

# MONTHLY REVIEW

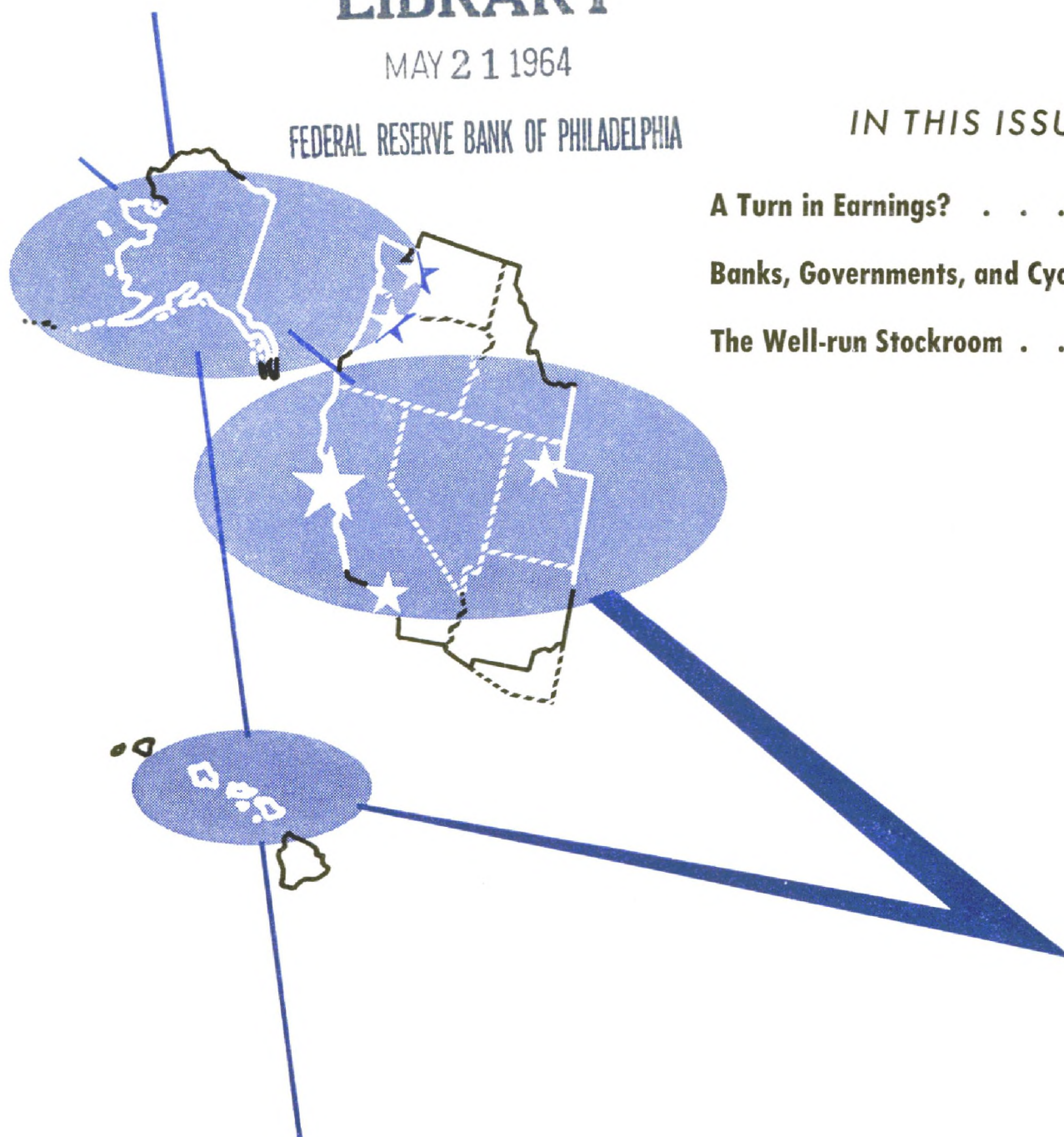
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FEDERAL RESERVE BANK OF PHILADELPHIA

### IN THIS ISSUE

A Turn in Earnings? . . . . .	75
Banks, Governments, and Cycles . . .	81
The Well-run Stockroom . . . . .	88



APRIL  
1964

## A Turn in Earnings?

. . . District banks report a sharp upturn in profits for 1963

## Banks, Governments, and Cycles

. . . will the usual sales-purchase pattern be repeated in 1964's  
Government securities market?

## The Well-run Stockroom

. . . will sharp pencils and computers keep inventories under  
control throughout this expansion?



## A Turn in Earnings?

**T**WELFTH DISTRICT member banks filled out their income and earnings reports for 1963 with a justifiable sense of pride. Their after-tax profits jumped more than 8 percent over the previous year's level, and this increase was doubly welcome because it occurred after two consecutive years of declining net income. Net profits after taxes were \$248 million, just \$1 million short of the 1960 record, and net current earnings before taxes reached an all-time high of \$519 million.

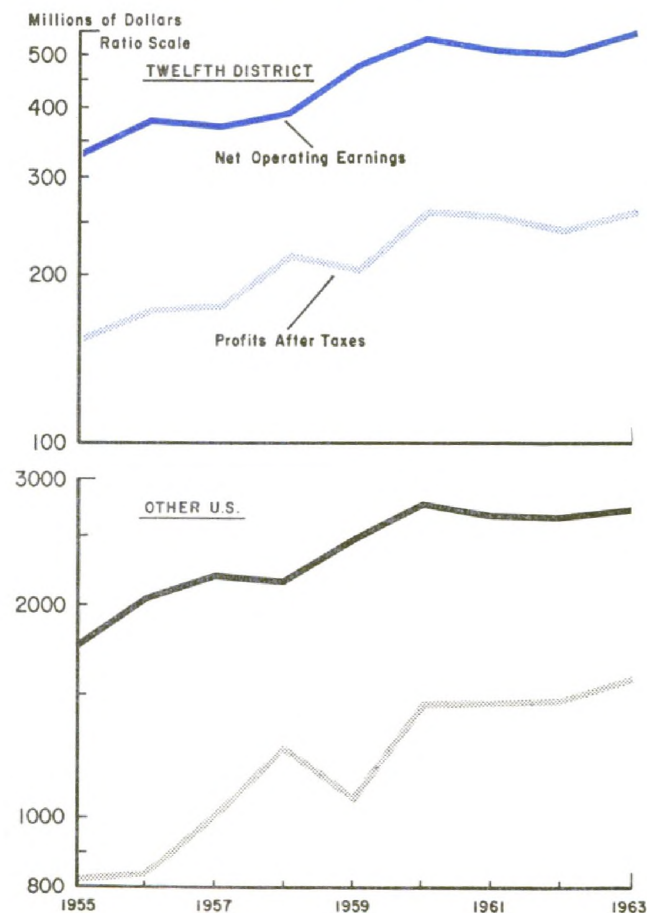
The profits figures reflected the success of most District banks in realigning their loan and investment portfolios, thereby producing more than enough added revenue to offset the prodigious increase in interest costs which has affected their cost structure in the last several years. In 1963 as in 1962, however, the profit experience of individual banks varied widely. The largest District banks, for example, improved on their relatively weak 1962 performance by achieving proportionally greater profit advances in 1963 than did their smaller competitors.

### Profits—despite cost squeeze

District banks experienced a far greater gain in net operating earnings than their counterparts elsewhere in the nation. The greater District increase—almost 10 percent as against 4 percent elsewhere—reflected mostly the smaller rate of increase incurred by District banks in interest costs on time and savings deposits. The revenue pattern of District banks and of other banks was somewhat similar, however, since both groups recorded substantial increases in earnings from loans and non-Federal securities.

Nonetheless, in the after-tax profits category, banks outside the District almost matched the 8-percent year-to-year gain which District banks recorded. This occurred in part because District banks took, in relation to 1962, proportionately higher net losses on loans

### Bank earnings turn up after two-year decline



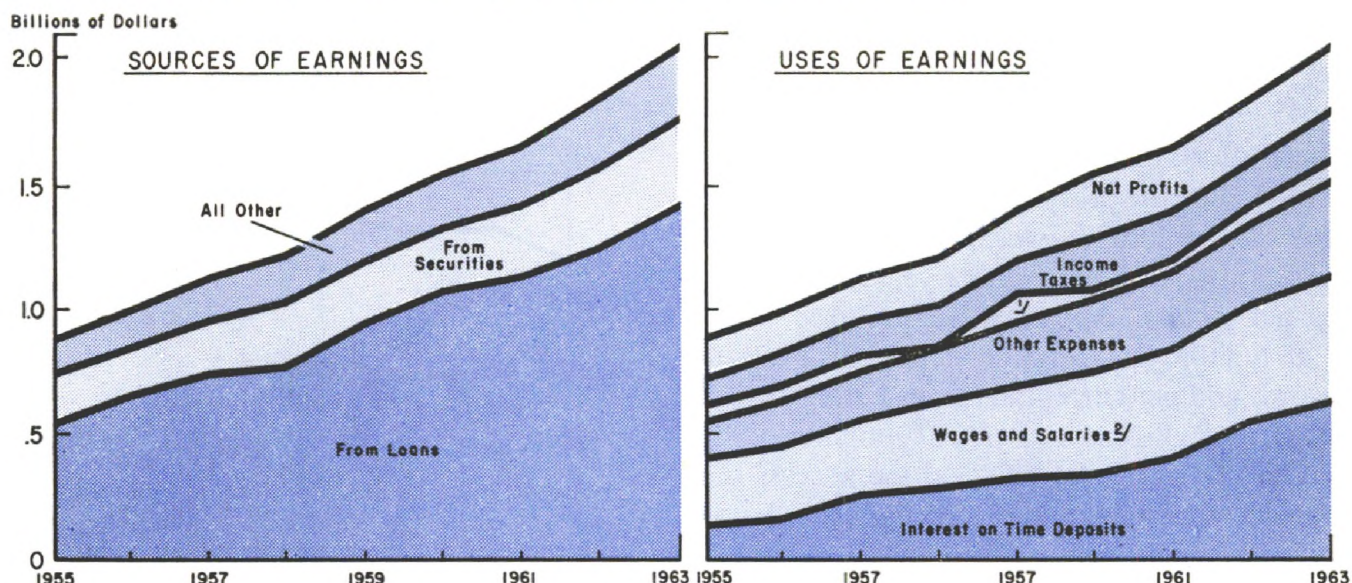
Sources: Federal Reserve Bank of San Francisco; Board of Governors of the Federal Reserve System.

and securities. In addition, District banks incurred a substantial increase in income taxes while member banks elsewhere actually paid less tax than in 1962; as a result, taxes amounted to 44 percent of net income for District banks in 1963, as compared with 36 percent for other member banks. (One reason for this development was the smaller increase recorded by District banks in the tax-exempt securities' share of net operating revenue.)

The bright earnings reports for 1963 should perhaps be read in the light of the decidedly mixed reports which preceded them, but they should also be read in the light of the difficulties encountered in controlling a single key



## District banks record decade-long rise in loan revenue as offset to upsurge in interest payments and other expenses



<sup>1</sup>Net losses on securities and loans including transfers to and from valuation reserves.

<sup>2</sup>Beginning in 1961, this item excludes wages and salaries of those officers and employees who spend the major part of their working time on bank building and related housekeeping functions. Those expenses thereafter are included in "other expenses."

Source: Federal Reserve Bank of San Francisco.

expense item. As early as 1961, net profits of District banks showed the impact of sharply increased interest costs on time and savings deposits, since many of the major banks instituted a policy at that time of computing interest on a daily-average basis. In 1962, these interest costs were accelerated by higher absolute rates of interest on time and savings deposits and by a high rate of expansion in such deposits. Member banks elsewhere in the nation were similarly affected by these developments, but the impact was less severe because such deposits constituted a much smaller percentage of total deposits there than at District banks.

Between 1960 and 1963, total expenses increased 47 percent in the District and 38 percent elsewhere—partly, of course, because of the faster over-all growth of District banks, but largely because of the greater impact of rising interest costs for these banks. In the same time-span, however, total revenues increased 32 percent at District banks and 23 percent at other banks, so that a measure of success was achieved in offsetting the rise in

the key expense item, interest costs. Taxes (measured as a percent of net pre-tax income) were consistently higher for District banks during this period than for other banks—and the spread widened in 1963.

### Loans and municipals

The revenue side of the District's 1963 ledger reflected the success of the attempt to offset burgeoning expenses. Loans expanded at the expense of holdings of Government securities, increasing from 51 to 54 percent of total assets, and this allocation of funds resulted in a 14-percent year-to-year gain in total loan revenue.

Banks channelled over half of the added loan funds into relatively high-earning real estate and consumer loans. This was a continuation of the shift in loan portfolios that began in 1962, when banks were faced with the necessity of investing rapidly growing time and savings deposits in earning assets that would more than cover the higher interest they were paying on such deposits. Notwithstanding this continued adjustment in port-

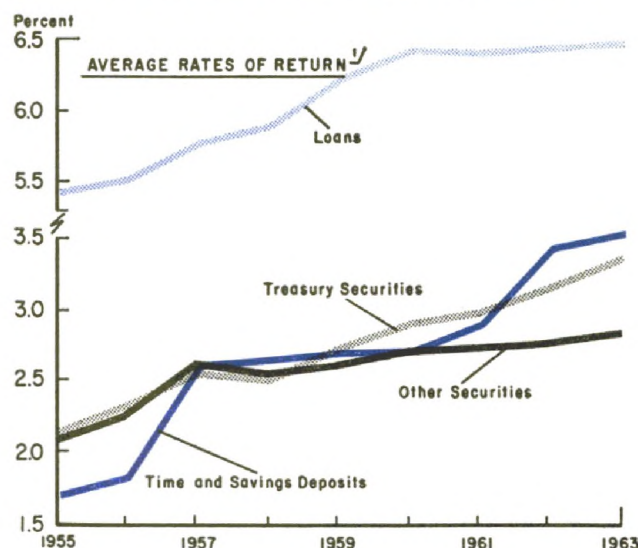


folios, the 6.4-percent average rate of return received on loans in 1963 was slightly lower than a year earlier—which reflects the ample availability of credit characteristic of 1963.

This development was particularly apparent in the mortgage market, where the heavy flow of funds into savings accounts of commercial and mutual savings banks and into share capital of savings and loan associations had a depressive effect on mortgage rates despite the rapid tempo of mortgage-lending activity. But in the commercial and industrial sector also, credit demand was not strong enough to firm interest rates on business loans, even in the period of increasing reserve pressure in the latter half of the year. The average rate of interest on business loans made by larger District banks was somewhat lower in 1963 than in the preceding year, and this decline in rates was accompanied by an increase in the proportion of the dollar volume of loans made at the prime rate of  $4\frac{1}{2}$  percent—the rate charged to borrowers with the highest credit rating.

District banks reduced their average holdings of U. S. Government securities by nearly 10 percent between 1962 and 1963, in an attempt to accommodate the moderately

### Margin narrows between interest on time deposits and return on loans



<sup>1</sup>Ratios are based on averages of five call reports (December, Spring, June, Fall, and December) except in 1963, which is based on averages of four call reports (December, Spring, June, and December).

Source: Federal Reserve Bank of San Francisco.

strengthened demand for loans and to adjust to less ease in monetary policy. Revenue from this source declined only 1 percent, however, partly because the average rate of return on Government security portfolios increased from 3.10 percent to 3.34 percent, and partly because the decrease in holdings was concentrated in short-term issues—bills, certificates, and notes and bonds maturing within one year

### SELECTED OPERATING RATIOS OF TWELFTH DISTRICT MEMBER BANKS

(percent ratios)

	1963	1962	Increase or Decrease
<b>Earning ratios:</b>			
Return on loans	6.40	6.43	— .03
Return on U. S. Government securities	3.34	3.10	+ .24
Return on other securities	2.83	2.77	+ .06
Current earnings to capital accounts	19.05	18.40	+ .65
Net profits after taxes to capital accounts	9.10	8.91	+ .19
Cash dividends to capital accounts	5.29	5.41	— .12
<b>Other ratios:</b>			
Interest paid on time deposits to time deposits	3.47	3.40	+ .07
Time deposits to total deposits	49.34	47.69	+ 1.65

Note: The ratios in this table are computed from aggregate dollar amounts of earnings and expense items of Twelfth District member banks. Capital accounts, deposits, loans, and securities items on which these ratios are based are averages of Call Report data as of December 30, 1961, March 26, June 30, and December 28, 1962; and as of December 28, 1962, March 18, June 29, and December 20, 1963.

Source: Federal Reserve Bank of San Francisco.



—which had lower yields than intermediate- and long-term issues.

The decline in revenue from Governments was more than offset by an increase in income from other securities, mainly tax-exempt issues of states and political subdivisions. The increased revenue from municipals was mainly due to a 14-percent expansion in portfolios, for the average rate of return on these securities rose only 6 basis points, from 2.77 percent in 1962 to 2.83 percent in 1963. Admittedly, the 1963 expansion in holdings did not match the record 22-percent growth rate of 1962, but this form of investment continued to be viewed favorably by District banks because of the relatively high after-tax equivalent yield.

### Interest costs pivotal

Interest expense on time and savings deposits continued to be the pivotal (and most worrisome) item on bank income and expense statements, but 1963 brought a measure of encouragement to District banks on this score. The rate of growth in this expense item dropped from 36 percent in 1962 to 13 percent in 1963, and the \$72 million increase in cost was only half the amount recorded a year earlier. Even so, this item accounted for approximately half of the year's total increase in bank expenses.

The inflow of passbook savings deposits slowed down during the year as banks faced intensified competition from other financial institutions—particularly from savings and loan associations, which offered substantially higher interest rates than the 3½-4 percent ceiling imposed on banks by Regulation Q. Since over three-fourths of total time and savings deposits at District banks are in the form of passbook savings accounts, the slowdown in the savings inflow tended to reduce the rate of increase in interest cost. Moreover, in view of the unchanged rate ceiling, set by Regulation Q at 3½ percent for deposits held

### EARNINGS AND EXPENSES OF TWELFTH DISTRICT MEMBER BANKS

(millions of dollars)

	1963p	1962
Earnings on loans	1,414.5	1,246.1
Interest and dividends on		
U. S. Government securities	239.1	242.4
Other securities	105.3	88.9
Service charges on deposit accounts	150.4	139.0
Trust Department earnings	62.7	57.0
Other earnings	63.7	61.5
Total earnings	2,035.7	1,834.9
Salaries and wages	499.6	461.8
Interest on time deposits	625.0	552.6
Other expenses	392.6	347.7
Total expenses	1,517.2	1,362.1
Net current earnings	518.5	472.8
Net recoveries and profits (—losses) <sup>1</sup>		
On securities	+ 6.1	+10.0
On loans	—75.8	—67.4
Others	— 8.1	— 6.3
Total net recoveries and profits (—losses) <sup>1</sup>	—77.8	—63.7
Net profits before income taxes	440.7	409.0
Taxes on net income	192.5	180.0
Net profits after taxes	248.3	229.1
Cash dividends declared	145.2	139.3
Undistributed profits	103.0	89.7

p—Preliminary.

<sup>1</sup> Includes transfers to (—) and from (+) valuation reserves. Note: Details may not add to totals because of rounding.

Source: Federal Reserve Bank of San Francisco.

less than 1 year, and in view of the fact that most major banks already paid the ceiling rate on such deposits prior to 1963, interest costs rose less than heretofore.

In contrast to the behavior of passbook savings deposits, other time deposits of individuals, partnerships, and corporations expanded more rapidly in 1963 than in the preceding year. This deposit expansion partly reflected higher rates of interest paid by District banks after mid-year, when Regulation Q was revised to permit rates up to 4 percent on time certificates of deposit with maturities over 90 days (as well as on time deposits requiring over 90 days of advance notice of withdrawal). In addition, this reflected the growing popularity of negotiable time certificates as the secondary market broadened for this type of money-market instrument. Time deposits



of foreign governments and central banks, which are not subject to a maximum rate ceiling, meanwhile registered gains nearly twice as great as in 1962.

The reduced rate of growth in total time and savings deposits was accompanied by an increase in the average interest paid on such deposits to 3.47 percent—only a 7 basis-point increase in contrast to a 53 basis-point rise in 1962. Interest costs, nonetheless, were once again the dominant bank expense item—even more so than in 1962, when they had exceeded wage and salary expenses for the first time.

District banks, however, faced higher employment costs in 1963. Wage and salary expenses increased 8 percent or one-third more than in 1962, but employee benefit costs rose at a more moderate pace than in the preceding year. The staffing of a record number of new banks and banking offices contributed substantially to 1963's rapid rise in employment costs, and new-bank staffing also determined

the basic composition of these costs, since the number and the compensation of officers increased relatively more rapidly than those of other employees. Yet, even so, wage and salary payments accounted for only one-third of total bank expenses last year, as opposed to one-half of the total a decade ago.

One of the more significant expense items in 1963 was interest on borrowed money. The amount was small relative to other expenses, but it reflected banks' willingness to expand loans, even in the face of reserve pressures which necessitated greater recourse to the Federal Reserve discount window and to the Federal funds market. The total amount of notes discounted at the Federal Reserve Bank of San Francisco rose from \$1.64 billion to \$3.86 billion in 1963, and the daily average amounts of discounts climbed from \$5.86 million to \$15.74 million. In addition, banks borrowed extensively through the purchase of Federal funds—that is, reserves of member

**PERCENT CHANGES IN SELECTED EARNINGS AND EXPENSE ITEMS  
OF TWELFTH DISTRICT MEMBER BANKS**

	ALL		LARGEST <sup>1</sup>		OTHER	
	1962-63	1961-62	12 1962-63	13 1961-62	1962-63	1961-62
Earnings on loans	+13.5	+10.9	+13.2	+10.8	+15.2	+11.4
Interest and dividends—total	+4.0	+12.2	+3.2	+13.1	+7.2	+8.7
U. S. Government securities	—1.4	+8.0	—2.8	+8.1	+4.2	+7.7
Other securities	+18.5	+25.2	+18.8	+28.7	+16.7	+11.6
Service charges on deposit accounts	+8.2	+9.7	+8.3	+9.4	+6.8	+10.9
Trust department earnings	+10.0	+13.8	+9.7	+13.5	+12.0	+15.4
Other earnings	+3.6	+17.6	+1.4	+20.0	+12.0	+8.3
Total earnings	+10.9	+11.4	+10.6	+11.5	+12.7	+10.8
Salaries and wages	+8.2	+6.4	+7.7	+6.6	+10.3	+5.4
Interest on time deposits	+13.1	+35.6	+12.3	+36.4	+17.2	+33.8
Other expenses	+12.9	+8.9	+11.9	+8.9	+17.0	+8.5
Total expenses	+11.4	+17.4	+10.7	+17.9	+14.7	+15.1
Net current earnings	+9.7	—3.0	+10.2	—3.8	+7.2	+0.7
Net profits before income taxes	+7.8	—9.5	+9.0	—10.8	+2.7	—4.2
Taxes on net income	+6.9	—13.3	+8.0	—14.7	+2.6	—6.6
Net profits after taxes	+8.4	—6.3	+9.8	—7.4	+2.7	—2.3
Cash dividends declared	+4.2	+6.9	+3.3	+7.8	+9.2	+2.4
Undistributed profits	+14.8	—21.5	+21.8	—26.6	—2.3	—5.8

<sup>1</sup> Includes all District member banks with total deposits above \$500 million as of December 20, 1963. The reduction in number of banks from 13 in 1962 to 12 in 1963 is due to a merger; the composition of banks remained the same.  
Source: Federal Reserve Bank of San Francisco.



banks on deposit with a Federal Reserve bank (generally overnight transactions).

### **Earnings, pay outs, and size**

With the rise in total revenue exceeding the increase in total expenses, District bank net current earnings (before taxes) registered a gain of almost 10 percent in 1963. This was a reversal of the 5 and 3 percent declines of the two preceding years, respectively, and brought net current earnings to a record high of \$519 million. The total net loss on loans and securities (including transfers to and from valuation reserves) and on other asset transactions was greater than the loss in 1962, but net income before taxes was still substantially higher. Net profits on security transactions<sup>1</sup> were lower than in 1962, partly because of price declines on intermediate- and long-term issues in the latter half of the year. In addition, loan losses<sup>2</sup> were greater than in 1962.

Although they paid 7 percent more in taxes than in the preceding year, District banks in 1963 experienced an 8-percent gain in net

profits after taxes, to \$248 million. The ratio of net profit to capital accounts rose from 8.9 in 1962 to 9.1 in 1963. Dividends increased 4 percent, but this still left banks with undistributed profits of \$103 million, or 13 percent more than in 1962. The ratio of cash dividends to capital accounts declined, however, as District bank capital accounts rose at an accelerated rate.

The profit position of the 12 largest District banks improved somewhat more in 1963 than did that of their smaller competitors. Total earnings of the largest banks rose by approximately the same amount as in the preceding year, while total earnings of the smaller banks rose more than in 1962. The largest banks, however, had much more success in controlling upward pressures on costs. As a result, their after-tax profits rose 10 percent in 1963, as against a 7-percent decline the previous year. Smaller banks, with an increase of 2.7 percent in net profits, barely offset the 2.3 percent profit decline which they recorded in 1962.

<sup>1</sup>Including net recoveries credited to valuation reserves on securities, actual profits were \$10 million compared with \$21 million in 1962.

<sup>2</sup>Including net losses charged to bad debt and other reserves for loans, actual net losses were \$38 million compared with \$25 million in 1962.



# Banks, Governments, and Cycles

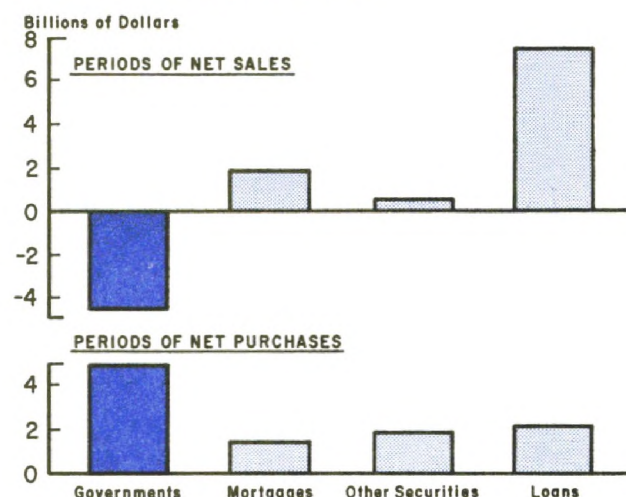
**T**REASURY debt-management officials may well speculate about the strength of the current investor demand for Government securities, since they are faced with a possible \$3-billion cash deficit in fiscal 1965 on top of the \$8-billion cash deficit in the fiscal year now drawing to a close. In this situation, they will undoubtedly search for clues in the past behavior of the major actors in the Government securities market—especially such key performers as commercial banks, nonfinancial corporations, and individuals. These and other members of the investing public increased their public-debt holdings by an average of almost \$4 billion annually during the past six calendar years—a period in which the deficit in the Federal cash budget averaged almost \$5 billion annually. (The balance was financed by such investors as the Federal Reserve banks and U. S. Government agencies and trust funds.)

## Banks in the spotlight

Commercial banks are likely to find their market activities strongly spotlighted, among other reasons because debt managers prefer not to finance Treasury deficits through the banking system during an expansionary period such as the present. (The financing of a budget deficit might be eased “by creating redundant dollars,” in the words of Federal Reserve Chairman Martin, but, as he emphasizes, sharp inflationary pressures could be generated if the banking system’s liquidity were suddenly expanded in this fashion.) Commercial banks, moreover, by virtue of holding one-third of the \$164 billion of publicly held marketable Treasury issues, are capable of exerting a substantial impact on the money and capital market through their acquisition and sales of these securities.

Conversely, the commercial-bank earnings are affected substantially by fluctuations in

## Shifts in Government portfolios affect other bank assets



Changes in Bank Assets, 1952-62

Periods of net purchases: I-II 1952, III 1953-IV 1954, IV 1956-II 1958, and III 1960-II 1962.

Periods of net sales: III 1952-II 1953, I 1955-III 1956, and III 1958-II 1960.

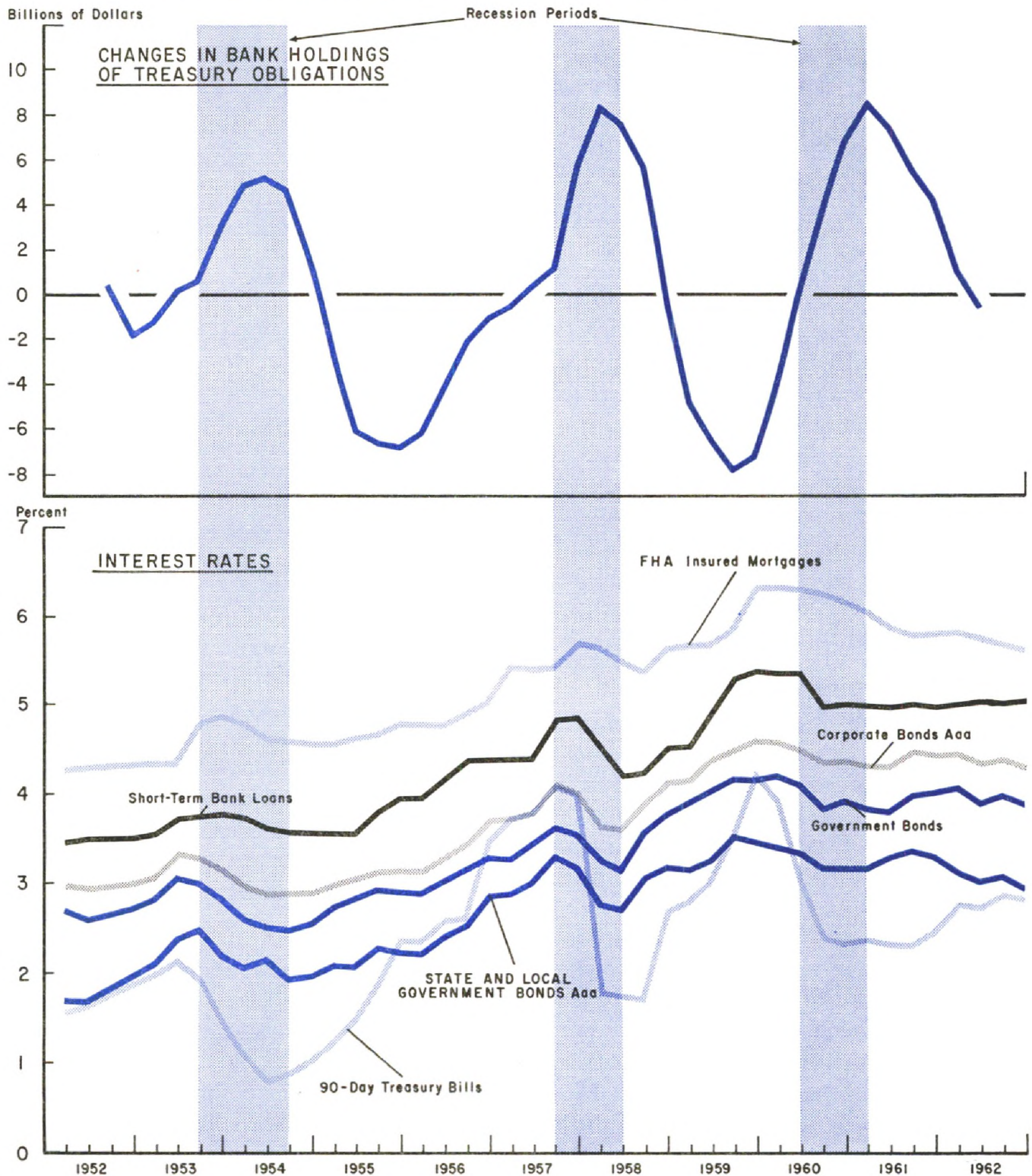
Source: Board of Governors of the Federal Reserve System (flow-of-funds data).

their holdings of Governments. Public-debt issues account for more than one-fourth of banks' earning assets; hence, the maximization of their revenues depends to some extent on how well they manage their Government portfolios. Market factors profoundly affect bank portfolio decisions, but monetary policy also—through its impact on banks' reserve positions—affects their asset situations in general and their Government portfolios in particular.

A striking characteristic of bank portfolio management is the strong cyclical pattern in Government holdings—a pattern explainable in terms of banks' demand for earning assets and their incentive to shift, when possible, to higher yielding assets. Banks acquire Governments in a business contraction, since they are then faced with a slack demand for loans and a slack demand on the capital market by all sectors except the Federal Government. Conversely, banks sell off Governments as higher yielding assets (such as mortgages or



**Banks exhibit cyclical pattern, buying Governments in downturn and selling when higher-yielding assets become available**



Note: Holdings of U. S. Government securities shown as four-month moving averages of quarterly data.  
 Source: Board of Governors of the Federal Reserve System; Federal Housing Administration.



business loans) become available.

Nonetheless, bank holdings of other assets do not all move inversely to their holding of Governments, as can be seen by comparing those periods in the past decade when banks sold Governments as opposed to those periods when they acquired such issues. In sum, bank holdings of Governments *declined* \$4.6 billion in sell-off periods and *increased* \$4.9 billion in acquisition periods. Other asset categories each *increased* in both types of periods, but the pattern of increase varied markedly. Thus, total loans (minus security loans) rose \$7.4 billion in the periods when Governments were sold off and increased only \$2.1 billion in the periods when Governments were acquired, while "other" securities—municipal issues, Federal Agency issues, and corporate bonds—increased \$0.5 billion and \$1.8 billion, respectively, in those two types of periods.

Banks' holdings of Governments and banks' outstanding business and consumer loans tend to move inversely, at least to the extent that loans grow rapidly while banks are selling Governments but grow only slowly while banks are acquiring such issues. The same relation holds between purchases and sales of Governments and changes in mortgage holdings, although to a lesser degree.

Holdings of "other" securities, however, generally tend to move more closely in line with holdings of Governments, primarily because banks purchase such securities for almost the same reasons that they purchase Governments. For example, the cyclical behavior of corporate bond issues is rather like the cyclical pattern of Treasury issues, rising during contractions and falling off during recovery periods; this occurs because corporations customarily turn to the capital markets during recessions to take advantage of lower borrowing costs, in order to obtain new capital, to fund bank loans, or to refund out-

standing issues that carry higher coupon rates. On the other hand, corporations frequently turn to bank lending officers for accommodation during cyclical upturns—and they are made welcome, since banks prefer loans to fixed-coupon securities because of the generally more favorable interest return.

During a business expansion, banks either slow down their rate of acquisition of non-Federal securities (primarily state-local government bonds) or else sell them off to gain funds to loan. And although banks favor such issues because of their Federal income-tax exemption feature, they still prefer loans when available—witness the slowdown in the bank acquisitions of municipals during the late 1963 period of strong loan demand.

### **Divergent cyclical behavior**

What of the cyclical behavior of nonbank investors? The behavior of these investor groups is important because most of them hold significant proportions of the public debt, although not so much as commercial banks. (Nonfinancial corporations, state-local governments, and nonbank financial institutions each hold one-fifteenth to one-tenth of the publicly held marketable debt, as opposed to the one-third held by commercial banks.) Yet their financing requirements generally lead them to follow policies which diverge from the bank financing pattern. As already noted, bank holdings of Governments follow a pattern that is almost inverse to the business cycle; thus, banks purchase Governments in the contraction and the early-recovery period because of the paucity of other earning assets. On the other hand, the nonbank sectors, because of declines in their income, tend to sell Governments during the contraction.

In the financial sector, the magnitude of the fluctuations in holdings of Governments by nonbank investors has been completely overshadowed by the shifts in bank holdings. The portfolio behavior of nonbank financial institutions, moreover, has assumed different



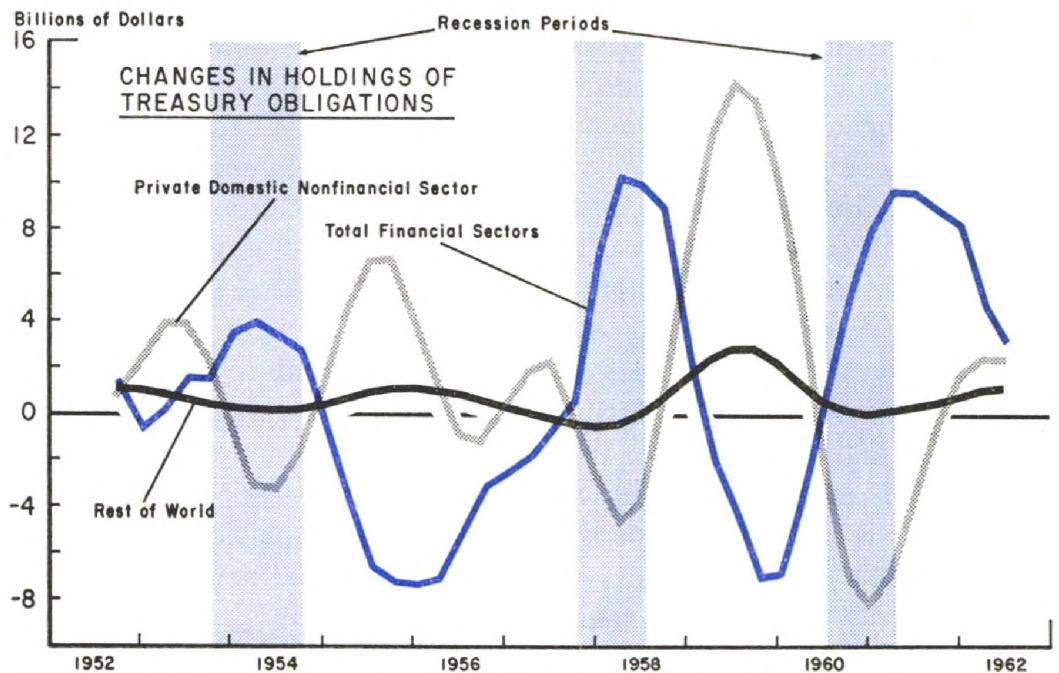
### Financial, nonfinancial sectors display contrasting patterns of purchases and sales

forms. Savings institutions as well as insurance companies and pension funds have followed a somewhat different pattern from the commercial banks, but the "not elsewhere classified" category has followed the bank pattern. (This unclassified category includes sales finance companies, industrial and personal finance firms, mort-

gage companies, securities and commodity dealers and brokers, and agencies of foreign banks.)

Yields are a crucial consideration for savings institutions and insurance companies and pension funds, however, and their portfolio behavior consequently follows a somewhat different pattern. Savings institutions have generally refrained from buying Governments during periods of rising interest rates; they increased these holdings during the 1955-57 period, when the yield factor was offset by the need to find uses for a heavy inflow of savings, but most of their increased volume of savings deposits even then was still committed to mortgages. Insurance companies and pension funds during that same period recorded net sales of Governments, against the background of a sharp run-up in yields on both mortgages and corporate bonds.

Among nonfinancial sectors as well, varied patterns of portfolio management have arisen. A fairly clear-cut complementary relation ex-



Note: Holdings of U. S. Government securities shown as four-month moving averages of quarterly data. Source: Board of Governors of the Federal Reserve System (flow-of-funds data).

ists between bank purchases and sales and consumer sales and purchases of Governments. On the other hand, no such clear-cut relationship exists between the behavior of banks and nonfinancial corporations—perhaps because of the mixture of motives which leads business firms to invest in Governments. (These motives are analyzed in detail by Ernest Bloch in the December-1963 issue of the *American Economic Review*.)

### Motives affecting corporations

Corporations hold Governments because these securities—especially Treasury bills—provide a convenient means of investing temporarily idle funds. Since most corporate funds for investment purposes are internally generated, Governments represent a worthwhile depository of these funds when their inflow is greater than the outflow on plant-equipment spending. Conversely, corporations may liquidate their holdings of Governments to meet financing needs when plant-



equipment spending becomes greater than what can be financed from current earnings.

Corporations also hold Governments, however, as a convenient means of accruing the necessary funds to meet quarterly income-tax payments. The Treasury has accommodated their desire to hold Treasury securities against tax liabilities through the tender of tax-anticipation bills, which may be redeemed in payment of tax liabilities.

Changes in corporate holdings of Governments closely correspond to changes in their pre-tax profits. Corporations generally tend to sell off securities during the course of the business contraction, add to their holdings in the early stages of the recovery—when corporate profits rise most rapidly—and then sell off Governments again in the later stages of the expansion. This latter reduction may be due to the demand for funds created by the cyclical expansion, since business borrowing from banks increases as corporate holdings of Governments decline. Even so, a clear-cut inverse relationship between bank and corporate portfolio behavior does not emerge, perhaps because of the timing of the major de-

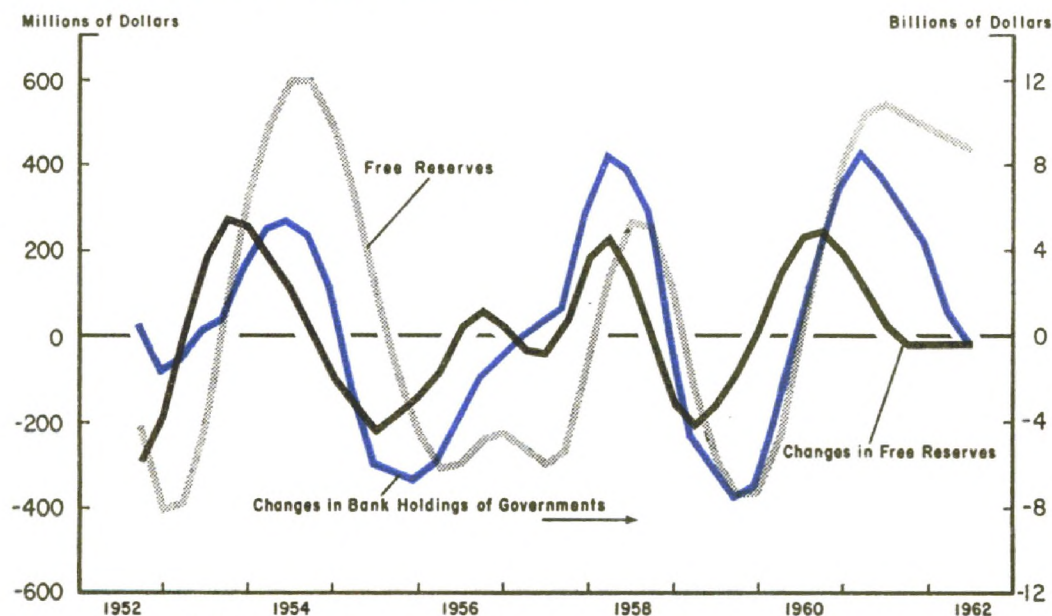
terminant, corporate profits, as well as for the other reasons which influence corporations' holdings of Governments.

The consumer sector meanwhile tends to move inversely to the banking sector, primarily because of the close cyclical correspondence between changes in personal income and changes in individual holdings of Governments. Consumers tend to acquire Governments during business recoveries, when personal income rapidly expands, but tend to reduce their holdings during contractions, when personal income either declines or rises at a declining rate.

Another important investor group, state and local governments, throughout most of the past decade has exhibited few cyclical fluctuations but rather an upward trend in holdings of Treasury issues. The uptrend has occurred because these securities serve as a depository (either permanent or temporary) for two rapidly growing sources of state-local funds—retirement systems and general tax revenues.

State and local governments frequently hold Treasury issues as investments for their

### Banks vary holdings of Governments in line with shifts in free reserves



Note: Holdings of U. S. Government securities shown as four-month moving averages of quarterly data. Source: Board of Governors of the Federal Reserve System (flow-of-funds data).

retirement funds; in fact, retirement funds now account for nearly one-third of Treasury securities held by state and local political units. In recent years, however, Federal securities have lost ground as the dominant type of investment in this field; between 1957 and 1962, for example, retirement systems increased their holdings of Governments by \$1 billion,



but increased their holdings of other securities even more.

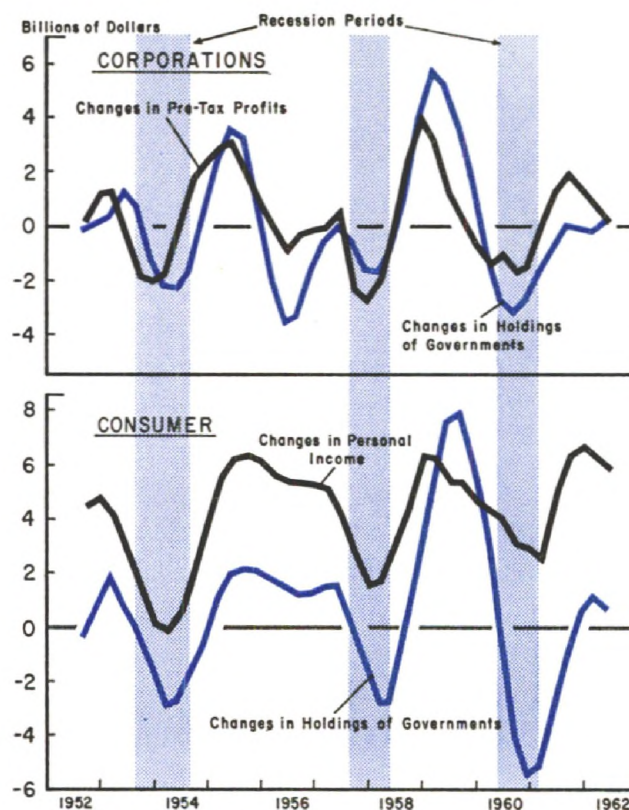
State and local governments also invest receipts from certain types of taxes, as well as receipts from bond sales, in Treasury securities until the need arises for the use of such funds. Short-term securities, especially Treasury issues, provide an effective depository for tax and bond revenues that are received in lump sums but are dispensed only piecemeal. Thus, a substantial increase in the market for such issues has arisen because of the steady growth in state-local government revenues and the similar upward trend in flotations of state and local bonds.

The portfolio decisions of the various non-bank sections are influenced, of course, by their differing financial environments, but the financial and nonfinancial sectors also tend to differ in their basic attitudes toward Government securities. Financial institutions acquire financial assets as a primary source of income; they are influenced consistently by the availability of alternative investment outlets and the yields on such investments relative to the return on Governments. But individual investors and business firms buy securities primarily to add to their financial-asset holdings—acquiring them when current income exceeds current needs or outlays, and selling them off when funds are needed.

### Another set of influences

Commercial bank purchases and sales of Governments are directly affected by another set of factors—monetary policy influences—that are felt only indirectly by other sectors of the economy. A policy of monetary ease provides banks with additional reserves which may be used to purchase Governments; conversely, a tighter policy, which tends to put pressure on reserves and drive the banks “into the Central Bank,” leads banks to sell Gov-

### Profit, income changes affect corporate and consumer holdings



Note: Holdings of U. S. Government securities shown as four-month moving averages of quarterly data.  
Source: Board of Governors of the Federal Reserve System (flow-of-funds data).

ernments in order to obtain funds for loan expansion.

Consequently, a close relationship exists between the level of free reserves—that is, excess or uncommitted reserves of member banks minus borrowings from the Federal Reserve Banks—and bank purchases and sales of Governments. Moreover, *changes* in the level of free reserves tend to lead similar *changes* in the direction and magnitude of banks' net transactions in Governments. This suggests that banks react more quickly to *changes* in the level of free reserves than to the *level* of free reserves itself—and that shifts in monetary policy, as typified by such changes in free reserves, are instrumental in facilitating shifts in public-debt ownership. (Corroborative evidence is provided by another measure of banks' reserve positions—changes in total nonborrowed reserves.)



April 1964

On balance, Treasury debt managers are likely to find several relevant cyclical patterns in their search through the business annals of the past decade. Thus, rising personal income and corporate profits operated during past cyclical expansions to expand individual and business holdings of Governments. On the other hand, different market and policy factors influenced commercial-bank portfolio decisions during expansions, so that their holdings generally declined.

Needless to say, these patterns may not be repeated at this stage of the current expansion. There is no certainty that the Treasury's financing difficulties will now be eased by substantial consumer and corporate purchases of Governments, or that those difficulties will

be aggravated by substantial bank sales, as the cyclical annals suggest.

To cite only one variable, changes in the pattern of corporate tax liabilities arising from the recent tax legislation could result in different corporate portfolio decisions than would normally be expected. But one constant will remain in the current equation, in the form of the "complementary responsibilities" outlined by Chairman Martin in the debt-management field: the Federal Reserve's obligation to see "that the Treasury is able to carry out its borrowing obligations in an orderly manner," and the Treasury's reciprocal obligation "to conduct its operations with recognition of the Federal Reserve's responsibility for healthy credit and economic conditions, and for stability of the dollar."

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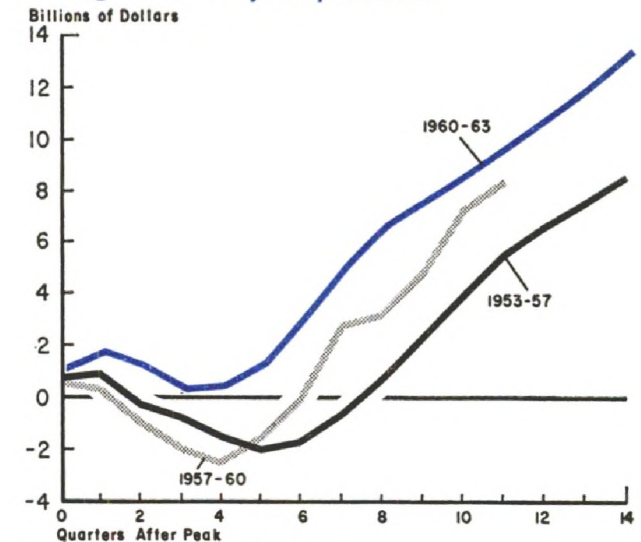
## The Well-run Stockroom

**I**NVENTORY buying has played a relatively minor role during the present expansion, except perhaps during the strike-hedge buying waves of early 1962 and early 1963. Does this mean, then, that the inventory cycle is a thing of the past? Or is it more likely that stock buying will continue to amplify the ups-and-downs of the business cycle—and, specifically, give an added fillip to the 1964 expansion?

In reply, some observers claim that inventory buying is now cast permanently in a secondary cyclical role. To support this view, they cite several factors that have tended in recent years to reduce stockbuilding requirements: the phenomenal improvement in inventory handling, the steady decline in the relative importance of those industries where inventory buying is centered, and the gain in price stability which has made speculative inventory buying unnecessary.

Other observers contend, however, that the economy is witnessing only a temporary decline in its stockbuying component. They argue that we are too apt to forget, in the midst of a prolonged expansion, that substantial fluctuations in inventory purchases historically have been associated far more closely with contractions than with cyclical expansions. Thus, in the eight business cycles since 1920, the change in inventory investment has accounted for 66 percent of the average change in GNP during cyclical contractions but for only 14 percent of the average change in GNP during expansions. Moreover, in the cycles of the post-World War II period, inventory fluctuations have accounted for even more of the GNP contractions—and for somewhat less of the GNP expansions—than they did in the last half-century as a whole. Changes in inventory purchasing—despite the apparent secondary role they are playing in

### Burgeoning cycle supports strong inventory expansion



Source: Department of Commerce.

this expansion—thus still fulfill an independent function in the business cycle.

### Rising stocks, falling ratios

Whatever the merits of these contending viewpoints, inventory buying in the present expansion has followed a somewhat different path than it did in the two preceding cycles of the past decade. The decline during the contraction was smaller, and the rise during the 1961-63 expansion was greater, than in either 1953-57 or 1957-60. In particular, this cycle has witnessed a \$14-billion cumulative gain in inventories since the cyclical low of early 1961, as compared with a cumulative gain from trough to peak of roughly \$10 billion in each of the two preceding cycles. (The changes are computed from seasonally adjusted national-income data.)

Nonetheless, when inventory growth is viewed in relation to the cyclical growth in final sales, a different picture emerges. The present cycle, in other words, has combined a very substantial expansion with a far smaller relative growth in inventories than heretofore. Only about 16 percent of the annual increase



in real GNP has been accounted for by inventory expansion in this cycle—as opposed to roughly 20 percent in each of the two preceding cycles.

The decline in the importance of inventory buying may be due to a long-run shift in the mix of GNP components. Inventories are especially important in the durable-goods sector of the economy, since the extensive time required in production and the long time-span between ordertaking and delivery compel manufacturers to hold on to large quantities of goods in process. But the durable-goods sector in recent years has grown more slowly than the nondurable-goods sector—and far more slowly than the service and construction sectors—and this shift in mix has reduced the relative importance of inventories. Over the past decade, for instance, durable-goods spending has increased about 40 percent, whereas spending on nondurable goods has grown about 50 percent, and spending on services and construction has almost doubled.

### Saving on shelf-space

Perhaps an even more important cause of the relative inventory decline can be found in the remarkable postwar improvements in inventory management. In the long run, of course, rising sales levels call for rising levels of inventory, and the introduction of new products also plays a part in raising inventory requirements. Yet these upward pressures have been offset substantially by several factors which tend to reduce shelf-space requirements.

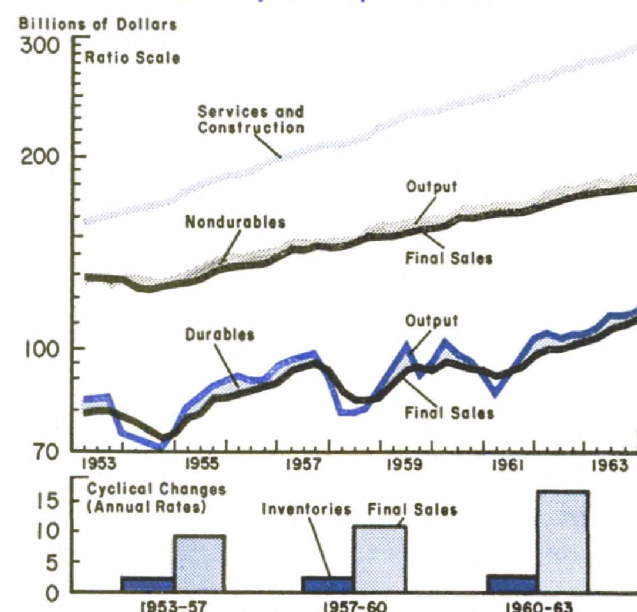
First, the improvement in inventory processing speeds up goods-handling and permits greater utilization of storage facilities. This factor, coupled with improvements in transportation, permits lower stocks to be carried at both the manufacturing and the wholesale-retail trade levels. In addition, the standardization of sales lines permits business to be transacted with fewer inventory requirements.

(But this factor may be questioned by dealers for one major auto manufacturer which entered the 1964 sales race with 343 models in its line.)

Perhaps the most ruthless pruning of excess stocks has resulted, however, from the inventory-control innovations which have increased the efficient movement of goods all the way from the time of raw-material purchase to the time of final sale. In particular, the development of operations-research and computer techniques has acted to conserve inventories by speeding up inventory control and by improving the locational efficiency of plants and warehouses.

Yet, surprisingly, inventory-sales ratios have not declined in the post-war period as rapidly as might be expected in view of all the widely heralded improvements in inventory handling. The ratio of total business inventories to business sales declined from 2.0 to 1.5 in the two decades between 1928 and 1948. In the subsequent decade and a half, the ratio has moved within the range of 1.4 to 1.6. Obviously, then, some factors have tended to increase inventories in relation to sales,

### Smaller inventory growth required as durables drop in importance



Sources: Department of Commerce; Federal Reserve Bank of San Francisco.



and thus have counterbalanced the downward pressures noted above.

One offsetting factor is the competitive necessity to keep on the shelf a wide range of styles and models of every product. Another offset is the competitive necessity to have goods available to satisfy customers who want speedy delivery and production to order. The influence of these factors must be considerable, because in their absence the inventory-sales ratio undoubtedly would have continued to exhibit a decided long-run downtrend.

### **No need for speculation?**

The long-run downward pressures on inventories have stood out in recent years, however, especially since strong upward pressures have been noticeably absent in the price sector. Businessmen, viewing the relative price stability of the last half-decade, have found better uses for their money than to buy excess inventories. In other words, they have avoided speculative stockbuying and have tailored their inventory plans more closely to their anticipated sales.

Wholesale prices have moved differently at different production levels, but the general trend in recent years has been stable or even downward—in contrast to the strong upward price movement of the mid-Fifties. Concomitantly, inventory changes at each production level (especially when adjusted for changes in industrial production) have been relatively small in recent years—again in contrast to the situation existing a decade ago.

In the finished-goods sector, the book value of manufacturers' inventories expanded 1.6 times as rapidly as production during the 1954-57 expansion—a period in which finished-goods prices rose 7 percent. In the next cyclical expansion (1958-60), inventories expanded 1.2 times as rapidly as industrial production, while finished-goods prices rose less than 2 percent. In the current expansion to date, finished-goods inventories have in-

creased less rapidly than industrial production (0.8 times), in a period when prices of such goods have actually declined.

The same situation—a relatively declining rate of growth in inventories and a declining rate of growth in wholesale prices—is found at other levels of manufacturing. At the initial stage of production, for example, raw-materials inventories increased almost three times as rapidly as industrial production during the inflationary 1954-57 expansion, but inventories expanded somewhat less rapidly than industrial production during the price declines of the two succeeding cyclical expansions.

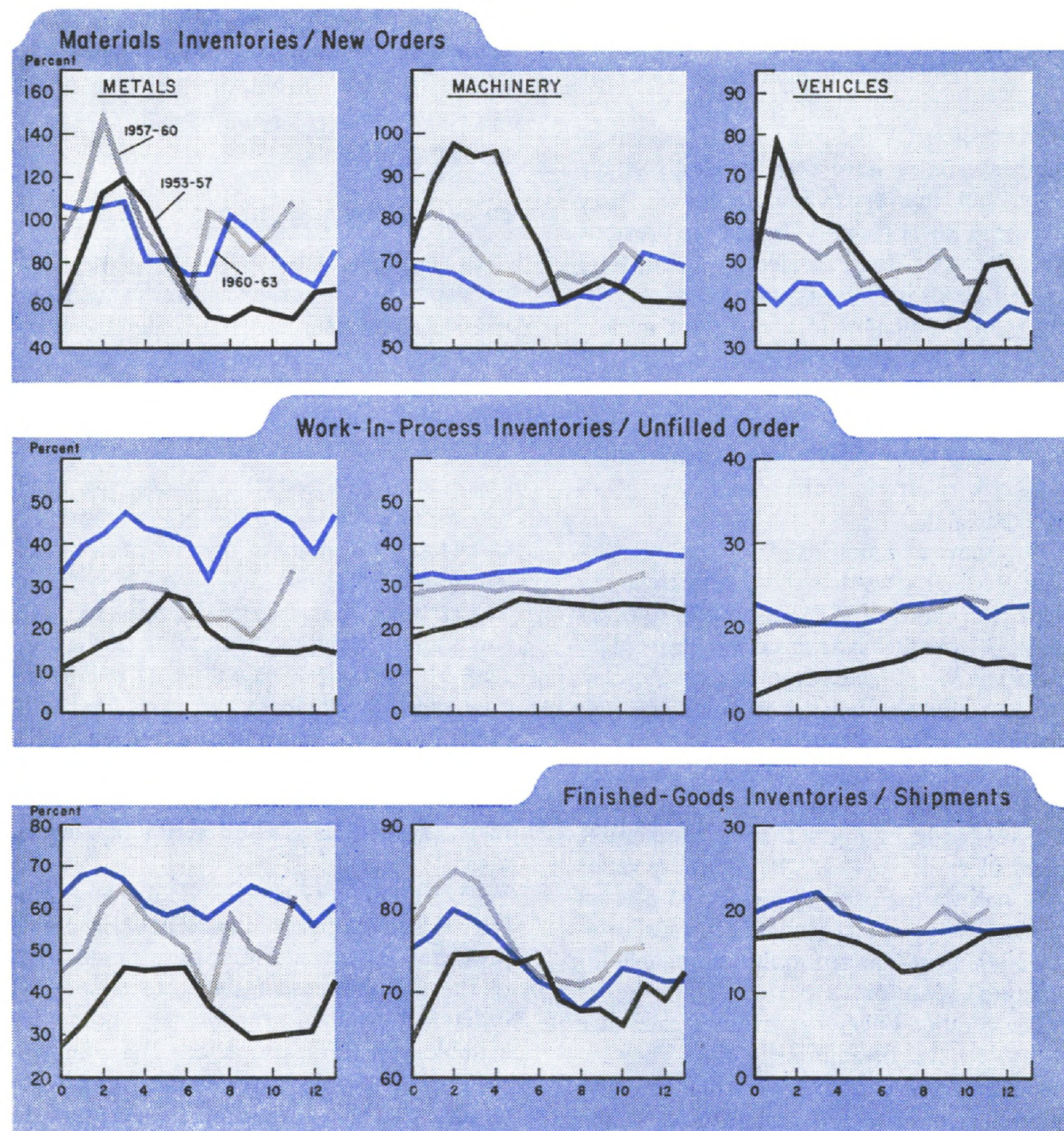
### **Signals from the stockroom**

In sum, purchasing agents at this stage of the prolonged 1961-64 expansion are faced with downward pressures on inventory buying as a result of the changing GNP mix, the computer-based improvements in inventory handling, and the general situation of price stability. But they are also faced with upward pressures resulting from the businessman's need for speedy delivery and from the consumer's insatiable demand for a wide range of household products—and perhaps from their own suspicion that they should stock up while prices still remain stable. In this situation, what signals can the business analyst expect to get from the nation's well-run stockroom?

On the basis of the standard yardstick of current inventory position—the inventory-sales ratios in manufacturing and trade—business is in relatively good shape to meet the post-tax-cut expansion in demand, but, on the other hand, is not obviously overloaded with stock. In early 1964, the ratios were 1.89 for durable manufacturing, 1.37 for nondurable manufacturing, and 1.38 for retail trade—and none of these figures were above the average levels prevailing earlier in the expansion.



## Key industries boast low ratios of raw material stocks to new orders . . . other ratios relatively stable



Note: Ratios plotted from cyclical peaks. II 1953, III 1957, and II 1960.  
Sources: Department of Commerce; Federal Reserve Bank of San Francisco.

Business observers may find it more meaningful, however, to examine several more specific ratios, especially those prevailing in the durable-goods sector, where the ups-and-downs of the inventory cycle usually are generated. In particular, they may find it worth-

while to compare the relative cyclical performance of inventory ratios at each of the major stages of production.

One clue may be gained by measuring the amount of success achieved by the metals, machinery, and transportation-equipment in-



dustries in holding down their finished-goods inventories in relation to their shipments. In each of these industries, finished-goods inventories at each stage of the current cycle have been generally higher in relation to shipments than at the comparable stages of the two preceding cycles. On the other hand, inventory-shipments ratios have been generally stable throughout this expansion; moreover, they have been lower recently than at the previous cyclical peak. (And, as already noted, total finished-goods inventories have risen less rapidly than production in the current cycle.) Thus, the February inventory-shipment ratios—59 percent for the metals industry, 71 percent for the machinery industry, and 18 percent for the transportation-equipment industry—look relatively stable for this stage of the expansion.

The same situation exists at the intermediate production level; in those same three key industries, ratios of work-in-process to order backlogs recently have ranged somewhat higher than at comparable stages of earlier cycles, but the ratios also have risen much less rapidly than in either of the two preceding cycles. More important, at the initial production level, ratios of materials inventories to new orders have tended to be *lower* than at comparable stages of earlier cycles. The February ratios—72 percent for primary metals, 55 percent for machinery, and 37 percent for transportation equipment—appear quite reasonable for a mature expansion.

These ratios offer objective evidence of a relatively stable inventory situation. They are supported, moreover, by the confident way in which manufacturers evaluate the condition of their own inventories. According to this subjective appraisal, only 14 percent of durable-goods manufacturers considered their in-

ventories to be too high at the beginning of this year, as compared with 34 percent at the preceding cyclical peak. Similarly, only 10 percent of nondurable-goods manufacturers considered their inventories too high at the last survey date, as compared with 22 percent at the preceding peak.

### Conservative policies?

In the light of these figures, perhaps the only surprise to be found in the latest Commerce Department survey of manufacturers' inventory expectations is the modest size of the build-up planned for the first half of this year. Inventories, and sales also, were projected to grow at the same pace as in the second half of 1963, so that no increase at all was expected in the relatively low inventory-sales ratio prevailing at the end of last year. The latest experience, moreover, supports the expectations. The national-income accounts show total inventories increasing in the January-March quarter at only a \$3 billion annual rate—the smallest gain since the beginning of this cyclical expansion. Indeed, as the National Association of Purchasing Agents pointed out in a March release, "conservative inventory policies are still very much in evidence."

The situation, of course, could change rapidly. A sudden jump in sales could generate pressures on inventories which would lead, in the time-honored fashion, to a flood of orders, an eventual overstocking, and the inevitable inventory correction. But although their sharp pencils and computers may not be able to control every minor fluctuation in businesses' \$103-billion stock of goods, purchasing agents seem determined to make the effort.