing banks. This distinction in part reflects the greater emphasis on time deposits by the Scottish banks. No formal liquidity

regulations are applied by the Bank of England to the discount houses, the merchant banks, or the overseas and foreign banks; but most of these institutions (especially those whose bills are bought by the Bank) submit to central bank judgment as to the adequacy of their capital resources, liquidity, and general standing.

III. REDISCOUNTS AND ADVANCES

The discount market

The 12 members of the London Discount Market Association, to which access to the Bank of England's discount window is limited, are a key element in the rediscount mechanism. As specialists in dealing in short-term money, they do business mainly with the banking community and to a small extent with nonbank institutions, but hardly at all with the general public. Their principal activities may be summarized as follows:

(1) The discount houses undertake to underwrite the weekly tender of United Kingdom Treasury bills. With the concurrence of the authorities, they submit a syndicated bid which puts a floor under the market price at the tender. This bid must be carefully priced because the discount houses cannot afford to go without Treasury bills; at the same time, they face competition from outside tenders, particularly from nonclearing banks and bill brokers outside the Discount Market Association tendering on their own account and from banks tendering for insurance companies, nonfinancial corporations and overseas and other customers.

(2) The discount houses borrow the clearing banks' excess cash, on a secured basis, providing the banks with a highly liquid asset in the form of money taken at call. About two-thirds of the discount

houses' liquid resources are provided in this manner. The remainder comes largely from other banks operating in the London money market and such "outside money" is borrowed on terms that fluctuate with money market conditions but which generally are slightly higher than the cost of funds obtained from the clearing banks. The clearing banks, which never borrow reserves from each other, normally recall from the market on any one day sufficient cash balances to meet their daily cash reserve requirements.[1]

(3) The discount market, on its part, invests whatever funds are available to it in liquid assets--e.g., mainly Treasury bills, prime commercial bills and government securities of maturities up to five years. Market holdings of Treasury bills are primarily designed to meet anticipated purchases by the clearing banks; the latter do not tender for Treasury bills for their own account.

Discount houses make a market in Treasury bills, bank bills and trade bills as well as government bonds of up to five years' maturity. These instruments are also employed as collateral for short-term loans obtained by the discount houses from the clearing banks and the rest of the money market. In recent years, the discount houses' commercial bill holdings have grown rapidly relative to their other assets, thus reversing a long-term trend.

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1. Nonclearing banks similarly may recall needed cash balances; in the last few years, however, an active interbank market has developed among the nonclearing banks. These banks, which keep accounts with and make settlements through the clearing banks, can adjust their cash positions by borrowing or lending sterling deposits among themselves on an unsecured basis, in addition to using the discount market.

Technique and practice of central bank lending

The discount houses can either rediscount bills or borrow on collateral, normally at the Bank rate. In either case rediscountable paper or acceptable loan collateral consists of Treasury bills, government securities within five years of maturity, bills issued by local authorities which comply with Bank of England requirements, and commercial bills carrying the names of two established British institutions (one of which must be the primary acceptor)--usually a British bank and a discount house. To reinforce the penal nature of the borrowing, Bank of England regulations require that rediscounts must have an average maturity of 21 days, and until 1966, advances had normally been given for a minimum of 7 days (see below). However, discount houses typically require assistance for a period very much shorter than 21 days. Consequently, they are normally eager to obtain loans with the shortest possible maturity in order to minimize the total interest cost of central bank assistance which is given at a uniform rate (usually the Bank of England discount rate) regardless of the maturity involved. In general practice, therefore, the discount houses borrow by means of advances, usually secured by "short" government securities (bonds within 5 years of maturity).

In order to avoid adding to or creating unwanted market shortages seven days ahead, the authorities may allocate some 8 to 9 days' maturities to each borrower or equal amounts of six- and eight-day money in which case average maturity is, in effect, seven days. If bills are offered for rediscount, the Bank of England insists that no bill in the parcel have less than 15 days' maturity and, as noted above, requires an average life of 21 days for the aggregation of the bills involved

in each transaction. Rediscounts are treated by the discount houses in their balance sheets as sales of assets, and there is no counterpart to repurchase agreements as practiced in the United States.

On June 30, 1966, the Bank informed the discount houses that it was prepared on occasions of its own choosing, and for purely technical money-market purposes, to assist them overnight, thus reducing the actual cost of borrowing. In part, at least, the new arrangement became desirable because contraction in the available supply of Treasury bills tended to inhibit open-market operations. Such overnight lending has so far taken place when there was an acute shortage of money on one day and a large surplus was expected the next day. With the new type of accommodation, the Bank did not have to buy bills one day and sell bills the next. Overnight lending has also been used to push forward a shortage from day-to-day and thereby ensure the opportunity of taking penal action the following day, if so desired. So far, such overnight lending has been at a rate below the Bank rate, and usually at the highest effective market rate. The authorities reserve, however, the right to charge for overnight accommodation whatever rate seems appropriate in the light of current policy objectives.

The authorities' signals may be reinforced by charging a rate above the regular discount rate when it seems unadvisable, for domestic reasons, to raise the discount rate. Thus, in early 1963, along with a reduction in the discount rate, the Bank of England announced that it might from time to time lend to the discount houses at a higher rate. But, the superpenalty rate was brought into play only once, in March 1963.

Technically, there is no ceiling on the amount that a discount house may borrow at rates determined by the Bank, provided that acceptable collateral is presented. Nor are there explicit limits on the total rediscounting of bills, although the Bank of England does observe internal limits on individual acceptors and drawers. In circumstances of relative stringency, no special emphasis is placed on having an individual discount house borrow at the Bank of England for any shorter period than the borrowing by the market as a whole. Moreover, during such periods, as for example during the early part of 1965 when total borrowings tended to be exceptionally large, the number of days on which such borrowings occurred increased, and the period in which loans were outstanding also showed a rise. This use of central bank credit reflected the pressures imposed on the discount market by the Bank of England through its day-to-day open-market operations.

The discount houses, however, do not normally make it a practice to borrow or rediscount in excess of their short-term needs, for they cannot profitably finance investments in prime short-term assets on funds borrowed at a penalty rate. Excessive acquisitions of high-yield paper with considerable risk exposure would surely incur Bank of England disapproval. Moreover, such assets would not prove acceptable to the clearing banks as collateral for money-market loans because a high proportion of such collateral must be eligible security at the Bank of England. Still, some leeway exists for "speculative" operations in "short" government securities. For instance, if the market anticipates that over the near term interest rates will decline (as for example, after a stringent official credit policy has been in force for some time and the market has reason to expect an easing of policy), it will increase its holdings of these types of assets.