Reform of Reserve Requirements

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The Board of Governors has concluded that the prospect of eliminating a considerable amount of float as a result of extending same-day payment of collection items offers an opportunity for making simultaneously the first significant change in the structure of reserve requirements since the creation of the Federal Reserve System.[1] The purpose of this article is to place these changes in reserve requirements in perspective by reviewing, first, the shortcomings of the system of reserve requirements which the new changes in Regulation D are designed to remedy and, then, past efforts directed at improvements.

Banks must hold a certain amount of cash as a matter of sound banking practice to meet possible deposit losses. In addition, most countries, including the United States, have legal provisions stipulating a minimum amount of reserves that must be held in prescribed form. These "legal reserves" provide a fulcrum against which Federal Reserve System control over reserve availability becomes effective in influencing bank credit and the monetary aggregates. Achieving the objectives of monetary policy depends primarily on the System's ability to control the availability of member bank reserves, rather than on a particular average level of prescribed reserve ratios.

The average (weighted) reserve ratio for demand and time deposits sets an upper limit on the deposit multiplier. However, attempts to define an optimal average reserve ratio, or even to agree on criteria for determining it, have not been successful. Required reserves can perform their fulcrum function even when set at a relatively low level. Arguments have been put forward in academic literature in favor of large as well as small deposit multipliers.

ORIGINS

Formalization of the traditional cash reserves of commercial banks into a set of legally required reserve ratios was an American invention. Not until the Great Depression of the 1930's did reserve requirements begin to be widely used abroad as a policy instrument. Legal reserve requirements became part of much of the banking legislation that was enacted or modified in foreign countries during World War II and the early postwar years. Some of the leading countries, such as the United Kingdom and France, introduced reserve requirements only a few years ago. So far, the Bank of England continues to rely on voluntary compliance with ratios set by it. In several other countries of Western Europe, central banks have obtained powers to impose reserve requirements but have made use of them only intermittently or not at all. In Germany, however, reserve requirements have become a main tool of monetary control.

The present structure of member bank reserve requirements based on a geographical classification of banks was inherited from the National Banking Act which specified reserve ratios, in increasing amounts, for three classes of banks: country, reserve city, and central reserve city banks. Prior to the enactment of the Federal Reserve Act, a specified portion of reserves could be held on deposit with banks in designated cities. Indeed, the rationale for higher reserve requirements in reserve and central reserve cities was undermined by the provision in the Federal Reserve Act which required that reserves be deposited (after a transition period) with the Federal Reserve and not with other banks. The system of reserve requirements embodied in the Federal Reserve Act linked reserve requirements to assumed liquidity needs. The liquidity function of reserves, in turn, was related to location, because of the presumed greater exposure of banks in cities which served as clearing

[1] A summary of the amendments to Regulations D and J appeared in this *Review* (July 1972), page 154.

centers to sudden and/or sizable deposit withdrawals.[2] For all banks in cities designated as reserve cities the Act imposed requirements that were higher than those for country banks, and still higher ones for those in the central reserve cities.[3] After the transfer in 1917 of reserves of member banks to the Federal Reserve Banks, the three-tier structure of ratios was justified on different grounds, such as the smaller velocity or volatility of demand deposits at country banks.

While the geographic principle had become outmoded a long time ago, the existing system became more and more anachronistic with the succeeding changes in banking practices and advances in transportation and communications that have taken place over the years.[4] It failed to accord equal treatment to banks that were similar in most significant aspects of their activities but different in terms of location, or to provide differential treatment reflecting a bank's place in the banking system as it affects the conduct of monetary policy. As a result, banks with virtually identical net demand deposits and similar business have been often subject to different reserve ratios. Specifically, a number of large banks participating in the money market and/or having extensive foreign operations through branches or affiliated Edge Act corporations have continued to be classified as country banks because of their location.

PAST CHANGES

While no comprehensive reform has been undertaken since the passage of the original Federal Reserve Act, there have been several changes in the definitions of demand deposits subject to reserves as well as assets qualifying as reserves, in reserve accounting, and in the structure of reserve requirements. The following may be considered the most significant:

(1) In 1935, reserve requirements were made variable within specified ranges by giving the Board of Governors the authority to increase the reserve ratios up to double the ratios then in force.

(2) The next important change was in 1959, when the Board of Governors was given broad discretionary powers to reclassify individual banks in reserve cities as country banks, thus exempting these banks from the higher reserve ratios attached to the reserve city bank status; previously, only banks in "outlying areas" could be so reclassified. This change recognized the fact that banks located in a reserve (or central reserve) city could differ greatly in significant features, and these differences were not necessarily systematically related either to a bank's size or its location within a city.

(3) Banks were permitted to count a portion of their vault cash as a reserve asset in 1959; all vault cash was permitted to be counted in 1962.

(4) The central reserve city classification was abolished in 1962, thereby reducing the reserve requirements to which twenty-two large banks in New York City and Chicago were subject at that time.

(5) The principle of graduation was introduced in 1966, by establishing a higher reserve ratio for time deposits other than savings deposits of over $5 million at any bank. In 1968, it was expanded by raising requirements for net demand deposits above $5 million, for country as well as reserve city banks.

(6) Lagged reserve accounting was introduced in 1968. Since then, reserve requirements against demand and time deposits in any statement week have been based on average deposit liabilities two weeks earlier.

(7) Reserve requirements on borrowings from foreign branches (or foreign banks) were introduced in 1969, in the form of marginal requirements on amounts above an exempt base figure. Reserve requirements on commercial paper issued by bank affiliates, another nondeposit source of funds, became effective in 1970.

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[2] On the history of minimum reserve requirements, see Phillip Cagan, "The First Fifty Years of the National Banking System—An Historical Appraisal" in *Banking and Monetary Studies*, Deane Carson, ed. (Homewood, Illinois: 1963), notably the Figure 2 showing required, excess, and total reserve ratios of national banks, 1865-1913.

Reserve requirements stipulated in some state banking laws antedated those of the National Banking Act.

[3] The Federal Reserve Act originally designated three central reserve cities: New York, Chicago, and St. Louis. In 1922 St. Louis was reclassified as a reserve city.

[4] Irving M. Auerbach pointed out in "Reserve Requirements of Commercial Banks", this *Review* (July 1948), reprinted in an updated and expanded version in this Bank's publication *Bank Reserves* (1953), that a proposal to base reserve requirements on the class of deposits was advanced even before the Federal Reserve Act was enacted. For a review of the earlier history of reserve requirements, in addition to Auerbach's article, see "The History of Reserve Requirements for Banks in the United States", *Federal Reserve Bulletin* (November 1938), pages 953-72. See also "Member Bank Reserve Requirements—Heritage from History," *Business Conditions* (Federal Reserve Bank of Chicago, June 1972.

The introduction in 1935 of variable reserve requirements was widely hailed as a significant innovation in techniques of monetary control; subsequently they were adopted by many other countries. The actual use of reserve requirements has varied with monetary conditions and with the prevailing views within the System but, on the whole, changes have been quite infrequent. Some of the most notable episodes include the sharp (and controversial) increase in requirements in 1936-37 to mop up excess liquidity, the successive reductions in 1942 at central reserve city banks from maximum levels to facilitate bank absorption of war loans, the modest increases in 1951 to cushion the initial impact of the Korean war on bank credit,[5] followed by gradual reductions from 1953 to 1966 to meet a widespread criticism that requirements were at excessively high levels. The very modest increases in 1968 and 1969 were related to overheated conditions in the economy, though no similar increases had been made when the economy approached cyclical peaks in the previous fifteen years. Yet, for both classes of member banks, reserve ratios for demand deposits at the beginning of 1972 were not far from the late-1930's levels, a period when bank reserves were considerably enlarged by gold inflows.

In the ten years (1949-58) following the immediate postwar adjustment period, the lowering of reserve ratios supported most of the deposit growth at member banks, but in the following years the further growth of deposits was supported mostly through open market operations.

The possibility of reducing reliance on open market operations by making frequent changes of small percentage amounts in reserve requirements has been explored, but no experimentation along these lines has been undertaken as open market operations have provided an effective tool for implementing policy objectives. Indeed, monetary policy was revived in the early fifties under conditions which offered a unique opportunity to control reserves through open market operations. The public debt was large and widely distributed and was comprised largely of marketable securities with a wide range of maturities.

Thus, in recent years, there has been a clear tendency to use the reserve tool sparingly. To be sure, reductions in requirements were usually timed so as to be coordinated with other moves to ease credit conditions and/or to meet seasonal demands. On several occasions the possibility of changing reserve requirements was considered, but no action was taken. On the whole, the System seemed to agree with Allan Sproul who, when president of the Federal Reserve Bank of New York, remarked that reserve requirements were a "blunt instrument". When reserve ratios were changed, in most instances cushioning open market operations were undertaken.

The respective advantages of the two means of supplying and absorbing reserves have been the subject of study and discussion within the System and also of lively debate in academic journals.[6] There was less interest among academic economists in devising a better system of reserve requirements.[7]

REFORM PROPOSALS

Over the years the Board of Governors and several committees of the Conference of Federal Reserve Bank Presidents and of the System's research function have considered and tested numerous ways of placing member bank reserve requirements on a more logical footing and of making them more flexible on either an automatic or a discretionary basis. Numerous attempts were made to develop an alternative system which, even though not ideal or even wholly logical, would constitute a sufficiently desirable improvement (without posing significant administrative problems) to warrant a request for appropriate Congressional legislation.

Because of uniformity of reserve requirements on time deposits for all classes of banks and because ratios have consistently been considerably lower than those on demand deposits (which resulted in about 80 percent of aggregate reserve assets being held against demand deposits), the System's efforts to find an alternative system have been focused on demand deposits alone. While

[5] The Board of Governors also exercised its power, granted for a limited period by the Anti-Inflation Act of 1948, to raise reserve requirements above the statutory limit. It did not make full use of these powers, which lapsed less than a year after they were enacted.

[6] See, for instance, J. Ascheim, "Open-Market Operations *versus* Reserve Requirement Variations", *Economic Journal,* (December 1959); C. A. Thanos, "Open-Market Operations and the Portfolio Policies of the Commercial Banks", *ibid.* (September 1961); H. N. Goldstein, "The Relative Security Market Impact of Open-Market Sales and 'Equivalent' Reserve-Requirement Increases", *ibid.* (September 1962); John H. Kareken, "On the Relative Merits of Reserve-Ratio Changes and Open-Market Operations", *Journal of Finance* (March 1961).

[7] See, however, Frank E. Norton and Neil Jacoby, *Bank Deposits and Legal Reserve Requirements,* UCLA (Los Angeles, 1959) and Neil Jacoby, "The Structure and Use of Variable Bank Reserve Requirements", in *Banking and Monetary Studies.*

the need for legal reserve requirements on time deposits was occasionally questioned both within and outside the System, the various schemes considered focused on demand deposits. Studies of alternative structures of reserve requirements were, of course, limited by the practical considerations of public acceptance and the problems of transition. It was clear that any alternative system should permit effective control of bank deposit expansion. Furthermore, it was recognized that, in order to facilitate transition, a new plan should result in aggregate reserve liabilities not much different from those held at the time by all member banks combined. Various sets of ratios were suggested and tested with this constraint in mind.

The history of endeavors to achieve a more equitable and more defensible system of reserve requirements and to reassess its role in relation to other instruments of monetary control is a good example of the difficulty of finding practical solutions to complex problems, of achieving a sufficiently broad agreement within the System when the problem at hand has considerably different regional aspects, and of the interplay between academic discussion and internal System efforts.

Proposals for a more rational system of reserve ratios proceeded along two lines. Earlier efforts had concentrated on finding a substitute for the reserve city bank classification by relating reserve requirements either to the rate of activity (turnover velocity) of deposits or to the relative importance of interbank deposits at a given bank. Different reserve ratios on various classes of deposits were proposed primarily on the presumption that different rates of use of such deposits reflected significant differences in the function of each class of deposits in our monetary system. Higher reserve requirements on interbank deposits were proposed not so much on the basis of a theory which justified them, but rather as a means of abandoning the outmoded geographic classification without changing considerably the existing pattern of reserve liabilities among individual banks and without lowering or raising the aggregate volume of reserves by a significant amount. Later endeavors concentrated on devising a system of graduated reserve requirements that would apply to all banks irrespective of location.

Attempts to devise a more rational system for distributing the burden of member bank reserve requirements go back at least to 1931, when an elaborate study (by a Federal Reserve System committee chaired by W. Riefler) resulted in a published report which served as the basis for recommendations to the Congress, on which, however, no action was taken. Since that time, the issue has come to life intermittently. The Board of Governors discussed many, but endorsed none, of the various proposals developed over the years by its own staff, by various System committees, or outside the System.

When, after World War II, the banking situation reemerged little changed and with the war-generated liquidity replacing the prewar influx of reserves from abroad, consideration of the problem of reserve structure was placed on the agenda again. In 1948 the Board presented to the Joint Economic Committee, without endorsement, a version of the "uniform reserve plan".[8] This plan, developed by Karl Bopp, then director of research of the Federal Reserve Bank of Philadelphia, would have supplanted the geographic classification, in that different ratios would apply to interbank and to other demand deposits. Under this plan, reserve requirements for demand deposits could ultimately have been made completely uniform merely by lowering the initially higher ratio on interbank deposits.

A closely related plan would have related reserve requirements directly to deposit velocity. It is likely that the System did not formally endorse the velocity version of the uniform reserve plan because no workable solution could be found to deal with the special situation of "stockyard banks", which, although few in number, had some importance and an association to defend their interests. These banks, servicing primarily accounts maintained by sellers and buyers at major cattle markets, held an exceptionally high amount of interbank deposits in relation to demand deposits (up to 50 percent), and their deposits had an exceedingly high velocity. There were other small groups of banks which had similar characteristics, such as banks in tobacco-auction centers. More importantly, the association of velocity with certain relevant characteristics, such as bank location, type of business, or structure of deposit liabilities, was too erratic and too complex (some of these characteristics being interrelated) to permit generalizations that could be used as a basis for an alternative system of reserve requirements. There were, furthermore, considerable doubts with regard to the theoretical underpinnings of the proposal.

Interest in a reform of reserve requirements was revived in the early fifties as a result of continuing post-World War II inflationary pressures, which were reinforced by the outbreak of the Korean war. Also, System officials recognized that over the longer run the System would have to provide support for continuous deposit growth either through an ever-growing scale of open market operations

[8] See *Credit Policies*, Joint Economic Committee, 79th Congress, Second Session (1948).

or, in part at least, by lowering average reserve requirements.

A variant of the velocity proposal was recommended for consideration by the "Douglas Subcommittee" in 1950,[9] and was again discussed in 1952 in System replies to a questionnaire and in oral testimony in connection with the "Patman Subcommittee" inquiry.[10] A committee of System economists studied the problem again in 1953-54 but, after producing numerous analyses and conducting discussions which revealed considerable differences of views on several important issues, failed to agree on recommendations. Two proposals, which, in fact, represented variants of the velocity plan, were circulated within the System in the following years.

In 1957, a committee of Federal Reserve Bank officers studied a report by an American Bankers Association committee which recommended moving toward a single reserve ratio on all demand deposits. It rejected the velocity approach and differential ratios for interbank deposits. While endorsing a uniform reserve plan as the ultimate goal, it recommended that further studies be made to determine the range within which the Board should have the power to vary reserve ratios.

Subsequently, discussions within the System centered on a system of graduated reserve requirements put forward in April 1963 by the President's Committee on Financial Institutions (known as the Heller Committee) but, even though a good deal of testing with a variety of sets of ratios and size brackets was undertaken, no urgency was felt to find an immediate solution to the problem of reserve structure.

Every plan considered in the past would have resulted in increasing total reserve liabilities for some significant group of banks; it was obvious that only a general lowering of average reserve ratios could avoid it.

Nearly all proposals considered in the past required changes in the Federal Reserve Act. For a variety of reasons, the System has been reluctant to recommend formally new legislation to reform reserve requirements, or else concluded that chances for passage were too slim to try. In the meantime, liberal interpretation of the authority to reclassify banks in reserve cities as country banks, permitting use of vault cash as a reserve asset (even though a partially offsetting increase in reserve requirements for country banks was made at the time), and establishing a lower reserve ratio on the first $5 million of demand (and also for "other time") deposits—all contributed to improving the structure of reserve requirements. Liberal use of the discretionary authority to declassify reserve city banks (as well as mergers) resulted in a reduction of this group to only 179 by the time the new Regulation D was promulgated. While the Board had the power to designate new reserve cities (as well as to terminate such designation), no such actions were taken after December 1965. Some quite large banks have remained in the country bank category, including, for instance in this District, several banks in Albany, the state capital, and in Newark, New Jersey. On the other hand, three large and rapidly expanding suburban country banks, by acquiring New York City banks through merger, became subject to reserve city requirements.

Interest in a reform of reserve requirements acquired new urgency in recent years as withdrawals from membership became widespread in some Federal Reserve Districts. The System, of course, always has been aware of the effect of reserve requirements on profits and on membership. Requirements imposed by state authorities are typically lower than those in force for member banks, and can be satisfied in a less onerous manner. In particular, interbank deposits held for business purposes can usually be counted among eligible reserve assets. In some states, a proportion of reserves can be held in specified (usually United States Treasury) securities. In the recent past, some states have taken various steps to liberalize further the reserve requirements for nonmember banks.

THE NEW SYSTEM

The change which is to take effect for the reserve period September 21 to September 27 is thus the result of a forty-year search to find a workable solution for a situation which, in fact, antedated the creation of the Federal Reserve System. By redefining reserve city banks on the basis of net deposit size, it abolishes the geographic principle through administrative action within the framework of existing legislation.

The uniform treatment of all member banks, irrespective of location, will be achieved under the revised Regulation D by applying a uniform set of graduated reserve ratios to all member banks and by defining reserve cities other than those with Federal Reserve offices as a function of the net demand deposit size of the largest member bank located in a given city. Every city with a bank having net demand deposits of over $400 million will

[9] *Monetary, Credit and Fiscal Policies,* Joint Economic Committee, 81st Congress, Second Session (1950).

[10] *Monetary Policy and the Management of the Public Debt,* Joint Economic Committee, 82nd Congress, Second Session (1952).

automatically become a reserve city. However, country bank status will be granted to all banks located in such a city having net demand deposits of $400 million or less.

A number of centers (none in this District) will lose the reserve city designation because even their largest banks will be reclassified as country banks, and a few centers (probably Albany in this District) will become reserve cities. With the passage of time, more banks now in the country bank category will reach the demand deposit size that will shift them automatically into the reserve city bank category. In fact, however, the reserve city-country bank distinction will lose much of its meaning. A borderline bank would be considered a reserve city bank only for the reserve periods when its demand deposits subject to reserves exceed $400 million. The provisions in the Federal Reserve Act relating to these two classifications will merely continue to set an upper and lower limit for graduated reserve ratios that can be imposed within the range stipulated in the Federal Reserve Act as amended in 1935.

The revised Regulation D establishes five net demand deposit-size brackets, with reserve ratios ranging from 8 to 17½ percent and which apply cumulatively. More than 4,200 member banks will henceforth be subject to the first- and second-bracket ratios only, which will reduce significantly reserve liabilities for each of them.

The lowest reserve ratio (8 percent) applies to the first $2 million of net demand deposits, instead of the 12½ percent ratio now in force for country banks. For the following tranche, between $2 million and $10 million, the reserve ratio is 10 percent, still substantially below the average ratios formerly in force for this deposit size (12½ percent applying to deposits of $5 million and under, and 13 percent for amounts exceeding $5 million). A bank with net demand deposits of $10 million will be subject to an average reserve ratio of only 9.6 percent, and the ratio is smaller for banks below this size. Given the average relationship between net demand deposits, time deposits, cash items in process of collection, and capital funds, a bank with $10 million in net demand deposits would typically have a balance sheet of about $25 million.

The reserve ratio for net demand deposits in excess of $10 million, but less than $100 million, will be 12 percent. A reserve ratio of 13 percent (formerly applicable to net demand deposits in excess of $5 million at country banks) will apply to deposits in excess of $100 million and up to $400 million (with a 16½ percent ratio applicable in the transitional week on deposits at existing reserve city banks which now are subject to a 17½ percent reserve requirement).

Institutions formerly classified as country banks with net demand deposits of $400 million or less benefit from the new system to the extent that the first $100 million of such deposits are now subject to an average ratio of 11.76 percent instead of 12.98 percent, as formerly. This reduction is quite significant for banks with net demand deposits in excess of $10 million, but for a country bank with deposits at the upper limit the reduction of reserve liabilities (by $1,215,000) is fairly small, only about two cents for each dollar of reserves now required.

The reduction under the new regulation is also significant for the fewer than sixty institutions which will continue to be classified as reserve city banks, even though their net demand deposits in excess of $400 million will continue to be subject to a 17½ percent reserve ratio—the same ratio as now applicable to net demand deposits at such banks in excess of $5 million. Banks in this category are benefiting from a reduction in their reserve liabilities against the first $400 million; the reduction amounts to $19,215,000 for each bank, irrespective of size. Again, the relative value of this reduction for members continuing in the reserve city bank classification is the greatest (about 27 percent of the liabilities prior to the revision) at the lower limit of the bracket, that is, for banks with total assets of about $1 billion, but diminishes rapidly for the giant money market banks. The only institutions that are experiencing an increase in their reserve liabilities are four or five banks being shifted from the country to the reserve city bank classification.

It is estimated that the revised Regulation D will reduce reserve requirements by about $3.4 billion, or approximately $1.4 billion more than the estimated loss resulting from the change in Regulation J. The prospective shrinkage of float as a result of same-day payment occasioned by the revision of Regulation J which will also become effective September 21 is expected to reduce member bank reserves by approximately $2 billion on average.

There is no sure way of knowing to what extent the reduced reserve liability will offset, or more than offset, the loss of Federal Reserve float (and thus of reserves) experienced by each given member bank, although the various Federal Reserve Banks have endeavored to obtain as complete an analysis of their situation as possible from the individual member banks. Some banks may reap a considerable advantage from changes in Regulation D, while losing little from the change in Regulation J; but the opposite case is likely to occur quite frequently. Also, the reduction of reserve liabilities will become effective on a single date, while additional losses of float may result from a number of changes in the collection mechanism beyond the establishment of additional county or regional clearing arrangements, not all of which are directly related to the current change in Regulation J. Even the effects of changes resulting from the revision of Regulation J may take some time to work themselves out.

The new version of Regulation D removes, in effect, the anachronistic basis for the structure of reserve requirements, but the much-delayed reform is becoming effective at a time when the banking system is undergoing what might well be the most profound changes in its history. Indeed, the most conspicuous developments—liabilities management and formation of multibank holding companies—are only two of a wide range of changes that are profoundly affecting the environment in which banks operate. The relationship of deposits to other categories of short-term assets and liabilities and of commercial banks to other categories of financial institutions are also undergoing important changes, as are banking practices and policies. The geographic area of operations open to individual banks is widening in many states, and the diversification of services which individual banks or holding companies are able or willing to offer is growing. On the other hand, a variety of influences, including the generally less onerous burden of reserve requirements in almost all states, has resulted in a decline in membership and a resulting shrinkage of the percentage of total demand deposits held by member banks.

Clearly, revisions in Regulations D and J, taken together, represent a significant change in operating conditions for member banks. It remains to be seen what their effect will be on the collection mechanism and on banking structure. For instance, the graduated structure of reserve requirements might favor the holding company route over mergers as a means of banking growth.

The new Regulation D leaves room for subsequent moves toward more complete uniformity in reserve ratios. Under existing legislation a single ratio could be set within the range of 10 and 14 percent. The desirability of making identical reserve requirements applicable to all commercial banks, irrespective of membership,[11] continues to be debated. A good case can be made for extending reserve requirements to all short-term liabilities at all depository institutions or at least at all commercial banks —particularly if some of the developments that are taking place or are being widely discussed further blur the distinction of demand accounts of commercial banks from other short-term liabilities, or reduce considerably the unique role of banks in the payments mechanism.[12] Questions also have been raised as to whether, by substituting (with proper adjustment in reserve ratios) gross for net demand deposits as the basis for assessing bank liabilities, additional simplification and uniformity could be achieved.

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[11] The Board of Governors of the Federal Reserve System has requested legislation along these lines in several of its *Annual Reports* since 1964.

[12] *The President's Commission on Financial Structure and Regulation* has recommended in its *Report* of December 22, 1971 that membership in the Federal Reserve System be made mandatory not only for all state-chartered commercial banks but also for all savings and loan associations and mutual savings banks that offer third-party payment services (with identical reserve ratios becoming applicable after a transitional period).