CURRENCY AND COIN RESPONSIBILITIES OF THE FEDERAL RESERVE

— A Historical Perspective —

CURRENCY AND COIN RESPONSIBILITIES OF THE FEDERAL RESERVE

— A Historical Perspective —

Prepared by George Booth
for Federal Reserve Bank of Cleveland

First Edition □ May 1989
Second Edition □ December 1992

Copies of this book may be obtained from the Public Affairs/Bank Relations Department of the Federal Reserve Bank of Cleveland, Cleveland, Ohio 44101

Library of Congress Catalog Card Number: 89-192203

TABLE OF CONTENTS

	Page
INTRODUCTION	1
CHAPTER 1	
AN ELASTIC CURRENCY — FEDERAL RESERVE NOTES	
The Need for an Elastic Currency	2
Aldrich Vreeland Act	3
Introduction of Federal Reserve Notes	4
CHAPTER 2	
CASH OPERATIONS IN FEDERAL RESERVE BANKS 1914-1920	
Transactions Involving Currency and Coin	7
Volume of Operations	8
Payment for Cost of Transportation	9
CHAPTER 3	
TRANSFER OF SUBTREASURY FUNCTIONS	
Historical Role of the Subtreasuries	11
Currency and Coin Functions of the Subtreasuries	11
Transfer of Functions to Federal Reserve Banks	13
"Instructions" to Reserve Banks - Currency	14
"Instructions" to Reserve Banks - Coin	16
Treasury Department Circular No. 55	17
Reserve Bank Performance of New Functions	18
CHAPTER 4	
SOME ASPECTS OF TREASURY-FEDERAL RESERVE RELATIONS 1921-1980	
Treasury Department Oversight of Handling of Federal Reserve Notes	20
Reserve Banks as "Fiscal Agents"	22
Service to Nonmember Banks and Others Than Banks	23
Payment of Transportation Costs for Member Banks	25
CHAPTER 5	
PRACTICES AND ISSUES OF THE 1980's	
Statement of Responsibility	27
Adequate Supply - Production Considerations	28
Adequate Supply - Denomination Considerations	29
Distribution to All "Depository Institutions"	30
Distribution to Individual Offices	31

INTRODUCTION

The responsibility of the Federal Reserve for the distribution of currency and coin stems from the provisions of the Federal Reserve Act and the provisions of the Appropriations Act of 1920 relating to the transfer of certain Subtreasury functions to Federal Reserve Banks. With regard to the Federal Reserve Act, the provisions are of two kinds—those that provided for an elastic currency through the issue of Federal Reserve notes and Federal Reserve bank notes, and those that gave the Federal Reserve Banks certain functions related to banking that necessarily involved extensive transactions in currency and coin with commercial banks. The Subtreasury provisions in the Appropriations Act of 1920 resulted in the transfer to Federal Reserve Banks of Subtreasury functions relative to the distribution, exchange, and replacement of United States currency and coin, and led to a degree of Treasury Department oversight of Federal Reserve currency and coin operations that had not been contemplated at the outset.

In 1980 the Monetary Control Act required Federal Reserve Banks to provide currency and coin services to all "depository institutions"—not just commercial banks—and provided for the pricing of Federal Reserve services. The provisions of this legislation not only led to a great expansion in the number of institutions to be served, but also made it necessary to modify a number of practices that had developed in previous decades.

This paper describes and explains the role of Federal Reserve Banks with regard to the distribution, flowback, and destruction of currency and coin. It does not deal with accounting procedures or accountability questions related to the issue, circulation, and retirement of Federal Reserve notes or other kinds of currency or coin. Nor does it cover questions regarding the total money supply. References to "elasticity" refer only to the amount of currency and coin available for interconvertability between cash and deposits.

CHAPTER 1
AN ELASTIC CURRENCY—FEDERAL RESERVE NOTES

The Need for an Elastic Currency

The provisions of the Federal Reserve Act relating to currency were originally designed to provide a form of currency that could expand and contract as the public's demand for cash increased or decreased. The kinds of currency then in circulation had proved incapable of meeting the needs for additional amounts that developed from time to time—on a seasonal and cyclical basis as well as in periods of financial crisis. At such times country banks and smaller city banks called on the reserve city correspondents for increased quantities of cash for customers who needed to handle a large volume of transactions or feared for the safety of their deposits as word of the cash crunch spread. In the Panic of 1907, reserve city correspondents had been unable to meet such demands and had "restricted" payments to other banks which in turn had limited, and sometimes suspended, payments to their depositors.

The limited supply of currency resulted from the fact that the volume of various forms of Treasury currency (U.S. notes, Treasury notes of 1890, and gold and silver certificates) was fixed by statute or governed by the amount of gold and silver held by the Treasury, and the volume of national bank notes was dependent upon the decisions of individual banks with respect to the profitability of the note issue and/or the availability of Government bonds with the circulation privilege. Gold and silver coins were also part of the currency supply, and the volume of these available for circulation fluctuated to some extent, largely in accordance with developments in the international arena. Thus, while there was an element of elasticity in the currency, the changes in volume represented responses to factors other than the needs of the financial community to support an increase in the level of business activity or meet the demands of depositors in time of panic.

The supply of currency was adequate for normal times, and more than adequate for periods of depressed business activity that did not give rise to panic. The surplus in such times was held in bank vaults and in the vaults of the Treasury Department and its Subtreasury offices. While some Government funds were deposited in national banks, a substantial amount was held in cash by the Treasury. One of the common methods of increasing the supply in time of need was for the Treasury to transfer portions of its vault cash to the depository banks. At the time of the 1907 Panic the Treasury increased the amount of currency in circulation by making deposits of $36 million in New York banks and $28 million in banks outside New York City in this manner. The Treasury would also attempt to put more currency in circulation by anticipating interest payments on its bonds and prepaying some expenses.

The currency supply was also supplemented by clearing house certificates designed to substitute for official currency in interbank settlements and in general use by the public. The New York Clearing House issued $256 million of such certificates in the latter part of 1907. This was equal to approximately 10 percent of the total amount of official currency in circulation on June 30, 1907.

Aldrich Vreeland Act

A direct result of the Panic of 1907 was the passage of the Aldrich Vreeland Act in May of 1908. This legislation provided for the issue of national emergency currency as a short term answer to the need for elasticity, and for the appointment of the National Monetary Commission "to inquire into ... what changes are necessary or desirable in the monetary system of the United States or in the laws relating to banking and currency." The Commission's efforts resulted in the recommendation of the Aldrich Plan for the establishment of a National Reserve Association which served as the model or basis for the Federal Reserve System actually adopted in 1913.

The emergency currency provided for in the Aldrich Vreeland Act could be issued by groups of ten or more national banks making up a National Currency Association. An Association was authorized to issue the special currency to its members in amounts up to 75 percent of the value of commercial paper deposited with the Association and 90 percent of the value of approved state and local government bonds. A special tax on amounts outstanding was designed to bring about retirement as soon as the urgent needs had subsided.

No emergency currency was issued under this arrangement for the next several years, but the possibility of the need continued to be recognized. It was highlighted in the report of the National Monetary Commission, and the note issue provisions of both the subsequent Aldrich bill and the Federal Reserve Act were designed to meet the need and supplant the Vreeland emergency currency.

The emergency currency provisions of the Aldrich Vreeland Act were scheduled to expire in June 1914, but they were extended for a year to cover the period until the Federal Reserve Banks could become operative. Very shortly after the extension, the outbreak of World War I gave rise to fears of financial difficulties that resulted in near panic. The New York Stock Exchange closed on July 31, and the country banks started their demand for currency from their city correspondents. Clearing house certificates again appeared, in the total amount of $212 million. And by November a total of $400 million in Vreeland currency had been issued. (A maximum of $364 million was outstanding at any one time.)

Introduction of Federal Reserve Notes

The Federal Reserve Act, with a stated purpose of furnishing an "elastic currency," offered a more permanent and sophisticated solution by providing for the issuance of Federal Reserve notes. By statute these were obligations of the United States, a first lien on the assets of the issuing Federal Reserve Bank, backed 100 percent by discounted commercial notes and bills and a 40 percent gold reserve, and redeemable in gold or "lawful money." They were declared to be "receivable by all national and member banks and Federal reserve banks and for all taxes, customs and other public dues." They were not, however, declared to be "legal tender" or "lawful money" although they were redeemable in "lawful money." They did, of course, have the great virtue of having their issuance and redemption related more or less directly to the expansion and contraction of economic activity.

The first Federal Reserve notes were issued in late 1914, and instead of constituting only a marginal currency during the first few years, they underwent a remarkable growth and became a major component of the nation's supply of cash before 1920. This occurred without the displacement of National Bank notes. It was largely due to events connected with World War I, including—in addition to a large growth in the total money supply—the retirement of many silver certificates in order to free up silver reserves for export to Great Britain, and a concerted effort by the Government to concentrate gold coin and gold certificates in the Federal Reserve Banks.

The amount of Federal Reserve notes and various other kinds of currency in circulation (including gold coin and silver dollars) during the period 1915-1920 are shown in the following table:

(As of June 30 - In Millions of Dollars)

	1915	1916	1917	1918	1919	1920
Gold coin	588	625	667	537	475	475
Gold Certificates	822	1,050	1,083	511	328	259
Silver dollars	64	66	72	77	79	77
Silver Certificates	463	476	468	370	163	98
Treasury Notes of 1890	2	2	2	2	2	2
U.S. Notes	310	328	312	292	274	278
National Bank Notes	782	716	691	691	639	690
F.R. Bank Notes	0	2	4	11	155	185
F.R. Notes	71	149	507	1,698	2,450	3,065
Total — All	3,102	3,414	3,299	4,189	4,565	5,129
F.R. Notes as percent of total	2%	4%	15%	41%	54%	60%

During the decade of the twenties the volume of Federal Reserve notes dropped to less than half the 1920 amount: from \$3,065 million to \$1,402 million. (\$465 million of this decline occurred before the end of 1921 in connection with the post-war depression.) The total volume of all currency also declined between 1920 and 1930, but by only one-fifth: from \$5,129 million to \$4,104 million. As a result, Federal Reserve notes constituted only 34 percent of currency in circulation in 1930, compared to 60 percent in 1920. Events of subsequent decades were to cause the proportion to increase to more than 99 percent.

The substantial reduction in the volume of Federal Reserve notes in the 1920's demonstrated the contraction aspect of the new "elastic" currency. Federal Reserve notes were the component of the whole body of currency that was directly responsive to the shrinking needs of the business and financial community. By comparison, the volume of National Bank notes remained about the same during this period, and the volume of gold certificates and silver certificates each increased many fold, the result of factors other than the changing needs of the business and financial community.

The performance of Federal Reserve notes in their first seven years (through the sharp contraction of the 1920-21 depression) was the subject of the following comment in the 1921 Annual Report of the Federal Reserve Bank of Cleveland:

> "The movement of Federal Reserve notes has graphically reflected the results of the period of readjustment. It has further demonstrated the soundness of the views held by economists and financiers that an elastic currency is one that rises and falls according to the volume and velocity of business transactions."

(It will be seen from the foregoing table that Federal Reserve Bank notes also became a significant part of the nation's currency in 1919 and 1920. These notes were a special type of currency authorized in the Federal Reserve Act as an additional supplementary currency, similar to National Bank notes in that their issue was based on holdings of U.S. bonds with the circulation privilege which served as collateral. At three periods before 1950 Federal Reserve Bank notes were issued in substantial quantities for special purposes: during World War I to help in replacing silver certificates, during the emergency banking period of the early thirties, and during World War II. They did not remain outstanding in large quantities for long periods and are not significant in the present context except in the sense that they constituted some of the bulk of the currency that Federal Reserve Banks were handling even before they assumed the functions of the Subtreasuries.)

CHAPTER 2
CASH OPERATIONS IN FEDERAL RESERVE BANKS 1914-1920

Transactions Involving Currency and Coin

Before examining the impact that the transfer of the Subtreasury functions had on the role of the Federal Reserve Banks, it should be observed that the Banks were far more involved in the handling of currency and coin in the first few years of their existence than might be thought from the mere fact that they were issuing and redeeming Federal Reserve notes and Federal Reserve Bank notes. The responsibilities that they had in the check collection area, in their special relations with member banks, and in their role as fiscal agents for the federal government (especially related to the sale of securities during the war) all led to transactions that required the receipt, payment, verification, and storage of coin and many kinds of currency. These transactions included the following:

- Transfers of cash by member banks to pay for Federal Reserve stock and establish required reserves. Initial installments had to be in "lawful money"; subsequent payments could be in other kinds. Receipt of such payments put the Reserve Banks in the money handling business immediately and provided them with an inventory of various kinds of currency.
- Subsequent "deposits" by member banks to keep reserves at required levels or to reduce surplus holdings of vault cash that was not counted as reserves.
- Deposits by Government agencies. Reserve Banks were designated as fiscal agents and depositories in January 1916. Large deposits were immediately transferred from national banks, of which $1 million or more was in cash. Thereafter Internal Revenue and Customs officers in particular made regular deposits.
- Presentation of gold and gold certificates as deposits or in exchange for Federal Reserve notes as part of a national effort to concentrate gold in the Federal Reserve. Reserve Banks participated actively and accumulated large amounts of gold and gold certificates in 1917 and 1918. These were received from nonmembers as well

as members. The Reserve Banks paid the cost of transportation on incoming gold and gold certificates, and on the Federal Reserve notes sent in exchange.

- Cash remittances from nonmember banks in payment for cash letters. To encourage par collection, Reserve Banks paid shipping and insurance costs on currency sent by nonmembers remitting at par.
- Deposits of silver certificates in exchange for Federal Reserve notes and Federal Reserve Bank notes pursuant to a program undertaken under the Pittman Act (1918) to free up silver for export.
- Cash proceeds from sales of securities, especially during World War I.
- Payments in response to requests of member banks for various kinds of currency to meet payroll needs. Since F.R. notes were not issued in $1 and $2 denominations, silver certificates and U.S. notes had to be handled for this purpose. (After the Pittman Act, Federal Reserve Bank notes were issued in $1 and $2 denominations.) Shipments were often made to member and nonmember correspondents at the request of city member banks.

Volume of Operations

The consequence of these transactions was a great deal of activity in the way of currency shipments and receipts and internal money handling operations, which included sorting (by kind and bank of issue as well as condition), laundering, cutting and cancelling, and preparation of shipments to the Treasury for redemption. In the annual reports of the Banks there are numerous references to the growing size of the staffs employed in the money departments and the growing needs for working and vault space. At New York the size of the major departments was as follows in 1917 and 1918:

	1917	1918
Money Department	37	74
Transit	167	447
Government Departments	333	472

At Boston the staff of the money department grew from 71 to 104 in 1919. Dallas reported in its Annual Report for 1916:

"The members, as a whole, have been quick to grasp the benefits which may be derived by them through our shipping facilities, and our coin and currency shipments in 1916 were nearly treble those of the previous year..." The accompanying figures showed shipments of several kinds of currency, not just Federal Reserve notes; also substantial amounts of fractional silver and nickels and pennies. Cleveland stated that one of its principal reasons for establishing branches was to give better currency services to member banks (notwithstanding the fact that a Subtreasury was already located in Cincinnati). Atlanta regarded its Agency at Savannah as primarily a facility for currency service.

The size of currency receipts from, and shipments to, member and nonmember banks by Federal Reserve Banks in 1919 and 1920 is indicated by the following figures (in thousands of dollars):

	Receipts		
	Member	Nonmember	Total
1919	\$4,492,379	\$312,346	\$4,804,725
1920	\$6,477,199	\$339,250	\$6,816,449
	Payments		
	Member	Nonmember	Total
1919	\$4,533,100	\$ 93,806	\$4,626,906
1920	\$6,639,775	\$254,630	\$6,894,405

Payment for Cost of Transportation

As indicated earlier, Reserve Banks had undertaken at a relatively early date to pay the cost of transportation on (a) incoming shipments of currency from nonmember banks remitting for cash letters at par; (b) incoming shipments of gold and gold certificates sent to Reserve Banks by both member and nonmember banks; and (c) outgoing shipments of Federal Reserve notes sent in exchange for gold and gold certificates. These practices were recognized and approved by the Board of Governors in 1918, if not before.

In 1918 the Board also approved a policy of paying the cost of "postage, expressage, insurance, etc., incident to shipments of currency to and from member banks." The rationale given was that it was believed that this and other privileges being extended "will remove the feeling that many country banks have that the Federal Reserve Act discriminates against them in favor of the banks in the larger cities and will at the same time prove an added stimulus to the state banks to apply for membership." The authorization did not apply to shipments of coin.

CHAPTER 3
TRANSFER OF SUBTREASURY FUNCTIONS

Historical Role of the Subtreasuries

The Subtreasuries of the United States were the last remnant of the Independent Treasury established by the Government in 1846 in order to achieve a complete separation of Government finances from the banks of the country. Government monies were no longer to be deposited in the banks but in the Treasury or one of the Subtreasuries established as branches of the Treasury to facilitate performance of fiscal functions throughout the country. As the years went by, however, the relations between the Government and the banks became closer, and the role of the Subtreasuries became less important.

The establishment of the national banking system in 1863 and the unprecedented fiscal operations of the Treasury required to finance the Civil War blurred the line of separation and started the erosion of the independence of the independent Treasury. National banks became depositories of public moneys and fiscal agents of the Government. In the ensuing years the Government continued to make use of the national banks, and the Subtreasuries performed a smaller part of the depository and fiscal functions than originally intended. A further blow to the Independent Treasury came with the legislation authorizing Federal Reserve Banks to act as depositories and fiscal agents of the U.S. The Government made such extensive use of the Reserve Banks in efforts to finance World War I that by the end of the war the need for the Subtreasuries as depositories and fiscal agents had almost completely disappeared.

Currency and Coin Functions of the Subtreasuries

Through it all, however, the Subtreasuries continued to have certain responsibilities in connection with the issue, redemption, exchange and distribution of currency and coin. They and the Treasury Department in Washington were the only agencies to perform certain functions. Principally, they provided the channels by which new Treasury currency (gold certificates, silver certificates, and U.S. notes) and coin were paid into circulation. They were also the official agencies for redeeming currency, accepting unfit, and exchanging one kind of money for another. They would also make denominational exchanges and accept deposits of surplus amounts when shipped to them or brought to the counter. A sorting operation was maintained to determine what U.S. currency was fit for further circulation or could be made fit by laundering. Canceling, cutting and destruction operations were also carried on.

To make use of this service, one had to transport his money to and from the premises of the Subtreasury at his own expense. This was a minor burden for parties who lived in a Subtreasury city, but it involved payment of postage or expressage and insurance charges both ways for parties who did not. The same service could be obtained by a direct transaction with the Treasury in Washington, and many chose to effect their redemptions and exchanges in this way.

The Subtreasuries performed similar services with respect to coin. They accepted silver dollars for exchange into silver certificates, and minor coin "for redemption in lawful money." The minor coin had to be in sums or multiples of $20, sorted by denomination and put in separate packages. The Subtreasuries verified the coin, sorted out mutilated and worn or bent pieces, rebagged them, and held them "until called for by banks or individuals who wish to use them in the channels of trade."

In its 1918 report on the Subtreasuries the U.S. Bureau of Efficiency made the following observation:

"The Subtreasuries render a service to the public by absorbing surplus coin at a time when there is a plethora and holding it until it is needed. Furthermore, the Subtreasuries aid in the distribution of small coins to those places and to those lines of business where they are most in demand. This is a legitimate service. However, the coin divisions of the Subtreasuries have been burdened with more work than is really necessary. Banks or corporations bring bags of coin to the counters one day and withdraw them the next. Some commercial concerns which receive large quantities of small coin—such, for example, as moving picture shows, department stores, street railways, gum-slot and weighing machine companies, and automatic lunch rooms—bring their money directly to the Subtreasuries where it is received, counted, and checked. The banks—sometimes the very banks with which these

> concerns deal—later withdraw this same coin for the use of their customers. Thus an endless chain is started which imposes upon the Government labor which should be performed by the banks themselves. The Subtreasuries have recognized the existence of this abuse, but they are powerless against it under the present law."

There were nine Subtreasuries in the United States, located in the following cities:

Boston
New York
Philadelphia
Baltimore
Cincinnati
Chicago
St. Louis
New Orleans
San Francisco

In each of these cities there was a main office or branch of a Federal Reserve Bank by early 1918. In addition, there was a Federal Reserve main office or branch in 20 other large cities by the end of 1918. As described earlier, Federal Reserve Offices had extensive currency operations and also handled coin to some extent in connection with the transactions that related to other Federal Reserve responsibilities. The extent of their coin operations varied, but in all cases such operations were limited to dealings with banks, and they did not include the feeding of new coin into the stream.

Transfer of Functions to Federal Reserve Banks

The question of the need for the continuing existence of the Subtreasuries was frequently raised and had been addressed by the National Monetary Commission, among others. In 1917, Congress included in the Appropriations Act a provision directing the Government's Bureau of Efficiency to—

> "investigate the work performed by the Subtreasuries and report to the Secretary of the Treasury and to Congress at the beginning of the next regular session what part of the work of the Subtreasuries can be transferred to other offices of the Government, banks of the Federal

Reserve System, or farm-loan banks."

The ensuing Report of the Bureau of Efficiency contained a recommendation for "the consolidation of the entire Subtreasury system with the Federal Reserve Banks within six months after the end of the present war."

In 1920, Congress included in the Appropriations Act provisions which directed the Secretary of the Treasury to discontinue the Subtreasuries and the exercise of all duties and functions by the Assistant Treasurers in charge of such offices. The Secretary was authorized in his discretion to transfer any or all of such duties and functions —

> "to the Treasurer of the United States or the mints or assay offices of the United States, under such rules and regulations as he may prescribe, or to utilize any of the Federal reserve banks acting as depositories or fiscal agents of the United States, for the purpose of performing any or all of such duties and functions ... [and] to assign any or all the rooms, vaults, equipment, and safes or space in the buildings used by the subtreasuries to any Federal Reserve bank acting as fiscal agent of the United States."

"Instructions" to Reserve Banks — Currency

Pursuant to such legislation, arrangements were made for the Federal Reserve Banks to assume the currency and coin functions of the Subtreasuries. The functions to be performed by the Bank were described in two sets of confidential "Instructions" addressed by the Secretary of the Treasury to the Treasurer and Assistant Treasurers of the United States, Federal Reserve Banks, and "others concerned." One set authorized Federal Reserve Banks "to receive United States notes, Treasury notes of 1890, gold certificates and silver certificates (hereinafter sometimes called United States paper currency), and to make exchanges and replacements thereof upon the following terms and conditions, which must be executed with impartiality."

Detailed provisions of the "Instructions" included the following:

> "5. Federal Reserve Banks acting hereunder are authorized to receive from any person United States paper currency unfit for further circulation and to issue in exchange therefor, when demanded, United States paper currency of the same kind fit for circulation, insofar as

such currency is available. No Federal Reserve Bank is authorized to receive for replacement paper currency fit for circulation. In making replacements of unfit currency, requests for denominations other than those presented should be honored as far as possible. Federal Reserve Banks, wherever necessary, are authorized to deduct, from the currency to be returned to member or non-member banks and private individuals or concerns (whether acting under this paragraph or under paragraph 13 hereof), expenses of transportation (with insurance) on the currency so returned."

"6. Insofar as possible, requests for denominational exchanges of currency should be honored, even though the currency presented is fit for circulation."

"12. ... the Treasurer of the United States will ship new currency (and any other paper currency in hand fit for further circulation) to the Federal Reserve Banks in such proportions as will provide as equitable a distribution thereof as possible. In general, such shipments will be made in proportion to the receipts of unfit currency from the respective banks ...."

"15. In making deliveries of notes fit for circulation, Federal Reserve Banks shall wherever possible deliver new currency and circulated currency in proportion to the stocks of each available ...."

Certain features of the "Instructions" regarding currency are especially worthy of note:

- They applied only to "U.S. Currency," which did not include Federal Reserve notes, Federal Reserve Bank notes, or National Bank notes.
- They authorized receipt of currency "from any person" and the return of currency "to member or non-member banks and private individuals and concerns."
- They stated that Federal Reserve Banks were not authorized to receive "for replacement" currency fit for circulation.
- They authorized Federal Reserve Banks to charge (by deduction from the currency being returned, where necessary) the expenses of transportation and insurance.

- They provided that Federal Reserve Banks should distribute new currency and circulated currency "in proportion to the stocks of each available."
- They emphasized the importance of carrying out the functions in an equitable and impartial manner.

"Instructions" to Reserve Banks — Coin

The second set of "Instructions" issued by the Treasury related to the "exchange and redemption" of coin. Reserve Banks were authorized and instructed to receive all types of U.S. coin and to make exchanges and replacements thereof upon the specified terms and conditions, "which must be executed with impartiality." Detailed provisions included the following:

"7. Federal Reserve Banks ... will receive and make payment for all subsidiary silver and minor coins when and as presented ... Payments should be made ... at face or nominal value, so long as it is possible to determine the authenticity or genuineness of the coins by denominations. Any noncurrent coins thus received will from time to time be transferred to the Mints .... In the event that the accumulation of subsidiary or minor coins should at any time reach such proportions that the Federal Reserve Bank would prefer not to carry the full amount in its cash assets, the bank should request instructions from the Secretary of the Treasury for the opening of a custody account, as fiscal agent of the United States, or the transfer of the coins to other Federal Reserve Banks or to Treasury offices."

"9. ... In order that ... accommodations may be extended the public with respect to exchanges of gold coin and standard silver dollars for gold and silver certificates ... Federal Reserve Banks ... will be expected to maintain in their cash assets sufficient stocks of gold and silver certificates to meet demands ... will also be expected to maintain in their cash assets sufficient stock of gold coin and standard silver dollars in order to make payment thereof upon presentation of gold and silver certificates ...."

"10. Transportation charges on shipments of United States currency hereunder ... and on shipments of coin hereunder from the office of the Treasurer of the United States, from mints and assay offices to Federal Reserve Banks, and between Federal Reserve Banks and mints, assay offices and the Treasurer of the United States, will be paid by the Treasury Department ...."

"11. Federal Reserve Banks acting hereunder, upon receipt of request therefor together with payment, will furnish banks, bankers, trust companies or other persons in their respective districts with subsidiary silver and minor coin to the extent that the supply on hand will permit, taking into consideration the necessity for making an equitable distribution thereof. If an actual shipment is necessary (as distinguished from delivery over the counter) the applicant should ... forward sufficient cash to cover postage and insurance if shipment is to be made by mail. If prepayment is not made, the Federal Reserve Bank may deduct a sufficient amount from the shipment to cover postage, registration fees and insurance. If the shipment is requested to be sent by express, it may go forward 'Collect,' unless prepayment is made."

Treasury Department Circular No. 55

The "Instructions" discussed above were issued on a confidential basis to a limited number of addressees. A public announcement of the transfer of Subtreasury functions was made through an amendment to Treasury Department Circular No. 55, which contained the following language:

"Under authorization in the act approved May 29, 1920 the Secretary of the Treasury transferred to the Federal Reserve Banks and branches the functions performed by the former Assistant Treasurers of the United States in connection with the issue, exchange, and replacement of United States paper currency and coin and the receipt for redemption of national bank notes and Federal Reserve bank notes. Except for the duties in this respect to be performed by the Treasurer of the United States as may be indicated from time to time by the Secretary of the Treasury, distributions of available supplies of United States paper currency and coin, exchanges and replacement thereof, and payments on account of redemption of currency and coin will, so far as practicable, be effected through the Federal Reserve Banks and branches. Federal Reserve Banks and branches have been instructed by the Treasury to make an equitable and impartial distribution of available supplies of United States paper currency and coin in all cases, and application therefor should be made to the Federal Reserve Bank or branch of such bank located in the same district with the applicant."

Reserve Bank Performance of New Functions

During a period beginning in October 1920 and extending into 1922, the various Federal Reserve offices undertook the performance of the operations covered by the Treasury's Instructions. In cities where a Subtreasury had been located there were a number of transitional matters to be taken care of, involving, in addition to transfers of inventories of currency and coin, the absorption of Subtreasury personnel and occupation of Subtreasury facilities in some cases. From accounts provided in the Annual Reports of the Reserve Banks these arrangements seemed to present more of a problem than the simple assumption of the new functions. In cities where there had been no Subtreasury, the Reserve Banks undertook their new duties with what appeared to be a minimum of difficulty —the chief one being to acquire facilities for handling and storing a larger volume of coin than previously.

Evidence that the assumption of Subtreasury functions did not have a great impact on the operations of the Reserve Banks—that they were, in effect, already heavily in the currency if not coin business—is found in the following two sets of figures. The first shows the dollar amount (in thousands of dollars) of currency receipts and payments (paper and coin) for the years 1919-1922; this period includes two years before the performance of the new functions, one transitional year, and one year of almost full performance.

	Receipts	Payments
1919	$4,804,725	$4,626,906
1920	6,816,449	6,894,405
1921	7,755,970	6,491,294
1922	7,755,018	7,629,070

The second set of figures shows the number of pieces of currency and coin "received and counted" in the years 1920-1923:

	Currency	Coin
1920	1,085,459,000	N/A
1921	1,353,020,000	1,647,677,000
1922	1,424,672,000	1,953,632,000
1923	1,722,877,000	2,076,075,000

The Board of Governors felt that the transfer was a good move for the nation as a whole. The following evaluation was offered in its Annual Report of 1921:

> "The closing of the subtreasuries and the assumption of their principal duties by the Federal Reserve Banks has resulted in improved currency and coin facilities to the country. The location and banking connections of the Federal Reserve Banks and their branches afford a more convenient and natural method for the proper distribution of paper currency fit for circulation than it was possible to secure through the subtreasuries, and there has already been a decided improvement throughout the United States not only with respect to the condition of the paper currency but with respect to the supply of notes of desired denominations."
>
> "A material economy to the Government has resulted not only by the reduction in operation expenses effected by abolishing the subtreasury establishments but also by the elimination of the necessity for keeping with the Assistant Treasurers working supplies of currency and coin required to enable them to perform their functions, amounting in the aggregate to approximately $25,000,000.
>
> It has not been necessary to increase the balances of Government funds with Federal Reserve Banks by reason of their assumption of subtreasury functions."

CHAPTER 4
SOME ASPECTS OF TREASURY-FEDERAL RESERVE RELATIONS 1921-1980

In the days before the assumption of Subtreasury functions, the Reserve Banks had confined their currency and coin transactions to commercial banks and had been able to determine for themselves the kind and amount of service they would provide. As pointed out earlier, they were by 1920 fulfilling most of the currency needs and some of the coin needs of their member banks, and also engaging in some transactions with nonmembers. The latter consisted primarily of receiving currency and coin sent as remittances for cash letters, shipping currency to a nonmember at the request of a member, and exchanging gold and gold certificates for Federal Reserve notes. The volume of receipts from nonmembers was $339 million in 1920, compared with receipts of $6,477 million from members; and the volume of payments to nonmembers was $255 million compared with payments of $6,640 million to members.

In addition, the Reserve Banks had developed the practice, for which they received special authorization from the Board in 1918, of paying the cost of transportation on currency shipments to and from member banks, on cash remittances from nonmember banks paying at par, and on incoming shipments of gold coin and certificates whether from a member or nonmember.

Treasury Department Oversight of Handling of Federal Reserve Notes

The transfer of the Subtreasury functions gave rise to questions about the extent of the Treasury's control and the degree to which Federal Reserve Banks might be able to continue practices which they believed to be desirable. As already noted, the initial "Instructions" from the Treasury applied only to the handling of United States currency and coin, which did not include Federal Reserve notes, Federal Reserve Bank notes, or National Bank notes. In handling the latter types of currency, were the Federal Reserve Banks free to ignore such provisions as the mandates to deal equitably and impartially with all parties, including others than banks, and to refrain from making an exchange of one kind of fit currency for another?

Moreover, within a short time the Treasury issued additional instructions specifying the order in which the various kinds of currency (including Federal Reserve notes) were to be paid out, prescribing a standard of fitness for currency paid out by the Reserve Banks, and stating that no party had a right to receive new currency when fit was available. All of these instructions had the potential for interfering with the relations between Reserve Banks and their member banks, and the appropriateness of some of them was questioned by the Governors (Presidents) at their Conferences.

At the time that the Treasury undertook its oversight of the currency and coin operations transferred from the Subtreasuries, Federal Reserve notes constituted about one half of the currency in circulation. While the proportion dropped to about one-third in 1930, it rose to 71 percent in 1940, 88 percent in 1950, and over 99 percent in 1970. By the latter date the only other kind of currency then being issued was U.S. notes, which were required by statute to be maintained at a level of $322 million. The issuance of all other kinds of currency had been discontinued, and they were in process of retirement: gold certificates and National Bank notes in the 1930's, the last batch of Federal Reserve Bank notes after World War II, and silver certificates in the 1960's.

The question of the Treasury Department's authority to oversee the distribution, replacement and exchange of currency that consisted primarily of Federal Reserve notes could have become an important one—academically and legally—under these circumstances if it had not been for the provision in the Emergency Banking Act of 1933 that declared Federal Reserve notes to be legal tender and characterized them as "United States currency" by the following language:

> "All coins and currencies of the United States (including Federal Reserve notes and circulating notes of Federal Reserve banks and national banking associations) heretofore or hereafter coined or issued, shall be legal tender for all debts, public and private, public charges, taxes, duties and dues ...."

(This provision was reenacted in the Coinage Act of 1965 and restated in 1982 legislation.)

After the 1933 statutory provision, the Treasury Department used similar language in its Circular No. 55 to describe the currency and coin covered, thus bringing Federal Reserve notes within its provisions in a way that had not originally been the case.

In the successor to Treasury Department Circular No. 55 that was published after passage of the Monetary Control Act of 1980 (31 CFR, Part 100), the Treasury Department not only continued this definition of the currency and coin to which the Regulation applies and made the expected changes regarding the institutions to be served and the pricing of services, but it also altered the following long-standing provision by omitting the words in capital letters:

> "The Federal Reserve Banks and branches are authorized AND DIRECTED TO MAKE AN EQUITABLE AND IMPARTIAL DISTRIBUTION OF available supplies ...."

The omitted words were replaced by the words "to distribute." Unknown to this writer is the reason for the change, and whether any particular significance should be attached to the omission of (a) the provision that the Reserve Banks are "directed" as well as "authorized" to make the distribution, and (b) the mandate to make the distribution in an "equitable and impartial" manner.

Reserve Banks as "Fiscal Agents"

Related to this discussion is a question that never seems to have surfaced for open debate, namely, whether and to what extent Federal Reserve Banks are acting as "fiscal agents" in performing the currency and coin functions now "authorized" —previously "authorized and directed"—by the Treasury Department. It could reasonably be inferred from the circumstances and the language used in effecting and describing the transfer of the Subtreasury functions to the Reserve Banks that the latter are performing those functions as fiscal agents. This was acknowledged by Governor Strong (President of F.R.B. New York) in remarks made at the Governors' Conference in October of 1921:

> "Well, Governor Norris, the independent treasury system has been abandoned by the United States, and they have placed, as one of the duties of fiscal agents, the duty of distributing currency upon the twelve Reserve Banks, and the duty of distributing currency has no relation to whether the banks are members or nonmembers of the

Federal Reserve System. I think the Treasury is bound to take the position that no matter whether it is an inducement or not for a state bank to stay out of the system, that the bank in the Federal Reserve district is entitled to get the currency from the fiscal agent of the United States when it sends good money for it and pays the cost of shipping it. I do not think you can get away from that."

It appears, notwithstanding, that the operations were not frequently referred to as fiscal agency functions, and that no serious consideration has been given to reimbursing the Reserve Banks for their performance in this regard.

Service to Nonmember Banks and Others Than Banks

As pointed out earlier, it was the practice of the Subtreasuries to deal with private businesses and individuals as well as banks. Moreover, the "Instructions" issued by the Treasury Department to Federal Reserve Banks provided that they were to receive currency and coin "from any person" and "when and as presented"; also that they were to make payments to a member bank, a nonmember bank, "or any private individual or concern." In another provision it was stated that they were to furnish coin to "banks, bankers, trust companies or other persons."

For some unexplained reason these particular elements of the instructions seem to have made no serious impression on the Federal Reserve Banks. While there was considerable debate on the subject of access, it was limited to the question whether the Reserve Banks should be required to serve banks that were not members of the Federal Reserve System. At Conference meetings in 1921 a number of Governors (F.R.B. presidents) stated that the Banks should do so only at the request of a member bank. It took extended discussion in the presence of Assistant Secretary of the Treasury Gilbert (and several vigorous statements such as the one by Governor Strong quoted above) to bring the Governors to acknowledge that the effect of the Treasury's "Instructions" was to give nonmembers the same right as members to the services that had been provided by the Subtreasuries. Even so, certain conditions were imposed regarding the method of prepayment for orders of currency and coin by nonmember banks.

In the years following the 1921 discussion of the subject, a number of Reserve Banks departed from the policy established with respect to direct service to nonmember banks and followed instead a practice of supplying currency and coin to a nonmember bank only when requested by a member bank. The minutes of the October 1935 meeting of the Conference of Presidents indicated that "most of the Federal Reserve Banks were making shipments of currency and coin, or both, to nonmember banks within the district upon the request of their member banks, and the shipping charges were collected from the member banks making the request." The Conference then—

> "Voted that this is a reasonable service to extend to nonmember banks within the district, provided the shipment is ordered by a member bank from its Federal Reserve bank; and, provided further, that the shipping charges are reimbursed to the Federal Reserve Bank."

This apparently continued to be the Federal Reserve posture without objection from the Treasury until the middle 1960's when the coin shortage gave rise to complaints by some nonmember banks who found themselves unable to order coin direct from a Federal Reserve Bank when their correspondent failed to provide an adequate supply. The complaints came to Congress and/or the Treasury Department and were, in time, discussed with the Board of Governors. In August of 1965, the Board of Governors wrote to the Chairman of the Conference of Presidents stating that the Treasury-Federal Reserve Coin Rationing Committee had expressed some concern about the fact that all Federal Reserve Banks did not accept coin orders from nonmember banks directly. The Board drew attention to the apparent discrimination against nonmember banks in this respect and requested the views of the Conference on the matter.

After a year of delay (due largely to the unusual distribution conditions related to the coin shortage) the Conference of Presidents agreed to the position that nonmember banks should have direct access to the Reserve Banks for ordering and depositing currency and coin.

The Treasury Department meanwhile, at the recommendation of the House Committee on Government Operations, undertook to revise T.D. Circular No. 55 to make it clear that Federal Reserve Banks had a responsibility to distribute Currency and coin directly to nonmember as well as member banks. The following language was adopted for incorporation in the 1966 revision of the Circular after consultation with the Federal Reserve (words in capital letters were new):

> "The Federal Reserve Banks and branches are authorized and directed to make an equitable and impartial distribution of available supplies of currency and coin in all cases DIRECTLY TO MEMBER BANKS OF THE FEDERAL RESERVE SYSTEM AND TO NONMEMBER COMMERCIAL BANKS .... DELIVERIES TO AND FROM MEMBER BANKS AND TO AND FROM NONMEMBER COMMERCIAL BANKS SHALL BE MADE UNDER SUCH TERMS AND CONDITIONS AS MAY BE PRESCRIBED BY THE FEDERAL RESERVE BANKS. NOTHING IN THE AUTHORIZATION SET FORTH ABOVE SHALL BE REGARDED AS REQUIRING FEDERAL RESERVE BANKS AND BRANCHES TO SUPPLY CURRENCY AND COIN TO OTHER FINANCIAL INSTITUTIONS OR TO THE GENERAL PUBLIC."

The effect of the last sentence quoted above was to offset the provisions in the original "Instructions" regarding service to others than commercial banks. This part of the revision indicated the Treasury's acquiescence in the Federal Reserve's view that service should be limited to commercial banks. Such view prevailed until Congress provided in the Monetary Control Act of 1980 that access should be given to all "depository institutions." The M.C.A. provision represented a significant departure from the "commercial bank" position of the Federal Reserve but was still a long way from the "general public" practice of the Subtreasuries that the Treasury Department originally expected the Reserve Banks to follow.

Payment of Transportation Costs for Member Banks

The new language in the next to the last sentence in the above excerpt from the revised Circular No. 55 provided that deliveries to both member and nonmember banks "shall be made under such terms and conditions as may be prescribed by the Federal Reserve Banks." The significance of this provision was that it constituted an acknowledgement by the Treasury that the Reserve Banks could absorb the cost of transportation on shipments to and from member banks. This practice had been the subject of some debate after the Subtreasury transfer. There had been some concern that it might be inappropriate for Reserve Banks to pay the cost for some parties if the Subtreasuries had not—or inequitable if the costs were absorbed for member banks but not for nonmembers. On the other hand, the practice of absorbing some transportation costs for members was already in place and there was a strong feeling that this benefit of membership should not be diminished on account of the Subtreasury transfer. The latter position won out and was rationalized by one Governor with the statement: "Shipping currency to our member banks is not a Subtreasury function but a Federal Reserve Bank function."

In attendance at the 1921 Conference meeting where the question was discussed was Assistant Secretary of the Treasury Gilbert. When he was asked for his views he stated that while the Treasury would probably rather not see the Reserve Banks give different treatment to member and nonmember banks, "I do feel that it is really not our business." It does not appear that the Treasury voiced any objection in ensuing years, and their acquiescence was given formal expression in the new provision in the 1966 revision of Circular No. 55 referred to above.

A different way of dealing with the cost of transportation was developed after passage of the Monetary Control Act of 1980. Transportation of currency and coin was treated as a "priced service." For members this meant that, instead of receiving the service as an unmeasured benefit of membership that served as partial compensation for sterile reserves, the cost had to be calculated precisely and charged against specific reserve account earnings. For nonmembers there was very little difference between reimbursing the Reserve Bank for the cost and paying a "price" for a "service."

CHAPTER 5
PRACTICES AND ISSUES OF THE 1980'S

Statement of Responsibility

The role of Federal Reserve Banks with respect to the distribution of currency and coin is stated as follows in the current Treasury Department Regulation on the subject (CFR 31, Part 100; successor to T.D. Circular No. 55):

> "Except for the duties in this respect to be performed by the Treasurer of the United States and the Director of the Mint, as may be indicated from time to time by the Secretary of the Treasury, exchanges of the paper currency and coin of the United States and the distribution and replacement thereof will, so far as practicable, be effected through the Federal Reserve banks and branches. The Federal Reserve banks and branches are authorized to distribute available supplies of coin and currency to depository institutions, as that term is defined in section 103 of the Monetary Control Act of 1980 (Pub. L 96-221). As authorized by section 107 of the Act, transportation of coin and currency and coin wrapping services will be provided according to a schedule of fees established by the Board of Governors of the Federal Reserve System."

The "exchange" and "replacement" functions referred to in the Regulation apply principally to currency that is "unfit" and coins that are "uncurrent" as those terms are defined in the Regulation.

In addition, the Treasury Department has authorized Federal Reserve Banks to cancel and destroy unfit currency and has prescribed detailed procedures for the Banks to follow in performing this function.

A somewhat more complete or comprehensive statement of responsibility, as perceived by the Federal Reserve itself, might be that its function is to make available to depository institutions an adequate supply of genuine and fit currency and coin to meet the needs of the public as a medium of exchange. Performance of such a mission involves:

(a) participation in the process of determining and producing an adequate supply;

(b) equitable and impartial distribution to depository institutions in response to their orders;

(c) acceptance of unfit and surplus from depository institutions;

(d) verification and sorting to remove unfit and counterfeits and assure that currency and coin being redistributed are genuine and fit for further circulation; and

(e) destruction and/or disposition of unfit and counterfeits.

Adequate Supply — Production Considerations

While it is the responsibility of the Treasury Department to produce the currency and coin needed by the nation, the amounts produced annually are based on estimates generated by the Federal Reserve. These are based in part on Reserve Bank experience and familiarity with local conditions. There are certain limits to the amounts that can be produced in any given year, most immediately the physical capacity and scheduling problems of the Treasury's production facilities. The cost of production is also a factor to be considered, although it does not act as directly on the Treasury Department as might be supposed, because the cost of printing Federal Reserve notes is paid for by the Federal Reserve and the cost of minting coins is more than recovered when the Federal Reserve pays face value for the coins that it acquires for distribution. It is in the interest of the Government to hold production costs down, of course, because the less the Federal Reserve has to pay for its notes the more of its net earnings it can return to the Treasury; and the less the Mint spends to produce coins, the greater the profit it makes (seignorage) when disposing of them at face value.

Other limits on the supply, less frequently encountered, include possible problems with raw materials — such as the scarcity or rising prices of silver (switch to clad coins) and copper (switch to zinc pennies); and problems with the statutory collateral requirement for Federal Reserve notes. Congressional action has been necessary to make several adjustments in collateral requirements over the years as the volume of notes has grown.

Within these limits the Treasury Department and Federal Reserve work together to make the "available supplies" which the Reserve Banks are authorized to distribute. Both the Treasury and the Federal Reserve are interested in having ample supplies in order to avoid embarrassment for failing to meet what the general public may perceive as a fairly simple responsibility. The job has been more difficult than might appear in recent years because of steadily increasing amounts of currency and coin used in the nation's economy. Instead of moving toward a "cashless" society, as many have expected and predicted, records show that per capita amounts in circulation have grown from $179 in 1950 to $380 in 1975 and $940 in 1987.

Adequate Supply — Denomination Considerations

An adequate supply to meet the needs of the public implies ample amounts of desired denominations. The specific denominations in which currency may be produced are generally indicated by Congress in the enabling legislation. The Federal Reserve Act provides that the Treasury "shall have printed ... such quantities of such notes of the denominations of $1, $2, $5, $10, $20, $50, $100, $500, $1,000, $5,000, $10,000 as may be required to supply the Federal Reserve Banks." As originally authorized, Federal Reserve notes were limited to denominations of $5, $10, $20, $50, and $100. In 1918 Congress authorized the larger denominations listed in the above excerpt from the statute. It was not until 1963, perhaps in anticipation of the withdrawal of silver certificates, that the $1 and $2 denominations were authorized.

Within the limits set by Congress the Treasury may make decisions about the denominations that will actually be produced. In this it is guided by the annual projections made by the Federal Reserve; these specify estimated requirements by denomination. Although denominations up to $10,000 are allowed by statute, the Treasury has not printed denominations above $100 for many years; the larger denominations were discontinued because of their limited use in normal business transactions and their extensive use for certain criminal activity and tax evasion. Similarly,the Treasury has made an administrative decision to reissue new U.S. notes only in denominations of $100; this facilitates automated processing in the Reserve Banks by eliminating smaller denominations of this different kind of currency from the stream, and it also simplifies the task of keeping the prescribed dollar amount of this kind of currency in circulation.

Other decisions about denominations include the moves to revitalize the $2 note in the 1960's and 1970's, and the minting of one dollar coins, both undertaken in an effort to save money by reducing the volume of $1 notes that must be produced, distributed, and processed. Congressional action has been involved in some of these moves. The Federal Reserve is usually consulted with respect to denominational changes, both as to the prospects for public acceptance and as to possible distribution and processing problems, but its views are not controlling.

Denomination questions that still receive consideration from time to time include reintroduction of $1 coins and $2 notes, and elimination of $1 notes and pennies. The cost and physical problems related to production, distribution, and processing are important considerations for the Treasury and Federal Reserve, but the requirements and preferences of the public count most heavily.

Distribution to All "Depository Institutions"

Before passage of the Monetary Control Act of 1980, the Treasury Department recognized in Circular No. 55 that Federal Reserve Banks need only make distribution to commercial banks. This constituted a broader access policy than had been favored by some Reserve Banks that would have liked to limit direct access to member banks, but it was more restrictive than the practice followed by the Subtreasuries when their functions were transferred to the Reserve Banks. Provisions of the Monetary Control Act broadened the access to include all "depository institutions." The effect was to add savings banks, savings and loan associations, and credit unions to commercial banks as the parties to be served. The impact of this change is evident from the increase in the number of endpoints served by Reserve Banks—from 17,369 in 1978 to 29,234 in 1988.

While it was clear under the new law that every depository institution was entitled to order currency and coin from, and make deposits with, a Federal Reserve Bank, an old problem remained, namely: how many offices of each institution should be given access? The problem had an additional dimension in pre-MCA days when the cost of transportation was absorbed for member banks. Then it involved, for member banks, the question of how many offices would receive service at Federal

Reserve expense. For years the Reserve Banks were divided on this question, but the policy statement adopted by the System in 1976 provided that one office per municipality should be given "free" service and additional offices would be served if the member bank paid the cost of transportation. This approach could be used for nonmember banks as well: service would be provided to as many offices as they were willing to pay for. Such a pattern was easy to carry forward into the MCA era when all institutions, members and nonmembers, were required to pay for transportation as a "priced service." The only problem was that there was a much larger number of institutions to accommodate so that, even though willing to give access to as many offices as wished to pay for transportation (or provide their own), a Reserve Bank might find that it did not have the facilities to handle transactions with all of them.

Distribution to Individual Offices

The "Uniform Cash Service Standards" adopted by the System in 1984 addressed the problem in the following provision of Section B.1:

> "Federal Reserve Banks should offer to make payments to and receive deposits from all offices of depository institutions on an equal and impartial basis, without charge, in accordance with the approved Cash Service Standards for Federal Reserve Banks and consistent with their capabilities to provide such service through maximum utilization of available physical facilities."

This provision seems to leave open the question of how uniformity can be achieved when the physical facilities of one Reserve Bank enable it to serve a much larger proportion of the offices in its District than the physical facilities of another Reserve Bank make it possible to serve in the latter's District. Uniformity in the level of service in this regard assumes greater importance as the growth of interstate banking leads to more and more situations where one depository institution may have offices in more than one Federal Reserve District.

One helpful factor that tends to limit the number of offices to be served by a Federal Reserve Bank is the practice of some large banks of maintaining money centers or central cash vaults which effect exchanges of currency and coin among numerous offices of the institution. Only the money center then deals with the Reserve Bank. This practice is cost effective for the institution as well as advantageous for the Reserve Bank, and it is encouraged by the Federal Reserve.

The problem of distributing coin to an increased number of endpoints has also been eased by the growing practice of armored carriers of establishing coin centers or depots that serve as subdistribution points. Coin picked up at one depository institution, rather than being delivered to the Reserve Bank, is taken to the carrier's depot, verified by weighing bags, possibly wrapped, and then redelivered to another institution. Instructions for the redistribution come from the Reserve Bank, and the necessary accounting, including adjustments, is handled by the Reserve Bank.

Frequency of Service

Another element that bears on the adequacy or effectiveness of distribution is the frequency of service. The 1984 "Uniform Standards" contain the following provision:

> "B.2 Normal service to each authorized depository institution or office shall be once per week. Less frequent service may be called for to certain depository institution offices where volume and cost do not justify weekly service. More frequent service than once per week may be called for to certain depository institution offices where volume and cost justify the more frequent service. Such additional service must be provided on an impartial basis to all similarly situated depository institutions."

A problem encountered before the MCA changes was the request of large city member banks for service as frequent as daily. Where transportation was paid for by the Reserve Banks the question of actual need for such frequent "free" service was a difficult one. With transportation now treated as a "priced service," it would seem that the pricing mechanism might serve as a restraint acting directly on the user and provide some control over and above what the Reserve Bank might exercise through application of the criteria in the above quoted provisions, namely, the "volume and cost" justification and impartial treatment for "all similarly situated depository institutions." In actual practice, the cost of transportation may be so modest for an institution located in or near a Federal Reserve city that it does not act as restraint on the frequency with which service is requested.

Transportation cost, of course, is not the only expense that is increased with more frequent access. The more frequent preparation of shipments and processing of receipts also add to the cost of serving a depository institution that wants access more often than once a week. A 1986 amendment to the "Uniform Standards" provides that more frequent access than the normal weekly service may be provided by a Reserve Bank as a priced service (Section C.4.). This seems justifiable in view of the fact that more frequent access involves service over and above a basic level that can reasonably be regarded as fulfilling the Federal Reserve's fundamental responsibility.

Cost of Transportation

The responsibility for distribution of currency and coin as delegated by the Treasury Department does not include the providing of transportation. Parties dealing with the Subtreasuries came to the counter or used registered mail or express at their own expense. Reserve Banks undertook to pay the mail and express costs for member banks after the transfer. Then, with the advent of armored car service in the 1960's, Reserve Banks found it safer, more reliable, and more convenient (and, in time, more economical) to arrange for deliveries to member banks by contracting for regular runs by armored car companies. This was logical and simple where member banks were concerned because Reserve Banks were absorbing the cost as a "benefit of membership." In time, some nonmember banks were put on the runs and allowed to reimburse the Reserve Bank for a proportionate share of the cost. Such arrangements were advantageous for Reserve Banks because they made for an orderly system that they could readily control and helped to minimize traffic at their docks.

After enactment of the Monetary Control Act, armored car arrangements of the type provided for nonmember banks could readily be applied to any depository institutions which would reimburse the Reserve Bank for the cost as a "priced service" (calculated on a somewhat different basis). It was still advantageous for the Reserve Banks to arrange and control transportation for the reasons cited above, but such arrangements were not mandatory. Any depository institution could make its own arrangements at its own expense if it so desired. The condition reasonably imposed is that the Reserve Bank may exercise some control over scheduling. The "Uniform

Standards" address this matter as follows:

"C.1 The Federal Reserve Banks shall arrange transportation for the deliveries they consider necessary to meet their responsibilities. They reserve the right to control the scheduling of transportation to and from their facilities that may be arranged by depository institutions.

a. ....

b. The cost of transportation service arranged by the Federal Reserve for depository institutions shall be absorbed by the depository institutions. The cost of transportation service arranged by depository institutions shall be their responsibility."

By the middle to late 1980's, most depository institutions were arranging their own transportation; in the majority of Districts, Reserve Banks were not arranging transportation for any depository institutions. By and large, this situation reflects the preference of depository institutions, because they find it more economical or more convenient to function in such a manner. But it also reflects the feeling of Reserve Banks that what they can contribute in this area is not very meaningful or worth the administrative burden.

Size of Order and Deposit Units

It is generally recognized that an effective distribution system requires the establishment of some rules regarding ordering and depositing units and packaging standards. If these are reasonable in terms of the trade and are applied uniformly, they should satisfy the mandate to make an equitable and impartial distribution and should not give rise to complaints. A set of such rules observed by all Reserve Banks is set forth in Section A of the 1984 "Uniform Standards" (pars. 3-8 and 13-16). They are based on decades of experience in dealing with commercial banks and are generally accepted as effective means for handling transactions of this type. Nevertheless, some requests have arisen for special packaging or ordering depositing units.

One such request that goes back many years is for coins to be supplied wrapped instead of in bags. Reserve Bank responses to this request differed in pre-MCA days. Some declined to provide the wrapping service; others did provide it at a cost—even to members—that may have been below their own true costs; and still others made arrangements for the coin to be wrapped en route by the carrier or another contractor. It had never been possible to get sufficient agreement to adopt a uniform policy. It was clear to all that this service was beyond the basic responsibility for distribution. After enactment of the Monetary Control Act, coin wrapping was designated an optional "priced service" and provided for in Section C of the "Uniform Standards" as follows:

"2. The Federal Reserve Banks that wish to provide wrapped coin service may do so directly or may arrange for coin wrapping service through a second party."

Only a small number of Reserve Banks are offering wrapped coin service under this provision.

Requests are also sometimes made to receive or deposit currency and/or coin in smaller than standard units. In 1986 the "Uniform Standards" were amended to respond to such requests by providing for transactions in nonstandard units as a "priced service" to be offered at the option of a Reserve Bank. The following provision was added to Section C:

"3. The Federal Reserve Banks that wish to provide and/or accept cash in nonstandard units, as defined in "Section A, Nonpriced Services," may do so as a priced service. The basic units (Section A, paragraphs 7, 8, and 15) will, however, continue to be provided free."

Acceptance of Surplus Currency and Coin

Surplus currency and coin are accepted from depository institutions in order to avoid imposing on them an undue burden (in the form of storage costs and/or the maintenance of nonearning assets) as well as to make available to other institutions supplies that are in excess of the needs of the depositing institutions. The basic policy in this regard is set forth in Section A of the 1984 "Uniform Standards," as follows:

"2. The Federal Reserve Banks shall accept deposits of reusable currency and coin when a depository institution accumulates a surplus that cannot reasonably be stored or disposed of by direct exchange with other depository institutions."

As observed earlier, the capacity for contraction as well as expansion is an important element of an elastic currency. Contraction is generally thought of, however, as a longer term phenomenon—a flowback of currency on a seasonal or cyclical basis from an economy that no longer needs it. It is believed that it was this kind of contraction that Federal Reserve notes were designed to meet. They have performed very well in that regard, both as a supplemental currency at the outset and later as the primary currency.

The flowback can be very short-term, however, particularly when the vault facilities of depository institutions are inadequate to hold an inventory for a relatively short time until it is needed again by the institution's customers. This leads to what may be regarded as unnecessarily frequent deposits in the Reserve Bank — causing excessive receiving and processing and reshipping costs. This short deposit/withdrawal cycle was a subject of complaint on the part of the Subtreasuries, and it has posed a problem for Reserve Banks for many years. To some extent it has been aggravated by the extension of service to all depository institutions, because many thrifts and credit unions lack adequate vault facilities. The difficult question is how to achieve a longer time horizon for deposits of surplus without imposing an excessive burden on the depository institutions.

As noted earlier, there are already two constraints that should serve to limit the frequency of deposits, namely, the requirements that the depositor pay for the cost of transportation and for the cost of more frequent access than the normal level of service. In addition, an administrative rule has been adopted to prohibit "cross shipments." It is stated as follows in Section A of the 1984 "Uniform Standards":

> "9. Cross shipment (deposit of excess fit currency and reorder of the same denomination within five business days) should be eliminated at the depositing office level, and minimized, or eliminated where practicable, at the depository institution level."

This provision is aimed directly at the very short-term deposit/reorder problem. The automation of records has made it feasible for Reserve Banks to analyze order and deposit records and achieve enforcement. A five-day rule may seem arbitrary, and possibly discriminatory, to a small number of institutions, but in the larger sense of the Federal Reserve's responsibilities it appears to constitute a reasonable restriction. It does not interfere in any sense with the elasticity of the nation's currency, and it is in accord with the objective of minimizing currency and coin distribution and handling costs for both the Federal Reserve and society at large.

Reserve Banks make an effort to minimize the short-term surplus problem for both themselves and the depository institutions by undertaking to arrange exchanges between depository institutions. This policy is set forth in the second section of paragraph 2 of Section A of the "Uniform Standards" as follows:

> "To facilitate and encourage exchanges, the Federal Reserve Banks shall analyze order and deposit patterns and shall make efforts to arrange and implement cost-effective inter- or intra-depository institution exchanges."

In addition, the arrangements made by carriers for redistributing coin from their own depots, as described earlier, help in reducing the flow in and out of Reserve Banks.

Verification and Sorting — Nature of Responsibility

It is an important responsibility of the Reserve Banks to assure that the currency and coin being redistributed are genuine and fit for recirculation. The verification and sorting operations are designed to accomplish this.

From the earliest days after the transfer of Subtreasury functions the Treasury provided instructions and oversight for these operations. In 1921 it gave the Reserve Banks a lengthy written "standard of fitness" for currency, and it has performed periodic inspections in the ensuing years, before the installation of the automated equipment. The Regulation issued in 1982 (referred to at the opening of this section) provides a description of unfit currency as currency "that is unfit for further circulation because of its physical condition such as torn, dirty, limp, worn or defaced." It also provides a description of "uncurrent" coins as "whole U.S. coins which are merely worn or reduced in weight by natural abrasion yet are readily and clearly recognizable as to genuineness and denomination and which are machine countable." The Treasury wishes the Reserve Banks to withdraw the "unfit" notes and "uncurrent" coins from circulation, giving full value therefor to the depositor. Currency that is "mutilated" and coins that are "bent," "partial," or "fused" should not be sent to Federal Reserve Banks but direct to the Treasury.

The continued participation of the Treasury stems from its basic responsibility for the nation's currency and coinage, as delegated by Congress. Its interests are at least twofold: to provide a consistently good quality to the public that will not be difficult or unpleasant to handle and will survive a certain amount of further circulation, and to avoid premature destruction of notes that would lead to unnecessary replacement costs.

The Federal Reserve has similar reasons for its interest in the standard of fitness, but may have additional concerns in that —

(a) it is more directly concerned with public satisfaction because it is generally known to be the sorting agent;

(b) it has direct links with the depository institutions that hear public complaints and have some requirements of their own; and

(c) it wishes to minimize the costs associated with the sorting operation.

Verification and Sorting — Automated Equipment

The development of automated verification and sorting equipment for currency in the 1970's, which was designed to reduce the operating costs of the Reserve Banks, had another impact on the sorting process in that the machine sensors did not do as complete a job of culling unfit as the hand sorting operation. (They primarily sensed soil and were not fully effective in detecting limpness, tears, and holes). As a result of this fact and an interim period of operations when package sorting procedures were combined with high speed counting methods, the quality of currency being recirculated fell below desired standards. Improvements in fitness detection technology have been expected from the beginning, however, and are being made, so that the quality of recirculated notes should be less and less of a problem in this respect.

A significant advantage of the automated sorting process is the potential for obtaining objectively measurable levels of fitness that are relatively uniform on all machines. A given level can then be selected as a standard for the System. The tuning is so fine that it gives rise to a debate as to which setting to select in order to provide the quality of currency that will best satisfy the public, the depository institutions, and the cost and other constraints related to production of replacements for the currency declared unfit.

Verification and Sorting — Quality Questions

A factor in the decisions about quality is the need, or perceived need, of some depository institutions for new currency or currency of a higher quality than the general level being recirculated by Reserve Banks in order to meet certain specific purposes. The most conspicuous of these is the need for a good quality of currency for use in automated teller machines. In the early stages of ATM's it was believed that new or nearly new currency was required, but technological advances, consultations with machine manufacturers and depository institutions, and special Federal Reserve tests and studies have resulted in a consensus among Federal Reserve officials that the quality of currency being recirculated can be used effectively in ATM's and is satisfactory for other normal business transactions. Nevertheless, some demand for a higher quality persists.

The requests of some depository institutions for new or higher quality currency have raised the question whether Reserve Banks could supply such currency as a "priced service." In the past the policy with respect to new currency has been that it will be paid out only after supplies of reusable currency are exhausted and then apportioned equitably and impartially to those who want it. In the 1984 "Uniform Standards" a modification of this policy has been adopted. It is stated as follows in paragraph 1.b. of Section A:

> "Reserve Banks shall normally pay out reusable currency and coin of a given denomination before new supplies are used. To achieve an even calendar distribution of supplies of new currency, Reserve Banks may periodically pay out new currency at times when fit currency is on hand."

The offering of new currency as a "priced service" appears inconsistent with Federal Reserve responsibilities in that it would allow the market to determine the distribution of a scarce commodity that it is the responsibility of the Reserve Banks to distribute "equitably and impartially." Moreover, the offering of new currency does not involve a "service" that requires special effort or cost on the part of a Reserve Bank that could be "priced." The question was investigated by a "Study Group" appointed by the Subcommittee on Cash Services in 1982; and the conclusion was reached that the distribution of new currency should not be a priced service. This is the present position of the Federal Reserve.

A similar question is whether currency that has been machine sorted to a higher level of fitness than that used for normal payouts should be offered to depository institutions for a price. In this instance, a "service" in the form of a special sort and special handling would be involved, and a cost could probably be attributed to it. In this regard the providing of "superfit" currency as a "priced service" could be rationalized more readily than the providing of new currency. Moreover, the supply would not be limited to the same extent as new currency. There are other considerations, however, notably the impact of this skimming on the overall quality of straps of currency sorted to normal standards; also whether it is consistent with Federal Reserve responsibilities — or fair to the general public — to "sell" the currency in the best condition to parties who are willing to pay for it and, in the process, give a generally lower quality to the others.

An aspect of the quality question that occasionally comes to the fore is the very poor condition of currency in some rural areas and ethnic or other cultural or economic pockets. Generally, this is not the result of the recirculating of low quality money by a Reserve Bank, but a reflection of local patterns whereby currency circulates extensively among individuals without being deposited in a depository institution, or if so deposited, is not being sorted and/or returned to a Federal Reserve Bank by the depository institution. It would be beyond the normal function of a Reserve Bank, and beyond its traditional responsibility, to undertake initiatives to remedy this type of situation. Case studies of some particular situations, however, might suggest possible remedies in which it would be appropriate for a Reserve Bank to participate.

Verification and Sorting — Note Design as a Factor

A question related to the sorting of currency is whether design changes could facilitate or improve the process. Basically, design is the province of the Treasury and Congress. The Federal Reserve Act specifically provides with respect to Federal Reserve notes that they "shall be in form and tenor as directed by the Secretary of the Treasury." Congress was the source of this authority and may, of course, override it or intrude in the process as it did when it mandated the addition of the legend "In God We Trust." Nevertheless, the Federal

Reserve also has an interest and provides input. The principal interest at this stage involves such items as —

(a) design to facilitate machine reading of denomination;

(b) composition of paper for good machine handling, long life, and ready destruction and disposition of residue without environmental consequences; and

(c) design or composition features that will facilitate effective detection of counterfeits.

Close cooperation with the Treasury Department in these areas is particularly important.

Verification and Sorting — Counterfeit Detection

An important part of the Federal Reserve function in connection with recirculating currency is to detect and remove counterfeits. In recent years a great deal of effort has been devoted to the development of capability in the automated equipment to detect and outsort counterfeit notes; also to the redesign of currency in order to make counterfeits more readily and surely detectable by machine. There is an urgency to these efforts because advances in copying technology have made small-scale as well as large-scale duplicating of notes easier for criminally inclined members of the public.

The basic responsibility for protecting the public and the government from the counterfeit threat lies with the Treasury Department — particularly the Bureau of Engraving and Printing and the Secret Service. The following statutory provision relates specifically to Federal Reserve notes:

> "In order to furnish suitable notes for circulation as Federal Reserve notes, the Comptroller of the Currency shall, under the direction of the Secretary of the Treasury, cause plates and dies to be engraved in the best manner to guard against counterfeits and fraudulent alterations, and shall have printed therefrom ...."

Notwithstanding the Treasury's statutory responsibilities, the Federal Reserve has a substantial interest in the matter because of the public expectation that it will prevent counterfeits from recirculating. It is important that the Treasury and the Federal Reserve coordinate their efforts in this area and that the Federal Reserve have substantial input.

Verification and Sorting — Coin

The verification and sorting of coin — as opposed to currency — is a relatively minor function because of the low incidence of worn, damaged and counterfeit pieces. Coins that are unacceptable for further circulation can be detected and withdrawn in the course of normal handling by depository institutions or the wrapping operation conducted by such institutions or third party contractors. The act of doing so is simple, and the consequences of failing to do so in normal circumstances are relatively small. The minor importance of the function makes it tolerable for coin to be recirculated on a large scale from the coin depots of carriers instead of being returned to a Reserve Bank.

Destruction of Currency and Disposition of Residue

From the outset, control of the destruction of unfit Federal Reserve notes (as well as other kinds of U.S. currency) has been the province of the Treasury Department. The original provisions of the Federal Reserve Act required that "notes unfit for further circulation shall be returned by the Federal Reserve agents to the Comptroller of the Currency for cancellation and destruction." This provision was amended in 1966 to provide that such notes "shall be cancelled, destroyed, and accounted for under procedures prescribed and at locations designated by the Secretary of the Treasury." Pursuant to the amended provision, Federal Reserve Banks were permitted to destroy notes on their own premises, but this operation was performed under very strict Treasury Department procedures by Fiscal Agency personnel to whom Cash Department personnel transferred the unfit currency. Multiple complex steps were followed for physically cancelling the notes, cutting them in two, and destroying the lower and upper halves separately. Destruction was accomplished by maceration or burning followed by examination of the residue to make sure no identifiable fragments remained.

A change came about with development of the automated currency verification and sorting equipment in the 1970's. The new machine had the capability to perform on-line shredding of the notes that it identified as unfit. This opened up the possibility of completely eliminating the separate handling of unfit notes and the complex procedures designed to ensure security and complete destruction. The simplicity, economy, and effectiveness of this method led the Treasury to relax what had been a much stricter set of procedures under their control and approve on-line destruction.

Shredded residue flows automatically from the machines to containers whose contents can be hauled away as trash or sold to parties who use the material in various commercial or industrial undertakings. The Treasury requires prior approval for release by a Federal Reserve Bank to parties who wish to use the residue in novelties but not for release to waste collectors or companies that will recycle it into some useful product. The release is governed by a written contract in all cases, and restrictions are imposed on the use of the residue — notably prohibitions against the manufacture of any paper suitable for commercial printing or any product intended as a container for food or drink.

An unexpected development has been the objection raised recently by environmental authorities to the dumping of currency residue at waste sites or landfills because of surviving contaminants in the ink. This presents a problem as yet unresolved, and serves to nullify one benefit of shredding by the automated equipment — namely, avoidance of the smoke hazard from currency burning that was found objectionable by environmental authorities in a number of Federal Reserve cities in the 1960's. Among the solutions under consideration is a change in the materials originally used in producing the currency.

Under the aforementioned statutory provision the Treasury continues to have general oversight and control of the whole process. Having participated in the design and appoved the automated equipment, it provides, in addition to the rules governing destruction, a certain amount of oversight through periodic inspection of the machine performance and the conduct of the operation by Cash Department personnel of the Federal Reserve Banks.