

FEDERAL RESERVE BANK OF RICHMOND

MONTHLY REVIEW

Financial Highlights of 1972

*Personal Income in the
Fifth District in 1971*

*Employment and Unemployment
Since 1969*



Volume 59
Number 1

JANUARY 1973

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FINANCIAL HIGHLIGHTS OF 1972

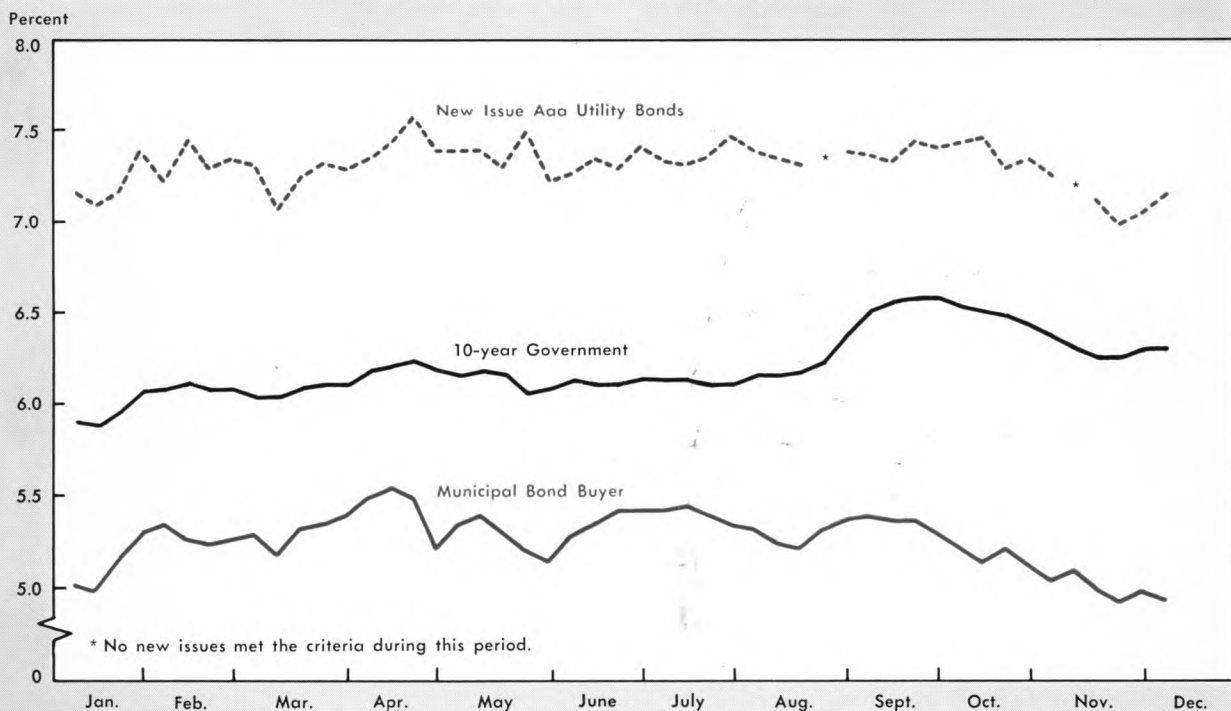
Financial developments in 1972, in contrast to the dramatic events and sharp fluctuations that characterized the financial sector during the last few years of the 1960's and the first two years of the 1970's, reflected a relatively high degree of stability and were devoid of any events of crisis proportions. For example, typical long-term interest rate measures moved within a 50-60 basis point range in 1972, as shown on Chart 1, whereas these same measures fluctuated over a 115-125 basis point range in 1971. Pressures on the financial markets were not as strong in 1972 as they had been in prior years—essentially because the economy was operating well below capacity, because the supply of funds was adequate to satisfy the demand for funds, and because rates of inflation had slowed noticeably from recent

years. Even unusually high rates of real growth, forecasts of a historically large Federal budget deficit, relatively high rates of money supply growth, and speculative runs on the dollar in foreign exchange markets did not send interest rates spiraling or cause investors to panic. Nevertheless, each of these factors, and others, contributed to the patterns of interest rate movements and financial flows in 1972.¹

Level of Economic Activity The overall level of economic activity provides the general framework within which interest rate movements and financial flows develop. The more rapid the pace of economic activity the greater the demand for credit funds to

¹ This article actually covers the period January-November 1972, because data for December were not available at the time of publication.

Chart 1
LONG-TERM INTEREST RATES — 1972



Source: Board of Governors, Federal Reserve System.

finance increases in working capital, expansions of plant and equipment, housing starts, and purchases of consumer durables. To the extent that the total demand for credit grows more rapidly than the available supply, upward pressures on interest rates will appear, which was the case on several occasions in the latter 1960's. When economic activity approaches capacity levels, prices are likely to start rising. As investors become aware of inflationary pressures, they try to protect the value of their investments from being eroded by future price increases by lending funds at higher interest rates than before. Borrowers are willing to pay the higher rates because they expect to be able to repay in cheaper dollars at some time in the future. In terms of this generalized sequence of events, the economy was just beginning to show signs of sustained growth at the beginning of the year, following weak performances in 1970 and 1971. Investors' attitudes, however, were still highly influenced by the cost-push inflation that had been built into the economy for several years following the demand-pull inflation of the middle 1960's.

In early 1972 considerable uncertainty prevailed in the investment community regarding the future course of interest rates. Investors were unsure of the underlying strength of the economy as well as the ability of monetary and fiscal policies and price controls to dampen the fires of inflation. Contributing to these feelings of uncertainty were the 5.5 percent increase in the implicit GNP price deflator and a 9.3 percent increase in the money supply at annual rates during the first quarter. Both of these factors suggested sharp upward shifts in interest rates over the coming months. In the second quarter, however, the rate of growth of inflation, as measured by the GNP deflator, cooled to 2.4 percent while the money supply grew at a relatively moderate 5.3 percent pace, suggesting a lessening of upward pressures on interest rates. Real output in the second quarter surged to a 9.4 percent rate and continued to grow rapidly at 6.3 percent in the third quarter. Sustained real growth of this magnitude was expected to result in strong corporate loan demand to finance a build-up of inventories; and, in conjunction with a fairly slow rate of growth in the money supply, this increased demand was expected to push up short-term interest rates. Apparently because the economy was still operating well below capacity levels for most of 1972 and because corporate liquidity positions were strong, upward pressures on short-term rates, while present in September, were not as great as expected.

Throughout 1972, the level and behavior of long-term rates were primarily influenced by current rates of inflation and inflationary expectations. Even

though long-term rates reflected smaller inflationary premiums as 1972 progressed, most rates still contained a large premium for protection against future price increases at the close of the year compared to pre-1965 rate levels. The poor behavior of the price indexes early in the year discouraged investors from committing funds to the long-term markets. Many investors also appeared to be apprehensive about the rate of growth of M_1 during the first quarter of 1972 for at least two reasons. They feared that a rapidly expanding money supply plus rapid economic growth implied continued price increases in the long run and, possibly, renewed demand inflation in 1973. Also, investors anticipated that excessive monetary growth suggested a potential tightening of policy by the Federal Reserve in the short run, which would raise short-term rates and likely put immediate upward pressure on long-term rates. During most of 1972, even though replete with cash, large institutional investors were concerned with inflation and thus shied away from the long-term securities markets. Instead, they invested funds temporarily in short-term assets, lowering short-term yields relative to long-term yields and sharpening the upward slope of the yield curve. (See Chart 5.)

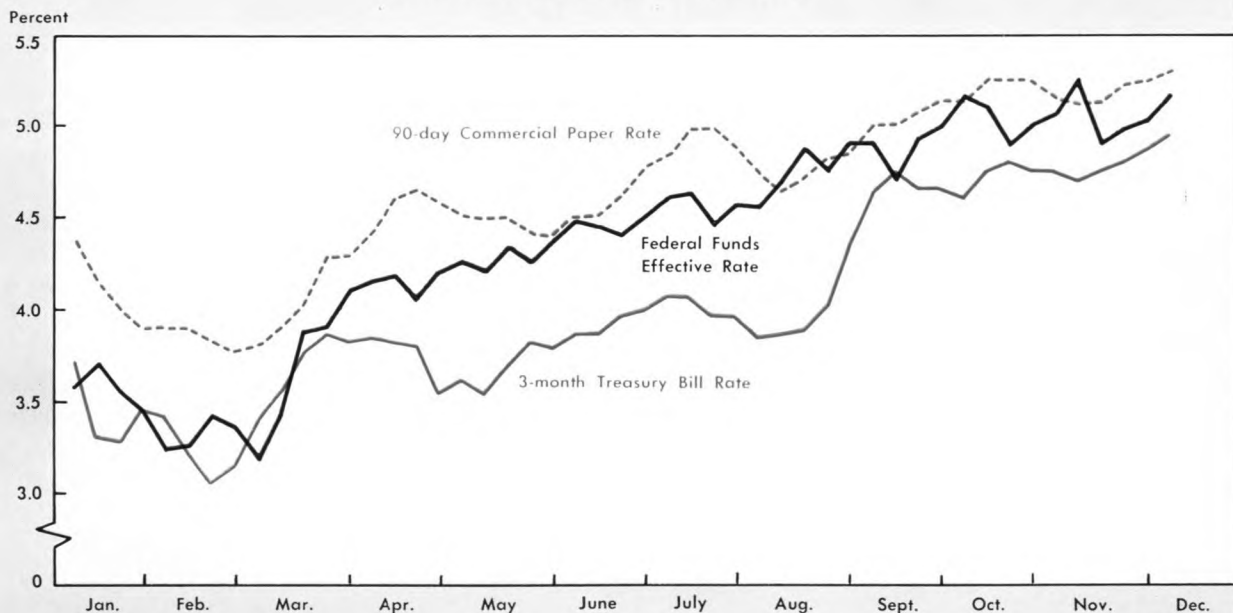
Monetary Policy The behavior of interest rates and financial flows is affected by the monetary policy actions of the Federal Reserve. Changes in the availability of bank reserves by the Fed indirectly cause changes in the rates of growth of money and credit and changes in interest rates. During the first part of 1972, the Federal Reserve made an adjustment in the guidelines it follows in the conduct of open market operations. Instead of primarily using the Federal funds rate as a guide to achieve desired growth in the money supply, the Manager of the Open Market Account began to focus on a reserve measure. Known as reserves available to support private nonbank deposits (RPD's), this measure is directly related to the demand deposit component of the money supply.² After this change was announced, some financial market analysts speculated that the Federal Reserve would allow interest rates to fluctuate much more than in the past. This potentially disturbing situation did not develop in 1972, however, largely because credit market conditions remained relatively easy throughout the year.

The broad aim of monetary policy in 1972 was to underwrite economic expansion by encouraging real growth, thus lowering unemployment without re-

² RPD's are defined as (1) required reserves for (a) private demand deposits, (b) total time and savings deposits, and (c) nondeposit sources subject to reserve requirements and (2) excess reserves. Excluded from this reserve are required reserves for net interbank and U. S. Government demand deposits.

Chart 2

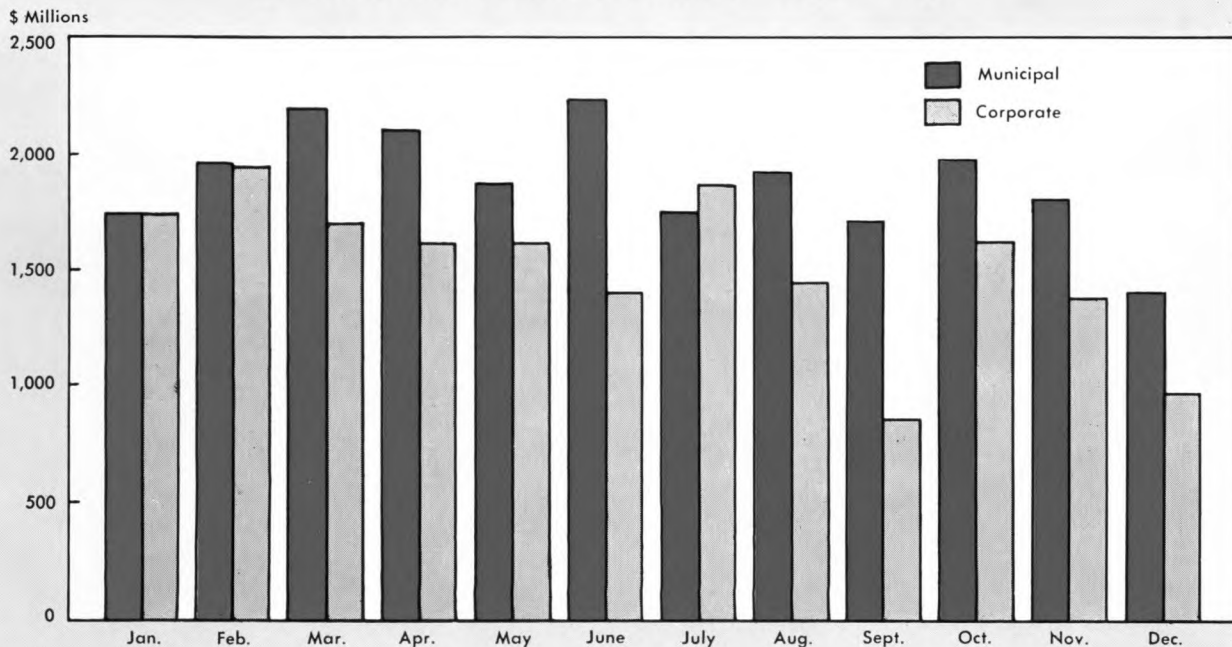
SHORT-TERM INTEREST RATES — 1972



Source: Board of Governors, Federal Reserve System.

Chart 3

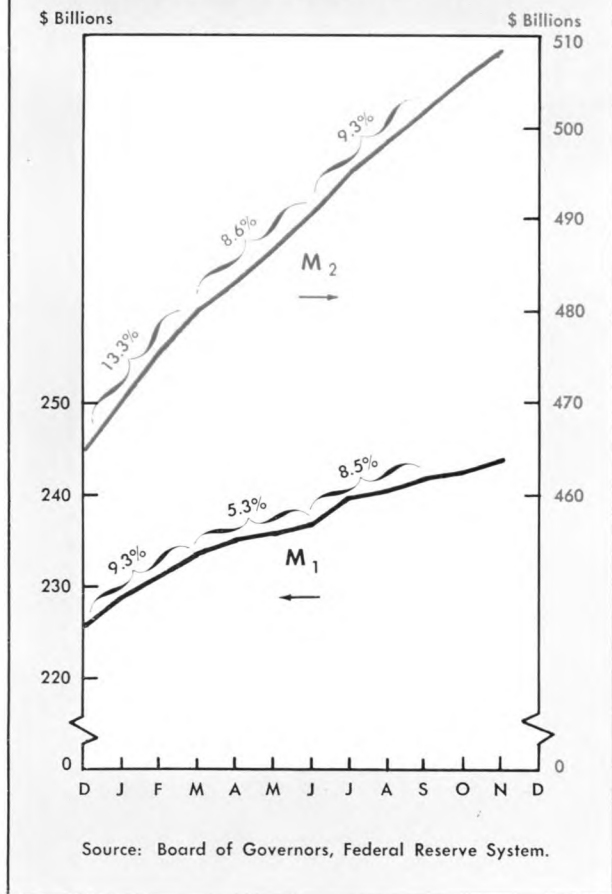
CORPORATE AND MUNICIPAL NEW ISSUE VOLUME — 1972



Source: Salomon Brothers.

Chart 4

MONETARY AGGREGATES — 1972



fueling inflation. After witnessing a 1.1 percent rate of growth in the narrow money supply (M_1) in the fourth quarter of 1971, the Fed provided bank reserves more readily in early 1972; and the rate of growth of M_1 increased in the first quarter of 1972 to 9.3 percent, as shown on Chart 4. The rate of growth diminished in the second quarter, posting a 5.3 percent gain. The third quarter opened with a whopping 14.2 percent (annual rate) jump in M_1 in July; but this was followed by smaller rates of growth in August and September, which brought the third quarter growth rate down to 8.5 percent. Beginning in August, M_1 growth proceeded at an extremely steady pace, which gave added stability to the financial markets, especially in October and November.

Early in the year, the market interpreted certain policy actions and interest rate movements as an indication of a revival of "Operation Twist." In the early 1960's, the Federal Reserve had an announced policy of attempting to raise short-term rates

in order to stem the flow of short-term capital to foreign countries while lowering, or at least stabilizing, long-term rates to foster domestic economic growth. That is, the Fed wanted to reverse or twist the prevailing yield curve relationships. The rise in short-term rates in early 1972, while the Fed was purchasing coupon issues, suggested to the market that a new attempt at such a strategy was under way. The eventual release of policy directives for that period did not substantiate this interpretation, however.

By the end of the third quarter, the market apparently felt that, although the Fed was supplying sufficient funds to encourage economic growth, the money supply was not growing fast enough to prevent short-term rates from rising. Market participants appeared to sense that monetary policy was based on the assumption that there was sufficient slope in the short end of the yield curve to permit short-term rates to rise without putting upward pressure on long-term rates. They also expected the Fed to control monetary growth in order to prevent renewed demand inflation in 1973 without subjecting the economy to a credit crunch.

Corporate and Municipal Securities The volume of securities offered by corporations in 1972 dipped well below 1970 and 1971 levels. Average monthly corporate volume in 1971 was \$2,058 million; whereas, for the first eleven months of 1972, corporate new issue volume averaged only \$1,550 million per month. This smaller figure for 1972 is misleading to the extent that private placements this year have been much larger than they were in 1971. Although fixed capital investment by business increased steadily during 1972, corporate demands on the securities markets moderated as a result of two factors: (1) increased corporate liquidity stemming from a restructuring of corporate balance sheets in 1970-71 and (2) increased internal cash flows resulting from improved corporate profits, liberalized depreciation rules, and the reinstatement of the investment tax credit.

Average monthly volume of \$1,923 million in the tax-exempt sector was down slightly in the first eleven months of 1972 from the 1971 figure of \$2,031 million, reflecting the continued large need for funds by state and local governments. Month-to-month demands for funds were rather irregular as shown on Chart 3, perhaps contributing to the fluctuations evident in tax-exempt bond yields shown on Chart 1.

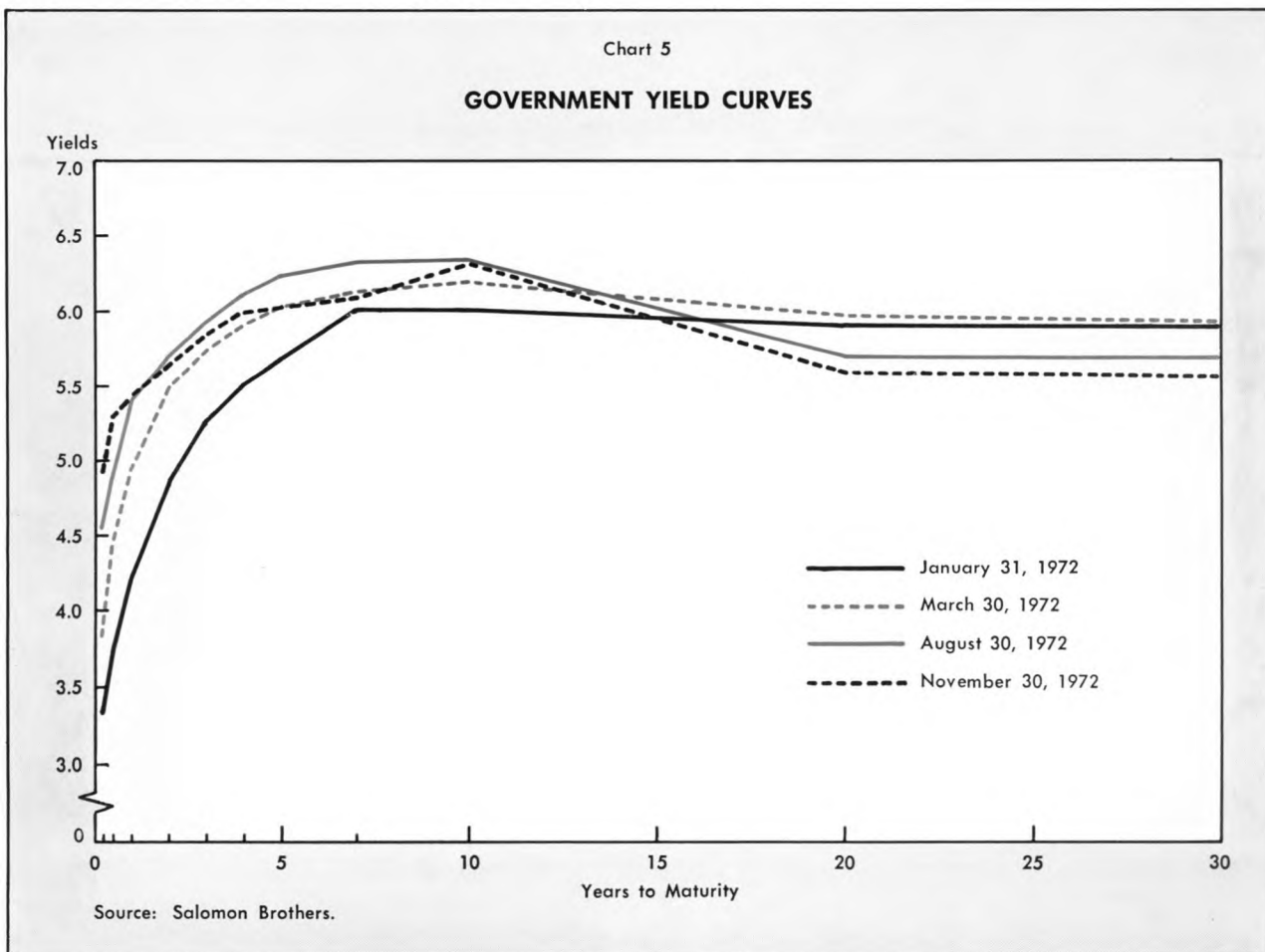
The smaller supply of new long-term securities in 1972 generally had two effects. First, long-term corporate and municipal yields were much more stable in

1972 than in 1971. Second, the Treasury was provided with the necessary leeway to lengthen its debt structure through the sale of long-term securities.

Borrowers and investors were affected by a variety of psychological factors during 1972 that tended to alter supply and demand conditions over the short run. The mining of the harbors in Vietnam in May had only a limited effect on the securities markets; however, the peace negotiations and apparent peace settlement that emerged in late October were interpreted very positively at that time. Market participants, principally the long-term investors, viewed the apparent end of the Vietnam conflict optimistically, seeing it as contributing to future economic stability. That 1972 was an election year does not appear to have had any major impact on the markets, perhaps because most investors tend to disregard much of the rhetoric that characterizes a presidential election campaign. Although the outcome of the presidential election was well anticipated by most investors, a rally in the securities markets developed in early November, in conjunction with the Vietnam situation, which lowered long-term yields from 10-20 basis

points over a two-week period. International financial developments, such as the floating of the British pound in June, generally tended to inspire caution and apprehension in both short- and long-term markets, thus contributing to the uncertain atmosphere that pervaded the long-term securities markets throughout 1972.

U. S. Government Securities In addition to the impact of corporate and municipal borrowers on credit markets, the U. S. Treasury also had a substantial influence on credit market behavior during 1972. The financial needs of the Treasury in any given period are dictated by the excess of current Federal expenditures over current Federal revenues. Also, the Treasury must refund or retire those previously issued securities that reach maturity during the period. Early in 1972, the deficit for the fiscal year ending in July was forecasted to be about \$38 billion, considerably higher than many analysts had expected. Such a large predicted deficit had an adverse effect on market psychology because of the inflationary potential associated with deficit spending and because



of the large amount of new cash financing that the Treasury would have to undertake. Surely these two factors contributed to the back-up in long-term rates in January and February, as shown on Chart 1.

By March, however, revised estimates placed the deficit in the \$30-\$32 billion range, which caused investors to reevaluate their fears of imminent rate increases. The downward adjustment in the deficit stemmed from increased revenues derived from excess tax withholding from individuals and from decreased expenditures caused by delays in Congressional appropriations. Further, the large cash balances of the Treasury, which were partially acquired from foreign central banks (as described below), reduced the Treasury's borrowing needs, at least for fiscal 1972. As the weeks progressed, those factors contributing to a smaller deficit grew stronger and stronger. Ultimately, the budget deficit for fiscal 1972 was about \$23 billion, well below the \$38 billion estimate made in January.

As in the latter part of 1971, several foreign central banks accumulated large dollar balances in their foreign exchange support operations. Instead of allowing these dollar balances to remain idle, they either swapped them directly with the Treasury for nonmarketable interest-bearing securities or purchased Treasury bills from the secondary market. In the first case, the Treasury's cash balances were augmented; in the second case, although some of these dollars held by foreign central banks might have been invested in Treasury bills anyway if they had not left this country, the supply of 90- and 180-day Treasury bills available in domestic markets was sufficiently diminished to help push bill rates well below other short-term interest rates. The unusually large spread between bill rates and commercial paper rates during the middle of the year is shown on Chart 2. It was at this time that foreign purchases of bills were at their peak.

Although in the early part of 1972 some apprehension was present among investors over the possible reversal of the above process by foreign central banks, the floating of the British pound in June put further pressure on the dollar. As a result, additional dollar balances were accumulated by foreign central banks, which caused the process to begin again. By September, with dollar trading in the international currency markets much more stable, an orderly selling of these securities by foreign central banks had begun, contributing to the upward movement of short-term rates at that time.

Actual Treasury financing activities during the first half of 1972 were well organized and not unusu-

ally large. Highly successful refundings and pre-refundings were conducted in February and May, with the latter including a net cash redemption of \$700 million of publicly held notes. The Treasury was able to lengthen the average maturity of its outstanding debt during the period, while at the same time achieving greater regularity in its schedule of offerings. A pattern of monthly auctions of 52-week bills was initiated, and the auction technique was successfully used in selling instruments with maturities of nearly 10 years.

Because of the originally projected deficit of \$35 billion for fiscal 1973, Treasury financing needs appeared to be relatively large for the second half of 1972. By fall, this figure was scaled down to \$25 billion, largely because of a program of serious fiscal restraint by the administration. The Treasury's cash balances remained high as revenues continued to exceed earlier forecasts and expenditures, especially those associated with revenue sharing legislation, continued to be delayed. Also, the central bank of Japan was still purchasing Treasury securities during this period. The impact on the markets of a large quantity of Treasury borrowing was further softened by the relatively light supply of new corporate securities expected to be issued in the last few months of 1972. Consequently, in August and November the Treasury was able to conduct large financing and refunding operations, which were enormously successful, without putting upward pressure on other long-term rates. The first of a regular series of quarterly, two-year note auctions was begun in October; and in mid-November \$2 billion of April tax-anticipation bills were sold.

Deposit Institutions Financial institutions, such as commercial banks and savings and loan associations, experienced large cash inflows during 1972 and thus were well prepared to satisfy the demand for credit in the economy. Business loan demand generally exhibited solid growth during the year. In the first half, new loan activity was dominated by banks outside New York meeting the needs of the public utility and construction industries. Business loan demand at New York banks, which traditionally has lagged loan activity elsewhere, began improving in July and continued to do so throughout the remainder of the year. Demand for other types of bank funds, mainly real estate and consumer loans, grew at historically high rates during 1972. This large lending capacity of commercial banks in 1972 is clearly reflected by the levels of bank liquidity ratios, which were higher than at any time since 1967.

Bank holdings of municipal and other securities grew substantially in 1972. Although banks have always been attracted to municipal securities—because they are effectively constrained from buying many other types of debt securities and because municipals are exempted from Federal income taxation—bank activity in this market in 1972 was much greater than normal. Large increases in municipal holdings by banks were registered in the first quarter and during August and September. Purchases of U. S. Treasury securities by banks fluctuated sharply in 1972, largely reflecting the changing cash needs of the Treasury during the year.

Most analysts expected business loan demand to grow more rapidly than was actually the case over most of the year. Thus, many banks bought unusually large quantities of municipal securities as an alternative earning asset, and by the end of the third quarter some large banks were aggressively issuing CD's in anticipation of increased loan demand. Quite likely, the aggressiveness of these banks contributed

to the upward pressure on short-term rates in August and September.

Continuation of the personal saving rate at fairly high levels and the continuation of market interest rates in line with Regulation Q ceilings during 1972 resulted in a record net inflow of funds at savings and loan associations and other depository savings institutions. Bolstered by large supplies of funds, these traditional mortgage lenders were able to satisfy a substantial demand for mortgage loans, permitting a rapid rate of housing starts without putting much upward pressure on lending rates.

Summary Interest rates, especially long-term rates, and financial flows were much more stable in 1972 than in recent years. The combination of improved growth of real output in an economy operating well below capacity and the strong liquidity positions of individuals, business corporations, and financial institutions largely contributed to this result.

Philip H. Davidson and B. Gayle Burgess

YIELD CURVE RELATIONSHIPS

During most of 1972, investors and analysts were struck by the unusually wide spread between the levels of short- and long-term interest rates. The graphical tool that illustrates the relationships among interest rates on securities of equal credit risk but varying maturities is known as a yield curve. Chart 5 presents four different yield curve relationships that prevailed on four occasions during 1972. The sharper the slope of the curve the greater the disparity between levels of short- and long-term interest rates.

Over the past year the behavior of the yield curve has reflected a combination of factors. First, expectations of future inflation, and thus higher interest rates, have caused long-term rates to remain higher than would normally be the case given the behavior of other economic variables. Second, short-term rates have remained relatively low because of the greatly improved liquidity positions of both borrowers and lenders. Further, supplies of short-term Treasury securities have been affected by international financial activities. Thus, the shape of the yield curve depends on supply and demand conditions in the various maturity sectors as well as on expectations of future interest rate behavior.

As 1972 progressed, the yield curve for Government securities shifted upward and flattened somewhat in the short-term area, thus returning to a more normal pattern in historical terms. Even though the short-term rate increases that took place in March and August shifted the short end of the curve upward, they did not cause long-term rates to rise. In fact, the long-term end of the curve actually experienced a slight decline over this period. A distinctive characteristic of the August and November yield curves is the so-called "hump" appearing in the intermediate maturity sector, which indicates the relatively large supply of securities outstanding with maturities in the 5-10 year range.

PERSONAL INCOME IN THE FIFTH DISTRICT IN 1971

Personal income growth in all Fifth District states in 1971 outstripped increases in the nation at large by a substantial margin. Whereas total personal income for the nation increased 6.9 percent in 1971, gains for Fifth District states ranged from 9.3 percent for West Virginia to 7.4 percent for Maryland and 7.3 percent for the District of Columbia. Growth rates of personal income in 1971 for Fifth District states are shown in Table I.

Per capita personal income also showed strong gains in the Fifth District, as shown in the chart. West Virginia's 7.9 percent increase in this statistic, largest among Fifth District states, was fifth highest nationally. Among District states, only Maryland, with a 5.5 percent growth in the per capita figure, fell below the national growth rate of 5.7 percent.

State Rankings In 1971, the absolute level of per capita personal income in the District of Columbia remained higher than in any of the 50 states. Income figures for the nation's capital, however, are more validly compared with figures for other large urban areas than with those for states, which contain rural areas as well as urban centers. Among the 50 states, Maryland, which ranked 11th, was the only Fifth District state above the national median for per capita personal income. Virginia ranked 28th, North Carolina 39th, West Virginia 45th, and South Carolina 47th.

State-Nation Differentials The difference between a state's growth rate in total personal income and the comparable rate for the nation arises, in part, from two factors: the variance of the state's industrial structure from the national structure and the differential growth rates in specific components of the state's personal income as compared with those of the nation. Information in Table I serves to point out those sectors that had major impacts on state-nation differentials in personal income growth in the Fifth District.

Growth in personal income from the manufacturing sector was a major contributor to state-nation differentials of Fifth District states, with the exception of Maryland. Maryland experienced a 1 percent de-

crease in personal income from the manufacturing sector. Growth rates of personal income from manufacturing in other Fifth District states, ranging from West Virginia's 3.5 percent increase to North Carolina's 6.7 percent growth, substantially exceeded the national increase of 1.3 percent in this sector. The importance of manufacturing as a source of personal income among Fifth District states varies from about one-eighth of total personal income in Maryland to approximately one-fourth in both North Carolina and South Carolina. In the District of Columbia, the 2.6 percent growth in personal income from manufacturing had a relatively minor influence on the overall growth rate, since less than 2 percent of Washington's personal income comes from this sector.

Developments in the farming sectors of Fifth District states generally decreased state-nation differentials. While personal income from the farming sector (which includes proprietors' income in addition to wage and salary disbursements) grew 3 percent on a national basis, Fifth District states, with the exception of South Carolina, encountered absolute declines in this component of personal income. Declines varied from Virginia's 5.1 percent decrease to Maryland's 20.5 percent decline. Since personal income from the farming sector accounts for no more than 5 percent of total personal income in any Fifth District state, the declines in income from this source did not weigh heavily in the overall growth of personal income in the District. South Carolina, with an increase of 6.4 percent, was the only District state to experience growth in personal income from the farming sector.

Growth of personal income from contract construction increased the state-nation differential of each Fifth District state. Gains in personal income from the contract construction sector, greater than the national increase of 8.2 percent, ranged from North Carolina's 8.5 percent growth to West Virginia's 23.6 percent increase. Interstate highway construction was a major factor in West Virginia's substantial growth in this component. As a source of personal income in Fifth District states, contract construction supplied from 3.8 percent of North Caro-

lina's total personal income to 5.5 percent of West Virginia's total. The District of Columbia, which derived only 1.7 percent of personal income from contract construction, experienced a 7 percent growth in this sector, less than the previously-mentioned national increase of 8.2 percent.

Personal income from the wholesale and retail trade sector, responsible for roughly one-tenth of total personal income in each Fifth District state, showed substantial gains. The national increase in this component of 6.9 percent was exceeded by all Fifth District states, with West Virginia's 10.6 percent growth rate the highest in the District. In the District of Columbia, personal income from the wholesale and retail trade sector experienced a 9.6 percent decline and accounted for about 5 percent of this division's total personal income.

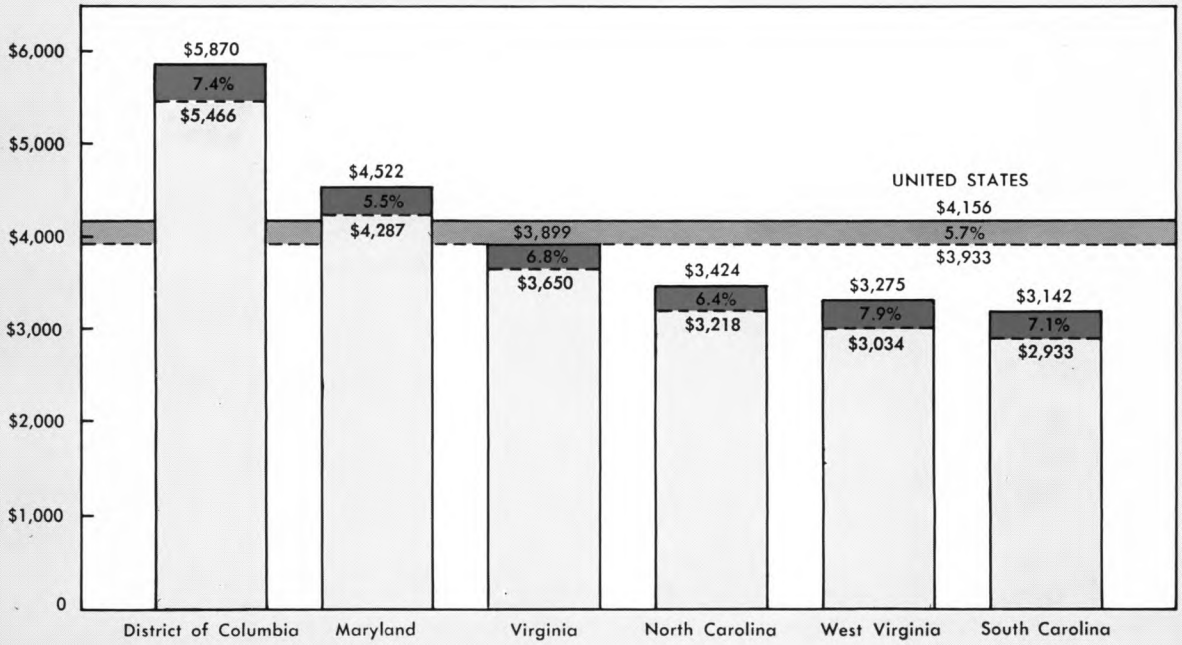
Growth of personal income from service industries also contributed to the state-nation differentials of Fifth District states. Increases in personal income from this source ranged from Maryland's 8.4 percent gain to Virginia's 9.6 percent increase to North Caro-

lina's 10.5 percent growth. For the nation at large, growth in personal income from services was 8.3 percent. The effects of these above-average growth rates on Fifth District state-nation differentials depended on the importance of the service industries in the states' economies. Among Fifth District states, West Virginia derived the smallest percentage of total personal income from this source, 5.8 percent; while Maryland obtained 10.2 percent of its total from services. As one might expect, the District of Columbia relies on services for a relatively large portion, 15 percent, of its personal income. Personal income from this sector increased by 6.8 percent during 1971, somewhat less than the national rate of growth in this sector.

Structural Differences The decline in personal income from manufacturing encountered by Maryland was more than compensated for by this state's healthy growth in other key industries. The largest single source of personal income in Maryland is the government sector, accounting for approximately

1971 PER CAPITA PERSONAL INCOME IN FIFTH DISTRICT STATES AND THE DISTRICT OF COLUMBIA

(Dollars)



Color areas show growth from 1970-71.
 Source: Survey of Current Business, August 1972.

Table I

**SOURCES AND GROWTH RATES OF PERSONAL INCOME IN
FIFTH DISTRICT STATES AND THE DISTRICT OF COLUMBIA IN 1971**

	United States	Maryland	North Carolina	South Carolina	Virginia	West Virginia	District of Columbia
Total Personal Income	100.0 6.9	100.0 7.4	100.0 7.8	100.0 8.7	100.0 8.3	100.0 9.3	100.0 7.3
Farm (Includes Proprietors')	2.4 3.0	0.7 (-20.5)	4.3 (-5.8)	2.8 6.4	1.3 (-5.1)	0.4 (-18.5)	*
Mining	0.7 3.7	0.1 6.3	0.2 0.0	0.2 9.1	0.7 5.7	8.0 5.2	*
Contract Construction	4.1 8.2	5.1 12.9	3.8 8.5	4.2 10.8	4.4 11.5	5.5 23.6	1.7 7.0
Manufacturing	18.7 1.3	12.4 (-1.0)	25.3 6.7	25.6 5.2	14.0 6.2	17.9 3.5	1.8 2.6
Wholesale and Retail Trade	11.1 6.9	11.8 8.7	10.7 8.0	9.3 8.8	10.2 8.6	8.9 10.6	4.9 (-9.6)
Finance, Insurance, and Real Estate	3.5 9.6	3.4 9.6	2.9 11.6	2.6 12.9	3.0 11.7	1.8 9.7	2.4 7.1
Transportation, Communications, and Public Utilities	5.0 7.4	4.8 7.0	4.4 10.8	3.7 10.4	5.0 9.9	6.2 6.5	3.4 2.1
Services	8.8 8.3	10.2 8.4	6.9 10.5	7.3 10.0	8.2 9.6	5.8 9.7	15.0 6.8
Government	13.9 8.0	25.6 7.6	14.5 7.7	17.8 9.0	27.0 6.5	10.9 8.7	36.3 8.0
Other Industries	0.1 10.5	0.2 12.0	0.1 8.7	0.1 0.0	0.1 9.5	0.1 0.0	0.7 13.8
Other Labor Income	4.3 13.7	3.5 13.8	3.9 15.4	3.9 16.2	3.6 16.8	5.3 10.9	2.7 25.0
Proprietors' Income (Nonfarm)	6.2 5.4	5.7 5.6	6.0 4.8	5.7 4.9	5.2 5.4	6.1 2.6	3.5 7.7
Property Income	13.9 5.0	11.5 5.7	11.4 6.0	10.3 5.7	11.7 6.1	11.0 6.0	14.5 3.7
Transfer Payments	10.9 17.8	9.0 19.0	9.2 16.8	10.2 18.3	9.3 18.2	15.7 21.9	16.9 15.4
Less: Personal Contributions for Social Insurance	3.6 11.4	4.0 11.5	3.6 11.9	3.7 11.7	3.7 11.7	3.6 12.5	3.8 9.9
Net Transfer Payments	7.3 21.2	5.0 26.0	5.6 20.2	6.5 22.5	5.6 22.9	12.1 25.0	13.1 17.1

Note: Figure in upper-left corner is the percentage of total personal income from this source. Figure in lower-right corner is the percentage growth rate of personal income from this source.

* Less than 0.1 percent.

Source: Survey of Current Business, August 1972.

Table II

**PERSONAL INCOME BY MAJOR SOURCES IN FIFTH DISTRICT STATES
AND THE DISTRICT OF COLUMBIA: 1970, 1971**
(millions of dollars)

Item	District of Columbia		Maryland		Virginia		West Virginia		North Carolina		South Carolina	
	1970	1971	1970	1971	1970	1971	1970	1971	1970	1971	1970	1971
*Personal income	4,116	4,418	16,877	18,119	16,986	18,400	5,297	5,789	16,383	17,661	7,614	8,274
Wage and salary disbursements	2,762	2,922	12,510	13,354	12,443	13,421	3,497	3,779	11,357	12,262	5,452	5,888
Farms	—	—	23	24	49	59	9	9	97	98	34	38
Mining	1	1	16	17	123	130	443	466	27	27	11	12
Coal mining	—	—	2	3	102	109	413	434	1	1	—	—
Crude petroleum and natural gas	1	1	1	1	1	1	18	18	1	1	—	—
Mining and quarrying except fuel	—	—	13	14	20	21	11	13	26	27	11	12
Contract construction	71	76	822	928	729	813	259	320	622	675	314	348
Manufacturing	77	79	2,271	2,249	2,427	2,578	999	1,034	4,194	4,476	2,016	2,120
Durables	9	9	1,309	1,267	1,030	1,121	609	638	1,378	1,478	507	521
Nondurables	68	70	962	981	1,396	1,457	390	397	2,817	2,997	1,509	1,600
Wholesale and retail trade	240	217	1,974	2,146	1,733	1,882	464	513	1,750	1,890	704	766
Finance, insurance, and real estate	98	105	560	614	486	543	93	102	456	509	186	210
Banking	22	24	116	127	136	149	33	36	129	142	47	53
Other finance, insurance, and real estate	76	81	444	487	350	394	60	66	327	367	139	157
Transportation, communications, and public utilities	145	148	810	867	836	919	336	358	705	781	279	308
Railroad transportation	27	29	118	125	178	189	108	114	75	79	42	45
Highway freight and warehousing	5	5	170	194	166	185	57	63	283	321	69	77
Other transportation	33	34	168	169	193	207	19	19	84	85	28	28
Communications and public utilities	79	80	353	379	299	337	153	163	263	296	140	157
Services	620	662	1,697	1,840	1,373	1,505	308	338	1,110	1,226	549	604
Hotels and other lodging places	22	21	49	54	84	95	17	18	47	50	26	31
Personal services and private households	74	75	214	218	252	256	49	50	293	298	140	144
Business and repair services	80	80	539	565	286	300	35	39	140	153	90	98
Amusement and recreation	10	10	72	78	42	47	15	17	38	40	15	16
Professional, social, and related services	433	475	822	925	710	807	192	215	593	685	277	315
Government	1,483	1,602	4,313	4,642	4,666	4,970	583	634	2,373	2,555	1,349	1,471
Federal, civilian	1,037	1,119	2,291	2,474	2,069	2,267	119	132	370	399	292	316
Federal, military	193	197	564	564	1,240	1,244	21	22	734	722	472	499
State and local	252	285	1,458	1,603	1,357	1,459	443	480	1,268	1,434	585	657
Other industries	29	33	25	28	21	23	3	3	23	25	11	11
Other labor income	96	120	565	643	559	653	274	304	596	688	277	322
Proprietors' income	143	154	1,118	1,140	1,117	1,143	364	368	1,703	1,704	637	670
Farm	—	—	133	100	206	183	18	13	700	653	185	195
Nonfarm	143	154	984	1,039	911	960	346	355	1,003	1,051	452	474
Property income	617	640	1,968	2,080	2,029	2,153	601	637	1,899	2,012	808	854
Transfer payments	648	748	1,377	1,639	1,445	1,708	744	907	1,398	1,633	714	845
Less: Personal contributions for social insurance	151	166	661	737	607	678	184	207	570	638	274	306

¹ Less than \$500,000.

* Detail may not add to total because of rounding.

Source: Survey of Current Business, August 1972.

one-fourth of the state's total. Maryland's personal income from the government sector can be broken down as follows: Federal civilian income, 53.3 percent; Federal military, 12.2 percent; and state and local, 34.5 percent. The percentage rates of growth in these categories for 1971 were 8.0 percent, 0.0 percent, and 9.9 percent, respectively. The combined 7.6 percent growth rate in personal income from the

government sector, along with substantial increases in wholesale and retail trade and services, gave impetus to Maryland's growth of 7.4 percent in total personal income.

The major factor in North Carolina's state-nation differential of 0.9 percentage points was this state's strong performance in manufacturing. Approximately one-fourth of the state's total personal income

is derived from the manufacturing sector. Personal income from the manufacture of nondurable goods, which accounts for about two-thirds of total manufacturing income, exhibited a 6.4 percent growth; while personal income from the manufacture of durable goods increased by 7.3 percent. The overall growth rate of 6.7 percent in personal income from manufacturing was more than five times the national percentage growth of 1.3 percent in this sector.

South Carolina's experience was similar to North Carolina's in that the major factor in its state-nation differential of 1.8 percentage points was the strength exhibited in its manufacturing sector. Manufacturing is the source of approximately one-fourth of South Carolina's personal income. Personal income from the manufacture of nondurable goods increased by 6.0 percent and accounted for about three-fourths of personal income from manufacturing in 1971. Personal income growth from manufacture of durable goods was 2.8 percent, resulting in a combined growth rate of 5.2 percent in personal income from manufacturing. This sector's 5.2 percent increase was part of the state's broad-based economic growth, enabling South Carolina to achieve an 8.7 percent increase in personal income in 1971.

Virginia's chief component of personal income is the government sector, a source of approximately 27 percent of the state's total personal income. Personal income from the government sector can be broken down into: Federal civilian, 45.6 percent; Federal military, 25.0 percent; and state and local, 29.4 percent. Growth rates in personal income from these categories were 9.6 percent, 0.3 percent, and 7.5 percent, respectively. The state's 6.5 percent growth rate in personal income from the government sector was less than the national increase of 8 percent, thereby exerting a negative effect on Virginia's state-nation differential. Personal income from the manufacturing sector, accounting for 14 percent of Virginia's total personal income, advanced by 6.2 per-

cent, thereby playing a major role in the state-nation differential of 1.4 percentage points.

West Virginia's 9.3 percent growth in total personal income, resulting in a state-nation differential of 2.4 percentage points, was the result of above-average growth in many sectors of this state's economy. Personal income growth from the manufacturing sector, a source of approximately 18 percent of the state's total personal income, was 3.5 percent—more than twice the national percentage increase in this sector. Personal income from wholesale and retail trade increased by about 10.6 percent and provided just under 9 percent of the state's total personal income in 1971. Personal income from the state's important mining industry, the source of approximately 8 percent of personal income, advanced at a 5.2 percent rate, which compares favorably with a growth of 3.7 percent in this sector for the nation at large. Transfer payments served to increase West Virginia's state-nation differential in personal income growth during 1971. Net transfer payments (transfer payments less personal contributions for social insurance) increased by 25.0 percent and provided 12.1 percent of total personal income. For the nation, net transfer payments increased by 21.2 percent and provided 7.3 percent of total personal income.

Personal income growth in the District of Columbia depends to a large extent on the government sector, since this sector is the source of about 36 percent of total personal income. Subdivisions of this sector, with appropriate percentage figures, are as follows: Federal civilian, 69.9 percent; Federal military, 12.3 percent; and local, 17.8 percent. Growth rates in these components were 7.9 percent, 2.1 percent, and 13.1 percent, respectively. The District of Columbia's 8 percent increase in personal income from the government sector equaled the increase in this sector for the nation. This substantial growth of personal income from the District of Columbia's economic mainstay was the major force behind the 7.3 percent increase of personal income in the nation's capital.

John W. Scott

EMPLOYMENT AND UNEMPLOYMENT SINCE 1969

The economy in 1972 experienced a continued recovery from its 1970 and early 1971 doldrums—at least as measured by such indicators as the rate of growth of real gross national product, business profits, the index of industrial production, the level of retail sales, and other such indicators. According to the National Bureau of Economic Research (NBER), long considered the authority on business cycles in the United States, the 1969-1970 recession reached its low point in November 1970, and business recovery has been in process since that time. Some economists might question the accuracy of the NBER's dating of the trough, but most would agree that recovery, which was definitely in train through much of 1971, picked up momentum in 1972. Even so, the sticky behavior of one important economic indicator—the unemployment rate—over this period has occasioned a great deal of uneasiness over the extent and vigor of the recovery.

The unemployment rate, one of the so-called coincident indicators, moved up in 1970, as would be expected in a recession, reaching a high of 6.1 percent by December. That the peak was no higher than 6.1 percent seemed to portend a milder unemployment problem than in the recessions of the recent past. In both the 1957-1958 and the 1960-1961 recessions, the unemployment rate moved over 7 percent but then declined steadily after periods of three to six months. Contrary to these past experiences, however, the unemployment rate after the 1970 recession remained around 6 percent throughout 1971 and showed no more than a mild and gradual downtrend by July 1972, 18 months after the trough.

Part of this behavior has been attributed to the unusual character of the 1970 recession. White-collar workers, who now account for almost 50 percent of the labor force, fared relatively worse in the recent recession than did other workers. Moreover, there was a tendency, particularly in manufacturing, to cut back on nonproduction workers relatively more than in previous recessions when relatively fewer of those laid-off were unskilled and semi-skilled production workers. These observations, however, only *describe* the recent recession; they *explain* very little.

A more basic question is why the 1969-1970 recession generated kinds of unemployment that differed in significant respects from the patterns accompanying earlier post-war recessions. An examination of the labor market by sector may suggest an answer to the question. For such an examination, it is helpful to use *employment* rather than *unemployment* statistics because unemployment data cannot accurately show from what sector of the economy a worker is unemployed.

When the employment data are examined by sector, the current unemployment situation becomes more clearly understandable. As will be shown, the figures suggest that much (perhaps most) of the unemployment build-up subsequent to July 1969 is related to special factors, such as the winding down of the Vietnam War and the reduction in Government aerospace contracts. Since such factors as the winding down of the war and the reduction in aerospace contracts resulted in rather unusual changes in the composition of demand in the economy, the relationship between the recent unemployment problem and the general business recession has differed from what might normally have been expected.

Employment as an Indicator Geoffrey Moore, the Federal Commissioner of Labor Statistics, in an article in the February 3, 1972, *Wall Street Journal* on "Employment: the Neglected Indicator," suggested that employment should be given at least as much attention as the unemployment rate in any examination of the labor market. This view, which is shared by other observers as well, is reasonable in view of the fact that employment figures are firmer than unemployment figures. The employed can be clearly and unambiguously identified, and total employment can be measured with great accuracy. By contrast, vexatious definitional and classificatory problems are involved in the measurement of unemployment. Also, since the unemployment figures are smaller, they are subject to a much larger relative sampling error than the employment data.

For purposes of this paper, an equally compelling reason for investigating employment figures is that they can shed light on micro-economic char-

acteristics of unemployment rate changes. It is extremely difficult to tell from which industry a person is unemployed, especially since he might be a new entrant in the labor force; but it is possible to determine what industries are hiring or firing from looking at the employment figures by industrial sector.

The table that accompanies this article shows employment data since July 1969.¹ It points up some interesting facets of the present labor market situation and shows exactly which industries have been expanding employment and which have been contracting since that time. For example, employment in the services; wholesale and retail trade; transportation, communications, and public utilities; and state and local government never dropped significantly below July 1969 levels throughout the recession and is now significantly above these pre-recession highs. Employment in the contract construction industry declined until February 1970, but has since shown a considerable recovery. Employment in the mining industry, the Federal Government, and the manufacturing industries, on the other hand, fell sharply during the recession and is still below 1969 levels.

Employment in Expanding Industries Employment in the service industries has typically shown little cyclical sensitivity. True to form, it increased steadily from July 1969 to October 1972, apparently little affected by the 1969-1970 business recession. By October 1972, service industry employment was 10.6 percent higher than in July 1969. Such a rate of increase meant that employment in the industries kept pace with both population and labor force growth. The U. S. population of labor force age increased only around 7 percent during the same time period, and the civilian labor force expanded approximately 9 percent.

By the same token, state and local government employment, almost 15 percent higher than the July 1969 base, also outstripped the rate of population and labor force increase; and wholesale and retail trade has matched or equaled the rate of population growth. Employment in these three industry groups accounted for 50.2 percent of the total employees on nonagricultural payrolls in the 1969 base period. In October 1972, it accounted for 53.2 percent. In all, the three industries employed almost 3.8 million more persons in October 1972 than in July 1969. Transportation, communications, and public utilities, on the other

hand, were employing more persons than in the base period, but not enough to keep pace with the growth of population. The contract construction industry was affected by the recession until the second quarter of 1971. Since that time, however, employment in the industry increased approximately 7 percent; and by October 1972, it was 3.1 percent above the 1969 base figure.

Employment in Other Sectors Employment in the mining industry remained above its 1969 base level until July 1971. It then began to drop fairly rapidly, reaching a low point in October 1971 that was around 16 percent less than the base figure. It recovered most of its loss shortly thereafter, but remained 2 percent less than the July 1969 base in October 1972. Thus, mining employed 15,000 fewer workers than in mid-1969.

Federal Government employment, at about 2.74 million in the base period, fell to 2.64 million in August 1970 and has remained close to this level since that time. The Federal Government had been averaging increases of 47,000 employees per year from 1962 to 1969.

Manufacturing employment, by the same token, was 5.5 percent below the July 1969 base in mid-1972. Around 20.3 million persons were employed in manufacturing in July 1969; but in August 1971, when this series reached its low point, fewer than 18.4 million persons were employed. While the pace of general business recovery accelerated significantly after this low point was reached, the rate of recovery in manufacturing employment has remained sluggish. By October 1972, total employment in this important sector had come back to 19.1 million, still nearly 1.1 million below the July 1969 base. Between 1962 and 1969, mining, Federal Government, and manufacturing combined provided over 572,000 new jobs per year.

Manufacturing Employment By Industry The manufacturing sector of the economy is of particular interest because it was a substantial contributor to the slack labor market conditions from 1970 to mid-1972. Employment in this sector is still down approximately 1.1 million workers from the mid-1969 peak. This figure, however, represents some recovery, since in August 1971 employment in manufacturing was almost 1.9 million below the 1969 peak.

A breakdown of changes in manufacturing employment by industry groupings, or subsectors, is instructive. Such a breakdown is shown in the table. Of the 21 manufacturing industry groups, only five had regained their July 1969 base level by October 1972, and only six others were within 3 percent of their

¹ The table contains employment figures categorized by Standard Industrial Classification codes. It uses as its base the average employment for each category in June, July, and August 1969. All of the basic data used to derive the table are shown as percentages of the base. The June, July, and August 1969 average (hereafter called the July 1969 base) was chosen as the base period since it was the period of peak manufacturing employment prior to the 1970 recession.

EMPLOYEES ON NONAGRICULTURAL PAYROLLS BY INDUSTRY, SEASONALLY ADJUSTED
(In Percentages of Base Period)

	July Base* (Thous.)	1969					1970				1971				1972					
		Nov.	Feb.	May	Aug.	Nov.	Feb.	May	Aug.	Nov.	Feb.	May	July	Aug.	Sept.	Oct. p				
TOTAL	70,462	100.5	100.8	100.4	100.0	99.3	99.7	100.3	100.1	100.9	101.8	103.0	103.1	103.6	103.9	104.4				
Services	11,248	101.5	102.7	103.0	103.2	104.2	104.6	105.1	105.7	106.7	107.7	108.9	109.7	110.4	110.2	110.6				
Wholesale and Retail Trade	14,685	101.1	101.6	101.6	101.4	101.6	102.2	102.8	103.4	104.2	105.3	106.4	106.9	107.3	107.5	107.9				
Transportation and Public Utilities	4,447	100.6	101.1	100.7	101.5	100.9	100.9	100.5	98.9	99.0	99.8	101.0	100.6	100.7	100.9	101.4				
Federal Government	2,736	99.6	98.9	101.2	96.7	97.4	97.2	97.3	97.3	97.4	97.6	97.4	95.8	95.7	96.3	96.3				
State and Local Government	9,448	101.4	102.4	103.3	104.7	105.9	106.6	107.8	107.9	109.2	110.9	112.3	112.8	113.2	114.4	114.8				
Contract Construction	3,439	100.5	100.6	97.9	97.8	97.7	96.0	99.0	99.1	102.3	101.6	102.8	101.5	103.1	103.1	103.1				
Mining	619	100.8	100.8	100.0	100.5	101.1	100.6	100.5	98.9	84.7	99.0	97.6	96.8	97.3	97.7	97.9				
Manufacturing	20,264	99.1	98.3	96.5	95.0	91.2	91.8	91.8	90.8	91.5	91.8	93.2	93.1	93.4	93.8	94.5				
Durable Goods	11,967	98.5	97.2	95.2	93.0	87.3	88.7	88.7	87.5	88.2	88.8	90.7	90.6	91.1	91.6	92.5				
Ordnance and accessories	318	91.2	85.2	78.3	73.0	67.9	62.9	61.3	59.4	58.2	57.2	58.5	59.7	60.4	60.4	61.9				
Lumber and wood products	608	98.2	96.5	94.7	92.9	92.4	92.9	93.9	96.4	98.8	99.3	100.3	100.8	100.8	100.8	101.2				
Furniture and fixtures	486	98.8	97.1	93.8	93.4	93.0	92.4	93.8	93.6	97.7	99.0	100.4	101.6	102.3	102.7	104.3				
Stone, clay, and glass products	657	100.3	99.5	97.6	96.8	95.7	95.6	97.0	96.5	97.3	98.3	100.5	100.5	100.9	100.9	102.0				
Primary metal industries	1,363	101.8	99.5	96.9	96.0	92.4	92.7	93.5	85.2	87.1	87.3	90.1	89.1	90.7	93.0	93.9				
Fabricated metal products	1,445	99.7	98.6	96.3	95.4	90.3	91.8	92.2	91.8	92.3	92.8	94.8	94.8	95.2	95.4	95.8				
Machinery, except electrical	2,038	100.8	101.1	99.3	96.3	92.0	89.5	88.1	88.0	88.7	89.1	90.7	91.0	91.7	92.0	93.2				
Electrical equipment and supplies	2,047	95.4	98.2	95.7	92.9	87.8	86.8	86.5	85.7	86.6	87.2	88.8	89.2	89.4	89.9	90.7				
Transportation equipment	2,083	96.5	90.2	90.2	87.1	71.4	83.6	83.4	82.7	82.2	82.2	84.2	83.7	83.3	83.6	84.4				
Motor vehicles and equipment†	894	103.8	90.3	96.8	85.7	64.7	97.3	99.5	93.1	99.6	98.3	100.1	83.4	N.A.	N.A.	N.A.				
Aircraft and parts†	821	95.1	91.5	84.5	80.0	77.1	73.0	66.7	64.3	63.9	63.3	63.0	62.7	61.8	N.A.	N.A.				
Ship and boat building and repairing†	189	99.2	97.5	90.5	84.0	86.5	87.2	87.5	86.5	86.6	89.5	94.0	92.8	92.8	N.A.	N.A.				
Railroad equipment†	53	94.7	101.3	101.7	97.3	80.6	95.3	97.5	97.2	98.1	97.0	93.0	93.7	N.A.	N.A.	N.A.				
Other transportation equipment†	110	97.1	96.7	101.8	100.8	99.6	96.2	111.5	119.5	118.6	122.1	134.2	135.8	N.A.	N.A.	N.A.				
Instruments and related products	479	99.4	98.7	97.7	95.2	92.9	91.2	90.6	91.0	92.1	92.5	94.4	95.2	96.0	96.7	97.5				
Miscellaneous manufacturing industries	442	99.3	99.3	97.1	95.5	93.7	92.8	92.8	92.5	92.5	95.2	95.7	95.5	96.4	96.4	97.1				
Non-durable Goods	8,297	99.9	99.9	98.3	97.8	96.8	96.3	96.3	95.5	96.1	96.3	97.1	96.6	96.8	97.1	97.4				
Food and kindred products	1,792	100.3	100.9	99.9	99.1	98.7	98.6	98.3	98.0	98.0	97.7	97.9	98.0	97.0	97.4	97.3				
Tobacco manufacturers	83	98.8	100.0	101.2	102.4	98.8	97.6	96.4	88.0	89.2	88.0	91.6	90.4	84.3	79.5	79.5				
Textile mill products	1,004	99.6	99.1	97.9	96.4	95.3	95.0	95.3	95.1	96.1	97.2	98.4	98.2	98.8	99.0	99.8				
Apparel and other textile products	1,413	98.9	98.4	96.0	96.0	95.0	94.6	95.3	94.0	94.9	94.6	94.4	92.8	94.4	94.5	94.6				
Paper and allied products	713	100.3	100.4	99.9	98.2	97.3	96.4	95.2	95.0	96.2	96.1	98.2	97.9	98.0	98.5	99.2				
Printing and publishing	1,094	101.5	101.6	101.1	100.5	99.5	98.7	98.2	97.3	97.5	98.0	98.7	98.4	98.6	99.0	99.1				
Chemicals and allied products	1,065	99.8	99.9	99.1	98.1	96.9	95.7	95.4	93.8	94.0	93.6	94.1	93.4	93.6	94.6	94.6				
Petroleum and coal products	189	100.5	101.6	101.1	100.5	100.5	101.6	101.1	100.0	100.5	102.1	100.5	99.5	99.5	99.5	100.0				
Rubber and plastics products	599	100.5	99.8	92.5	96.5	94.5	94.7	96.8	97.2	99.0	101.0	103.7	104.7	105.0	105.5	107.0				
Leather and leather products	345	96.8	95.4	93.9	91.3	89.6	88.1	88.4	87.5	87.2	87.8	89.6	88.4	89.0	88.7	87.2				

* July Base is average of June, July, and August 1969 data.

p Preliminary.

† Not seasonally adjusted.

Source: U. S. Department of Labor, Bureau of Labor Statistics.

July base. Employment in all of the remaining 10 two-digit industrial categories was within 15 percent of its 1969 level, except for ordnance and accessories, transportation equipment manufacturing, and tobacco manufacturing. Ordnance and accessories, mostly the ammunition manufacturing industry, employed only 61.9 percent as many persons in October 1972 as in July 1969. Employment in this industry reached a low of 57.1 percent in February of this year. Ordnance and accessories is a relatively small industry group, and the employment decline amounts to only around 121,000 persons. The tobacco manufacturing industry, also relatively small, employed only 79.5 percent as many persons in fall 1972 as in the base period, a drop of around 17,000 employees.

The transportation equipment manufacturing industry, in which employment was almost 15.6 percent lower in October 1972, however, is a relatively large industry. It employed over 2 million workers in July 1969; but because of a more than 15 percent

decline, it provided jobs for 324,000 fewer workers in October 1972.

Because of the relative importance of transportation equipment manufacturing in accounting for the decline in manufacturing employment, the table includes a more detailed breakdown of employment in that industry. These data are not seasonally adjusted because of the difficulty involved in obtaining current seasonally adjusted figures for employment by four-digit industrial code.

Employment in the automotive, aircraft, shipbuilding, and railroad equipment industries was lower in mid-1972 than in the July base period. Only employment in the miscellaneous "other transportation equipment" category (mostly bicycles) showed any substantial growth. This category contained almost 110,000 employees in July 1969, which was about 5.3 percent of the total transportation equipment manufacturing employment. By July 1972, its employment had increased by 39,300 workers, or

35.8 percent, thus making up 8.5 percent of total transportation equipment manufacturing employment.

Employment in the aircraft and parts manufacturing industry showed the largest relative decline from the base level—by mid-1972 the industry employed almost 37 percent or 300,000 fewer persons. The bulk of the cutbacks in the aircraft industry came between October 1969 and July 1971. Since then, employment in the industry has leveled off at around 61 percent of its July 1969 level. The aircraft and parts industry had been increasing its employment by almost 36,000 workers per year between 1962 and 1968.

The motor vehicle and parts industry, which employed 984,000 workers in the base period, also showed an employment decline over the three years, but of relatively smaller proportions than the aircraft industry. Analysis of employment in this industry is beclouded by strike effects and seasonality, but it appears that recovery in the industry was well under way by mid-1972. Although the July 1972 figure was 17 percent below the July 1969 base, the May and June employment figures were about the same as the 1969 base. The base is actually an average of the June, July, and August figures, and there is a definite seasonal pattern to motor vehicle employment in those months. Some of the 17 percent July 1972 drop, therefore, can probably be attributed to seasonal and irregular influences.

The employment picture in the shipbuilding and railroad equipment industries is clearer. Railroad equipment employment was down 6.3 percent by July 1972; shipbuilding was down 7.2 percent. Both industries had their employment lows in the second half of 1970, however, and appear to have been recovering since that time.

Conclusion A study of employment by industrial classification provides an added dimension to any description of labor market behavior over the latest business cycle. With respect to the current situation, the data suggest that the persisting slack in some labor markets is related to conditions that developed in the mining, Federal Government, and manufacturing sectors of the economy.

Employment in these sectors, after showing a growth of 572,000 workers per year from 1962 to 1969, declined by approximately 1.8 million from mid-1969 to mid-1971. Since mid-1971, employment in these sectors has increased by 583,000 work-

ers, but it remained 1.2 million below the 1969 base level in October 1972. Such an abrupt reversal of past trends has meant that the growing labor force had to be accommodated by accelerating growth rates in other sectors of the economy if there were to be no unemployment build-up. And the civilian labor force has indeed been growing. From July 1969 to July 1972, it increased by around 6 million persons. As mentioned earlier, employment in the service industries, wholesale and retail trade, and state and local government kept pace with the rate of labor force growth, but their annual rates of growth from mid-1969 to mid-1972 were 1 to 1½ percentage points lower than their 1962-1969 trend values. Employment in those industries, particularly wholesale and retail trade, increased rapidly even in the face of the employment cutbacks in manufacturing and contract construction.

The data also show that the manufacturing employment declines were heaviest in ordnance and accessories, transportation equipment manufacturing (particularly aircraft and parts), primary metals, and electrical equipment. There are definite interrelationships between these industries. A reduction in demand for aircraft, for example, leads to a reduction in demand for primary and fabricated aluminum as well as for some electrical equipment. Reduction in demand for ships, ordnance and accessories, railroad equipment, and motor vehicles likewise affects primary metals and, to some extent, electrical equipment.

The persistent nature of the unemployment problem since the 1970 recession, therefore, may be attributed in large part to certain key sectors of the manufacturing and mining industries. The key manufacturing industries were apparently affected by changes in the composition of demand in the economy, which resulted from: (1) sharp cutbacks in defense spending; (2) the changing moods of the legislative and executive branches of Government with respect to Federal subsidies for contracts with the aerospace industries; and (3) in the case of automobiles, increased foreign competition. Such changes in policy and in consumer tastes can have profound and far-reaching effects that take time to work themselves out. Recent declines in the unemployment rate and the leveling off of employment cutbacks in key industries are signs of encouragement that the economy has nearly completed its adjustment process.

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