

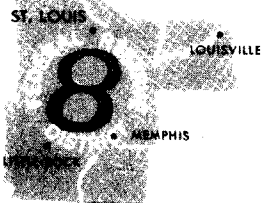
April 1965

FEDERAL RESERVE BANK OF ST. LOUIS

Review

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FEDERAL RESERVE BANK
OF ST. LOUIS

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Earnings and Expenses of Central Mississippi Valley Banks During 1964

COMMERCIAL BANKS have become increasingly aggressive in seeking funds in recent years. They have raised the rates paid on time and savings deposits, and the growth in these accounts has been substantial. As a result, interest paid on time and savings deposits became the largest single expense item of member banks in the Central Mississippi Valley¹ in 1964, surpassing salaries and wages, which had previously been the biggest item.

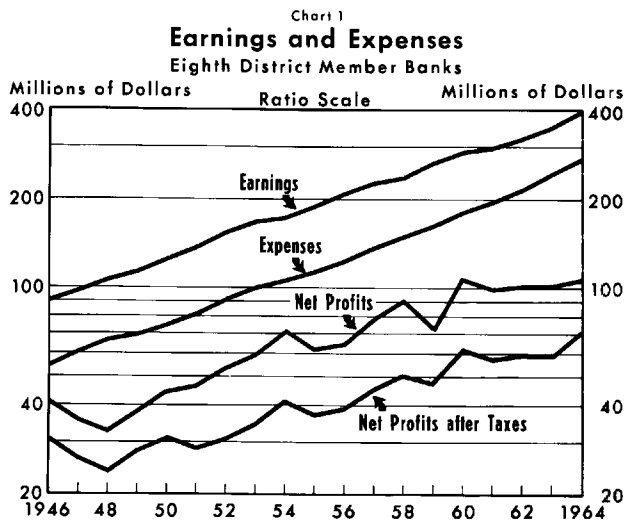
Expenses of banks in the region rose 13 per cent from 1963 to 1964 (Chart 1 and Table I). Earnings rose at about the same rate but by a greater amount. Following a three-year plateau, net profits (before taxes) rose 6 per cent, to about \$106 million, in 1964. Net profits after taxes expanded 19 per cent, or about three times as rapidly as before-tax income (Chart 1 and Table I).

Member banks in the Central Mississippi Valley fared slightly better than member banks throughout the nation. Preliminary calculations show that earnings of all member banks rose 8 per cent from 1963 to 1964, while expenses increased 9 per cent. Net profits after taxes expanded about 3 per cent.

¹The "Central Mississippi Valley," a descriptive name for the Eighth Federal Reserve District, includes all of Arkansas and parts of Illinois, Indiana, Kentucky, Mississippi, Missouri, and Tennessee, as shown by the map on this page. At the end of 1964 there were 481 member banks in the district, 338 national and 143 state member. Member banks constituted 32 per cent of all commercial banks in the Central Mississippi Valley but held about 63 per cent of the assets of all commercial banks in the region.

Expenses

Expenses of member banks in the region were about 13 per cent higher in 1964 than in 1963, continuing the steady postwar rise (Chart 1 and Table I).



As in other recent years, interest paid on time and savings deposits rose sharply, increasing about 23 per cent. Salaries and wages, until 1964 the largest expense item of district banks, rose 8 per cent. Other operating expenses, which include such items as advertising, depreciation, fees to directors, interest on borrowed money, local taxes, rent, and supplies, increased 10 per cent from the previous year.

Since 1946, expenses have risen at an average annual rate of 9.4 per cent. Interest payments on time and savings deposits have been the largest single contributor to this increase, rising from \$7 million in 1946 to \$95 million in 1964, an average annual rate of 15.8 per cent (Chart 2). Since 1956, such payments have increased at an annual rate of 24.0 per cent. Contributing to this rise has been both a rapid growth of time and savings accounts and a much higher average rate of interest paid. Time and savings deposits rose from \$0.9 billion in 1946 to \$2.9 billion in 1964, and the average rate of interest paid increased from 0.90

Table I

EARNINGS AND EXPENSES OF CENTRAL MISSISSIPPI VALLEY MEMBER BANKS

(Dollar amounts in millions)

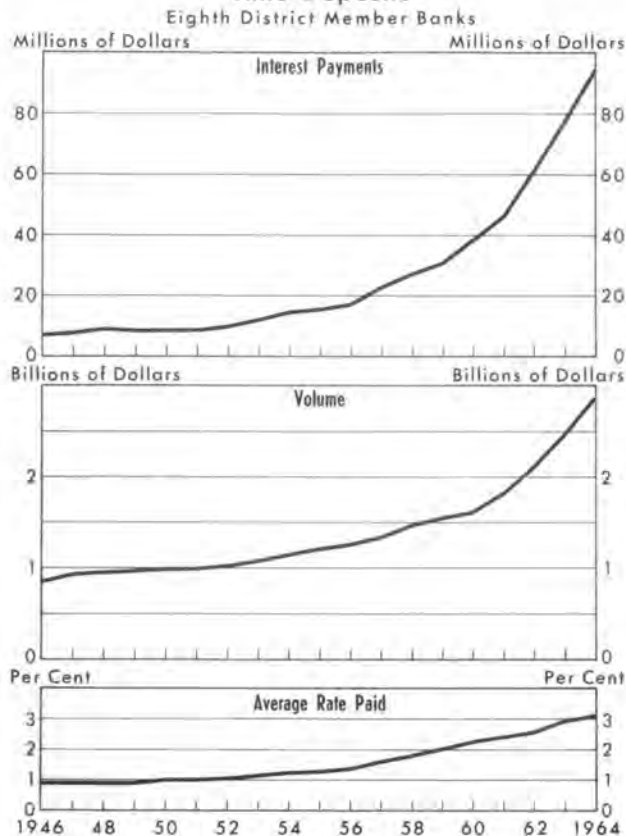
	1964	1963	1962	Per Cent Change	
				1963-1964	1962-1963
Interest and discounts on loans	\$250.8	\$221.8	\$200.6	+13.1	+10.6
Interest on securities					
a. U. S. Government	70.4	67.9	64.7	+ 3.7	+ 4.9
b. Other	31.1	23.9	19.5	+30.1	+22.6
Service charges on deposits	15.4	14.4	13.9	+ 6.9	+ 3.6
Other earnings	24.9	21.9	21.2	+13.7	+ 3.3
Total earnings	\$392.5	\$349.9	\$319.9	+12.2	+ 9.4
Salaries and wages	89.3	82.8	78.5	+ 7.9	+ 5.5
Interest on time deposits	94.6	77.0	61.2	+22.9	+25.8
Other expenses	89.4	81.1	73.5	+10.2	+10.3
Total expenses	\$273.3	\$240.9	\$213.2	+13.4	+13.0
Net earnings	\$119.2	\$109.1	\$106.7	+ 9.3	+ 2.2
Net recoveries and profits (+), losses (-)					
a. On securities	+ 0.6	+ 4.7	+ 5.3		
b. On loans	-10.1	- 7.5	-10.1		
c. Other	- 3.3	- 5.7	- 1.3		
Total net recoveries and profits	\$-12.8	\$- 8.5	\$- 6.1		
Net profits	\$106.4	\$100.6	\$100.5	+ 5.8	+ 0.1
Taxes on net profits	36.0	41.6	41.2	-13.5	+ 1.0
Net profits after taxes	\$ 70.4	\$ 59.0	\$ 59.4	+19.3	- 0.7
Cash dividends on common stock	28.9	26.3	25.0	+ 9.9	+ 5.2
Interest on capital notes and debentures*	1.2	**	**		
Net retained earnings	\$ 40.3	\$ 32.7	\$ 34.4	+ 23.2	- 5.0

*Includes cash dividends on preferred stock.

**Less than 0.1.

Note: Detail may not add to totals due to rounding.

Chart 2
Time Deposits



per cent to 3.08 per cent.² Interest payments increased from 13 per cent of all expenses of district member banks in 1946 to 35 per cent in 1964 (Table II).

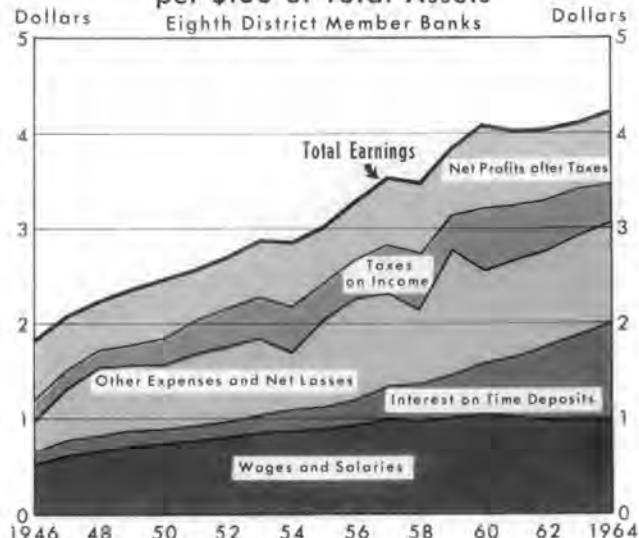
Table II
MEMBER BANK OPERATING EXPENSES
(Dollar amounts in millions)

	1946		1964	
	Amount	Per Cent of Total	Amount	Per Cent of Total
Interest on time deposits . . .	\$ 6.8	12.5	\$ 94.6	34.6
Salaries and wages	25.8	47.3	89.3	32.7
Other expenses	21.9	40.2	89.4	32.7
Total	\$54.5	100.0	\$273.3	100.0

Salaries and wages increased steadily from \$26 million in 1946 to \$89 million in 1964, reflecting both an increase in wage rates and a growth in the number of employees. While salaries and wages rose more rapidly than assets during the 1946-60 period, since 1960 the rise in labor costs has been less than the expansion in bank resources (Chart 3). This shift in

²These statistics are unweighted averages of rates paid on time and savings deposits at district member banks. A release containing these rates and operating ratios of member banks in the Eighth District for 1964, with comparative ratios for 1963, can be obtained on request to the Research Department of this bank.

Chart 3
Expenses and Net Profits
per \$100 of Total Assets



the trend reflects the introduction of electronic machines and other efficiencies. In addition, bank growth has centered in time deposits, which require less labor to handle than demand accounts. Relative to total expenses, salaries and wages have declined from 47 per cent in 1946 and from 41 per cent in 1960 to 33 per cent during 1964 (Table II).

Earnings

Total operating earnings of member banks in the Central Mississippi Valley rose 12 per cent from 1963 to 1964, the most rapid yearly increase in the postwar period. This rise reflected largely an increase in earning assets made possible by a large jump in time deposits, a substantial growth in capital, and a moderate increase in demand deposits. The average volume of loans outstanding during 1964 was 11 per cent above a year earlier, while holdings of municipal and corporate securities averaged 24 per cent more than in the previous year. Partially offsetting these increases was a decrease of 4 per cent in holdings of Government securities. In addition to greater earnings reflecting growth in the volume of earning assets, there was an increase in receipts from service charges and other sources.

Since 1946, earnings of member banks in the region have risen at an average annual rate of 8.5 per cent, slightly less than the growth of expenses. The growth of earnings has resulted largely from an increase in deposit and capital funds, a shift from nonearning and relatively low-yielding securities to higher earning assets, and a marked rise in the average level of interest rates.

From 1946 to 1964 total resources grew at an annual rate of 3.6 per cent, from \$5.0 billion to \$9.5 billion, providing these banks with more funds to invest (Table III). Earnings, however, increased much

Table III
MEMBER BANK ASSET HOLDINGS

(Dollar amounts in billions)

	1946		1964	
	Amount	Per Cent of Total*	Amount	Per Cent of Total*
Loans	\$1.0	19.7	\$4.4	46.8
U. S. Government securities	2.5	49.6	2.0	20.7
Municipal and corporate securities3	5.5	1.0	11.1
Cash assets	1.2	24.4	1.9	19.9
Other assets	**	.7	.1	1.5
Total	\$5.0	100.0	\$9.5	100.0

*Computed from aggregate statistics for district member banks. In the release containing operating ratios averages of individual bank ratios are used, resulting in somewhat different figures.

**Less than 0.1.

Note: Detail may not add to totals due to rounding.

more rapidly than assets, and the earnings-to-assets ratio more than doubled, rising from 1.83 per cent in 1946 to 4.27 in 1964 (Chart 3). During this period both time deposits and capital funds grew much more rapidly than demand deposits. Time deposits rose at an average annual rate of 6.9 per cent, and capital, at a 6.5 per cent rate. Demand deposits, meanwhile, increased at a 2.1 per cent average rate.

During the postwar period banks in the area have shifted a greater portion of funds to higher earning assets. Cash balances were reduced from 24 per cent to less than 20 per cent of total assets (Table III). Holdings of relatively low-yielding Government securities dropped from one-half to about one-fifth of assets. Over the same period higher yielding loans more than doubled in relative importance, rising from 20 per cent to 47 per cent of assets. Municipal and corporate securities rose from 6 per cent to 11 per cent.

Interest rates generally have worked up since 1946, and the rate of return on most types of bank earning assets have risen, contributing materially to the increase in area bank earnings. Yields on 3- to 5-year Government securities rose from 1.16 per cent in 1946 to 4.06 per cent in 1964. The interest rate on prime business loans rose from 1.50 per cent in 1946 to 4.50 per cent in 1964.

Other sources of bank earnings have grown since 1946 but contributed proportionately less to total earnings in 1964 than in earlier years. Service charges on deposit accounts, trust department earnings, service

charges and fees on bank loans, and other revenue have risen at an average annual rate of 5.8 per cent since 1946. These items accounted for 16 per cent of total earnings in 1946, compared with 10 per cent in 1964.

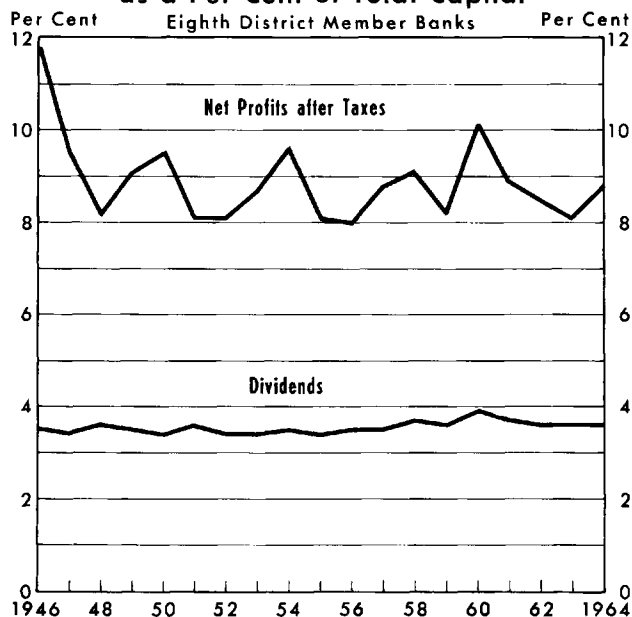
Net Earnings

Net operating earnings of member banks in the Central Mississippi Valley totaled \$119 million in 1964, about 9 per cent greater than the previous high of \$109 million attained in 1960 and again in 1963. Net losses and charge-offs absorbed nearly \$13 million, about 50 per cent more than during the previous year, leaving net profits before taxes of \$106 million. While net profits in 1964 were 6 per cent greater than a year earlier, they were below the \$108 million reached in 1960.

Despite the larger profits in 1964 income taxes took 14 per cent less than in the previous year. Although state income tax payments rose, Federal income taxes declined markedly. Profits after taxes jumped 19 per cent from 1963 to 1964. A major factor in the increase in net profits after taxes was the lower Federal tax payments, resulting primarily from the reduction in tax rates and, to a lesser extent, from an increased proportion of assets in the form of tax-exempt municipal securities.

Net profits after taxes relative to capital accounts have fluctuated in the comparatively narrow range of 8 to 10 per cent during the postwar period (Chart 4).

Chart 4
Net Profits after Taxes and Dividends as a Per Cent of Total Capital



(Continued on page 16)

Economic Activity Continues to Advance in Early 1965— *Monetary Expansion Slows and Fiscal Developments Are Little Changed*

ECONOMIC ACTIVITY has continued to advance rapidly during the first quarter of 1965. Production, employment, incomes, and sales have been strong. Continuation of this advance through the rest of 1965 depends in part on the character of public policy developments in coming months. An evaluation of these potential influences may profit from an examination of the role of monetary and fiscal actions in the current expansion. While recent monetary developments are summarized briefly in this article, the discussion focuses on fiscal developments. The role of monetary policy in the current expansion has been discussed at greater length in previous issues of this *Review*.¹

Recent business and monetary developments are summarized first, followed by a more extensive discussion of fiscal developments, with emphasis on the period since 1960. Some problems in identifying and measuring fiscal actions are also examined.

Recent Business Developments

The pace of economic activity in the nation quickened during the first quarter in contrast with a strike-induced slowdown in the fourth quarter of 1964. Sales, production, employment, and incomes have risen rapidly, and prices have shown some increase since last fall (Table I, page 6).

Retail sales have increased moderately from the high level reached in December, and in February were up at an annual rate of 8 per cent from last September. Sales of both durable and nondurable goods shared in the expansion.

Since September, industrial production has increased at an annual rate of 8.6 per cent, and, since a year ago (February 1964), the increase has been 8.3 per cent. From 1957 to 1964 industrial production increased at an average annual rate of 3.9 per cent, and from 1953 to 1964, at a 3.4 per cent rate.

¹In particular, see the December 1964 issue.

Increases in output and spending have enabled the economy to expand employment more rapidly than previously. Since September, payroll employment has risen at an annual rate of 4.5 per cent, compared with an increase of 3.3 per cent since February of last year and a 3.1 per cent rate since two years ago. Total employment has increased at a rate of about 3 per cent since September. It is estimated that the population aged 18 to 64 has been increasing at about a 1.5 per cent rate. Total employment has increased at a 2.1 per cent rate since a year ago, compared with a 1.2 per cent rate since 1953.

The agricultural portion of total employment has continued to decline, decreasing at an annual rate of 9 per cent since September. The average annual rate of decline has been 4.3 per cent since 1960 and 2.3 per cent since 1953. These figures indicate that the rate of decline in farm employment has been increasing while total employment has been growing at an accelerating rate.

Strength in labor markets is also indicated by a marked rise in the amount of overtime in manufacturing. The average hours worked per week in manufacturing was 40.5 in September, and by early this year, had increased to 41.4.

In February the number of persons looking for work for five weeks or more was 2.7 per cent of the labor force, the same as in September 1964, compared with 3.0 per cent in February of last year. The number of persons who are reported looking for work for five weeks or more may be of considerable significance and public interest. To a large extent such a group excludes those who experience short seasonal layoffs or who are involved in normal transition between jobs.

Prices have risen slightly in recent months. Since last September, wholesale prices have increased at a 1.2 per cent annual rate. By comparison, wholesale prices have changed only slightly on balance since 1958. Average industrial prices have been edging up—

Table I
SELECTED BUSINESS INDICATORS

**ANNUAL RATES OF CHANGE
SEASONALLY ADJUSTED**

To February 1965 from Month Indicated

	Employment ¹			Prices* ¹		Personal Income ⁸	Retail Sales ³
	Total Civilian	Payroll	Industrial Production ²	Consumer	Wholesale		
1965 Jan.	0.3%	4.7%	6.1%	0.0%	2.4%	1.2%	7.0%
1964 Dec.	2.5	3.6	5.7	0.6	3.0	5.7	6.0
Nov.	3.1	4.6	11.3	0.7	2.0	6.7	25.0
Oct.	3.9	6.1	17.4	1.1	1.2	7.2	22.9
Sept.	2.9	4.5	8.6	1.1	1.2	6.2	8.2
Aug.	2.4	4.3	7.5	1.3	1.8	6.4	6.7
July	2.0	3.8	7.6	1.0	1.4	6.7	8.4
June	2.0	3.8	8.2	1.2	1.8	6.6	8.6
May	1.3	3.8	7.6	1.4	1.5	6.3	7.6
Apr.	1.4	3.6	7.6	1.2	1.1	5.9	9.1
Mar.	2.3	3.4	8.3	1.2	0.9	6.3	9.2
Feb.	2.1	3.3	8.3	1.2	0.7	6.3	6.9
Jan.	2.3	3.6	8.0	1.0	0.2	6.0	8.9
1963 Feb.	2.3	3.1	7.6	1.3	0.5	6.2	6.5
1962 Feb.	1.8	2.8	6.4	1.3	0.2	5.8	6.8

To 1964 from Year Indicated

1961	1.7	2.5	6.3	1.2	0.1	5.6	6.1
1960	1.4	1.8	5.0	1.2	0.0	5.2	4.5
1959	1.4	1.8	4.5	1.3	0.0	5.1	4.0
1957	1.1	1.4	3.9	1.4	0.2	4.9	3.9
1955	1.2	1.5	3.5	1.6	0.8	5.2	4.0
1953	1.2	1.3	3.4	1.4	0.7	5.0	4.0
1951	1.1	1.5	3.8	1.4	0.3	5.1	4.0

MONTHLY SEASONALLY ADJUSTED DATA

	Thousands of Persons		1957-59=100			Billions of Dollars Annual Rates	
	1965	1964	1965	1964	1965	1964	
Feb.	71,304	59,560 ^p	138.8 ^p	108.9	101.2	510.7	276.2
Jan.	71,284	59,328	138.1	108.9	101.0	510.2	274.6
1964 Dec.	71,004	59,206	137.5	108.8	100.7	505.9	273.4
Nov.	70,755	58,878	135.0	108.7	100.7	502.3	259.9
Oct.	70,379	58,382	131.2	108.5	100.8	498.7	256.6
Sept.	70,465	58,458	134.0	108.4	100.7	497.9	267.0

p-Preliminary

* Not seasonally adjusted.

Sources: ¹ Department of Labor.

² Board of Governors of the Federal Reserve System.

³ Department of Commerce.

ward steadily since last summer. Consumer prices have increased at a 1.1 per cent annual rate since last September, about the same as in other recent years. This increase is subject to the possibility of overstatement if quality improvements are not adequately taken into account.

The stability of wholesale prices in the United States since 1958 is in sharp contrast with increases in other countries. From 1958 to 1964 wholesale prices increased 3.5 per cent in Japan, 5.1 per cent in Ger-

many, 7.9 per cent in Canada, 8.6 per cent in Switzerland, 9.8 per cent in Italy, 11.8 per cent in Great Britain, and 18.6 per cent in France.

Regional Economic Developments. Economic activity in the Central Mississippi Valley has advanced rapidly since early last fall. Payroll employment has risen at a 5.1 per cent annual rate since September, with significant increases in both the durable and non-durable goods industries. Manufacturing output has gone up at a 9 per cent rate, with particularly large

gains in the Little Rock area. Spending, as measured by the volume of check payments, has increased markedly at most major cities in the area.

Since September, deposits at weekly reporting banks in the Central Mississippi Valley have risen slightly faster than for the entire United States. The expansion of deposits in the region was primarily in the form of time deposits; there was only slight growth in demand deposits. Business loans for these banks have moved up at about a 14 per cent annual rate; an unusually sharp gain at the St. Louis banks was partially offset by declines at Louisville and Memphis banks.

Recent Monetary Developments

A reduced rate of expansion of the money supply has accompanied the rising level of economic activity in recent months. From November to the month ending March 15, money rose at a 0.7 per cent annual rate. By comparison, money rose at a 4.2 per cent average annual rate from September 1962 to November 1964.

In contrast with the slow growth in money, member bank reserves have expanded rapidly in recent months. From November to the month ending March 15, total member bank reserves increased at a 7.4 per cent annual rate. The addition to member bank reserves since November has been absorbed by a large expansion in reserves required for time deposits and an increase in the average level of excess reserves. Hence, the demand deposit component of the money supply has been unchanged.

Fiscal Actions and Economic Activity

Federal Government fiscal operations influence economic activity chiefly by affecting total demand for the nation's product. An increase in Government expenditures or a reduction in tax rates tends to expand total spending and national income; a decrease in Government expenditures or an increase in tax rates tends to contract total spending and national income.

Government decisions fix tax rates and expenditure plans, but actual receipts and expenditures are also responsive to variations in economic activity.² As a result, the difference between receipts and expenditures, i.e., the realized budget surplus or deficit, reflects the

²Those features of a fiscal system which have the predetermined (i.e., no new legislative or executive actions are necessary) effect of altering expenditures and receipts in a way which tends to offset changes in private spending are called "automatic stabilizers." Best-known examples are the Federal income tax and unemployment compensation.

level of national output and legislative and executive decisions regarding the budget.

A realized surplus or deficit may provide a misleading impression of the degree of expansiveness or restrictiveness of a particular fiscal program.³ Consider a legislative decision to increase tax rates. Suppose that a slowdown in economic activity results; tax receipts decline as income and profits fall, and Government expenditures for unemployment compensation increase. The *realized* Federal budget will show either a smaller surplus or a larger deficit than might otherwise have been expected from the increase in tax rates. Since the observed magnitude reflects both the legislative action of raising tax rates *and* the level of national income, it does not provide an accurate measure of the impact of the change in the fiscal program itself on economic activity.

A meaningful analysis of the economic impact of different fiscal programs requires separation of those changes in realized budget position that result from legislative or executive action and those that reflect changes in the economy's rate of production. A method of separating these aspects is to calculate, for a given fiscal program (i.e., a set of expenditure plans and tax rates), the budget surplus or deficit that would occur at various levels of economic activity, as measured, say, by gross national product. Such a procedure will yield a schedule of surpluses and deficits related to different levels of gross national product.

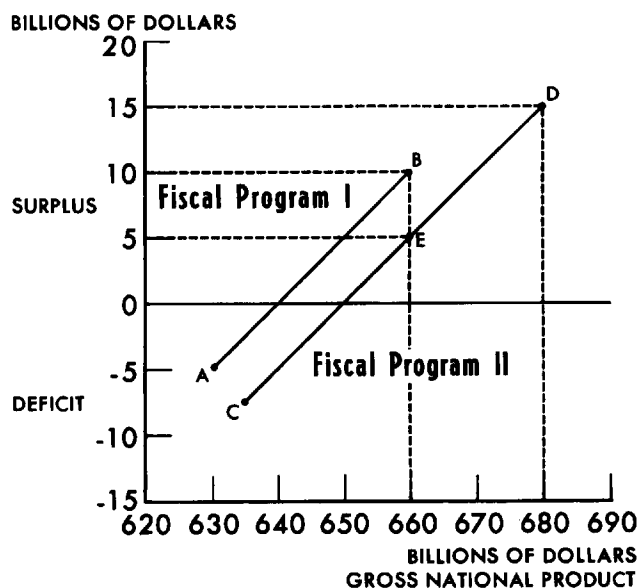
The schedule of surpluses and deficits associated with a particular fiscal program are depicted graphically (see figure, page 8) by an upward-sloping line. Because of the dependence of some receipts and expenditures on the level of economic activity, the same fiscal program may yield a surplus at high levels of economic activity and a deficit at low levels. Changes in Government expenditure plans or tax rates (i.e., legislative or executive actions) will tend to shift the schedule up or down.

Full Employment Budget Position. Rather than compare complete schedules, it is more convenient to compare single numbers. Therefore, comparison of different fiscal programs from one period to the next is facilitated by considering the budget position for a given level of economic activity. In a growing economy the gross national product associated with "full

³Words like "expansive" and "restrictive" are meaningful only in a comparative sense. In this discussion the emphasis is on comparisons of different fiscal programs over time. Furthermore, the usage of these terms in describing different fiscal programs is not to be confused with the "appropriateness" of these programs. This aspect is discussed at greater length below.

Fiscal Actions & Economic Activity

Illustrative Schedules



employment” is regarded as a meaningful basis for comparison.⁴

The surplus or deficit for different fiscal programs can be estimated for a full employment level of economic activity.⁵ One program is said to be more expansive than another if its surplus at full employment is less or its deficit is greater. The smaller the surplus, or the larger the deficit, of the budget at full employment, the less is the burden on private demand to maintain full employment.

Consider a fiscal program (Fiscal Program I in figure) which in fact yields a budget deficit of \$5 billion (point A) but would have resulted in a budget surplus of \$10 billion at full employment (point B). If the economy had been generating this full employment level of gross national product, the Government would have withdrawn \$10 billion more in receipts than it would have returned in expenditures. This means that for full employment to have been main-

⁴For purposes of the analysis here, the President’s Council of Economic Advisers’ definition of “full employment” is used. They define a full employment level of economic activity as that level associated with a 4 per cent unemployment rate. See the 1965 *Annual Report of the Council of Economic Advisers*, pp. 81-83. Other levels of activity, such as 3 or 5 per cent unemployed, when used consistently, would yield different figures, but their relationships over time would not be significantly altered. Also, it is to be noted that in a growing economy a given unemployment rate implies an increasing full employment level of gross national product over time because of growth in the labor force, net investment in plant and equipment, and advances in productivity.

⁵For a discussion of the technical problems of estimating the budget surplus or deficit (on a national income accounts basis) at full employment, see Nancy H. Teeters, “Estimates of the Full-Employment Surplus, 1955-1964,” in a forthcoming issue of *The Review of Economics and Statistics*.

tained, this withdrawal would have required a \$10 billion excess of private investment over private saving. This fiscal program would be more expansive than one, say in the *next period* (Fiscal Program II in figure), which realizes a larger deficit (point C) but would have yielded a \$15 billion surplus at the relevant full employment level for that period (point D), and, hence, would have required a \$15 billion excess of private investment over private saving to maintain full employment.

It is apparent from this example that the magnitude of the hypothetical budget position at full employment would increase (i.e., a surplus would become larger or a deficit would become smaller) over time without a change in fiscal program. In the figure the movement from B to D is chiefly the result of an increase in full employment production and income. Without growth in the economy Fiscal Program II would have yielded a surplus of \$5 billion at full employment (point E). As the full employment level of economic activity increases over time in an economy with an income-based tax structure, the volume of full employment tax receipts rises without a change in tax rates. Thus, in a growing economy a given fiscal program becomes more restrictive in its impact on economic activity as time passes.

Fiscal Actions in the Recent Expansion

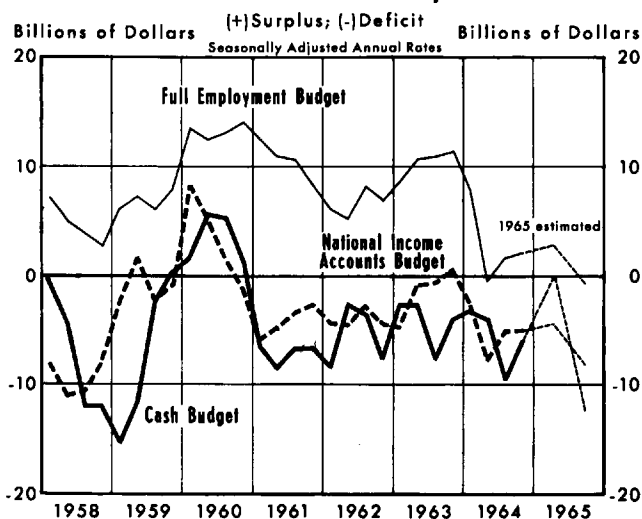
With the aid of this tool of analysis, what can be said about the course of fiscal actions during the recent expansion?⁶ Fiscal developments during 1961-64 are summarized in the chart on page 9.⁷

The appropriate magnitude (or whether plus or minus) of the full employment budget surplus cannot be determined by examining these figures alone. No statement can be made about whether the Federal Government’s net budget position is too large or too small without examining it in conjunction with other public policies and the general strength of private demand. A given level of total demand can be achieved with different combinations of fiscal policy, monetary policy, and debt management. The discussion that follows is based on examination of fiscal

⁶While the discussion here is centered on the full employment national income accounts budget, it should be pointed out that for general purposes of analysis this hypothetical budget should be used in conjunction with, not to the exclusion of, other budget concepts. Each budget concept adds an important dimension to a full understanding of the role of the Federal Government in the economy.

⁷The full employment budget used here corresponds to the national income accounts basis for classifying Federal Government transactions. This is the same accounting framework that is used to describe the major flows of output and income for the entire economy.

U.S. Government Fiscal Operations



policy in "isolation," with no attempt to evaluate its "appropriateness" during the period and with no attempt to assess the "leads" and "lags" of effect on the economy.

Fiscal Actions: 1961-64. The fiscal program of the Government became progressively more expansive starting in early 1961 and continuing until about mid-1962. The full employment budget surplus declined from \$13 billion in the fourth quarter of 1960 to about \$5 billion in the second quarter of 1962. The stimulative character of the Government's fiscal program during this period was caused mainly by rapidly increasing expenditures, but new depreciation guidelines and an investment tax credit provided additional stimulus to private demand. Partly as a result of these actions, economic activity rose rapidly.

From mid-1962 through 1963 the Federal Government's fiscal program became steadily more restrictive in its impact on total demand; the full employment budget surplus rose from \$5 billion to over \$11 billion in the fourth quarter of 1963. The growth of Federal expenditures slowed, while full employment receipts rose rapidly. In addition to trend growth, receipts increased because of the raising of social

security tax rates on January 1, 1963. In late 1962 and early 1963 economic activity remained on a virtual plateau, but during most of 1963 activity again advanced markedly.

In early 1964 the fiscal program of the Government assumed a more stimulative role in the economy, primarily as a result of enactment of a tax reduction bill. The full employment budget surplus declined from over \$11 billion in the fourth quarter of 1963 to about \$2 billion a year later. The primary impact of the tax cut was felt in the second quarter. In the third and fourth quarters the trend growth of the economy caused larger potential tax receipts while expenditures changed little, so that the full employment budget surplus rose. During 1964 economic activity rose much faster than the longer run trend since 1946.

The Outlook for 1965. Fiscal developments during the first half of 1965 are expected to be little changed from the second half of 1964. Realization of the administration's budget and economic forecasts for early 1965 would yield a full employment budget surplus of between \$2 and \$3 billion, compared with about \$2 billion in the last quarter of 1964.⁸ No major changes in tax rates or expenditure programs are planned, but the second stage of the 1964 tax cut is taking effect in 1965, particularly as it affects receipts from corporate profits taxes.

A movement toward a more stimulative fiscal program is expected during the second half of 1965. The details are specified in the President's budget program for fiscal 1966.⁹ Among expansive measures proposed are reductions in excise tax rates and increases in Federal expenditures, especially for social security benefits. It is estimated that there will be a full employment budget *deficit* of about \$500 million in the second half of 1965 if the proposed program is enacted.

⁸See the 1965 Annual Report of the Council of Economic Advisers, and the Hearings before the Joint Economic Committee on the Report, especially the testimony of Kermit Gordon, Director of the Bureau of the Budget.

⁹The Budget of the United States Government for the Fiscal Year Ending June 30, 1966.



Federal Reserve Open Market Transactions and the Money Supply

THE NATION'S MONEY SUPPLY has an important influence on economic activity.¹ Changes in the supply are effected by the Federal Reserve System with a view to promoting a high level of employment, reasonably stable prices, and a viable balance of payments. A major means by which the Federal Reserve affects the quantity of money is changing its holdings of assets. In addition, numerous other factors, which are beyond immediate Federal Reserve control, impinge on money. The Federal Reserve can compensate for these factors, but to give precision to its monetary management it must continually measure and study them.

Changes in the volume of assets—primarily U. S. Government securities—held by the Federal Reserve System directly change the amount of member bank reserves.² Bank reserves, in turn, have an important bearing on the movement in the nation's money supply (demand deposits plus currency).³ As the chart suggests, however, in many periods there have been large divergences between the rates of change in the System's holdings of Government securities and in the money supply. For example, from December 1963 to December 1964 the Federal Reserve increased its holdings of Governments \$3.4 billion, a 10 per cent rise. During the same period the money supply rose \$6.4 billion, or 4.1 per cent.

If all of the increase in Federal Reserve holdings of Governments last year had been used to expand the demand deposit component of money at member banks, the money supply would have risen about \$22

billion, or 18 per cent.⁴ That is, the money supply would have expanded at a rate more than three times as great as it actually did. This article discusses the factors contributing to the discrepancy between the potential rate of growth in money as a result of Federal Reserve open market transactions and the actual rate of change in the money supply.

Money Supply Concepts

The money supply, as usually defined, consists of (1) demand deposits of all commercial banks other than those due to domestic commercial banks and the U. S. Government, less cash items in the process of collection and Federal Reserve float; (2) foreign demand balances at the Federal Reserve Banks; and (3) currency outside the Treasury, the Federal Reserve System, and the vaults of all commercial banks. Each of the components of the money supply is listed in Table I.

Table I
MONEY SUPPLY
(Billions of dollars)

	<u>Dec. 1964*</u>
Member bank monetary deposits	
Individuals, partnerships, corporations	} 124.2
Foreign governments, central banks	
State and political subdivisions	
Mutual savings banks	
Banks in foreign countries	
Certified checks, travelers checks, etc.	
Adjustments	
Cash items in process of collection	} — 21.0
Federal Reserve float	
Total	103.2
Nonmember bank monetary deposits, adjusted	25.3
Currency in the hands of the nonbank public	34.9
Foreign deposits at Reserve Banks2
Money supply	163.6

* Averages of daily figures.

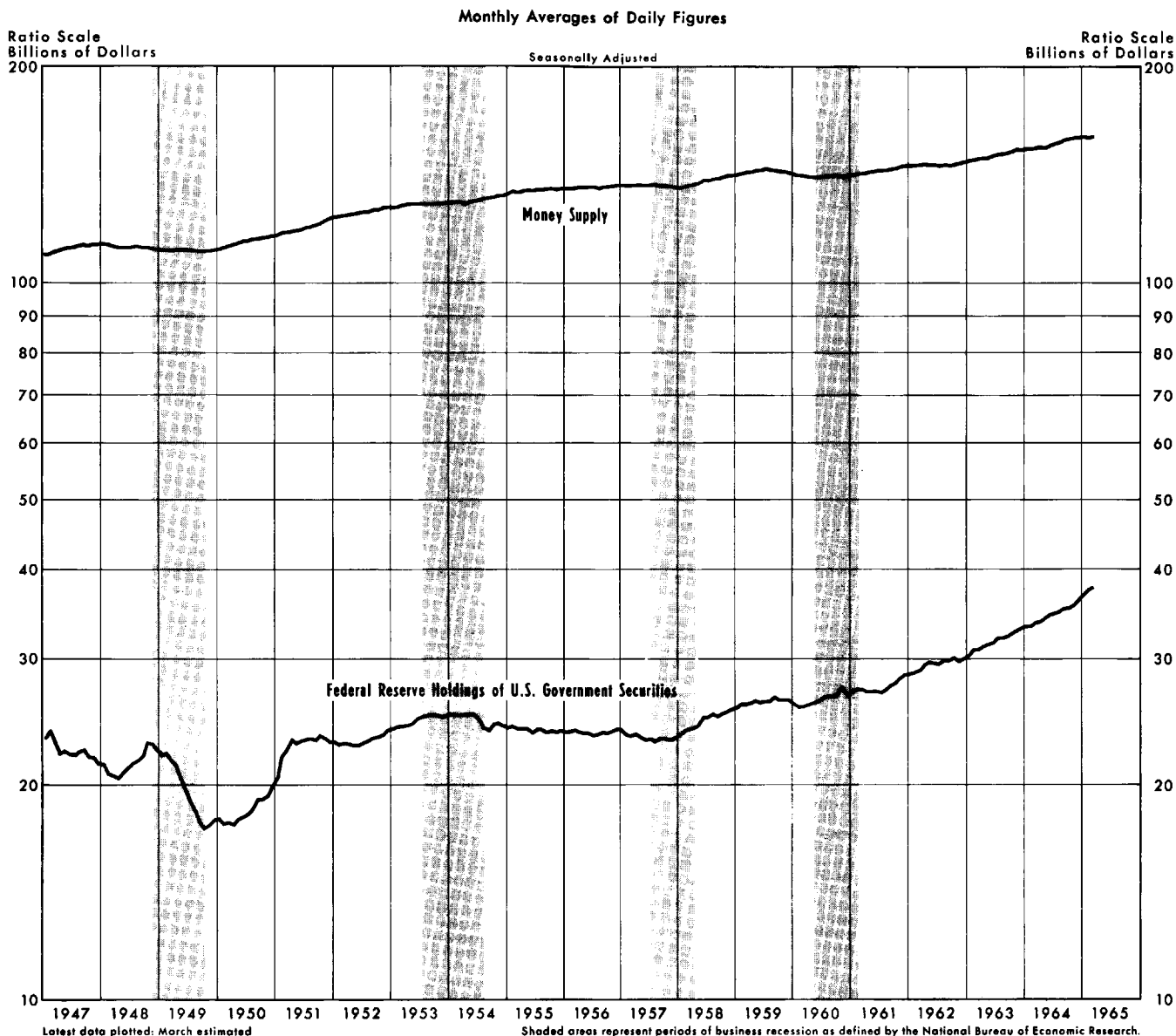
⁴The \$22 billion potential expansion in money is 6.62 (the reserve expansion factor for monetary deposits for December 1963) times the \$3.4 billion increase in holdings of Governments.

¹For an outline and discussion of academic studies on this point, see H. G. Johnson, "Monetary Theory and Policy," *American Economic Review*, Vol. LII (June 1962), pp. 335-384.

²Purchases and sales of these assets—called open market operations—is the chief tool used by the System in managing money. In addition, changes in reserve requirements and the discount rate are used.

³See Board of Governors of the Federal Reserve System, *The Federal Reserve System: Purposes and Functions* (5th ed., Washington, D. C., 1963), pp. 63-81.

Money Supply and Federal Reserve Holdings of U. S. Government Securities



In this article, deposits included in money are referred to as "monetary deposits," consisting primarily of demand deposits of individuals, partnerships, and corporations in commercial banks (Table I). To a lesser extent, they include demand deposits of state and political subdivisions; of foreign governments and central banks; of mutual savings banks; of foreign banks; and certified and officers' checks, cash letters of credit, and travelers checks. Monetary deposits at member banks, the major part of the money supply, increased \$3.2 billion during 1964, a 3.2 per cent increase. Nonmember bank monetary deposits expanded \$1.4 billion, or 6 per cent. Currency in the

hands of the nonbank public rose \$1.8 billion, or 5.4 per cent. Total money increased \$6.4 billion, or 4.1 per cent, a weighted average of the relative changes of the three components.

All other deposits at commercial banks are referred to as "nonmonetary deposits." These consist of U. S. Government demand deposits, deposits due to domestic commercial banks, and time and savings deposits (Table II, page 12). During last year these deposits at member banks increased \$12.4 billion, or 11.4 per cent; nonmonetary deposits at nonmember banks rose \$2.3 billion, or 11.1 per cent.

Table II

NONMONETARY DEPOSITS

December 1964*

(Billions of dollars)

	Member Banks	Nonmember Banks
U. S. Government demand	4.8	.7
Due to U. S. commercial banks	13.4	.3
Time and savings	103.0	22.0
Total	121.2	23.0

* Averages of daily figures.

Determinants of the Money Supply

The major factors which influence the behavior of the money supply are changes in: (1) System holdings of Government securities; (2) other factors affecting member bank reserves; (3) nonmonetary deposits; (4) excess reserves at member banks; and (5) currency held by the public.⁵ These factors reflect decisions of the Federal Reserve, Treasury, commercial banks, and the public (Exhibit). Each of these factors will be discussed in turn.

Federal Reserve Holdings of Government Securities

Federal Reserve purchases of U. S. Government securities are made by adding to member bank reserves, and sales are made by subtracting from reserves.⁶ Decisions to buy or sell Government securities are discretionary on the part of the Federal Reserve System. Generally, these decisions are based on a consideration of the level and rate of growth in domestic economic activity along with other ultimate economic goals. In the very short run, such proximate goals as bank reserves, money, bank credit, and interest rates affect open market decisions.

Other Reserve Factors

Reserves are also affected by changes in such other factors as currency in the hands of the nonbank public, the gold stock, Treasury operations, member bank borrowings from Reserve Banks, and Federal Reserve float. These factors—which are determined, for the most part, by forces beyond the direct and immediate control of monetary authorities—may absorb or reinforce the impact on bank reserves of Federal Reserve open market transactions.

⁵There are some other influences discussed later, such as expansion ratio factors and other components of money.

⁶Total reserves of member banks consist of member bank deposits at Reserve Banks and vault cash.

Nonmonetary Deposits

Member banks are required to hold reserves equal to a prescribed proportion of their deposits. Consequently, a rise in nonmonetary deposits reduces the maximum volume of monetary deposits which may be supported by a given reserve base. Reserves required for member bank nonmonetary deposits—consisting of Government demand deposits, interbank deposits, and time and savings deposits—were about 30 per cent of total reserves last year.

Changes in United States Government demand deposits at commercial banks result from variations in tax and borrowing receipts held in accounts at these banks. While additions to these accounts tend to center around tax periods, withdrawals are made as funds are needed by the Government. Government deposits are left in commercial banks until the funds are spent in order to reduce the impact of large Treasury financing operations on the monetary system. While flows of Government receipts and expenditures are the major determinant of these deposits, Treasury balances at commercial banks are further affected by transfers of funds from Government demand deposits at commercial banks to the Treasury's active account at Federal Reserve Banks.

Interbank deposits (demand deposits due to U. S. commercial banks) at member banks arise as the result of correspondent banking relationships among member banks and between member and nonmember banks. The amount of these deposits is set by individual banks and is generally related to the volume of banking activity.

Time and savings deposits at member banks account for the major portion of reserves required for nonmonetary deposits. These deposits are a form of "intermediation deposits," arising out of the flow of funds from saving units to units which borrow to purchase investment or consumption goods and services. As in the case of other intermediation-type deposits (e.g., saving and loan shares and deposits in mutual savings banks), the growth in time and savings deposits is related to yields offered, to yields on other short-term investment opportunities, to the amount of personal and business saving, and to the amount of wealth. Time and savings deposits are in the nature of a "tap issue": that is, the public determines the flow into time deposits at the interest rate offered by commercial banks.

Excess Reserves

Not all of member bank reserves are used to sup-

port deposits; some reserves are held in excess of reserve requirements. Other things constant, banks change their holdings of excess reserves by taking actions which result in opposite changes in reserves to support monetary deposits. Since excess reserves are a nonearning asset, banks desire to keep their holdings at a minimum consistent with efficient operations. Alternative yields on short-term investments, particularly Treasury bills, and costs of managing a bank's reserve position largely determine the average volume of excess reserves. Within short periods of time there may be considerable variation in excess reserves, depending on the magnitude and timing of flows of funds into and out of individual banks.

Currency

Currency in the hands of the public plays a dual role in money supply determination; it is both a factor tending to reduce total bank reserves (as noted in other factors affecting reserves) and a factor adding

directly to the money supply. On balance, a rise in the currency component of money tends to reduce the demand deposit portion by a greater amount than it adds directly to the money stock. This results from the fractional reserve system whereby reserves support a multiple, presently over 6 times, of demand deposits. The volume of currency in the hands of the public depends on the public's demand for currency which, in turn, is closely related to business activity.⁷

Recapitulation

The following simplified outline may be helpful in explaining changes in the stock of money outstanding.⁸ The volume of member bank reserves is affected

⁷See Norman N. Bowsher, "Currency and Demand Deposits," this *Review*, March 1965.

⁸There probably are interactions between the factors affecting the money supply, but little is known of the relative importance of such interactions at the present time.

Exhibit	
SUMMARY OF DETERMINANTS OF THE MONEY SUPPLY	
Immediate Determinant	Chief Forces Influencing Determinants
Federal Reserve holdings of U. S. Government securities	Discretionary actions of the Federal Reserve.
Other reserve factors	Business activity, balance of payments, Treasury decisions, relationship of market interest rates to the discount rate, and many irregular and seasonal forces.
Currency held by the nonbank public	
Gold stock	
Treasury operations	
Member bank borrowing from F. R.	
Miscellaneous factors	
Reserve utilization factors	Government taxing, spending, and financing, and transfers by the Treasury of balances from commercial banks to Reserve Banks.
Nonmonetary deposits	Volume of banking business and bank decisions regarding liquidity.
Government demand deposits	The public, on the basis of interest rates paid on these deposits and similar investment instruments, the volume of saving, and wealth.
Interbank deposits	Member bank decisions based largely on yields on short-term investment instruments, on the discount rate, and on distribution of member bank reserves.
Time and savings deposits	Federal Reserve decisions.
Excess reserves	The public and the movement of deposits within the country.
Expansion ratio factors	
Reserve requirements	
Location of deposits in member banks with different reserve requirements	
Other components of money	The public, state regulatory agencies, and activities of nonmember banks.
Monetary deposits at nonmember banks	Public decisions based primarily on business activity.
Currency held by the nonbank public	Decisions of foreigners.
Foreign deposits at Reserve Banks	

by System open market transactions and other reserve factors outside direct Federal Reserve control, particularly currency movements. A portion of total reserves is used to support nonmonetary deposits: Government demand deposits determined primarily by the Treasury; the volume of time and savings deposits determined by the public; and interbank deposits. Total reserves less reserves required to support these nonmonetary deposits establishes the amount of reserves available to support monetary deposits. Member bank operations require a certain amount of ex-

cess reserves. The remaining portion of reserves are used to support monetary deposits, the major component of money.⁹

In addition, a change in the deposit expansion ratio permits a difference in the amount of deposits

⁹Each bank keeps excess reserves at a desired level; additional reserves are quickly used to make loans or to buy securities resulting in an expansion of deposits. Because of the fractional reserve system, the process can be repeated within the banking system until the total deposit expansion is about 6 to 7 times the amount of surplus reserves.

Money Demand and Bank Credit as Factors Affecting the Money Supply

THE ARTICLE, "Federal Reserve Open Market Transactions and the Money Supply," focuses on the role of bank reserves and related factors in money supply determination.¹ For a discussion of money demand and the money supply, see "Bank Credit and Monetary Developments in 1964," in the *Federal Reserve Bulletin*, February 1965. In the section entitled "Money supply," on pages 218 to 220, the *Bulletin* article states:

"During 1964 the money supply rose by 4.0 per cent, slightly more than in 1963 and a record for any year since 1951. After increasing at a seasonally adjusted annual rate of 2.0 per cent during the first 5 months, it rose at a rate of 8.5 per cent in June and July and 4.1 per cent after that. The currency component rose by a postwar record of almost 6.0 per cent in both 1964 and 1963.

"The acceleration in money growth over the past 2 years suggests that expanding transactions needs may now be having a greater influence on the public's demands for cash balances than formerly. Over the postwar period, these needs have been accommodated to a substantial degree by activation of idle balances, as cash balances held for liquidity needs were attracted into earning assets by rising interest rates. The incentives for such transfers have been particularly strong since early 1962, a period in which competition of banks and other savings institutions for time deposits and shares has been aggressive. As the public fulfills more of its desires for liquidity by holding nonmoney assets, the demand for money will be influenced to a greater extent by transactions needs related to income and output. Thus, the higher levels of transactions in 1963 and 1964 may help to explain the larger rate of growth of the money stock in those years.

"Since economies in the use of cash for transactions purposes will continue to be developed and

since the public will continue to have changing desires about the amount of liquidity it wishes to hold in the form of cash, the money supply should not be expected to grow in any fixed relationship to income—at least in the short run. Indeed, in December 1964 and January 1965—as short-term open market rates rose and commercial banks offered more on time and savings deposits—the money supply grew less rapidly than in the previous months."

Professor Lester V. Chandler, in *The Economics of Money and Banking* (Fourth Edition; New York: Harper and Row, Publishers, 1964), concentrates primarily on the role of commercial bank holdings of loans and securities as the major direct determinant of the money supply. In his Table 11-2 on page 258, Chandler summarizes the factors affecting the money supply as follows:

DIRECT DETERMINANTS OF THE MONEY SUPPLY (in billions of dollars)

	April 24, 1963
ASSETS	
Monetary gold stock	\$ 15.9
Treasury currency	5.6
Federal Reserve holdings of loans and securities ...	31.4
Commercial-bank holdings of loans and securities* ..	234.9
Total	<u>\$287.8</u>
Less: NONMONETARY LIABILITIES	
Foreign deposits, net	1.2
Treasury holdings of cash and deposits	5.5
Time deposits at commercial banks	103.0
Total	<u>\$109.7</u>
Less: CAPITAL ACCOUNTS	
	29.7
Equals: MONETARY LIABILITIES	
Demand deposits	118.2
Currency and coin outside banks	30.2
Total	<u>\$148.4</u>

*Chandler points out that bank reserves have an influence on commercial bank holdings of loans and securities.

¹For two recent studies of money supply determination incorporating many of the same factors, see Karl Brunner and Allan H. Meltzer, "Some Further Investigations of Demand and Supply Functions for Money," *Journal of Finance*, Vol. XIX (May 1964), pp. 240-283; and Milton Friedman and Anna J. Schwartz, *A Monetary History of the United States, 1867-1960*, a study by the National Bureau of Economic Research (Princeton: Princeton University Press, 1963).

supported by a given reserve base. Shifts in demand deposits between reserve city banks (16½ per cent reserve requirement) and other member banks (12 per cent requirement) change the reserve expansion ratio.¹⁰

Money may also increase without direct reference to the member bank reserve base. Growth in non-member bank monetary deposits does not require reserves at Federal Reserve Banks; hence this component of money is not directly related to the reserve base.¹¹ Movements in currency and foreign deposits at Reserve Banks affect money directly, as well as via changes in the reserve base.

In summary, five classes may be used to categorize the factors which affect the money supply. In addition to Federal Reserve open market transactions, there are other reserve factors, reserve utilization factors, expansion ratio factors, and other components of money (Exhibit). System actions and the other reserve factors affect the size of the reserve base. Reserve utilization factors establish the portion of the base allocated to support member bank monetary deposits. The expansion ratio factors determine the volume of monetary deposits supported by this portion of reserves. Other components of money constitute the portion of money which is not directly related to the reserve base.

¹⁰The Federal Reserve from time to time changes these reserve requirements on demand deposits, as well as those for time deposits, establishing different expansion ratios as a tool of monetary policy.

¹¹Nonmember banks must keep reserves in an amount and form specified by state law or regulation. The amount of reserves held by nonmember banks is influenced to some extent by the amount of reserves provided to member banks.

Factors Affecting the Money Supply During 1964

The Federal Reserve contributed directly to member bank reserves during 1964 by increasing its holdings of U. S. Government securities by \$3.4 billion. Changes in other reserve factors absorbed most of the addition to reserves (Table III), and total member bank reserves expanded only \$900 million. Chief reserve factors absorbing the expansion in the System's account in 1964 were an increase of \$1.8 billion in currency held by the public, a reduction of \$200 million in the nation's gold stock, and a drain of \$400 million because of Treasury operations.

The net addition to total reserves was used largely by a \$600 million increase in reserves required for nonmonetary deposits (Table III), chiefly time deposits.¹² Hence, only \$300 million, one-third of the

¹²The rise in nonmonetary deposits largely explains why commercial bank credit during 1964 rose at a more rapid rate (8.2 per cent) than the money supply (4.1 per cent).

Table III
**SUMMARY OF FACTORS AFFECTING THE MONEY SUPPLY
DURING 1964**

(Averages of daily figures, in billions of dollars)			
Factors	Dec. 1964	Dec. 1963	Change
U. S. Government securities held by Federal Reserve	37.1	33.7	+ 3.4
Other reserve factors			
Currency held by the nonbank public	— 34.9*	— 33.1*	— 1.8
Gold stock	15.4	15.6	— 0.2
Treasury operations	3.9	4.3	— 0.4
Member bank borrowing from F. R.	0.2	0.3	— 0.1
Miscellaneous factors	— 0.1*	— 0.1*	— 0
Net other reserve factors	— 15.5*	— 13.0*	— 2.5
Total reserves	21.6	20.7	+ 0.9
Reserve utilization factors			
Reserves required for nonmonetary deposits**	— 5.7*	— 5.1*	— 0.6
Excess reserves	— 0.4*	— 0.5*	+ 0.1
Total	— 6.1*	— 5.6*	— 0.5
Reserves required for monetary deposits	15.5	15.1	+ 0.4
Expansion ratio factors	6.66†	6.62†	+ 0.04†
Member bank monetary deposits	103.2	100.0	+ 3.2
Other components of money			
Nonmember bank monetary deposits	25.3	23.9	+ 1.4
Currency held by the nonbank public	34.9	33.1	+ 1.8
Foreign deposits at Reserve Banks	0.2	0.2	— 0
Money supply	163.6	157.2	+ 6.4

* These factors have a negative relationship to the money supply; hence, the minus sign.

** Includes adjustment for reserve credit which is allowed, according to Federal Reserve regulations, for deposits due from banks.

† Actual figure, not in billions of dollars. The 6.66 in December 1964 resulted from a weighted average reserve requirement on monetary deposits of 15.02 per cent, and the 6.62 in December 1963 resulted from a 15.11 per cent average.

expansion in the reserve base (and less than 1/11 of that provided by the System), were available for support of member bank monetary deposits.

Reserves required for monetary deposits at member banks increased \$400 million during last year, reflecting the increase of \$300 million in reserves available for monetary deposits and a \$100 million decrease in excess reserves. This rise in reserves required for monetary deposits permitted the member bank demand deposit component of money to increase by \$2.6 billion. An increase in the expansion ratio contributed an additional \$600 million, so that the member bank component of money actually expanded \$3.2 billion. Monetary deposits expanded less rapidly at reserve city banks (2.2 per cent) than at country banks (4.1 per cent). Since reserve requirements are higher (16½ per cent) at reserve city banks than at country banks (12 per cent), the expansion ratio increased from 6.62 to 6.66. The reserve base, therefore, was able to support a larger amount of monetary deposits than otherwise.

Changes in other components of the money stock resulted in a further increase in money last year. Monetary deposits at nonmember banks, which are not directly supported by the reserve base, grew more rapidly (6 per cent) than at member banks. During

¹³ While currency growth added to the money supply, its growth also reduced member bank reserves. Therefore, currency flows into the hands of the public, as mentioned previously, were a major factor offsetting the impact of Federal Reserve open market transactions on the money supply.

1964 currency in the hands of the public increased 5.4 per cent.¹³ Foreign deposits at Reserve Banks were unchanged.

In summary, the acquisition of \$3.4 billion in Government securities by the Federal Reserve during 1964 was necessary, given the changes that occurred in other factors affecting money, in order that the money supply could continue to expand at about 4 per cent a year. This rate of expansion in money was somewhat less than the rate of expansion of total output.

Conclusion

The Federal Reserve System has the major responsibility of managing the nation's money supply so as to assist the economy in achieving a high level of employment and output, a relatively stable price level, and a viable balance of payments. There are many factors beyond direct and immediate control of the monetary authorities which make the task of effective monetary management difficult.

This article has presented a framework for identifying some of the more important elements or "slippages" interposed between Federal Reserve open market transactions and the money supply. Currently, research is under way within the Federal Reserve System to quantify these "slippages" and to develop methods for predicting their movements. The purpose of this research is to make monetary management more a science and less an art.

LEONALL C. ANDERSEN



Earnings and Expenses of Central Mississippi Valley Banks During 1964

Continued from page 4

They hit a peak of 10.1 per cent in 1960. After declining to 8.1 per cent in 1963, near the postwar low, net profits after taxes rebounded to 8.8 per cent of capital accounts in 1964. Although profits for industry over this period generally have been higher, profits at these banks have shown greater stability.

District member banks distributed \$29 million as cash dividends to their stockholders in 1964, an in-

crease of 10 per cent from 1963. Dividends have been rising at virtually the same rate as bank capital and, since 1962, have remained at 3.6 per cent of capital accounts, approximately the average of the postwar period (Chart 4). Interest on capital notes and debentures absorbed \$1.2 million, leaving \$40.3 million to be added to member banks' capital accounts, an increase of 23 per cent from the previous year.