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Contents

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The Business Situation

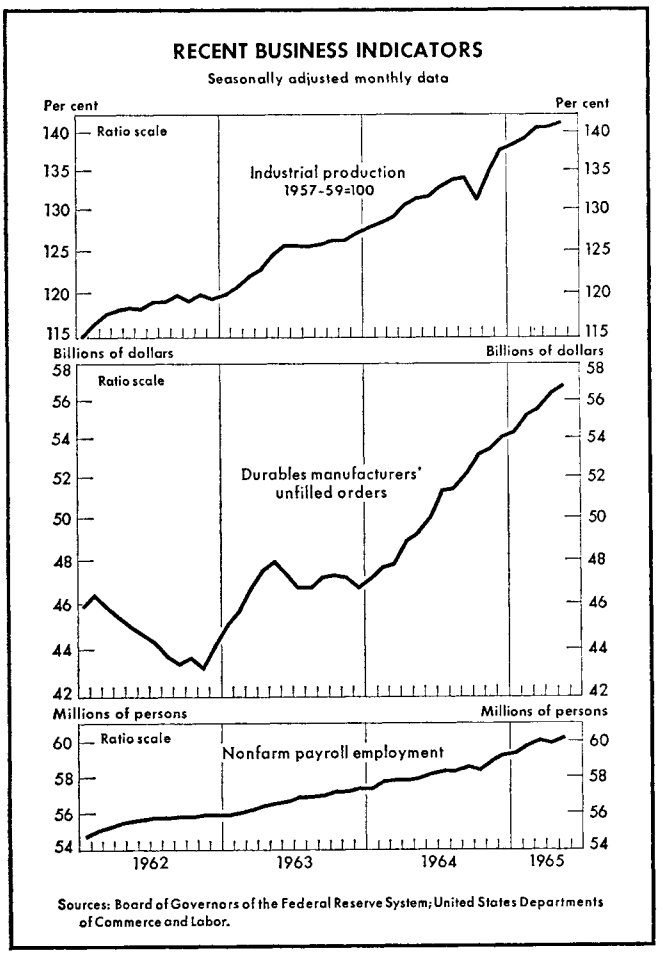
Business activity continued to expand as the summer began. The pace of advance has recently been slower than in the unusual first quarter of the year, which has led to a more cautious reassessment of future prospects by a number of observers. Some of this reassessment has shown up in a change in the previously highly buoyant atmosphere of the stock market. The underlying sources of strength in the economy remain intact, however, and are being recognized both by business analysts and in current official appraisals. These positive factors include business plans for further increases in plant and equipment spending, the stimulus to consumer spending expected from the excise tax cut effective June 22, and a further expansion in the combined spending of Federal and state and local governments on goods and services in the months ahead.

That the economy has in fact remained strong over the past several weeks is reflected in the gains in such key indicators of activity in May as industrial production, durables manufacturers' unfilled orders, employment, and retail sales. Fragmentary data for June suggest that both automobile assemblies and steel ingot production were well maintained, while retail sales apparently continued near the record rate of the month before. The unemployment rate, to be sure, did edge up in June after a marked decline in the month before. Nevertheless, there has been a distinct improvement in the labor market situation during the second quarter as a whole, compared with both the first quarter of 1965 and the second quarter of 1964.

The economy continues to show signs of increased vulnerability to upward price pressures. The over-all consumer price index was up by 0.6 percentage point in the April-May period, largely reflecting higher prices for meats. The excise tax cut has already resulted in price reductions in a significant number of consumer items, and these decreases should show up in the index for July, but it must be remembered that this is essentially a one-time effect (until the next round of reductions that becomes effective January 1). The wholesale price index was also up again in May, and apparently in June as well. It is true that some of the wholesale price increase in the past several weeks also reflected special factors relating to possibly temporary shortfalls in food supplies, which may ease again soon. Nevertheless, there continues to be a noticeable upcreep in prices for industrial commodities, and while the rate of advance in this component of the wholesale price index is still modest in comparison with the inflationary surge of the mid-1950's, it nevertheless contrasts with the stability the country achieved during the earlier portion of the current expansion. Against the background of these developments, the need for restraint in price-wage decisions has become even more pronounced. The steel industry, in which labor negotiations were recently resumed, will clearly be a bellwether of the future.

PRODUCTION, ORDERS, AND EMPLOYMENT

The Federal Reserve's seasonally adjusted index of industrial production rose by 0.5 percentage point in May to 141.3 per cent of the 1957-59 average (see chart). Output in industries producing business equipment showed particular strength in the month and reached a level 11 per cent higher than in the corresponding month a year earlier. Production of consumer goods was also up in May, buoyed by a slight rise in automobile assemblies as well as by some increase in output of consumer staples. Output of industrial materials, on the other hand, was essentially unchanged, following the sharp run-up that reflected the surge in steel production earlier in the year. In June, steel ingot production edged back close to the record rate reached in April, and producers in the auto-



Sources: Board of Governors of the Federal Reserve System; United States Departments of Commerce and Labor.

mobile industry assembled new cars at a seasonally adjusted annual rate of 9.6 million units—a further slight gain in comparison with the advanced rate of the month before.

Prospects for future strength in production remain good. Although the volume of incoming new orders for durable goods declined somewhat in May, such orders were still well above the current rate of shipments. As a result, the backlog of unfilled orders held by durables manufacturers rose for the seventeenth consecutive month (see chart). This brought the stock of unfilled orders to a level equal to more than 2.7 times the current monthly rate of shipments, which is 7 per cent above the ratio for the corresponding month a year ago.

Nonfarm payroll employment also rose in May, more than recouping the mild decline that occurred in April (see chart). Employment was off slightly in the manufacturing sector in May, but this decline largely reflected a smaller number of persons at work in the primary metals industry following the interim labor settlement in the steel industry. Outside the manufacturing sector, gains were widespread in May. For the April-May period combined, the total number of persons on establishment payrolls averaged more than 300,000 persons above the figure for the first quarter. Along with the continuing rise in business activity in June, both total employment and the number of persons seeking jobs expanded further. The over-all unemployment rate in the month was 4.7 per cent, a shade above the 4.6 per cent rate in May, reflecting a rise in unemployment among adult women. The unemployment rate for adult men, and married men, on the other hand, edged downward; and unemployment among teenagers was also down a bit. For the second quarter as a whole, the over-all unemployment rate averaged 4.7 per cent, compared with 4.8 per cent in the first quarter and 5.3 per cent in the corresponding year-ago period.

CONSUMER SPENDING AND RESIDENTIAL CONSTRUCTION

Retail sales rose by 2.2 per cent in May to a record seasonally adjusted annual rate of nearly $281 billion. The dollar volume of both nondurables and durables sales advanced by slightly more than 2 per cent. In June, new-car sales surged to a seasonally adjusted annual rate of 8.8 million units. Over-all retail volume was well maintained in the month as a whole, and sales in the last few days of the month probably received some stimulus from the excise tax cut, which the President signed into law June 21 to take effect the following day. (In the case of both new automobiles and air conditioners, the reductions were retroactive to cover purchases made on or after May 15.)

There were, to be sure, some reports of disappointment with the initial consumer reaction to the excise tax cuts in terms of actual purchases. Past experience indicates, however, that there tends to be a lag between the enactment of tax cuts and the response in consumer spending. It would seem that such a lag is especially likely in the case of an excise tax cut which has its immediate effect only on specific goods. As consumers in the weeks ahead come to realize more fully that previously taxed items now take less of their income to purchase, they will find more income left over for spending on other things. There will therefore be a tendency for the effects of the excise tax cut to spread over the entire range of consumer goods and services.

Developments in residential construction continued, on balance, to suggest improvement, although the erratic fluctuations in many of the statistical series relating to this sector of activity make it difficult to draw conclusions from any one month's returns. One way of gaining per-

spective is to look at average levels of activity over several months. The number of nonfarm housing starts, for example, fell by 4 per cent in May. This decline, however, followed an advance the month before, and the average level of starts in the April-May period shows an increase from the January-March average. With respect to actual outlays for residential construction, activity in the second quarter was on a par with the previous quarter.

The Money and Bond Markets in June

The money market remained firm in June while handling readily the substantial financial flows generated by quarterly corporate dividend and tax payments. Heavy midmonth credit demands associated with these payments increased the pressure on the reserve positions of the money market banks. While these banks were able to cover part of the special needs of the period in the Federal funds market, their borrowings from the Federal Reserve Banks also increased. Treasury bill rates generally declined during most of the month in response to a steady demand from commercial banks, public funds, and other sources, but edged higher toward the end of June.

Prices of Treasury notes and bonds fluctuated narrowly in the early part of June when the outlook for interest rates was clouded by the congestion evident in the corporate and tax-exempt bond markets. Around midmonth, as selling of Governments by investors failed to expand, a more confident tone developed. Demand for coupon issues picked up, and prices moved higher in fairly active trading until late in the month when both activity and prices receded. In the corporate and tax-exempt bond sectors, market supplies of new and recent issues remained very heavy and prices declined during the first third of the month. A better tone subsequently emerged in the corporate sector, as progress was gradually made in distributing bonds to investors, but prices of tax-exempt bonds continued to move lower throughout the month in the face of persistent market congestion.

THE MONEY MARKET AND BANK RESERVES

Nationwide net reserve availability in June fluctuated in approximately the same range which had prevailed in other recent months. The money market remained firm, with Federal funds trading on most days primarily at 4⅛ per cent. Rates on new call loans to Government securities dealers were most frequently quoted in a 4¼ to 4½ per cent range by the major New York City banks, while rates on renewal call loans were generally in a 4¼ to 4⅜ per cent range (see the left-hand panel of the chart on page 139). Offering rates for new time certificates of deposit issued by leading New York City banks edged slightly higher in early June and then receded. The range of rates at which such certificates traded in the secondary market moved irregularly lower during the month. Rates on bankers' acceptances were unchanged and dealer inventories increased only slightly in June, as the usual substantial expansion in dealer portfolios over the June 30 statement date for banks failed to materialize. On June 1, the major sales finance companies raised their offering rates on 30- to 89-day directly placed paper by ⅛ of a percentage point, thus setting a uniform rate of 4¼ per cent for all such paper in the 30- to 270-day maturity category.

The month began with a consistently firm tone in the money market. System open market operations released reserves in the two statement weeks ended June 2 and June 9 as an offset to the absorption of reserves resulting from the movements in "market" factors. The distribution of reserves favored the major New York City banks, which continued to add to their negotiable certificates of deposit outstanding, presumably to be in a good position to meet credit demands expected over the June dividend and tax dates. In the meantime, these banks sold Federal funds on balance, including the sizable volume which they normally purchase from their correspondents. The major money center banks outside New York City were able to cover a good portion of their substantial reserve needs in the Federal funds market. Member bank borrowings from the Reserve Banks, however, remained around the half billion dollar mark.

Table I

CHANGES IN FACTORS TENDING TO INCREASE OR DECREASE MEMBER BANK RESERVES, JUNE 1965

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

Factor	Daily averages—week ended					Net changes
	June 2	June 9	June 16	June 23	June 30	
"Market" factors						
Member bank required reserves*	— 28	+ 20	— 181	— 398	+ 85	— 502
Operating transactions (subtotal)	— 728	— 169	+ 229	+ 493	— 173	— 348
Federal Reserve float	— 152	+ 110	+ 76	+ 405	— 359	+ 80
Treasury operations†	— 63	+ 8	+ 18	— 68	+ 90	— 15
Gold and foreign account	— 43	+ 16	— 25	+ 22	— 98	— 128
Currency outside banks*	— 311	— 305	+ 97	+ 63	+ 122	— 334
Other Federal Reserve accounts (net)‡	— 161	+ 4	+ 63	+ 70	+ 72	+ 48
Total "market" factors	— 756	— 149	+ 48	+ 95	— 88	— 850
Direct Federal Reserve credit transactions						
Open market instruments						
Outright holdings:						
Government securities	+ 674	+ 53	+ 12	+ 169	+ 44	+ 952
Bankers' acceptances	— 1	— 4	— 2	— 3	+ 1	— 9
Repurchase agreements:						
Government securities	+ 63	+ 119	— 84	— 211	+ 51	— 62
Bankers' acceptances	+ 9	— 7	— 10	— 5	+ 6	— 7
Member bank borrowings	+ 35	— 44	+ 137	— 28	— 97	+ 3
Other loans, discounts, and advances	—	+ 6	— 5	— 2	+ 1	—
Total	+ 778	+ 124	+ 49	— 81	+ 6	+ 876
Excess reserves*	+ 22	— 25	+ 97	+ 14	— 82	+ 26
Daily average level of member bank:						
Total reserves, including vault cash*	21,414	21,369	21,647	22,059	21,892	21,676§
Required reserves*	21,087	21,067	21,248	21,646	21,561	21,322§
Excess reserves*	327	302	399	413	331	354§
Borrowings	518	474	611	583	486	534§
Free reserves*	— 191	— 172	— 212	— 170	— 155	— 180§
Nonborrowed reserves*	20,896	20,895	21,036	21,476	21,406	21,142§

Note: Because of rounding, figures do not necessarily add to totals.
* These figures are estimated.
† Includes changes in Treasury currency and cash.
‡ Includes assets denominated in foreign currencies.
§ Average for five weeks ended June 30, 1965.

During the midmonth statement week, the money market dealt smoothly with the huge flows set in motion by the most popular dividend payment date, June 10, and the quarterly corporate tax date, both of which fell in the same statement week. Total demand deposits (including checks in process of collection) at weekly reporting member banks rose by $8.4 billion during the week, as corporations acquired the deposits to pay out a substantial amount of dividends and several billion dollars in Federal taxes. On the assets side, the weekly reporting member banks extended approximately $2.7 billion in loans over the week ended June 16, over 50 per cent more than in the same period of 1964. Commercial and industrial loans rose substantially, while loans to sales finance companies and to brokers and dealers for purchasing or carrying securities also increased considerably. (During this period corporations not only borrowed from banks, but also reduced their holdings of Government securities under repurchase agreements with securities dealers as well as their holdings of finance company paper.) These heavy credit demands brought a notable increase in reserve pressure on the New York City banks, while other major banks continued to have sizable basic reserve deficits. However, reserves were in good supply at 4⅛ per cent in the Federal funds market, and borrowings from the Reserve Banks increased only moderately.

The pressures generated by the tax date led to heavy borrowing at the Federal Reserve "discount window" over the June 18-20 weekend. Subsequently, the money market became easier and Federal funds were available to buyers at a nominal rate at the end of the June 23 statement week. A comfortable atmosphere carried over into the following statement week, but the tone of the money market tightened as the week progressed. Borrowings from the Reserve Banks rose very sharply on the eve of the midyear

Table II

RESERVE POSITIONS OF MAJOR RESERVE CITY BANKS JUNE 1965

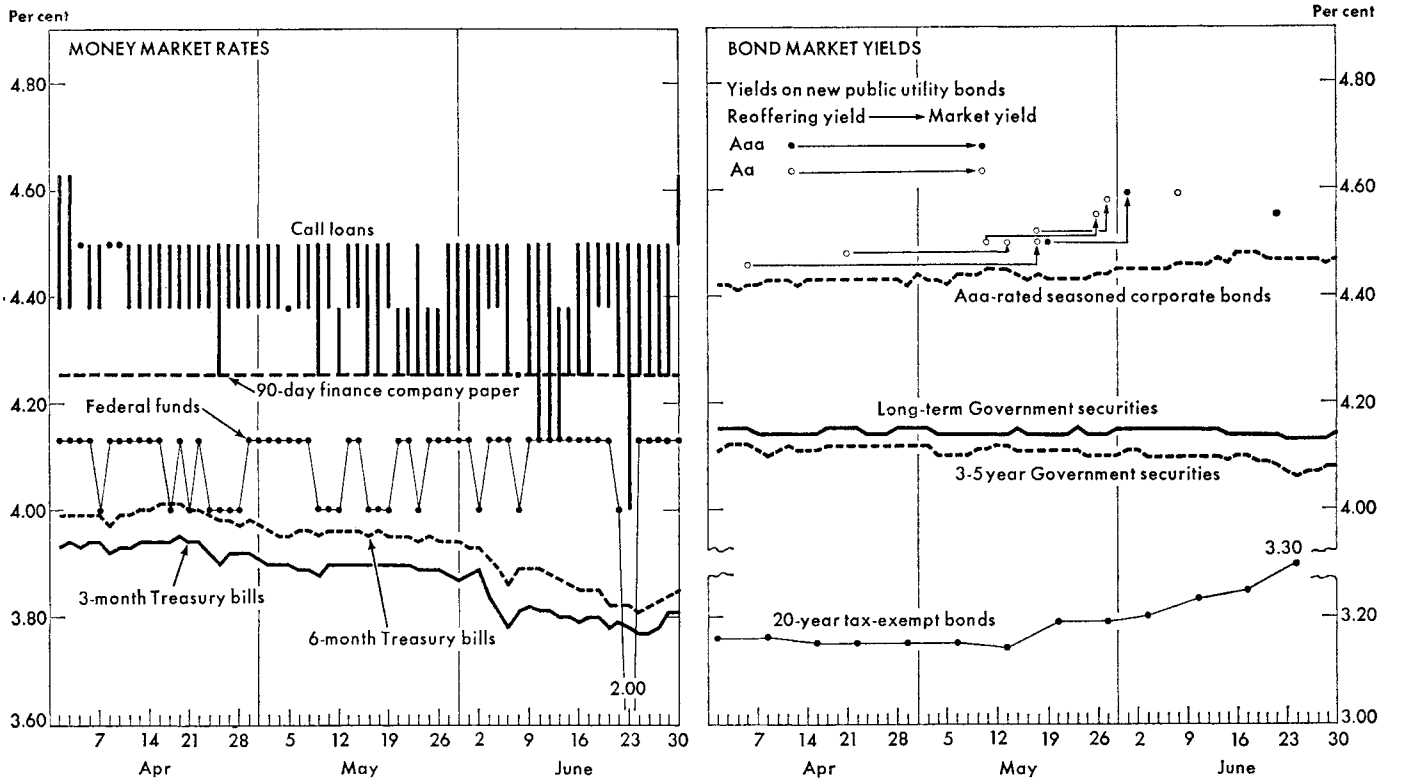
In millions of dollars

Factors affecting basic reserve positions	Daily averages—week ended					Average of five weeks ended June 30*
	June 2	June 9	June 16	June 23	June 30*	
Eight banks in New York City						
Reserve excess or deficiency(—)†	13	4	1	64	2	17
Less borrowings from Reserve Banks	18	47	166	213	96	108
Less net interbank Federal funds purchases or sales(—)	— 124	— 83	38	158	— 26	— 7
Gross purchases	*779*	*891*	*937*	*934*	*782*	*865*
Gross sales	*903*	*974*	*899*	*777*	*808*	*872*
Equals net basic reserve surplus or deficit(—)	119	40	— 203	— 306	— 68	— 84
Net loans to Government securities dealers	486	424	831	942	998	736
Thirty-eight banks outside New York City						
Reserve excess or deficiency(—)†	16	26	21	52	13	26
Less borrowings from Reserve Banks	129	118	129	118	141	127
Less net interbank Federal funds purchases or sales(—)	289	503	493	691	367	469
Gross purchases	*1,206*	*1,391*	*1,281*	*1,303*	*1,110*	*1,258*
Gross sales	*917*	*888*	*788*	*612*	*743*	*790*
Equals net basic reserve surplus or deficit(—)	— 401	— 595	— 602	— 757	— 495	— 570
Net loans to Government securities dealers	247	179	282	401	365	295

Note: Because of rounding, figures do not necessarily add to totals.
* Estimated reserve figures have not been adjusted for so-called "as of" debits and credits. These items are taken into account in final data.
† Reserves held after all adjustments applicable to the reporting period less required reserves and carry-over reserve deficiencies.

SELECTED INTEREST RATES*

April-June 1965



Note: Data are shown for business days only.

* MONEY MARKET RATES QUOTED: Daily range of rates posted by major New York City banks on new call loans (in Federal funds) secured by United States Government securities (a point indicates the absence of any range); offering rates for directly placed finance company paper; the effective rate on Federal funds (the rate most representative of the transactions executed); closing bid rates (quoted in terms of rate of discount) on newest outstanding three- and six-month Treasury bills.

BOND MARKET YIELDS QUOTED: Yields of new Aaa- and Aa-rated public utility bonds are plotted around a line showing daily average yields of seasoned Aaa-rated corporate bonds (arrows point from underwriting syndicate reoffering yield of a given issue to market yield of the same issue immediately after it has been released from syndicate restrictions); daily averages of yields of long-term Government securities (bonds due or callable in ten years or more) and of Government securities due in three to five years, computed on the basis of closing bid prices; Thursday averages of yields of twenty seasoned twenty-year tax-exempt bonds (carrying Moody's ratings of Aaa, Aa, A, and Baa).

Sources: Federal Reserve Bank of New York, Board of Governors of the Federal Reserve System, Moody's Investors Service, and The Weekly Bond Buyer.

statement date, on which banks ordinarily like to keep their borrowings small.

Over the month as a whole, market factors absorbed $850 million of reserves, while System open market operations provided $874 million. The weekly average of System outright holdings of Government securities rose by $952 million from the final statement week in May through the last week in June, and average System holdings of Government securities under repurchase agreements fell by $62 million. Average net System holdings of bankers' acceptances (outright and under repurchase agreements), declined by $16 million during the month. From Wednesday, May 26, through Wednesday, June 30, System holdings of Government securities maturing in less than one year expanded by $359 million, while holdings of issues maturing in more than one year rose by $452 million.

THE GOVERNMENT SECURITIES MARKET

Treasury bills were in broadly based demand in the opening days of the month. Market scarcities developed, particularly in the short-term maturity area, and rates continued along the downtrend which had begun in March (see left-hand panel of the chart). The June 3 reduction in the British bank rate from 7 per cent to 6 per cent was a factor contributing to the strength of Treasury bill prices. Around the June 10 corporate dividend payment date, bill rates generally edged a trifle higher, as dealers

took on securities returning from maturing corporate repurchase agreements. A steady investment demand persisted, however, and moderate offerings related to the dividend payment date and to the subsequent midmonth corporate tax date were readily absorbed. In the latter part of June, a keen investment interest centered upon bills coming due within three months as well as on bills maturing during future tax and dividend payment periods in September and December 1965 and in 1966. The general downward movement of bill rates resumed and continued until the closing days of the month, when demand tapered off and rates rose slightly.

At the last regular weekly auction of the month, held on June 28, average issuing rates were 3.784 per cent for the new three-month issue and 3.824 per cent for the new six-month bills, about 9 and 10 basis points lower than the average rates at the final weekly auction in May. The June 24 auction of $1 billion of new one-year bills produced an average issuing rate of 3.807 per cent, as against 3.954 per cent on the comparable issue sold a month earlier. The newest outstanding three- and six-month bills closed the month at bid rates of 3.81 per cent and 3.85 per cent, respectively.

In the market for Treasury notes and bonds, the atmosphere of caution which had developed in the latter part of May persisted in the opening days of June. Throughout this period, participants continued to react warily to the substantial calendar of offerings scheduled for flotation elsewhere in the capital markets. In particular, as corporate bond yields moved higher, the widening spread between yields of corporate bonds and those of Government securities of comparable maturity generated some concern over the tenability of prevailing yield levels of Treasury issues. Against this background, dealer offerings of Government notes and bonds expanded somewhat. However, a moderate demand remained in evidence and provided a steadying influence. Thus, after declining slightly on June 1, prices fluctuated narrowly from June 2 through June 10 (the right-hand panel of the chart illustrates the corresponding general stability of yields early in June).

Subsequently, investment demand and switching operations increased, and the coupon sector of the Government securities market strengthened. Participants were influenced by an improved atmosphere in the corporate bond market and by the excellent reception accorded a $525 million offering of Federal National Mortgage Association participation certificates. The bond market was also influenced by the decline in stock market prices—partially reversed late in the month—which was interpreted as being likely to lead to some increase in the demand for fixed-interest securities. The expansion in investor interest in coupon issues stimulated professional demand, offerings were easily taken up, and prices generally moved higher from June 11 through 24. Demand favored the short- and intermediate-term maturities—particularly the 2½ per cent wartime issues. The System Account also made open market purchases of coupon issues during the month to supply reserves in anticipation of large needs over the July 4 holiday weekend. In the last few trading sessions, investor interest declined and prices receded on professional profit taking.

OTHER SECURITIES MARKETS

In the early part of the month, prices of corporate and tax-exempt bonds generally moved lower in a hesitant atmosphere. Considerable investor resistance contributed to, and was reinforced by, the substantial backlog of new issues and older bonds which crowded dealers' shelves. Market participants were also aware of the heavy volume of impending flotations, including two large issues of capital notes by commercial banks. In the corporate sector, a steadier tone appeared in the latter part of the month as price reductions facilitated the distribution of new and recent corporate bonds. In the tax-exempt sector, however, dealer inventories remained large and prices continued to decline over the remainder of the month. Over the month as a whole, the average yield on Moody's seasoned Aaa-rated corporate bonds rose by 2 basis points to 4.47 per cent. During the same period, the average yield on *The Weekly Bond Buyer's* series for twenty seasoned tax-exempt issues (carrying ratings ranging from Aaa to Baa) increased by 11 basis points to 3.30 per cent. (These yield series are shown in the right-hand panel of the chart.)

The volume of new corporate bonds publicly floated in June amounted to an estimated $720 million, compared with $675 million in May 1965 and $460 million in June 1964. A $250 million offering of commercial bank capital notes maturing in 1990 reached the market early in the month. Reoffered at par to yield 4.60 per cent, the issue—which cannot be called for five years—initially encountered investor resistance, but demand for the notes subsequently expanded. Another major commercial bank also offered new capital notes in June. The latter issue consisted of $266 million of 4 per cent notes maturing in 1990, which were offered at par to stockholders and were convertible into stock. The notes, which carried five-year call protection, were well received. The largest publicly offered new corporate bond issue of the month consisted of $40 million of Aaa-rated 4⅝ per cent utility company debentures maturing in 2005. The debentures, which can-

not be called for five years, were reoffered to yield 4.55 per cent and were accorded a fair investor reception. New tax-exempt flotations totaled about $885 million, as against $895 million in May 1965 and $780 million in June 1964. The Blue List of tax-exempt securities advertised for sale closed the month at $834 million, compared with $872 million at the end of May. The largest new tax-exempt bond flotation during the month consisted of $67 million of state bonds which were reoffered to yield from 2.50 per cent in 1968 to 2.95 per cent in 1980. The bonds were Aaa rated by Moody's and were accorded a fair reception. Most other new corporate and tax-exempt bonds publicly offered during the period were accorded fairly good investor receptions.

The Initial Effects of Federal Budgetary Changes on Aggregate Spending*

Statistics describing how much the Federal Government spends and how much it collects in revenues are available in great quantity and on a variety of different accounting bases.[1] Despite this wealth of data, however, and despite the increasing importance of fiscal policy as a tool for promoting cyclical stability and long-run growth, the task of assessing the precise impact of Federal budgetary operations on aggregate production and income remains difficult. This article presents one possible technique for quantifying the effect on the economy implicit in any particular set of changes in Federal budgetary programs. Essentially, the technique seeks to measure the direction and size of the budget's initial influence on aggregate demand through changes in Federal outlays and through the direct effects on private incomes associated with changes in tax rates.

It should be stressed at the outset that no single measure of fiscal impact—including the relatively simple and tentative one presented here—will prove satisfactory in all analytical situations. The virtue of the procedure here presented is that it attempts to distinguish the independent effects of the budget on the economy from the "feedback" effects of the economy on the budget, effects which operate mainly on the revenues side of the budget. In this respect, the technique developed in this article has a goal similar to that of the so-called "full employment surplus", a concept which also attempts to separate out the feedback effects and which has become familiar from the reports of the President's Council of Economic Advisers.[2] The concept of the full employment surplus, of course, goes beyond this limited end; in particular, the concept has been used in discussions of the upward trend in tax revenues that would be generated by the economy as it approaches or maintains full employment of a growing labor force and productive capacity. The technique here discussed avoids the complications that arise in estimating tax revenues at a hypothetical full employment level of activity. The current employment and output situation is taken as given, and the computations are designed only to estimate the direct effect on total spending of actual changes in Federal expenditures and tax rates.

As will be apparent from the discussion below, the basic methodology and all the numerical computations shown in this article rest on a long series of assumptions, any one of which might prove to be a fit subject for lengthy debate. Moreover, there are some aspects of the over-all economic impact of Federal fiscal operations that cannot be examined at all in the context of the technique

* A number of persons in the Research Department of this Bank have worked toward developing the method of analysis presented here. Camille B. Pantuliano had primary responsibility for the preparation of this article.

[1] See Joseph Scherer, "A Primer on Federal Budgets", this *Review*, April 1965, pp. 79-88.

[2] The reader who wishes to examine the concept of the "full employment surplus" may consult an article by Robert Solomon, "A Note on the Full Employment Surplus", *Review of Economics and Statistics*, February 1964, pp. 105-108.

discussed here. Thus, even with the help of this technique, or any other such simple procedure, the analyst will still find it imperative to undertake a thorough investigation of all the circumstances prevailing in the particular period in which he is interested.

SUMMARY OF BASIC APPROACH

The technique described here is designed to measure the initial and direct effects of the changes in the Federal budget on aggregate spending by computing a weighted sum of the change in total Federal expenditures and the change in aggregate after-tax incomes due to statutory or administrative modifications in the Federal tax system. Additions to expenditures and reductions in tax rates are considered to be "stimulative", while reductions in expenditures and tax rate increases are considered to be "restrictive". The aim of the procedure is to assess the combined effects of expenditures and tax rate changes in pushing up or pulling down aggregate spending in a given period relative to spending in the immediately preceding period. Consequently, changes on both the expenditures and tax sides are measured in terms of levels prevailing in the previous period.

In the case of expenditures, the relevant figure is simply the absolute dollar amount of change from period to period, modified for certain timing factors (and adjusted for seasonal variation when periods of less than one year are used as the unit of analysis). For reasons explained in the Appendix, the data most suitable for this analysis represent a compromise between the "cash" and the "national income accounts" expenditures figures of the Federal budget. A more sophisticated technique would obviously also take into account the expenditures "mix", since it is very likely that different types of Government expenditures will have different effects on the economy. (One example that is frequently listed is the distinction between direct purchases of goods and services and "transfer" payments such as social security payments which stimulate the demand for goods and services less directly.) Such refinements can be built into the technique once further research on Government spending by components has yielded workable empirical generalizations.

The procedure for estimating the effects of changes in tax rates is somewhat more complex. Essentially, an attempt is made to estimate the extra amount of income left in (or taken from) private hands as a result of the tax rate change. Clearly, this estimate should eliminate feedback effects—the effects of tax-change-induced variations in the tax base, and hence in tax revenues. Therefore, the evaluation is made on the basis of levels of personal income or corporate profits (or other relevant tax bases) prevailing in the period before the tax change becomes effective. This figure is then multiplied by 90 per cent in order to obtain an estimate of the initial and direct effect on aggregate spending of the tax rate change itself.[3] The over-all impact of fiscal operations in any period is said to be stimulative when the net outcome of changes on the expenditures and tax sides so computed is positive. When the net outcome is negative, fiscal operations are said to be restrictive.

It should be noted explicitly that the fiscal impact measure developed here differs conceptually both from levels of the actual surplus or deficit—however measured in terms of the standard budget accounts—and from changes in the surplus or deficit. The amount of the deficit at any one time depends of course on the *level* of expenditures relative to revenues, while the present concept takes into account *changes* in both expenditures and tax laws. Moreover, since the level of the standard deficits depends upon the level of revenues actually realized rather than merely upon changes in the tax laws, it is the net result of two factors: the effects of the budget on the economy, and the effects of the economy on the budget. The latter represents mainly the previously mentioned feedback of changes in personal income and corporate profits on the tax receipts of the Federal Government. Since the present procedure seeks to measure the "independent" impact of budget changes on the economy, this independent effect must be isolated from the feedback effects.

The same factors account for the conceptual difference between changes over time in the realized deficit or surplus on the one hand, and the present measure on the other hand. Changes in the deficit, of course, depend upon changes in expenditures and changes in realized revenues. The measure developed here does make use of changes in expenditures, but on the revenues side it records only the effects on income due to changes in tax laws. Suppose, for

[3] The 90 per cent figure is based on the fact that consumers on average tend to lay out a little more than 90 per cent of their after-tax (or "disposable") income for "personal consumption expenditures", while the remainder of disposable income is saved. This 90 per cent weight was also — somewhat arbitrarily — applied to the dollar amounts released by corporate tax reductions. Available data were not helpful in determining a more appropriate weight for corporate tax changes. Imperfect as it is, this method does allow for the virtual certainty that tax reductions (and increases) have a slightly smaller initial impact on the economy than expenditure increases (and reductions). The alternative of treating personal and corporate tax cuts as equivalent to expenditure increases (and tax increases as equivalent to expenditure reductions) would most likely lead to overestimates of the fiscal impact from tax changes.

example, that expenditures change by a constant amount from year to year and that there are no changes in the tax laws. In such a case, the concept here developed would show a constant amount of fiscal stimulus in each year, which would correspond to the change in expenditures. If the economy were growing, however, actual tax receipts would be growing from year to year. Hence the actual deficit or surplus and changes in these figures would probably vary from year to year, while the present measure would remain constant, as noted.

LIMITATIONS OF BASIC APPROACH

Since the procedure is designed solely to measure the initial and direct effects of changes in fiscal operations on aggregate demand, a change in expenditures or in tax rates is allowed to affect the computations only for the period in which the change takes effect. If the expenditures or tax change remains in effect during subsequent periods, the economy will of course behave differently in those periods than if the change had never been made. In the present technique, however, the test is whether additional stimulus is being provided relative to the previous period. Thus, the assumption is made that a tax cut or an increase in expenditures will raise aggregate demand to a new higher level during the period in which the budgetary change occurs. The mere continuance of a tax cut or of an already elevated level of expenditures in subsequent periods is not considered as an additional stimulus causing demand to rise still further.[4]

Thus, the technique does not deal with the secondary repercussions of fiscal operations. This is certainly not to deny the occurrence of such repercussions. It is usually assumed that additional disposable income resulting from a tax cut will be spent and that the additional incomes so generated will go on to stimulate still further spending, via the so-called "multiplier" process. This process is likely to operate with lags. Therefore, the economy may continue to move up in subsequent periods as a result of the initial momentum generated by a tax cut even though no further cuts take place. An analysis of the precise size and timing of these secondary effects would be both necessary and worthwhile to attempt, but would go beyond the bounds of this article.

[4] In somewhat the same sense, a rise in business spending on plant and equipment may be thought of as a stimulus for aggregate demand to rise in the period in which it occurs and yet not be counted as a further stimulus if plant and equipment outlays remain at the same higher level in subsequent periods.

Some further limitations of the procedure should be mentioned explicitly. First, it does not yield a measurement of the adequacy of fiscal policy in attaining full employment goals. Second, this measure gives no indication of the effect on the economy that occurs through the growth of Government revenues with the growth in the economy. (The "full employment surplus" concept does give such an indication, as noted earlier.) The present analysis skirts these issues by concentrating strictly on the narrower question whether changes in the budget are tending to push up or pull down aggregate demand from the level of the preceding period. Naturally, this also means the sacrifice of some of the valuable results yielded by the "full employment budget" analysis.

Third, the technique described here does not take account of the impact of fiscal operations on the capital market, interest rates, or liquidity. For example, a fiscal program that is stimulative in terms of the present analysis might—though need not—involve a cash deficit requiring the flotation of additional Government securities. This additional supply of securities in the market might, in turn, tend to push up interest rates, make funds more expensive for private borrowers, and possibly discourage private demands for funds. This process could conceivably offset part or all of the fiscal stimulus as here measured. Therefore, such possibilities should be explored in a more nearly complete analysis of fiscal effects on the economy than that here given.

Fourth, the present technique cannot, of course, take any account of the "psychological" effects of fiscal operations. There is no way of attaching a dollar-and-cents figure to the contribution to business optimism in much of 1963 made by the widely held expectation that a tax cut would eventually be enacted. Similarly, the prospect of a particularly large budgetary deficit might introduce a note of uneasiness into business sentiment that could not be readily measured.

In addition to these broad considerations, two particularly thorny technical problems concerning the data had to be resolved and should be mentioned before the results are presented. (Most of the technical problems are left for the Appendix.) One of these problems concerns the treatment of Federal lending activity; the other involves the treatment of corporate taxes.

Federal lending obviously shares some, but not all, of the characteristics of outright expenditures. On the one hand, it is in fact stimulative insofar as the borrowers will spend much, if not all, of the proceeds on goods and services. On the other hand, the borrowers assume a liability which may dampen the stimulative effects significantly. There is no clear-cut answer to the question

whether Federal lending should be included in or excluded from the fiscal stimulus. Therefore, the figures are given on both bases. (Further difficult problems related to the impact of Federal lending are treated in the Appendix.)

In the case of corporate tax changes, the issues—which are also treated more fully in the Appendix—revolve around the choice of the proper basis for the timing of the impact of such changes. It makes a great deal of difference whether one chooses the time of accrual of tax liabilities or the time of cash payments. In the absence of a convincing rationale for the exclusive choice of either basis, a simple arithmetic average of the two possibilities was computed for the present purpose.

RESULTS

The present technique yields the figures of the chart and of Table I for the effects of changes in the Federal budget in the calendar years 1960-64. At the beginning of the period for which calculations were made, i.e., in early 1960, budgetary changes were moving in the direction of restrictiveness as a result of an increase in social security taxes without any expenditures stimulus. The calculations suggest, however, that since that time changes in the Federal budget have been stimulative in each half-year period, regardless of whether the calculation includes or excludes the Government's loan operations.

Nevertheless, there have been significant fluctuations in the degree of stimulus occasioned by budgetary changes during the period under review. Generally, the effects of budgetary changes became gradually less stimulative between early 1961 and early 1963 but considerably more stimulative thereafter. This pattern is primarily the result of declining amounts of stimulus from changes in expenditures after 1961, followed by the significantly expansionary tax cut in 1964. Because that tax cut fell into early 1964, this period emerges as the most stimulative within the five years for which calculations were made.

It is interesting to note that the inclusion of net Federal lending activities in expenditures tends to smooth out some of the fluctuations in stimulus produced by changes in outright expenditures. Moreover, the broader measure was to some degree stimulative in each of the periods since 1960

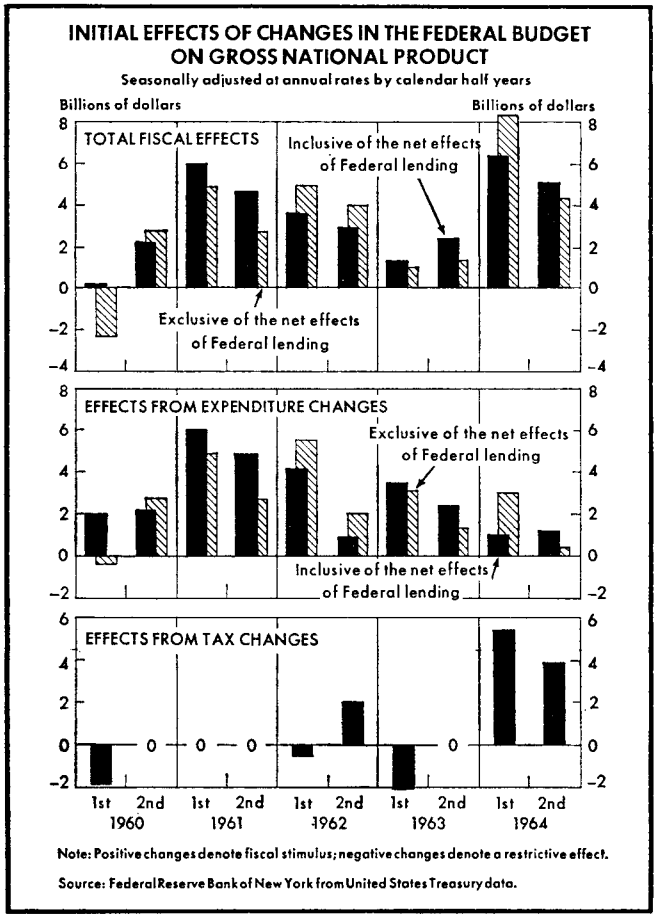
Table I

INITIAL EFFECTS OF CHANGES IN THE FEDERAL BUDGET ON GROSS NATIONAL PRODUCT

Seasonally adjusted at annual rates; in billions of dollars

Calendar years by half years	Fiscal effects (excluding net Federal lending)			Fiscal effects (including net Federal lending)		
	From expenditure changes	From tax changes	Total fiscal effects	From expenditure changes	From tax changes	Total fiscal effects
1960: 1	—0.4	—1.9	—2.3	2.0	—1.9	0.1
2	2.7	—	2.7	2.2	—	2.2
1961: 1	4.8	—	4.8	6.0	—	6.0
2	2.7	—	2.7	4.6	—	4.6
1962: 1	5.5	—0.5	5.0	4.1	—0.5	3.6
2	2.0	2.0	4.0	0.9	2.0	2.9
1963: 1	3.1	—2.1	1.0	3.4	—2.1	1.3
2	1.3	—	1.3	2.4	—	2.4
1964: 1	3.0	5.4	8.4	1.0	5.4	6.4
2	0.4	3.9	4.3	1.2	3.9	5.1

Note: Absence of a sign denotes fiscal stimulus; a negative sign denotes a restrictive effect. Increases in expenditures or tax cuts are positive, decreases in expenditures or tax rises negative. The initial effect from expenditures is the period-to-period change in a series derived in Table II. The initial effect from taxes is the change in after-tax income due to tax revisions calculated in Tables III, IV and V (Tables II-V are in the Appendix).
Source: Federal Reserve Bank of New York from United States Treasury data.



—most particularly in early 1961, when business activity reached the trough of a recession. The measure excluding loans shows sharper variations from period to period and suggests that expenditures changes were most expansionary not in early 1961 but in early 1962.

As was noted earlier, there is no reason to expect the numerical value of changes in the realized deficit from period to period to be the same as the numerical value of the present measure for comparable periods. Indeed, the differences have in fact been rather marked over the past few years. For example, the half-yearly changes in the cash deficit (at annual rates) have ranged from plus $1.7 billion to minus $1.9 billion in the 1962-64 period. The measure developed here, in contrast, has been positive throughout this period, ranging for the half years (at annual rates) from a low of $1.3 billion to a high of $6.4 billion (including net Federal lending), and from a low of $1.0 billion to a high of $8.4 billion (excluding net Federal lending).

TECHNICAL APPENDIX

The conceptual content of the measure of fiscal impact developed here requires information as exact as may be obtainable on the timing of the economic effect of Government expenditures and taxation: just when do outlays become an income flow to the private sector of the economy, and when do taxes become a withdrawal of income from the private economy? Unfortunately, many of the official series on important components of the budget are not entirely satisfactory in this respect. Therefore, a compromise series had to be developed, based on information available in different sets of published data.

EXPENDITURES. ***What data to use?*** With respect to inclusiveness, the expenditures figures listed in either the cash budget or the national income accounts budget are about equally satisfactory. Both cover virtually all Government payments to the private sector, though the national income accounts data do not include Government loans and though there is considerable "netting" of receipts and expenditures in both budgets.[5] Administrative budget statistics, on the other hand, are not particularly useful for the analysis presented here, since they do not include the operations of the social insurance funds or of the Government's other trust fund accounts.

As already suggested, the construction of a series in which expenditures are dated at the time of their impact on incomes presents a difficult problem. Cash budget data are not quite satisfactory for three reasons. First, the bulk of spending for the farm price support program has an income effect at a time other than the time of listing as a cash expenditure. These outlays are recorded in the cash budget when farmers default on their crop loans and forfeit their crops to the Commodity Credit Corporation.[6] Yet, the income effect of these loans probably occurs several months earlier when the farmers initially borrow the funds.

Second, "payment" in cash budget terminology means that the check issued by the Treasury has actually been cleared through the banking system, whereas the income effect probably occurs when the person or firm receiving the check cashes or deposits it. Although the time lag between check issuance and check clearance is relatively short, the magnitude of the fluctuations in outstanding checks in the clearing accounts can be substantial, particularly around the end of a fiscal year.

Third, no data are published which permit, on a seasonally adjusted basis, a separation of expenditures under the Government's lending programs from other expenditures. The necessity for such a separation stems from the difficulties surrounding the measurement of the fiscal impact from changes in Government loans. Unlike the recipients of outright expenditures, the recipients of loans incur a financial liability to the Government. Moreover, some types of lending programs—such as those of the Federal National Mortgage Association—are so operated as to influence primarily credit conditions rather than expenditures in the private sector; and some loans made to foreign borrowers may have a smaller direct impact on the American economy than other types of loans or outright expenditures. Nevertheless, the bulk of Federal lending consists of loans which would not otherwise be available and generates additional spending by the recipients (or, in periods of net repayments to the Government, subtracts from spending that would otherwise take place). The analysis developed here skirts the issue by the calculation of two separate measures of fiscal effects—one excluding loans, the other including loans.

[5] Expenditures for the Post Office are a case in point. These are included in both budgets as net of receipts of income from the sales of stamps and of other postal services.

[6] It should be understood that this "default" is actually one major way in which the farm price support program is implemented. It is a type of default that, in its implications, does not correspond to defaults on private bank loans.

Table II

DERIVATION OF FISCAL EFFECTS FROM CHANGES IN FEDERAL EXPENDITURES

Seasonally adjusted at annual rates; in billions of dollars

Calendar years by half years	National income accounts expenditures	Excess of interest accruals over payments	Excess of deliveries over payments	Modified cash expenditures (1)—(2)—(3)	Fiscal effects of modified cash expenditures*	Net Federal lending	Modified cash expenditures including loans (4)+(6)	Fiscal effects of modified cash expenditures including loans*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1959: 2	92.4	0.8	—0.8	92.4	—	0.7	93.1	—
1960: 1	91.7	0.3	—0.6	92.0	—0.4	3.1	95.1	2.0
2	94.7	0.1	—0.1	94.7	2.7	2.6	97.3	2.2
1961: 1	100.8	0.3	1.0	99.5	4.8	3.8	103.3	6.0
2	104.3	0.5	1.6	102.2	2.7	5.7	107.9	4.6
1962: 1	109.5	0.7	1.1	107.7	5.5	4.3	112.0	4.1
2	111.4	0.9	0.8	109.7	2.0	3.2	112.9	0.9
1963: 1	114.6	0.9	0.9	112.8	3.1	3.5	116.3	3.4
2	115.8	0.9	0.8	114.1	1.3	4.6	118.7	2.4
1964: 1	118.7	0.8	0.8	117.1	3.0	2.6	119.7	1.0
2	119.7	0.8†	1.4†	117.5	0.4	3.4†	120.9	1.2

* Figures shown are period-to-period changes in preceding column.
† Estimated by the Federal Reserve Bank of New York.
Source: The data through 1963 are from the July 1964 issue of the *Survey of Current Business* with seasonal adjustments of columns 2, 3, and 6 by the Federal Reserve Bank of New York. The adjustments for the first half of 1964 were derived as the difference between the totals for fiscal 1964 listed in the *Budget Document* for fiscal 1966 (and other sources) and the totals for the second half of 1963. National income accounts expenditures for 1964 are available in the February issue of the *Survey of Current Business*.

The national income accounts budget also has its shortcomings as a source of expenditures data in terms of the present concept, most particularly because of the dating of expenditures. To be sure, price support payments to farmers are recorded as of the time the loan is made rather than when it goes into default, and checks are recorded when issued rather than when cleared. On the other hand, a number of expenditures items are listed in the national income accounts budget either as of the time of delivery of the goods to the Government (which may postdate the cash income effect), or when payments accrue to the private sector (which may precede the cash income effect).

The national income accounts data do, however, provide a "clean" seasonally adjusted expenditures series (excluding the Government's lending operations). As a practical matter, therefore, it is simpler to start with the national income accounts data rather than with the cash budget data. What follows, therefore, is a summary of the steps taken in adjusting the published expenditures data in the national income accounts budget to the "modified cash" basis needed for the present analysis.

Derivation of modified cash expenditures. In column 1 of Table II, expenditures in the national income accounts budget are listed by half years at seasonally adjusted annual rates.[7] Many of the adjustments of these data that might be made to arrive at the measure needed for the present analysis are so small or so stable from period to period that they may be safely ignored. The two major adjustments that cannot be ignored are shown in columns 2 and 3 of the table.[8]

The first of these adjustments, shown in column 2, concerns the dating of interest payments. The national income accounts budget lists interest on the Federal debt as an expenditure as interest accrues. The effect on private income, however, occurs when interest is actually paid out and is so listed in the cash budget. In order to

[7] Historical data for expenditures in the national income accounts budget are available by quarters and the adjustments needed are available by half years in the various July issues of the *Survey of Current Business*. Annual data, including the Administration's projections for the coming fiscal year, are published in the *Budget Document*, the *Economic Report of the President*, and the February issue of the *Survey of Current Business*.

[8] Among the adjustments that have been ignored are expenditures for the District of Columbia (these are recorded as state and local expenditures in the national income accounts budget), and such adjustments for netting and consolidation as: contributions to Federal employee retirement funds by the Government and by Federal employees, contributions to the veterans' life insurance funds by the Federal Government, and an adjustment for the receipt of interest and for the proceeds of Government sales.

put interest payments in the national income accounts on a cash budget basis, the excess of interest accruals over interest payments, shown in column 2, should be removed from total expenditures. A similar problem occurs with respect to the payment for goods purchased by the Government. The national income accounts budget contains these payments when goods are actually delivered to the Government, but the impact is more likely to occur when cash payments for the goods are made, whether or not they have been delivered at that point. The adjustment which places expenditures on a payments basis is listed in column 3.

The two adjustments just described, and the total for loans shown in column 6 of Table II, are part of the regular public record, but only in amounts unadjusted for seasonal variation. The seasonally adjusted data shown in the table were developed at this Bank.[9]

Subtraction of the adjustments in columns 2 and 3 from the data in column 1 yields the "modified cash" version of expenditures listed in column 4 of Table II. Half-yearly changes in these modified cash expenditures are shown in column 5 as the fiscal effects from the expenditures side of the budget excluding the Government's lending operations. The addition to column 4 of Government loans, shown in column 6, gives a measure of modified cash expenditures including loans. These are shown in column 7, and half-yearly changes in this total, or the fiscal effects including loans, are shown in column 8.

TAXES. ***What accounting basis?*** The choice of an accounting basis by which to measure taxes presents an even thornier problem than in the case of expenditures. The main problem relates to corporate taxes since the use of different possible bases typically results in substantial variations in the figures.

The cash budget counts tax revenues when they are received by the Government; the national income accounts budget lists some types of taxes when they accrue. In the case of corporate taxes, this difference in timing can lead to widely disparate revenues totals in the two budgets for the same period because of the considerable lag between the time when corporations accrue taxes and the time when these are paid.[10] As an example, during early 1964 the effects of the Revenue Act of 1964 could be considered either restrictive or stimulative as regards corporate taxes, depending upon the basis used for measurement. On a liabilities basis the law provided for a corporate tax cut during the first half of 1964 of $1.4 billion, but on a cash payments basis the law resulted in a temporary increase in tax payments of $0.6 billion for the period, due to a speedup in the payments schedule (both figures given at seasonally adjusted annual rates). Similarly, the Budget Bureau has estimated that the difference between corporate tax accruals and corporate tax payments for fiscal 1966 will amount to $2.9 billion.

These differences have, of course, substantive implications for a measure of the effect of budgetary changes on the economy as of the time when that impact is initially felt. More particularly, accuracy on the tax side requires some knowledge of whether the relevant impact upon corporations occurs as they incur the tax liabilities or as they actually make the tax payments. There is little empirical evidence on this issue. Therefore, the analysis presented here is based on a compromise. The estimates shown are a simple arithmetic average of corporate tax changes on an accrual basis and on a payments basis. No such averaging procedure appears to be necessary in the case of personal income tax changes. There is fairly general agreement that individuals react to their tax payments rather than their tax liabilities.

The remainder of this Appendix summarizes the estimate of the initial effects of individual and corporate after-tax incomes stemming from recent tax law changes. In each case, the effect is measured in terms of the change in taxes at the level of income prevailing in the previous period rather than as the simple period-to-period change in tax receipts.

Changes in individual tax rates. Social security taxes and personal income taxes have undergone major changes since 1960. Social security rates were increased three times during the 1960-64 period. The Social Security Administration has estimated the amounts of these increases at annual rates of $2.1 billion in 1960, $0.5 billion in 1962, and $2.3 billion in 1963. Each of these

[9] The formula $(A + 2B + C) \div 4$, in which A represents the previous period, B the current period, and C the succeeding period, has been used to obtain a "seasonally adjusted" figure for period B. The half-yearly totals are converted to annual rates by multiplying by 2.

[10] Until 1964, large corporations were not required to make any actual tax payments on income earned during a given calendar year until September of that year. Indeed, the largest portion of their tax bill was not paid until the following March and June. (The somewhat different schedule for fiscal-year corporations does not materially affect this point.) In the national income accounts budget, however, taxes for any period are listed as the liability is accrued.

rate changes became effective on January 1 of the year indicated. Thus, the impact of the changes is listed in Table III for the first half of these three years. Although each tax rate change remained permanently in effect, there was no additional curtailment of incomes subsequent to the initial introduction of the increase, and therefore no tax change is listed in Table III for the succeeding half-year period or for later periods.

The Revenue Act of 1964, of course, provided for a substantial cut in personal income tax rates. To implement the cut, the basic withholding rate was reduced from 18 per cent to 14 per cent, effective in early March of 1964. At the level of personal income prevailing in calendar 1963, and given the amount of income taxes actually withheld at that income level, this reduction in the withholding rate would have provided individuals with an additional $8.9 billion (annual rate) in after-tax income. Because the effective date of the withholding rate cut occurred in March 1964, or roughly two months after the first half of the year had begun, the amount of the tax cut for that half year is listed in Table III at an annual rate of only $5.6 billion. In the second half of the year, however, the lower withholding rate covered the entire period. Hence the table lists an additional stimulus for the second half, which reflects the difference between the application of the lower rates to six months as against only about four months.

The net effects of the changes in social security and personal income taxes are shown in the last column of Table III. As previously explained, these figures should be adjusted to allow for the fact that some of this after-tax income released was saved rather than spent and thus did not have a direct impact upon aggregate output. Therefore, these figures were multiplied by 90 per cent before including them in the final estimate of the total fiscal effect from taxes, shown later on in Table V. (The reversal of signs in Table V reflects the fact that a tax cut is stimulative, while a tax increase is restrictive.)

Table III
CHANGES IN INDIVIDUAL TAXES
Seasonally adjusted at annual rates; in billions of dollars

Calendar years by half years	Social security	Revenue Act of 1964	Total
1960: 1	+2.1	—	+2.1
2	—	—	—
1961: 1	—	—	—
2	—	—	—
1962: 1	+0.5	—	+0.5
2	—	—	—
1963: 1	+2.3	—	+2.3
2	—	—	—
1964: 1	—	−5.6	−5.6
2	—	−3.3	−3.3

Note: A minus sign denotes a reduction in taxes, a positive sign an increase in taxes.
Source: Estimates released by the United States Treasury Department and the Social Security Administration, or based upon the Treasury's estimates.

Corporate tax rate changes. Since 1960, there have been several tax changes affecting corporations—the investment tax credit, effective in 1962; the liberalization of depreciation allowances, also effective in 1962; and the Revenue Act of 1964, which provided for a two-stage tax cut and the acceleration of corporate tax payments.

The dollar value of the tax reduction generated by the investment tax credit of 1962 has been estimated at an annual rate of $1.0 billion, while the liberalization of depreciation allowances brought about a tax reduction of $1.2 billion (both figures based on 1962 income levels).[11] These estimates of the change in tax liabilities are shown in the first two columns of Table IV. Because both these tax features became effective in the second half of 1962, the timing of the reduction in cash payments largely coincided with the reduction in tax liabilities (or accruals). These two reduction measures, of course, remain in effect, but once again the logic of the "initial" impact measure requires that these tax changes be shown as affecting only the second half of 1962, which is done in Table IV.

Corporate income taxes were also reduced by the Revenue Act of 1964. Calculation of the effects of this reduction is somewhat more complicated than in the case of the earlier tax measures. First, the effective date of the cut in liabilities preceded that in tax payments. Second, the Act also provided for some acceleration of tax payments. On the basis of 1963 profit levels, the Treasury has calculated that the value of the over-all reduction in corporate tax liabilities will amount to about $2.5 billion when fully effective in 1965. A little more than half this total, or about $1.4 billion, was estimated as applicable to calendar 1964, effective as of the first half of the year. This number is shown in the third column of Table IV, which is on a liabilities basis. Tax payments, on the other hand, did not begin to reflect the effects of the rate

[11] All figures in this section are based on official United States Treasury estimates.

reduction until the second half of 1964. Thus, column 6 of Table IV, which shows the effects of the reduction in rates on a payments basis, lists the $1.4 billion figure for the second half of 1964.

The Revenue Act of 1964 also provided that corporations make two "advance" income tax payments—in April and in June—on income earned during the same calendar year. These two payments were in addition to the traditional September and December advance payments. Between 1964 and 1970, the size of each of these new payments is scheduled to increase from 1 per cent to 25 per cent of the estimated tax liability for the given current year. In the long run, this provision affects only the timing of payments rather than the amount and will result in a closer correspondence of actual tax payments with accrued tax liabilities. But during the transition years, payments in any given half-year period are affected significantly. More specifically, corporate tax payments will tend to be relatively higher in the first half of each calendar year when corporations will make both the normal final payments on profits earned in the preceding year and two additional payments on estimated profits for the current year. Thus, in column 7 of Table IV, an increase in tax payments of $0.6 billion is shown as occurring in the first half of 1964—the result of the speedup—followed by a reduction in payments of $0.6 billion in the second half (to reflect the fact that higher payments in the first half do not also remain in force for the second half of the year).

The last column of Table IV shows the "compromise" effect of the changes in corporate taxes over the 1960-64 period (calculated simply by taking the arithmetic average of the effects on a liabilities basis and on a seasonally adjusted cash basis). Following the same procedure that was applied to the effects of changes in individual tax rates, these compromise figures are multiplied by 90 per cent, the signs are reversed, and the results shown in column 2 of Table V. The last column in Table V, which is reproduced in Table I and is also plotted in the chart, shows the total initial effects of the changes that have occurred in the individual and corporate tax laws over the 1960-64 period.

Table V

DERIVATION OF FISCAL EFFECTS FROM CHANGES IN FEDERAL TAXES

Seasonally adjusted at annual rates; in billions of dollars

Calendar years by half years	Individual tax changes	Corporate tax changes	Fiscal effects of tax changes
	(1)	(2)	(3)
1960: 1	−1.9	—	−1.9
2	—	—	—
1961: 1	—	—	—
2	—	—	—
1962: 1	−0.5	—	−0.5
2	—	+2.0	+2.0
1963: 1	−2.1	—	−2.1
2	—	—	—
1964: 1	+5.0	+0.4	+5.4
2	+3.0	+0.9	+3.9

Sources: Tables III and IV, with actual amounts of tax changes listed in those tables multiplied by 90 per cent to reflect the assumed initial effects of the changes in taxes on spending (and with signs reversed to reflect the inverse relationship of tax changes from the budgetary point of view as against their fiscal effects).

Table IV

CHANGES IN CORPORATE TAXES

Seasonally adjusted at annual rates; in billions of dollars

Calendar years by half years	Changes in liabilities			Changes in cash payments				Average of liabilities and payments bases
	Investment tax credit of 1962	Liberalized depreciation of 1962	Revenue Act of 1964	Investment tax credit of 1962	Liberalized depreciation of 1962	Revenue Act of 1964		
						Rates	Speedup	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1960: 1	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	—	—
1961: 1	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	—	—
1962: 1	—	—	—	—	—	—	—	—
2	−1.0	−1.2	—	−1.0	−1.2	—	—	−2.2
1963: 1	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	—	—
1964: 1	—	—	−1.4	—	—	—	+0.6	−0.4
2	—	—	—	—	—	−1.4	−0.6	−1.0

Note: A minus sign denotes a reduction in taxes, a positive sign an increase in tax payments.
Source: Estimates released by the United States Treasury Department or based upon the Treasury's estimates.

Publications of the Federal Reserve Bank of New York

The following is a selected list of publications available free (except where a charge is indicated) from the Public Information Department, Federal Reserve Bank of New York, New York, N. Y. 10045. Copies of charge publications are available at half price to educational institutions.

1. FEDERAL RESERVE OPERATIONS IN THE MONEY AND GOVERNMENT SECURITIES MARKETS (1956) by Robert V. Roosa. A 105-page booklet describing how Federal Reserve operations are conducted through the Trading Desk in execution of the directions of the Federal Open Market Committee. Discusses the interrelation of short-term technical and long-range policy factors in day-to-day operations. Has sections on the role of the national money market, its instruments and institutions, trading procedures in the Government securities market, what the Trading Desk does, the use of projections and the "feel" of the market, and operating liaison with the Federal Open Market Committee.

2. THE MONEY SIDE OF "THE STREET" (1959) by Carl H. Madden. A 104-page booklet giving a layman's account of the workings of the New York money market and seeking to convey an understanding of the functions and usefulness of the short-term wholesale money market and of its role in the operations of the Federal Reserve. 70 cents per copy.

3. DEPOSIT VELOCITY AND ITS SIGNIFICANCE (1959) by George Garvy. An 88-page booklet discussing the behavior of deposit velocity, over the business cycle and over long periods, with emphasis on the institutional and structural forces determining its behavior. 60 cents per copy.

4. MONETARY POLICY UNDER THE INTERNATIONAL GOLD STANDARD, 1880-1914 (1959) by Arthur I. Bloomfield. A 62-page booklet analyzing, in the light of current monetary and banking theory, the performance and policies of central banks within the framework of the pre-1914 gold standard. 50 cents per copy.

5. OPEN MARKET OPERATIONS (1963) by Paul Meek. A 43-page booklet describing for the interested layman or undergraduate student how open market operations in United States Government securities are used to cope with monetary stresses and promote a healthy economy.

6. ESSAYS IN MONEY AND CREDIT (1964). A 76-page booklet containing eleven essays on technical problems of monetary policy, Treasury debt and cash operations, and the Federal Reserve's daily work. It also contains several analyses of money and securities market instruments and of banking problems and policies. 40 cents per copy.

7. TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE OPERATIONS: MARCH 1961-AUGUST 1964 (1964) by Charles A. Coombs. A 47-page consolidated reprint of five reports on the title subject that appeared earlier in the *Federal Reserve Bulletin* and the *Monthly Review*. 50 cents per copy.

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