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FINANCIAL INNOVATION AND MONETARY MANAGEMENT IN THE UNITED STATES

A Paper presented by

By

Andrew F. Brimmer
Member
Board of Governors of the
Federal Reserve System

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The severity of monetary restraint in the United States during the current year has induced many of the leading commercial banks to exploit intensively traditional sources of funds and to search for new means of raising funds to carry on their business -- especially the extension of loans to their large corporate customers. Unfortunately, from the point of view of central banking, the very success of the banks' efforts has diluted the effects of credit restraint and complicated the task of monetary management during a period of intense inflation in the United States.

The most noticeable development in the banks' quest for loanable funds undoubtedly has been the dramatic expansion in Euro-dollar borrowings by American banks -- primarily through the London branches of a dozen or so institutions. Other widely-noted new developments include the issuance of commercial paper by bank subsidiaries or one-bank holding

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companies, the sale of participations in individual loans or pools of loans, and other steps which permit the banks to obtain funds outside the scope of interest rate ceilings and reserve requirements. In addition, the Federal funds market -- a long-used vehicle relied on by banks to meet temporary reserve deficiencies -- has expanded enormously and has become much more sophisticated in its operation. In contrast, the volume of bank deposits, traditionally the principal source of loanable funds, on balance, has shrunk since the end of last year -- a result thoroughly in keeping with the objectives of current monetary policy.

Of course, the Federal Reserve has not been unaware of these financial innovations -- nor has it been ignorant of the motivations from which they spring. To a considerable extent, the new fund raising techniques have been adopted as a direct result of the methods the Federal Reserve has employed in its efforts to use monetary policy in the campaign against inflation. While attempting to bring about general restraint on the availability of credit, the Federal Reserve Board has given particular attention to the rapid expansion of bank loans to large industrial and commercial corporations. During the closing months of 1968 and during the first five months of this year, business loans at banks have grown at an exceptionally high rate. Moreover, until this spring, the highest rates of expansion in business loans were recorded at the largest banks, especially at banks with ready access to Euro-dollars through their London branches. Thus, as interest rates rose under the

impact of monetary restraint, the large banks found themselves less and less able to compete for time deposits; this was particularly true of large denomination certificates of deposit (of $100,000 and over) -- known as CD's -- which many banks offer to corporations and others with sizable cash balances in competition with U.S. Treasury bills, commercial paper and other money market instruments. The lessened competitive position of CD's, in turn, can be traced directly to the fact that the maximum interest rate payable on such deposits has not been raised by the Federal Reserve Board since April, 1968, when it was set at 6-1/4 per cent for minimum maturities of 180 days. Since the end of last year, the volume of CD's outstanding at banks has shrunk by more than $7 billion.

Consequently, with the steady attrition in CD's, one would expect the banks' ability to lend to be moderated substantially. To a considerable degree, this is the pattern that actually developed. However, for those banks with ready access to Euro-dollars, the adverse effects of CD attrition were cushioned and delayed. In the meantime, many banks that could not tap this market so easily have increasingly uncovered domestic sources which also provide a partial cushion against the impact of credit restraint. Thus, the net result has been a more hesitant response of U.S. commercial banks to monetary restraint than one would have expected -- given the magnitude of the pressure exerted by the monetary authorities on the availability of bank reserves.

As I mentioned above, the Federal Reserve System has not been ignorant of these developments. On the other hand, there has not always

been an identity of views within the System regarding either their significance or what -- if anything -- should be done to counter them. For example, early this year, some System officials (and I was among them) began to express concern over the adverse consequences of Euro-dollar inflows for the policy of monetary restraint being pursued in the United States. I personally urged in early March that -- while I recognized the beneficial effects of such inflows on our balance of payments -- consideration be given to the imposition of reserve requirements against Euro-dollar borrowings by head offices of U.S. banks. On the other hand, many other observers (including some Federal Reserve officials) thought the Euro-dollar inflows provided a needed safety valve for American banks -- which, in turn, enabled the Federal Reserve to pursue a more vigorous policy of monetary restraint than it otherwise would be able to do. The favorable effect of these inflows on the U.S. balance of payments was also a factor in their minds weighing against such a move.

Nevertheless, as the new year progressed, it became more and more evident that Euro-dollar borrowings by head offices of American banks were ceasing to be a safety valve and were becoming an obvious escape route around a national policy of domestic credit restraint. For example, during the first 5-1/2 months of this year, liabilities of U.S. banks to their foreign branches rose by more than $7 billion. In the first three weeks of June alone, the rise was about $3 billion -- to a level approximating $13-1/2 billion.

Against the background of this surge in Euro-dollar borrowings, the Federal Reserve Board decided to take steps to moderate the inflow. On June 26, the Board proposed the imposition of marginal reserve requirements on borrowings of U.S. banks from their foreign branches over and above the amounts outstanding in May. Since the Board allowed 30 days for comment, it could make the new requirement effective around the end of July. I strongly supported the proposal.

But, assuming that the Board adopts the Euro-dollar reserve requirements, the banks would still be able to raise funds via the commercial paper market, loan participations, and other instruments described above. These devices should also be kept under close review.

In the rest of this paper, I will review the main outlines of monetary management in the United States since a policy of firmer restraint was adopted last December. The principal conclusions reached can be summarized briefly:

- In the first half of 1969, the availability of bank credit in the U.S. has been sharply reduced. However, the burden of monetary restraint has been borne unevenly, as some sectors (particularly the corporate business sector) have actually expanded their access to bank credit.

- The leading banks in the U.S. have been able to expand their lending at a rapid pace by relying increasingly on non-deposit sources of funds. This has been especially true of the dozen or so banks which have had ready access to Euro-dollars through their London branches.

· Nevertheless, the severity of credit restraint in the United States is showing up increasingly. Even the largest banks have begun to moderate their lending in the face of shrinking deposits (centered mainly in CD attrition). For this reason, I personally think it would be unwise at at this time to lift the ceiling on the maximum interest rates which the banks can pay on such deposits.

Impact of Monetary Restraint in the United States

It will be recalled that the Federal Reserve adopted a policy of firmer restraint in mid-December last year, when it became evident that the pace of economic activity was not slowing down as anticipated last summer. However, by early spring, the outlook still suggested vigorous expansion of the economy in coming months. Against this background, additional measures of monetary restraint were adopted in early April. The discount rate at Federal Reserve Banks was raised from 5-1/2 to 6 per cent. Reserve requirements against demand deposits at Federal Reserve member banks were increased by 1/2 percentage point -- which absorbed about $660 million in reserves. During the first half of this year, through open market operations, the Federal Reserve brought increased pressure on bank reserve positions.

Total member bank reserves, in the first six months of 1969, declined at an annual rate of almost 1 per cent, compared with an increase of nearly 9 per cent in the fourth quarter of last year and a gain of 7 per cent for 1968 as a whole. (See Table 1.) Nonborrowed reserves

(a better indication of Federal Reserve policy) declined at an annual rate of more than 5 per cent in the January-June months.

Under the impact of this pressure on bank reserves and rising market yields, private demand deposits expanded only moderately, and time deposits at commercial banks declined substantially in the first half of this year. As the yields on market instruments rose further, the maximum interest rates payable on CD's became increasingly non-competitive. Under these circumstances, considerable pressure was focused on the large banks. From mid-December (when heavy CD attrition began) to late June, banks reporting weekly to the Federal Reserve lost nearly $8 billion in CD's. Roughly 50 per cent of the decline occurred at banks in New York City. The rate of growth of time and savings deposits at all commercial banks (excluding CD's) during the first half of 1969 fell to less than one half of what it was during 1968, an annual rate of 4.2 per cent compared to 10.7 per cent. During much of the first half of this year, high -- and rising -- yields on market instruments probably diverted funds from consumer-type time and savings deposits to securities. Reflecting the sizable attrition in CD's and the reduced expansion in consumer-type deposits, total member bank deposits (the Federal Reserve's credit proxy) declined at an annual rate of more than 4 per cent during the January-June months. The drop was especially noticeable (5.4 per cent at an annual rate) in the first quarter.

TABLE 1. SELECTED MONETARY AND FINANCIAL INDICATORS FOR THE UNITED STATES, 1968-1969
(Annual Percentage Rates of Change)

Category	1968		1969			
	Year	4th Qtr.	1st Qtr.	April-May	2nd Qtr. (Est.)	First Half (Est.)
Total Reserves	7.1	8.6	-1.0	4.9	-1.2	-0.8
Nonborrowed reserves	5.2	4.3	-4.0	-3.8	-6.4	-5.1
Money supply (currency and private demand dep.)	6.5	7.6	1.9	3.7	3.1	2.5
Time and savings dep. at banks	11.3	15.7	-6.5	-2.7	-3.4	-4.9
Total member bank deposits--credit proxy	8.6	12.2	-5.4	1.4	-3.0	-4.2
Deposits at savings banks and S&L's	6.4	6.5	6.1	3.7	n.a.	n.a.

The money stock (which includes currency in the hands of the public as well as private demand deposits) rose at an annual rate of 2.5 per cent during the first half of 1969. This was about one-third the rate of growth over 1968 as a whole. Some of the reduced rate of expansion in the money stock probably can be traced to a somewhat lower average volume of stock market activity and a sizable increase in U.S. Government deposits over this 6-month period. However, the main source of the slowdown in the growth of the money stock undoubtedly has been the increased pressure on bank reserve positions; this pressure has raised market interest rates and has induced additional economies in the management of money balances.

During the first five months of 1969, total loans and investments at all commercial banks rose at a seasonally adjusted annual rate of 4 per cent. (See Table 2.) This was less than half the rate of expansion in the full-year 1968. Actually, the rate of expansion was even less in the first quarter (2.3 per cent) and in May (2.8 per cent). The higher rate for the 5-month period as a whole is due primarily to the surge in April -- which was associated with Treasury financing and borrowing for tax payments.

To a considerable extent, the generally slower expansion in bank loans and investments reflects the liquidation of securities -- rather than any significant moderation in bank lending. For example, in 1968, commercial banks expanded their holdings of U.S. Government

TABLE 2. NET CHANGE IN BANK CREDIT
ALL COMMERCIAL BANKS
(Seasonally Adjusted Annual Rates, Per cent)

Category	1968		1969			
	Year	4th Qtr.	1st Qtr.	April	May	First Five Months
Total loans and investments	11.0	10.7	2.3	9.6	2.8	3.9
U.S. Gov't. Sec.	3.0	-15.6	-26.7	4.2	-33.3	-21.5
Other Sec.	16.4	26.9	2.2	-3.3	-3.3	-
Total loans	11.6	13.1	9.4	14.4	12.4	11.2
Business loans	11.1	15.2	16.3	16.8	16.6	16.8
All other loans	11.9	11.9	5.1	12.9	9.8	7.7

securities by 3 per cent and their holdings of other securities (mainly issues of State and local governments) by more than 16 per cent. In contrast, in the first five months of 1969, their U.S. Government investments dropped at an annual rate of nearly 22 per cent. Their holdings of other securities rose slightly in the first quarter and then declined in both April and May, leaving their net position about unchanged for the 5-month period.

Throughout 1969, total bank loans have continued to grow at a rapid pace, registering a gain of more than 11 per cent at an annual rate -- virtually unchanged from 1968. The growth of business loans has been especially sharp. In 1968, such loans rose about 11 per cent. However, during the final quarter of last year, business loans rose by more than 15 per cent at an annual rate, and the pace has climbed further since then. For the first five months of 1969, the annual rate of growth was nearly 17 per cent. Moreover, if the substantial volume of loans sold by banks were added to the reported figures, the rate of expansion in business loans would be even higher. In recent months, some of the rise in business loans probably reflected financing of inventory accumulation, but it may also partly reflect diversion of demand from the commercial paper market prior to the increase in the banks' prime lending rate to 8-1/2 per cent in early June. In the last few months, the increases in business loans were large at both New York City and outside banks and

were fairly widespread among industry categories. Increases earlier in the year and in late 1968 had been concentrated at banks outside of New York and within a relatively few industry categories.

Comparative Behavior of Euro-Dollar Banks

As I mentioned above, some U.S. banks have been able to continue -- and expand -- their lending to domestic customers because of their ready access to the Euro-dollar market. To a considerable extent, borrowings by head offices of U.S. banks from their foreign branches have served as offsets to CD attrition. The way in which various groups of banks have adjusted to monetary restraint during 1969 (compared with their behavior during the period of CD attrition in 1966) can be traced in the changes in the major asset and liability items shown on the banks' balance sheets over both periods. (The details are set out in the attached Appendix Table.) While more than two dozen U.S. banks have branches abroad, 11 banks account for over 90 per cent of the total Euro-dollar borrowings through these branches.

Between mid-December, 1968, and the end of May this year, banks reporting weekly to the Federal Reserve lost $6.5 billion in CD attrition. Virtually all of this amount (or $6.2 billion) was concentrated among banks with total deposits of $1.0 billion or more. The 11 Euro-dollar banks accounted for $3.8 billion of the total decline; this represented just under three-fifths of the total CD attrition, although this group of banks had only slightly more than one-third of the total CD's outstanding

in mid-December last year. In contrast, during the period of CD attrition in 1966, the 11 Euro-dollar banks experienced an even greater relative decline in CD's, when they accounted for more than four-fifths of the total CD attrition.

However, Euro-dollar inflows this year have been a much more important means of offsetting CD attrition for the 11 Euro-dollar banks than they were in 1966. For example, in the earlier period, their Euro-dollar borrowings rose by $1.4 billion, an amount equivalent to about 60 per cent of their CD attrition. This time, in the 5-1/2 months ending on May 28, their Euro-dollar borrowings climbed by $3.0 billion, an amount equivalent to about 80 per cent of their CD attrition.

The 11 Euro-dollar banks have also had a much more adverse experience in 1969 with time and savings deposits other than CD's than they did in 1966. Over the earlier period, their consumer-type deposits remained about unchanged, while such deposits held by all weekly reporting banks rose by $500 million. In the most recent period, total consumer-type time and savings deposits expanded by $400 million. However, the 11 Euro-dollar banks experienced a loss of about $200 million. These developments also put pressure on these banks to find other sources of funds.

In addition to relying more heavily on Euro-dollar inflows, the 11 Euro-dollar banks have greatly expanded other non-deposit sources of funds in 1969. For example, other kinds of indebtedness on their books

(excluding Euro-dollar borrowings) rose by $2.7 billion in the December-May period this year; such indebtedness for all weekly reporting banks rose by only $800 million. So the rise for the 11 Euro-dollar banks was more than three times that for all banks combined. In 1966, the Euro-dollar banks accounted for only one-third of the rise.

On the lending side, the 11 Euro-dollar banks have fared far better in 1969 than they did in 1966. For instance, in the 5-1/2 months ending on May 28, their total loans declined by $900 million, while total loans of all weekly reporting banks rose by $1.8 billion. However, in the same period, total loans of the largest banks taken as a group (those with total deposits of $1.0 billion and over) declined by $1.8 billion. Thus, the loan experience of the 11 Euro-dollar banks, while similar to that of other large banks, ran strongly against the trend for other weekly reporting banks. Their recent experience was also in sharp contrast to that in 1966. In this earlier period, total loans of the 11 Euro-dollar banks shrank by $2.7 billion, while such loans at all weekly reporting banks rose by $700 million -- and by a somewhat larger amount at banks with deposits over $1.0 billion.

In the area of business loans the 11 Euro-dollar banks in 1969 have just about kept even with the expansion of such loans at all weekly reporting banks. In mid-December last year, they held about one-third of the total business loans, and they accounted for about the same proportion of the expansion in total business loans during the next 5-1/2 months. In the 1966 period of CD attrition, they accounted for almost four-fifths

of the rise in business loans -- although they held less than half such loans outstanding at the beginning of the period.

U.S. Banks and the Euro-Dollar Market

Given the greatly increased reliance of some U.S. banks on Euro-dollar borrowings, their substantial impact on the Euro-dollar market comes as no surprise to anyone. How large this impact has been can be seen quantitatively in the figures compiled by the Bank for International Settlements (BIS). (See Table 3.) In terms of sources of funds, the United States and Canada have traditionally been relatively insignificant. In fact, even after U.S. corporations began in 1965 to borrow substantial amounts in the Euro-bond market (in response to the U.S. balance of payments program) and to invest the unused proceeds temporarily in short-term instruments, U.S. citizens remained of only modest importance as a source of funds through 1968. On the other hand, residents in the U.S. -- particularly banks -- have been the principal users of Euro-dollars. For example, at the end of 1968, U.S. banks had $7 billion of Euro-dollar borrowings outstanding, representing more than one quarter of the $25 billion estimated by BIS to have been the net size of the Euro-dollar market at year-end. (By mid-June, this year, the BIS estimated the market had expanded to $30 billion. U.S. borrowings rose to $13.4 billion which then represents nearly 45 per cent of the market.) If only the outside area is considered, the U.S. bank share of total uses of funds at the end of 1968 climbs to two-fifths.

TABLE 3. ESTIMATED SIZE AND UNITED STATES' SHARE OF THE EURO-DOLLAR MARKET, 1964-1965
(Year-end figures, except for June, 1969)
(Billions of Dollars)

Item	1964	1965	1966	1967	1968	1969 (June) (Est.)
Sources of Funds						
Outside area*						
U.S. and Canada	1.5	1.3	1.7	2.6	4.5	
Other areas	3.1	3.6	4.4	5.3	7.3	
Total	4.6	4.9	6.1	7.9	11.8	
U.S. and Canada as per cent of total	32.6	26.5	27.9	32.9	38.1	
Inside area*						
Banks	2.6	4.4	5.6	5.7	8.0	
Non-banks	1.8	2.2	2.8	3.9	5.2	
Total	4.4	6.6	8.4	9.6	13.2	
Banks as per cent of total	59.0	66.5	66.7	59.4	60.6	
Grand Total	9.0	11.5	14.5	17.5	25.0	30.0
U.S. and Canada as per cent of grand total	16.7	11.3	11.7	14.9	18.0	
Uses of Funds						
Outside area*						
U.S. and Canada	2.2	2.7	5.0	5.8	10.2	
U.S.	1.2	1.3	4.0	4.2	7.0	13.4
Other areas	1.8	2.5	3.2	4.8	6.8	
Total	4.0	5.2	8.2	10.6	17.0	
U.S. and Canada as per cent of total	54.8	52.0	61.0	54.8	60.0	
U.S.** as a per cent of total	30.0	25.0	48.8	39.6	41.2	

*Inside area for computation purposes include 8 countries: Belgium, France, Germany, Italy, Netherlands, Sweden, Switzerland, and United Kingdom. The rest of the world constitutes outside area.

**U.S. bank head office liabilities to foreign branches.

But, as I am certain all would agree, the really dramatic developments have occurred in the Euro-dollar market in 1969, as borrowings by U.S. banks rose sharply in reflection of growing stringency in domestic financial markets. From the end of last December to the third week of June, liabilities of U.S. banks to their foreign branches rose by more than $7 billion. While these borrowings were relatively large during the entire period, they accelerated enormously in June. During the first three weeks of that month, Euro-dollar borrowings by U.S. banks expanded by $3 billion to reach an all-time record of $13.4 billion.*

Naturally, this competition for funds generated extreme pressure on Euro-dollar deposit rates. From the end of May to the third week in June, the 3-month deposit rate jumped from 9-3/4 per cent to 12-1/2 per cent. However, as the immediate pressure on U.S. banks eased somewhat with the passing of corporate borrowing for tax payments, the banks, in turn, put less pressure on the Euro-dollar market, and rates declined somewhat. Nevertheless, in the last week of June, the 3-month rate was still 11 per cent.

All the sources of the funds supporting the enormous expansion in the Euro-dollar market in recent months are not known. Yet, several sources are known, and several others can be readily deduced. For example, we know that during most of this period foreign central banks have been major suppliers of Euro-dollars. This has been especially

* $13.609 billion as of June 25.

true of Germany, where the decline in Bundesbank reserves reflected the reversal of speculative funds which had flowed into marks. The Bundesbank assisted the reflow by maintaining relatively attractive opportunities for German banks to switch into dollar assets. We know that several other European central banks also experienced reserve declines which had their counterparts in outflows to the Euro-dollar market.

However, in June, other sources of Euro-dollars became much more important in the market. There is an indication that the high Euro-dollar rates attracted some U.S. resident funds into the market -- despite stringent domestic conditions. Moreover, foreign residents may have sold U.S. securities (especially equity issues) and re-invested the proceeds temporarily in Euro-dollar deposits. In particular, there is an indication that some British investors who had financed stock purchases with Euro-dollar loans sold out their U.S. stocks and repaid the Euro-dollar loans. In addition, one gets the impression that the inflow of funds from Middle Eastern countries to the Euro-dollar market has also increased.

As I mentioned earlier, it was against the background of the enormous expansion in Euro-dollar borrowings by American banks that the Federal Reserve recently proposed amendements to its regulations to moderate the flow of Euro-dollars between U.S. banks and their foreign branches

and also between U.S. and foreign banks. These amendments focus on the three major channels through which Euro-dollar funds may affect credit availability in the United States: (1) the flow of Euro-dollar funds between U.S. bank head offices and their overseas branches, (2) the flow of credit between U.S. overseas branches -- which draw on Euro-dollar funds -- and U.S. residents, and (3) the flow of Euro-dollar funds between U.S. banks and foreign banks which are not branches. Briefly, a 10 per cent marginal reserve requirement is proposed on U.S. bank liabilities to overseas branches and on assets acquired by overseas branches from their U.S. head offices in excess of outstandings during a base period -- the four weeks ending May 28, 1969. A 10 per cent marginal reserve requirement would also be applied to U.S. branch loans to U.S. residents in excess of outstandings during a given base period, which may be calculated in one of two optional ways. The reserve-free bases will be subject to automatic reduction -- unless waived by the Board -- when, in any period used to calculate a reserve requirement, outstanding amounts subject to reserve requirements fall below the original base. Finally, the Board proposed to define deposits against which required reserves are calculated to include any borrowing by a member bank from a foreign bank. A 10 per cent reserve requirement will be applied to deposits of this class.

Personally, I hope the proposal to establish reserve requirements against such inflows will be adopted. While the details of the proposal differ somewhat from the suggestion I made earlier in the year, the over-all purpose is the same as the objective I had in mind.

Other Sources of Funds

One of the principal new arrangements commercial banks have used to raise funds is the issuance of commercial paper through a corporation affiliated with the bank. "Commercial paper" refers to short-term unsecured promissory notes of corporations that are sold in the open market. For the most part, banks have used their recently-created one-bank holding companies as the issuing agent, but direct subsidiaries of the bank or other bank or bank holding company affiliates also have been used for this purpose. In the latter cases, the paper generally is sold through a commercial paper dealer and carries the bank's guarantee (in the form of an irrevocable letter of credit) to assure ready marketability of the paper on favorable terms. Paper issued by holding companies of the largest banks generally has been sold direct to investors.

Through the commercial paper instrument, banks have been able to tap a source of funds that is not subject to interest rate ceilings, or reserve requirements as are, for example, their

negotiable CD's, which are purchased in the market largely by the same types of customers that purchase commercial paper. The proceeds of the sale of the paper by the holding companies can be used to purchase loans from the bank, which in turn makes room for the bank to engage in additional lending. However, in the case of paper issued by bank subsidiaries and other affiliates, the proceeds often are used to finance a separate financial activity, such as a mortgage servicing company, without placing any additional drain on the bank's own funds for financing it.

Another device that banks have used to obtain funds in the market outside the scope of ceiling rate and reserve requirment limitations is the sale of participations in individual loans or pools of loans. The instrument used in such transactions generally provides that the bank will repurchase the participation at a specified date or on demand. The loans continue to be serviced by the bank and the borrowers whose loans have been sold may not even be aware that their notes have been involved in such transactions. Sales of participations in loans to correspondent banks are an established practice of long standing among large city banks and have been implicitly sanctioned in existing Federal Reserve regulations. The novel aspect introduced more recently is the sale of such participations to nonbank customers, where they permit a

bank to bid for funds at interest rates and on maturities that would not be permissible under existing regulations on the issuance of time deposits to those customers.

While the above are the principal new arrangements banks have used to obtain additional funds for lending, they have also made use of certain types of guarantee arrangements to facilitate short-term financing by their customers without extending any of the bank's own funds. For one thing, some banks have issued letters of credit similar to those referred to above to guarantee redemption at maturity of commercial paper issued by customers of the bank. Such guarantees assure that the paper will be readily saleable and at a rate of interest below what the market would otherwise require on paper issued by the same corporation without such a guarantee. For providing the guarantee, the bank charges a small fee, which is mainly to compensate for assumption of risk. Since such paper is distributed through a commercial paper dealer, the bank becomes administratively involved, aside from issuance of the guarantee, only if the borrower fails to redeem the notes at maturity, in which case the investor has an automatic claim on the bank for payment.

As I said earlier, these devices are clearly designed to enable banks to escape or delay the effects of monetary restraint. I am hopeful that careful consideration will be given to the timely repair of these openings in the Board's regulations.

The Federal Funds Market

For many years banks have been extending credit to each other through transactions in Federal funds -- that is, through transfers of balances on deposit at the Federal Reserve Banks. Such transactions, which generally represent 1-day loans, are an important means used by banks in adjusting their reserve positions. Large banks, in particular, often make use of these temporary borrowings as a continuing source of portfolio financing.

In earlier years, the daily volume of these transactions had remained relatively small, but recently the volume has increased sharply. For example, five years ago, the daily average volume of gross purchases plus gross sales of Federal funds was below $3 billion, but in May this year it was more than $9 billion.

The trend toward more active use of the Federal funds market has tended to accelerate during periods of restrictive monetary policy. In 1966, as major banks came under increased pressure from restricted reserve availability and the enforced runoff of their negotiable CD's, they began to compete more aggressively for funds in the Federal funds market. As interest rates paid on these funds rose, and the efforts of many large banks to encourage more widespread participation in this market, particularly among their correspondent banks, met with success, the volume of transactions rose rapidly from an average daily volume of about $3.8 billion in the fourth quarter of 1965 to more than $5 billion in the autumn of 1966.

Despite the relatively easy posture of monetary policy in 1967, the volume of Federal funds trading remained near the plateau that had been reached in late 1966. But the relatively restrictive policies beginning in 1968 stimulated a further rise in the level of funds trading to the record levels recently recorded.

To some extent, the change in reserve-computation procedures introduced last September facilitated this growth. The authorization granted to Federal Reserve member banks at that time to calculate required reserves on deposits two weeks earlier and to carry forward limited amounts of excess reserves as well as reserve deficits from one reserve-computation period to another enabled smaller banks in particular to manage their reserve positions more closely and to make more extensive use of the purchase or sale of Federal funds for reserve funds for reserve adjustments. But probably more important as a stimulus to such trading has been the unusually sharp rise in rates paid on these funds. For example, the average effective rate on Federal funds last December was 6.02 per cent; in May, it was 8.67, and through most of June it has averaged in excess of 9 per cent.

One new development that I should like to note before leaving this subject is that some banks have begun to make the Federal funds market available to their corporate depositors as a means of providing them with short-term funds. In the Board's judgment, no justification exists for a bank's liability on such transactions to be exempt from rules governing reserve requirements and the legal prohibition against payment of

interest on demand deposits. Accordingly, the Board published recently a proposed revision of its Regulations D and Q to make sure that such arrangements -- oral or otherwise -- are covered.

Impact of Interest Rate Ceilings

As I mentioned above, much of the scramble by U.S. banks to find new sources of funds can be traced to the sharp attrition in large denomination time deposits. This attrition in CD's, in turn, reflects the fact that the maximum interest rate payable on such money market instruments has been kept at 6-1/4 per cent since April, 1968. Naturally, the suggestion has been made strongly (not only by U.S. banks but in Europe as well) that the ceiling be raised.

I personally would not support such a move in today's circumstances. If such a step were taken, in my opinion, it would further undermine the effects of monetary restraint in the United States. Commercial banks could be expected to use any new headroom given to compete vigorously for funds in the domestic market, and this would reduce their incentives for exerting much needed restraint on lending, particularly lending to business.

Limitations on the availability of funds to lenders, thereby forcing them to ration loans, are a critical element of monetary restraint, especially in an inflationary period when many borrowers are willing to pay rising interest rates in order to obtain funds. Banks can be expected to bend every effort to obtain loanable funds so as not to lose any prospective customers. Thus, if they were given leeway under Regulation

Q, they would likely rush to take advantage of it, and thereby increase the availability of funds to borrowers, including those who do not have ready access to other sources of funds. This expected pattern of behavior can be inferred from the data in Table 4, which provides information on the distribution of CD attrition in three periods, 1966-69, and the speed of recovery from lows in 1966 and 1968 as CD's became competitive with market rates.

The recovery from runoffs after the 1966 low reflected rapidly declining market rates following the shift toward easier monetary policy. While 1966 losses at New York banks were not recovered for over one-half year, the CD inflow to these banks was very strong during the early weeks when smaller banks recovered their losses fully.

In 1968, interest rate ceilings were restructured upward in April during the runoff period, but the net inflow of CD's did not begin until about mid-year when expectations in the wake of the surtax legislation brought market rates below CD ceilings again. While the New York recovery to the earlier high again took longer than smaller banks, inflows were very strong in New York in the early weeks of the recovery.

It is interesting to note that the smallest size categories shown in Table 4 did not experience any runoffs in the 1966 and 1968 periods of attrition, and the smallest size group was still reporting a net increase in CD's through April 30, 1969, the latest date for which the bank size data are available.

TABLE 4. CD ATTRITION AND RECOVERY BY SIZE OF BANK, 1966-69
(Amounts are in millions of dollars on CD maturity survey dates)

	Total WRBs reporting	Size of bank--total deposits ($ millions)						
		200 & under	200-500	500-1,000	1,000 and over			
					Total	Prime		Non-prime
						N.Y.	Other	
1966 period								
Outstanding CD's:								
July 27, 1966	18,272	599	1,779	2,381	13,513	6,976	4,178	2,359
Nov. 30, 1966	15,460	621	1,692	2,367	10,780	5,115	3,419	2,279
CD change--$ mil.	-2,812	+22	-87	-14	-2,733	-1,861	-759	-80
%	-15.4	3.7	-4.9	-0.6	-20.2	26.7	-18.2	-3.4
Number of months after low to recover CD losses:								
90%	2		2	1	4	8	2	2
100%	3		2	1	4	9	3	2
1968 period								
Outstanding CD's:								
Feb. 28, 1968	21,085	920	2,421	3,504	14,240	6,222	5,071	2,947
June 26, 1968	19,268	954	2,424	3,443	12,448	5,406	4,303	2,739
CD change--$ mil.	-1,817	34	3	-61	-1,792	-816	-768	-208
%	-8.6	3.7	0.1	-1.7	-12.6	-13.1	-15.1	-7.1
Number of months to recover CD losses:								
90%	1			1	1	4	2	1
100%	1			1	2	4	2	1
1969 period								
Outstanding CD's								
Nov. 27, 1968	24,307	1,102	2,871	4,387	15,948	6,985	5,503	3,460
Apr. 30, 1969 (most recent)	17,612	1,151	2,698	3,429	10,334	3,519	4,069	2,747
Change: $ mil.	-6,695	49	-173	-958	-5,614	-3,466	-1,434	-713
%	-27.5	4.4	-6.0	-21.8	-35.2	-49.6	-26.1	-20.6
MEMO: Number of banks	265	93	85	50	37	7	12	18

The table also gives an indication of the extent of greater decline in CD's relative to pre-attrition highs in 1969, with all categories showing deeper attrition in the recent period than in 1966 and 1968. The current attrition has gone on longer and has been more intense than in previous periods.

The attrition in CD's and constraint on other deposits has resulted in compression of bank liquidity and a stiffening of loan terms offered by banks. These developments should help in cooling the economy as borrowers find funds less readily available and more costly, and as the Federal Reserve's intentions to curb inflation and inflationary psychology becomes wholly recognized. In this context, one can see little to be gained -- and much to be lost -- if banks are permitted to bid aggressively (without some sense of constraint) for funds to be loaned, including CD funds.

APPENDIX TABLE

NET CHANGE IN MAJOR BALANCE SHEETS ITEMS FOR WEEKLY REPORTING BANKS, BY SIZE OF BANKS
(August 17, 1966-December 14, 1966 and December 18, 1968-May 28, 1969)
(In billions of dollars)

Size of Banks * (Total Deposits) Selected Balance Sheet Items	1966						1969					
	Held 8/17/66		Held 12/14/66		Change		Held 12/18/68		Held 5/28/69		Change	
	amount	per cent	amount	per cent	amount	per cent	amount	per cent	amount	per cent	amount	per cent
(1) Total Deposits												
under $0.5	45.4	29.0	42.7	27.3	-2.7	900.0	44.4	23.2	44.7	25.0	0.3	-
0.5 - 1.0	25.3	16.1	28.2	18.0	2.9	-966.7	32.1	16.8	31.2	17.4	-0.9	7.2
over 1.0	86.0	54.9	85.5	54.7	-0.5	166.7	114.9	60.0	102.9	57.6	-12.0	95.2
Total	156.7	100.0	156.4	100.0	-0.3	100.0	191.4	100.0	178.8	100.0	-12.6	100.0
11 E-D Banks	52.1	33.2	48.5	31.0	-3.6	1200.0	59.1	30.9	52.4	29.3	-6.7	53.2
(2) Demand Deposits												
under $0.5	20.6	31.6	19.5	28.8	-1.1	-44.0	19.3	24.4	18.4	25.3	-0.9	13.8
0.5 - 1.0	11.4	17.5	12.8	18.9	1.4	56.0	14.2	17.9	13.3	18.3	-0.9	13.8
over 1.0	33.2	50.9	35.4	52.3	2.2	88.0	45.7	57.7	41.0	56.4	-4.7	72.4
Total	65.2	100.0	67.7	100.0	2.5	100.0	79.2	100.0	72.7	100.0	-6.5	100.0
11 E-D Banks	21.9	33.6	20.9	30.9	-1.0	-40.0	25.5	32.2	23.5	32.3	-2.0	30.8

* Number of banks in sample

under $0.5	261	250	232	235
0.5 - 1.0	46	53	57	56
over 1.0	35	36	48	45
Total	342	339	337	336

NET CHANGE IN MAJOR BALANCE SHEETS ITEMS FOR WEEKLY REPORTING BANKS, BY SIZE OF BANKS
(continued)

Size of Banks (Total Deposits) Selected Balance Sheet Items	1966						1969					
	Held 8/17/66		Held 12/14/66		Change		Held 12/18/68		Held 5/28/69		Change	
	amount	per cent	amount	per cent	amount	per cent	amount	per cent	amount	per cent	amount	per cent
(3) Total Time and Savings												
under $0.5	24.8	27.1	23.2	26.1	-1.6	57.1	25.1	22.4	26.4	24.8	1.3	-21.7
0.5 - 1.0	13.9	15.2	15.4	17.4	1.5	-53.6	17.9	15.9	17.9	16.9	0	0
over 1.0	52.8	57.7	50.1	56.5	-2.7	96.4	69.2	61.7	61.9	58.3	-7.3	121.7
Total	91.5	100.0	88.7	100.0	-2.8	100.0	112.2	100.0	106.2	100.0	-6.0	100.0
11 E-D Banks	30.2	33.0	27.6	31.1	-2.6	92.9	33.6	29.9	28.9	27.2	-4.6	76.7
(4) Time & Savings Less CD's												
under $0.5	21.9	30.1	20.9	28.5	-1.0	-200.0	21.8	24.5	22.9	25.7	1.1	2[redacted]0
0.5 - 1.0	11.5	15.8	12.7	17.3	1.2	240.0	14.3	16.1	14.7	16.5	0.4	100.0
over 1.0	39.4	54.1	39.7	54.2	0.3	60.0	52.7	59.4	51.6	57.8	-1.1	-275.0
Total	72.8	100.0	73.3	100.0	0.5	100.0	88.8	100.0	89.2	100.0	0.4	100.0
11 E-D Banks	21.1	29.0	21.1	28.8			24.4	27.5	24.2	27.1	-0.2	-50.0
(5) Money Market CD's												
under $0.5	2.9	15.6	2.3	14.9	-0.6	18.8	3.3	14.1	3.4	20.0	0.1	-1.6
0.5 - 1.0	2.3	12.4	2.7	17.5	0.4	-12.5	3.6	15.3	3.2	18.8	-0.4	6.2
over 1.0	13.4	72.0	10.4	67.6	-3.0	93.7	16.6	70.6	10.4	61.2	-6.2	95.4
Total	18.6	100.0	15.4	100.0	-3.2	100.0	23.5	100.0	17.0	100.0	-6.5	100.0
11 E-D Banks	9.4	50.5	6.8	44.2	-2.6	81.3	8.4	35.7	4.6	27.1	-3.8	58.5

NET CHANGE IN MAJOR BALANCE SHEETS ITEMS FOR WEEKLY REPORTING BANKS, BY SIZE OF BANKS
(continued)

Size of Banks (Total Deposits) Selected Balance Sheet Items	1966						1969					
	Held 8/17/66		Held 12/14/66		Change		Held 12/18/68		Held 5/28/69		Change	
	amount	per cent	amount	per cent	amount	per cent	amount	per cent	amount	per cent	amount	per cent
(6) Other Liabilities												
under $0.5	1.6	15.8	1.6	13.6	0	0	1.7	9.1	1.9	8.5	0.2	5.3
0.5 - 1.0	1.0	9.9	1.1	9.3	0.1	5.9	1.4	7.5	1.5	6.7	0.1	2.6
over 1.0	7.5	74.3	9.1	77.1	1.6	94.1	15.5	83.4	19.0	84.8	3.5	92
Total	10.1	100.0	11.8	100.0	1.7	100.0	18.6	100.0	22.4	100.0	3.8	100.0
11 E-D Banks	6.2	61.4	7.7	65.3	1.5	88.2	10.0	53.8	15.7	70.1	5.7	150.0
(7) Liabilities to Foreign Branches												
under $0.5	-		-		-		-		-		-	
0.5 - 1.0	-		-		-		-		-		-	
over 1.0	2.9		4.3		1.4		7.3		10.3		3.0	
Total	2.9		4.3		1.4		7.3		10.3		3.0	
11 E-D Banks	2.9		4.3		1.4		7.3		10.3		3.0	
(8) Other Liabilities Less those to Foreign Branches												
under $0.5	1.6	22.2	1.6	21.3	0	0	1.7	15.0	1.9	15.7	0.2	25.0
0.5 - 1.0	1.0	13.9	1.1	14.7	0.1	33.3	1.4	12.4	1.5	12.4	0.1	12.5
over 1.0	4.6	63.9	4.8	64.0	0.2	66.7	8.2	72.6	8.7	71.9	0.5	62.5
Total	7.2	100.0	7.5	100.0	0.3	100.0	11.3	100.0	12.1	100.0	0.8	100.0
11 E-D Banks	3.3	45.8	3.4	45.3	0.1	33.3	2.7	23.9	5.4	44.6	2.7	337.5

NET CHANGE IN MAJOR BALANCE SHEETS ITEMS FOR WEEKLY REPORTING BANKS, BY SIZE OF BANKS
(continued)

Size of Banks (Total Deposits) Selected Balance Sheet Items	1966						1969					
	Held 8/17/66		Held 12/14/66		Change		Held 12/18/68		Held 5/28/69		Change	
	amount	per cent	amount	per cent	amount	per cent	amount	per cent	amount	per cent	amount	per cent
(9) Total Borrowings												
under $0.5	1.1	17.2	0.8	11.4	-0.3	-50.0	1.1	8.9	2.0	13.0	0.9	30.0
0.5 - 1.0	0.9	14.1	1.0	14.3	0.1	16.7	1.7	13.7	2.3	14.9	0.6	20.0
over 1.0	4.4	68.7	5.2	74.3	0.8	133.3	9.6	77.4	11.1	72.1	1.5	50.0
Total	6.4	100.0	7.0	100.0	0.6	100.0	12.4	100.0	15.4	100.0	3.0	100.0
11 E-D Banks	3.2	50.0	3.7	52.9	0.5	83.3	5.5	44.4	6.4	41.6	0.9	30.0
(10) Total Loans												
under $0.5	34.7	26.3	32.1	24.3	-2.6	-371.4	32.1	20.0	34.5	21.3	2.4	133.3
0.5 - 1.0	20.9	15.9	23.2	17.5	2.3	328.6	24.8	15.5	26.0	16.0	1.2	66.7
over 1.0	76.1	57.8	77.1	58.2	1.0	142.9	103.3	64.5	101.5	62.7	-1.8	-100.0
Total	131.7	100.0	132.4	100.0	0.7	100.0	160.2	100.0	162.0	100.0	1.8	100.0
11 E-D Banks	47.8	36.3	45.1	34.1	-2.7	-385.7	58.1	36.3	57.2	35.3	-0.9	-50.0
(11) Real Estate Loans												
under $0.5	8.5	31.5	8.3	30.3	-0.2	-50.0	8.2	25.6	8.9	27.0	0.7	70.0
0.5 - 1.0	4.8	17.8	5.4	19.7	0.6	150.0	6.0	18.8	6.0	18.2	0	0
over 1.0	13.7	50.7	13.7	50.0	0	0	17.8	55.6	18.1	54.8	0.3	30.0
Total	27.0	100.0	27.4	100.0	0.4	100.0	32.0	100.0	33.0	100.0	1.0	100.0
11 E-D Banks	7.2	26.7	7.2	26.3	-0.2	-50.0	7.2	22.5	7.6	23.0	0.4	40.0

NET CHANGE IN MAJOR BALANCE SHEETS ITEMS FOR WEEKLY REPORTING BANKS, BY SIZE OF BANKS
(continued)

Size of Banks (Total Deposits) and Selected Balance Sheet Items	1966						1969					
	Held 8/17/66		Held 12/14/66		Change		Held 12/18/68		Held 5/28/69		Change	
	amount	per cent	amount	per cent	amount	per cent	amount	per cent	amount	per cent	amount	per cent
(12)												
Business Loans												
under $0.5	12.1	20.5	10.9	18.0	-1.2	-85.7	11.1	15.2	12.1	15.8	1.0	28.6
0.5 - 1.0	8.0	13.6	9.0	14.9	1.0	71.4	9.8	13.4	10.6	13.8	0.8	22.9
over 1.0	38.9	65.9	40.5	67.1	1.6	114.3	52.2	71.4	53.9	70.4	1.7	48.6
Total	59.0	100.0	60.4	100.0	1.4	100.0	73.1	100.0	76.6	100.0	3.5	100.0
11 E-D Banks	27.0	45.8	28.1	46.5	1.1	78.6	33.2	45.4	34.4	44.9	1.2	34.3
(13)												
Other Loans												
under $0.5	14.1	30.9	12.9	28.9	-1.2	109.0	12.8	23.3	13.5	25.8	0.7	-25.9
0.5 - 1.0	8.1	17.7	8.8	19.7	0.7	-63.6	9.0	16.3	9.4	17.9	0.4	-14.8
over 1.0	23.5	51.4	22.9	51.4	-0.6	54.6	33.3	60.4	29.5	56.3	-3.8	140.7
Total	45.7	100.0	44.6	100.0	-1.1	100.0	55.1	100.0	52.4	100.0	-2.7	100.0
11 E-D Banks	13.6	29.8	9.8	22.0	-3.8	345.5	17.7	32.1	15.2	29.0	-2.5	92.6