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CURRENT PROPOSALS FOR CHANGES IN RESERVE REQUIREMENTS OF COMMERCIAL BANKS IN THE UNITED STATES

A Thesis

Submitted to The Faculty of the Graduate School

University of Richmond, Virginia

in Partial Fulfillment of the Requirements for

the Degree of Master of Arts

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UNIVERSITY OF RICHMOND
VIRGINIA

by

William Byrd Harrison, III

May, 1964

PREFACE

An exposure to three or four years' accounting work involved in maintaining reserve ledgers of Federal Reserve member banks has led to some observation of the various ways in which the banks adjust their reserve positions. This observation has prompted an interest in the monetary as well as the mechanical aspects of commercial bank reserves. The causes and effects of changes in reserves upon banks individually, and in the aggregate, have become an endless source of inquiry. To be able to relate banking theory to banking practice is to possess a rare opportunity. Yet one with such an opportunity becomes increasingly aware that it is very difficult to understand or explain in adequate terms the workings of our monetary system in America unless one has an exceptional degree of training.

The well-being of a nation is dependent in large part upon the state of its money. Bank reserve positions have a great deal to do with the state of our money. An impressive volume of study and evidence has been brought forth in just the past few years to indicate that United States laws which establish the rules under which financial institutions operate need revising. Other, more readily understood topics, however, have claimed the attention of the public and its representatives in Congress. Little has been done to remedy serious shortcomings in banking laws.

This paper examines briefly these studies as they relate to commercial bank reserve requirements with the thought that they deserve more attention. This paper is not concerned with the 100 per cent reserve plan, the ceiling reserve, the asset reserve, or other reserve proposals of past years. It deals with current plans.

Part of Chapter VI, based upon an unpublished paper prepared for internal use at the Federal Reserve Board, should not be used beyond the University without the author's permission.

I am grateful to the following for valuable reference material: George W. McKinney, Jr., Irving Trust Company; Albert H. Cox, Jr., American Bankers Association; and Lewis N. Dembitz, Federal Reserve Board. Edw. A. Wayne, President, Federal Reserve Bank of Richmond; James Parthemos of the Richmond Reserve Bank; and Evelyn B. Harrison, Columbia University, were kind enough to read this manuscript and contribute prized criticism. The patience and assistance of my thesis adviser, Robert C. Burton of the University, is appreciated. Lastly, I must thank Ruth M. Eggleston for valuable library contributions, and Emanuel O. Melichar of the Federal Reserve Board who not only has furnished study sources for this paper, but who also has been an esteemed teacher.

It should be said that my association with the Richmond Reserve Bank offers little reason to suppose that these observations are any more credible than those of any student.

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CHAPTER I

INTRODUCTION

The Need for Bank Reserves

Why do United States laws require commercial banks to keep reserves against their deposits? Reserve requirements for commercial banks are thought to serve three functions: they provide for a base of support for monetary control, they obtain some degree of primary liquidity, and they provide balances for temporary clearing drains or withdrawals by depositors. A fairly strong argument can be presented against the liquidity basis for establishing legal reserves. These points might be made:

(1) Banks usually have facilities for borrowing to meet emergencies.

(2) By using legal reserves to meet emergencies, banks violate the legal requirements, incur penalties, and establish an unfavorable record in the eyes of the supervisory authorities.

(3) Most banks have other assets readily convertible to cash which--though not countable as legal reserves--nevertheless act as a backstop for emergencies.

(4) The American Bankers Association, the United States Congress and the Federal Reserve System have all taken the position that liquidity is of minor importance in establishing the need for legal reserves.

(5) In the event of a bank's failing, legal reserves would not satisfy all the depositors; Federal deposit insurance would have the burden of protecting them anyway.

(6) Good bank supervision is a more logical means to assure adequate liquidity in commercial banks.

An opposing but somewhat weaker argument will properly state that banks which are in danger of failing to meet depositor demands will first fail to maintain legal reserves. Thus the supervisory authorities can be alerted to take actions as may be necessary to assist the bank to avert the danger.

Do banks have to maintain legal reserves to provide the Federal monetary authority with the means for monetary control? In other words, do legal reserves exist to limit or expand commercial banks' abilities to create money so that by changing requirements, a desired change in the money supply may be brought about?

Let us suppose that a 10 per cent reserve requirement prevails constantly in a model banking system. Also assume that all banks have only three accounts; reserves--10 per cent of deposits, loans--90 per cent of deposits, and deposits--100 per cent. If the monetary authority now injects new bank reserves into the system by purchase of open market securities, banks may expand loans by ten times the amount of new reserves. But suppose the injection of new reserves is unintentional, say, by reason of a greater portion of uncollected checks in the hands of the central bank--checks drawn upon, but not yet presented to, the banks we have been discussing--or maybe an inflow of gold from foreign countries. Now the central bank or monetary authority must take "defensive" action through the purchase of securities in the open

market to offset the unwanted reserve effects. What if the "defensive" action isn't enough to offset the unwanted effects on bank reserves? What if the "defensive" action is too vigorous; that is, what happens if the monetary authority misjudges the degree of the job to be done? Then we obtain more or less bank reserves in our model system than we wish to have. The real rub is that we permit or cause our loans to expand or contract in amounts ten times the magnitude of the misjudgement. Now assume that instead of a 10 per cent prevailing reserve requirement we have a 20 per cent requirement. Under *these* conditions we have assumed, the banks can only expand or contract loans by five times the excess or deficient reserve figure. Hence the monetary power has less *leverage* but the unfavorable effects of its misjudgements are lessened.

The Economic Policy Commission of the American Bankers Association issued a report in 1957 entitled *Member Bank Reserves* which included this statement:

> "Under our system, control over bank reserves is exerted primarily through discount and open market operations. Legal reserve requirements may be thought of as providing a fixed fulcrum on which these credit-control levers rest.
> . . . .
> Federal Reserve policy could not effectively regulate the volume of bank lending and investing unless the bankers were to adhere rigidly to some unwritten rules with respect to their cash ratios--a condition which would not be likely to be fulfilled in practice."

The above *raison d'être* does not apply, however, with equal force throughout our banking society, and there is some suspicion that reserve requirements do not really serve as an effective monetary control tool at all. Some points along these lines are:

(1) Nonmember banks' abilities to create money are not directly affected by Federal Reserve monetary controls.

(2) Many small member banks customarily carry excess reserves and thus are not immediately affected by Federal Reserve action to restrict or encourage bank lending powers.

(3) Many other small and moderate-sized banks, while affected, are not important generators of money and credit since their loans and investments are governed more by local factors than by the money markets or by the business cycle. While a shift in these banks' portfolios into or out of government securities can be discerned over a period of time, neither cost nor availability of credit in the money market has great import to the moderate-sized bank in the short run.

(4) Reserve requirements have not been changed in an upward direction at any time during the past twelve years despite three identifiable national business cycles and a fairly steady upward change in the general price level. Couldn't this be interpreted as proof that reserve requirements aren't really a tool for monetary control?

In the concluding section of this paper, the question of whether reserve requirements are needed will again be raised. In the meantime assumption is made that bank reserves do provide a measure of liquidity; and, much more important, they do serve as a base against which manageable effects on the money supply can be brought about through general controls on bank credit. These two purposes are the ones chiefly considered. However, it must be borne in mind that legal reserves with the central bank serve a valuable clearing function also, and the central bank with its immense check processing facilities has greatly contributed to the payments mechanism in the United States, benefitting the public.

Nature of Bank Reserves

An examination of present legal reserve requirements against commercial banks, a brief look at Federal Reserve member bank requirements over the years, and a restatement of definition might be helpful. Bank reserves are primary reserves if they consist of cash or balance due from other banks subject to immediate withdrawal. Bank reserves are secondary reserves if they consist of short-term liquid assets. Most of the legal requirements imposed on banks pertain to primary reserves. Federal Reserve member banks, for example, are required to maintain a minimum amount of cash in vault plus collected balance due from a Federal Reserve bank. Many state chartered nonmember banks may consider balances due from correspondent banks as legal reserves. Some may consider secondary reserves such as United States Treasury Bills as legal reserve. Tables 1 and 2 indicate present requirements for state chartered nonmember banking institutions. Table 3 shows member bank reserve requirements from 1917 to the present.

Calls For Changes In Legal Reserves

The foregoing discussion is intended to provide some perspective for the subject matter of this paper. We are mainly concerned here with the kind of legal reserve requirements needed in the United States today. While this paper deals with mechanics more than with macroeconomic effects of various proposals, the real test of laws dealing with our financial institutions seems to be whether a law contributes to the economic growth and well being of the whole society. This paper, like others written on the subject of reserve requirements in commercial banking, considers an abundance of mechanical detail and is especially occupied with competitive relationships.

TABLE 1

STATE RESERVE REQUIREMENTS FOR COMMERCIAL BANKS AND TRUST COMPANIES, JANUARY 1, 1962*

Section A--Requirements applicable to all commercial banks and trust companies except in States marked with the symbol #, in which the requirements apply to "country banks" only. In the latter States these provisions do not apply to banks designated or approved as reserve depositories, not located in reserve cities, or located in cities of specific population ranges. For provisions applicable to such "non-country banks", see Section B, Table I.

State	Required reserves: Uniform requirements on demand and time deposits	Required reserves: Different requirements on-- Demand deposits	Required reserves: Different requirements on-- Time deposits**	Composition of reserve required on demand deposits: Vault cash	Composition of reserve required on demand deposits: Either balances with depository banks or vault cash	Composition of reserve required on demand deposits: Securities, balances with depository banks, or vault cash***	Composition of reserve required on time deposits**: Vault cash	Composition of reserve required on time deposits**: Either balances with depository banks or vault cash	Composition of reserve required on time deposits**: Securities, balances with depository banks, or vault cash***
	(Per cent of deposits specified)			(Per cent of demand deposits)			(Per cent of time deposits)		
Alabama		15	4	0	15	0	0	4	0
Alaska		20	8	0	20	0	0	8	0
Arizona		10	5	0	10	0	0	5	0
Arkansas#	1/ 15			1/ 0	15	0	1/ 0	15	0
California#		12	5	2/ 6	6	0	2/ 1	0	4
Colorado	15			0	0	15	0	0	15
Connecticut		12	0	2	8	2	0	0	0
Delaware		11	5	0	11	0	0	5	0
District of Columbia		16.5	5	0	16.5	0	0	5	0
Florida	20			0	0	20	0	0	20
Georgia		15	5	0	15	0	0	0	5
Hawaii		12	5	0	12	0	0	5	0
Idaho	15			0	10	5	0	10	5
Illinois	(No statutory reserve requirements)								
Indiana		12.5	3	0	12.5	0	0	3	0
Iowa#		7	3	1.05	5.95	0	.45	2.55	0
Kansas 3/#		12.5	5	0	12.5	0	0	5	0
Kentucky#		7	3	2.33	4.67	0	1	2	0
Louisiana		20	0	0	20	0	0	0	0
Maine		11	5	0	11	0	0	5	0
Maryland		15	5	0	4/ 15	0	0	0	5
Massachusetts#		15	0	3	6	6	0	0	0
Michigan	12			0	12	0	0	0	12
Minnesota#		12	5	0	12	0	0	5	0
Mississippi#		15	7	0	15	0	0	7	0
Missouri#		15	3	0	15	0	3	0	0
Montana#	10			0	10	0	0	10	0
Nebraska#		15	5	0	12	3	0	4	1
Nevada		12	6	0	12	0	0	6	0
New Hampshire	15			0	15	0	0	0	15
New Jersey		12	5	0	12	0	0	5	0
New Mexico	12			0	12	0	0	12	0
New York#		11	5	0	11	0	0	5	0
North Carolina		15	5	0	15	0	0	5	0
North Dakota		10	5	0	10	0	0	5	0
Ohio		15	10	0	15	0	0	4	6
Oklahoma#		15	5	0	15	0	0	5	0
Oregon		15	5	0	15	0	0	5	0
Pennsylvania		14	6	0	8.4	5.6	0	3.6	2.4
Rhode Island		15	0	6	9	0	0	0	0
South Carolina		7	3	0	7	0	0	3	0
South Dakota	17.5			0	7	10.5	0	7	10.5
Tennessee		10	3	0	10	0	0	3	0
Texas		5/ 15	5	0	15	0	0	5	0
Utah#		15	5	1.88	13.12	0	1.25	3.75	0
Vermont		30	8	0	12	18	0	3.2	4.8
Virginia		10	3	0	10	0	0	3	0
Washington		15	6	0	15	0	0	6	0
West Virginia		10	5	2	8	0	1	4	0
Wisconsin#	12			0	8	4	0	8	4
Wyoming		20	10	0	20	0	0	10	0

* In most cases the percentage requirements shown are prescribed in the State law itself. Where the law empowers banking authorities to change reserve requirements, the percentages shown are those which were actually in effect; the minimum and maximum reserve percentages which may be prescribed in those States are shown in another table.

** The reserve requirements shown in the "Time deposits" columns for Arizona, California, Connecticut, Massachusetts, Nebraska, New Hampshire, Rhode Island, Utah, Washington, and Wyoming apply only to savings deposits or to deposits in the savings departments of commercial banks and trust companies. Other time deposits are subject to different requirements, but in these States such deposits in State commercial banks and trust companies are relatively small in comparison with savings deposits or deposits in their savings departments.

*** Securities eligible as reserves are United States Government obligations and, in some States, State and municipal obligations.

1/ An unspecified "part of" the reserve must be in the form of vault cash. There is a 50 per cent reserve requirement for banks in places with less than 1,500 population, with capital of $10,000 or more but less than $25,000.

2/ Either vault cash or demand deposits with the Federal Reserve Bank of San Francisco.

3/ For trust companies the reserve requirements are 25 per cent of demand and 10 per cent of time deposits.

4/ In the case of trust companies 1/3 of the reserves against demand deposits (5% of deposits) may be held in the form of securities as described above.

5/ There is a 20 per cent requirement for banks with capital stock of less than $25,000.

TABLE 1 (Cont'd)

STATE RESERVE REQUIREMENTS FOR COMMERCIAL BANKS AND TRUST COMPANIES, JANUARY 1, 1962*

Section B--Requirements applicable to banks designated or approved as reserve depositories, located in reserve cities, or located in cities of specific population ranges.

State	Required reserves			Composition of reserve required on demand deposits			Composition of reserve required on time deposits**		
	Uniform requirements on demand and time deposits	Different requirements on-- Demand deposits	Different requirements on-- Time deposits**	Vault cash	Either balances with depository banks or vault cash	Securities, balances with depository banks, or vault cash***	Vault cash	Either balances with depository banks or vault cash	Securities, balances with depository banks, or vault cash***
	(Per cent of deposits specified)			(Per cent of demand deposits)			(Per cent of time deposits)		
Arkansas	20			8	12	0	8	12	0
California:									
Banks in places with populations of --									
100,000 or more		18	5	1/ 9	9	0	1/ 1	0	4
Under 100,000		15	5	1/ 7.5	7.5	0	1/ 1	0	4
Iowa		10	3	1.5	8.5	0	.45	2.55	0
Kansas		12.5	5	0	12.5	0	0	5	0
Kentucky		10	3	3.33	6.67	0	1	2	0
Massachusetts:									
Boston		20	0	4	8	8	0	0	0
Minnesota		15	5	0	15	0	0	5	0
Mississippi		25	10	0	25	0	0	10	0
Missouri:									
Banks and trust companies in places with populations of --									
200,000 or more		18	3	7	11	0	3	0	0
25,000 to 200,000		15	3	6	9	0	3	0	0
Montana	15			0	15	0	0	15	0
Nebraska		20	5	0	16	4	0	4	1
New York:									
Manhattan Borough, downtown area		16.5	5	0	16.5	0	0	5	0
Manhattan Borough, uptown area, and Buffalo		16.5	5	0	16.5	0	0	5	0
Elsewhere		11	5	0	11	0	0	5	0
Oklahoma		18	5	0	18	0	0	5	0
Utah		20	5	2.5	17.5	0	1.25	3.75	0
Wisconsin	20			0	13.33	6.67	0	13.33	6.67

* In most cases the percentage requirements shown are prescribed in the State law itself. Where the law empowers banking authorities to change reserve requirements, the percentages shown are those which were actually in effect; the minimum and maximum reserve percentages which may be prescribed in those States are shown in another table.

** The reserve requirements shown in the "Time deposits" columns for California, Massachusetts, Nebraska, and Utah apply only to savings deposits or to deposits in the savings departments of commercial banks and trust companies. Other time deposits are subject to different requirements, but in these States such deposits in State commercial banks and trust companies are relatively small in comparison with deposits in their savings departments.

***Securities eligible as reserves are United States Government obligations and, in some States, State and municipal obligations.

1/ Either vault cash or demand deposits with the Federal Reserve Bank of San Francisco.

NOTE: In States not listed in this Section or in this note, the reserve requirements shown in Section A are applicable to all State commercial banks and trust companies. The requirements shown in this Section apply to banks designated or approved as reserve depositories, banks in central reserve or reserve cities, banks in specified cities, and banks in cities with specified population, as follows:

Arkansas - The 20 per cent requirement applies to banks designated as reserve agents.
California - The requirements shown above apply only to reserve depositories. For banks that are not reserve depositories, located in places with population of 50,000 or more, the requirements are the same as shown above except that the vault cash requirement is only 6 per cent and the portion which may be carried with depository banks is correspondingly larger. For banks that are not reserve depositories, located in places with population under 50,000 see Section A.
Iowa - The requirements apply to banks in reserve cities (designated as such under the Federal Reserve Act).
Kansas - A 20 per cent reserve is required against demand deposits due to banks; the 12.5 per cent requirement applies to other demand deposits.
Kentucky - The 10 per cent requirement on demand deposits applies to banks in reserve cities. There is a 13 per cent requirement against demand deposits for central reserve city banks, but there is no central reserve city in the State.
Minnesota - The requirements apply to banks in reserve cities (designated as such under the Federal Reserve Act).
Mississippi - The requirements apply to banks in places with population over 50,000.
Montana - The requirement applies to banks approved as reserve depositories.
Nebraska - The requirements apply to banks in cities with population of 25,000 or more.
Oklahoma - The requirements apply to approved depositories.
Utah - The requirements apply to banks in places with population of 50,000 or more.
Wisconsin - The requirement applies to banks designated as reserve depositories.

Source: Legal Division, Board of Governors of the Federal Reserve System.

TABLE 2

BASIC STATUTORY RESERVE REQUIREMENTS, ACTUAL REQUIREMENTS ON JANUARY 1, 1962, AND MINIMUM AND MAXIMUM REQUIREMENTS PRESCRIBED BY STATE LAW, FOR STATE COMMERCIAL BANKS AND TRUST COMPANIES IN STATES IN WHICH BANKING AUTHORITIES ARE EMPOWERED TO CHANGE RESERVE REQUIREMENTS

State	Per cent of demand deposits				Per cent of time deposits			
	Basic	Actual	Minimum	Maximum	Basic	Actual	Minimum	Maximum
Alabama 1/					:	4	1	5
Arizona	10	10	10	20	5	5	5	10
Arkansas 2/ 3/	15	15	15	FR	15	15	15	FR
California:								
Banks in places with population of --								
100,000 or more	18	18	18	FR	5	5	5	FR
50,000 to 100,000 4/	15	15	15	FR	5	5	5	FR
Elsewhere	12	12	12	FR	5	5	5	FR
Connecticut 5/	12	12	12	24	0	0	0	0
Delaware	7	11	7	FR	3	5	3	FR
District of Columbia	FR	16.5	FR	FR	FR	5	FR	FR
Kentucky:								
Reserve cities 6/	10	10	10	20	3	3	3	6
Elsewhere 6/	7	7	7	14	3	3	3	6
Maine	15	11	*	FR	0	5	0	FR
Maryland	15	15	15	30 FR	3	5	3	6 FR
Massachusetts 5/:								
Boston	20	20	*	*	0	0	0	0
Elsewhere	15	15	*	*	0	0	0	0
Michigan 2/	12	12	12	24	12	12	12	24
Minnesota	12	12	12	FR	5	5	5	FR
Nevada	10	12	10	*	5	6	5	*
New Hampshire	15	15	*	FR	15	15	7/ 15	7/ 15
New Jersey	15	12	15	30 FR	3	5	3	6 FR
New Mexico 2/	12	12	12	15	12	12	12	15
New York:								
Manhattan Borough, downtown area	10	16.5	10	FR	*	5	0	FR
Manhattan Borough, uptown area	10	16.5	10	FR	*	5	0	FR
Brooklyn and Bronx Boroughs	10	11	10	FR	*	5	0	FR
Buffalo	10	16.5	10	FR	*	5	0	FR
Elsewhere	7	11	7	FR	*	5	0	FR
North Dakota	10	10	10	20	5	5	5	10
Ohio	15	15	*	*	10	10	*	*
Oregon	15	15	12	30	5	5	4	10
Pennsylvania	15	14	*	30	7.5	6	*	15
Utah:								
Large cities 8/	20	20	20	40	5	5	5	10
Elsewhere	15	15	15	30	5	5	5	10
Vermont	15	30	9	30	3	8	2	8

FR This symbol standing alone signifies that the State law provides that the maximum and/or minimum shall be the same as prescribed by Federal authorities for member banks; where the symbol appears with a percentage, the requirement prescribed by State authorities may not exceed either that percentage or the corresponding requirement applicable to member banks.

* None specified in the law.

1/ The provision for changes in reserve requirements by the State Banking Board applies only to time deposits.

2/ In Arkansas, Michigan, and New Mexico, identical requirements apply to demand and time deposits. However, in Michigan the entire reserve on time deposits may consist of United States Government securities.

3/ Neither these percentages nor the authority to change requirements extends to banks designated as reserve agents. The requirements for such banks is 20 per cent against demand and time deposits.

4/ The requirements apply also to banks that are reserve depositories located in places with population under 50,000.

5/ Because all but a relatively small portion of total time deposits of Connecticut trust companies consist of deposits in savings departments and in the case of Massachusetts trust companies, of savings deposits, the zero figures for these States refer to such deposits, which deposits are exempted by statute from reserve requirements. However, in Connecticut an actual requirement of 5 per cent, with a permissible range of from 5 to 10 per cent, is applicable to time deposits in the commercial department, and in Massachusetts the demand deposit requirement applies to certain time deposits in the commercial department.

6/ The State law prescribes higher requirements for banks in central reserve cities, but there are no such cities in the State.

7/ The range of reserve requirements on time deposits in the commercial department is from 5 per cent to the Federal Reserve maximum, but the reserve requirement on deposits in savings departments of commercial banks is the same as fixed for savings banks, namely, 15 per cent, and the reserve may consist of cash, balances in other banks, or obligations of the United States.

8/ Banks in cities with a population of 50,000 or more.

NOTE: In Florida (not listed above) the law provides that the Comptroller may from time to time formulate and promulgate reasonable rules and regulations governing the conduct of State banks, which shall have the force and effect of law, and he shall have power to enforce the same. This authority has never been used by the Comptroller to increase or lower bank reserve requirements.

Source: Legal Division, Board of Governors of the Federal Reserve System.

TABLE 3

MEMBER BANK RESERVE REQUIREMENTS

(Per cent of deposits)

Effective date	Net demand deposits [1]			Time deposits	
	Central reserve city banks [2]	Reserve city banks	Country banks	Central reserve and reserve city banks [2]	Country banks
1917—June 21	13	10	7	3	3
1936—Aug. 16	19½	15	10½	4½	4½
1937—Mar. 1	22¾	17½	12¼	5¼	5¼
May 1	26	20	14	6	6
1938—Apr. 16	22¾	17½	12	5	5
1941—Nov. 1	26	20	14	6	6
1942—Aug. 20	24	......	......	......	......
Sept. 14	22	......	......	......	......
Oct. 3	20	......	......	......	......
1948—Feb. 27	22	......	......	......	......
June 11	24	......	......	......	......
Sept. 16	......	......	16	......	7½
24	26	22	......	7½	......
1949—May 1	......	......	15	......	7
5	24	21	......	7	......
June 30	......	20	......	6	......
July 1	......	......	14	......	6
Aug. 1	......	......	13	......	......
11	23½	19½	......	5	......
16	......	......	12	......	5
18	23	19	......	......	......
25	22½	18½	......	......	......
Sept. 1	22	18	......	......	......
1951—Jan. 11	23	19	......	6	......
16	......	......	13	......	6
25	24	20	......	......	......
Feb. 1	......	......	14	......	......
1953—July 1	......	......	13	......	......
9	22	19	......	......	......
1954—June 16	......	......	......	......	5
24	21	......	......	5	......
July 29	20	18	......	......	......
Aug. 1	......	......	12	......	......
1958—Feb. 27	19½	17½	......	......	......
Mar. 1	......	......	11½	......	......
20	19	17	......	......	......
Apr. 1	......	......	11	......	......
17	18½	......	......	......	......
24	18	16½	......	......	......
1960—Sept. 1	17½	......	......	......	......
Nov. 24	......	......	12	......	......
Dec. 1	16½	......	......	......	......
1962—Oct. 25	......	......	......	4	......
Nov. 1	......	......	......	......	4
In effect Jan. 1, 1963	......	16½	12	4	4
Present legal requirements:					
Minimum		[3] 10	7	3	3
Maximum		[3] 22	14	6	6

[1] Demand deposits subject to reserve requirements which, beginning with Aug. 23, 1935, have been total demand deposits minus cash items in process of collection and demand balances due from domestic banks (also minus war loan and Series E bond accounts during the period Apr. 13, 1943–June 30, 1947).

[2] Authority of the Board of Governors to classify or reclassify cities as central reserve cities was terminated effective July 28, 1962.

[3] From Aug. 23, 1935, to July 28, 1959, the minimum and maximum legal requirements against net demand deposits of central reserve city banks were 13 and 26 per cent, respectively, and the maximum for reserve city banks was 20 per cent.

NOTE.—All required reserves were held on deposit with Federal Reserve Banks, June 21, 1917, until late 1959. Since then, member banks have also been allowed to count vault cash as reserves, as follows: Country banks—in excess of 4 and 2½ per cent of net demand deposits effective Dec. 1, 1959, and Aug. 25, 1960, respectively. Central reserve city and reserve city banks—in excess of 2 and 1 per cent effective Dec. 3, 1959, and Sept. 1, 1960, respectively. Effective Nov. 24, 1960, all vault cash.

Source: Forty-ninth Annual Report of the Board of Governors of the Federal Reserve System, 1962, p. 161.

What level and structure of reserves held by financial institutions will offer the optimum incentive to full employment of the nation's resources, price stability, and secular growth? No one has really answered this question. However, most knowledgeable, interested persons who have addressed their attention to the proper role and structure of commercial bank reserve requirements have concluded that present day requirements are not what they should be. Apparently it is widely felt that the present form of requirements exists largely because of historical considerations which no longer apply to our money and banking society.

The American Bankers Association (1957), the Commission on Money and Credit (1961), the Advisory Committee on Banking of the Comptroller of the Currency (1962), and the President's Committee on Financial Institutions (1963), have all called for drastic change in the structure of legal reserve requirements. Interestingly, there is very little evidence presented in all this work that legal reserve requirements are necessary at all. At least there is little attempt to provide such evidence. All of these studies have resulted in a call for more uniformity in legal reserves.[1] All but the American Bankers Association study recommend that all Federally-insured commercial banks be subject to Federal requirements. All the studies have denounced the present geographical basis for establishing reserves for member banks.

Legal reserves of financial institutions are considerably more important than would be supposed by laymen unexposed to fundamental money and banking theory. They affect our economic growth, they affect government revenue, they affect the growth, earnings and safety of the

[1]Only about 18 per cent of state-chartered banks presently belong to the Federal Reserve System.

institutions subjected to reserve requirements. Unfortunately, changes in legal reserves affect competitive positions so comprehensively that it is very difficult to avoid suspicion that this or that viewpoint is entirely objective. It is also difficult to advance one's own viewpoint without (1) adhering to a traditional concept which would be contrary to economic progress or (2) calling for a drastic change which might bring financial hardship or even ruination to large classes of institutions. Supply of over-all money and credit in the United States has come to be a "public" function; however, the ownership of the underlying capital which makes this possible is private. Any change will benefit--or hurt--some more than others. The question of change therefore involves degree as much as substance, and a step by step approach may be the best way out of the jungle of the varying reserve requirements which apply today in this country. The Heller report in its advocacy of graduated reserve requirements based upon a commercial bank's size, evidently envisions this procedure as a stepping stone and not a permanent solution to the problem presented by the morass of Federal and state laws which are themselves products of imperfect evolution from the days of the liquidity reserve.

Scope of the Paper

The principal aim of this paper is to present all the recent proposals for changes in commercial reserve requirements, which are conveniently quoted and described in one place. The evaluations provided herein are necessarily vulnerable and rather cursory. The supposed effects of adopting such changes cannot be based upon mathematical certainties or past statistical evidence. Furthermore, the side issues

or related topics such as competitive relationships among the financial institutions, Federal supervision, Federal deposit insurance, role of the central bank, or the open market mechanism for credit control can only be mentioned here and there when it appears these considerations belong with bank reserve considerations. The side issues are not primarily important <u>in this paper</u>. These things are clearly related to any consideration of what commercial bank legal reserves should be; they are timely and interesting subjects, but there is not capacity to treat them here.

One cannot begin really to disentangle the complicated system of bank reserve requirements without a thorough understanding of how the various requirements and mechanics for maintenance of legal reserves came to their present state. This, however, is not an historical account. The student of money and banking is fully supplied with economic history in his undergraduate studies and texts. What is attempted here is a kind of editorial report on <u>current</u> proposals. Undoubtedly there will be revisions in our banking laws. Little improvement can be accomplished, however, unless this segment of private enterprise can recognize what are its own shortcomings and which of the laws under which it operates are unsatisfactory. Then it must interest the public in an up-to-date banking system. Since the general public lacks sufficient educational background to cope with money and banking problems, the banking community probably must do the job of correcting any faulty legislation.

There are three original and complete sets of current proposals for changes in reserve requirements. These are the American Bankers Association plan (1957), the Commission on Money and Credit recommendation (1961), and the President's Committee on Financial Institutions

or the Heller recommendations (1963). These will be quoted, described, and evaluated in varying degrees. Their evaluation will consist of considering their effectiveness (in correcting inequities or deficiencies in present laws), their administrative effects (as to the central bank as well as to the commercial banks), and their structural effects (changes in organization of the commercial banking system). There is some duplication and overlapping of proposals among the results of the three study groups. Although each group's recommendations which pertain to reserve requirements will be fully quoted, repetitious discussion is avoided. For example, the Heller report (and this paper--in discussing it) deals with reserves against time deposits, and so does the ABA plan. However, little is said regarding this under the ABA section. This procedure is explained appropriately in each chapter.

A report made in 1962 by the Advisory Committee of the Comptroller of the Currency entitled National Banks and the Future, better known as the Saxon report, included recommendations substantially equal to those contained in the earlier ABA plan. Chapter IV is quite brief for these reasons.

There is a proposal described in Chapter VII for changes in the reserve settlement periods (March, 1964). This appears to be quite interesting since it involves correction of a mechanical deficiency in the present reserve requirement system. This apparent deficiency has existed for nearly 50 years, almost unnoticed; yet the new proposal would--in the eyes of its authors--facilitate a substantial improvement in administration. It is the most current of the proposals here discussed, having been acquired from its authors for this paper prior to its publication in the March 1964 issue of the Journal of Finance.

Another unpublished paper concerning statistical analysis of the effects of the Heller recommendations on various classes of United States commercial banks is the basis for Chapter VI. This inspired this writer to a brief further analysis of effects of the CMC recommendations upon the various classes of banks. There are also included in Chapter VI the supposed effects of the Heller and CMC proposals upon Virginia banks grouped into size classifications.

Chapter II deals with the ABA plan. While wishing to scrupulously avoid an historical and doctrinal approach in writing this paper, it seems necessary to discuss the events surrounding the 1959 Congressional Amendments to Section 19 to the Federal Reserve Act. Since these changes in law followed and largely result from activities of the ABA, it seems appropriate to begin Chapter II with some discussion about the net borrowed reserve positions in which banks found themselves during the 1950-1959 period and which principally gave rise to the ABA activity. It also gives us an opportunity to examine some current factors affecting reserves, and see how the central bank in this instance went about changing the structure of legal reserves so delicately as to preserve an orderly supply of money and lend stability to existing competitive relationships. We will wish to both describe the ABA plan and review the 1959 amendments. An evaluation will be chiefly directed toward two ideas expressed in this study: (1) The classification of banks for reserve purposes should be abolished, and (2) a substantial reduction in legal reserve requirements should take place. The chapter closes with a little discussion of "what level reserve requirements should be."

The recommendations of the Commission on Money and Credit are the subject of Chapter III. In this chapter there are three principal

ideas examined: (1) changes in reserve requirements should be used sparingly, (2) universal membership in the Federal Reserve System should be required of all commercial banks, and (3) the time deposit reserve requirement should be repealed.

Chapter V deals with the Heller report of April, 1963. This report--with the greatest amount of support from all interested segments of the Federal government and perhaps representing the most practical approach to commercial bank reserve requirements--has had the least attention of all the sets of proposals. It was a conviction that the Heller report deserved far more attention than it appears to have received that caused the writing of this paper. It seems almost incomprehensible that all the concerned government agency heads could agree on a need for extending uniform reserve requirements to all commercial banks, a conclusion reached by a distinguished committee of industrial, financial, and labor leaders three years earlier, and yet that after nearly a year, not one bill has been introduced in the Congress concerned with this proposal or any other from the Heller report.[1] Chapter V is addressed to (1) voluntary membership coupled with uniform requirements, (2) graduated reserve requirements, (3) extension of uniform time deposit reserve requirements to other savings institutions and the effect on commercial banks.

Together, Chapters II, III, and V form the basis for writing this thesis: a statement and brief evaluation of current and recent

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[1]We find Congress in early 1964 concerned with hearings on appropriateness of ownership of capital stock certificates in the Federal Reserve Banks, audits of the Reserve Banks by the General Accounting office, and proper size and organization of the Open Market Committee, among other things.

proposals for changes in reserve requirements. This is written with the thought that too little has been said on the subject.

Chapter VIII concludes with the outlook for changes and a question: Do these proposals go far enough?

CHAPTER II

THE AMERICAN BANKERS ASSOCIATION PLAN

The Plan Described

The plan of the Economic Policy Commission of the American Bankers Association which was published in 1957, aimed at reserve reduction and reform, may not seem after seven years to qualify as a current plan. On the other hand the principal aim, substantial reduction in required reserve ratios, has not yet been put into effect. Therefore, the ABA objectives are still in a sense current. Further, the Report of the Advisory Committee of the Comptroller of the Currency (1962) revealed the continuing dissatisfaction of the banking community with the 1959 changes in law. This report substantially repeated some of the ABA suggestions.

The proposed program of the ABA will be discussed principally in terms of the general ideas that reserve requirements on net demand deposits are too high and that geographical considerations are no longer appropriate. The question of legal reserves on time deposits is discussed under the Commission on Money and Credit and the Heller report sections.[1] The vault cash proposal has been written into law.

[1]Although time deposit reserve discussion is deferred, it is interesting to note that the ABA recommended in 1957 a "nominal reserve of two per cent" against time deposits, in the event vault cash were to

The ABA plan recommended the following:

(1) Eventually reduce reserve requirements for demand deposits to 10 per cent.

(2) Authorize the Federal Reserve to vary the reserve requirement for demand deposits between 8 and 12 per cent.

(3) Eliminate geographical differences in reserve requirements for demand deposits.

(4) Eventually reduce the reserve requirement for time deposits to 2 per cent.

(5) Permit the inclusion of vault cash in legal reserves.

Our intent at this point is to consider the above proposals in the light of "free reserve" conditions which prevailed in the latter part of the 1950's, the changes in law which were made in 1959, and the situation which now prevails. The evaluation of the uniformity of classification of member banks and the substantial reduction ideas will follow. The chapter will conclude with some discussion of how one may arrive at an appropriate level of reserve requirements.

From 1917 to 1936 reserve requirements on demand deposits were respectively 13 per cent, 10 per cent, and 7 per cent for central reserve city, reserve city, and country banks. A three per cent requirement obtained on time deposits of all member banks. In 1934, following devaluation of the dollar in terms of gold, huge inflows of gold from

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become part of legal reserves. It would have been "illogical," it was argued for banks to count all of their vault cash as reserve against net demand deposits "including the portion now held to take care of the operating needs of their savings deposits . . . . this would mean that banks with savings departments would benefit unfairly." Since the Saxon report in 1962 recommended complete abolishment of reserve against time deposits, it is understood that the ABA now agrees with this later proposal, however.

abroad occurred. Excess bank reserves soared to such levels that central bank policy was useless as it applied to establishing appropriate money supply levels through affecting bank reserves.[1] The war and postwar years were periods of "controlled" government security prices.

In the early fifties, the central bank was once again in charge of monetary policy following the now famous Treasury-Federal Reserve accord of 1951. From 1945 to 1957, commercial banks increased their loans by $67 billion and reduced their holdings of government securities by $34 billion. This not only raised loan-deposit ratios sharply (to the highest level since the early 30's), but also reduced member banks' liquidity since the reduction in security holdings was chiefly in the short-term governments. Between 1946 and 1956, gross national product expressed in constant 1947 dollars increased 42 per cent. In the same period, bank loans rose almost 250 per cent.[2] The rise in demand deposits of member banks was 14 per cent from mid-1951 to mid-1957. Time deposits increased by 49 per cent in this period.[3] How could the legal reserves needed for the projected continuation of this rise in deposits be provided? This was the question raised by the ABA. Certainly an inflow of gold was not to be expected. In order to provide the needed reserves through System open market purchases of United States government securities, the Federal Reserve would need to expand its holdings by $7 billion in the coming five years. The

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[1]In 1940 member banks' excess reserves were about 90 per cent of legal requirements.

[2]Murray G. Lee, "Why Reserve Requirements Should Be Cut," Reprinting from Banking, Journal of the American Bankers Association, (February, 1958).

[3]*Ibid.*

ABA reasoned that this would put pressure on the Reserve Bank's own gold reserves and eventually impair the independence of the System in its relationship to the Treasury. Another reason for not relying on more purchases of securities by the System was alleged to be that a further reduction in the supply of liquid assets held by the private economy would be unwholesome.

The plan emphasized the inequities of the existing system of bank classification according to geographical considerations. This was said to be based upon an historical accident. There were times in the early history of Federal Reserve and before, when banks in outlying districts kept liquidity reserves in city banks which in turn maintained reserves in New York, Chicago, and St. Louis. The resulting pyramid of reserves called for more liquidity on the part of banks at the apex. When the Federal Reserve System was established, it was thought that reserves should be mobilized in the central banks, but the importance of the financial centers in continuing to attract deposits was recognized. Thus, the geographic classification of banks for reserve purposes was preserved. In later years the distribution was justified on grounds of greater velocity of deposits in large city banks and the greater responsiveness of these banks to credit demands.

Central reserve city and reserve city banks would benefit most from a reduction in legal reserve requirements against demand deposits to the 10 per cent level envisaged. Country banks would gain most from the reduction in time deposit requirements and the vault cash allowance, since traditionally they have had larger proportions of their assets and liabilities in these forms than have city banks. The ABA expected

that the three classes would benefit equally in a general sense with some greater advantage for smaller reserve city banks.

A prompt denunciation of the ABA plan was forthcoming from the "100 per centers."[1] It was pointed out that a $9.8 billion decrease in required reserves would have to be offset by System open market sales of $9.8 billion since the monetary authorities could not simply inflate the money supply overnight.[2] Professor Alvin Hansen called this a "windfall" for commercial banks since they would, in effect, be transforming $9.8 billion in nonearning assets (reserve balances with Federal Reserve banks) into earning assets (United States government securities released by the System's open market account).

Partial Reform Amid Economic Fluctuation

The economic downturn of 1957-1958 caused the monetary authority to use its general powers vigorously to ease credit. Reserve requirements by 1958 had already been cut considerably from the 1953 level. Central reserve city requirements had been reduced to 18 per cent from 24 per cent, reserve city requirements had been cut to 16-1/2 per cent from 20 per cent, and country banks legal reserves lowered to 11 per cent from 14 per cent. Time deposit requirements were set at 5 per cent for all classes of banks in 1954.[3] The American Bankers Association's

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[1]A characterization of the "Chicago School" of thinking which suggests eliminating commercial banking as we know it by requiring 100 per cent reserve against bank deposits, thus destroying banks' ability to create money (demand deposits) and transforming them into simple depositaries.

[2]Alvin H. Hansen, "Bankers and Subsidies," The Review of Economics and Statistics, (February, 1958), Harvard University.

[3]Reduced to 4 per cent in late 1962.

picture of outmoded requirements based upon an originally more-than-sufficient money supply was thus not exactly a true one. Federal Reserve authorities reduced discount rates to 1-3/4 per cent in 1958, and supplied commercial banks with $2 billion of reserves through System open market purchases, in addition to the funds released by the lowering reserve requirements which amounted to an additional $1.5 billion in 1957-1958.

In 1958 the commercial banks experienced three things which led to very tight reserve positions in spite of rapid easing action by the monetary authority. Demand deposits of banks increased by $5 billion, time deposits by $8 billion, and the outflow of gold was greater than it ever had been--over $2 billion. In consequence banks found themselves once again in a net borrowed reserve position at the end of 1958 having borrowed heavily during the year.

In early 1959, three changes in Section 19 of the Federal Reserve Act were included in a bill before Congress which was favored by the Federal Reserve Board. The changes would:

(1) Permit member banks to include all or part of their vault cash holdings in their required reserves;

(2) Set the range of reserve requirements for central reserve city banks (in New York and Chicago) at 10-20 per cent instead of the previous range of 13-26 per cent;

(3) Permit individual banks in a central reserve city or reserve city to carry the lower level of legal reserves established for reserve city or country banks, respectively, if the "character" of their business made this appropriate.

The Board noted that in 1917 vault cash was discontinued as a part of legal reserve of banks in an attempt to mobilize gold reserves

in the Reserve Banks. It said that now vault cash and gold supply are unrelated, now cash and reserves are both interchangeable and limit credit, and the Reserve Banks would enjoy benefits of larger holdings of cash by members since less money would be transported and handled by the Federal Reserve; also, larger holdings of cash dispersed around the country would facilitate exchange in an emergency.[1] Of greatest importance, counting of vault cash as reserves it was claimed would correct inequities arising from the need of some banks to hold larger amounts of cash for operating purposes. The lower reserve requirement limits (10-20 per cent) supported by the Board of Governors for central reserve city banks (New York and Chicago) would equate their requirements with those for reserve city banks. It was felt that the upper limit would provide plenty of room for any foreseeable increases in actual required reserves.[2]

Public Law 86-114, approved July 28, 1959, provided for these three amendments to the Federal Reserve Act, with the additional provision that the classification "central reserve city banks" be abolished in 1962. This was very appropriate in light of the increasing similarities in character of business between New York and Chicago banks on the one hand, and large reserve city banks on the other. Congress also set the upper limits for both reserve city and central reserve city banks

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[1] C. Canby Balderston, Vice Chairman, Board of Governors of the Federal Reserve System, Statement Before Senate Banking and Currency Committee, March 23, 1959. Experience has not borne out all these advantages claimed by supporters of the vault cash amendment.

[2] _Ibid._

at 22 per cent with a minimum of 10 per cent (rather than the 10-20 per cent recommended).[1]

Table 4 provides an interesting picture of the factors affecting reserve positions of member banks over the months during which these reforms were implemented.

These reserve requirement reforms of 1959 were interpreted by the nation's banks as a step toward their goals; but they were not enough, principally because they left higher levels of nonearning assets (legal reserves) in the hands of the central bank than desired by the ABA. The ABA report of 1957 had ended with the following admonition:

> . . . the Commission wishes to stress the necessity of adopting a comprehensive approach to the reserves problem, instead of dealing separately with different aspects of it. The need is for a broad plan for overhauling the reserve structure. Specifically, it would be a serious mistake to enact legislation changing the status of vault cash without coupling this provision with other equally desirable changes affecting the distribution of the reserve _burden_. (Italics supplied.)

It is, therefore, obvious that the 1959 changes in law must have--in the eyes of the ABA--represented a "patchwork reform." The 1957 study was, in a sense, singularly oriented toward conditions which would afford greater earnings for the banks. At the same time it was quite comprehensive and yet written in a layman's language. Two subjects of importance to the student of reserve requirements are treated in the ABA study. One is the question of fixed versus variable reserve ratios.[2]

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[1] "Implementation of the 1959 Act on Reserve Requirements," _Federal Reserve Bulletin_, December, 1960.

[2] For example, the _fixed_ ratio of four per cent now prevailing against time deposits and the _variable_ range against net demand deposits within which the Federal Reserve Board is authorized by law to make changes.

TABLE 4

FACTORS AFFECTING RESERVE POSITION OF MEMBER BANKS, NOVEMBER 25, 1959 - DECEMBER 14, 1960[1]

(Signs indicate effect on net free reserves)

Factor and type of bank	Billions of dollars	
Federal Reserve actions related to vault cash and reserve requirements:		
Country banks:		
Permission to count vault cash	+1.5	
Increase in reserve requirement percentage (from 11 to 12 per cent)	-0.4	+1.1
Reserve city banks:		
Permission to count vault cash		+0.7
Central reserve city banks:		
Permission to count vault cash	+0.2	
Decrease in reserve requirement percentage (from 18 to 16-1/2 per cent)	+0.4	+0.6
Banks in central reserve and reserve cities given permission to carry reduced reserves:		
Amount of reduction in requirements		(2)
Total reserve funds released by above actions		+2.5
System open market purchases of Government securities (net)		
Total reserves supplied by Federal Reserve actions		+3.2
Reduction in gold stock		-1.6
Increase in currency in circulation		-0.6
Changes in other accounts--net effect on reserves[3]. . . .		(2)
Change in net free reserves (excess reserves less borrowings)		+1.0
Excess reserves (increase)		0.3
Borrowings (decrease)		0.8

[1]Changes based on averages of daily figures for two-week periods ending on these dates.

[2]Less than $50 million.

[3]Represents changes in: Federal Reserve float, Treasury currency outstanding, Treasury cash holdings, deposits (other than member bank reserves) with Federal Reserve Banks, and other Federal Reserve Accounts; also includes $100 million increase in required reserves resulting from change in deposits (as if deposits in December, 1960 had been subject to 1959 reserve requirements).

Source: "Implementation of the 1959 Act on Reserve Requirements," Federal Reserve Bulletin, (December, 1960), p. 1330.

The other concerns reserve treatment of interbank deposits and reserve credit for "Due From Banks."[1] The ABA does not propose any changes in these important areas of mechanical reserve procedures, and this paper will accordingly not examine this portion of the reserve question.

Evaluation of the Uniformity Proposal[2]

The elimination of classifications of banks for reserve purposes is recommended by all the groups associated with the proposals reviewed in this paper. Some reasons for this proposal are readily apparent.

Reserve settlement periods for reserve city banks are weekly; for country banks the periods are biweekly. The origin of this arrangement seems rooted in a compromise of various practices which prevailed among the Reserve banks before 1919.[3] The practice was probably not originally based upon any monetary consideration since day-to-day "defensive" open market actions were foreign to the System at the time. As it stands, reserve city banks' required reserves are based upon a daily average figured over a seven day period which ends each Wednesday. Country banks' requirements are calculated over a two-week period ending every other Wednesday. The required percentages are

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[1]The Uniform Reserves Plan of 1948 proposed that in a correspondent banking relationship, a reserve credit to a creditor bank equal to the reserve which the debtor bank has to maintain against its interbank deposit.

[2]The structural effects of the uniformity of reserve requirements are principally examined in Chapter VI.

[3]When the System was established in 1914, each Reserve bank was free to prescribe its own settlement periods.

calculated against the daily deposits averages over the period. Uniform requirements would thus eliminate the inequitable and the somewhat more administratively difficult system afforded by different settlement periods.

The classification of member commercial banks into reserve city and country bank groups also is today the result of a compromise between historical precedent on the one hand and on the other, a desire on the part of the monetary authorities to take account of deposit turnover and the kind of credit needs served by individual banks. The 1957 ABA study provides a searching analysis of the historical basis for differential classification and contains persuasive evidence to show that the geographical origins still substantially used as a basis for classifying banks are entirely without merit. The study insists that even if one can accept the questionable argument that extra liquidity reserve backing is needed for banks acting as depositaries of other banks, the geographical basis does not achieve the desired results. It is admitted that reserve city banks as a group hold a much larger proportion of their deposits in the form of interbank balances; but this proportion has become smaller, and banks in several cities not classified as reserve cities hold larger proportions of interbank balances than those in some reserve cities of comparable size.

The classification system which prevails today is more flexible than the one which existed in 1957, but the basic objections remain and the criteria are quite complicated. Generally speaking, classification procedures today place in the reserve city category: (1) Banks locating any of their offices in a city in which a Reserve bank or branch is located, (2) Banks locating any of their offices in

a city in which member banks of the city hold as much as 2/5 of one per cent of the total of all balances due to banks, (3) Banks locating any of their offices in a city in which local member banks hold 2/5 of one per cent of total demand deposits of all United States member banks, (4) Banks locating offices in a city in which one member bank holds 1/4 of one per cent of all the demand deposits of United States member banks. Activity or turnover of deposits is not considered when originally classifying banks in reserve cities. On the other hand, individual banks in reserve cities may apply to carry the reduced level of reserve specified for country banks; in considering their request, the Federal Reserve Board does consider the turnover of deposits for the individual bank making application.[1] Other factors considered include proximity of the applicant bank to the financial area of the city, number of banking offices, size of the larger individual depositor accounts, whether the bank purchases and sells in the short term money market, amount of deposits consisting of other banks' deposits, and--in general--the character of business of the bank. Seemingly, the above procedure is an attempt more to classify banks on the basis of preserving relationships between banks than to take monetary considerations into account. It might be argued that individual banks which can claim to be "small" by comparison are encouraged to compete unfairly with their larger city fellows. For these reasons it is felt that sizable administrative

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[1]Regulation D of the Board of Governors provides for banks in reserve cities to carry the legal reserves prescribed for country banks (12 per cent against net demand deposits in lieu of 16-1/2 per cent) if the Board deems it "reasonable and appropriate" in view of the character of business transacted. . . . In the Fifth District (Richmond), only two banks applied for such relief in 1963; these were newly chartered national banks.

difficulties exist in having to reclassify banks under this complicated formula and inequities are inescapable. Of all the mechanical aspects pertaining to legal reserve maintenance, the latter criticism seems the most justified.[1] It may be that the Federal Reserve Board wishes to retain the classifications in order that it may deal with concentrations of excess reserves in the larger cities more selectively.

Consideration of central bank services creeps into almost any discussion of legal reserve treatment of the various classes of commercial banks in the United States. Some services are rendered country banks which reserve city banks do not enjoy, e.g., free safekeeping of securities, prepaid delivery of currency and coin. On the other hand, banks in cities where Reserve Banks or branches are situated receive earlier credit in their accounts for checks sent for collection because country banks and other reserve city banks must suffer mail delays. These and other details would require consideration in conjunction with adoption of uniform reserve requirements.

In summary, there seems little to commend a system of favoring--through reserve requirement differentials--the "country" banks of the nation. There seems little more reason to preserve "existing relationships" between banks than there is to impose a progressive tax on the gross sales of a grocery chain--merely to preserve the country store.

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[1] A statement of the Federal Reserve Board in opposition to the proposal (considered by the 86th Congress in 1959) that the central reserve city classification be abolished reveals the Board's reasoning in wishing to retain the differentials among banks for purposes of monetary policy.

The Substantial Reduction Proposal

The ABA's desire for substantially lower reserve requirements must now be considered in terms of several criteria. A tendency on the part of some bankers to argue for lower reserve requirements in terms of narrow interests is revealed by the following letter written by the president of a national bank in North Carolina to the Committee on Banking and Currency of the United States Senate on March 25, 1959:

> Speaking as a banker with 48 years in banking and now president of a national bank and member of the Federal Reserve System that [sic] we are penalized for being a member. . . . We . . . are required to set up our reserve in the Federal Reserve Bank with no remuneration except an occasional shipment of currency express charges free. And, in addition to that reserve, we are required to keep money in our correspondent banks and clear through those member banks who charge the life out of us for clearing nonmember bank checks. . . . this excess kept in the Federal Reserve bank as a reserve requirement is that much lost to us in income which amount should be invested in government bonds or loaned to our customers.[1]

Hopefully, not all bankers are so lacking in understanding of the purpose of the reserve requirement. Still, in spite of its comprehensive and conservative nature, the ABA study has something of the North Carolina banker's preoccupation with bank earnings.

First, what is the effect on the money supply of a given change in requirements? Secondly, is such a change in the interest of sound economic growth for the United States? Third, how will the proposed level of reserves affect the safety of the banking system, and what effect will it have upon public service, upon growth of banking, upon

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[1] Member Bank Reserve Requirements, Hearings Before the Committee on Banking and Currency, United States Senate, 86th Congress, 1st Session, on S.860 and S.1120, March 23 and 24, 1959 (Washington: 1959), p. 94.

competitive relationships? Just what is the optimum level of reserve requirements over the long run?

The ABA concludes that reserve requirements can be reduced to 10 per cent of net demand deposits. It contends that present requirements are a result of an historical accident--the gold inflow of the thirties--and that these are much higher than needed for monetary control. Also, central bank holdings of government securities are sufficiently large to cope with any redundant bank reserves by sales from its account. Indeed the System's holdings, it is said, are too large, and thus they could be used to offset any undesirable effects on bank reserves of lowering present requirements to the 10 per cent level. This would provide the commercial banks with needed liquid assets; and, of greater importance, to the ABA, additional reserves would be needed over the coming years to provide for natural growth of bank credit and money. The only alternative would be for the "Fed" to add to its already "excessive" portfolio of government securities.[1] Finally, the ABA argued, the nation's commercial banks' relatively small ratios of net profits to capital accounts and declining ratios of capital accounts to risk assets should be considered in setting appropriate levels of reserve requirements. These legal reserves constitute nonearning assets of commercial banks and "excessive" reserves damage banks' growth abilities.

What is the precise level of reserve requirements needed in the United States? Obviously this is not easy to determine. The treatment afforded this question by the ABA apparently consists of (1) an argument

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[1]The Board of Governors' Annual Report for 1962 shows roughly $30 billion in SOMA. This may be contrasted with $17 billion in total balances of member banks held by the Reserve banks.

that present levels are too high, (2) a proposal that requirements be reduced to 10 per cent, and (3) statements of the benefits which would ensue. The ABA study fails to examine any foreign banking structures to find material for its thesis. The present paper also lacks such material. The ABA work also lacks an analysis of the results of various higher or lower reserve requirements in terms of achieving the beneficial results claimed. In other words, the selection and proposal of the 10 per cent level seems almost arbitrary. True, the ABA recommends a continuation of variable ratios within an 8-12 per cent range, but how was this arrived at? Why not 6-10 per cent, or 10-14 per cent?

This writer has failed to find any empirical data relating reserve balances maintained with the central bank to the clearing balances which member banks necessarily maintain to assure continuity in paying for checks, money shipments, bonds, and transfers. It hardly seems possible for a member bank to maintain less balance with a Reserve bank than is necessary to meet its debits. What is this relationship? For the months of October, November, and December, 1963, total debits to reserve accounts of the 271 banks in the Federal Reserve Bank of Richmond (Head Office) territory were added each business day. The aggregate reserve balances each day were also added for comparable months. For the three months, the ratios of total debits to total reserve balances were 72.0 per cent, 73.2 per cent, and 72.9 per cent. If the mid-point of 72.6 per cent were to be applied to the ratio (14.8 per cent) of reserves with Federal Reserve banks (not including vault cash) to net demand deposits for banks over the comparable period, we might say that a 10.7 per cent reserve would have been needed for temporarily adverse clearing purposes alone. Table 5 provides an interesting comparison

TABLE 5

MEMBER BANK RESERVE ACCOUNTS - DEBITS AND BALANCES
BUSINESS DAYS OCTOBER 1 - DECEMBER 31, 1963
(In Thousands)

Federal Reserve Bank of Richmond
Head Office

Date	Debits	Reserve Balance	Percentage of Debits to Balances
October 1	$ 298,090	$ 419,148	71.1
2	283,628	434,785	65.2
3	297,105	443,590	67.0
4	277,202	444,148	62.4
7	359,359	468,431	76.7
8	290,105	436,742	66.4
9	247,699	437,347	56.6
10	286,094	424,145	67.5
11	267,479	441,425	60.6
14	381,663	424,446	89.9
15	317,416	429,989	73.8
16	286,747	451,994	63.4
17	345,573	432,546	79.9
18	291,451	437,367	66.6
21	388,462	441,079	88.1
22	302,319	411,618	73.4
23	284,528	395,803	71.9
24	308,579	411,199	75.0
25	280,299	427,237	65.6
28	402,219	407,826	98.6
29	300,244	413,016	72.7
30	305,946	417,490	73.3
31	307,228	425,233	72.2
Total	$7,109,435	$9,876,604	72.0

Source: Files of Federal Reserve Bank of Richmond, Bank Accounts Department.

TABLE 5--Continued

Date	Debits	Reserve Balance	Percentage of Debits to Balances
November 1	$ 265,670	$ 437,318	60.7
4	380,221	457,907	83.0
6	495,592	389,477	127.2
7	280,827	447,716	62.7
8	287,868	446,386	64.5
11	232,172	476,580	48.7
12	327,596	434,784	75.3
13	307,616	404,806	76.0
14	307,158	430,384	71.4
15	330,290	445,699	74.1
18	435,547	451,960	96.4
19	331,826	398,149	83.3
20	266,020	420,312	63.3
21	266,841	433,780	61.5
22	289,603	444,676	65.1
26	506,611	410,396	123.4
27	63,007	407,968	15.4
29	306,397	423,014	72.4
Total	$5,680,862	$7,761,312	73.2
December 2	$ 390,320	$ 441,267	88.5
3	331,461	426,850	77.7
4	297,199	429,618	69.2
5	299.136	429,414	69.7
6	279,882	439,363	63.7
9	331,229	480,934	68.9
10	267,712	451,179	59.3
11	268,998	421,312	63.8
12	293,565	424,784	69.1
13	264,063	460,060	57.4
16	402,406	472,350	85.2
17	314,678	443,166	71.0
18	305,801	436,427	70.1
19	334,783	453,180	73.9
20	316,899	446,951	70.9
23	423,115	460,693	91.8
24	295,577	458,002	64.5
26	317,943	447,852	71.0
27	310,239	436,670	71.0
30	414,783	442,921	93.6
31	320,870	398,577	80.5
Total	$6,780,659	$9,301,570	72.9

Source: Files of Federal Reserve Bank of Richmond, Bank Accounts Department.

of book balances and debits in the Richmond office reserve accounts for these months.

The above is merely a brief excursion. Better ground on which to evaluate the ABA plea for lower requirements is found in the work of Warren L. Smith of the University of Michigan. His paper entitled "Reserve Requirements in the American Monetary System" was prepared for the Commission on Money and Credit.[1] The major considerations involved in choosing a level of reserve requirements are (1) the interest costs of the Treasury in managing the Federal debt, (2) the level of bank earnings, (3) the leverage of monetary controls, and (4) the structure of public and private debt, according to Smith.

Using various reserve requirement levels and making certain assumptions--including a 3 per cent annual growth in money supply, a 30 per cent tax rate on holders of government securities other than the Federal Reserve, a 90 per cent "tax rate" on Federal Reserve earnings paid to the Treasury, a 3 per cent yield on governments, and a tendency on the part of the public to hold 10 per cent of the money supply in the form of coin and currency--Smith calculates changes in the Treasury's net interest costs from the 1959 cost level. A 12 per cent effective reserve requirement would add about $9 million averaging over the ten year period while a 30 per cent effective requirement would lessen Treasury interest costs by $443 million a year or $4.4 billion over the ten year period.[2] Hence high legal reserves would substantially lower Treasury costs.

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[1]Warren L. Smith, Reserve Requirements in The American Monetary System, Monetary Management (a series of research studies prepared for the Commission on Money and Credit, Englewood Cliffs, N. J.: Prentice Hall, Inc., 1963).

[2]Ibid., p. 221.

Bank earnings are greatly affected by reserve requirement levels. Assuming conditions of a tax rate on member bank earnings of 43 per cent and a 1.6 per cent return on earning assets (other assumption same as in preceding paragraph), Smith again calculates for different levels of reserve requirements what change from 1959 levels would take place in total profits after taxes over the decade of the sixties. A 12 per cent level would yield a $281 million increase in 1966 (over 1959); a 30 per cent level of reserve requirements would yield only $96 million over the earlier level.[1] Smith states that, whether explicitly or by default, the central bank, through its ability to change reserve requirements, has a policy with respect to earnings of the banking system. In ratios of net profits after taxes to total net assets, commercial banks achieved a 10 per cent average return from 1953 to 1958 compared to 10.6 per cent for all industries. In 1958 banks' return was 10.4 per cent--higher than the 9.0 per cent return for all industries.[2] While these conclusions and statistics don't agree with those of the ABA (because the latter's represent an earlier period), this study reveals a continuous and sizable reduction in ratios of capital accounts to risk assets from 25 per cent in 1940 to 14 per cent in 1959.[3] This was noted in the ABA study with an implication that release of nonearning reserves would increase earnings and thereby cause additions to capital accounts. The principal flaw in this reasoning is that the increased earnings might be paid out in dividends and not added to capital accounts. On balance there seems some

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[1] *Ibid.*, p. 226.

[2] *Ibid.*, p. 229.

[3] *Ibid.*, p. 231.

cause for concluding that bank earnings do not need strengthening by lowering requirements. Banks' earnings are comparable to those of other industries, and they enjoy the benefit of Federal deposit insurance in attracting deposits. If secondary reserves are too low, it would seem to be a cause for stricter supervision.

Lower reserve requirements provide the central bank with greater leverage in its monetary actions. The lower the required reserve percentage, the greater the effect of a transaction in the open market by the central bank. Expressed as an equation, this relationship may be shown as: $K = \frac{1}{r(1-c)+c}$. Where K is the expansion multiplier, r is the reserve ratio, and c is the proportion of the money supply held by the public in the form of currency and coin. If r is 10 per cent and c is 0 (for sake of simplification), then K is 10. Under such conditions a purchase of securities by the central bank will release reserves and permit expansion ten times that amount. If the monetary authorities misjudge the factors affecting reserves (check float, gold, currency in circulation, etc.), then--under conditions of low requirements--it will be harder to avoid overdoing the job or not doing enough. Little can be proved in a paper of this kind concerning how much leverage is needed. Certainly the ABA study offers nothing along these lines. It is felt that with the sophisticated system of daily attention to factors affecting reserves which the Fed employs, there is much to be said for lower reserve requirements and greater leverage. This is in support of a widespread belief that open market operations are the principal and preferable general credit control tool.

Finally, a combination of circumstances aimed at achieving a greater proportionate output in the private sector of our economy might

not be unlikely in this decade.[1] These circumstances would be "tight" fiscal budgeting yielding significant Federal surpluses and an easy money policy represented by continued increases in central bank holdings of government securities. A "drying up" of the government securities market might then obtain to a degree, making the central banks' control of bank reserves through open market operations more difficult. To the extent that reducing the level of reserve requirements in lieu of adding to the Federal Reserve portfolio would offer more leverage while slowing down contraction of privately held public debt, monetary management would be benefitted.

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[1] Ibid., p. 248.

CHAPTER III

THE COMMISSION ON MONEY AND CREDIT RECOMMENDATIONS

The Recommendations

In 1961 the Commission on Money and Credit published a report on its studies of the United States monetary and financial system. The funds for the work were provided by the Ford Foundation, the Merrill Foundation, and the parent organization, the Committee for Economic Development. Five of the Commission's recommendations dealt directly with bank reserve requirements.[1]

The Commission established topical task forces to undertake research projects which would provide information relating to each policy consideration. Each was to provide arguments for and against the positions taken as well as alternative positions. Warren L. Smith was asked to prepare the paper on reserve requirements. He was instructed to appraise past proposals, study present requirements applicable to commercial banks, study possible modifications, and analyze the effects--including questions of equity--on the primary classes of financial institutions. He was also to appraise reserve requirements as an instrument of credit control. His paper "Reserve Requirements in the American Monetary System" is perhaps the most comprehensive work available in recent years on this subject.

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[1]The Commission on Money and Credit, Money and Credit - Their Influence on Jobs, Prices, and Growth (Englewood Cliffs, N. J.: Prentice Hall, Inc., 1961), pp. 64-66.

The recommendations relating to reserve requirement are broadly conceived in this paper to include those relating to membership requirements and extension of Federal Reserve controls over nonbank financial institutions.[1] For sake of convenience, the seven proposals considered will be grouped into four categories: (1) recommendations for status quo or those discussed elsewhere in this paper, (2) the sparing use of reserve requirement changes as a contracyclical tool, (3) "universal" membership, and (4) time deposit requirement repeal.[2]

The Commission on Money and Credit recommended the following:

(1) The present general form of fractional reserve requirements against net demand deposits is adequate for the purposes of general monetary policy and the Commission recommends that it be continued.

(2) The Commission recommends that the demand deposit reserve requirements for all member banks be made identical, and that the classification of banks into country banks and reserve city banks be eliminated.

(3) The Commission recommends that Congress continue to grant to the Federal Reserve Board a range within which reserve requirements can be set for demand deposits, perhaps from 8 to 18 per cent, so that the Board can adjust the specific level to meet the needs of growth or to meet emergency needs.

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[1] Actually "universal" membership is taken to include all insured commercial banks. There are a few noninsured commercial banks in the United States and some mutual savings banks. Their total resources are not thought to be an important part of the total for all banks.

[2] The Commission on Money and Credit, op. cit., pp. 76-78.

The first proposal isn't evaluated because it doesn't recommend change. The second two have been discussed in Chapter I under corresponding recommendations of the American Bankers Association.

Sparing Use of Reserve Requirement Changes as a Contracyclical Tool

"The Commission believes that the power to change reserve requirements should be used only sparingly, and favors major reliance on the use of open market operations for contracyclical adjustments."

The awkward nature of changes in requirements, used as a countercyclical tool, is often said to be evident from the large change in banks' reserve positions following even a one-half per cent change in requirements on demand deposits of all member banks.[1] Decreases in requirements can be offset by sales of securities in the System Open Market account which readily absorb excess reserves created by reserve requirement reductions. Increases in reserve requirements directly affect all banks too; however, purchases of securities will not necessarily provide all banks with an opportunity to recoup reserve losses through sale of assets of the type purchased by the Federal Reserve. Then too, the concentrated impact of changes in requirements on correspondent city banks can result from adjusting their own positions as well as supplying (or using) their country correspondents' reserves. An example is provided in a study of the accounts of a number of smaller Richmond Reserve District banks following 1953 and 1954 reductions in

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[1]This would result in $500 million change in reserves of banks--based upon net demand deposits aggregating $107 billion for all member banks in the United States on September 11, 1963. Source: Assets and Liabilities of All Banks in the United States, (Washington: Board of Governors of the Federal Reserve System, September 24, 1963.)

reserve requirements. These banks were found to have increased their correspondent balances, that is, amounts due from other banks by at least half the reserves released to them.[1]

The direct action on smaller banks of System action in raising and lowering requirements countercyclically would be inappropriate for two reasons. First, such action might ultimately cause banks to withdraw from the System. Secondly, frequent changes might cause these banks to maintain greater excess reserves more or less permanently in order to forego adjustments in times of reserve restriction, thus neutralizing monetary policy to some extent. While reserve requirements can be reduced to obtain an immediate effect for all banks, it might, therefore, be difficult even with skillful open market operations to periodically tighten up reserves without discriminating against some commercial banks.

Certainly open market operations would seem to take effect in areas where credit creating powers are most responsive. Also, this tool is less personal in nature. A sale to security dealers as a substitute for an increase in legal reserve requirements is not nearly so apparent to a reserve city bank which finds itself approaching a reserve deficiency. The record for the past decade readily testifies to the effectiveness of the open market operation; no increases in reserve requirements have been necessary. This proposal of the CMC appears to be soundly based; it would continue the precision work and hold on to the "emergency" tool: reserve requirement changes. The latter would come into the picture only

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[1]"Fifth District Member Bank Responses to Reductions in Reserve Requirements," Federal Reserve Bank of Richmond Monthly Review, December, 1955, p. 5.

in times such as prevailed during the gold inflow of the thirties or in the event of a serious recession in which a general increase in money supply could be reasonably expected to generate aggregate demand.[1] The CMC thus suggests a sort of "standby control."

From an administrative standpoint, it is argued frequently, but unconvincingly, that reserve requirement changes cannot be made in smaller increments than one-half percentage point. There is no reason, however, to think that any decimal system of reserve requirements would not be entirely feasible.

It must be concluded that infrequent use of reserve requirement changes would serve to strengthen System membership and quiet the call for release of "nonearning assets." On the other hand, if it is believed that monetary policy is best confined to the volatile money market banks; and if reserve requirements continue to drift downward as they have for ten years, we cannot easily justify the next recommendation of the Commission which assures that universal membership in the System is both desirable and necessary for operation of monetary policy.

Universal Membership

"The Commission recommends that all insured commercial banks should be required to become members of the Federal Reserve System."

The 6,097 member banks in the System held $220 billion in total deposits on October 30, 1963.[2] Total deposits of all United States

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[1]Monetary policy could be helpless in some circumstances. An interesting discussion of the "liquidity trap" described by Keynes is found in Gardner Ackley's Macroeconomic Theory. (New York: The MacMillan Co., 1961), pp. 192-194.

[2]Board of Governors of the Federal Reserve System, Federal Reserve Bulletin, November, 1963 (Washington), Principal Assets and Liabilities and Number, By Class of Bank, p. 1548.

commercial banks amounted to $265 billion.[1] Because of their relatively small deposits, the 7,443 nonmember banks holding $45 billion in deposits are not indispensable to effective functioning of monetary control.

The Commission's view is that the most important problem associated with nonmembership is the inequitable escape of these banks from influence of monetary policy. Also, "reserve requirements for nonmember banks are established by states and frequently are lower than requirements imposed on members, which gives nonmembership a competitive advantage." The Federal Reserve bank Presidents, replying to a questionnaire from Senator Paul Douglas stated in 1949 that "The wider the spread between member and nonmember bank reserve requirements, the greater the deterrent to membership and the danger of withdrawal become. The possibility of withdrawal from membership has to be taken into account by the Federal Reserve in considering increases in member bank reserve requirements and this tends to inhibit the System in making such increases."

There is some evidence that nonmember banks, which now hold 17 per cent of total deposits, are growing more rapidly than members of the Federal Reserve System. From December, 1945 to October, 1963, their share of total deposit growth amounted to 22 per cent. From June, 1962 to October, 1963, nearly 30 per cent of total bank deposit growth was shared by nonmember commercial banks; also in this period a net addition of 89 banks included 62 nonmembers.[2]

The proposal is effective from the standpoint of securing membership, certainly. It also provides a means of securing more

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[1]<u>Ibid.</u>

[2]Calculated from: <u>Ibid.</u>

equitable treatment for commercial banks in the sense that a kind of burden of restraint would fall on all banks equally. Since commercial banks have the special ability to create money, they should, collectively and equally, share the burden of restraining the unwise or inappropriate use of that ability. On the other hand, it is difficult to ascertain that effective exercise of monetary control is not possible without compulsory membership or even uniform requirements. Evidence that desired changes in money supply can be brought about through open market operations reveals that only a minority of the number of commercial banks is necessary to achieve the results. Therefore, the residual argument that the reserve requirements on member banks constitutes a problem through threat of withdrawal from membership is in itself a vulnerable position. Why is loss of membership a problem unless it undermines monetary policy? Why should monetary policy be restrained because of a threat of membership loss? Unless it can be shown that the central bank has other functions which only it can perform (aside from monetary control) satisfactorily, the desirability of "universal" membership is open to question.

The Commission mentions the exchange charge levied by some nonmembers (against checks drawn upon them) as an impediment to the United States payments mechanism. This practice is slowly disappearing, however, and there is little evidence that System membership is a factor. In addition, the central bank performs numerous free services for member banks which alleviate somewhat their "burden" of reserve differential. Finally, if uniformity of reserve is the desired end, then compulsory membership is not necessary. Equal requirements for all Federally

insured banks would serve as well and be politically more acceptable.[1] What do we want as a result of compulsory membership? More effective monetary control? A better payments mechanism? More equitable treatment for private enterprise at the hands of Federal regulation? There seems to be more evidence that the last objective is the one most likely to be achieved.

What are the administrative effects of universal or compulsory membership? It would certainly require more bookkeeping work for the Reserve banks. Also, the banks presently classed as nonmembers would be probably subjected to more supervision and reporting requirements. Extension of present central bank services could be assumed. This would represent an improvement and enlargement of interbank service relationships, e.g., supplying currency and coin, wire transfer facilities, safekeeping and purchase and sale of government securities, collection of cash and noncash items. These services centralized would be performed more economically. Undoubtedly, the greatest burden on the central bank would be in the area of supervision; this might be in the interest of stockholders and the public as it could result in more uniform and, in some instances, more competent bank supervision.[2] Many relationships already exist between the central bank and nonmember banks in the area of United States fiscal agency relations and through collection of checks drawn on nonmembers agreeing to remit at par to Reserve Banks.

From the standpoint of structure, compulsory membership would undoubtedly affect commercial bank correspondent relationships. Large

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[1]All but three or four hundred banks are insured.

[2]National banks in practice are examined only by the Comptroller of the Currency.

reserve city banks have come to be, in the eyes of many small country banks, the equal of (if not superior to) the central bank. The withdrawal of balances from city correspondents to establish legal reserves with the "Fed" and the extension of "Fed" services could well result in some decline in clearing and other activities between commercial banks.[1] There is room for suspicion that the combination of higher reserve requirements for many small banks and the ultimate breaking up of some correspondent relationships would result in partial isolation and absorption of many small unit banks. There is also reason to expect that strict state laws against branching would be hastened toward their demise. Some of the smaller unprofitable banks might become more interested in selling out than in remaining as members with full banking responsibilities.

Repeal of Time Deposit Reserve Requirements

"The Commission recommends that existing statutory reserve requirements against savings and time deposits be repealed.

"The Commission recommends that there be no extension of direct Federal Reserve controls over nonbank financial institutions."

The second proposal is closely related to the first one, for the nonbank financial institutions which are causing such concern to the banks are naturally their competitors for savings. First, we must consider again the function of reserve requirements as they apply to time deposits as well as define and differentiate between time deposits

[1]Although some member banks now maintain both a legal balance with Federal Reserve and a clearing balance with one or more correspondents, this is seldom the most profitable procedure for utilization of excess reserves.

and demand deposits. Of much importance to the discussion of reserve against time deposits is the possible effect on monetary policy of shifts between the two categories. The questions of equity again arise and disparities are even more noticeable than those concerned with non-member and member banks' demand deposit requirements. Member commercial banks are subject to a four per cent legal reserve. Nonmembers are subject to requirements ranging from no reserve in five states to the same requirements which are applicable to demand deposits in eleven states.[1] Mutual savings banks in the major savings bank states aren't subject to asset reserves. Federal savings and loan associations are subject to a seven per cent reserve requirement, but this may be kept in United States governments as well as cash. Federal credit unions are not required to maintain asset reserves.[2]

There is a conspicuous absence of treatment in the CMC work of the liquidity function of reserves against time deposits. The CMC supporting material including Smith's study dismisses the need for such a liquidity reserve. The Commission's report, however, recognizes a need but states that management and supervisory authorities are competent to maintain liquidity.

The other choices open to the Commission for consideration were presumably (1) to require uniform reserves against both demand and time deposits, (2) maintain present (lower) requirements but extend them to all savings institutions, and (3) to eliminate reserve requirements

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[1]Smith, op. cit., p. 304.

[2]United States House of Representatives, Subcommittee on Domestic Finance of the Committee on Banking and Currency, Comparative Regulations of Financial Institutions, 88th Cong., 1963, pp. 78, 113-115, 139-140.

against <u>individuals'</u> savings deposits but to retain required reserves against time deposits.[1]

Elimination of savings reserve requirements would not provide a defect in monetary control in the opinion of the CMC. It did not believe there were very important shifts between demand and time accounts. Furthermore, present time deposit requirements are so low now as to make it unlikely that complete elimination of these requirements would have a material effect upon monetary control.

Although it is true that the present four per cent reserve can hardly be necessary to monetary control, this does not seem to be ground for further opening up what already seems to be a substantial loophole. Commercial banks--unlike pure savings institutions which can only extend credit--create money as well. They do so whether the deposit takes the form of a time deposit or a demand balance. Time deposits of <u>member</u> banks of the Federal Reserve System have risen more rapidly than any other group of institutions accepting these funds.[2] Since 1960, growth in member bank savings balances has been greater than 50 per cent.

The lack of statistical data concerning debits to time accounts is a handicap to this study, but it seems safe to assume that savings are often "spent" for goods and services. Thus they sometimes constitute a part of the money supply. Without any reserve requirements, a growth in time deposits could free reserves for use in greater expansion of credit

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[1]The latter only are open to corporations; at least this has been the Federal Reserve Board's ruling for many years--now challenged by the Comptroller of the Currency.

[2]Board of Governors of the Federal Reserve System, <u>Federal Reserve Bulletin</u>: November, 1963 (Washington), Savings Institutions, pp. 1548, 1560-1561.

and the money supply. While it may be true that time deposits do not fluctuate cyclically, the threat of "shifting" would seem to be a source of imperfection in monetary control. Furthermore, the size and growth of time deposits could accentuate this imperfection.

The special ability of commercial banks to create demand money plus the fact that they have shared substantially in the growth of savings deposits (in spite of generally lower rates of interest paid) also lends support to the second proposal which the CMC makes in this area.

CHAPTER IV

REPORT OF THE ADVISORY COMMITTEE ON BANKING TO THE COMPTROLLER OF THE CURRENCY

An advisory committee established by the Comptroller of the Currency presented a report entitled National Banks and the Future in September, 1962. This report, often called the Saxon Report, was based, presumably, on findings from reports received from 1,500 national banks. These banks were asked to "review their experience and suggest any modification of policy or practice which they thought would promote the more effective operation of our National Banking System." Questionnaires were used.

Recommendations of the Committee which were concerned with bank reserves were:[1]

(1) That all geographical differences in reserve requirements against demand deposits be eliminated.

(2) That legislative authority be sought to eliminate any requirement for reserves against time and savings accounts; and that, in the interim, the required percentage should be reduced to the basic three per cent level set forth in the Federal Reserve Act.

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[1] National Banks and the Future, Report of the Advisory Committee on Banking to the Comptroller of the Currency, United States Treasury Department, (Washington: Government Printing Office, 1962), p. 126.

(3) That reserve requirements against demand deposits be reduced to ten per cent, and that the Federal Reserve Board be given the authority to vary these requirements only between eight per cent and twelve per cent.

These proposals are almost identical to some made by the American Bankers Association (Supra, Chapter I) five years earlier. Further, the treatment afforded these questions (in the published report, at least) is rather superficial. Since we have already discussed the American Bankers Association proposals, no attempt will be made to evaluate the details of the Saxon Report. It is interesting to note, however, the continuing attention in this report to the competition afforded by mutual savings banks and savings and loan associations which are not subject to reserve requirements on time balances.[1] Also, the level of requirements and geographical differences involved in demand deposit reserves are attacked in the report. While maintaining that reserve requirements at present (high) levels are unnecessary for liquidity and monetary control, the Saxon Report fails to provide on its face any reason for reduction. Undoubtedly, the desire for greater earnings potential was foremost in the minds of the Comptroller's respondents. Some justification may be found for strengthening commercial banks' capital structure (not dividends) and providing for long term deposit growth; however, little evidence is seen that either of these conditions will be lacking under a dual banking system where banks are soundly organized in the public interest and competently managed. Withdrawal from Federal Reserve membership has been rare even under wide differences in reserve requirements between member and nonmember banks.

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[1] Ibid., p. 123.

A statement is provided in the "analysis of issues" to the effect that reserves against time and savings accounts are not required for monetary control purposes since the credit-creating powers of commercial banks do not apply to their operations in the time and savings field.[1] This statement seems questionable. Shifts of balances from demand accounts to time accounts <u>do</u> increase the supply of loanable funds because legal reserves on time accounts are lower.

The call for abolishment of time deposit reserves fails to account for the earlier contention of the ABA that banks with large savings departments would have an "unfair advantage." Since the ABA has endorsed the Saxon Report, it too reflects an abandonment of this consideration of ethics on the part of the commercial banking community (<u>supra</u>, p. 17).

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[1] <u>Ibid</u>.

CHAPTER V

REPORT OF THE COMMITTEE ON FINANCIAL INSTITUTIONS TO THE PRESIDENT OF THE UNITED STATES

The persistence of questions concerning the appropriateness of the wide range of Federal laws dealing with financial institutions in the United States was evidenced by a memorandum from President Kennedy to eleven Federal agencies on March 28, 1962.[1] A committee, headed by the Chairman of the Council of Economic Advisors, was to "review legislation and administrative practices relating to operations of financial intermediaries." Although the group was named the Committee on Financial Institutions, it came to be known informally as the Heller Committee, after its chairman. The President directed that among the topics to be considered was "the scope of controls over commercial banks and other financial intermediaries exercised by the Federal Reserve System and other government and quasi-government agencies: for example, membership in the Federal Reserve System and in the Federal Home Loan Bank System, reserve requirements, regulation of interest rates on deposits and other liabilities and on government-guaranteed mortgages."[2]

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[1]The agency heads were: Secretary of the Treasury; Secretary of Agriculture; Director, Bureau of the Budget; Chairman, Federal Home Loan Bank Board; The Comptroller of the Currency; Chairman, Council of Economic Advisors; The Attorney General; Secretary of Health, Education and Welfare; Chairman, Federal Reserve Board; Administrator, Housing and Home Finance Agency; and Chairman, Federal Deposit Insurance Corporation.

[2]United States, Report of the Committee on Financial Institutions to the President of the United States (Washington: United States Government Printing Office, 1963), p. 65.

The Heller Committee findings presented April 10, 1963 included three recommendations regarding scope and structure of reserve requirements. Interestingly, nearly a fourth of the entire report's 60 pages are devoted to these first three conclusions.

Voluntary Membership Coupled With Uniform Requirements

> Conclusion 1 -- The Committee, with one member dissenting, concludes that all commercial banks ought to be subject to the reserve requirements specified by the Federal Reserve, and ought to have access to Federal Reserve discounts and advances. Membership in the Federal Reserve System would continue to be voluntary for state-chartered banks.[1]

Some long run indication that the deposit growth rate among nonmember banks has been greater than among member banks led the committee to believe that a question of equity in the present structure is important. The earlier comparisons of the member and nonmember requirements certainly indicate the portion of nonearning assets which the former must hold is greater. Hence, this must inhibit earnings as well as deposit creating abilities to a greater degree. More important, in terms of public objectives, higher member bank requirements are said to be a deterrent to exercise of monetary control. This possibility is not due so much to nonmember banks holding 17 per cent of commercial bank deposits or even because they number 7,443 as opposed to 6,097 member banks.[2] The chief deterrent lies in the possibility that member bank requirements might at some future time need to be raised to comparatively high levels and thus the threat of large scale withdrawals from membership

[1] Ibid., pp. 9-10. The dissenter member in each case is understood to be the Comptroller of the Currency.

[2] Federal Reserve Bulletin: November, 1963, loc. cit., p. 1,548.

might inhibit monetary policy. It really doesn't seem logical for only some portion of the small and medium sized commercial banks to have balances with the central bank while arguing that these particular banks' membership is essential for exercise of public policy. Why then wouldn't it be necessary for all commercial banks to have balances subject to central bank requirements? Either the smaller banks are not needed and should be excused from central bank requirements (even though Federally chartered) or all banks should be subjected to comparable requirements.

The Heller report presents the view that all banks should be subject to Federal Reserve requirements; therefore, it sidesteps the politically vulnerable proposition that all banks be members of the System and preserves to a degree the duality of Federal-state banking. For this reason it is an effective proposal. The central bank would possess more precise credit tools and undoubtedly be less inhibited in circumstances where competitive factors would have less weight. At the same time the proposal would be more palatable to proponents of state banking. It must be remembered that commercial banks, by their abilities to create money, have widespread public responsibilities. Therefore, it is apparent they should be willing and able to assist public monetary policy when times demand restraint.

The idea that Federal supervision is somehow related to monetary control remains in the writer's mind. While recommending uniformity of reserve requirements for all commercial banks, the Heller Committee admits that uniformity in supervision has varied from time to time depending on the views and temperaments of the responsible officials. In such circumstances isn't it conceivable that the Federal Reserve Board might prescribe certain minimum balances, but lack the means to

insure compliance? For this reason an administrative defect appears. The Heller report does not specify that nonmember banks subjected to Federal Reserve requirements would have to carry these balances <u>with</u> the Reserve banks. This is the only conclusion one can draw, however, since the maintenance of legal reserves in correspondents' accounts isn't presently permitted by the Reserve banks. Under the circumstances we can assume that the new required reserves would have to be withdrawn from correspondent accounts and deposited with Federal Reserve. Unless member banks on the whole were to gain reserves by reason of lower percentage requirements sufficient to offset losses of correspondent balances, purchase of securities in the System's Open Market account would be necessary to provide the necessary "defensive" action. It is probable that System liabilities would be somewhat greater raising more questions about the domestic gold reserve required by law to back these liabilities. The independent bankers would probably argue that power to control bank credit throughout the commercial banking system will inevitably be followed by power to supervise. Next central bankers will wish to eliminate nonpar check clearing and so on. Neither arguments against the Heller proposal which condemn loss of local rights to supervise banking nor those arguments in favor which have to do with the inequities inherent in the present situation carry as much weight as the case for full monetary control. Principally, the emphasis on the structural aspects of this proposal will be found in Chapter VI (<u>infra</u>, p. 75).

From an administrative standpoint, Federal Reserve bookkeeping capacities could be doubled without difficulty as most Reserve banks possess modern data processing facilities. A mechanism similar to that

provided for member banks for weekly reporting of nonmember cash, deposit, and reserve figures to the Reserve banks would undoubtedly be necessary. This reporting requirement might be slightly onerous to some small nonmember banks. Increased check volume for Reserve banks would occur to a small degree. Clearing operations of the correspondent city banks for their nonmember associates would go on and Federal Reserve would ultimately handle these checks anyway. It is felt that a large portion of nonmembers' balances would be preserved in city banks even after meeting Federal Reserve requirements. There they would continue to command the attention and services now provided by the city correspondents. In short, there would be some but not a material disruption in the correspondent banking relationships.

Access to Federal Reserve discounts and advances is not exactly related to the limited confines of this paper. If, however, one can effectively argue on the grounds of public interest that all commercial banks should be subject to reserve requirements of the central bank, then it must follow that all banks should be afforded the opportunity of borrowing from the "lender of last resort."

Graduated Reserve Requirements

Conclusion 2 -- The Committee, with one member dissenting, concludes that a system of graduated reserve requirements for demand deposits would eliminate many of the inequities and administrative difficulties in the present system of reserve requirements, and would facilitate a decision to bring all commercial banks under the reserve jurisdiction of the Federal Reserve.

In an atmosphere of complete reform, one could suppose that the graduated system would preserve inequities among the classes it provides for. On the other hand, the Committee has recognized the political uncertainties or the "impact" effect inherent in a system

of uniform requirements. The larger banks have long been recognized as having greater velocity effect in the exchange equation.[1] The graduated reserve arrangement implies a recognition that size of deposits, ipso facto, is indicative of velocity. This is not necessarily the case, however.

The Heller graduated reserve would be feasible from an administrative standpoint with some minor difficulties apparent. It would do away with the differential requirements according to geography. Classification would no longer be necessary. Some banks would not be in a position to know their required reserves until the period involved were over since deposit levels would not be precisely known; therefore, the present basis of calculation by Federal Reserve member banks would not suffice. If some past average or figures as of a given date were used, reverse "window dressing" might be the order of the day. Perhaps the best system would be to allow the net demand deposits of one period to determine the required reserve of the same period on a daily basis. The Heller example was: (1) 7 per cent on the first $5 million in net demand deposits, (2) 12 per cent on the next $95 million, and (3) 16-1/2 per cent on all net demands in excess of $100 million. Thus, the banker with a daily average of $110 million in net demand deposits would--midway of a reserve period--calculate his average required reserve at $5.4 million. This would result from: (1) $350 thousand, (2) $3.400 million, and (3) $1.650 million. To this $5.4 million requirement would be added or subtracted $16-1/2 thousand for each $100 thousand in deposits gained or lost per day for the remainder of the reserve period. Such a calculation would certainly be more complicated than the present system.

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[1]Money supply times income velocity equals national product times the price level, or MV = PT.

The graduated system would be effective; it would probably facilitate monetary policy as well as any other system including the present one. It might be argued that the reserve effect of System open market policy would be more indeterminate by reason of not knowing the distribution of purchase and sale effects upon the three categories of banks. If purchases failed, for example, to provide reserves to the smaller banks in an instance of supplying reserves to the banking system, then the multiple expansion possibilities might be lessened. However, this factor of uncertainty obtains under the present classification according to city or country status. By graduating requirements according to size of bank, the impact of monetary policy would be leveled out for all banks because the larger and more volatile deposit accounts would be subject to more restraint.

Chapter VI reveals the structural effects which might result from the graduated reserve of the Heller report. Added strength to the smaller member bank would be afforded by a five-twelfths drop in requirements. It is entirely possible that the seven per cent required reserve of these banks, less provision for vault cash, would be insufficient to serve as a clearing balance. These banks might maintain excess reserves with Federal Reserve sufficient to meet check clearings, currency orders, Treasury tax and loan calls, etc.; or these banks might look to their correspondents to maintain their clearing accounts. The result could be a loss of clearing balances from the central banks to the correspondent city banks to offset the opposite effect mentioned earlier in this chapter. Most banks would receive a benefit of reduced reserves under the Heller-suggested levels. Some of the larger banks would lose an indeterminate amount of balances due to other banks.

A few of the largest country banks would experience a rise in requirements and perhaps a loss of balances as well.

The chief criticism to be leveled against graduated reserve requirements is that they discriminate against size.

Extension of Uniform Time Deposit Reserve Requirements To Other Savings Institutions

Conclusion 3 -- The Committee, with one member dissenting, favors the continuation of reserve requirements on time and savings deposits at commercial banks, and the introduction of a similar reserve requirement for shares at savings and loan associations and deposits at mutual savings banks.

Since this paper is concerned with commercial banks, it is tempting but difficult to discuss the relation between reserve requirements on savings and loan associations and those on time and savings deposits of commercial banks. Perhaps one might dodge this question by assuming that reserve requirements are not intended to assure liquidity and that savings deposits are not part of the money supply. Therefore, a hasty conclusion might be reached that reserve requirements against savings deposits aren't relevant. Both premises are subject to serious question and so one must at least consider, as far as commercial banks are concerned, whether Conclusion 3 is feasible, effective, and structurally sound. Some few comments concerning other institutions are unavoidable.

Unlike the proposal concerning demand deposit reserves which would provide for central bank-prescribed minima for all commercial banks, the time and savings requirement would extend to all important classes of savings depositaries excepting credit unions. In this case, the Committee evidently assumes reserve balances of the savings and loan associations would be maintained by their supervising agencies. The

custody of mutual savings and loan associations' reserves is admittedly complicated by current questions about Federal chartering. The study overlooks nonmember commercial banks. These, it will be remembered, have to put aside varying reserves against their time deposits ranging from 20 per cent in Florida to 0 per cent in four other states. It seems logical to assume that they would be required to maintain equal time and savings reserves with the Reserve Banks. This would result in some additional withdrawals from correspondents. Since this type of deposit is typically stable (in total) and cash withdrawals are more or less predictable, the structural effects upon institutions not now subject would not be important, assuming a three or four per cent requirement. If, however, savings in future times take on the characteristic of higher velocity, then they might be subjected to much higher reserve requirements. In such circumstances, savings and loan institutions would enjoy a sizable advantage over commercial banks without the Heller prescription. Some nonbank financial institutions are apparently leaning toward nonliquid positions according to recent reports.

There should be no administrative difficulties in continuing the requirement for member banks or in extending it to nonmember banks or nonbank institutions. Here again it seems most businesslike to base required reserves for a given period upon the deposits in that same period.

Judgement of the effectiveness of sterilizing part of savings and time deposits against credit expansion must be preceded by a statement of logical purpose for such sterilization. First, commercial banks create money whether the proceeds of a loan ultimately come to rest in

a demand _or_ a time account. Secondly, deposits can shift from demand to time accounts and back again. When they move toward a class of deposits requiring more or less sterilization, then free reserves change. The amount of change is equal to the differential between the percentage required reserve on the two deposit classifications. Therefore, some reserve against time deposits is needed to lessen the differential effect and to discourage use of savings deposits as a substitute for high velocity money.

Secondary considerations are: (1) liquidity, and (2) the non-equitable arrangement prevailing now wherein competing institutions are variously subjected to either no requirements or to legal minima.

Under the National Bank Act of 1863, reserve requirements on time deposits were at the same level as on demand accounts. The Federal Reserve Act of 1913 provided a differential based upon the findings that the time accounts were less volatile and required less protection against sudden withdrawal. The approach of the Heller Committee was aimed at deciding the all important question: Are time deposits properly a part of the money supply? The Radcliffe Report (1959) in the United Kingdom was said to feel that central bank control is needed over _all_ institutions whose liabilities are close substitutes for money.[1] The clear inference is that savings and loan shares, for example, are close substitutes for money. The Heller report, while agreeing with this general conclusion of the Radcliffe Report, finds no empirical evidence that nonbank financial intermediaries have weakened countercyclical monetary policy. Rather, the committee's conclusion is seemingly based again

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[1]Report of the Committee on Financial Institutions, _loc. cit._, p. 15.

upon the equity of the situation. Thus, it may be open to the accusation that in its attempt to equalize competitions, it has overlooked the fact that nonbank institutions are not really competing since they serve the public in a specialized fashion instead of performing a general service.

From the point of view of this paper, a better approach might be to determine whether time and savings accounts do or do not act as money. If they do then the central bank must have full monetary control powers. If only liquidity is involved then the liquidity needs peculiar to the kind of institution responsible for such deposits might be more relevent than a uniform approach. The Heller Committee speaks first of inequities; then it clinches its argument with a belief that central bank-prescribed controls over nonbank institutions would be a valuable supplement to monetary policy. Thus, it apparently aims for a new selective credit control which would not be justified. Furthermore, the huge growth of time deposits in commercial banks of late hardly seems an indication that they are not attracting such deposits sufficiently. The structural effect is, therefore, meant by Conclusion 3 of the Heller Committee to be the real target; that is, a realignment of competitive relations. Practically, it would seem more logical to impose special liquidity requirements on nonbank financial institutions for the protection of the general public; or upon determination that the money supply cannot be fully controlled without these uniform requirements, to impress them on that basis alone.

In summary, the first three conclusions reached by the Heller Committee, considered together and with the remainder of the report, constitute an effective means of streamlining monetary policy without serious jeopardy to private financial enterprise. Their administration

seems entirely feasible. They are admittedly pointed in the direction of eventual uniform requirements. They would, if adopted, conform to a long trend in the direction of a banking system oriented toward national objectives.

CHAPTER VI

BRIEF STATISTICAL ANALYSIS OF THE EFFECT OF UNIFORM AND OF GRADUATED RESERVE REQUIREMENTS ON UNITED STATES BANKS AND ON VIRGINIA BANKS

It is difficult, perhaps even impossible, to determine the effects of these proposals empirically. Given static balances and relationships between banks and with the public, the effect of a change in reserve requirements can be predicted. These conditions do not obtain however. Distributions of assets and liabilities among the nation's commercial banks and other institutions would change in indeterminate ways with changes in legal requirements. Any change in free reserve of Bank A might cause it to increase or to draw down its balance with Bank B. The situation is complicated by the fact that the central bank which holds the legal reserve also is a clearing bank.

It is nonetheless intriguing to speculate upon the possibilities open to a given bank or group of banks were a particular change in reserve requirements to take place. The two proposals most readily adaptable to "face value" analysis are the uniform requirements mentioned in the report of the Commission on Money and Credit and the graduated requirements of the Heller report.

The CMC Effect--United States

The uniform requirement proposal is not original with the CMC report. In fact, there is already a "uniform" reserve requirement against

all member banks' time deposits. About the only way one can easily determine the effect of a uniform requirement on net demand deposits is to obtain a ratio which, if applied to the net demand deposits of all banks, would yield reserves equal to those which actually prevailed under the period of time studied. This approach at least serves to illustrate the effects on various classes of banks and to indicate a formula for future use in determining the effects of uniformity.

In order to accomplish this analysis on a nation-wide basis, Federal Reserve Board semimonthly statements showing data for all United States banks were utilized.[1] The ratio of net demand deposits of member banks to combined cash and reserve balances with Federal Reserve banks was determined for twelve dates (one each month) in 1963.[2] This ratio was then considered (in the absence of any legal requirements against time deposits--which the CMC favors abolishing) to be the prevailing uniform legal reserve percentage.

Table 6, which produces an average annual ratio of 18.3 per cent based upon member banks' cash and reserve balances, illustrates the application of the monthly ratios to nonmember banks. Three flaws in this applied reasoning should be pointed out. First, since nonmember banks do not maintain reserves on the same basis as member banks do now, the monetary authorities might well consider an entirely different ratio appropriate for all banks as opposed to the one which prevails for member banks at the time the uniform requirement is put into effect.

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[1]Board of Governors of the Federal Reserve System, "Assets and Liabilities of All Banks in the United States," No. J. 4.

[2]"Net demand deposits" was computed by deducting from "gross demand deposits," "cash items in process" and "due from banks."

TABLE 6

APPLICATION OF UNIFORM RESERVE REQUIREMENTS TO NONMEMBER COMMERCIAL BANKS IN UNITED STATES BASED UPON RATIO OF RESERVES OF MEMBER BANKS TO NET DEMAND DEPOSITS, AND ELIMINATION OF REQUIRED RESERVE AGAINST TIME DEPOSITS, LAST WEDNESDAY EACH MONTH 1963
(Figures in millions of dollars)

	1/30/63	2/27/63	3/27/63	4/24/63	5/29/63	6/26/63	7/31/63	8/28/63	9/25/63	10/30/63	11/27/63	12/25/63
Member Banks												
1. Reserve With Federal Reserve Banks	16,262	16,252	16,259	16,623	15,921	16,511	16,768	15,936	16,351	16,379	16,068	16,776
2. Cash In Vault	3,262	3,249	+ 3,227	3,286	3,208	3,422	3,397	3,440	3,458	3,550	3,448	3,661
3. Total (1 + 2)	19,524	19,501	19,486	19,909	19,129	19,933	20,165	19,376	19,809	19,929	19,516	20,437
4. Balances With Commercial Banks	6,946	7,225	7,027	7,094	6,938	7,260	7,221	7,090	7,445	7,382	7,758	7,958
5. Cash Items In Process	13,554	14,745	13,172	13,431	14,942	14,579	15,002	13,161	14,957	14,584	17,002	16,260
6. Total Deductions (4 + 5)	20,500	21,970	20,199	20,525	21,880	21,839	22,223	20,251	22,402	21,966	24,760	24,218
7. Gross Demand Deposits	128,188	128,898	127,111	126,511	127,103	131,493	130,716	125,670	131,732	129,939	133,499	138,117
8. Less Deduction (6)	20,500	21,970	20,199	20,525	21,880	21,839	22,223	20,251	22,402	21,966	24,760	24,218
9. Net Demand Deposits	107,688	106,928	106,912	105,986	105,223	109,654	108,493	105,419	109,330	107,973	108,739	113,899
10. Ratio (3 : 9)	18.1	18.2	18.2	18.8	18.2	18.2	18.6	18.4	18.1	18.5	17.9	17.9
Nonmember Banks (All Commercial Banks Less All Members)												
1. Gross Demand Deposits	23,052	23,022	22,659	23,159	22,927	23,577	23,484	23,180	23,948	24,161	24,631	25,193
2. Balances With Commercial Banks	4,244	4,335	4,223	4,656	4,542	4,650	4,739	4,630	4,415	4,538	4,542	4,712
3. Cash Items In Process	+ 386	+ 375	348	369	348	361	388	329	363	396	458	430
4. Total Deductions (2 + 3)	4,630	4,710	4,571	5,025	4,890	5,011	5,127	4,959	4,778	4,934	5,000	5,142
5. Net Demand Deposits (1 - 4)	18,422	18,312	18,088	18,134	18,037	18,566	18,357	18,221	19,170	19,227	19,631	20,051
6. Gross Required Reserve (5 x 10)	3,334	3,333	3,292	3,409	3,283	3,379	3,414	3,353	3,470	3,557	3,514	3,589
7. Less Cash In Vault	- 1,078	- 1,071	- 1,053	1,004	982	1,048	1,073	1,050	1,092	1,140	1,092	1,139
8. Net Required Reserve (6 - 7)	2,256	2,262	2,239	2,405	2,301	2,331	2,341	2,303	2,378	2,417	2,422	2,450

Source: Board of Governors of the Federal Reserve System, "Assets and Liabilities of All Banks in the United States," No. J. 4., 1963.

The precise legal ratio finally selected would have to be based principally upon desired effects to be obtained in the money supply. Secondly, the member bank ratio of 18.3 per cent includes about $400 million in excess reserves which is 2 per cent of required reserves.[1] Lastly, the "upper limit" suggested by the CMC was to be 18 per cent. Our selection of 18.3 per cent can be considered somewhat high.

Table 7 illustrates the effect of application of the 18.3 per cent reserve requirement upon the various classes of banks as they existed on December 25, 1963. Nonmember banks and their correspondents would be the ones most affected by this proposal. As new members of the Federal Reserve System they would have had to draw down correspondent balances equal to $2.5 billion, assuming they would not wish to liquidate other assets. This would constitute more than half of all their balances due from banks. Undoubtedly, many correspondent relationships would cease to be profitable and use of central bank services would grow.

Although "country" member banks hold 43 per cent of their total gross deposits in the time category, and these would no longer be subject to <u>any</u> requirements, this group of banks might be hardest hit among the member bank groups. This is due to their no longer being able to enjoy a preferential reserve rate in relation to the "reserve city" banks. Their required reserves would have been raised by $1.2 billion and would largely have to be secured from their balances due from banks which amounted to $5.2 billion. The $2.5 billion which nonmember banks would draw out of correspondents and transfer to Federal Reserve would

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[1] It does not seem improper to consider this two per cent excess as "required" reserve. All banks, especially small country banks, are inclined to maintain some margin of safety over absolute legal minima.

TABLE 7

APPLICATION OF UNIFORM RESERVE REQUIREMENTS TO ALL COMMERCIAL BANKS IN UNITED STATES
BASED UPON 18.3 PER CENT RESERVE REQUIREMENT AGAINST
NET DEMAND DEPOSITS AS OF DECEMBER 25, 1963
(Figures in millions of dollars)

	Reserve City Member Banks			Country Member Banks	All Member Banks	Nonmember Banks	All Banks
	New York	Chicago	Other				
1. Gross Demand Deposits	26,174	6,629	53,112	52,202	138,117	25,193	163,310
2. Balances With Banks	274	110	2,404	5,170	7,958	4,712	12,670
3. Cash Items In Process	4,612	910	8,297	2,441	16,260	430	16,690
4. Deductions (2 + 3)	4,886	1,020	10,701	7,611	24,218	5,142	29,360
5. Net Demand Deposits (1 - 4)	21,288	5,609	42,411	44,591	113,899	20,051	133,950
6. Required Reserves @ 18.3 Per Cent	3,896	1,026	7,761	8,160	20,844	3,669	24,513
7. Cash in Vault	303	57	1,137	2,164	3,661	1,139	4,800
8. Net Required Reserves (6 - 7)	3,593	969	6,624	5,996	17,183	2,530	19,713
9. Actual Reserve With Federal Reserve Banks December 25, 1963	3,872	997	7,089	4,818	16,776		16,776
10. Difference Over (+) Under (-)	+ 279	+ 28	+ 465	-1,178	- 407	-2,530	- 2,937

Source: Board of Governors of the Federal Reserve System, "Assets and Liabilities of All Banks in the United States," No. J. 4., December 25, 1963.

similarly reduce member banks' deposits. This reduction in deposit liabilities of banks would reduce their required reserves by $0.7 billion. A net increase in legal reserve requirements as indicated above would probably have to be offset by massive purchases in the open market by the Federal Reserve. Just what amount of purchases would be necessary is difficult to determine.

Reserve city banks would gain considerable free reserves. Table 7 indicates that New York city banks would enjoy a gain of $279 million in free reserves while Chicago banks would gain only one-tenth as much. Other reserve city banks would gain $465 million in free reserves. The increase in required reserve for <u>all</u> members reflected by this table is not particularly meaningful. It merely results from our using the annual average ratio of 18.3 per cent instead of the 17.9 per cent which actually prevailed on December 25, 1963. The more important aspect of this illustration is the effect upon the classes of banks. It is interesting to note, however, that a change of only four-tenths of one per cent yields a $400 million increase in requirements for member banks. Perhaps this result illustrates the difficulty of using changes in reserve requirements as a contracyclical tool. It should be pointed out that these figures are totals and averages; therefore, they conceal the extreme cases.

The CMC Effect--Virginia

It has been convenient to group Virginia banks into <u>size</u> classifications for two reasons: (1) these banks are "closer to home" and the effects upon various sizes indicate to a degree effects upon various individual banks with which we are familiar, and (2) banks must

be grouped according to size when one wishes to apply the Heller graduated requirements. For this latter reason the groupings are the same for both uniform (CMC) and graduated reserve (Heller) analysis. Member and nonmember Virginia banks are grouped according to: (1) banks with more than $100 million in <u>net</u> demand deposits, (2) banks with more than $5 million but no more than $100 million in net demands, and (3) banks with $5 million or less in net demands. Member banks will be designated in descending order as groups 1, 2, and 3; nonmembers will be called groups A and B. There is no nonmember Virginia bank with deposits of $100 million or more.

Table 8 indicates that, on the average, the three largest and the 39 medium-sized banks would lose a substantial amount of free reserves per bank. The 140 small member banks would lose an insignificant amount of reserves. Within the latter group, however, there would be large variations depending on the proportion of time deposits held by each bank. The loss indicated for the larger Virginia banks would <u>also</u> depend upon time deposit proportions. More important, some of these banks would lose a tremendous amount of their correspondent deposits needed by nonmember Virginia banks to establish reserve balances under the new law. There is no published information to indicate which Virginia banks would be hardest hit by loss of correspondent balances. Indeed a great deal of the nonmembers' balances would be probably withdrawn from New York city banks; some would be taken from Washington, D. C. banks. It is safe to assume that the larger Richmond, Norfolk, and Roanoke banks would be the most affected by withdrawals of correspondent balances resulting from imposition of uniform reserve requirements against nonmember Virginia banks.

TABLE 8

APPLICATION OF UNIFORM RESERVE REQUIREMENTS TO VIRGINIA MEMBER BANKS FOR RESERVE PERIOD ENDED DECEMBER 25, 1963, AND TO VIRGINIA NONMEMBER BANKS FOR STATEMENT DATE DECEMBER 28, 1962-- BASED UPON 18.3 PER CENT REQUIREMENT AGAINST NET DEMAND DEPOSITS ONLY
(Amounts in thousands of dollars)

Virginia Member Banks	Number	Daily Average Aggregate Net Demand Deposits	Projected Required Reserve @ 18.3 Per Cent	Actual Required Reserve	Reserves Required (Difference)	Average Per Bank
Group 1 Banks (More than $100 million in net demand deposits)	3	565,031	103,400	98,775	+ 4,625	1,542
Group 2 Banks ($100 million or less but more than $5 million in net demand deposits)	39	728,293	133,278	121,057	+12,221	313
Group 3 Banks ($5 million or less in net demand deposits)	142	309,744	56,683	55,281	+ 1,402	10
Total	184	1,603,068	293,361	275,113	+18,248	99

Computed from: Report forms BK 246, "Reserve Status Computation" (accounting files of Federal Reserve Bank of Richmond, Bank Accounts Department, December 25, 1963).

TABLE 8--Continued

Virginia Nonmember Banks	Number	Aggregate Net Demand Deposits	Projected Required Reserve @ 18.3 Per Cent	Average Amount Per Bank
Group A Banks ($100 million or less but more than $5 million in net demand deposits)	13	164,411	30,087	2,314
Group B Banks ($5 million or less in net demand deposits)	86	150,381	27,520	320
Total	99	314,792	57,607	582

Computed from: Commonwealth of Virginia, 1962 Annual Report of the Bureau of Banking, State Corporation Commission, 1963.

The Virginia analysis, like the one concerning the entire United States, indicates that some fairly sizable dislocations might take place through nonmember banks withdrawing deposits from member banks; also some extensive open market operations would be necessary. Probably, uniform requirements are desirable in the long run, but some other scheme that will avoid the transitional problems in the uniform requirement plan would be preferable. This seems the chief merit in the graduated reserve requirement proposal advocated by the Heller Committee.

The Heller Effect--United States

The graduated reserve proposal has been studied in terms of September, 1961 reports of condition by Mr. Lewis N. Dembitz, Division of Research and Statistics of the Board of Governors of the Federal Reserve System. Mr. Dembitz has generously offered to allow use of the data from this unpublished study.

The graduated requirements suggested by the Heller Committee are: 7 per cent against the first $5 million of net demand deposits, 12 per cent against the next $95 million, and 16-1/2 per cent against the net demand deposits above $100 million. Uniform requirements--as noted earlier--would pose an immense problem for the group of banks (and their correspondents) which would move from nonmember to member bank status under terms of the CMC recommendation.[1] The effect of the graduated requirements on these banks, which incidentally would retain nonmember status under the Heller proposal, would probably be smaller

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[1]It must be borne in mind that the Heller Committee recommended equal reserve classification of all insured banks except as to size; the CMC recommended full membership in the Federal Reserve System.

but this is problematical. The following table taken from the Dembitz material shows the effects on various size groupings of banks. This illustrates the gentle progression in requirement percentages as the demand deposit size groups increase.[1] This is in contrast to the sharp 4-1/2 per cent differential provided by the present reserve city-country requirements.

TABLE 9

GRADUATED RESERVES--PERCENTAGES OF NET DEMAND DEPOSITS[2]

Net Demand Deposits (Millions of dollars)	Required Reserves As a Percentage of Net Demand Deposits
Up to 5	7.0
6	7.8
8	8.9
10	9.5
20	10.8
50	11.5
100	11.8
120	12.5
150	13.3
200	14.1
500	15.6
1,000	16.0
5,000	16.4

Mr. Dembitz bases his analysis upon September 27, 1961, condition report data.

More than 90 per cent of the nonmember banks would be subject to the lowest requirement--seven per cent. Only ten nonmember banks had

[1]Reserve required against time deposits, presently in effect for member banks, would presumably be extended to nonmember banks at the present four per cent rate.

[2]Lewis N. Dembitz, "Graduated Reserve Requirements" (unpublished staff paper, Board of Governors of the Federal Reserve System, June 4, 1963) p. 4.

net demands of more than $100 million. The following table illustrates the number of nonmember banks and proportion of total net demand deposits in each size category.

TABLE 10

INSURED NONMEMBER BANKS CLASSIFIED BY AMOUNTS OF THEIR NET DEMAND DEPOSITS[1]

	Number Banks	Total Deposits (Billions of dollars)	Total Net Demand Deposits (Billions of dollars)	Number Member Banks in Same Size Class
Under $5 million	6,356	18.8	8.8	4,218
$5 million to $100 million	639	14.9	7.8	1,761
Over $100 million	10	2.4	1.4	153
Total	7,005	36.0	18.0	6,132

As in the case of the preceding discussion of the CMC proposals, it is assumed that nonmember banks would establish their reserve balances by drawing down an equal amount of correspondent balances. Actually some might draw down more than enough to establish reserves with the central bank; they might wish to become members and establish <u>all</u> their clearing funds with the Federal Reserve. On the other hand, six per cent of the nonmember banks in September, 1961 would have held sufficient vault cash balances to meet the Heller required reserve. Thus, they might not have withdrawn any correspondent balances.

The Dembitz study reveals that even after deducting from correspondent balances of nonmember banks an amount sufficient to meet the

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[1]*Ibid.*, p. 6.

impact of the Heller reserve, more than two-thirds of the nonmembers would still have equal or greater correspondent balances than the median balances held by member banks in comparable size groupings. The next table reveals the average correspondent balances which would have been held by member and nonmember banks in the various size groupings after deduction of amounts necessary to satisfy the nonmembers' newly required reserves on time and net demand deposits.

TABLE 11

AVERAGE CORRESPONDENT BALANCES (DUE FROM BANKS) HELD BY MEMBER AND NONMEMBER BANKS[1]
(Thousands of dollars)

Bank Size (Total deposits)	Held by Member Banks	Held by Nonmember Banks After Deducting Reserve Requirement
Under $2 million	150	157
$ 2-3 million	240	292
$ 3-5 "	334	407
$ 5-7 "	478	560
$ 7-10 "	627	703
$ 10-20 "	949	958
$ 20-50 "	1,871	1,349
$ 50-100 "	3,771	2,046
$100-500 "	8,118	1,367
Over $500 "	17,982	6,780

While the effect of losing correspondent balances to the Federal Reserve might be considered injurious to the member banks, the effect of the Heller requirements upon nonmembers would not be as drastic as one might suppose. Two-thirds would have more than enough correspondent balances, if member banks of comparable size can be said to have enough, even after imposition of the new requirements. The remaining one-third

[1] *Ibid.*, p. 8.

nonmember banks in all but a few instances, perhaps the largest, would have a choice of paring balances due from banks below "normal" levels or liquidating earning assets. Mr. Dembitz states that if this entire group of nonmember banks (one-third the total number of nonmembers) were to require balances with other commercial banks equal to the median amount held by member banks of comparable size, the amount of earning assets driven to liquidation would be only about $600 million or two per cent of all nonmember banks' earning assets.[1]

What of the effect upon member banks? The following is a summary adapted mainly from the Board study:[2]

Group 1 Banks

Net Demand Deposits More Than $100 Million:

Reserve City Banks -- A reduction of $4-3/4 million would benefit each of these banks. This is derived from a reduction of $250 thousand on the first $5 million (five per cent) of their net demand deposits plus a 4-1/2 per cent reduction on the first $100 million. Losses of correspondent balances by reason of nonmembers' establishment of legal reserves would probably cancel this gain. Dembitz found that $10-1/2 billion in deposits due to correspondent banks were held by the 228 reserve city banks in September, 1961. He estimates that an aggregate of $800-900 million would probably be transferred by nonmember correspondents to their reserve accounts at Federal Reserve Banks from their accounts with reserve city banks. This loss of reserves would approximate the $816 million

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[1] Ibid., p. 9.

[2] Ibid., pp. 9-12.

gain in reserves afforded by the reduction in requirements on their net demand deposits. The above is based upon assumptions that withdrawals among member banks of this size would be proportional to these banks' totals of balances due to other banks; and non-members would transfer to the Fed only to the extent that such transfer would not reduce their correspondent balances below those held by member banks of comparable size.

Country Banks -- These 31 largest country banks would have increases in their reserve requirements. As country banks they presently are subject to a 12 per cent requirement on net demands, but the Heller proposal would subject a portion of these deposits (over $100 million) to a 16-1/2 per cent requirement. The study estimates a total increased reserve of $110 million applicable to these banks; also they would lose about $15 million in withdrawals of balances by nonmember correspondents. However, $60 million of the increase in reserve would apply to nine country banks which would have become reserve city banks under the Federal Reserve Board's classification published in March, 1961.[1]

Group 2 Banks

Net Demand Deposits More Than $5 Million to $100 Million:

Reserve City Banks -- These banks would gain reductions on the first $5 million of their net demand deposits equal to 9-1/2 per cent or $475,000 each plus 4-1/2 per cent on the amount of net demands which exceed $5 million. However, losses of correspondent balances by reason of nonmember banks' establishment of legal reserves would in all likelihood cancel out a large portion of this gain.

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[1]*Supra*, pp. 26-27.

Country Banks -- This group of banks would gain reductions on the first $5 million of net demand deposits equal to five per cent or $250,000. The requirement of 12 per cent would remain equal to the present one for the net demands which exceeded $5 million. An aggregate reduction of $180 million would be offset by loss of about $75 million in correspondent balances to nonmembers establishing Federal Reserve accounts.

Group 3 Banks

Net Demand Deposits $5 Million or Less:

Reserve City Banks -- There are none in this category.

Country Banks -- These banks would gain reductions in legal requirements equal to five per cent or five-twelfths the present level of 12 per cent. The following is a summary adapted from the Dembitz conclusion:[1]

TABLE 12

ESTIMATED EFFECTS ON CLASSES OF BANKS IN UNITED STATES FROM APPLICATION OF HELLER COMMITTEE GRADUATED RESERVE REQUIREMENTS
(Amounts in millions of dollars)

	Nonmember Bank	Reserve City Member Banks	Most Country Member Banks	Thirty-one Largest Country Banks
Assets:				
Reserve with F. R. Bank	+1,700	- 800	- 850	+ 100
Due from other banks	-1,000			
Earning Assets	- 700		+ 750	- 125
Liabilities:				
Due to banks		- 800	- 100	- 15

[1] Dembitz, loc. cit., pp. 13-14.

The Heller Effect--Virginia

The writer has followed a somewhat different approach in the application of graduated reserve requirements against Virginia banks. First, the impact of correspondent nonmember banks' withdrawals from member banks is not indicated. It would be difficult to determine this in a limited area because some balances would move into Virginia from other states; also, some of the reserve city banks in Virginia might lose balances to out-of-state nonmembers. Secondly, the effects upon reserve city banks as opposed to country banks is not shown; the groupings as to size seem more appropriate

Member Banks

Country bank reserve position reports for the two-week period ended December 25, 1963 were used. These are computer-prepared from member banks' reports of deposits and required reserve. They were divided into the three groups according to daily average net demand deposits over the two-week period. In the case of reserve city banks, one-week reports were utilized and daily averages obtained. There are five reserve city banks in Virginia. Two are in group 1; three are in group 2. There are 179 country banks in Virginia. One is in group 1, 36 are in group 2, and 142 are in group 3.[1]

The one country bank in group 1 is a state-wide branch banking system with almost $200 million in net demand deposits subject to only a 12 per cent reserve requirement. It has no office in the state's only reserve city. One of the group 2 reserve city banks confined to the city of Richmond has net demand deposits of only about $18 million.

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[1] *Supra*, p. 73.

It is subject to a 16-1/2 per cent requirement. No better evidence could be found for the proponents of a change in the present system of reserve requirements for member banks of the Federal Reserve System. Drastic changes in these two banks' reserve levels would take place as will be noted from reviewing Table 9 above.

The applicable Heller percentages were computed from the three groups' net demand deposits in Table 13. For example, there are 39 banks in group 2; a seven per cent required reserve was calculated against the first $5 million of each of these banks resulting in $13.650 million ($5 million x 39 banks x 7 per cent) required reserve. The remaining net demand deposits were subjected to a 12 per cent required reserve, producing $63,995 million. The total, $77.645 million, was compared with the daily average required reserve actually in effect for the period ended December 25, 1963 for these 39 banks: $94,649 million. The result was a release of about $17 million. This is misleading, however, since 36 of these banks would uniformly have their reserves reduced by $250 thousand. The three Richmond banks presently classified as reserve city banks whose net demand deposits are less than $100 million would enjoy a reduction of $8 million in required reserve, almost half the release for this entire group of 39 banks.

Again it is necessary to point out that we don't know what effect correspondent nonmember withdrawals would have; certainly it would not greatly change the picture of a significant potential for greater earning assets on the part of the group 2 banks (especially those three banks in Richmond) afforded by the Heller requirements.

Nonmember Banks

The 1962 Annual Report of the Bureau of Banking, State Corporation Commission, Commonwealth of Virginia shows condition of each

TABLE 13

APPLICATION OF "HELLER" COMMITTEE GRADUATED RESERVE REQUIREMENTS TO VIRGINIA MEMBER BANKS FOR RESERVE PERIOD ENDED DECEMBER 25, 1963
(Amounts in thousands of dollars)

	Aggregate Net Demand Deposits Daily Average	Pro Forma Required Reserve	Present Required Reserve	Amount of Reserves Released	Daily Average Reserves Released Per Bank
Group 1 Banks (3)					
Net Demand Deposits More Than $100 Million:					
Amount subject to 7 per cent requirement - $5 million x 3 banks	15,000	1,050			
Amount subject to 12 per cent requirement - $95 million x 3 banks	285,000	34,200			
Amount subject to 16-1/2 per cent requirement - remainder	265,031	43,730			
Total Group 1 Net Demand Deposits	565,031	78,980	85,030	6,050	2,017
Group 2 Banks (39)					
Net Demand Deposits more than $5 million:					
Amount subject to 7 per cent requirement - $5 million x 39 banks	195,000	13,650			
Amount subject to 12 per cent requirement - remainder	533,293	63,995			
Total Group 2 Net Demand Deposits	728,293	77,645	94,649	17,004	436
Group 3 Banks (142)					
Net Demand Deposits $5 Million or Less:					
Total Group 3 Net Demand Deposits Subject to 7 Per Cent Requirements	309,744	21,682	37,169	15,487	109
Grand Total All Groups (184)	1,603,068	178,307	216,848	38,541	

Computed from: Report forms BK 246, "Reserve Status Computation" (accounting files of Federal Reserve Bank of Richmond, Bank Accounts Department, December 25, 1963).

Virginia state nonmember bank. Although <u>net</u> demand deposits are not indicated, each bank's gross demand deposits were considered to be five times deductions (cash items in process of collection and balances due from banks); in other words, net demands were figured to be four-fifths gross demands. This is based upon ratios found in Table 6 between nonmember bank totals in the United States.

The 99 nonmember banks were allocated either to group A or group B on the basis of net demand deposits for each bank. Group A includes 12 nonmember Virginia banks whose net demands were more than $5 million (there are none with as much as $100 million) as of December 28, 1962. Group B consists of the remaining 87 nonmember banks whose net demands are less than $5 million.

Table 14 illustrates the effect of applying 7 per cent and 12 per cent respectively to the first $5 million of net demand deposits of nonmember banks, and to the excess above that amount for the 12 banks affected by the higher requirement. Also, time deposits of these 99 banks as of December 28, 1962 has been aggregated and a 4 per cent requirement levied <u>pro forma</u>.

Aggregate required reserves for Virginia nonmember banks under the Heller proposals would amount to about $38-1/2 million--almost exactly the amount of reserves released to Virginia member banks (refer to Table 13). In Virginia, state nonmember banks are presently subject to a 10 per cent requirement on demand deposits and a 3 per cent requirement on time deposits. These requirements may be met by either balances with depository banks or vault cash (refer to Table 1). On December 28, 1962 all 165 state banks held $284 million in cash and balances with other banks. Probably half or more of these primary reserves belonged to nonmembers.

TABLE 14

APPLICATION OF "HELLER" COMMITTEE GRADUATED RESERVE REQUIREMENTS TO VIRGINIA NONMEMBER BANKS
FOR STATEMENT DATE DECEMBER 28, 1962
(Amounts in thousands of dollars)

	Aggregate Net Demand Deposits	Required Reserve Net Demand Deposits	Aggregate Time Deposits	Required Reserve Time Deposits @ 4 Per Cent	Pro Forma Total Required Reserve	Average Reserves Per Bank
Group A Banks (13) Net Demand Deposits More Than $5 Million But Less Than $100 Million:						
Amount subject to 7 per cent requirement - $5 million x 13 banks	65,000	4,550				
Amount subject to 12 per cent requirement - remainder	99,411	11,929				
Total Group A Net Demand Deposits	164,411	16,479	114,453	4,578	21,057	1,620
Group B Banks (86) Net Demand Deposits $5 Million or Less:						
Total Group B Net Demand Deposits Subject to 7 Per Cent Requirement	150,381	10,527	180,430	7,217	17,744	206
Grand Total All Groups (99)	314,792	27,006	294,883	11,795	38,801	392

Computed from: Commonwealth of Virginia, 1962 Annual Report of the Bureau of Banking, State Corporation Commission, 1963.

In conclusion, it seems safe to assume that Virginia nonmember banks could easily afford the price of the Heller recommendations. This would result in some shifting of correspondent balances from member banks' depositories to the Federal Reserve. However, some would come from out-of-state banks and in many instances nonmembers' vault cash would constitute a major part of the required reserve. Member banks, except for a very few, would probably enjoy an opportunity to increase their earning assets under the new requirements.

CHAPTER VII

A PROPOSAL FOR CHANGE IN RESERVE SETTLEMENT PERIODS[1]

The March, 1964 issue of the Journal of Finance contains an article by Albert H. Cox and Ralph F. Leach recommending that reserve settlement periods for member banks be lengthened and staggered. Mr. Cox is Secretary of the Banking and Financial Research Committee of the American Bankers Association. Mr. Leach is Senior Vice President and Treasurer, Morgan Guaranty Trust Company, New York. Correspondence with Mr. Cox resulted in an early enough look at the manuscript to add this chapter.

This is an important piece of work in that it lays open to inquiry another apparent "historical accident." It suggests that present reserve settlement periods for member banks pose operating difficulties for them; and, worse yet, the reserve settlement procedure interferes with private security and money markets by causing unnecessary "defensive" open market operations. It is proposed by Messrs. Cox and Leach that member banks be permitted to average required reserves over a one month period and that reserve periods be arranged so as to have some of the banks' periods ending on each of the first four Wednesdays in each month. In other words the reserve settlement periods would be lengthened to

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[1]Albert H. Cox, Jr., and Ralph F. Leach. "Defensive Open Market Operations and the Reserve Settlement Periods of Member Banks." An unpublished paper, December, 1963.

one month and staggered so as to permit one-fourth of the banks to settle on each of the first four Wednesdays of the month. The proposal is beyond the scope of this paper and, moreover, there has not been sufficient time to evaluate it adequately. However, because this proposal seems to represent an original and logical approach to an important phase of reserve mechanics, it is considered altogether appropriate to offer here a tentative evaluation.

The Federal Reserve Act prescribes minimum balances to be held by member banks with the Reserve banks. However, it leaves to the Federal Reserve Board authority to change reserve requirement percentages within limits and to prescribe such rules and regulations as it may deem necessary to effectuate the purposes of establishing member bank reserve requirements.[1] One of the Board's rules prescribes that deficiencies in reserve balances of reserve city banks shall be computed on the basis of daily average cash and balances with the Reserve bank over a one week period. Deficiencies of banks not in reserve cities shall be computed on a biweekly basis.[2] In other words, a country bank may be deficient in required reserves over a substantial part of a two week period just so long as he is able to "average out," or offset these daily deficiencies with excess reserves in other days of the period.[3]

Originally, each of the twelve Reserve banks specified their own computation periods. One assessed penalties against deficiencies

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[1]Federal Reserve Act (38 Stat. 270, as amended; 12 U.S.C. 461, 462, 462a-1, 462b, 464, 465).

[2]"Regulation D: Reserves of Member Banks," as amended effective January 29, 1964, Washington.

[3]No member banker may overdraw his balance at any time, however.

as they occurred on any individual day. Three banks permitted their members to average any deficiencies or offset them with excess reserves over an entire month. Some banks differentiated between country banks and city banks as to settlement periods. It wasn't until 1923 that the various Reserve banks uniformly adopted the reserve settlement periods recommended by the Board, and these were a result of compromising the various practices of the Reserve banks. These 1923 settlement periods were essentially what we have today. Messrs. Cox and Leach point out that money market or monetary considerations were not taken into account in 1923 or before.[1] Daily attention to bank reserves and money market influences had not then come upon the scene. It is, therefore, hard to disagree with the contention that today's reserve settlement periods--weekly for reserve city and biweekly for country banks--have no real monetary basis for their establishment. The fact that so many practices originally prevailed among the districts gives rise to suspicion that little attention was given to selection of either the original practices or the compromise practice which prevails today. It might be argued that one to two weeks is long enough to permit banks to adjust their reserves to the required balance, that any longer period would encourage unwise short term credit expansion, that city banks would be more vulnerable to sudden cash outflows and hence require more attention to reserves from a liquidity standpoint. Further, it might be argued that the Federal Reserve Act implies banks must maintain legal reserves every day and that they may only withdraw or "check against" the required balance subject to the deficient reserve penalties. As noted earlier, liquidity

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[1]Cox and Leach, <u>op. cit.</u>, p. 4.

is of minor importance in establishing reserve requirements; rather, monetary management is the principal consideration. Therefore, it might be more properly asked: how would lengthening reserve periods to one month affect monetary management? The answer to this is the crux of the thesis by Cox and Leach.

Today, the Federal Reserve Bank of New York under direction of the Federal Open Market Committee carries on open market operations, the principal money and credit control instrument of the central bank. Many of the New York Bank's purchases and sales of United States government securities are defensive operations designed to offset intra-monthly swings in factors affecting reserves, e.g., Federal Reserve float of uncollected checks. In the months April through September 1961, gross day to day changes in factors affecting reserves amounted to $14,892 million supplied and $14,937 million withdrawn.[1] Thus, reserves supplied throughout the six month period almost exactly equaled reserves withdrawn. These factors increasing or decreasing reserves excluded System open market holdings, but included check float, currency in circulation, Treasury deposits with Reserve banks, vault cash in banks, required reserves, and other factors. The largest net change in any one month--September 1961--amounted to minus $449 million. The net for the six months was only plus $45 million. Similarly, Federal Reserve System open market holdings increased on balance only $669 million over the six month period. However, gross purchases amounted to $5,607 and gross sales amounted to $4,938 over this period.[2] Obviously, therefore,

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[1] Ibid., p. 7.

[2] Ibid.

Federal Reserve activities in the government securities market are largely defensive in nature, apparently designed to offset the fluctuations in other factors affecting reserves. Why does the Fed need to engage in such defensive maneuvers? Messrs. Cox and Leach answer this by saying that given the present length of time for settlement (one week in the case of the city banks) they are necessary to maintain stability in money market conditions. The Fed requires that these banks settle for their legal reserves every week and the Fed must determine and offset the short term fluctuations in the factors which affect bank reserves.

Check float in the United States reaches its peak around the middle of each month. Toward the end of the month it declines sharply. It results from the Reserve bank's having passed credit to its depositor member banks more rapidly than it receives credit from the drawee banks. This is due to the Fed's policy of always granting credit to its depositors in two days or less while actual collection time may require as much as four to six days. In a sense it is an illogical practice and the float which it creates tends to fluctuate rapidly, thereby complicating monetary control. Nevertheless, it encourages use of the more efficient collection system which the central bank provides. Thus, it perhaps encourages membership. Of greater significance here is the fact that check float provides banks with reserves. Since the reserves thus supplied do fluctuate, the central bank must take defensive action to offset intra-monthly fluctuations in check float. The central bank must purchase for its open market account near month end when float contracts; otherwise, banks would have to liquidate short term assets. It must sell government securities at the middle of the month to avoid banks with excess reserves investing too heavily. The study states that

". . . these offsetting operations prevent large fluctuations in reserve availability and money rates . . . they help stabilize the money market. . . . the pattern is clear, with the factors going one way, and the Fed the other, both ending the month in approximate balance."

A good deal of the blame for the necessity of intramonthly, offsetting purchases and sales of government securities can be attached to the short reserve settlement periods. If banks were permitted to average out their required reserves over a one month period, the central bank would not need to take these offsetting short term actions. And if the central bank wer to stay out of the government securities market to a greater extent, the short term money market would be free of some of its disruptive influence. Furthermore, with longer reserve periods the money market banks could plan reserve utilization more effectively.

The common settlement dates also serve to impede a freer money market. For example, when excess reserves are relatively large, it has become a familiar pattern for the Federal funds rate to drop sharply just before country bank settlement days. This instability again arises from no real difference in credit availability, but from the artificial stimulus of the common settlement dates. If staggered settlement dates were permitted with banks' periods ending at different times, their aggregate reserve funds could be evenly apportioned over time. One quarter of the city and country banks in each Federal Reserve district would settle each week, and settlement dates would be distributed among the banks in each major city. These settlements would be apportioned to each of the first four Wednesdays in the month. No banks' reserve periods would end whenever a fifth Wednesday occurs (four times a year).

This proposal brings a fresh new criticism to the mechanical rules by which commercial banks maintain their reserves. It provokes new thoughts about the necessity and purpose of reserve requirements. It should dispel some of the mystery about the mechanics of the Fed "going to market" by forcing the monetary theorists to come to grips with a monetary problem which the authors expose and then "solve" with a simple mechanical device. The most serious question might be concerned with the degree of imperfection to result from the reliance upon the commercial banks to plan reserve needs over so long a period of time. Might not they miscalculate and actually accumulate even greater reserve deficiencies or excesses over a month, such that finally--realizing their positions--they might exert a magnified pressure on the money market themselves? And--worse yet--might not they run the risk of incurring huge reserve deficiencies and penalties levied by the central bank? Also, precisely how would the banks be divided into the four groups? Would one week of the month (as a time for ending a settlement period) have more significance to a given bank than another week? If so, would the bank have any choice in selecting its particular closing week?

Messrs. Cox and Leach anticipate and answer other questions. They also illustrate their study with daily reserve and "factors" charts which amply reveal their thesis.[1] This is an interesting paper and one which seems to merit a considerably greater amount of study than is afforded in this short chapter.

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[1]In developing figures for the April-September, 1961 period which are used in the charts, the authors were assisted by the statistical staff of the Board of Governors.

CHAPTER VIII

CONCLUSION

The dual role of the central bank presents some difficulty to the student of money and banking. The Federal Reserve System must contribute substantially to the payments mechanism in the United States. It must also regulate the supply of money and credit in keeping with national output. One function lies in the field of administrative finance and the other has to do with economic policy. Seemingly, the two functions are separate, yet relationships between the central bank and commercial banks touch upon both areas. Legal reserves are the base for monetary control. They are also used for clearing purposes, and the central bank's policy of granting credit through the payments mechanism affects the reserve base. The "services" which the central bank performs, e.g., check collection for its members, are often thought of as a kind of reward to a member bank for its having become a member and thereby established a nonearning reserve balance.

It can safely be stated that the central bank is essential for the performance of both of these two functions. What does it need in the way of support through membership of the commercial banks? Does it need to exercise supervision and control over most of the nation's commercial banks for purposes of providing an effective payments mechanism? Probably. To provide an effective monetary control? Probably not. The point of this discussion is not to provide knowledgeable answers

to these two questions; it is to draw a line between the two principal kinds of work which the central bank performs, and to suggest that authority in one field should not be unnecessarily complicated by legislation in the other. For example, provision for changes in reserve requirements should not be made with an eye toward central bank services. Reserve requirements should be set primarily for reasons of monetary needs. Services established are presumably to improve the payments mechanism. For this reason, a system of uniform reserve requirements applicable to all creators of loanable funds will remove much of the discontent and misunderstanding which cloaks present reserve requirements with considerations of compensatory services.

The student is likely to be tempted to favor proposals which will simplify the task of monetary control and eliminate the favored status of some financial institutions which seemingly do not carry their share of responsibility for modern money and banking needs. Specifically, there seems little to commend a geographical or otherwise differentiated reserve requirement. There is good reason to suspect that monetary policy is complicated by the unknown distributive effects of changes in bank reserves due to reserve differentials.

At the same time, it is unreasonable to demand that small unit banks be forced to cease existence through unbridled competition. It is not required that banks be compelled to become members of the Federal Reserve System or that states cease chartering banks. The Heller recommendation, within the framework of the Federal-state banking system, seems fair to nearly all classes or groups of commercial banks. It recognizes Federal insurance as a criterion for Federally established reserve requirements. It graduates requirements in keeping with

traditional concepts of size and velocity. Finally, it provides reduction in requirements for many banks.

What are the chances of amending the Federal Reserve Act and the Banking Act of 1935 along lines suggested in this paper?[1] There seems to be little hope for remedial action in the near future. Exhibit 1, a letter from Senator A. Willis Robertson, Chairman, Committee on Banking and Currency of the United States Senate, dated December 17, 1963, indicated to the writer that no proposals have been presented along these lines since the 1959 legislation was adopted. More recently, Senator Robertson remarked:

> "With most financial institutions thriving and with their customers on the whole supplied with adequate credit, the need for substantial changes in the organization of our financial institutions does not appear great. The long established rules of a game should not be changed unless and until the need for change has been proved.
>
> "My hesitance to enter the area of change is further strengthened by the fact that the Congress has other proposals which are generally considered to be of far greater immediacy and importance, whatever one may think of their merits.
>
> "The banking proposals must compete for the attention of the Congress with such measures as the tax cut bill and the civil rights bill which the President has placed at the top of the list."[2]

As regards the appropriate level of reserves against time deposits, it seems necessary to establish more empirical evidence to determine the <u>nature</u> of these funds. In the meantime, theories that time deposits are not money must lead to an assumption that these

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[1]These are the laws presumed to be subject to legislation in the event the Heller recommendations are adopted.

[2]A. Willis Robertson, "Report on the Washington Scene," remarks before the Convention of the Wisconsin Bankers Association, Milwaukee, January 20, 1964.

reserve requirements are not needed for monetary control. Also, adequate liquidity for these funds' withdrawal is obtained through maintenance of reserves against net demand deposits, clearing balances, effective supervision, and secondary reserves.

The proper level for reserves against net demand deposits is the most elusive element in the "solutions" discussed here. Apparently the reductions which have taken place in the last decade have not impaired the central bank's ability to regulate money and credit. In Chapter II it was found that the less reserve requirements are, the greater leverage is afforded. It was also found that aggregate clearing charges against member bank reserve balances in the Richmond territory amount to 70 per cent of balances over a three month period. One might conclude that banks need a sizable portion of what they now maintain if they are to withstand adverse clearing balances in the form of checks drawn upon them, cash withdrawals, etc.

In a sense, banks appear to have a kind of precautionary demand for money. If this approaches the present level of reserve requirements, then further reductions in legal requirements would create excess reserves and monetary control would be complicated. Changes in banks' reserve positions would then result from changing cash needs more than from conscious monetary action.

Are reserve requirements needed at all? Most writings examined in preparing this paper assume that they are. The American Bankers Association reason is hard to assail: legal reserves are necessary to act as a fulcrum against which the leverage of monetary control can be exerted.[1] However, if monetary leverage becomes progressively greater

[1] Member Bank Reserve Requirements, op. cit., p. 11.

as the legal reserve ratio is reduced, then without <u>any</u> requirements a factor of change affecting bank reserves would have an infinite effect on the money supply. Surely this cannot be. There must be some other deterrent to infinite expansion of the money supply. It must be that banks have a demand for cash balances or primary reserves, owing not entirely to law but to instinct and experience. Any reduction of primary reserves below the safe level will cause the bank to borrow or to fail to meet its obligations.

Have recent reductions caused reserve requirements to approach the point of precautionary demand on the part of member banks? Apparently they have not. State member banks' cash assets are now 21 per cent of their total deposits; nonmember commercial banks' cash assets are only 14 per cent of their deposits.[1] Thus, the nonmembers with the generally lower requirements are taking advantage of opportunities for a greater proportion of earning assets.[2]

A conclusion might be reached that complete removal of reserve requirements is possible with the Federal Reserve Board empowered to reinstitute them at any time (a standby basis). The floor of primary reserves which the commercial banks must have to carry on their operations might serve as an appropriate fulcrum just as legal reserves now do. System open market operations have come to represent the predominant monetary tool in recent years. On the other hand, it is probable that the central bank would suffer a loss of control sufficient

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[1] <u>Federal Reserve Bulletin</u>, op. cit., p. 1550.

[2] This may be due in part to their larger proportion of time deposits.

to hamper monetary policy as it tried to exercise a stabilizing influence upon bank deposit and credit levels.

The Heller proposals represent a giant step in the right direction. If these are embraced by both the central bank and the commercial banking associations, it is likely they will be adopted within a few years.

There is little emphasis placed upon the study of economic subjects in public education, and most Americans understand little about their money and banking systems. In some ways the average American seems to have a kind of eighteenth century attitude toward economic problems. Banking laws probably reflect to a degree the kind of social or economic awareness of the general populace. The general view that legal reserves are chiefly a source of liquidity is manifested in many quarters. The monetary authorities express a sense of awe in contemplating the rapid development of monetary theory and their responsibilities in coping with it. George W. Mitchell, Member, Board of Governors of the Federal Reserve System, recently had this to say:

> Where the faith is serenely confident, the mechanism that makes monetary policy work may be thought of as being locked away in a black box which cannot be opened. Where heresy or agnosticism prevail monetary action may be derided as little more than economic voodooism. In between these extremes, scholars and monetary practitioners have been laboring over the years to improve their understanding of the ways in which monetary action affects the economy, unashamed to admit that in this world there is a great deal the human mind can describe but very little it can fully explain or comprehend.[1]

In such a climate, it is very appropriate for studies such as those witnessed over the past few years to take place.

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[1] George W. Mitchell, "Evaluating the Effects of Monetary Action," remarks at Ohio State University, Columbus, February 20, 1964.

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EXHIBIT 1

United States Senate

COMMITTEE ON BANKING AND CURRENCY

December 17, 1963

Mr. W. B. Harrison, III
7718 Yarmouth Dr.
Richmond 25, Va.

Dear Mr. Harrison:

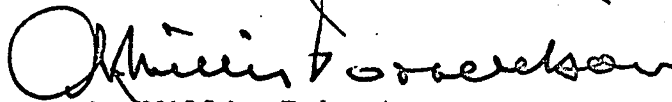
In your letter of December 13 you ask for information and material which might be helpful in preparing a paper on the subject of recent proposals for changes in the legal reserve requirements of commercial banks in the United States.

This Committee considered the question of reserve requirements at length during the 1st session of the 86th Congress. As a result of these hearings, Public Law 86-114 was enacted, making a number of basic changes in the laws relating to reserve requirements. I enclose copies of this Committee's hearings on the bill, together with copies of the reports of this Committee and the House Banking and Currency Committee and the Conference report.

I believe these will be the most helpful information which I can send you. No further proposals have been presented to the Committee in the form of bills.

With kind regards, I am

Sincerely yours,



A. Willis Robertson
Chairman

AWR:hc
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BIBLIOGRAPHY

Books and Special Reports

Ahearn, Daniel S. Federal Reserve Policy Reappraised, 1951-1959. New York and London: Columbia University Press, 1963.

American Bankers Association, Member Bank Reserve Requirements. Economic Policy Commission. New York, 1957.

Bagehot, Walter. Lombard Street: A Description of the Money Market (14th Ed.). New York, 1921.

Commission on Money and Credit, Money and Credit, Their Influence on Jobs, Prices, and Growth, Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1961.

Federal Reserve Bank of Philadelphia, The Quest for Stability. Philadelphia, 1954.

Federal Reserve System, Board of Governors of the, The Federal Reserve System: Purposes and Functions (5th Ed.). Washington, 1964.

Fousek, Peter G. Foreign Central Banking: The Instruments of Monetary Policy. Federal Reserve Bank of New York, 1957.

Gardner, Ackley. Macroeconomic Theory. New York: The MacMillan Co., 1961.

Goldenweiser, E. A. American Monetary Policy. New York, 1951.

Hawtrey, R. G. The Art of Central Banking. London, 1932.

Hawtrey, R. G. The Art of Central Banking (2nd Ed.). London, 1962.

National Banks and the Future. Report of the Advisory Committee on Banking to the Comptroller of the Currency, U. S. Treasury Department. Washington: Government Printing Office, 1962.

New York Clearing House Association, The Federal Reserve Re-examined. New York, 1953.

Ritter, Lawrence S. (ed.) Money and Economic Activity: Readings in Money and Banking (2nd ed.). Cambridge: The Riverside Press, 1961.

Rodkey, Robert G. Legal Reserves in American Banking, Michigan Business Studies, VI, No. 5. Ann Arbor, 1934.

Roosa, Robert V. Federal Reserve Operations in the Money and Government Securities Markets. Federal Reserve Bank of New York, July, 1956.

Smith, Warren L. Reserve Requirements in the American Monetary System, Monetary Management. (A series of research studies prepared for The Commission on Money and Credit, Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1961.)

Manuscripts

Balderston, C. Canby, Vice Chairman, Board of Governors of the Federal Reserve System. Statement before Senate Banking and Currency Committee. March 23, 1959.

Cox, Albert H., Jr., and Leach, Ralph F. "Defensive Open Market Operations and the Reserve Settlement Periods of Member Banks." An unpublished paper. New York, December 1963.

Dembitz, Lewis N. "Graduated Reserve Requirements." An unpublished staff paper. Board of Governors of the Federal Reserve System. Washington, June 4, 1963.

"Monetary Policy and the Balance of Payments." Remarks of William McChesney Martin, Jr., Chairman, Board of Governors of the Federal Reserve System, before Annual Dinner Meeting of the United States Council International Chamber of Commerce. New York City, December 9, 1963.

"Report on the Washington Scene." Remarks of Senator A. Willis Robertson at the Convention of the Wisconsin Bankers Association, Milwaukee, Wisconsin, January 20, 1964.

Statement of William McChesney Martin, Jr., Chairman, Board of Governors of the Federal Reserve System before the Joint Economic Committee, August 16, 1962.

Storrs, Thomas Irwin. An Evaluation of Credit Control Tools. An unpublished Ph.D. dissertation. Harvard University, Cambridge, April 1955.

Tejada, Arturo. Reserve Requirements in American Banking. An unpublished M.B.A. thesis. New York University, N. Y., 1961.

Thomas, Woodlief, Adviser to the Board of Governors of the Federal Reserve System, "Operation of the Monetary System in the U.S.A." An unpublished paper. (Memorandum submitted at the request of the Royal Commission on Banking and Finance, Ottawa, Canada.) Washington, May 1962.

Scheduled Publications and Administrative Regulations

Annual Report of the Federal Deposit Insurance Corporation for the year ended December 31, 1959. Submitted to the Congress June 7, 1960. Washington.

Annual Report of the Federal Deposit Insurance Corporation for the year ended December 31, 1962. Submitted to the Congress May 23, 1963. Washington.

Aschheim, Joseph. "Open Market Operations versus Reserve Requirements Variations," The Economic Journal, LXIX. December 1959.

Aschheim, Joseph. "Open Market Operations versus Reserve Requirements Variations," The Economic Journal, LXX. December 1960.

Commonwealth of Virginia, 1962 Annual Report of the Bureau of Banking, State Corporation Commission. 1963.

Federal Reserve System, Board of Governors of the, Federal Reserve Historical Chart Book. Washington, 1963.

Federal Reserve System, Board of Governors of the, Forty-ninth Annual Report, 1962. Washington, 1963.

Federal Reserve System, Board of Governors of the, "Implementation of the 1959 Act on Reserve Requirements," Federal Reserve Bulletin. Washington, December 1960.

Federal Reserve System, Board of Governors of the, "Principal Assets and Liabilities and Number, by Class of Bank." Federal Reserve Bulletin, November 1963.

Federal Reserve System, Board of Governors of the, "Principal Assets and Liabilities and Number, by Savings Institutions." Federal Reserve Bulletin, November 1963.

Federal Reserve System, Board of Governors of the, "Regulation D: Reserves of Member Banks," as amended effective January 29, 1964.

"Fifth District Member Bank Responses to Reduction in Reserve Requirements." Monthly Review. Federal Reserve Bank of Richmond, December 1955.

Lee, Murray G. "Why Reserve Requirements Should Be Cut." Reprinted from Banking, Journal of the American Bankers Association, February 1958.

"Monthly Settlements Urged to Limit Fed's Activities in Money Markets," New York, The American Banker, March 10, 1964, pp. 1, 13.

Tobin, James. "The Interest - Elasticity of Transactions Demand for Cash," The Review of Economics and Statistics, XXXVIII, No. 3. August 1956.

Governmental Hearings, Reports, and Resolutions

"Assets and Liabilities of All Banks in the U. S." United States Congress, House, Subcommittee on Domestic Finance of the Committee on Banking and Currency, Comparative Regulations of Financial Institutions. 88th Cong. Washington, 1963.

Monetary Policy and the Management of the Public Debt--Their Role in Achieving Price Stability and High-Level Employment, Replies to Questions and Other Material for the Use of the Subcommittee on General Credit Control and Debt Management, Joint Committee on the Economic Report, 82nd Cong., 2nd Sess. 2 parts. Washington, 1952.

United States, Report of the Committee on Financial Institutions to the President of the United States. (Washington: Government Printing Office, 1963.)

Public Laws

Employment Act of 1946 (60 Stat. 23), Public Law 304, 79th Cong., 2nd Sess. (February 20, 1964.)

Federal Reserve Act (38th Stat. 270), as amended; 12 U.S.C. 461, 462, 462a-1, 426, 464, 465.

Gold Reserve Act of 1934 (45 Stat. 337), Public Law 87, 73rd Cong.