

FEDERAL RESERVE BANK OF NEW YORK



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Treasury and Federal Reserve Foreign Exchange Operations*

By CHARLES A. COOMBS

The announcement on September 10 of new central bank arrangements in support of sterling helped to set the stage for the strong recovery of sterling this past winter. This operation brought about a definite turning in market sentiment, the effects of which were evident not only on sterling itself but on several other major currencies including the dollar. Indeed the air of impending crisis that had hung over the exchanges during so much of the year prior to last September faded rapidly once the success of the September 10 operation became evident. During the succeeding six months through February, the period covered by this report, the markets were generally calmer and more orderly than at any time in recent years.

More fundamental than the change in market psychology were the indications that a number of countries were moving away from positions of extreme deficit or surplus and toward better balance of payments equilibrium. The persistent payments deficit of the United States at last seemed to be yielding to the latest series of official measures, including most notably the voluntary foreign credit restraint program, backed up by gradually tightening credit conditions. At the same time, the United Kingdom position showed substantial improvement. Although there were fairly wide swings in the capital account, the British trade deficit was narrowing. At the other end of the spectrum, the huge surpluses of Italy and France began to taper off during the winter months as domestic activity expanded.

Other developments that helped to promote stability

in the exchange markets this past winter were the actions taken by a number of foreign central banks to minimize the effects on international money and exchange markets of temporary domestic credit squeezes, year-end pressures, and abnormal strains. The Netherlands Bank, for example, resumed swap operations with Dutch commercial banks in the fall (taking in dollars spot and selling them forward), thus providing the domestic liquidity that the banks were seeking through repatriations of foreign assets without running up the central bank's holdings of dollars. Likewise the Italian authorities during the fall continued to engage in swaps with Italian commercial banks, in this case selling spot dollars to the banks under forward repurchase contracts in order to funnel back into private channels dollars that otherwise would have been drained off into official reserves. This type of exchange operation, which the Italians had resumed in 1964 when a large payments surplus had reemerged, reached record levels during 1965, and served not only to promote balanced conditions in the Euro-dollar market, but also averted the possibility of large-scale drains on the United States gold stock and consequent reduction in international liquidity. To facilitate the Italian operation, first the United States Treasury and then, in November, the Federal Reserve System agreed to share the forward exchange contracts assumed by the Italian authorities. Toward the year-end, when some Italian banks began to repatriate dollars they had previously placed abroad, the Italian authorities stepped up the pace of their swaps with other banks to offset partially the effect of these repatriations.

In addition to the Bank of Italy, the Swiss and German authorities also took steps to see that the usual repatriation of funds toward the year-end exerted as little disruptive influence on the international financial markets as possible. The German Federal Bank, for example, temporarily reduced commercial bank reserve requirements during

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Table I
FEDERAL RESERVE RECIPROCAL CURRENCY ARRANGEMENTS AND COMMITMENTS

Institution	Term of arrangement (in months)	Amount of total facility, February 28, 1966	System commitments		
			December 31, 1964	April 6, 1965	February 28, 1966
In millions of dollars equivalent					
Austrian National Bank	12	50			
National Bank of Belgium	12	100	45	100	
Bank of Canada	12	250			
Bank of England	12	750			
Bank of France	3	100			
German Federal Bank	6	250	50	5	
Bank of Italy	12	450		200	
Bank of Japan	12	250			
Netherlands Bank	3	100	100	50	
Bank of Sweden	12	50			
Swiss National Bank	6	150		130	
Bank for International Settlements.....	6	300*	100	100	
Total		2,800	295	585	0

* Of which, half is available in Swiss francs and half in other European currencies.

December, thus easing seasonal pressures and, in conjunction with other developments, successfully avoiding the sizable repatriations that had characterized previous years. The Swiss National Bank, following the pattern that it had developed to deal with seasonal pressures in the past, began in early December to take dollars in from the market on a swap basis. Before the end of the month, it had purchased a record \$385 million from Swiss commercial banks under swaps, and had in turn placed them back in the Euro-dollar market via the Bank for International Settlements (BIS). All these special arrangements helped to insure that temporary pressures would not cause dislocations in the exchange markets that could easily have complicated the recovery of sterling as well as posed problems in official reserve management.

With the reversal of pressures on sterling and the broad improvement in the position of the dollar, both the United States and United Kingdom authorities made good progress in reducing short-term commitments. Reflecting the success of the September 10 operation, the improving balance of payments trend, and the special central bank arrangements over the year-end, sterling showed sustained strength during the winter months and between September and February the Bank of England took in over \$1 billion, exclusive of very substantial receipts used to liquidate maturing forward contracts. As a result, the British

authorities were able to pay off not only the special end-of-August United States credits of \$140 million, but the entire \$750 million in drawings under the swap line with the Federal Reserve System as well.

Similarly, during 1965, System swap commitments were reduced by \$450 million equivalent from a peak of \$585 million in early April to \$135 million equivalent at the end of the year, and the remainder of these drawings was paid off during January and February. Thus, by the end of February, the Federal Reserve swap network—now totaling \$2.8 billion (see Table I)—was fully on a standby basis. During the four years since the first swap arrangement was initiated in 1962, total drawings by the Federal Reserve and foreign central banks amounted to more than \$6 billion; of this total, \$5.6 billion, or 93 per cent, was repaid within six months (see Tables II and III), and no drawings were outstanding for more than one year.

In addition to swap repayments, System and Treasury forward contracts—exclusive of technical commitments in Italian lire—which had reached a 1965 peak of \$281 million in January were all paid off. The Treasury also acquired sufficient marks to repay \$175 million equivalent of mark-denominated bonds during the period July-March, thus largely offsetting the increase in foreign currency bonds that had taken place earlier in 1965 (see Table IV).

Table II
DRAWINGS AND REPAYMENTS BY FEDERAL RESERVE SYSTEM
UNDER RECIPROCAL CURRENCY ARRANGEMENTS

March 1962-February 1966

In millions of dollars equivalent

Institution Year	Drawings*	Repaid within			
		3 months	3-6 months	6-9 months	9-12 months
Austrian National Bank					
1962	50.0	50.0			
Total	50.0	50.0			
National Bank of Belgium†					
1962	30.5	30.5			
1963	25.0	25.0			
1964	145.0	62.5	37.5	45.0	
1965	150.0	70.0	75.0	5.0	
Total	350.5	188.0	112.5	50.0	
Bank of Canada					
1963	20.0	20.0			
Total	20.0	20.0			
Bank of England					
1962	50.0	50.0			
1963	35.0	35.0			
Total	85.0	85.0			
Bank of France					
1962	50.0		50.0		
1963	21.5	21.5			
Total	71.5	21.5	50.0		
German Federal Bank					
1963	286.0	143.5	142.5		
1964	105.0	105.0			
1965	15.0	15.0			
Total	406.0	263.5	142.5		
Bank of Italy					
1962	50.0	50.0			
1965	350.0	82.0	268.0		
Total	400.0	132.0	268.0		
Netherlands Bank					
1962	60.0	50.0	10.0		
1963	150.0	60.0	90.0		
1964	100.0		55.0	45.0	
1965	25.0		25.0		
Total	335.0	110.0	180.0	45.0	
Swiss National Bank					
1962	50.0				50.0
1963	80.0	5.0	20.0	55.0	
1964	25.0	25.0			
1965	150.0	90.0	12.0		48.0
Total	305.0	120.0	32.0	55.0	98.0
Bank for International Settlements					
1962	80.0	40.0	5.0	19.5	15.5
1963	150.0	5.0	65.0	80.0	
1964	100.0		35.0	65.0	
Total	330.0	45.0	105.0	164.5	15.5
All banks					
1962	420.5	270.5	65.0	19.5	65.5
1963	767.5	315.0	317.5	135.0	
1964	475.0	192.5	127.5	155.0	
1965	690.0	257.0	380.0	5.0	48.0
Total	2,353.0	1,035.0	890.0	314.5	113.5

* No drawings were outstanding at the end of the period.

† Data relate to disbursements and repayments under the \$50 million fully drawn portion of the swap facility and to utilization of the \$50 million standby portion available since December 1964.

Table III
DRAWINGS AND REPAYMENTS BY FOREIGN CENTRAL BANKS
UNDER RECIPROCAL CURRENCY ARRANGEMENTS

March 1962-February 28, 1966

In millions of dollars

Institution Year	Drawings*	Repaid within	
		3 months	3-6 months
National Bank of Belgium			
1963	45.0	40.0	5.0
Total	45.0	40.0	5.0
Bank of Canada			
1962	250.0		250.0
Total	250.0		250.0
Bank of England			
1963	25.0	25.0	
1964	1,370.0	1,370.0	
1965	1,765.0	1,290.0	475.0
Total	3,160.0	2,685.0	475.0
Bank of Italy			
1963	50.0		50.0
1964	100.0		100.0
Total	150.0		150.0
Bank of Japan			
1964	80.0	30.0	50.0
Total	80.0	30.0	50.0
All banks			
1962	250.0		250.0
1963	120.0	65.0	55.0
1964	1,550.0	1,400.0	150.0
1965	1,765.0	1,290.0	475.0
Total	3,685.0	2,755.0	930.0

* No drawings were outstanding at the end of the period.

STERLING

By August 1965 the sterling crisis had stretched out over a full year. During this period, the Bank of England twice drew the full amount of the Federal Reserve swap line, \$500 million by November 1964 and \$750 million by August 1965, while also receiving sizable credits from other central banks. At the end of August, the Bank of England drew supplementary credits of \$140 million from the Federal Reserve and United States Treasury. In December 1964 and May 1965, the British authorities drew the full \$2.4 billion available to them from the International Monetary Fund (IMF) and received \$120 million in medium-term credits from Switzerland: of that total of \$2.5 billion, around \$2.1 billion was used to repay earlier short-term credits from the Federal Reserve and other central banks. Throughout this period, not only the British financial authorities but central banks and treasuries all over the

world lived under the constant threat that the pressures against sterling might have seriously disturbing effects upon the flow of world trade and payments.

While short-term central bank credits and subsequent funding operations through the IMF provided the basic defense line for sterling during this troubled period, inadequate recognition has been given to the success of Bank of England operations in the forward market which were conducted forcefully and with great technical skill during the course of the year. Such large-scale operations in the forward market not only exerted at critical moments a highly salutary influence on market confidence, but also had the vitally important effect of relieving pressure on the spot market and British dollar reserves by providing at reasonable cost the alternative of hedging in the forward market. In the absence of such forward operations, it seems all too clear that the drain upon British reserves and utilization of central bank credits would have been much heavier and consequently would have aggravated still further an already dangerous crisis.

As noted in the previous report in this series, one of the most striking features of the sterling market during the summer months of 1965 was the skepticism of the market regarding the effectiveness of the series of policy measures taken by the British Government to correct the deficit in the British balance of payments. There was, in fact, impressive statistical evidence that these policy correctives had begun to yield results; during the first eight months of 1965, for example, British exports had risen more than 5 per cent over the corresponding period of 1964, while the rise in imports was negligible. With price and wage pressures continuing, however, the market remained convinced that sterling was heading into a new and even more serious crisis, and by the late summer of 1965 market confidence in sterling had withered away almost to the vanishing point. At this moment, the British financial authorities were again confronted with a crisis situation which was in many respects even more dangerous than the flight from sterling in November 1964. As of August 31, the British drawing rights of \$2.4 billion with the IMF had been exhausted, short-term credits from the Federal Reserve and United States Treasury had reached the sizable total of \$890 million, while very heavy commitments in the forward market had also been assumed. The market was aware of the heavy depletion of foreign credit resources during the preceding year and increasingly questioned whether Britain's financial defenses would not collapse simply for lack of funds.

It would indeed have been a major tragedy if the forces of speculation had overwhelmed sterling at this point through lack of outside assistance, more particularly since

selling pressure on sterling was showing signs of exhaustion and from time to time market shortages of sterling began to appear. The bonds of mutual interest linking the central banks and treasuries of the Western world again proved their strength, however, and in a special meeting at the BIS on September 5 the Bank of England and the Federal Reserve enlisted the assistance of nine other central banks and the BIS in a new operation in support of sterling. (Under these new arrangements, the Federal Reserve agreed to provide an additional \$200 million for cooperative action on the exchange markets while the United States Treasury supplied a further substantial amount.)

This new operation was based upon a policy decision of the British Government to take determined action to arrest the inflationary trend of prices and wages which had been progressively undermining the position of sterling and creating market fears of devaluation. Announcement on September 1 of the British Government's intention to seek Parliamentary authorization of new powers to deal with the wage-price spiral had in fact brought an immediate improvement in market sentiment and a more buoyant tendency in the sterling rate. The central banks which agreed to participate in a new support operation for sterling were also well aware of the fact that speculative pressures over the preceding year had left sterling in a grossly oversold position, in both the spot and forward markets. In fact, the technical position of sterling in the exchange markets had become so favorable as to open up

an excellent opportunity for executing a bear squeeze.

This official counterattack was launched on September 10 with good results. At 9 a.m. New York time and 2 p.m. London time, the Bank of England announced the negotiation with the central banks of Austria, Belgium, Canada, Germany, the Netherlands, Italy, Japan, Sweden, Switzerland, the United States, and the BIS of new arrangements which would enable appropriate action to be taken in the exchange markets with the full cooperation of the central banks concerned. Fifteen minutes later, the Federal Reserve Bank of New York, operating for System account, simultaneously placed bids for sterling totaling the equivalent of nearly \$30 million with all the major banks operating in the New York exchange market at the then-prevailing rate of \$2.7918. The market rate immediately reacted upward, and the Federal Reserve pursued the upward movement with new and higher bids until the rate of \$2.7934 was reached; at this rate level, \$8 million equivalent of sterling was sold by the market to the Federal Reserve. After the rate had held at this level for a certain interval, the New York Bank proceeded to bid the rate up still further. By the close of the day the rate had risen to \$2.7945 and Federal Reserve sterling purchases totaled no more than \$13 million equivalent.

On the following day, in both London and New York, market forces took over and bid the rate up so strongly that the Bank of England intervened to limit the rise and in the process began an accumulation of dollars which

Table IV
OUTSTANDING UNITED STATES TREASURY SECURITIES,
FOREIGN CURRENCY SERIES
In millions of dollars equivalent

Issued to	Amount outstanding January 1, 1965	Transactions (+) denotes issued; (-) redeemed					Amount outstanding March 1, 1966
		1965				1966	
		I	II	III	IV	January-February	
Austrian National Bank	50.3	+ 50.3					100.7
National Bank of Belgium	30.1						30.2
German Federal Bank	678.7			- 25.1	- 50.3	- 100.6	501.0
Bank of Italy				+ 124.8			124.8
Swiss National Bank	257.4						257.3
Bank for International Settlements*	69.5			+ 23.2			92.6
Total	1,086.0	+ 50.3	0	+ 122.9	- 50.3	- 100.6	1,106.6

Note: Discrepancies in amounts are due to valuation adjustments and rounding.

* Denominated in Swiss francs.

continued almost without interruption over the following five months. Since the intervention by the Federal Reserve on September 10 succeeded in triggering such a strong shift in market expectations, possibilities of simultaneous intervention in support of sterling by other central banks in their markets did not have to be called into play but remain available if and when needed.

The major swing in the position of sterling since the bear squeeze was initiated on September 10 has apparently reflected not only extensive short covering but also a major improvement in the British balance of payments position during the fourth quarter of 1965. Since the turn of the year, favorable seasonal forces have also come into play, with the result that the sterling rate moved into new, high ground during January and the Bank of England took in a further sizable amount of dollars. In February, however, poor trade figures for January and rumors of an early election (announced on February 28 for March 31) tended to unsettle the market by injecting new elements of uncertainty. Exchange traders understandably took a more cautious view, which became reflected in a narrowing of the sterling market and a reduced rate of reserve gains by the Bank of England.

As dollars have flowed back to the Bank of England since September, the Bank has shown a scrupulous regard for honoring the maturity dates of its short-term borrowing from foreign financial authorities. Of the total influx of more than \$1 billion during the six months' period, September 1965 to February 1966, the Bank of England has devoted \$890 million to repaying in their entirety credits received during the summer months of 1965 from the Federal Reserve and United States Treasury. Simultaneously, the Bank of England has succeeded in liquidating a very substantial part of its forward exchange commitments and has thereby strengthened its hand for dealing with any new pressures in the forward market. With so much of the inflow of dollars thus used in liquidating official debt and forward market commitments, the British Government, on March 1, deemed it useful to reinforce its official reserves by shifting \$885 million of liquid dollar assets from its securities portfolio into the official reserves. This action raised British official reserves to a level of \$3,648 million, an increase of \$1,064 million over the end-of-August-1965 level. As noted by Chancellor Callaghan, these reserve availabilities are effectively enlarged by the reconstitution of the \$750 million swap line with the Federal Reserve, an unused Export-Import Bank credit line of \$250 million, and the remaining \$500 million in the British Government securities portfolio to an over-all figure in excess of \$5 billion. Together with the facilities from the September 10 package,

this adds up to an impressive total of financial resources which can be readily deployed to deal with any recurrence of speculative pressure on sterling.

SWISS FRANC

The heavy demand for Swiss francs that had prevailed during most of 1964 appeared only sporadically during 1965. Indeed, francs frequently were on offer in the exchange markets—despite a sharp reduction in Switzerland's trade deficit last year. Under these circumstances, United States authorities were able to purchase large amounts of Swiss francs. Since March 1965, a total of \$299.6 million of short-term Swiss franc commitments has been liquidated.

About one half the commitments that were repaid had been incurred during January and March to absorb dollars taken in by the Swiss National Bank at the end of 1964. After the turn of the year the franc rate began to ease, and the United States authorities were able to purchase Swiss francs throughout the spring and early summer; between March and July, purchases totaled some \$239 million, including \$20 million equivalent purchased from the Bank of England and \$40 million acquired under a German mark-Swiss franc swap with the BIS. These francs were used to liquidate \$202 million of the Federal Reserve's \$250 million drawings under the swap arrangements and \$37 million of Federal Reserve and Treasury forward market sales.

In mid-July, however, the Swiss franc rose to its effective ceiling of \$0.2317½ in connection with the unwinding of midyear swaps and inflows of funds from London. Consequently, the Swiss National Bank bought dollars in its market, and the United States Treasury absorbed \$23 million of these gains with the proceeds of a Swiss franc-denominated bond issued to the BIS. This bond sale raised the Treasury's Swiss franc bond indebtedness to \$350 million equivalent.

In mid-August the Swiss franc began to back away from its ceiling, as tensions associated with sterling subsided and the Swiss money market became easier. By October the franc had dipped to \$0.2314 as short-term funds were placed abroad, and the Swiss National Bank began late that month to meet some of its current dollar requirements by selling Swiss francs to the Federal Reserve. These and other purchases enabled the System by early December to liquidate its remaining \$48 million equivalent swap drawing from the Swiss National Bank. Also, during December, the final \$22.5 million equivalent of Treasury forward market commitments was paid off.

It is significant that these repayments extended into

December, a period when the Swiss franc is usually at its ceiling as a result of repatriations of short-term Swiss assets. On previous occasions the Swiss National Bank met these pressures partly through outright purchases of dollars and partly through short-term swaps with the commercial banks. But in 1965 the Swiss National Bank began on December 1 to buy dollars from Swiss banks on the basis of one-month swaps. These swaps—which eventually reached a record level of \$385 million—made it possible for the Swiss National Bank to minimize the increase in its uncovered dollar position. At the same time, the Swiss National Bank acted to insure that this inflow of dollars did not result in a tightening of the Euro-dollar market; as it absorbed dollars under these short-term swaps with the market, it simultaneously entered into gold-dollar swaps with the BIS and that institution immediately invested most of the dollars in the Euro-dollar market.

After the year-end the Swiss franc eased further below its ceiling, and during January and February the spot rate was generally below \$0.2310, despite heavy trading volume on occasion. In February and early March, dollar requirements of the Swiss Confederation prompted the Swiss National Bank to purchase \$33.5 million from the Federal Reserve with Swiss francs. Most of the francs were then used to repay \$30 million of the System's \$40 million equivalent German mark-Swiss franc swap with the BIS. Thus, by early March, outstanding United States short-term Swiss franc indebtedness had been reduced to only two German mark-Swiss franc third currency swaps with the BIS—one for \$10 million equivalent for System account and one for \$15 million equivalent for Treasury account. Both Federal Reserve swap lines in Swiss francs were fully on a standby basis, and there were no outstanding forward commitments, while medium-term indebtedness had increased by only \$23 million to \$350 million equivalent.

NETHERLANDS GUILDER

During the course of 1965, the Federal Reserve and Treasury were able to purchase at only nominal cost to United States gold reserves sufficient guilders to liquidate all outstanding commitments to the Netherlands Bank, the BIS, and Dutch commercial banks. Most of these obligations had been undertaken during the August 1964-January 1965 period when a strong Dutch balance of payments position and a flight from sterling contributed to large dollar gains by the Netherlands Bank.

Over-all United States commitments in guilders had reached a peak of \$348 million equivalent by January 8, 1965. Progress in reducing these commitments was slow

until the spring, when the Netherlands balance of payments weakened seasonally and the dollar began to show the first positive effects of corrective United States balance of payments measures. At that point, the United States authorities were able to begin purchasing sizable amounts of guilders from the Netherlands Bank, and by late July the System had repaid virtually all its \$223.7 million equivalent in guilder commitments, while the Treasury had reduced its obligations by \$89.2 million to \$69.4 million equivalent.

Toward midsummer, the Netherlands Bank resumed taking in dollars. Consequently, at the end of July the United States Treasury purchased \$25 million from the Netherlands Bank with guilders drawn from the IMF, and in August the Federal Reserve drew \$25 million equivalent under its swap arrangement with the Netherlands Bank.

Beginning in late September the guilder eased gradually as funds flowed back to London, and later in the fall the demand for dollars picked up as Dutch imports accelerated, largely in anticipation of the imposition of new excise taxes on January 1, 1966. With the Netherlands Bank selling dollars in support of the guilder rate, the Federal Reserve Bank of New York was able to purchase from the Netherlands Bank guilders totaling \$56.9 million equivalent between late September and mid-December and to repay at maturity all the remaining Treasury forward guilder commitments to the market. Continuing support operations by the Netherlands Bank in December further reduced its dollar holdings, and in late December this Bank was able to acquire sufficient guilders from the Netherlands Bank to repay all the remaining official United States commitments in guilders: \$25 million equivalent under the System's swap arrangement with the Netherlands Bank and the two \$12.5 million German mark-Dutch guilder swaps with the BIS for System and Treasury account.

BELGIAN FRANC

The dollar rate rose in Brussels at the end of 1965 after having been subject to virtually uninterrupted downward pressure for more than a year, and the Belgian market was in relative equilibrium during the first two months of 1966. As a result, the National Bank of Belgium ceased taking in dollars in the exchange market and instead found it necessary on occasion to buy dollars for current needs. Consequently, during this period the Federal Reserve was able to acquire sufficient Belgian francs to eliminate its short position in that currency.

The Federal Reserve swap line of \$100 million with the Belgian National Bank was heavily utilized during the first

eight months of 1965. Early in the year the facility was fully drawn by the Federal Reserve, and although subsequent developments made it possible to repay these drawings by the end of July, a renewed downward movement of the dollar rate in Brussels during August in connection with the United Kingdom's balance of payments difficulties led to further employment of the swap line. Thus, at the beginning of the period covered by this report, the Federal Reserve had utilized \$55 million equivalent of Belgian francs available under the \$100 million arrangement.

In mid-September the Belgian franc moved away from its ceiling when the situation in the United Kingdom began to improve, and the Belgian National Bank sold dollars in order to maintain smooth conditions in the market. Consequently, early in October the Federal Reserve was able to purchase \$15 million of francs from that bank and to reduce correspondingly its Belgian franc commitments under the swap line. The franc temporarily returned to its ceiling in November, however, and the Federal Reserve System absorbed \$10 million from the Belgian central bank with funds available under the swap facility. Then in December the franc eased once again, and the National Bank of Belgium sold \$15 million equivalent of francs to the System. Thus, by the year-end, uncovered System commitments in Belgian francs amounted to \$35 million equivalent. In early 1966, the National Bank again sold dollars when commercial demand for dollars developed in Belgium, and the System was then able to cover its remaining franc commitments. By January 14, the Federal Reserve swap line with the National Bank of Belgium was fully available.

GERMAN MARK

Germany's official reserves fell by \$377 million last year, and a further drop occurred during the first two months of 1966. This decline reflected mainly a sharp increase in German expenditures for foreign goods and services as a result of boom conditions in the domestic economy. As Germany's trade and services account moved into deficit last spring, marks began to come on offer in the exchange markets and the spot rate eased significantly below its ceiling for the first time in nearly two years. By June the rate had dipped below par, as the German trade surplus virtually disappeared. Then, beginning in October, demand for marks picked up, mainly in connection with foreign subscriptions to German mark bond offerings by foreign borrowers and the adoption in Germany of a more restrictive monetary policy—the effect of which was in part to prompt a repatriation of German funds and substantial borrowings abroad by German corporations. Under the circumstances, the spot mark rose to parity late in

the month and held there until mid-December, while marks for three-month forward delivery moved to a discount. The customary large year-end repatriation of funds did not occur, however, partly because the German Federal Bank had moved to ease bank liquidity, and thereby to temper the inflow of funds for year-end purposes, by suspending for December the August 1964 increase of 10 per cent in commercial bank reserve requirements, and partly because of the inflow of short-term funds in earlier months. In fact, by the time the Christmas holidays were over, the mark had begun to come on offer as a result of repayments of corporate borrowings abroad and some short-term outflow of funds. With Germany's over-all balance of payments continuing in deficit, the mark eased further in January and February, reaching \$0.2490 in mid-February.

In June 1965, the decline in the mark rate had prompted this Bank to initiate substantial purchases of marks, both in the New York market and directly from the German Federal Bank, in order to strengthen the over-all official United States foreign currency position, to begin repayment of outstanding United States Treasury mark-denominated bonds, and to liquidate other commitments. In all, United States authorities purchased a little over \$300 million equivalent of marks between late June 1965 and March 1, 1966.

These mark purchases were used for a variety of purposes. Initially, the System on July 8 sold to the BIS \$40 million equivalent of marks for Swiss francs on a three-month swap basis and used the francs to liquidate its remaining Swiss franc drawing under the swap arrangement with that institution. Then in July the Treasury substituted \$15 million of marks for sterling in a sterling-Swiss franc swap with the BIS, and in July and August the System and Treasury each substituted another \$12.5 million equivalent of marks for sterling in outstanding sterling-guilder swaps with that institution.¹ The largest operation in marks, however, consisted of repaying at maturity a total of \$175 million of United States Treasury German mark-denominated bonds. The Treasury had begun to issue such bonds to the German Federal Bank in January 1963, and commitments eventually reached a peak of \$679

¹ In the fall of 1964, both the System and Treasury needed guilders to absorb dollars from the Netherlands Bank and consequently swapped some of their excess sterling balances for guilders with the BIS, purchasing the guilders spot and selling them forward against sterling. By substituting marks for sterling in these swaps, both the System and the Treasury were in effect reconstituting their sterling balances while leaving unchanged their forward commitments to deliver guilders and Swiss francs to the BIS.

million equivalent by 1964. Repayments were initiated on July 12 when a \$25 million equivalent bond matured. Subsequently, bonds of \$50 million equivalent each were repaid on October 1, 1965 and on February 1 and March 1, 1966. The Federal Reserve and the Treasury meanwhile added \$20 million and \$14 million of marks, respectively, to their balances available for future operations.

CANADIAN DOLLAR

The Canadian dollar eased gradually below parity by midsummer, with the spot rate declining as low as \$0.92 $\frac{1}{4}$ in early July. This easing was partly seasonal but also reflected a sharp rise in imports, in response to the continuing high level of Canadian economic activity, as well as the initial impact of the United States voluntary foreign credit restraint program. That program, while leaving untouched essential long-term capital flows to Canada, gave rise to large outflows of short-term United States funds, and Canadian banks drew heavily on resources available in the Euro-dollar market. Beginning in late July, however, the spot Canadian dollar began to firm, as a bulge in Canadian bond offerings in the United States together with substantial Russian purchases of Canadian wheat and flour added to upward seasonal pressures. Heavy demand for Canadian dollars in August and September resulted in substantial official reserve gains; these were partially absorbed by the United States Treasury in September when it swapped temporarily with the Bank of Canada Canadian dollars that it had drawn from the IMF for eventual sale to countries repaying the Fund. More balanced conditions prevailed in October, and reserve increases that month reflected essentially the progressive unwinding by the Treasury of its swap with the Bank of Canada.

In the final two months of the year, the exchange market was less even, the spot rate fluctuating rather widely in response to alternating pressures. The rate dipped when the market learned of the United States Government's request in late November that Canadian issues scheduled for placement in the United States prior to the year-end be deferred until early 1966, and again in response to the December 6 United States measures raising domestic interest rates and curbing capital outflows. The rate recovered quickly, however, once initial uncertainties disappeared and the market readjusted to the generally tight short-term money market conditions in Canada and the year-end preparations for some \$200 million of portfolio-capital inflows scheduled from the United States in January 1966.

By early December, the Treasury had sold virtually all the \$60 million of Canadian dollars drawn from the

IMF in September. In anticipation of a new United States drawing of Canadian dollars from the IMF, the Treasury swapped with the Bank of Canada US\$10 million for Canadian dollars. This swap was repaid from the proceeds of a \$100 million Canadian dollar drawing from the Fund on January 4, 1966.

ITALIAN LIRA

During 1965, Italy's balance of payments surplus doubled to \$1.6 billion as domestic economic activity continued sluggish. The impact of this record surplus on international financial markets and reserves was minimized, however, since United States and Italian monetary authorities undertook a variety of measures to offset the inflow of dollars. In this respect, a recent statement by Paolo Baffi, General Manager of the Bank of Italy, is of interest. Mr. Baffi noted that during the 1940's and 1950's Italy had achieved an outstanding success first in stopping inflation and then in achieving a high and stable rate of growth. He went on to say: "Our distinction during the sixties has been so far of a more doubtful nature, since it has been based mainly upon the extraordinary magnitude of our balance of payments swings. Now that we are in the upswing and approaching a total gold and foreign exchange reserve of \$5 billion, we have not chosen to add to that distinction by making ourselves a nuisance. We have always been ready to cooperate in all appropriate ways so that the present international monetary system would work while progress is being made on the slow path of reform. Just to give an instance, we have extensively used the recent surplus in our balance of payments to reduce drastically our borrowing in the Euro-dollar market. This reflow of dollars from Italy to the Euro-dollar market was partly due to market considerations, but also was the result of the readiness on the part of the monetary authorities to provide to our banks alternative facilities."²

A major portion of Italy's potential reserve gain was reabsorbed directly by the Italian commercial banks under swap arrangements with the Italian authorities. In addition, some \$572 million of official Italian dollar gains was absorbed by the United States authorities during the period January-August 1965 (as detailed in the previous report): swap drawings by the Federal Reserve on its expanded arrangement with the Bank of Italy totaled \$350 million (\$250 million of which was repaid from

² Statement at the meeting of the National Industrial Conference Board in New York City on October 7, 1965.

the proceeds of lira drawings on the IMF which the Federal Reserve purchased from the United States Treasury, the United Kingdom, and Ceylon); a Treasury lira-denominated bond for \$125 million equivalent was sold to the Bank of Italy; \$17 million was purchased with lire drawn from the IMF; and \$80 million was absorbed by a Treasury sale of gold.³ In February 1966, the Federal Reserve was able to acquire sufficient lire to repay the remaining \$100 million equivalent swap drawing with the Bank of Italy.

Although the Italian payments surplus remained substantial, it diminished considerably during the winter months, partly for seasonal reasons. After August, reserve gains were largely limited to a temporary bulge over the year-end reflecting repatriated funds. In general, swaps between the Italian authorities and the Italian commercial banks offset official dollar receipts, and no additional direct absorption of dollars from the Italian authorities was necessary. Such swaps had already reached substantial proportions as early as March 1965, and it was agreed at that time that the United States Treasury would begin sharing with the Italian authorities technical commitments for these swap contracts with the Italian banks. The Treasury had undertaken similar commitments, beginning in January 1962 and continuing until the contracts between the Italian authorities and Italian banks were fully liquidated as Italy's balance of payments swung into deficit in 1963.⁴

Not only did these arrangements have the effect of reducing Italy's potential demand for gold, but they helped materially to avoid a potentially disturbing squeeze for dollars that might have arisen on the international markets as a result of the United States balance of payments program. As Italian banks received dollars from the Bank of Italy under these swap arrangements, they placed funds in the Euro-dollar market, thereby replacing funds being repatriated to the United States. Since the Federal Reserve had an interest in assuring the maintenance of market balance and since the volume of Italian swap contracts was still increasing during the fall, it was agreed that the System should join with the Treasury in the operation. Thus, in late November the Federal Reserve Bank of New York was authorized to assume commitments for forward sales of lire up to \$500 million equivalent as

a means of facilitating both the retention of dollar holdings by private foreign holders and the orderly flow of short-term funds through international money markets.

OTHER CURRENCIES

There were no official United States transactions in Austrian schillings, French francs, Japanese yen, or Swedish kronor during the period under review.

INTERNATIONAL MONETARY FUND

As outlined in previous reports in this series, the United States began in 1964 to draw currencies from the IMF for sale to countries having repurchase obligations to the Fund. Two drawings of Canadian dollars were made during the period covered by this report—one for \$60 million on September 28, 1965 and one for \$100 million on January 4, 1966. These operations brought to \$760 million equivalent the total of United States technical drawings under this program. In addition, the United States in July 1965 had drawn \$300 million equivalent in five European currencies in a regular Fund drawing and used the currencies to repay short-term swap commitments of the Federal Reserve and to absorb dollars from several European central banks. As an offset, however, other countries have continued to draw dollars from the Fund, thereby reducing the Fund's holdings of dollars in excess of 75 per cent of the United States quota and thus reducing this country's repayment obligation to the Fund. Consequently, at the end of February 1966 net United States indebtedness to the Fund was only \$516 million.

In 1964, a draft agreement was signed by the governors of the Fund, providing for increases of 25 per cent or more in members' quotas. Such quota increases must be paid to the Fund partly in a country's own currency and partly in gold. In order to compensate the United States and the United Kingdom—the two reserve currency countries—for gold losses incurred as a result of other members' conversions of dollars and sterling into gold for payment of their gold subscriptions, the agreement also provided that the IMF would deposit up to \$350 million of gold with the Federal Reserve Bank of New York and the Bank of England. Insofar as the United States is concerned, these compensating operations began last September and as of February 28 the Federal Reserve Bank of New York held for United States Treasury account \$37 million of gold so deposited by the IMF. These deposits are reflected in the Federal Reserve's statement of condition under "Other assets" and "Other deposits".

³ This purchase by Italy represented a partial reconstitution of the \$200 million of gold sold to the United States during 1964.

⁴ See this *Review* (September 1964), page 168.

THE GOLD MARKET

International political tensions and exchange speculation resulted in very heavy private demand for gold on the London market through most of 1965. In addition, Communist China bought a fairly sizable amount of gold. Under these circumstances, prices tended to rise somewhat above the levels of the past two years.

At the beginning of 1965 the private demand for gold was stimulated by continuing apprehension regarding the future of sterling, widespread speculation on the consequences of the French decision to convert a large amount of dollars into gold—as well as French criticism of the gold exchange standard—and the worsening conflict in Vietnam. Thus, during the winter months, the fixing price

rose as high as \$35.17¾ and the Pool had to supplement market supplies. During the spring the gold market was calmer but, as speculation against sterling revived in early summer and as Communist Chinese buying reached its peak, the fixing price was allowed to rise to \$35.19¾. Thereafter, the situation improved significantly, as the exchange markets quieted with the recovery of sterling and as the Soviet Union resumed large-scale gold sales to finance purchases of wheat from the West. Nevertheless, there were periodic surges of demand as a result of the continued enlargement of the Vietnam war and the emergence of new crises on the Indian subcontinent and in Rhodesia. By the year-end, the volume of activity on the London gold market had receded to more normal levels and the Gold Pool had registered a small surplus.

Per Jacobsson Foundation Lectures

The Per Jacobsson Foundation in Washington, D.C., will again make available to the Federal Reserve Bank of New York a limited number of copies of the Proceedings of their 1965 Washington lectures. (The inaugural 1964 lecture series was held in Basle, Switzerland.) In sponsoring and publishing annual lectures on international monetary affairs by recognized authorities, the Foundation continues to honor the late Managing Director of the International Monetary Fund.

The second of the lecture series sponsored by the Foundation was held in Washington, D.C., on October 1, 1965. Two lectures were given on that date: "The Balance Between Monetary Policy and Other Instruments of Policy in a Developing Economy" by Dr. C. D. Deshmukh of India and "The Place of Monetary Policy in the Economic Policy of the United States" by Dr. Robert V. Roosa of the United States.

Because of the interest of many readers of this *Review* in international monetary affairs and in view of this Bank's sympathy for the Foundation's aims, we will distribute copies of the texts upon request.

Requests should be addressed to the Publications Section, Federal Reserve Bank of New York, New York, N.Y. 10045. Requests for French and Spanish versions of the lectures can also be filled.

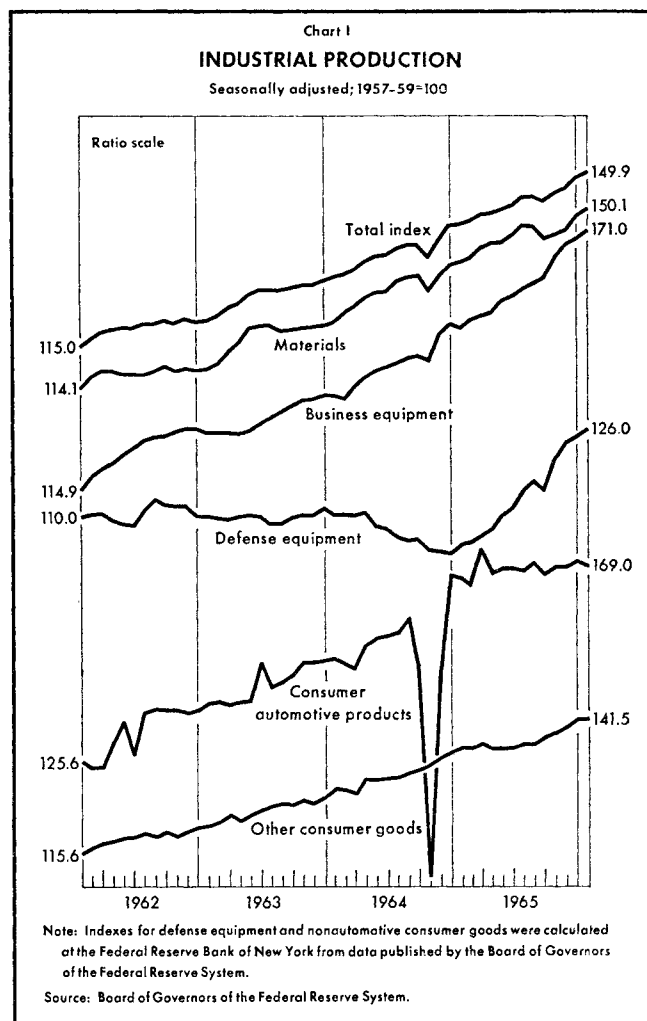
The Business Situation

Economic activity has expanded further in the new year, and prospects continue to be for sizable additional gains over the months ahead. The current buoyancy is only in part attributable to the high rate of growth in actual and prospective production of military goods; the economy's strength rests in good measure on a broad civilian-oriented base. A recent survey points to further expansion in consumer demand, and present indications are for sustained strength in business capital spending. Data gathered by the National Industrial Conference Board show continued sizable increases in the volume of capital funds appropriated by leading manufacturers and in the backlog of unspent appropriations. At this point, the major uncertainties respecting the outlook continue to center around the question of the adequacy of the economy's productive resources—both human and physical—to meet the demands likely to be placed upon them. Significant labor shortages already exist in certain industries and regions, capacity utilization rates are high and apparently rising further, and price increases continue to be a matter of concern.

The wholesale price index rose sharply once again in January, reflecting not only further advances for farm products and processed foods but increases in most major industrial categories as well. In February, higher agricultural prices apparently led to another significant increase in the over-all wholesale index. The uptrend in the consumer price level was interrupted in January, when the index of such prices remained unchanged at 111.0 per cent of the 1957-59 average. The over-all stability in January was attributable to Federal excise tax reductions, which resulted in lower prices for new cars, auto parts, and telephone service. Consumer food prices, on the other hand, registered another sharp advance and prices of services also continued to rise. According to Government analysts, the over-all consumer price index would have risen somewhat if the excise tax cuts had not occurred. Those cuts had, of course, only a one-time effect on the consumer price level, and the upward movement of the index was apparently resumed in February.

PRODUCTION AND INVESTMENT

A further substantial advance in industrial output in January pushed the Federal Reserve Board's seasonally adjusted production index up by 1.4 percentage points



to 149.9 per cent of the 1957-59 average (see Chart I). Reflecting the strong uptrend of industrial activity during midwinter, the index rose by a total of just under 5 percentage points between October and January—representing an annual growth rate of more than 13 per cent. The rise in the over-all index in recent months has been broadly based, though the rate of production growth has been slower for consumer goods than for equipment and materials. In January, motor vehicle production schedules were upset by exceptionally bad weather in the midwest and middle Atlantic regions and by a strike at one of the major companies, while the output of apparel was curtailed as a result of the transit strike in New York City. Production of other consumer goods continued to expand, however, with particular strength in color television sets and other home appliances.

In response to the sustained strength of capital spending, the production of business equipment has continued to grow at a rapid rate, with strong gains reported throughout the machinery industries as well as in transportation equipment. Indeed, industry sources report that production of heavy trucks is now running at virtually full capacity, and that total truck output in the first quarter is likely to set a new record. In recent months, the production of defense goods has been rising even more rapidly than has business equipment output. Following a protracted period of virtual stability, defense equipment production turned upward just a year ago, and the advance gathered strength as 1965 progressed. A further increase in January put defense output (according to the derived production index shown in Chart I) at a level about one-fifth above its year-earlier reading.

Fragmentary data suggest that industrial output may have risen further in February, although very poor weather throughout the eastern half of the country slowed production in a number of industries early in the month. The automobile assembly rate, to be sure, registered its second consecutive monthly decline, dropping by about 1½ per cent to a seasonally adjusted annual rate of just over 9 million cars. The February slowdown reflected losses due to bad weather and to the disruptions stemming from a strike at a key plant, as well as the start (on February 21) of a two-week suspension of production at American Motors. Steel output, on the other hand, has moved up further as the demand situation has continued to strengthen. Not only is the decumulation of excess strike-hedge inventories apparently over, but industry reports indicate that, as lead times between order and delivery lengthen for an increasing number of items, some steel users are showing an interest in protecting themselves against the possibility of shortages in the months ahead. For the

defense-oriented industries, the near-term production outlook was further improved by a large January surge in the volume of new orders received. Producers in other durable goods industries generally reported that orders in January declined somewhat, but nevertheless exceeded the shipments pace so that the backlog of unfilled orders expanded further.

The over-all pace of inventory investment increased in the latter part of 1965. Revised Commerce Department figures show that the inventory component of gross national product (at a seasonally adjusted annual rate) rose from \$7.6 billion in the third quarter to \$10.1 billion in the fourth quarter—the highest in nearly fifteen years. Indeed, had it not been for the decumulation of excess stocks of steel, the fourth-quarter rise in inventories would have been even larger. Moreover, there are indications of a greater inclination on the part of businessmen to build up inventories against the possibility of shortages or price increases. Nevertheless, the very substantial current and prospective strength of final demands has undoubtedly also been a factor in businessmen's recent decisions with respect to inventories, and inventory-sales ratios in most major sectors of manufacturing and trade have in fact continued to edge generally downward. At the same time, the fourth-quarter increase in the over-all pace of accumulation was centered in agriculture and in nondurables manufacturing and retailing—sectors in which stockbuilding had previously been quite slow by historical standards. Preliminary data for the manufacturing and wholesale sectors indicate that January witnessed a moderate further expansion of inventories.

The generally high rates of capacity utilization throughout the economy, coupled with the good prospects for further demand expansion, provide a strong inducement to the continued growth of business investment in new plant and equipment. Such spending will, of course, ultimately result in an enlargement of the economy's productive capacity. Over the short run, however, a high and rising demand for new plant and equipment will intensify the pressure on productive capacity in the capital goods industries. In this regard, it is noteworthy that the operating rates of both the electrical and nonelectrical machinery industries rose substantially between the end of 1964 and the end of 1965. By last December, the latter industry had attained its "preferred" operating rate of 91 per cent while the former had closely approached its "preferred" rate of 93 per cent.

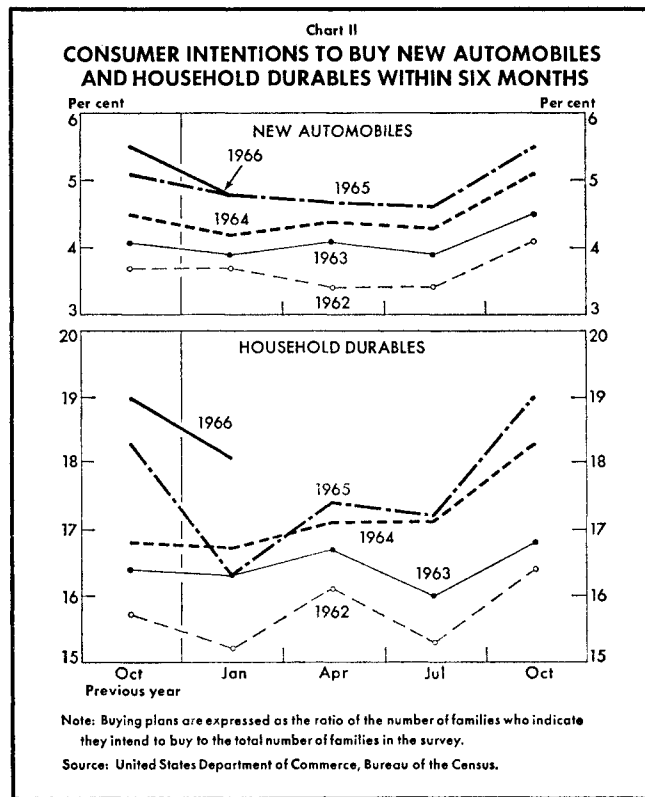
EMPLOYMENT AND CONSUMER DEMAND

Reflecting the sustained expansion of economic activity, nonagricultural employment recorded further sizable gains

in January and February. The increase in each month numbered about 260,000 persons (seasonally adjusted), compared with a 1965 monthly average of about 225,000 persons. The growth pace in January and February was, however, more modest than in last year's fourth quarter, largely because construction employment edged off following a sharp November-December increase. In the manufacturing sector, the employment gains in the first two months of this year continued to be comprised very largely of additions to the blue-collar work force. The growth of manufacturing activity during the past year has resulted in a very substantial expansion of production worker employment. In February, the number of such workers on manufacturers' payrolls was about 5¾ per cent above its year-earlier level, compared with an over-all increase of about 4½ per cent in the other categories of nonagricultural employment. Moreover, manufacturers have also made increasingly heavy use of overtime. The average week put in by factory production workers has lengthened appreciably since last fall, and in February it reached 41.6 hours—the highest since World War II.

The further growth of employment in January provided another boost to wage and salary payments—the largest component of personal income. The net rise in personal income as computed by the Commerce Department, however, was greatly restricted by a sharp jump in social security taxes, which are deducted from earnings in arriving at the income figure. The jump in social security taxes reflected the shift in January to a higher tax rate and to a higher ceiling on the amount of earnings subject to tax. Measured at a seasonally adjusted annual rate, such taxes had risen by about \$100 million monthly during 1965; in contrast, the January increase was \$2.8 billion. The heavy drag on income growth in January, however, was a one-time phenomenon. While social security taxes will henceforth continue to draw off a larger share of income than they formerly did, their month-to-month increases will again become quite modest.

The reduced rate of income expansion in January may well have been a factor contributing to the drop in retail sales, though losses attributable to the New York transit strike and to severe weather in some regions probably also had an effect. After rising strongly during the final quarter of 1965, sales volume at retail outlets is reported to have dropped by 1 per cent in January. The prospects for consumer demand over the months ahead are bright,



however. According to the latest quarterly survey by the Census Bureau, taken in mid-January, consumers' income expectations have improved further and their buying intentions—though down from October, in line with the usual seasonal pattern of this survey—continue to show substantial strength (see Chart II). The proportion of families planning to buy one or more of the seven household durable goods included in the survey, at 18.1 per cent, was significantly above the year-earlier reading of 16.3 per cent. Moreover, the proportion planning to purchase a new car within six months was equal to the figure reported for the corresponding period a year ago. This latter finding is noteworthy in view of the fact that auto-buying intentions in January 1965 were probably inflated somewhat by the responses of persons who, because of shortages resulting from strikes late in 1964, had postponed intended purchases into 1965.

The Money and Bond Markets in February

A deeply cautious tone pervaded the capital markets in February, and prices in both public and private sectors moved sharply lower over the month. Market attention turned increasingly to the substantial current and prospective demands for funds—particularly on the part of corporations and Government agencies—which were converging upon the credit markets. It was widely believed in the market that such demands spelled significant further upward pressures on interest rates.

The money market was consistently firm in February, and member bank borrowings from the Reserve Banks rose moderately. Many banks in the leading money centers were under reserve pressures, but a good availability of excess reserves in the Federal funds market resulted in the smooth accommodation of a large portion of these needs. Treasury bill rates receded in early February, partly reflecting switches out of coupon issues into short-term debt instruments by investors anticipating higher interest rates. Subsequently, however, the cautious atmosphere evident in the capital markets penetrated the bill sector as well, and rates rose irregularly until late in the month when they again edged lower. At the close of the month, a large New York City commercial bank increased the interest rate paid on nonnegotiable savings certificates of deposit of nine months' or longer maturity from 4¾ per cent to 5 per cent.

THE GOVERNMENT SECURITIES MARKET

An extremely hesitant atmosphere descended upon the market for Government notes and bonds in February when several factors revived uncertainties over the viability of prevailing interest rate levels. Predominant among these developments were the prospective heavy demands upon the capital markets which came to light, the large volume of corporate, tax-exempt, and Government agency financing which was completed during the month itself, and the lukewarm response accorded a sizable offering of Export-Import Bank participation certificates. Government agency flotations alone, including large issues of the Federal Land Banks, the Federal Intermediate Credit Banks, the Federal Home Loan Banks, and the

Federal National Mortgage Association, tapped the credit markets for over \$1 billion, and it appeared likely that such financing, both to refund maturing issues and to obtain new money, would continue at a brisk pace. The market also reacted hesitantly to news that the Federal Housing Administration had raised the maximum permissible interest rate chargeable by lenders on insured mortgages from 5¼ per cent to 5½ per cent. In addition, market participants were influenced by discussions in the press and in market advisory letters of the situation in Vietnam, continuing economic expansion, intensified inflationary pressures, the uncertain prospects for additional fiscal restraint, and the possibility of more restrictive monetary policy.

The announcement early in the month of the unexpectedly large response to the Treasury's February refunding of 1966 issues produced little improvement in the underlying market sentiment. In that refunding, \$9.8 billion of the total of \$28.8 billion of outstanding notes and bonds eligible for exchange was converted into two new Treasury note issues.¹ Subscriptions for the new 4¾ per cent notes of August 1967 and the 5 per cent notes of November 1970 aggregated \$2.1 billion and \$7.7 billion, respectively. Public owners of the eligible outstanding issues converted approximately 83.6 per cent of their holdings of the February 15 and April 1 maturities and 44.8 per cent of their May 15 and August 15 maturities.

Against the backdrop of the widespread expectation of upward pressures on interest rates, prices of most outstanding Treasury notes and bonds declined sharply during February. Expanded offerings of coupon issues arose mainly from professional sources, but also included some investor selling. In the cautious atmosphere which generally prevailed, demand favored the short-term area where a few issues rose in price over the month. The new 5 per cent notes of 1970, in particular, enjoyed a persistent demand. Price declines of as much as 3 points in

¹ For details of the offering, see this *Review* (February 1966), page 43.

Table I
FACTORS TENDING TO INCREASE OR DECREASE
MEMBER BANK RESERVES, FEBRUARY 1966

In millions of dollars; (+) denotes increase,
(-) decrease in excess reserves

Factors	Changes in daily averages— week ended				Net changes
	Feb. 2	Feb. 9	Feb. 16	Feb. 23	
"Market" factors					
Member bank required reserves*	- 44	+ 210	+ 166	+ 97	+ 429
Operating transactions (subtotal)	- 280	- 844	+ 155	+ 482	- 487
Federal Reserve float	- 178	- 236	+ 68	+ 302	- 44
Treasury operations†	- 68	- 33	- 29	+ 234	+ 109
Gold and foreign account	- 35	+ 28	+ 16	+ 6	+ 15
Currency outside banks*	+ 59	- 430	+ 133	+ 65	- 173
Other Federal Reserve accounts (net)‡	- 63	- 173	- 33	- 127	- 396
Total "market" factors	- 324	- 634	+ 321	+ 579	- 58
Direct Federal Reserve credit transactions					
Open market instruments					
Outright holdings:					
Government securities	+ 89	+ 409	- 166	- 318	+ 14
Bankers' acceptances	- 1	- 1	+ 1	+ 1	-
Repurchase agreements:					
Government securities	+ 249	+ 160	- 142	- 267	-
Bankers' acceptances	- 34	+ 4	- 6	- 2	- 38
Member bank borrowings	+ 66	+ 85	- 50	+ 67	+ 168
Other loans, discounts, and advances	- 1	- 1	-	-	- 2
Total	+ 367	+ 656	- 363	- 520	+ 140
Excess reserves*	+ 43	+ 22	- 42	+ 59	+ 82

	Daily average levels				
	Feb. 2	Feb. 9	Feb. 16	Feb. 23	Average
Member bank:					
Total reserves, including vault cash*	22,538	22,350	22,142	22,104	22,284§
Required reserves*	22,190	21,980	21,814	21,717	21,925§
Excess reserves*	348	370	328	387	358§
Borrowings	418	503	453	520	474§
Free reserves*	- 70	- 133	- 125	- 133	- 115§
Nonborrowed reserves*	22,120	21,847	21,689	21,584	21,810§

System Account holdings of Government securities maturing in:	Changes in Wednesday levels				Net changes
	Feb. 2	Feb. 9	Feb. 16	Feb. 23	
Less than one year	+ 1,009	+ 19	+ 113	- 230	+ 911
More than one year	-	-	- 957	+ 10	- 947
Total	+ 1,009	+ 19	- 844	- 220	- 36

Note: Because of rounding, figures do not necessarily add to totals.

* These figures are estimated.

† Includes changes in Treasury currency and cash.

‡ Includes assets denominated in foreign currencies.

§ Average for four weeks ended February 23, 1966.

Table II
RESERVE POSITIONS OF MAJOR RESERVE CITY BANKS

In millions of dollars

Factors affecting basic reserve positions	Daily averages—week ended				Average of four weeks ended Feb. 23
	Feb. 2	Feb. 9	Feb. 16	Feb. 23	
Eight banks in New York City					
Reserve excess or deficiency(-)*	5	15	- 32	21	2
Less borrowings from Reserve Banks	10	142	- 116	103	93
Less net interbank Federal funds purchases or sales(-)	82	4	96	- 171	3
Gross purchases	1,180	1,048	1,194	1,003	1,106
Gross sales	1,099	1,044	1,098	1,174	1,104
Equals net basic reserve surplus or deficit(-)	- 87	- 130	- 244	89	- 93
Net loans to Government securities dealers	693	543	493	310	510

Thirty-eight banks outside New York City

Reserve excess or deficiency(-)*	14	30	27	16	22
Less borrowings from Reserve Banks	81	87	72	119	90
Less net interbank Federal funds purchases or sales(-)	686	837	694	639	714
Gross purchases	1,519	1,455	1,460	1,561	1,499
Gross sales	833	617	767	922	785
Equals net basic reserve surplus or deficit(-)	- 753	- 894	- 738	- 742	- 782
Net loans to Government securities dealers	278	168	184	73	176

Note: Because of rounding, figures do not necessarily add to totals.

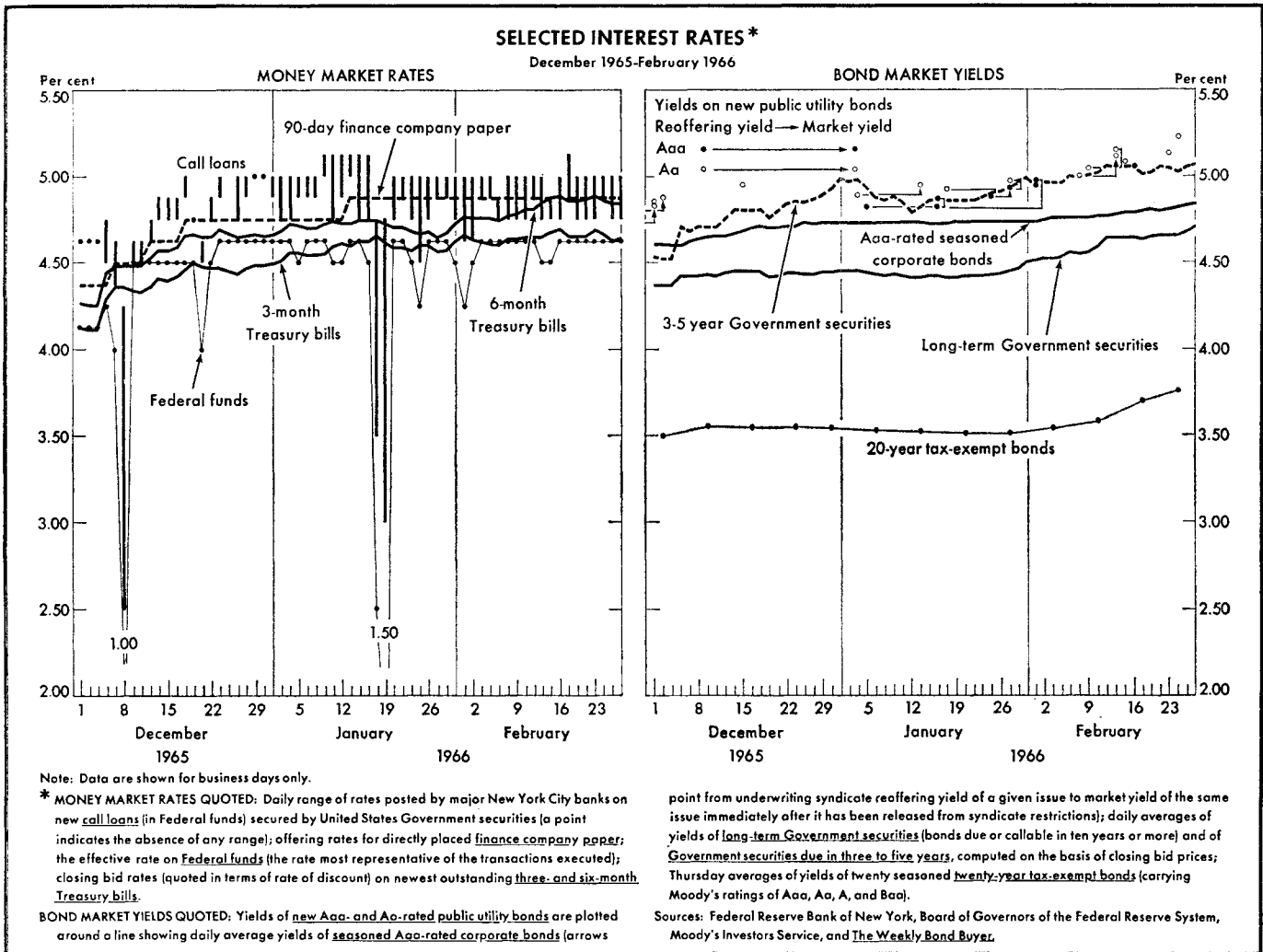
* Reserves held after all adjustments applicable to the reporting period less required reserves and carry-over reserve deficiencies.

Table III
AVERAGE ISSUING RATES*
AT REGULAR TREASURY BILL AUCTIONS

In per cent

Maturities	Weekly auction dates—Feb. 1966			
	Feb. 7	Feb. 14	Feb. 21	Feb. 28
Three-month	4.650	4.695	4.696	4.661
Six-month	4.774	4.876	4.892	4.861
	Monthly auction dates—Dec. 1965-Feb. 1966			
	Dec. 23	Jan. 25	Feb. 23	
One-year	4.731	4.699	4.945	

* Interest rates on bills are quoted in terms of a 360-day year, with the discounts from par as the return on the face amount of the bills payable at maturity. Bond yield equivalents, related to the amount actually invested, would be slightly higher.



the longer maturities, however, left yields on long-term Government bonds at their highest levels in more than forty years. (The right-hand panel of the chart illustrates the recent rise in yields.) After midmonth, demand from official and investment sources triggered some professional short covering and prices of coupon issues improved. The rally was of short duration, however, and a very heavy tone reappeared in the latter part of the month when aggressive professional offerings and investment selling once again drove prices considerably lower.

In contrast to the weakness evident in the coupon sector, a steadier tone prevailed in the Treasury bill market in the first third of the month. During this period, bill rates edged irregularly lower (see left-hand panel of the chart) on fairly active demand favoring the shorter ma-

turities. The interest in bills partially reflected switching out of coupon issues, as well as temporary purchases of short-term obligations by investors postponing commitments in the bond markets. Gradually, concern over the interest rate outlook also became more prominent in the bill sector. Bill rates generally rose from February 10 through February 16 as the underlying uncertainty prompted aggressive professional offerings. At the higher rate levels that emerged, a moderate demand for short-dated bills persisted, including demand from state and municipal bodies, and rates receded at times. Although the affinity of investors for short-term debt instruments in periods of deep uncertainty continued to provide some reinforcement to the bill market, a hesitant undertone dominated the sector, and as the March dividend and

tax dates drew nearer, Government securities dealers became more cautious. Late in the month, however, bill rates declined slightly when demand arising from the temporary investment of the proceeds of recent securities issues and from sources deferring bond investments depleted market supplies. At the close of the month, the newest outstanding three-month bill was bid at 4.64 per cent, 1 basis point above the comparable rate quoted on January 31.

OTHER SECURITIES MARKETS

As in the Government securities market, prices of corporate and tax-exempt bonds moved lower through most of the month while investors weighed the impact on interest rates of current and prospective heavy demands for new capital. The tax-exempt sector was besieged, in addition, by continuing reports of selling by commercial banks. New corporate and tax-exempt bonds which were publicly floated in February totaled approximately \$550 million and \$745 million, respectively. They were marketed at progressively higher yields but were nevertheless accorded mixed receptions. (In addition, a substantial volume of corporate bonds was privately placed in February.) Among the major new corporate offerings, all the issues that were received favorably during the month carried special protection against early refunding. Dealers made some headway in paring their inventories of older bonds, although only after offering sizable price concessions. As the month drew to a close, all signposts seemed to point to the maintenance of market pressures, since a steady stream of announcements raised the March calendar of prospective public offerings to about \$¾ billion in the corporate sector and \$1 billion in the tax-exempt sector.

Over the month as a whole, the average yield on Moody's seasoned Aaa-rated corporate bonds rose by 10 basis points to 4.84 per cent, while *The Weekly Bond Buyer's* series for twenty seasoned tax-exempt issues (carrying ratings ranging from Aaa to Baa) climbed by 25 basis points to 3.76 per cent (see the right-hand panel of the chart). At the same time the average yield on new corporate bonds, adjusted to an Aaa basis, also rose by 25 basis points to 5.10 per cent. All these indexes are, how-

ever, based on only a limited number of issues and do not necessarily reflect market movements fully.

THE MONEY MARKET AND BANK RESERVES

The money market displayed a firm tone during February, but no unusual pressures developed. The major money market banks as a whole remained in a relatively deep, though diminishing, basic reserve deficit. These banks bought large amounts of Federal funds—chiefly at the “premium” rate² of 4½ per cent—from a few New York City banks which had substantial basic reserve surpluses as well as from “country” banks. The residual reserve needs of the deficit banks were filled through moderately greater borrowings from the Federal Reserve than had occurred in January. As the month progressed, nationwide reserve availability contracted somewhat, and average net borrowed reserves returned to a level more closely in line with the levels which had prevailed in early autumn.

Rates posted by the major New York City banks on their call loans to Government securities dealers ranged from 5 per cent to as low as 4¾ per cent on most days. Early in the period, dealers in bankers' acceptances increased most of their rates by ⅛ of a per cent, making the rate on ninety-day unendorsed acceptances 5 per cent (bid). At the close of the month, commercial paper dealers also raised their rates by ⅛ of a per cent, setting the offering rate on prime four- to six-month paper at 5 per cent. In addition, the offering rates posted by many of the large New York City banks on negotiable time certificates of deposit were adjusted progressively higher with rates on new three- and six-month and one-year certificates rising by about 10, 12, and 25 basis points, respectively, during the month. Despite these more attractive rates, the volume of negotiable time certificates of deposit outstanding at weekly reporting banks in New York City declined by more than \$350 million in the four weeks ended February 23, in contrast to an increase of about \$275 million in such deposits during the corresponding period last year.

² I.e., above the 4½ per cent Federal Reserve discount rate.

Developments in the Commercial Bank Loan-Deposit Ratio*

Throughout the postwar years the over-all loan-deposit ratio of the banking system has moved upward with only minor interruptions. At slightly more than 63 per cent, this ratio currently is around the highest level since the late 1920's and thus, for most bankers, is now above any level reached in the span of their own professional experience. Moreover, the upward trend has been especially strong over the past few years of business expansion. Since the trough of the last business contraction in 1961, the loan-deposit ratio has advanced about 8.3 percentage points from a level which many bankers had previously thought to be near the upper limit of sound banking practice.

As a measure of liquidity, the loan-deposit ratio of banks has traditionally been employed to assess their ability to withstand deposit withdrawals and to judge their willingness to meet loan demand by reducing their cash assets and their investments in securities. The loan-deposit ratio, however, is widely recognized as providing only a very crude index of liquidity. The ratio takes no account, for instance, of the mix between time and demand deposits, nor does it allow for such important factors as the liquidity characteristics of the particular loans and investments held in bank portfolios. Consequently, changes in the aggregate loan-deposit ratio between two separate points of time must be evaluated against the background of changes over the interval in the composition of both bank assets and liabilities. Moreover, the portfolio liquidity "needs" of banks are not constant. Such needs depend upon economic conditions in general and upon the whole array of other bank opportunities for asset and liability adjustment.

Even so, loan-deposit ratios can still be a useful device for assessing bank liquidity. The extended postwar rise in loan-deposit ratios—and their recent sharp further increase—is therefore a development of genuine significance. There is reason to believe, moreover, that the banking system has

now approached the point where liquidity factors may again be watched very closely by bankers. The present article reviews developments in loan-deposit ratios since 1946, and examines some of the more important factors bearing on the significance of these ratios as an indicator of bank liquidity positions.

POSTWAR TRENDS IN THE LOAN-DEPOSIT RATIO

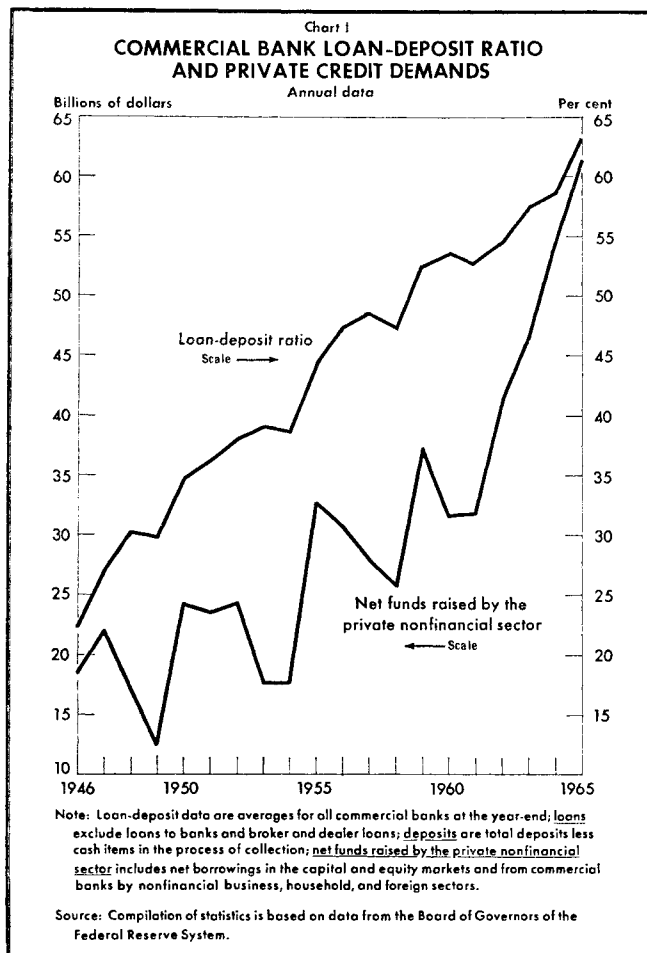
In the past two decades, the average loan-deposit ratio of all commercial banks has increased nearly threefold, moving from a very low level of roughly 22 per cent at the end of 1946 to 63 per cent at the end of 1965 (see Chart I).¹ This rise has reflected many forces, including perhaps most importantly, the ample liquidity of the banking system at the end of World War II, the relative strength of credit demands of the private sectors of the economy to which banks lend, and the willingness of banks to accept progressively lower liquidity positions.

Commercial banks were highly liquid at the start of the postwar period, and thus were quite ready to include additional loans in their portfolios as suitable loan demands arose. The loan-deposit ratio was around historically low levels and markedly below the general range that prevailed during the 1920's.² On the one hand, bank portfolios in 1946 reflected a lack of private credit demands both in

¹ The loan-deposit ratio is defined in this article as total loans less loans to banks and loans to brokers and dealers divided by total deposits less cash items in the process of collection. Loans to banks and to brokers and dealers are netted from total loans since they are used by banks to adjust temporary variations in reserve positions. Cash items in the process of collection are netted from total deposits in order to avoid counting twice funds that have not been cleared. Ratios for 1946 and 1947 are estimated because data neither for dealer and broker loans nor for cash items are available for those years.

² At all member banks, for example, the loan-deposit ratio in 1946 was 21 per cent, compared with 55 per cent in 1928. (Due to data limitations, the deposit figure does not exclude cash items in the process of collection for either year.)

* Jack W. Cox, Economist, Domestic Research Division, had primary responsibility for the preparation of this article.



the 1930's, when business activity was depressed, and in the war years, when private spending was limited and selective credit controls were in operation. On the other hand, commercial banks held substantial amounts of United States Government securities stemming from bank participation in wartime Government financing. Indeed, banks appeared so well supplied with liquidity at the end of World War II that the possibility of the banking system becoming "loaned up" seemed highly improbable.

As it turned out, the United States made a rapid transition to a peacetime economy. In the first postwar year, total net funds raised by the private nonfinancial sectors³ in the credit and equity markets (including bank borrow-

ings) amounted to only \$18.4 billion (see Chart 1). However, as economic activity expanded and the large stocks of private liquidity accumulated during the war were gradually drawn down, borrowings by the private sector grew steadily, and by 1965 reached \$61.3 billion. Over the entire interval, in contrast, net funds raised by the combined United States Government and state and local government sectors—borrowers who provide the bulk of the banks' securities investments—have loomed considerably smaller in the total credit picture, and have expanded at a much slower rate than the net funds raised by the private nonfinancial sector. It seems clear, therefore, that the composition of postwar credit demands was favorable to, if not a compelling reason for, increases in bank loan-deposit ratios.

Banks met the private demands for loans in part by reducing their holdings of Government securities. At the same time, banks received a steady inflow of funds as deposits in the banking system grew quite rapidly through 1951. Subsequently, however, the Federal Reserve System reduced the rate at which reserves were provided to the banking system, and bank deposits rose more slowly. Accordingly, by the end of 1953, the loan-deposit ratio of all commercial banks had advanced almost to a level of 40 per cent, about double the 1946 figure. The possibility that banks could run into a liquidity problem no longer seemed a purely academic question, and was clearly highlighted by the falling prices of Government securities accompanying the continuing bank sales of these obligations. To be sure, even in retrospect, it is difficult to identify when banks might be approaching a loaned-up position. Nevertheless, by the mid- and late 1950's, it appears that a point was reached where some banks became concerned about their rising loan-deposit ratios and at times limited new lending for this reason. Thus, for example, in a survey of bankers' lending and investing objectives during 1959, several bankers noted that their lending policies had been partly conditioned by the prevailing composition of their portfolios. In particular, one banker looking back on the 1959 experience commented that: "When for twenty years loans have consistently been less than 40 per cent of deposits you begin to feel tight when they get to about 50 per cent, even though in retrospect we could legitimately have justified an even higher level."⁴

However, despite the apparent uneasiness that some banks felt at times with respect to the level of their loan-

³ The private nonfinancial group of borrowers includes all non-financial businesses, households, and foreign borrowers.

⁴ Douglas A. Hayes, *Banking Lending Policies* (Bureau of Business Research, University of Michigan, 1964), page 217.

deposit ratios, these ratios have continued to push higher. This probably reflects in part the gradual acceptance by bankers of levels of loan-deposit ratios which at first seemed high. That these higher ratios did not present any serious problems during the postwar recessions no doubt proved reassuring to many. And, of course, bankers were gaining additional confidence in the stability of the economy and in the national commitment to carry out countercyclical policies.

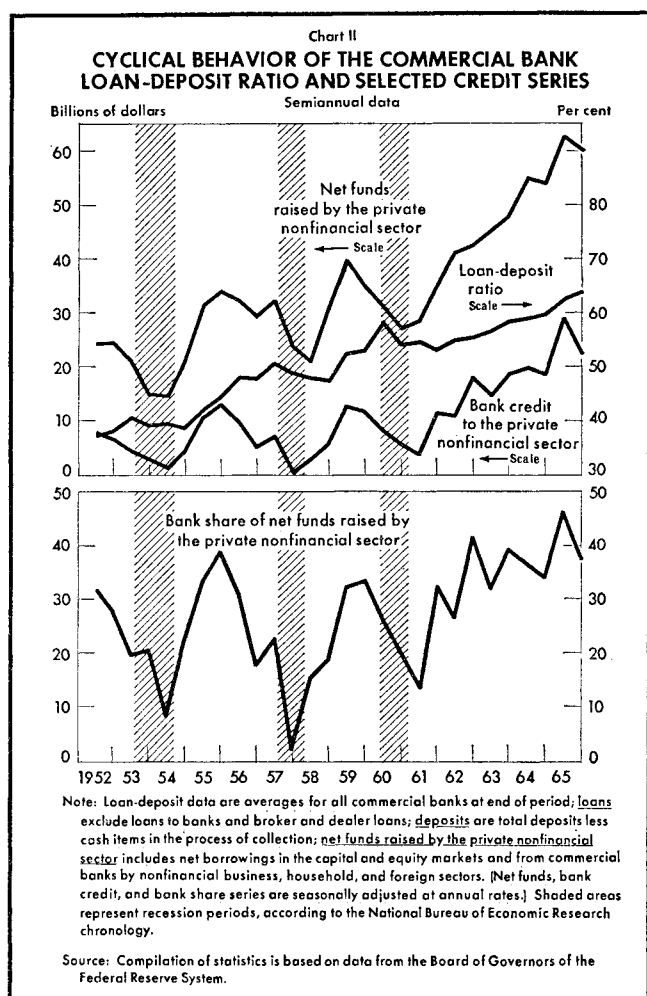
CYCLICAL MOVEMENTS

The only significant interruptions in the long postwar climb of the loan-deposit ratio occurred during the four postwar recessions in economic activity. During each of these periods, the ratio leveled off or fell back slightly. With the subsequent recovery of business activity, the

loan-deposit ratio began to rise once more and, of course, eventually passed its previous peak. To a considerable degree, this cyclical pattern can be explained in terms of the behavior of loan demands coupled with the desire of banks to meet the bulk of these demands in order both to preserve existing and to establish new long-term customer relationships. Variations in monetary policy, however, also have had an influence on the cyclical movements in the loan-deposit ratio, particularly on the timing of the upper turning points of the ratio.

The rise in the private nonfinancial sector's credit demands in the early stages of the business expansion and the subsequent decline in such demands through the ensuing downturn in business activity are clearly reflected in the flow of bank credit to this sector (see Chart II). The resulting general influence on the loan-deposit ratio, moreover, is reinforced by a similar cyclical pattern in the bank share of the total net funds raised by the private nonfinancial sector (Chart II, lower panel). The cyclical behavior of the bank share may partly reflect the timing of certain components of aggregate spending that rely relatively heavily on bank borrowing and whose own rate of expansion (or contraction) leads the pace of economic activity. Business inventory outlays provide such an example. In addition, during periods of low business activity, borrowers may seek to refinance outstanding bank loans in order to take advantage of lower prevailing interest rate levels, and thus banks then provide a smaller share of the private sector's credit needs.⁵

The cyclical behavior of loan demand is not the sole determinant of the cyclical behavior of the loan-deposit ratio, however. This is evident from the fact that while both private credit demands and the bank share of these demands have tended to peak before the peak in general business, the loan-deposit ratio continues to rise during the late stages of the expansion, peaking at about the same time that the economy as a whole reaches its upper turning point. The expansion of the loan-deposit ratio beyond the point where private credit demands have already begun to decline probably reflects in part the slower growth of reserves that has typically characterized the late stages of business expansions and which, in turn, reflects a relatively more restrictive monetary policy. With the flow of new reserves reduced, banks find that they need to sell



⁵ See George Budzeika, "Commercial Banks as Suppliers of Capital Funds to Business", this *Review* (December 1963), pages 185-89, reprinted in this Bank's *Essays in Money and Credit* (December 1964), pages 67-71.

or run off part of their holdings of Government and other securities in order to obtain the funds to accommodate existing loan demands. Accordingly, although the rate of new additions to bank loans drops off, there occurs a correspondingly greater decline in deposit growth—at times, an actual reduction in total bank deposits—and the loan-deposit ratio advances further.

THE CURRENT EXPANSION

Since the prior peak in economic activity in mid-1960, the commercial bank loan-deposit ratio has followed the same general pattern of movements established during the three earlier postwar cycles. Thus, the ratio edged lower in the 1960-61 recession and then resumed its upward course as the expansion got under way. In the current expansion, however, credit demands of the private nonfinancial sector have recorded a much stronger and better sustained advance than during any of the previous postwar business upturns. At the same time, the share of the borrowings of this sector supplied by the commercial banks has been consistently near previous postwar highs, since banks have expanded their activities in such fields as consumer, real estate, and farm lending while filling a sizable portion of business credit needs.⁶

The willingness of banks thus far to permit progressive increases in their loan-deposit ratios raises the question of what factors may have enabled bank managements to accept values of this ratio unprecedented in the experience of many present-day bankers. Perhaps the most important influences of a general nature have been the over-all improvement in the "science" of bank management and the steady, orderly, and thus far noninflationary pace of the current economic expansion. Both these developments have made it significantly easier for individual banks to project their cash requirements and thus have reduced liquidity needs.

Of course there are still sizable unpredicted variations in deposit levels and loan demands. The creation and broadening of a number of markets for various short-term instruments have contributed to the banks' ability to adjust to such variations and hence have also been a factor in the willingness of bankers to permit loan-deposit ratios to rise to new postwar highs. An important example of this development has taken place in the market for

Federal funds—member bank balances held at Federal Reserve Banks. The growth of the Federal funds market has led effectively to a greater integration of this country's predominantly unit banking system, so that banks needing reserves can buy (borrow) them from banks with a reserve surplus. The growing participation, even of fairly small banks, in this market has reduced the need for individual banks to hold large amounts of liquid assets as a buffer against possible variations in reserve positions. As a result, banks are willing to place a larger proportion of their earning assets into loans.

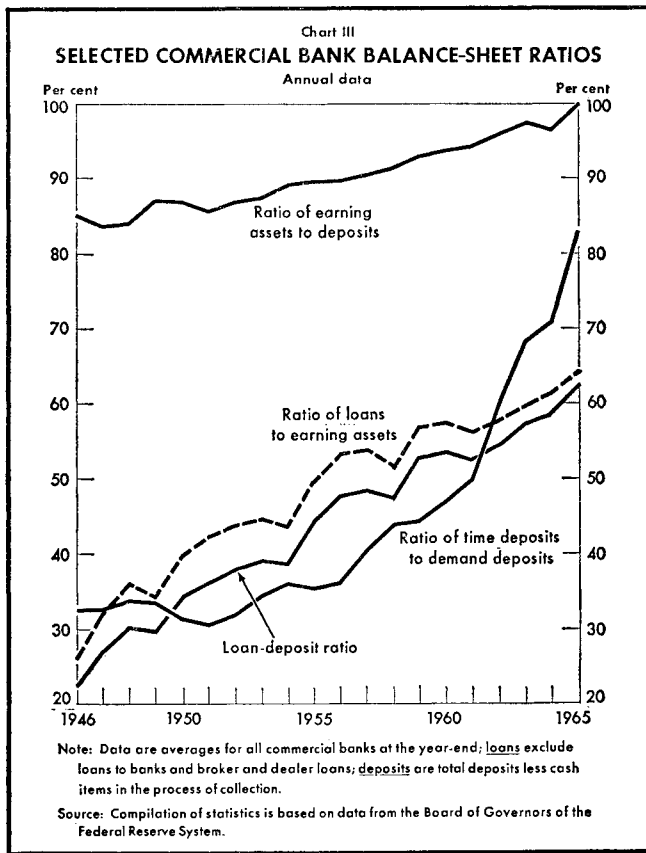
Similarly, the development or broadening of markets for various other short-term instruments has also provided banks with a variety of avenues by which they can adjust their reserve positions. Such markets include those for time certificates of deposit and short-term obligations of Governmental agencies.⁷ In addition, the Euro-dollar market is being used by major banks as an alternate source for short-term funds. For example, the overseas branches of the major international banks in the United States acquire dollar balances in the Euro-dollar market for deposit at their head offices whenever differentials between rates in our money market and foreign deposit markets for dollar balances make such transactions attractive. Finally, a market has arisen in the last two years for short-term notes issued by banks. These various markets have grown, not only in terms of the dollar volume of the instruments outstanding, but also in terms of the number of participants. As a result, they function with a high level of efficiency, providing banks (and others) with a greater degree of confidence that they will be able to obtain cash balances with only a minimum amount of risk and cost involved.

INFLUENCE OF CHANGES IN COMPOSITION OF BANK LIABILITIES AND ASSETS

TIME AND SAVINGS DEPOSITS. There is widespread agreement that the rise in the commercial bank loan-deposit ratio in recent years has been influenced by the rapid increase in time and savings deposits relative to demand deposits. At the end of 1946, time and savings deposits were equal to roughly 30 per cent of total commercial

⁶ See William F. Treiber, "Recent Trends in Commercial Bank Lending and Borrowing", *Proceedings: Eighteenth National Credit Conference*, American Bankers Association, New York City, January 31, 1966 (also in this *Review*, February 1966, pages 27-32).

⁷ The relative growth of these instruments was described by Robert W. Stone, "The Changing Structure of the Money Market", *Papers and Proceedings of the Twenty-third Annual Meeting of the American Finance Association*, Chicago, Illinois, December 28-30, 1964 (printed in the *Journal of Finance*, May 1965, pages 229-38, and in this *Review*, February 1965, pages 32-38).



bank demand deposits, and were only slightly more than 35 per cent at the end of 1956 (see Chart III). Since 1956, the maximum rates payable on member bank interest-bearing deposits under the Board of Governors' Regulation Q has been raised five times. And in 1961, the nation's larger banks started to seek aggressively interest-bearing deposits, particularly in the form of negotiable certificates of deposit. These developments enabled banks to become increasingly competitive for the liquid funds of the economy and thus by the end of 1965 commercial bank time and savings deposits were nearly 83 per cent of total demand deposits.

The sharp advance in time and savings deposits no doubt has increased the ability of banks to predict the over-all levels of their total deposits. This is particularly true for individual savings accounts (which made up about 28 per cent of commercial bank total deposits at the end of 1965), since these deposits do exhibit a smaller degree of variation than demand deposits. On the other hand, time deposits held by interest-sensitive customers may

actually be more volatile than demand deposits.⁸ Nevertheless, because these deposits have definite maturities, banks do at least know when such deposits might be lost. In all, the reduction in the uncertainty of deposit levels associated with the strength of time and savings deposits has probably led many banks to accept a smaller proportion of liquid assets in their portfolios and to maintain higher loan-deposit ratios.

Moreover, reserve requirements against member bank time and savings accounts are lower than those against demand deposits. Thus, the strong gains in time and savings deposits have permitted a gain in total bank earning assets relative to deposits (see Chart III). In addition, decreases in the statutory member bank reserve requirements have also enabled banks to expand earning assets relative to total deposits. There is, of course, no reason to assume mechanically that reductions in the relative importance of required reserves would be offset by increases in the relative importance of loans rather than investments. Nevertheless, at least in statistical terms, the fall in the ratio of these reserves to total bank assets has been equivalent to about one third of the over-all rise in the commercial bank loan-deposit ratio since 1960. The rest of the gain has stemmed from a change in the composition of bank portfolios toward loans (see Chart III).

CHANGING BANK ASSETS. A different structuring of bank portfolios over the past several years may also be a factor associated with a rising loan-deposit ratio. The available data on commercial bank assets, unfortunately, are not sufficiently disaggregated to permit more than a few observations: First, banks now hold a much wider variety of short-term assets which have considerable liquidity. Such assets include short-term obligations of Federal, state, and local governments and of Governmental agencies and loans to brokers and dealers and other financial institutions. These short-term liquid assets have apparently increased as a percentage of deposits since the mid-1950's, and accordingly have compensated for some of the loss of liquidity associated with rising loan-deposit ratios.⁹ Second, some loans that banks now hold are guaranteed or insured by Federal agencies, are fairly readily marketable,

⁸ See, George R. Morrison and Richard T. Selden, *Time Deposit Growth and the Employment of Bank Funds* (Association of Reserve City Bankers, Chicago 1965), pages 12-19.

⁹ Commercial bank holdings of short-term United States Government securities (maturing within one year), broker and dealer loans, and loans to banks amounted to 9.3 per cent of total deposits in June 1965, compared with 9.0 per cent in June 1960 and 5.2 per cent in June 1957. On the other hand, the ratio in June 1953 and June 1948 was 18.2 per cent and 14.5 per cent, respectively.

and thus at least in these respects may have more in common with long-term investments than with loans. (In mid-1965, over 20 per cent of the real estate loans held by commercial banks were insured by the Federal Housing Administration or the Veterans Administration.) Third, banks may now be willing to operate with higher loan-deposit ratios since a substantial amount of liquidity is provided by the regular cash flow arising from amortized loans. Amortization features appear in consumer instalment loan contracts, real estate loans, and business term loans. In 1965 these loans made up a sizable share of total commercial bank loans.¹⁰ Finally, the use of loan participation agreements between banks permits them to maintain higher loan-deposit ratios and still be ready to accommodate the potential needs of their more important customers.

It should be noted, of course, that some changes in the structure of bank assets may actually have made higher loan-deposit ratios *less* acceptable to banks. The increase of state and local obligations or other investments relative to United States Government securities, for example, may have raised the average risk of bank investments and thus reduced the willingness of banks to maintain high loan-deposit ratios. Moreover, there has been some indication that bank municipal portfolios have been shifting recently toward relatively longer maturity and lower rated securities.¹¹ Another factor which may have tended to reduce the attractiveness of higher loan-deposit ratios is the expanded use of term lending agreements. As noted above, such agreements do provide a steady flow of liquidity through their amortization provisions. At the same time, however, term loans increase the average maturity of total bank loans and, for that reason, presumably add to the risk of loan portfolios.

¹⁰ In June 1965, consumer instalment loans and real estate loans were 14.4 per cent and 24.5 per cent of total loans, respectively. Data on term loans of all commercial banks are not available. However, at major New York City banks, term loans were over 60 per cent of all business loans in 1965.

¹¹ Federal Reserve Bank of Cleveland, "Another Look at Municipal Portfolios" (November 1965), pages 21-27.

CONCLUDING COMMENT

Bank attitudes toward their individual loan-deposit ratios have obviously undergone considerable change in the postwar period. It is clear that many banks are now willing to operate with higher loan-deposit ratios than they would have thought appropriate even at the close of the 1950's. Nevertheless, although the loan-deposit ratio has been a highly flexible element in the portfolio decisions of many banks, the ratio remains a significant criterion in determining over-all lending and investing policies for a large number of banks.¹² At current levels, many banks again seem to be questioning the desirability of still further rises in their ratios. While the loan-deposit ratio has very definite limitations as a measure of bank liquidity, a point can be reached where prudence dictates that the individual bank should go no further. Bankers are probably aware that what seem reliable sources of liquidity may prove less than sufficient when many banks are relying on the same sources—a case in point is the competition for liquid balances of corporations—and some of these sources may be actually shrinking. Bankers are also aware that borrowings from the Federal Reserve Banks are available only under the conditions stipulated in Regulation A governing the use of the "discount window".

To the extent that banks are again giving careful attention to their loan-deposit ratios, loan accommodations are becoming more closely geared to the over-all growth of bank deposits, which in turn is heavily influenced by Federal Reserve policy. Such a development might be expected to be accompanied by more selective credit policies on the part of banks in choosing among their many applicants for credit.

¹² The relative frequency of the use of the loan-deposit ratio as a guide for individual bank lending policies is noted in Jules F. Bogen, *The Changing Composition of Bank Assets* (Graduate School of Business Administration, New York University, New York, 1961), page 32, and in George R. Morrison and Richard T. Selden, *op. cit.*, page 35.

Fifty-first Annual Report

The Federal Reserve Bank of New York has just published its fifty-first *Annual Report*, highlighting the major economic and financial developments of 1965.

In his covering letter to member banks, Alfred Hayes, President of the Bank, noted that rapid growth led to a gratifying decline in United States unemployment in 1965, "but the Vietnam conflict cast a shadow upon prosperity, as did the appearance of inflationary pressures". Mr. Hayes also noted that "the monetary and fiscal authorities face the major challenge of further extending the remarkable record of real economic growth, while at the same time containing inflationary forces that, if unchecked, would jeopardize both growth itself and the achievement of balance of payments equilibrium".

Copies of the *Annual Report* are available from the Publications Section, Federal Reserve Bank of New York, 33 Liberty Street, New York, N. Y. 10045.