Reserve Requirements Abroad

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The United States is the only important country in which not even all commercial banks are subject to reserve regulation by one central monetary authority. For members of the Federal Reserve System, significant changes were introduced last year (through amendments to Regulation D that became effective in November 1972) to formalize the break with the inherited geographic basis. However, the basic ingredients of the system of reserve requirements have remained, in fact, unchanged for almost forty years, in spite of deep and manifold changes in banking and in the structure of the demand for credit, credit instruments, and their uses. In this article, the use of reserve ratios in leading industrial countries is surveyed and an attempt is made to extract from this experience some general conclusions regarding their place as a routine tool of monetary control. Other uses, such as the control of undesirable inflows of foreign funds, are also noted.[1] In some instances, it seemed desirable to refer to the policies and practices of some less developed countries as well. A review of foreign experience with fractional reserve ratios is timely because, even after the recent changes in the structure and average level of reserve requirements in the United States, further improvements in the system of variable reserve requirements remain on the agenda and continue to be discussed within as well as outside the Federal Reserve System.[2]

VARIABLE RESERVE REQUIREMENTS AS A TOOL OF MONETARY POLICY

To be sure, in each country the specific aspects of fractional reserve ratios and the role which these requirements play within the range of tools actually used by the monetary authorities depend on a number of historical and traditional factors. Preferences of the central bank and, possibly, political constraints are other relevant influences. As with so many other monetary tools, the use of reserve ratios as a means of implementing policy objectives varies from country to country and, within each country, over time.

The effectiveness of the regulation of the deposit multiplier depends basically on the ability of the monetary authorities to control the supply of reserves and the differentiation of deposits into separate categories to which different ratios apply. Adjustments in the supply of bank credit can be achieved either by modifying the credit multiplier (the relationship between a given reserve base—primary reserves—and the credit superstructure) or by providing a fulcrum against which other policy tools designed to control the availability of reserves can be applied. The effects of changes in reserve ratios on the structure of bank costs and profits are important elements in monetary control. However, the creation of domestic reserve assets (through monetization of domestic public and/or private debt) may be the result of public policy decisions not directly related to monetary policy. Also, changes in reserves of foreign origin may result from exchange flows that are triggered by speculation rather than rooted in trade or service transactions or in international migration of capital. Thus, regulation of the monetary system through the manipulation of reserve ratios might be complicated by limitations affecting a central bank's ability to control the availability of reserve assets.

The introduction in the United States in 1935 of variable reserve ratios on a regular and permanent basis was followed by many foreign countries which passed similar

[1] An appendix in which the uses of reserve requirements in eleven individual major industrial countries are reviewed is available on request.

[2] See, for instance, Deane Carson, "Should Reserve Requirements Be Abolished?" *The Bankers Magazine* (Winter 1973), the Report of the President's Commission on Financial Structure and Regulation (Hunt Commission Report, December 1971), and "The Structure of Reserve Requirements", an address by Arthur F. Burns, Chairman of the Board of Governors of the Federal Reserve System, before the Governing Council Spring Meeting of the American Bankers Association, April 26, 1973 (*Federal Reserve Bulletin*, May 1973, pages 339-43).

legislation or provided for such requirements when undertaking a general revision of banking laws. Peter Fousek found that by October 1957 thirty-three foreign countries had adopted variable reserve requirements, usually for time as well as for demand deposits.[3] In the sixteen years following 1957, the use made of this new tool has varied widely among individual countries, as has its coordination with other tools of monetary policy, such as open market operations and liquidity ratios. These variations bring into relief the considerable differences in banking systems and banking policies throughout the world.

Since World War II, reserve requirements have been a preferred tool of monetary control in most industrially advanced countries, even those which, for historical or other reasons, had hesitated for a long time to introduce such requirements on a statutory basis. In several leading industrial countries where reserve requirements were introduced relatively recently,[4] they have been integrated with the existing fairly complex systems of monetary control, notably liquidity ratios.[5]

Liquidity ratios, prescribing the holding of a specified amount of cash and liquid assets related to total or selected bank liabilities, have not altogether disappeared as a means of controlling bank credit expansion. In most countries they have been relegated to, or maintained in, the role of a safeguard for depositors, and in that case are usually administered (as in Switzerland) by a separate authority in charge of bank supervision rather than monetary policy.

Variable reserve requirements now play a key role in implementing monetary policy in the three main countries of Western Europe—the United Kingdom, France, and West Germany—and also in Canada. In West Germany, reserve requirements became the main tool of monetary control following the reconstruction of its banking system after World War II. The system of reserve ratios was subsequently refined and modified to achieve additional objectives, such as controlling undesirable short-term capital flows. In the United Kingdom and in France, reserve ratios are reinforced by related liquidity ratios, and in recent years they have been used decisively to cope with mounting inflationary pressures.

[3] Peter G. Fousek, *Foreign Central Banking: The Instruments of Monetary Policy* (Federal Reserve Bank of New York, 1957).

[4] France in 1967 and Sweden in 1962.

[5] While regulation of reserves is primarily a tool of quantitative control over the cash base of the banking system, in some countries it is also used as a qualitative instrument.

VARIATIONS IN PRACTICAL APPLICATION

The way in which reserve requirements have been folded into the existing framework of monetary control differs from country to country. The usefulness of reserve requirements as a control tool depends to a certain extent on the alternative control mechanisms they replace or supplement. To the extent that generalizations can be made, in those industrially advanced countries in which reserve requirements have been introduced only recently, their attractiveness was in providing a fulcrum for controlling total multiple deposit creation as well as in providing a more powerful means for achieving specific policy goals. Such goals range from selective control—"direction" in the terminology of some foreign countries—to dealing with undesirable inflows of foreign short-term capital. In some instances, reserve requirements have been introduced or revitalized as a result of disenchantment with direct controls, or because the political parties that favored such controls lost power. Indeed, by and large, reserve requirements have now come to be widely regarded abroad as an alternative to the system of quantitative controls which set absolute or formula ceilings for total or specified categories of loans or bank assets.

Introduction and variation of reserve requirements usually pose difficult questions of policy and equity. The first encompasses questions such as the proper differentiation of deposit liabilities, the differential treatment of deposits of nonresidents, exemption of certain deposit liabilities, and compliance procedures. Problems of equity frequently arise because not all banks acquire reserves in the same manner and at comparable rates, especially when the balance of payments is the main source of additional reserves. Usually some banks have less difficulty than others in complying with any change in the level and structure of reserve ratios. Increases in reserve ratios must frequently be cushioned by other central bank actions to facilitate adjustment to the new levels, sometimes by lengthening the time available for portfolio adjustments beyond the effective date of the new provisions or by other means.

Bank reserves are now normally stipulated by law or regulation. Prior to the 1930's, they were usually maintained to satisfy a bank's liquidity needs under standards set by custom or determined by each institution in the light of its business experience. The detailed definition of categories of institutions and liabilities (or assets) subject to reserves may be stipulated in the law or left to the determination of the monetary authorities. Setting and modification of reserve ratios within legal limits is usually delegated to the central bank or, where it exists, to a monetary authority which establishes broad policy guidelines for the central bank, or to the Minister of Finance.

In countries in which legal authority to impose reserve requirements was lacking, central banks found it sometimes necessary to obtain the cooperation of commercial banks (in some cases, by indicating that, if it were not forthcoming, binding legislation would be sought) to observe "voluntarily" agreed-upon reserve ratios, either in cash (as in Sweden and Switzerland) or in cash and/or specified assets (as in the United Kingdom). Several central banks preferred to continue operating for some time on the basis of such agreements even after obtaining legal powers to impose reserve requirements (Canada prior to 1967, Sweden prior to 1969); the Bank of England, which has been in a position to set obligatory reserve ratios since 1971 and, as a matter of fact, even as far back as 1946, continues to seek voluntary cooperation.

Reserve requirements normally apply to various categories of deposit liabilities (in a few cases, other than interbank deposits) as they are differentiated by maturity. The degree of any further differentiation in reserve requirements depends on a variety of factors, such as the institutional structure of an individual country's financial sector and the nature and importance of foreign currency deposits. Only a few countries differentiate ratios by geographic location or size of bank. In countries in which nationwide branch banking systems predominate, there is little, if any, room for differentiation of reserve requirements by either size or location.

In industrially advanced countries, with the exception of the United Kingdom, reserves are normally held in the form of deposits with the central bank, with allowance for including vault cash up to a certain limit. In the less advanced countries, specific provisions range from the requirement that all reserves be held in the form of cash deposits with the central bank to complex formulas in which a specified part of the reserves may, or even must, be held in the form of a variety of stipulated assets. The range of assets qualifying as reserves depends on whether they have been issued to achieve certain qualitative objectives and/or are used to finance the government or some specific institutions created or controlled by it. When reserve requirements do double duty as a tool of monetary control and as a means of achieving specific aims of economic policy, such as stimulating growth of selected economic activities or achieving socially desirable goals, their average level is typically high.

In the less developed countries, the experience with reserve ratios has been quite varied. During most of the time since World War II, many of these countries have been experiencing pressures on their balance of payments, resulting in chronic shortages of international reserves. Some of these countries—frequently following the advice of experts from the United States or other advanced countries or international organizations—have introduced or revised banking laws to include authority for sophisticated versions of monetary tools. The use of these tools was usually limited by the undeveloped character of the countries' financial structure and markets. Reserve ratios were frequently vitiated by attempts to combine their use as tools of monetary control with efforts to foster economic development, typically by using them as a means of selective credit controls.

Reserve requirements in several countries of Latin America offer some of the most extreme examples of qualitative control use. In several countries, a prescribed proportion of reserves must be held in the form of specified obligations, including mortgages and/or loans to specified categories of borrowers, or for stipulated purposes. Such provisions lighten the reserve burden by reducing the share of reserves which yield no income. At times, it becomes difficult to determine whether reserve requirements are used primarily as a means of controlling monetary expansion or to influence the composition of bank portfolios. The latter is clearly the case when a reduction in reserve ratios is conditioned on using the funds released to make loans that would foster production (Bolivia) or benefit small- and medium-size industry (Brazil). A more frequent provision requires or permits holding of specified government securities. In some countries, interbank deposits qualify as reserves (up to a stipulated percentage), but in some instances only government-owned commercial banks qualify as reserve depositories.

The experience of less developed countries also underlines the basic fact that the effectiveness of variable reserve requirements as a monetary control tool hinges importantly on the scarcity character of primary reserves and the ability of the authorities to preserve this quality by closely controlling the creation of reserves of domestic origin. More broadly, it illustrates the proposition that the transfer of any control technique to a country with a different economic, financial, and social structure and political climate is fraught with many difficulties.

In several countries, one or more "central institutions" exercise supervisory power over specialized credit institutions and/or provide certain services to them, such as lending or rediscounting. Transactions between these central institutions and their members are frequent and sizable, and the latter tend to hold the bulk of their redundant funds with these central institutions. In some instances, as in Italy and Sweden, the affiliated credit institutions (such as credit cooperatives) may keep part

PRINCIPAL RESERVE REQUIREMENTS IN LEADING INDUSTRIAL COUNTRIES

In percent

Country	Demand deposits*	Savings and other time deposits*
Austria†	25	15
	7-11‡	6.5-9 for time and savings deposits of up to one year; 6.5-8 for time and savings deposits of over one year‡
Belgium	20§	7
	None	None
Canada	12	4
	12	4
France‖	None	None
	10	5
Germany†	30	10 for savings deposits; 20 for other time deposits
	10.5-19.55#	7.75-9.25 for savings deposits; 9-13.55 for time deposits#
Italy†	22½**	22½
	22½	22½
Japan	20††	20
	2-3.5‡‡	2
Netherlands §§	15 ‖ ‖	15
	2	2
Sweden§§	50	50
	24-30##	20-30##
Switzerland***	40	0-5 for savings deposits; 0-30 for time deposits
	28	3.5 for savings deposits and bank bonds maturing within five years
United Kingdom†††	None	None
	12½	12½

Note: For some countries, not all of the ratios applying to specific institutions and/or situations are mentioned in the following footnotes.

* The first line indicates the legal maximum, the second line the reserve requirements in force on July 1, 1973.

† Some form of marginal requirements also in effect.

‡ Lower ratios apply to institutions with liabilities of under 40 million schillings.

§ Deposits with a maturity of one month or less.

‖ Higher reserve ratios apply to demand and time deposits held by nonresidents. Also, a separate reserve ratio on assets applied concurrently.

Depending on location and other criteria.

** Applies to the excess of deposits over capital funds; a specified portion may be held in income-yielding assets, other than deposits at the central bank which earn interest. Different reserve ratios apply to various deposit-accepting institutions other than commercial banks.

†† But 50 percent for free yen accounts held by nonresidents.

‡‡ Depending on bank's total deposits.

§§ Authority to set legal requirements was not used; ratios shown are based on agreements concluded with the banks.

‖ ‖ Applies to deposits in excess of 15 million guilders, or about $5.7 million at the exchange rate in effect on June 29, 1973.

Depending on size and type of bank: 30 percent for the five largest commercial banks, 24 percent for other commercial banks, 27 percent for the Post Office Banks, and 20 percent for savings banks and rural credit societies.

*** Indicated ratios apply to growth in deposit liabilities to residents above July 31, 1971 levels. Lacking legal power, the Swiss National Bank negotiated in 1969 a gentleman's agreement with the Bankers' Association. In December 1972, it obtained, for a three-year period, powers to impose both average and marginal requirements on liabilities to both banks and nonbank financial institutions and higher ratios against liabilities to nonresidents. In addition, special cash deposits may be required against the excessive growth of certain assets.

††† The United Kingdom has a fixed reserve assets ratio, of which a small part is held as balances with the Bank of England by London clearing banks only; other reserve assets are various public debt securities, call money placed with discount houses, and a limited amount of commercial paper. Different reserve requirements apply to discount houses and finance houses. At times, special deposits in the form of interest-earning deposits must be held with the Bank of England. On July 1, 1973 special deposits amounted to 3 percent.

or all of the required reserves with their respective central institutions. Since the latter must redeposit an equivalent amount with the central bank, this arrangement amounts to a two-tier system in which specialized institutions act as a conduit for adjustments required of their members to fulfill reserve requirements. Similarly, in some countries certain categories of credit institutions are permitted to keep all or part of their legal reserves with Giro offices or similar organizations, which in some countries perform a key role in operating the national payments mechanism.

BROADENING THE SCOPE OF RESERVE RATIOS

The scope of application of reserve requirements has tended to be widened as the range of near moneys has grown and as the effectiveness of reserve requirements as a monetary tool tended to become impaired because of the significant changes which have taken place in the financial structure as well as in banking procedures and processes. In some countries, the scope of reserve requirements was widened primarily in order to tighten selective credit controls.

Indeed, since World War II, in most of the advanced countries compartmentalization of financial services has tended to be reduced by greater competition, mainly from institutions which until quite recently had no legal authority to engage in activities directly competing with those of commercial banks. Banks have developed new ways of raising funds to supplement deposit liabilities to which fractional reserve requirements originally applied. The amounts of such nondepository funds have increased rapidly and, in some countries, more rapidly than deposits of commercial banks. Furthermore, since reserve requirements raise the cost of funds to (and therefore total expenses of) banks, in some countries competing institutions have been able to offer services (including loans) at lower rates. To meet competition, commercial banks in some countries have sponsored, or made greater use of, institutions able to take over some of their business on a basis that would reduce the reserve costs and yet permit them to recapture the revenue (or profits) on business so transferred. At the same time, changes in savings, payments, and money management patterns have tended to blur, and even extinguish, what originally was—or appeared to be—a clear demarcation between money and near money. All advanced countries have experienced such developments in various degrees.

Most advanced industrial countries have endeavored to meet the problem of ever-growing proliferation of financial institutions and the significant changes in the scope of their activities by subjecting a widening range of financial institutions to reserve requirements which originally had been applicable to commercial banks only.[6] The tendency is quite general to make reserve requirements applicable to additional types of institutions which begin to accept deposits or that have become important factors in the short-term credit market. Where, in the absence of statutory requirements, cash balances with the central bank are held in stipulated amounts as a result of gentleman's agreements, such agreements now usually encompass (as in the Netherlands) various deposit-accepting and credit-granting institutions other than commercial banks.

There are, of course, many smaller and less developed countries which, because their institutional framework still consists essentially of commercial banks only or because the volume of near money is very small, have not needed to extend the range of institutions subject to reserve requirements. As a matter of fact, in some of these countries, currency rather than deposits constitutes the bulk of the money supply, so that control of the volume of deposit money is less significant than in the advanced countries.

Some countries have been searching for a more direct means of influencing the distribution of bank credit than making selected categories of assets eligible—within the stipulated limits—as reserve assets, or giving such assets preferential treatment at the discount window. Differentiated reserve requirements on assets offer such an alternative. The imposition of separate reserve requirements against assets rather than, or in addition to, reserves on liabilities is a relatively new technique (first applied in France in 1971). It is designed to give monetary authorities a measure of control over the portfolios of financial institutions by stimulating (or deterring) holding of certain types of assets. It is thought that reserve requirements related to specific categories of assets can achieve policy objectives more directly than similar requirements imposed on liabilities, or than reserve ratios on liabilities differentiated by type of institution, on the assumption that such variations can be related to institutional preferences for specific categories of assets (such as mortgages, foreign acceptances, etc.). Currently, credit institutions in France subject to reserve requirements must comply with stipulated ratios applicable to assets as well as to liabilities.

In some countries reserve ratios are used primarily as a fulcrum. Relative tightness or, alternatively, ease in monetary conditions is achieved by manipulating the availability of reserves—through open market operations or other means, such as debt management—in relation to aggregate reserves required by the applicable reserve ratio structure. Since all growing economies must increase their reserve base over the longer pull, the monetary authorities can influence credit conditions without resorting to cyclical changes in reserve ratios by regulating the availability of additional reserves and the conditions under which they are supplied. Reserve requirements may also be made more or less stringent merely by varying the range of eligible assets, by changing the mode of computation of liabilities subject to reserves, or by a more rigid enforcement of compliance rules. Thus, relative stability of reserve ratios over protracted periods of time is not necessarily an indication of a diminished role which fractional reserve requirements play in a given country.

The use of reserve requirements as a fulcrum is subject to serious limitations in situations where commercial banks hold excess reserves in amounts above those deemed desirable to protect their liquidity, or when banks (and, in some cases, other financial institutions as well) dispose, typically or occasionally, of large amounts of foreign exchange that can be automatically converted into domestic cash (as in the case of the Netherlands, for example).

A similar limitation arises in countries where a large part—or even the bulk—of reserves is created by rediscounting operations of the central bank and the additional reserves needed to meet an increase in reserve ratios are provided almost automatically. Indeed, in several Latin American countries, for instance, the value of the reserve tool—whether used as a fulcrum or a means of making frequent changes in the monetary multiplier—is greatly diminished, and in most instances neutralized, by central bank policies which normally provide reserves almost automatically to banks to meet increases in reserve ratios (in particular when they are made primarily to affect the composition of portfolios rather than the credit multiplier). In such situations, compliance with minimum reserve requirements has become a formality, which may involve costs and inconvenience, but does not, in fact, prevent banks from pursuing expansionary policies. Actually, in some Latin American countries (and in other countries as well) reserves provided at the discount window equal or exceed the total amount of required reserves. Another type of limitation has at times arisen in some less developed countries in which branches of foreign banks are an important component of the banking structure. Branches can usually offset the restraining effects of increased reserve ratios by obtaining additional funds from their head offices.

[6] In at least one country (Japan) reserve requirements have been extended to funds held by trust departments of commercial banks. In a few countries, reserves must be maintained against overdrafts.

In a few countries, where alternative control techniques such as open market operations are not available, frequent changes in reserve requirements have been utilized to offset seasonal fluctuations in reserve availability. One conspicuous example is Colombia, where sales of its main export product, coffee, used to result in seasonal bulges of bank reserves. To cope with this situation, the reserve ratios were frequently raised temporarily during end-of-year periods, and subsequently were restored to the original level. Another example is New Zealand, where massive transfers from private accounts occur on several tax payment dates. Until recently no mechanism existed to cushion the effect on the liquidity of banks, and for many years reserve requirements had been changed often to offset the impact on the New Zealand banking system of the payment of income taxes.[7]

On the other hand, some central banks have pursued a policy of making only infrequent changes in reserve requirements, in part to avoid undesirable "announcement effects". They have endeavored to mop up excess liquidity by requiring commercial banks to acquire from the central bank stipulated amounts of nonmarketable certificates of deposit as an alternative to raising reserve requirements (as in Austria). A similar technique is to require banks and other specified deposit institutions to make temporary deposits with the central bank. Interest may be paid on such deposits. Such arrangements may rest on a statutory basis (as in the United Kingdom) or be negotiated with the banks and embodied in a "gentleman's agreement" (as in Belgium since July 1972).

In countries in which liquidity ratios serve monetary control purposes (though in some countries, as in Austria and until July 19 in the Netherlands, on a standby basis only), they are used mainly to reinforce legal reserve requirements by further reducing the monetary multiplier but permitting the additional reserves to be held in specified income-yielding liquid assets. The most conspicuous examples are the United Kingdom and Canada. When the United Kingdom authorities recently abandoned direct credit ceilings and interest rate controls in favor of increased reliance on liquidity ratios, the Bank of England found it necessary to focus its regulatory concern beyond the clearing banks (large institutions in the city of London, but with nationwide branch networks). While the Scottish banks and those in Northern Ireland were expected to observe liquidity ratios comparable to those expected of city banks, other financial institutions were not. Even earlier, in July 1961, the Bank of England found it necessary to address its informal requests, designed to achieve a moderation of credit expansion, to an ever-widening range of financial institutions, in addition to those that had already observed liquidity ratios. Subsequently, British overseas banks, branches of foreign banks, merchant banks, acceptance houses, finance houses (which specialize in consumer finance), and discount houses were all added to the list of institutions required to observe stipulated reserve ratios, although not necessarily as high as those applying to the core of the financial system—the city banks.

Canada alters the liquidity ratio from time to time mainly to complement debt management operations and to support open market operations by forcing the banks to liquidate assets other than Treasury bills when squeezed for cash, thus spreading the effect of open market operations more quickly to other financial sectors. Other countries, such as Belgium, apply the ratio occasionally to neutralize excess liquidity. However, France, the country which after World War II had placed liquidity ratios in the center of its monetary policy, has been phasing them out since 1967 in favor of reserve ratios and other tools of monetary control.

USE TO CONTROL INFLOWS OF FOREIGN FUNDS

A relatively new use of reserve requirements has been to sterilize or reduce the effect on reserves of speculative inflows of foreign short-term funds and to protect the country from the effects of turbulence in the international monetary field by imposing higher reserve requirements on nonresident than on resident accounts. During the period of international monetary unsettlement that has existed since the floating of the pound in June 1972, changes in reserve requirements have been used extensively as part of moves by several European countries to achieve monetary restraint and, more specifically, to mop up liquidity resulting from central bank purchases of foreign exchange.[8]

[7] New Zealand and Colombia were identified by Fousek in 1957 as examples of frequent use of changes in reserve ratios (*op. cit.*, pages 51-53). In New Zealand the reserve ratio was changed 251 times between November 1957 and November 1972. In Colombia, 27 changes were made between 1962 and 1969.

[8] For example, the German Bundesbank raised, effective March 1, 1973, reserve ratios on demand and time deposits 15 percent across the board, and by half this percentage on savings deposits for residents; for nonresidents they were already 100 percent at the margin.

When separate or additional reserve ratios on deposits by nonresidents are used to control the inflow of short-term funds, usually marginal requirements are applied. In such cases, typically some historical base period rather than a uniform absolute amount is used to determine the exempt base. Foreign experience also includes examples of the temporary imposition of supplementary requirements in a form different from the normal reserve ratios authorized by permanent legislation. Such requirements may apply to borrowers rather than to lenders, as in the case of Germany and Australia which established cash deposit requirements for long-term borrowing abroad as emergency measures in 1972 and 1973, respectively.

SUMMARY

Among the major industrial countries, the United States remains unique in that the responsibility for setting reserve requirements for commercial banks is split between the Federal Reserve System and the fifty state banking authorities, which define independently the assets that qualify to satisfy these requirements. The United States is the only major country in which the central bank does not have the power to regulate reserves of depository institutions other than commercial banks, even though the bulk of savings and other time deposits is kept with such institutions. Also, in no other country is the effectiveness of the central bank limited by making membership, and thus compliance with its reserve regulations, voluntary for a significant segment of commercial banks.

In most of the advanced countries, central banks have at their disposal a number of policy tools which can be used either simultaneously or as substitutes. Skillful use by some central banks of variable reserve requirements has induced several other leading countries in recent years to add this tool to those already available to their monetary authorities. In countries in which the legal basis has been lacking, informal agreements with bankers' organizations were used to provide for holding specified cash reserves. The flexibility of the reserve tool and the usefulness of marginal requirements has been demonstrated in several situations, including the current period of international monetary tensions.

The mere existence of reserve requirements as well as extension of the range of financial institutions subject to them is by no means, by itself, an indication that the reserve tool is continuously and skillfully used, or even that it is indispensable as a monetary control tool in a given country. In some less advanced countries, the richness of monetary instrumentation borders on unnecessary gadgetry which, in effect, disguises unwillingness or inability to use the simpler available mechanisms.

One important lesson of foreign experience is the observable widening of controls through reserve ratios. The need for this widening has arisen from changes in financial structure, in the money market, and in the channels through which credit flows, as well as in the scope of activities of the various credit-granting institutions. In most advanced countries, it has resulted in successive extensions in the range of institutions subject to reserve requirements and, in some cases, in the range of liabilities as well. This, in turn, has led to greater differentiation of requirements. In countries which typically gain nonresident deposits in times of international monetary turbulence, it has been found useful to impose higher reserve ratios—frequently in the form of marginal requirements—on deposits of nonresidents (together with other measures to neutralize their effect on the domestic reserve base).

Another important conclusion is that periodic changes in reserve ratios must be coordinated with open market and discount operations. Such coordination is required to avoid situations in which the intended restraining or stimulative influence on the money supply (or on a specified collection of deposit liabilities) fails to materialize because reserves are provided (or absorbed) through other policy actions, thus permitting banks to avoid portfolio adjustments. On the other hand, coordinated use of other tools for a limited period might be required to facilitate individual bank adjustments to changes in the level and structure of applicable ratios.