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SURVEY OF CURRENT BUSINESS

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SURVEY OF CURRENT BUSINESS



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the BUSINESS SITUATION

THE intended thrust of fiscal policy in 1973, given the prospect of strong private demand expansion, is to keep the economic growth rate in a range that will avoid serious pressures on capacity and a threat to the achievement of price stability. Recent actions and statements by the monetary authorities indicate a similar intention to conduct policy in 1973 with the principal aim of avoiding excess demand and damping inflation. (The fiscal program presented in the budget sent to Congress at the end of January is reviewed in detail in the article beginning on page 18 of this issue.)

Although inflation in the nonfarm sector of the economy moderated last year, the administration felt that it would be premature to dismantle completely the mandatory wage and price controls established in "Phase II" of the economic stabilization program. However, there was a growing concern that the Phase II system—by virtue of its detail, rigidity, and extensive requirements for reporting and prior approval of wage and price changes—would lead to economic inefficiency, misallocation of resources, inequities, and a growing administrative burden. Thus, Phase III was announced in mid-January. The Phase III program is largely on a "self-administering" basis, and the reporting requirements are greatly reduced, but the Government retains the power to force private wage and price decisions to be consistent with the program goals. The President asked Congress to extend for another year the authority for the stabilization program, and a review of the program's goals and standards is to be conducted with the advice of advisory committees.

Of particular concern to policy makers this winter has been the acceleration in the rate of food price increase. This problem was the subject of special attention in the shift to Phase III; food processing and retailing are among the few industries that continue to be subject to the Phase II requirements for reporting wage and price changes, with large firms still required to obtain prior approval. (The other major exceptions involve the health services and construction industries.) Raw commodities, however, continue to be outside the controls, on the grounds that supply and demand forces determine these prices and that supply shortages would be engendered by controls that held prices below the free market levels. The wholesale price index for farm products—which are largely in the raw commodity stage—increased 5% percent in December and 4% percent in January (seasonally adjusted) or nearly 11 percent over the 2-month span. The increase from January 1972 to January 1973 was 22½ percent. The price index for processed foods and feeds has been rising less sharply than that for farm products but nonetheless very rapidly.

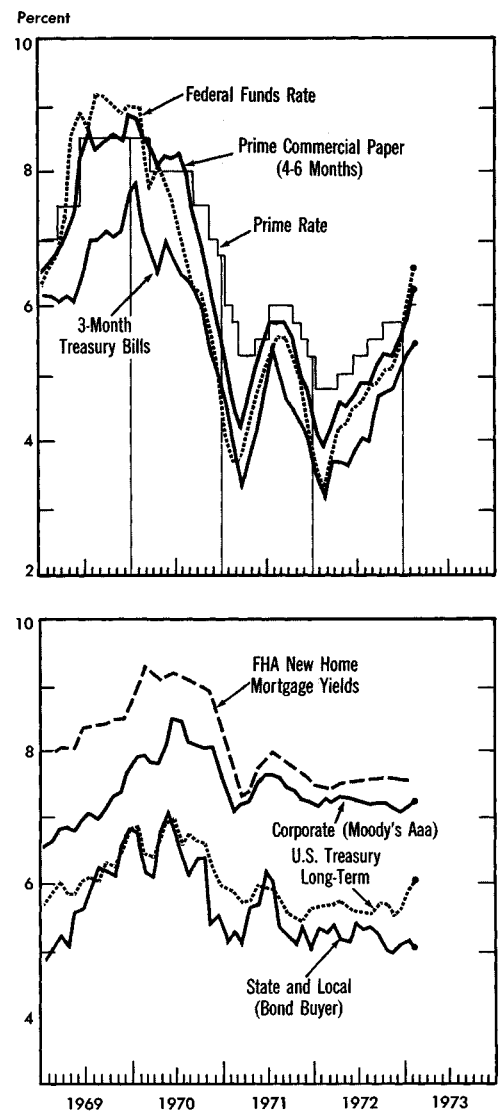
Economic expansion in January

The available indicators suggest further solid gains in economic activity in January. The consumer goods component of the Federal Reserve industrial production index continued to move up rapidly. There was also continued strong growth in business equipment production, which increased nearly 2 percent from December to January. Production of defense equipment, which increased briskly in the second half of

1972, fell in January. Housing starts continued to show strength. Starts in January were at an annual rate of about

CHART 1

Short- and Long-Term Interest Rates



Data: FRB, HUD, Moody's, Bond Buyer & Treasury
 • Last data plotted are weekly figures through mid-Feb.
 U.S. Department of Commerce, Bureau of Economic Analysis 73-2-1

2.5 million units, somewhat ahead of the 1972 total of 2.35 million. (The Census Bureau has updated the seasonal adjustment factors for housing starts. As is typical of seasonal factor revisions, the effect is to make the revised course of the seasonally adjusted series somewhat smoother in the latest year or two but not to change the time path in any significant way.)

The unemployment rate edged down to 5.0 percent in January from 5.1 percent in December; it was 5.2 percent in November and considerably higher before then. (The seasonally adjusted data on civilian employment and unemployment have also been affected by an updating of seasonal factors. The revisions are very small; the overall civilian unemployment rate was changed by 0.1 percentage point for 5 months of 1972 and unchanged for the other 7 months.) Total civilian employment dropped a bit in January, mainly in the agricultural sector, and the number unemployed also declined. As measured by the survey of nonfarm establishments, employment is estimated to have shown a fairly strong rise in January, mainly in nonmanufacturing industries where the workweek also increased on average. In manufacturing, there was little employment growth and a decline in the workweek.

Reflecting this, the growth of manufacturing wages and salaries slowed in January. However, construction wages rose sharply as employment rebounded from a slump in December. There was a pay raise in January for Federal military and civilian personnel which boosted government wages and salaries by \$2 billion (annual rate). State and local government pay rose in line with the relatively strong recent trend, as did private wages and salaries outside manufacturing and construction. Aggregate wages and salaries, excluding the pay raise, increased \$5.8 billion (annual rate) in January compared with an average of \$6.1 billion in the preceding 4 months. Aggregate nonwage income was little changed in January. Growth of total personal income was held back by increases in the maximum earnings subject to social security tax (from \$9,000 to \$10,800) and in the tax

rate on individual wage earners (from 5.2 percent to 5.85 percent). These changes boosted social security contributions about \$5.2 billion (annual rate) in January, and the increase in total personal income, which is calculated net of such contributions, was only \$2.5 billion.

The first estimate of January retail sales shows a gain of 3¼ percent, a very large advance. The auto group showed another big increase, and there were sharp gains also for other durables and for nondurables following little change or actual declines in November and December. In unit terms, sales of new domestic-model cars reached a seasonally adjusted annual rate of 10¼ million units in January, up from the already very high rates of 9½ to 10 million in last year's second half. Sales of import models were little changed following a steep rise in December to an annual rate of 1.9 million units. The total new car sales rate was a record 12¼ million units in January, after running at just over 11¼ million throughout the second half of 1972.

Financial Markets Tighten

A strengthening of loan demands, enlarged Treasury borrowing, tightening credit policy, and apparently some concern over the price outlook combined to push short-term interest rates sharply higher in recent months. From November to mid-February, short-term rates increased by three-fourth to 1½ percentage points; the advance carried most rates back to, or close to, the level of mid-1971, though they remained far below their 1969 and 1970 averages (chart 1). After late-January, conditions in short-term markets were also significantly affected by repercussions of the international currency turmoil.

The Federal funds rate, the rate at which commercial banks buy and sell excess reserves and a sensitive indicator of money market conditions, increased from an average of 5 percent in the week ending November 25 to nearly 6¼ percent in the week ending February 16. The international currency crisis worked to put severe pressures on bank reserve positions, and that development

contributed to the rise in the Federal funds rate. The rates on prime 4- to 6-month commercial paper and prime bankers' acceptances both increased from about 5¼ percent in late November to roughly 6¼ percent in mid-February. The rate on 3-month Treasury bills moved from 4¼ percent in late November to about 5¼ percent in late January and early February, but declined a bit as the month progressed.

The behavior of money market rates (and the conduct of Federal Reserve policy) were buffeted recently by distortions arising from the international currency turmoil. The movement from dollars into other currencies, in anticipation of exchange rate changes, probably contributed to upward pressure on money market rates in late January and early February. (The devaluation of the dollar occurred on February 12.) When owners of monetary assets in the United States decide to sell those assets and move into other currencies, that action tends to depress prices and thus raise yields in U.S. money markets. Toward mid-February, however, foreign central banks were heavily buying Treasury bills with the dollars acquired in their efforts to maintain exchange rates and this put downward pressure on yields. (A rough estimate is that foreign central banks acquired perhaps \$8 billion in this way prior to the devaluation in mid-February.) When foreign central banks acquire bills in the open market, downward pressure is exerted directly on yields; when they buy newly issued securities directly from the Treasury, the Treasury's market borrowing demands are lower than they otherwise would be and this also tends to put downward pressure on bill yields.

The period from November to mid-February saw some upward pressure on rates in long-term markets as well, but to a much lesser extent than in money markets. The most pronounced increase was in the yield on long-term U.S. Treasury securities, which reached nearly 6¼ percent in mid-February, some 65 basis points above the level of late November. Part of that increase may have been related to the Treasury's mid-January sale of new 20-year bonds, the first issue since mid-1965 carrying

a maturity of 20 years or longer. In other long-term markets, yields moved only slightly higher from November to mid-February. However, the upward movement that did occur reversed the downtrend that prevailed during most of 1972 and, in the case of corporate bonds, it occurred during a period when the volume of new corporate issues was relatively light.

Loan demand

Strong growth of economic activity resulted in a broad strengthening of loan demands at commercial banks in late 1972. This strengthening, coupled with rising interest rates in short-term markets, put upward pressure on the prime lending rate, which was raised from 5½ percent to 6 percent on December 26.

In January, outstanding loans at commercial banks surged a record \$8½ billion; that increase followed sizable gains averaging more than \$5½ billion per month in the second half of last year. Business loans, which had been strengthening since mid-1972, accounted for half of the loan expansion in January. The surge in business loans reflected not only the strength of economic activity, but also the fact that the 6 percent prime rate (even after allowing for the compensating balances that banks require of borrowers) represented more favorable borrowing terms for some businesses than could be obtained in the open market, e.g., through commercial paper sales.

In early February, several nationally prominent banks announced a further increase in the prime rate, from 6 percent to 6¾ percent. That announcement was challenged by the Committee on Interest and Dividends—an arm of the Government's economic stabilization program—which requested full explanation and justification for the increases. In the face of this, the banks rescinded the increases and the prime rate remained at 6 percent, but the banks involved indicated that if pressures in money markets did not abate it might be necessary to reinstate the 6¾ percent rate. However, given the political sensitivity that surrounds increases in this highly visible indicator of interest rate

trends, banks will probably turn first to adjustments in other lending terms, such as raising the amount of compensating balances that borrowers must maintain, or simply pushing borrowers out of the "prime" category.

Data from large weekly-reporting banks indicate that business loan demand continued to expand vigorously in the first half of February. However, it seems likely that loan demands in late January and early February were swollen by borrowing to finance currency transactions associated with the international monetary crisis. As the turbulence in international money markets subsides in the wake of the realignment of exchange rates, there could well be some letup from the recent hectic pace of business borrowing.

Monetary policy

Against the background of strong economic expansion and rapid growth of the monetary aggregates, the monetary authorities moved toward credit restraint late last year and early this year. The combination of tighter monetary policy and strong loan demand forced commercial banks to bid aggressively for federal funds and for certificate of deposit funds, and to borrow heavily from Federal Reserve banks. Borrowings from the Federal Reserve rose from a daily average of \$600 million in November to \$1 billion in December and \$1.2 billion in January. One reason for the banks to turn increasingly to such borrowing in December and early January was that the discount rate, at 4½ percent, was roughly one percentage point less than the rates for federal funds and CD's. In mid-January, the Federal Reserve raised the discount rate to 5 percent to bring it into better alignment with market rates, but market rates have climbed since then so as to re-establish a wide differential against the discount rate.

The shift to a more stringent credit policy was reflected in a slowdown in the growth of the monetary aggregates in January. Following a sharp gain in December, the narrowly defined money stock M_1 (currency in circulation and private demand deposits) showed no

growth in January. Although the growth of time and savings deposits accelerated a little in January, there was still an appreciable slowdown in the growth of the broader money aggregate M_2 (M_1 plus time and saving deposits other than large certificates of deposit). Banks bid aggressively for CD funds in January, and outstanding certificates of deposit increased substantially. However, the gain was less than that recorded in December when States and localities were heavily investing their new revenue sharing funds in CD's.

In early February, the commercial banking system experienced additional strain associated with temporary distortions caused by the international currency crisis. The massive shift from dollars to other currencies that erupted at the turn of the month led foreign central banks, mainly the German and Japanese, to maintain exchange parities by massive purchases of dollars. As foreign central banks transferred most of their dollar claims from the U.S. commercial banking system to their accounts at the Federal Reserve (en route to converting their dollar holdings into interest-bearing assets, mainly Treasury bills), commercial bank reserve accounts at the Federal Reserve were debited and bank reserves contracted. To the extent that the Federal Reserve purchased Treasury securities in the open market for the account of the foreign central banks, reserves were supplied to the banking system and the contraction of reserves offset. However, to the extent that the Federal Reserve sold bills from its own portfolio or purchased new, nonmarketable issues directly from the Treasury, as agent for the foreign central banks, the contraction of bank reserves was not offset.

By mid-February the market for Treasury bills was thin, rates had fallen sharply, and foreign central banks were heavily buying special issues directly from the Treasury. As a result, pressures on bank reserves greatly intensified. Banks scrambled for Federal funds, pushing the rate on these funds well above 7 percent, and increased their borrowing at the Fed-

eral Reserve banks very steeply to a daily average of \$2 billion. The extraordinary amount of member bank borrowing also reflected the fact that the scarcity of bills in the market made it difficult for the Federal Reserve to provide reserves through regular

open market purchases. That difficulty led to an unusual maneuver at mid-month: The Federal Reserve lifted the secrecy that typically surrounds open market operations and gave advance notice that it intended to inject sizable quantities of reserves into the system through repurchase agreements, and that the period of the agreements would be 1 week instead of the typical 1 to 3 days. (Under a repurchase agreement, the Federal Reserve buys securities from dealers who agree to buy them back at a later date and pay a specified rate of interest on the transaction.) Advance notice of the operations was given so that dealers would have the opportunity to seek out from their customers the securities that could be offered under repurchase agreement.

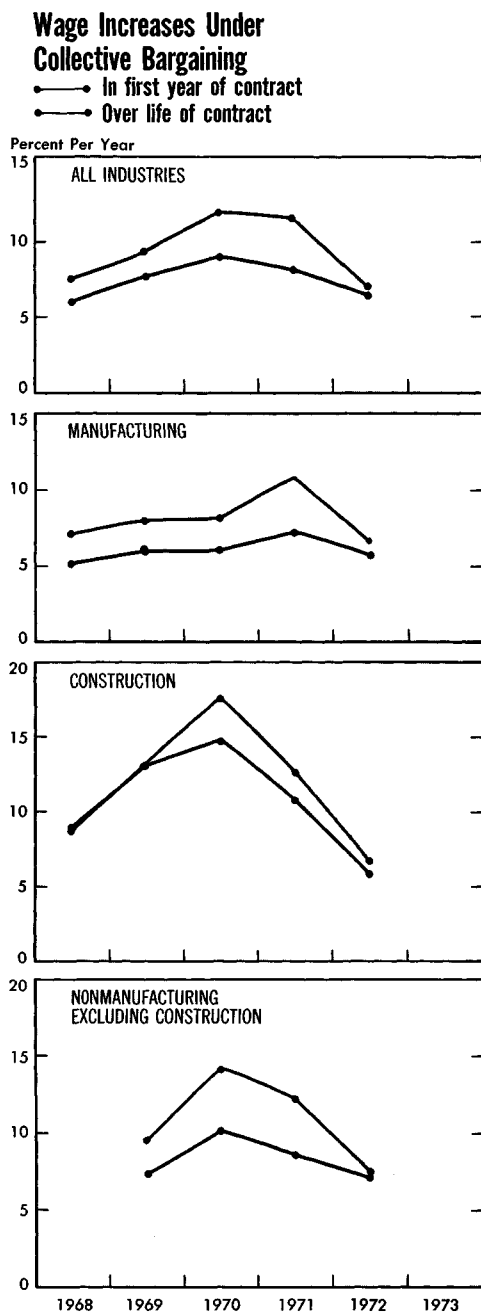
contracts covering 2.1 million workers which had been approved by the wage-control authorities; another 287 contract settlements covering 909,000 workers were omitted, since they had not yet been reviewed by the authorities.

In each major industry, the average annual life-of-contract increase negotiated last year was about one-half percentage point smaller than the first-year increase, while in 1971 negotiations the average annual life-of-contract increases were roughly 4 percentage points smaller than the first-year raises. The size of this difference, which reflects the amount of front loading, had steadily increased from 1967 to 1971. An important factor in the rise was worker pressure for immediate increases to make up for price inflation that had occurred while they had been locked into multiyear contracts providing only modest raises.

The size of major contract settlements diminished from quarter to quarter in 1972, though the drop was mainly in the first half of the year. By the fourth quarter, the average first-year wage increase in major contract settlements was 6.2 percent, compared with 10.5 percent in the fourth quarter of 1971. By far the sharpest decline occurred in the construction industry, where it reflected both the efforts of the Construction Industry Stabilization Committee and increasing competition for construction jobs from lower paid non-union workers. In these contracts, first-year wage rate increases averaged 4.7 percent in the fourth quarter of 1972, compared with 11.5 percent in the fourth quarter of 1971 and 21.2 percent in the fourth quarter of 1970. In manufacturing, the decline was considerably less; first-year wage increases negotiated in the fourth quarter of 1972 averaged 6.4 percent, against 9.1 percent in the fourth quarter of 1971 and 6.9 percent in 1970.

The average duration of newly negotiated union contracts shortened moderately in 1972, as many unions became unwilling to make long commitments under a control system that they thought might last for only a brief period. The major contract settlements

CHART 2



NOTE.—Figures plotted are mean percentage increases in straight time hourly earnings resulting from collective-bargaining agreements reached in the time period indicated and covering 1,000 or more workers.

Data: BLS

(covering 1,000 workers or more) in the BLS compilation for 1972 averaged 25.2 months' duration, compared with 28.4 months the last time these contracts were negotiated. The trend toward shorter contracts was especially pronounced in the construction industry, where there was a large increase in the number of one-year contracts. Before the shift to Phase III of the controls program was announced last month, the auto workers' union was evidently seriously considering proposing a one-year contract in the 1973 negotiations. This would have been a sharp change in practice, for the auto industry has been negotiating multiyear contracts since 1950.

Cost-of-living escalation

In January of this year, an estimated 4.1 million workers were covered by contracts providing cost-of-living increases tied to the Consumer Price Index. This was nearly the same as the number covered in January 1972 and in the 3 years from 1958 to 1960, when inflation was also a major concern. During the period of stable prices in the early 1960's, workers traded cost-of-living protection for other benefits, so that coverage declined to about 2 million workers in the 1963-66 period. Subsequently, as the consumer price rise accelerated, coverage increased steadily to 3 million in January 1971 and 4.3 million in January 1972. The sharp increase from 1971 to 1972 reflected the introduction of a cost-of-living escalator clause during 1971 in the Bell Telephone system contract and reinstatement of the clause in the steel, aluminum, and can manufacturing industries.

Even though the number of workers covered by contracts with escalator clauses was about the same this January as 1 year earlier, the number actually scheduled for cost-of-living reviews in 1973 will decline to 3.2 million from 3.8 million in 1972. The drop mainly reflects the fact that contracts in the trucking and electrical machinery industries expire this year; these contracts have escalator clauses, but they do not provide for any cost-of-living reviews in 1973. The mean cost-of-living increase

under major contracts was 8.8 cents in 1972 and 11.2 cents in 1971.

Union vs. nonunion wage increases

There was a marked narrowing from 1971 to 1972 in the difference between wage rate increases currently negotiated in unionized manufacturing plants and wage rate increases currently awarded in nonunion manufacturing plants. In the third quarter of 1972—the latest now available—contract negotiations in union establishments provided an average first-year increase of 5.6 percent, as against 4.3 percent for those nonunion establishments where general wage changes were made; in 1971, the averages were 9.3 percent in union contracts against 5.3 percent in nonunion situations. (The data on union contracts cited here are collected from many more manufacturing establishments than those included in the "major contracts" data.)

The pressure of the wage control system probably influenced nonunion wage increases to some degree, but the controls almost certainly had a greater effect on union raises, since these had been on the average much farther above the control guidelines. Another factor making for a difference between union and nonunion wage changes is the strong pressure that unions exerted for "make up" increases in the 1970 and 1971 negotiations. Consumer price inflation was then at its maximum rate after accelerating in the late 1960's. Union contracts frequently run for several years, so that (in the absence of escalator clauses or specific provisions for reopening) they cannot adjust for unexpectedly rapid inflation. The long-term contracts negotiated under the relatively stable price conditions of the early and middle 1960's usually provided only moderate deferred wage increases, leaving union workers at a distinct disadvantage when serious inflation emerged in the later years of the decade. The pressure for "catch up" wage increases appears to have been greatest in 1970 and 1971 and to have declined in 1972. Wage increases in nonunion establishments are awarded rather than negotiated; since there is no written contract, there can be no

deferred increases nor are workers "locked in" as they are under multiyear contracts. The primary factor in granting increases is the necessity of attracting and holding suitable workers; consequently, the size of the increases tends to vary according to the degree of tightness in the labor supply—but the degree of tightness generally varies with the degree of price inflation, minimizing the explicit need for a "catch up."

Broader wage movements

Although the average size of settlements negotiated in union contracts was declining from quarter to quarter during 1972, these settlements covered only about 4 percent of all wage earners in the private nonfarm sector, and they did not represent the trend in wage rates for nonfarm workers as a whole, which showed steadily larger increases after the second quarter. At the same time, the rate of increase in productivity—which tends to offset the effects of increasing labor compensation on costs of production—slowed in the fourth quarter, although it was still well above the postwar average. As a consequence, labor costs per unit of output in the private nonfarm sector increased at an annual rate of 3 percent in the fourth quarter after two quarters of slight declines.

Collective bargaining in 1973

In 1973, major contracts covering 4.7 million workers will expire or may be reopened for negotiations. This is about 2 million more than the number of workers involved in negotiations in 1972, and is nearly the same as in the peak years of 1970 and 1971. The number of workers covered by the principal contracts, with expiration or reopening dates, include the following: 250,000 in apparel, early in the year; 100,000 in rubber, in April, May, and June; 330,000 in electrical equipment, the majority around midyear; 500,000 in trucking, 525,000 in railroads, and 15,000 in West Coast longshoring, nearly all in June; 700,000 in motor vehicles and parts and 73,000 in farm equipment and tractors, all in September; and 610,000 in construction at various times during the year but mostly in the first half.

The last previous contract negotiations for the great majority of these workers came in 1970. The bargaining climate in 1973 is likely to differ in a number of important respects. The prospect this year is for strongly rising economic activity and tightening supplies of labor, especially trained and experienced factory workers. In contrast, 1970 was a year of recession and sharply rising unemployment. Also in prospect is a sizable further increase in retail food prices, the element in consumer prices which is most visible to the housewife. In 1970, the food price rise had slackened sharply from the year before. However, two important influences will be making for smaller wage settlements: one is the continued presence of wage controls, although in a somewhat less precise and rigid form than in Phase II; there were no controls whatever in 1970. The second is the fact that 1970 was a year of "catch up"—making up with large immediate wage increases for ground lost in the inflation of the late 1960's. Since contracts negotiated in 1970 and 1971 largely took care of the "catch up," the pressure for this type of wage increase should not be severe in 1973.

State and Local Government Finance and Investment in 1972

The fiscal position of State and local governments improved significantly in 1972, as their aggregate surplus measured on the NIA basis rose to \$12.6

billion from \$4.8 billion in 1971. That improvement reflected some increase in the surplus registered by retirement systems and a swing from a \$2 billion deficit to a \$5.1 billion surplus on general government account. This shift resulted in some noteworthy changes in financing activities of these governments. The relationship between the State and local NIA surplus and the financial transactions of States and localities can be seen in the preliminary Federal Reserve flow of funds data shown in table 1.

The \$5.1 billion surplus on the general government account was a factor in slowdown in the growth of State and local debt. The net increase in outstanding debt (gross debt issued of \$48.9 billion less retirements or refinancing of \$33.8 billion) amounted to about \$15 billion in 1972 as compared with \$21 billion in 1971. That slowdown centered mainly in short-term debt outstanding which showed no change in 1972 after an increase of about \$4.6 billion in 1971. Long-term debt outstanding increased a substantial \$14.4 billion in 1972, only moderately less than the record \$15.6 billion increase in 1971.

States and localities also stepped up their acquisition of financial assets from \$15.6 billion in 1971 to about \$16.8 billion in 1972. The growth in financial asset holdings exceeded the increase in liabilities and for the first time since 1946 States and localities recorded positive net financial investment. Last year's financial asset acquisitions reflected several developments. First, States and localities borrowed heavily in long-term

markets to finance current and prospective capital outlays, and some of those borrowings that were not immediately spent were used to acquire short-term assets. Second, these governments raised a significant volume of funds in long-term markets to be used for later re-funding of the high interest rate bonds issued in 1969 and 1970, and these funds were also used for temporary acquisition of short-term assets. Third, some of the revenue-sharing payments received late in the year were placed in short-term investments.

Long-term borrowing

Gross long-term bond offerings of State and local governments totaled \$23.6 billion in 1972, about \$1.3 billion less than in 1971 but still large by historical standards (table 2). These issues received broad investment interest from commercial banks, fire and casualty insurance companies, and individual investors, and the average yield was the lowest since 1968. Yields on long-term State and local bonds, which had dropped sharply in late 1971 following the inception of the economic stabilization program, rose moderately in the first half of 1972 and declined in the second half. For the full year, the yield on bonds averaged 5.25 percent, compared with 5.48 percent in 1971 and well over 6 percent in 1970.

In 1972, the market for long-term State and local securities was characterized by reduced offerings of general obligation bonds and increased offerings of revenue bonds, an increase in the volume of industrial aid bonds for pollution control, and considerable borrowing for the prerefunding of bonds issued during the high interest years 1969 and 1970.

The volume of revenue bonds offered by State and local government units was more than \$9.3 billion in 1972, up from about \$8.7 billion in 1971, and the share of revenue bonds in total offerings moved up to 40 percent from 35 percent in 1971 (table 2). In contrast, offerings of general obligation debt in 1972 totaled \$13.3 billion, down nearly \$1.9 billion from 1971. The interest and principal on revenue bonds are paid out of revenues generated by specific

Table 1.—State and Local Government Surplus, Net Acquisition of Financial Assets, and Net Increase in Liabilities, 1971-72

Item	[Billions of dollars]					
	1971	1972 ^a	Seasonally adjusted annual rates, 1972			
			I	II	III	IV ^a
Surplus, NIA basis.....	4.8	12.6	7.1	14.8	9.4	-----
Less: Retirement credit to household sector.....	6.8	7.4	3.1	11.2	7.3	8.1
Equals: Gross saving.....	-2.1	5.1	4.0	3.5	2.1	-----
Plus: Net increase in liabilities.....	21.0	15.1	16.7	12.2	17.2	14.2
Short-term obligations.....	4.6	(*)	2.4	-2.6	1.0	- .8
Long-term obligations.....	15.6	14.4	12.7	15.5	15.1	14.2
All other.....	.9	.7	1.6	-.7	1.1	.8
Less: Net acquisition of financial assets.....	15.6	16.8	18.6	13.6	15.8	19.3
Equals: Discrepancy between gross saving and gross investment.....	3.4	3.4	2.1	2.1	3.5	-----

*Less than \$0.05 billion.

^a Preliminary.

NOTE.—Details may not add to totals because of rounding.

Source: Federal Reserve flow-of-funds accounts.

Table 2.—State and Local Gross Long-Term Bond Offerings, Calendar Years 1965-72

	Total offerings (billions of dollars)	Percent		
		General obligations	Revenue bonds	Other
1965.....	10.6	60	34	6
1966.....	11.1	64	32	4
1967.....	14.4	62	35	3
1968.....	16.3	57	40	3
1969.....	11.7	66	30	3
1970.....	18.1	66	34	1
1971.....	24.9	61	35	4
1972.....	23.6	56	40	4

Source: Securities Industry Association.

activities financed by the bonds (for example, docking fees, water and sewer user charges, subway fares); the full taxing power of the parent jurisdiction(s) does not normally secure such bonds. General debt obligations of State and local governments, on the other hand, are backed by the credit of the issuer, with interest and principal payable out of the general fund. The shift away from general debt obligations and toward revenue bonds is partly the result of the fact that the former are sometimes more difficult to issue because of requirements for voter or legislative approval, limits on the amount of debt outstanding, restrictions on the use of proceeds, and ceilings on the interest rates that may be paid.

Debt issued during 1969-70 carried high interest rates and State-local units have been anxious to refinance that debt at the significantly lower rates prevailing more recently. In 1972, many State and local units evidently decided that interest rates would fall no lower, and they proceeded to offer advance refunding issues. It is estimated that the volume of prerefunding issues was about \$800 million in 1972. The proceeds of these issues were placed in temporary financial investments to be ready for use at the first call date of the outstanding securities that the governments wished to refinance. The return from the invested proceeds of these newer issues exceeded their interest cost generating a net income stream for the issuers. In mid-1972, however, the Internal Revenue Service acted to further limit the return allowed on financial assets purchased out of tax-exempt bond proceeds, and

the volume of prerefunding issues tapered off significantly in the second half of 1972.

Last year also saw a significant amount of new State and local tax-exempt bond issues for financing the construction of privately owned (or publicly owned and privately leased) pollution control facilities. Some of this financing involved general obligation bonds, but the main part was done with industrial aid revenue bonds. The principal and interest on such revenue bonds are paid by the private beneficiary firm, which benefits from the lower interest cost of tax-exempt financing. Estimates available for 1972 indicate State-local borrowing of this sort amounted to about \$550 million, most of which occurred in the second half of the year. In the first half of 1972, the IRS published regulations that clarified the eligibility requirements for pollution control facilities that could be financed by tax exempt industrial aid bonds, and many communities then proceeded to raise funds through such issues.

Short-term borrowing

States and localities typically use short-term borrowing (here defined as borrowing with original maturity of less than 1 year) to provide funds to cover the timing differences between expenditures and revenues and to allow more flexibility in the timing of long-term financing. In 1972, gross short-term offerings were \$25.3 billion, down

about \$1 billion from 1971. States and localities refinanced or retired a similar volume of debt and the change in net short-term borrowing was negligible (table 1). Large budget surpluses in 1972 were a major reason that States and localities were able to reduce their reliance on short-term credit. Also, the generally favorable conditions that prevailed in long-term markets last year made it attractive for some borrowers to raise funds in long-term rather than short-term markets.

Legislative developments

Legislative proposals designed to provide State and local governments with alternatives to financing through tax-exempt offerings was introduced in Congress last year but not passed. One of the two major types of proposals was that a Federal Government agency lend directly to State-local governments and issue taxable Federal debt to finance the operation. The other type would allow State and local governments the option of issuing taxable securities, with the Treasury paying an interest subsidy to those governments. Some proponents of this legislation are motivated by tax equity considerations and seek the elimination of tax-exempt interest income available on municipal bonds. Others seek to broaden the investment appeal of State-local debt by making it attractive to investors such as life insurance companies, pension plans, nonprofit institutions, etc., for whom tax exemption holds no appeal.

Government Gross Fixed Capital Formation

GOVERNMENT gross fixed capital formation amounted to nearly \$38 billion in 1971, an increase of nearly \$3 billion over 1970. State and local governments accounted for over \$33 billion of the 1971 total. Purchases of structures by State and local governments were nearly \$27 billion and purchases of equipment were more than \$6 billion. The Federal Government purchased over \$3 billion of nonmilitary structures and \$1½ billion of nonmilitary equipment. The Federal Government also purchased more than

\$17 billion of military equipment in 1971, a decline of more than \$2 billion from 1970, while purchases of military facilities increased by less than \$200 million to \$900 million.

Government gross fixed capital formation is an estimate of the government purchases of structures and of durable goods that, if purchased by the private sector, would be counted in gross private domestic fixed investment. It includes Federal and State and local purchases of nonmilitary new construction, used structures, and new and used

Table A.—Government Gross Fixed Capital Formation Average Annual Growth Rates Over Selected Time Periods

	[Percent]			
	Con- stant 1958 dollar total	Current dollar		
		Total	Federal	State- local
1929-40.....	3.5	2.8	18.1	0.4
1940-47.....	-9.2	-5	-6.8	1.2
1947-54.....	14.9	18.9	22.0	18.1
1954-65.....	4.7	7.2	5.2	7.7
1965-71.....	(*)	5.8	-2	6.9

*Less than 0.05 percent.

equipment. Purchases are attributed to the sector conducting the final transaction. For example, construction of highways is attributed to the State-local sector even though a considerable portion of the financing is by Federal grants-in-aid. Following the System of National Accounts (SNA) classification adopted by the United Nations, military equipment and military facilities are excluded from gross fixed capital formation. They are shown separately in table A.

Table A shows government gross fixed capital formation for the years 1929 through 1971. For total capital formation, both current and constant dollar estimates are shown. Detail is shown in current dollars only. All of the items in the table are elements of the government purchases of goods and services component of GNP, and, as such, include capital purchases by government enterprises as well as by general government. (Note that a transaction in used structures between sectors in the national income and product accounts is entered as an expenditure by the purchasing sector and a reduction in expenditures by the selling sector and thus does not affect total gross national product.)

The figures shown here for structures include construction force account compensation and are the equivalent of the detailed figures on public structures by type that are shown in the national income and product accounts summary table on structures (table 5.2). They differ from the figures on structures shown in the government sector tables of the NIP accounts, where force account compensation is counted as part of employee compensation rather than of structures.

At the State-local level, the entire

amount of durable goods purchases as shown in table 3.14 of the national accounts is counted as equipment. At the Federal level, most of the durable goods purchases shown in table 3.14 are military equipment and not included in fixed capital formation, though they are shown in table A here. Federal nonmilitary purchases of durable goods are adjusted to omit items that, in the private sector, would not be included in gross fixed investment, such as purchases of silver and of stockpiled materials.

The relative importance of the Federal sector and the State-local sector in government gross fixed capital formation (GFCF) has varied a good deal over time. The Federal share has ranged from as low as 6 percent in 1929 to as high as 92 percent at the height of World War II (1943). In recent years, the Federal share has remained at about 10 to 12 percent. The behavior of government gross fixed capital formation is summarized below with reference to several selected time periods. Average annual growth rates for the periods are shown in table B.

1929-40: The depression period

The government GFCF data show a stronger counter-cyclical spending pattern in the 1930's than in more recent years. Measured in constant 1958 dollars, real government GFCF fell to \$6.1 billion in 1933 and then subsequently reached a 1929-40 high of \$11.8 billion in 1939. The average annual real growth rate for the 11-year span was a moderate 3.5 percent. Federal GFCF increased at an average annual rate in current dollars of 18 percent in the period 1929-40, although year-to-year changes in the period varied a good deal. Contributing strongly to this growth in GFCF were programs designed to deal with unemployment, such as the Civilian Conservation Corps and later the Works Progress Administration. State-local capital spending, on balance, increased little over this period.

1940-47: World War II and postwar conversion

Preemptory moves by the Federal Government, aimed at guaranteeing

sufficient resources for increasing Federal military and nonmilitary purchases of structures and equipment, limited the flow of construction materials and manpower to other sectors during the war years (1941-45). Federal GFCF rose by over 100 percent from 1941 to 1942. This growth of Federal purchases of nonmilitary structures and equipment primarily reflected increased industrial activity undertaken by the Federal Government in support of the war effort.

With the end of World War II, Federal GFCF fell sharply, to only \$679 million in 1947, about 7 percent of the level reached in 1943. In contrast, State and local GFCF was less than \$1 billion yearly in 1943-45 but over \$3 billion by 1947.

In 1947, total current dollar GFCF was back down to about the 1938 level of less than \$4 billion after having reached a peak of \$10.5 billion in 1943. Measured in current dollars, the average annual decrease 1940 to 1947 was 0.5 percent; measured in 1958 constant dollars, it was more than 9 percent.

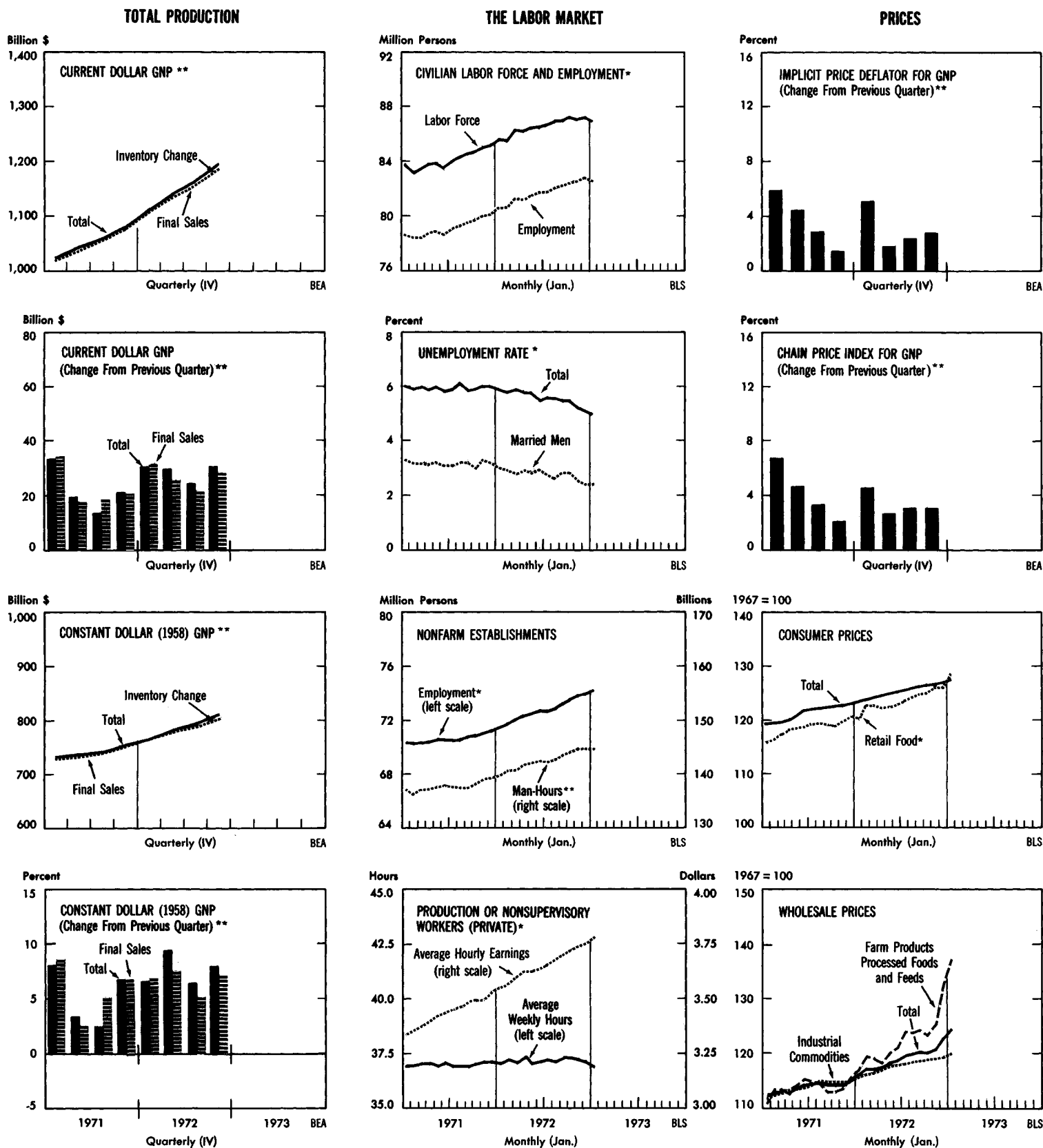
1947-54: Post World War II and the Korean conflict

Following the immediate postwar years, the Federal Government increased its GFCF from about \$680 million in 1947 to more than \$1.7 billion in 1950. Federal action to offset the 1949 recession was partly responsible for this growth. The Korean conflict saw Federal investment in industrial plant and equipment increasing \$1 billion from 1950 levels to \$2.7 billion in 1954.

State-local GFCF grew from \$3.1 billion to \$9.9 billion between 1947 and 1954, an average annual rate of 18 percent. As in the immediate postwar period, this spending apparently involved capital projects postponed or abandoned during World War II.

The growth of both Federal and State-local GFCF was quite strong over the period 1947-54, averaging almost 15 percent in real terms. This contributed to the general economic upswing from late 1949 to mid-1953 and to the recoveries from the economic slowdowns of 1948-49 and 1953-54.

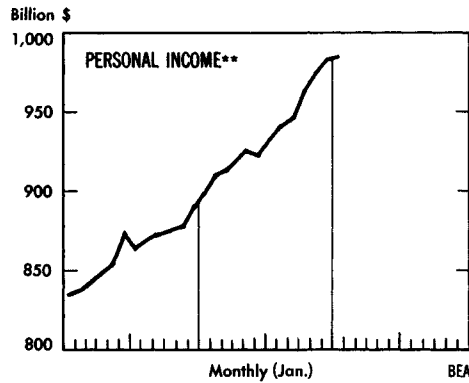
- In January: The unemployment rate was 5 percent
- Nonfarm payroll employment increased 200,000
- Wholesale price index increased 1.3 percent; food prices continued to rise sharply



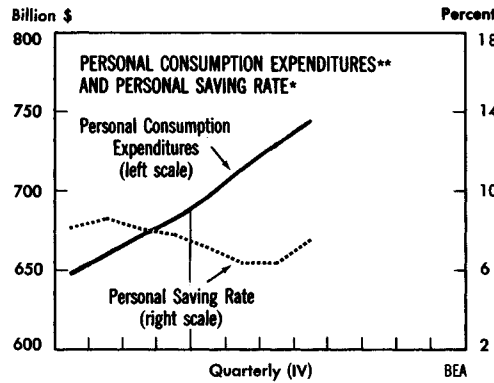
*Seasonally Adjusted **Seasonally Adjusted at Annual Rates

- In January: Retail sales advanced \$1¼ billion; new domestic-type car sales surged sharply
- Private housing starts increased to an annual rate of 2.5 million units

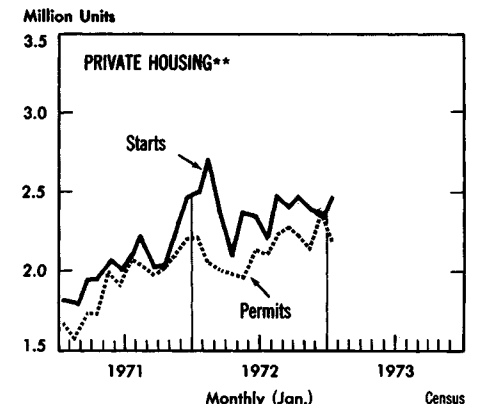
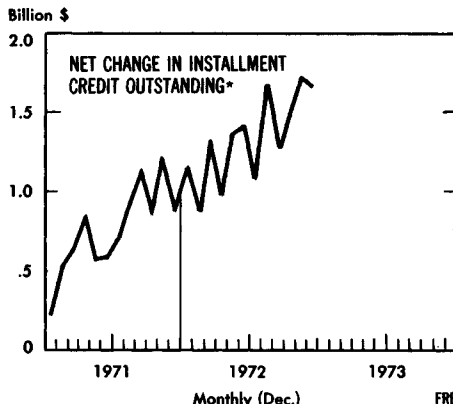
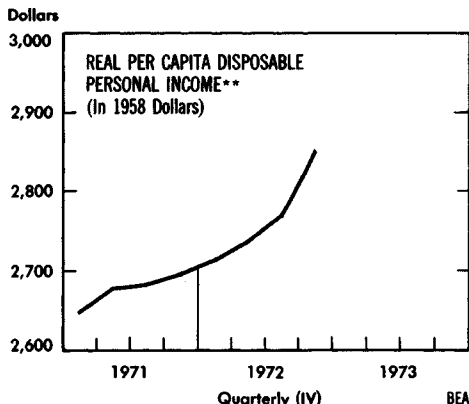
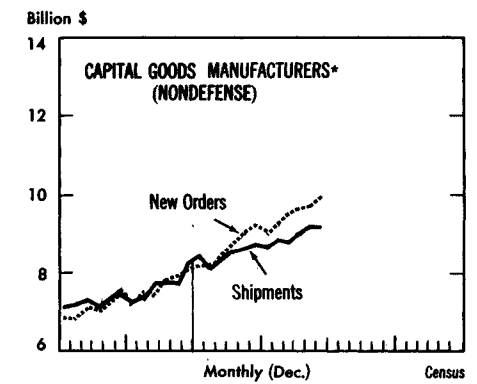
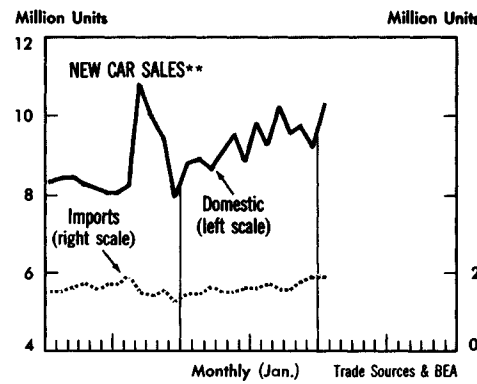
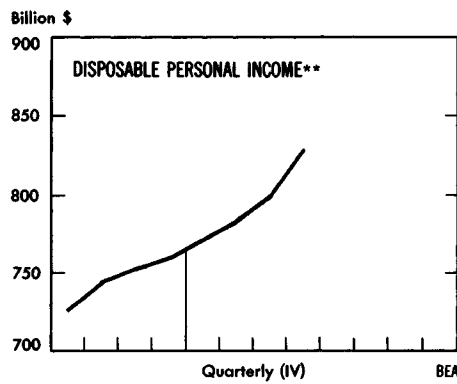
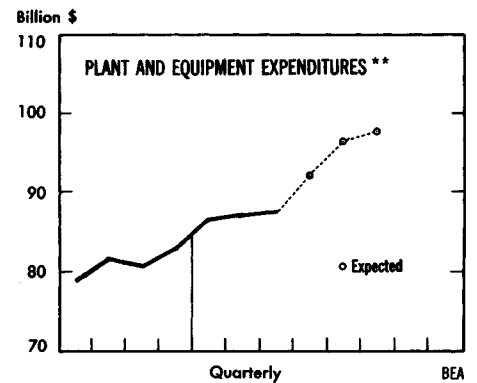
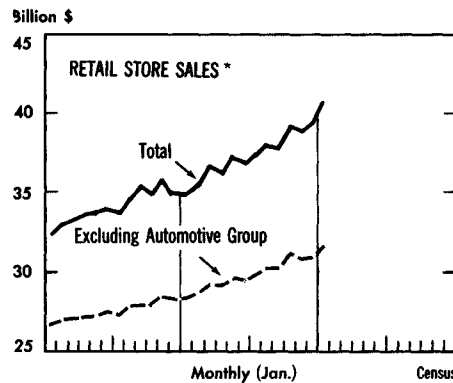
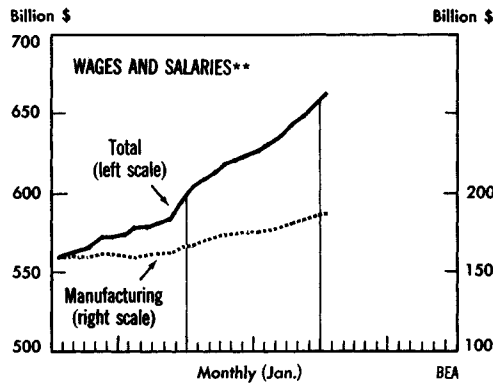
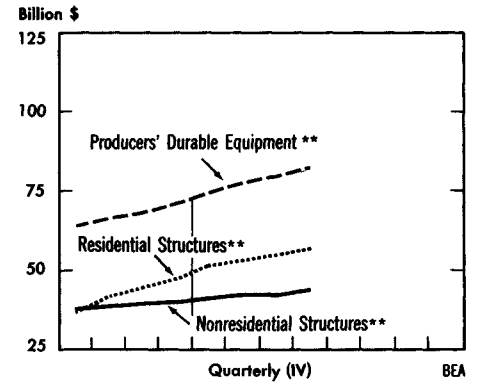
INCOME OF PERSONS



CONSUMPTION AND SAVING



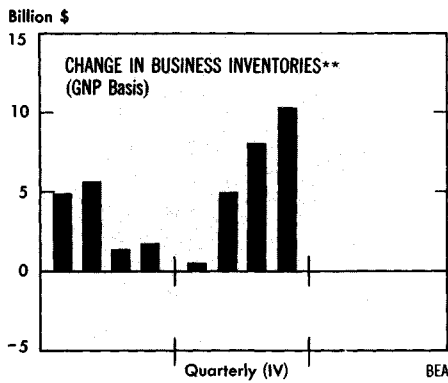
FIXED INVESTMENT



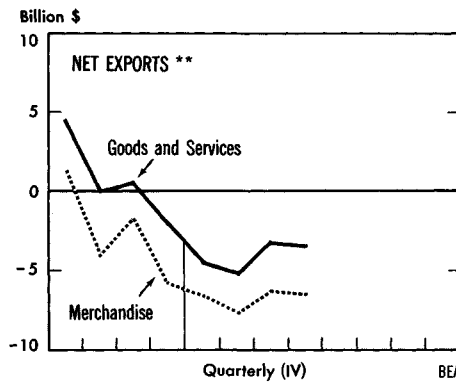
*Seasonally Adjusted **Seasonally Adjusted at Annual Rates

- In December: Manufacturing and trade firms added \$1 1/3 billion to inventories
- Trade deficit continued high as exports and imports were unchanged
- Balance of payments deficit smaller on both the net liquidity and official reserve bases in fourth quarter

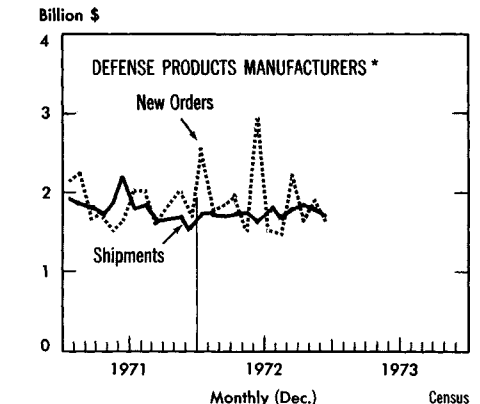
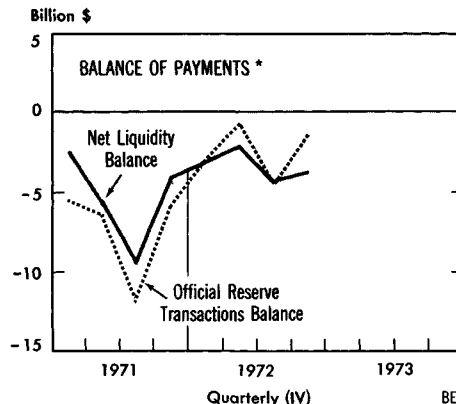
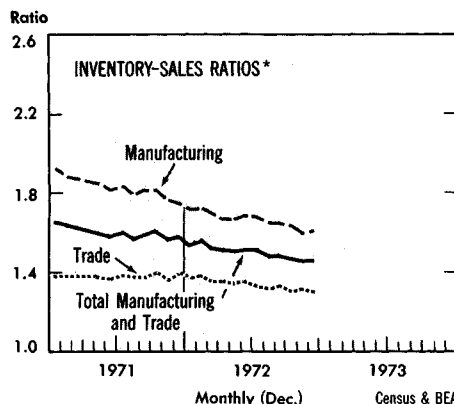
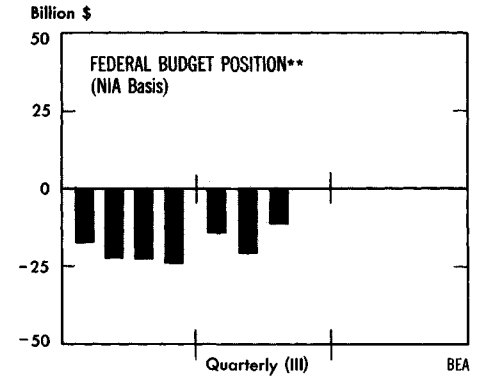
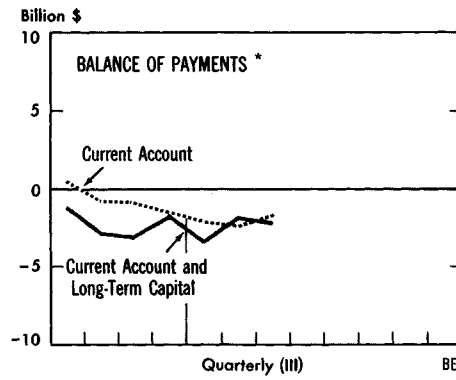
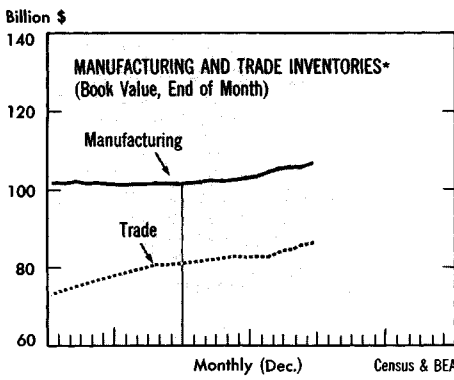
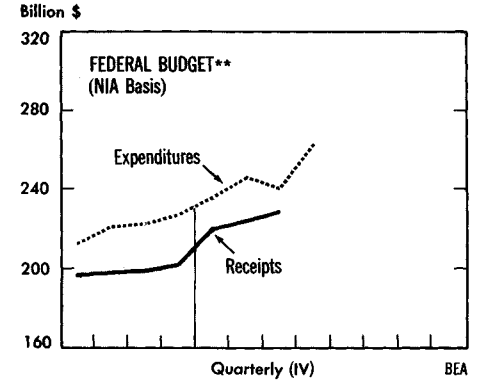
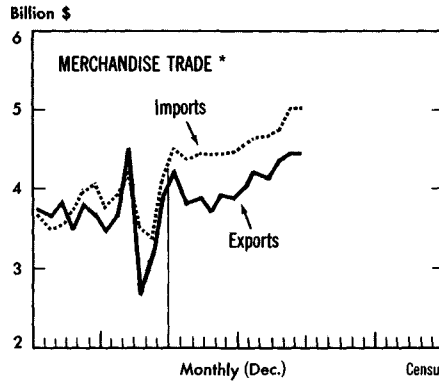
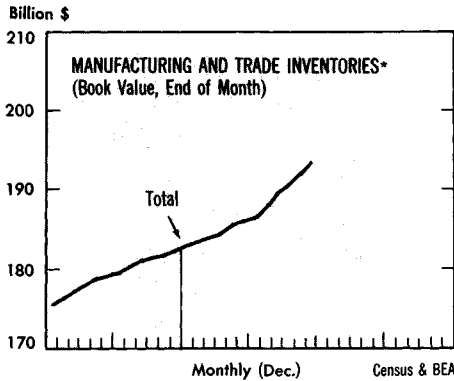
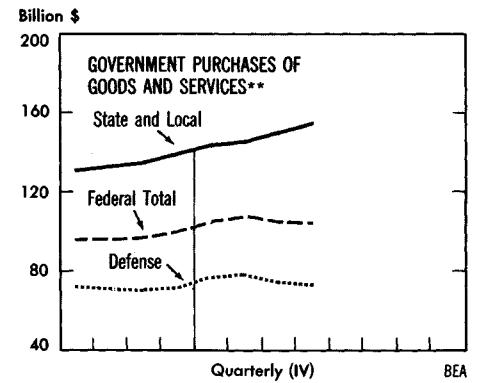
INVENTORIES



FOREIGN TRANSACTIONS



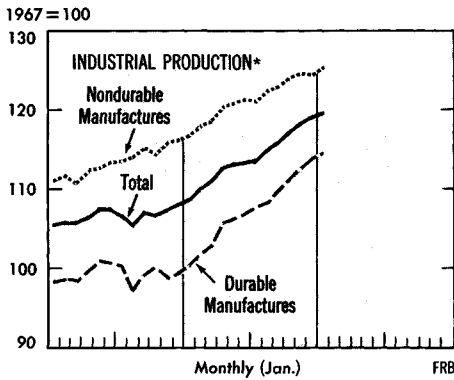
GOVERNMENT



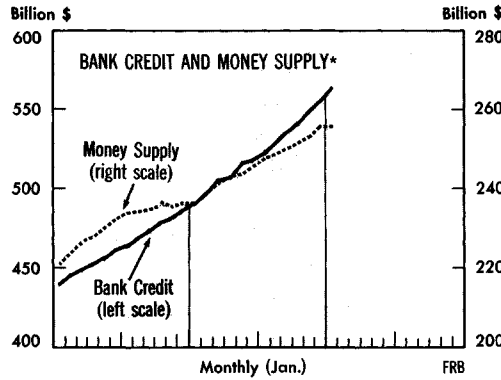
*Seasonally Adjusted **Seasonally Adjusted at Annual Rates

- In January: Industrial production increased one-half of 1 percent
- Bank credit rose sharply, money stock was unchanged
- Interest rates and bond yields moved higher

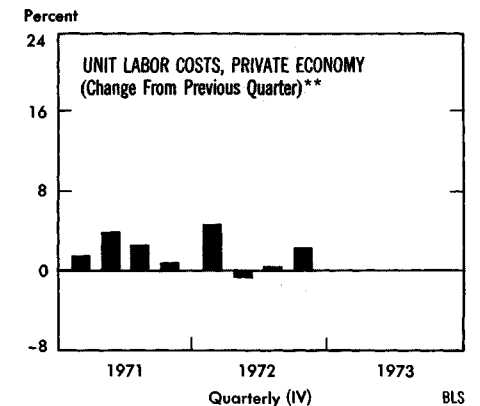
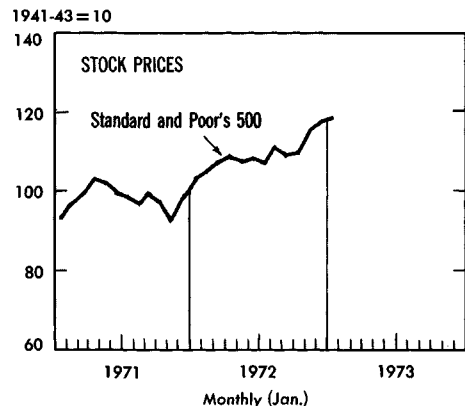
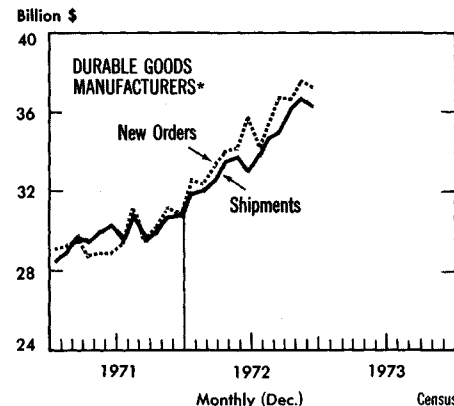
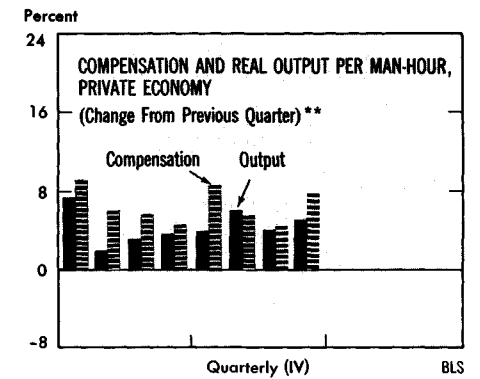
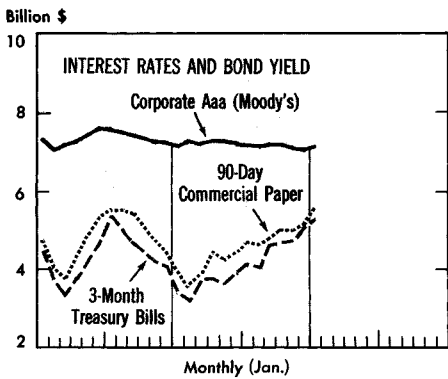
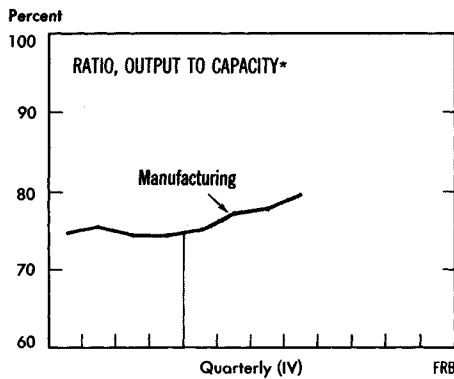
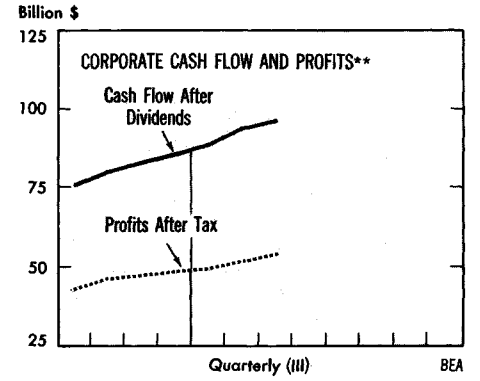
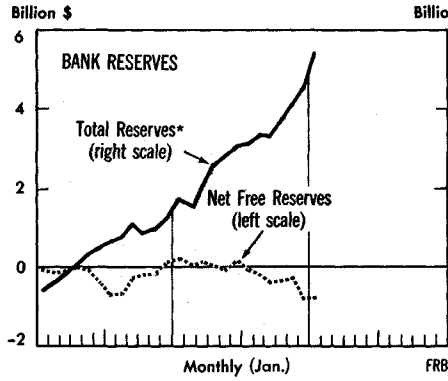
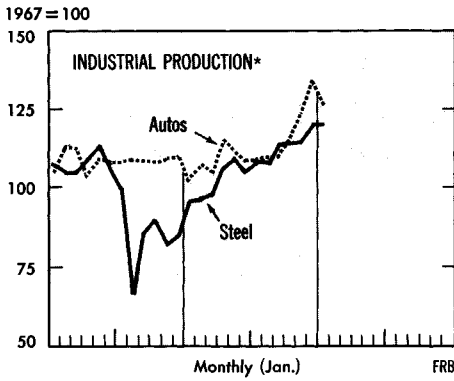
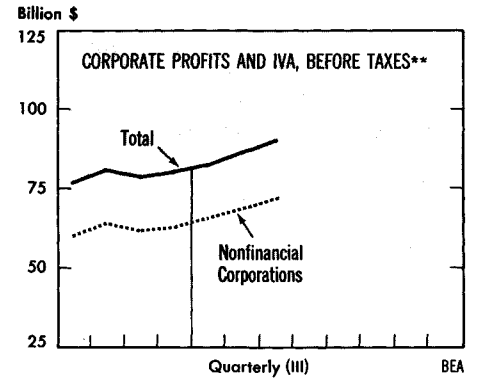
INDUSTRIAL PRODUCTION



MONEY, CREDIT, AND SECURITIES MARKETS



PROFITS AND COSTS



*Seasonally Adjusted **Seasonally Adjusted at Annual Rates
U.S. Department of Commerce, Bureau of Economic Analysis

Federal Fiscal Programs

THE budget submitted to Congress last month proposes a fiscal plan designed to moderate inflationary pressures, to limit the relative size of the Federal Government in the economy, and to move the economy toward full employment.

The budget estimates provide for significant reductions in Federal spending as compared with levels envisaged earlier for fiscal 1973. The impact of these reductions and continued restraint is estimated to limit unified budget outlays to the level of full-employment revenues in fiscal 1974. The budget calls for no new major spending initia-

tives, but existing law provides for increases in spending, especially for social security. Although no new income tax increases are proposed, already enacted increases in social security taxes are an important element of growth in fiscal 1974 receipts.

Unified budget outlays and receipts

The unified budget projects an increase in outlays of \$18.9 billion in fiscal 1974, somewhat more than the \$17.9 billion advance estimated for the current year (table 1). Civilian programs account for about three-

fourths—\$14.2 billion—of the 1974 increase. National defense outlays, mainly by the Department of Defense, are to rise \$4.6 billion. In terms of budget authority, civilian programs advance only \$2.1 billion in fiscal 1974, and national defense programs increase \$5.6 billion. Budget authority, usually in the form of appropriations, are the amounts authorized by Congress that permit Federal agencies to enter into obligations requiring either immediate or future outlays of money. Congress will have to act on \$172.8 billion of the total budget authority proposed for fiscal 1974; the remaining \$115.2 billion, mainly for trust fund programs, will be available under existing laws without additional action by Congress.

Among civilian functions, substantial outlay gains in fiscal 1974 are projected for income security (\$6.1 billion), health (\$3.7 billion), natural resources and the environment (\$2.8 billion), and interest (\$1.9 billion). Decreases are slated for commerce and transportation (\$1.0 billion), general revenue sharing (\$0.8 billion), agriculture and rural development (\$0.5 billion), and education and manpower (\$0.4 billion). Outlays for other civilian functions are to increase \$2.3 billion.

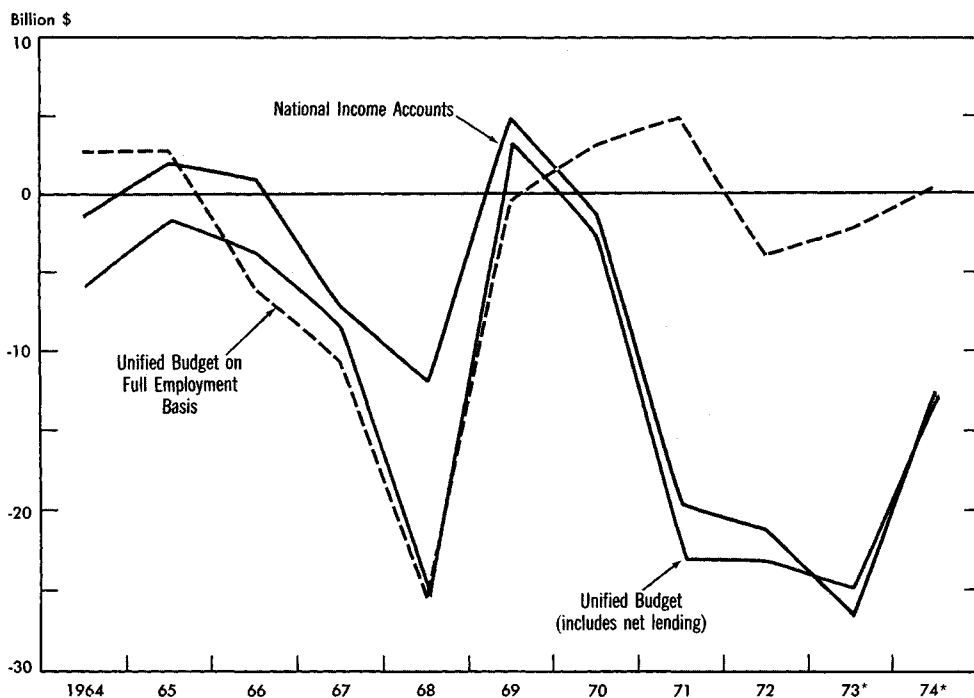
Receipts are estimated to rise \$31 billion, reflecting growth in individual and corporate incomes generated by the continued economic expansion assumed in the budget projections. Increases in both the taxable earnings base and the payroll tax rate for social security contribute to the rise in receipts.

Unified budget receipts are to increase \$23.8 billion in fiscal 1974; estimates are based on an increase in GNP from \$1,152 billion in calendar 1972 to \$1,267 billion in calendar 1973,

CHART 7

Federal Fiscal Position

Unified budget deficit declines in fiscal year 1974



*Estimates from "The Budget of the United States Government, 1974."

Table 1.—Federal Government Receipts and Expenditures, Fiscal Years 1972-74

[Billions of dollars]

	1972 actual	Estimates	
		1973	1974
Unified budget			
Receipts.....	208.6	225.0	256.0
Outlays.....	231.9	249.8	268.7
Surplus or deficit (-).....	-23.2	-24.8	-12.7
Full-employment surplus or deficit (-).....	-3.9	-2.3	.3
National income accounts			
Receipts.....	211.9	233.3	263.0
Expenditures.....	233.1	259.9	275.5
Surplus or deficit (-).....	-21.1	-26.6	-12.5

Sources: "The Budget of the United States Government, 1974" and BEA.

a rise of 10 percent, compared to 9.7 percent in calendar 1972. Personal income is projected at \$1,018 billion, up \$82 billion, or 8.8 percent. Corporate profits before taxes are to advance \$14 billion, or 15 percent, to \$108 billion.

The deficit in the unified budget is to decline \$12.1 billion—from \$24.8 billion in 1973 to \$12.7 billion in 1974 (chart 7). The deficit now estimated for fiscal 1973 is considerably less than the estimate of \$30 billion to \$35 billion that was in wide circulation early last fall. Table 2 shows the difference between "unconstrained" budget outlays and the current estimate for fiscal 1973. Unconstrained outlays represent the outlays resulting from existing programs as they

existed in the fall of 1972. The current estimate incorporates reductions in outlays resulting from program reductions and terminations, deferrals of various payments, and additional sales of financial assets, offshore oil leases, and stockpiled materials.

NIA deficit declines

Under the concepts used in the Federal sector of the national income accounts (NIA) (table 3), the decline in the deficit in fiscal 1974 is somewhat greater than in the unified budget—\$14.1 billion vs. \$12.1 billion. Expenditures on the NIA basis increase \$15.6 billion—\$3.3 billion less than unified budget outlays—and NIA receipts increase \$29.7 billion—\$1.3 billion less than unified budget receipts.

The smaller increase in NIA expenditures than in unified budget outlays is the result of the following factors: (1) deliveries in the NIA exceed cash outlays \$2.8 billion in 1973, but only \$0.3 billion in 1974; (2) proceeds from the current sales of offshore oil leases, which are netted against outlays in the unified budget but excluded from the NIA, decline from \$2.8 billion in 1973 to \$1.8 billion in 1974; (3) budget outlays, but not NIA expenditures, are reduced in 1973 by the transfer of more than \$1

billion from a deposit fund excluded from the budget; there is no similar transfer for fiscal 1974; and (4) financial transactions, which are excluded from the NIA, account for only \$0.9 billion of unified budget outlays in fiscal 1973, but for about \$1.5 billion in 1974, when asset sales decline. The most important factor working in the opposite direction is sharply increased spending by the Postal Service, largely for capital equipment. Beginning with fiscal 1974, the unified budget totals show only the Federal payment to the Postal Service; in contrast, the NIA continues to record capital spending by the Postal Service as part of nondefense purchases, and the postal operating deficit as part of subsidies less current surplus of government enterprises.

Calendar 1973 deficit, NIA basis

On the basis of the budget document, the Bureau of Economic Analysis (BEA) estimates that the NIA deficit in calendar 1973 will be about \$17 billion, compared with a preliminary figure of \$18½ billion for calendar 1972. Expenditures will rise more than \$21 billion and receipts almost \$22½ billion. The net effect of tax changes in calendar 1972 and 1973 (including the effect of overwithholding and the associated re-

Table 2.—Fiscal 1973 Unified Budget Outlays: Difference Between "Unconstrained" Total and Current Estimate

[Billions of dollars]

"Unconstrained" estimate.....	261.0
Limitation on open-end social service grant program.....	-2.3
Deferral of various payments, primarily shifting the June 1973 general revenue sharing payment to July 1973.....	-2.0
Additional sales of financial assets.....	-1.1
Additional sales of offshore oil leases.....	-1.0
Farm price supports.....	-0.7
Additional stockpile disposals.....	-0.4
Medicare and medicaid.....	-0.4
Absorption of January 1973 pay raise.....	-0.3
Water pollution.....	-0.3
All other (mainly program reductions and terminations).....	-2.7
January 1973 budget estimate.....	249.8

Source: "The Budget of the United States Government, 1974."

Table 3.—Federal Government Receipts and Expenditures, NIA Basis

[Billions of dollars]

	Fiscal year			Calendar 1972			
	1972 actual	1973	1974	I	II	III	IV
		Estimates		Seasonally adjusted at annual rates			
Federal Government receipts.....	211.9	233.3	263.0	221.4	224.9	229.8	.....
Personal tax and nontax receipts.....	100.1	104.2	116.6	105.8	107.3	109.1	113.6
Corporate profits tax accruals.....	33.5	38.7	41.6	34.0	35.2	36.7	.....
Indirect business tax and nontax accruals.....	20.1	20.5	21.6	19.9	19.7	20.2	20.6
Contributions for social insurance.....	58.3	69.8	83.2	61.7	62.6	63.8	65.3
Federal Government expenditures.....	233.1	259.9	275.5	236.3	246.5	241.6	262.7
Purchases of goods and services.....	103.1	105.8	111.5	105.7	108.1	105.4	104.0
National defense.....	74.3	74.6	75.9	76.7	78.6	75.1	73.2
Other.....	28.8	31.1	35.6	28.9	29.6	30.2	30.8
Transfer payments.....	78.6	91.6	101.9	79.4	80.4	82.0	91.8
To persons.....	75.8	88.9	99.1	76.6	77.6	79.4	89.6
To foreigners (net).....	2.8	2.7	2.8	2.8	2.8	2.6	2.2
Grants-in-aid to State and local governments.....	32.7	41.6	41.6	32.4	38.1	34.4	46.5
Net interest paid.....	13.5	14.6	15.8	13.1	13.8	13.6	13.7
Subsidies less current surplus of government enterprises.....	5.2	6.3	4.8	5.6	6.0	6.2	6.7
Less; Wage accruals less disbursements.....	0	0	0	0	-1	0	0
Surplus or deficit (-), national income and product accounts.....	-21.1	-26.6	-12.5	-14.8	-21.6	-11.8	.....

Sources: "The Budget of the United States Government, 1974" and BEA.

funds in 1973) is to lower calendar 1973 receipts about \$2½ billion; gross revenue growth in calendar 1973 excluding the effect of tax changes is approximately \$25 billion.

Impact of overwithholding

Overwithholding has characterized the personal income tax system in the United States for many years, but the total of overwithheld payments has been relatively small. Within the aggregate, however, withholdings frequently fell short of liabilities for many taxpayers, particularly for families with more than one source of wage and salary income; this was particularly true in 1971, following changes in withholding tax rates in January of that year. The withholding schedules for 1972, established in the Revenue Act of 1971, were designed to correct the 1971 experience and to allow taxpayers to match more closely their withheld payments with their liabilities. For this reason, the 1972 schedules were set high, but in calculating withholdings, taxpayers were allowed to claim additional exemptions to the extent necessary to align their withheld taxes with their liabilities. For the most part, however, taxpayers did not adjust their withholdings downward. As a result there were exceptionally large overwithholdings in calendar 1972 and the prospect is for exceptionally large refunds in calendar

1973 (or exceptionally low final settlements for taxpayers who ended up owing taxes on 1972 incomes).

According to estimates prepared by the Treasury Department's Office of Tax Analysis, overwithholding in 1972 associated with the 1972 changes in the withholding tax tables amounted to roughly \$10 billion (table 4). This was partly offset by an associated reduction of approximately \$1 billion in quarterly declaration payments. Thus, the net amount of overpayments in 1972 associated with the 1972 changes in the schedules was roughly \$9 billion. The \$9 billion overpayment is projected to increase 1973 refunds or lower 1973 final settlements from the levels they otherwise would have reached. The estimates assume that overwithholding will moderate in 1973, declining gradually to an annual rate of \$6 billion by midyear, with quarterly declarations remaining roughly \$1 billion below what they otherwise would have been. This results in a permanent overwithholding (net of declarations) of approximately \$5 billion. In the calculation of seasonally adjusted quarterly estimates in the NIA, the corresponding \$5 billion reduction in net settlements (final settlements less refunds) is spread evenly over the four quarters of the calendar year; the remaining reduction in net settlements—\$4 billion in 1973 and much less in 1974—is considered temporary, and will be recorded at the time that net settlements occur in the first half of the year.

Table 4.—Impact of Overwithholding on Personal Tax Payments, NIA Basis

[Billions of dollars, seasonally adjusted at annual rates]

	Total	Withheld	Other ¹
1972:			
First half.....	9.1	10.0	-0.9
Second half.....	9.1	10.0	-0.9
1973:			
First half.....	-6.3	7.0	-13.3
Second half.....	0	6.0	-6.0
1974:			
First half.....	-1.0	6.0	-7.0
Second half.....	0	6.0	-6.0
1975:			
First half.....	0	6.0	-6.0
Second half.....	0	6.0	-6.0

1. Includes quarterly declarations and final settlements net of refunds.

NOTE.—Seasonally adjusted half-years will average to calendar year totals but will not average fiscal year totals; see text.

Sources: Estimates by BEA and Treasury Department, Office of Tax Analysis.

Budget path on the NIA basis

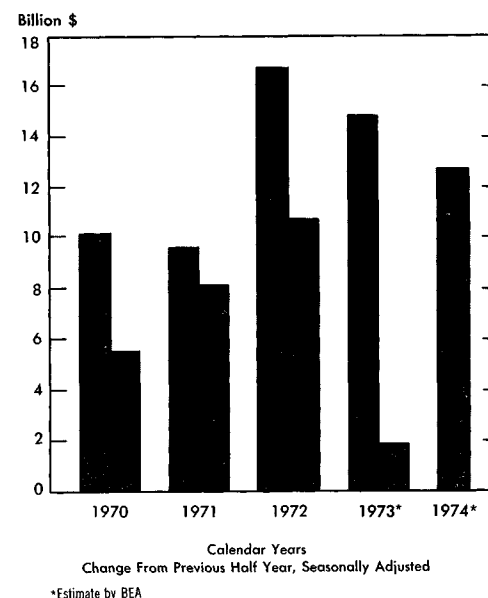
If budget projections are realized, the NIA deficit will grow from about \$18¼ billion in the second half of 1972 to \$26 billion in the first half of calendar 1973 (quarterly and half year figures in this article are expressed at seasonally adjusted annual rates), and then drop to \$8¼ billion in the second half. Expenditures will increase \$15 billion from the second half of 1972 to the first half of 1973 (chart 8). Transfer payments will rise almost \$9½ billion, largely due to recently enacted social security benefit increases. Grants-in-aid also increase sharply—about \$2¼ billion—mainly due to general revenue

sharing. Purchases are boosted \$2¼ billion by the Federal pay raise effective in January 1973. Interest payments also increase but subsidies fall, largely because of lower farm price support payments.

Receipts increase about \$7¼ billion in the first half of calendar 1973. Increases in the social security payroll tax rate and in the maximum earnings subject to the tax account for \$10¼ billion of the large gain in social insurance contributions. Corporate tax liabilities advance markedly; indirect business taxes also increase, despite a small reduction in the telephone excise tax. Partly offsetting these increases is a large decline in personal tax payments, largely attributable to refunds resulting from the overwithholding in calendar 1972. The growth in withheld taxes also slows during this period for, as already indicated, it is assumed that some individuals will adjust their withholdings downward.

Expenditures increase only \$2 billion in the second half of calendar 1973. Defense purchases are essentially flat; nondefense purchases continue to increase. Transfer payments rise only

CHART 8
Federal Expenditures (NIA Basis)
Large increases expected in first half of 1973 and first half of 1974



\$2 billion, of which roughly three-quarters is due to new medicare benefits for the disabled. Grants-in-aid and subsidies decline; interest is unchanged. Receipts, by contrast, increase \$19½ billion, resulting in a sharp reduction in the deficit. An important element in the receipts projection is a rebound in personal taxes as refunds fall to more normal levels and rapid gains in wages boost withholdings. Also, it is assumed that individual adjustments in withholding payments are largely completed by midyear. Social insurance contributions continue to advance, aided by increases in supplemental medical insurance fees and railroad retirement contributions.

Expenditures grow much more rapidly in the first half of 1974. Another pay raise for military and civilian employees, effective January 1, 1974, adds \$2½ billion to purchases. Transfers are raised, and grants-in-aid lowered, by the Federal takeover of State adult welfare programs for the aged, blind, and disabled. However, other grants-in-aid increase somewhat, resulting in moderate overall growth in this spending category. Receipts also continue to rise, with all the NIA receipt categories showing projected increases; another increase in the social security tax base adds over \$2 billion beginning January 1, 1974.

Difference between seasonally adjusted and unadjusted data

Generally, the difference between seasonally adjusted and unadjusted fiscal year totals is relatively small (although no attempt is made to force them to equality). In the Federal sector, as in the rest of the NIA, seasonally adjusted and unadjusted data are exactly equal only on a calendar year basis.

However, for fiscal 1973, the four quarters of NIA receipts at seasonally adjusted annual rates will average to a figure nearly \$4½ billion larger than the unadjusted total; in fiscal 1974, they will average to a figure at least \$1 billion larger than the unadjusted total. These large differences are mainly due to two factors. First, the January 1973 increase in the social security tax

base will increase seasonally adjusted contributions in fiscal 1973 \$1.8 billion, but increase unadjusted contributions only \$0.2 billion; the January 1974 base increase will increase seasonally adjusted contributions in fiscal 1974 \$1.1 billion, but increase unadjusted contributions \$0.2 billion. Second, it is assumed that some of the refunds associated with overwithholding will recur regularly in years subsequent to 1973, and this recurring amount is seasonally adjusted by smoothing it over all four quarters of calendar 1973, rather than concentrating it entirely in the first half; this will result in seasonally adjusted personal taxes in fiscal 1973 exceeding the unadjusted totals \$2.7 billion.

Full-employment surplus

As measured by changes in the full-employment surplus, fiscal policy was clearly expansionary in calendar 1972 and will become more restrictive in calendar 1973. However, estimates of the magnitude of the stimulus in 1972,

and of its reduction in 1973, depend on the treatment of overwithholding and of the associated refunds in the calculation of full-employment revenues.

The Annual Report of the Council of Economic Advisers suggests that the proper treatment of overwithholding for purposes of fiscal analysis depends on the view taken of its effects on consumer spending. If consumption depends largely on "permanent" incomes, temporary tax changes, such as overwithholding and the subsequent large refunds, will not alter spending significantly. On the other hand, if consumer spending is motivated by currently available disposable income, whether temporary or permanent, consumption will be affected by overwithholding. The size of the temporary changes in disposable income may also be a factor; for example, consumers may not have reduced consumption as a result of relatively small increases in weekly withholdings in 1972, but they may react differently to the much larger lump-sum refunds in 1973. The Council believes that it is appropriate to

The Full-Employment Surplus

The full-employment surplus (FES) is an estimate of the amount by which Federal revenues would exceed Federal expenditures if the economy were operating at a hypothetical full-employment level of activity at current price levels.

Although the FES concept dates back to work done by the Committee for Economic Development in the 1940's, it was first given major prominence by the Council of Economic Advisers in the early 1960's. At that time a practical need was felt for a measure of the impact of budget policy on the economy better than the actual budget surplus or deficit. The 1974 budget recently submitted to Congress relies heavily on the FES concept.

Use of the actual budget to judge the impact of fiscal policy can be misleading because its surplus or deficit reflects the economy's influence on the budget as well as the influence of the budget on the economy. For example, the Government might be taking restrictive fiscal actions but a weakening of the economy could cause the actual deficit to rise, falsely suggesting expansionary policies. On the other hand, a booming economy could lead to a rise in the surplus at a time when tax rates are reduced and expenditure policies become more expansionary. It is in order to abstract from the effect that changing levels of economic activity have on the

budget that a single level, that of a "fully-employed" economy, is used to calculate the FES.

The methodology generally employed in calculations of the full-employment surplus can be summarized in four steps:

(1) Real GNP is estimated on the basis of potential full-employment growth, and converted to current dollars using the actual rate of price change.

(2) Full-employment income is divided into various tax bases, such as personal income and corporate profits.

(3) Effective tax rates under present laws are computed for each tax base, and full-employment revenues derived.

(4) Full-employment expenditures are calculated by subtracting from actual expenditures the difference between actual and estimated full-employment levels of unemployment compensation.

Although the FES is generally calculated on an NIA basis, it can also be calculated in terms of unified budget data, as is done in the 1974 Budget document.

The absolute level of the full-employment surplus is of limited significance for indicating the extent of fiscal restraint or stimulus. Changes in the FES from period to period are generally considered to be the more significant indicators.

Table 5.—Changes in Full-employment Surplus, NIA Basis

[Billions of dollars, seasonally adjusted at annual rates]

Calendar year	Change from previous half-year	
	Including overwithholding and associated refunds	Excluding overwithholding and associated refunds
1972:		
First half.....	-0.8	-9.9
Second half.....	-4.3	-4.3
1973:		
First half.....	-11.4	4.0
Second half.....	12.8	6.5
1974:		
First half.....	-2.3	-1.3

Sources: Council of Economic Advisers and BEA.

adjust the full-employment surplus to exclude the impact of overwithholding and the associated refunds if the permanent income hypothesis is adopted; on the other hand, the impact of overwithholdings should be included in the full-employment surplus if it is felt that temporary tax changes significantly affect consumption. Table 5 shows half-year changes in the full-employment surplus (NIA basis) under both assumptions. (Overwithholding is excluded from the official estimates, published in the Budget document, of the unified budget on a full-employment basis—table 1.)

The treatment of overwithholding has a considerable impact on the behavior of the Federal full-employment surplus (NIA basis). If overwithholding and the associated refunds are treated like a tax law change and thus included in full-employment revenues, the swing toward fiscal stimulus in calendar 1972 and the swing toward fiscal restraint in calendar 1973 are much less than if overwithholding is excluded from the full employment calculation.

The impact of the swing in the Federal full-employment budget position is also dependent on how States and localities use the general revenue sharing funds being paid to them by the Federal Government. To the extent that these governments spend the funds, reduce existing taxes, or defer tax increases already planned, revenue sharing will have an expansionary impact on the economy in line with

its impact on the Federal full-employment surplus. However, to the extent that State and local governments temporarily use the revenue sharing funds to retire debt, or to

invest in financial assets, they will offset the fiscal stimulus (or increase the fiscal restraint) implied by the Federal full-employment budget position.

Fiscal 1974 Receipts

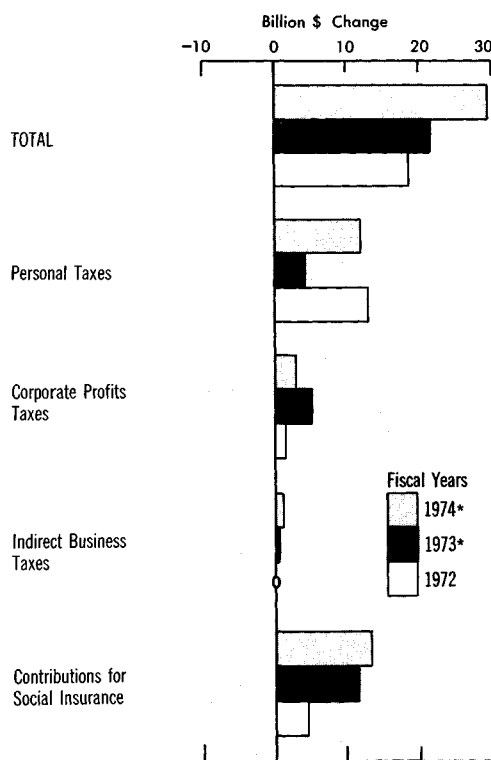
FEDERAL receipts in fiscal 1974 are projected to total \$263 billion on the NIA basis, an advance of \$29.7 billion from the estimate for fiscal 1973. This compares with increases of \$21.4 billion in fiscal 1973 and \$18.9 billion in 1972.

NIA receipts, which are recorded mainly on an accrual basis, increase somewhat less rapidly in 1974 than cash collections; in 1973 the increase in NIA receipts exceeds the increase in cash collections. Accruals were \$1.2

billion smaller than collections in 1972, but exceed collections \$3.6 billion in 1973 and \$1.7 billion in 1974. The widening of the gap in 1973 and the narrowing in 1974 result principally from the rapid economic expansion in fiscal 1973—which builds up tax accruals faster than collections—followed by a more moderate rate of expansion in 1974.

The 1974 increase in NIA receipts is 12.7 percent, the largest percentage gain since fiscal 1969 when the income tax surcharge was imposed. One-fourth of the increase is accounted for by tax changes: the net effect of tax changes is to increase receipts \$7.5 billion while income growth accounts for a gain of \$22.2 billion (table 6). For 1973, a \$26.6 billion increase resulting from higher incomes is partly offset by a \$5.2 billion decline due to tax changes, mainly the impact of overwithholding.

Changes in Federal Government Receipts (NIA Basis)



*Estimate by BEA

U.S. Department of Commerce, Bureau of Economic Analysis

73-29

Table 6.—Breakdown of Changes in Federal Receipts, NIA Basis

[Billions of dollars]

	Change from previous fiscal year		
	1972	1973	1974
Total receipts, NIA basis.....	18.9	21.4	29.7
Amount due to higher incomes.....	22.2	26.6	22.2
Amount due to tax changes.....	-3.3	-5.2	7.5
Personal tax and nontax payments.....	13.0	4.1	12.4
Amount due to higher incomes.....	13.4	14.5	12.9
Amount due to tax changes.....	-4	-10.4	-5
Corporate profits tax accruals.....	1.5	5.2	2.9
Amount due to higher incomes.....	5.1	6.4	3.5
Amount due to tax changes.....	-3.6	-1.2	-6
Indirect business tax and nontax accruals.....	0	.4	1.1
Amount due to higher incomes.....	1.7	1.0	1.3
Amount due to tax changes.....	-1.7	-6	-2
Contributions for social insurance.....	4.5	11.5	13.4
Amount due to higher incomes.....	2.1	4.5	4.6
Amount due to tax changes.....	2.4	7.0	8.8

Source: Estimates by BEA.

Table 7.—Personal Tax and Nontax Payments, NIA Basis

[Billions of dollars]

	Fiscal year			Change from previous fiscal year		
	1972	1973	1974	1972	1973	1974
	Estimates			Estimates		
Total personal tax and nontax payments.....	100.1	104.2	116.6	13.0	4.1	12.4
Withheld.....	83.5	96.8	108.9	9.4	13.3	12.1
Resulting from:						
Overwithholding.....	5.0	8.5	6.0	5.0	3.5	-2.5
Other.....	78.5	88.3	102.9	4.4	9.8	14.6
Declarations and settlements net of refunds.....	11.0	2.7	2.5	1.8	-8.3	-2.2
Resulting from:						
Overwithholding.....	-6	-9.8	-6.5	-6	-9.2	3.3
Other.....	11.6	12.5	9.0	2.4	.9	-3.5
Estate and gift and nontaxes.....	5.6	4.8	5.2	1.8	-8	.4
Addendum: Total impact of overwithholding.....	4.4	-1.3	-5	4.4	-5.7	.8

Sources: BEA and Treasury Department, Office of Tax Analysis.

The 1974 receipts advance resulting from tax changes is principally due to increases in social security tax rates and in the earnings base subject to the social security tax. The net effect of tax changes in excise taxes and personal and corporate income taxes is to lower 1974 NIA receipts.

Personal taxes up \$12.4 billion

Personal tax and nontax payments are estimated at \$116.6 billion, an increase of \$12.4 billion from 1973. This is the net result of an increase of about \$13 billion attributable to higher incomes and a loss of \$0.5 billion because of tax changes. Tax changes associated with the Tax Reform Act of 1969 and the Revenue Act of 1971, including the impact of overwithholding resulting from provisions of the 1971 Act, have little net effect. A loss of \$0.6 billion is accounted for by two items of proposed legislation—an income tax credit for nonpublic elementary and secondary school tuition, and liberalized rules concerning deductions for individual pension plans.

Overwithholding and the associated refunds have a major impact on the distribution of personal tax payments among withholdings, declarations, and net settlements. In addition to adding considerably to the level of withheld payments, overwithholding lowers the combined level of declaration payments and net settlements in all 3 years. As

shown in table 7, the net impact of overwithholding accounted for more than one-third of the 1972 increase in personal taxes, but severely restricts the rate of increase in 1973; its impact on the 1974 advance is relatively small.

Corporate taxes increase

Corporate tax liabilities are projected to increase \$2.9 billion, to a level of \$41.6 billion. An increase of \$3.5 billion resulting from higher profits is partly offset by a decline of \$0.6 billion because of tax changes, mainly the impact of the liberalized depreciation rules enacted in the Revenue Act of 1971.

Indirect business tax and nontax accruals are estimated to increase \$1.1 billion, following an advance of only \$0.4 billion in 1973. Changes in tax rates play a minor role in the 1974 change. The telephone excise tax declines to 8 percent on January 1, 1974, after having been reduced from 10 percent to 9 percent on January 1, 1973. The budget proposes the extension of the interest equalization tax which is due to expire under present law in March 1973. However, the recent devaluation of the dollar is likely to result in a modification of this proposal.

Tax increases boost social insurance contributions

The largest increase in NIA receipts occurs in social insurance contributions,

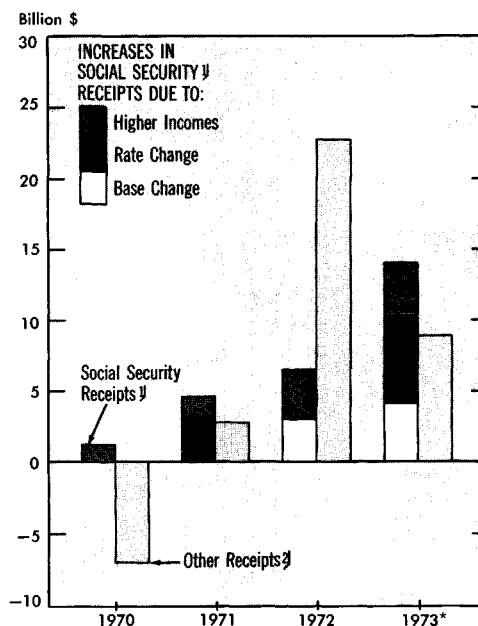
which are projected to advance a record \$13.4 billion to \$83.2 billion. This follows an advance of \$11.5 billion in 1973. Projected economic expansion accounts for about \$4.5 billion of the gains in both years, while tax increases—mainly for social security—account for \$7.0 billion of the 1973 advance and for \$8.8 billion of the 1974 advance.

The combined employer-employee tax rate for social security was raised from 10.4 percent to 11.7 percent on January 1, 1973. The maximum amount of earnings subject to the tax was increased from \$7,800 to \$9,000 on January 1, 1972, and from \$9,000 to \$10,800 on January 1, 1973. An increase to \$12,000 is scheduled under existing law for January 1, 1974.

All three of these increases in the tax base have their most pronounced effect on actual receipts in the second half of the calendar year in which they occur—and thus in the following fiscal year—as

CHART 10

Increases in Social Security Tax Rates and Base are Important in Growth of Federal Receipts



* Estimate

1. Includes old age, survivors, disability, and hospital insurance receipts.

2. Includes personal tax and nontax receipts, corporate profits tax accruals, indirect business tax and nontax accruals, and other contributions for social insurance.

persons reach the earnings maximum later in the year than they do with a lower base. The base increase in January 1973 has its principal impact on fiscal 1974 contributions, and the increase scheduled for January 1974 affects principally fiscal 1975 contributions. However, in the seasonally

adjusted NIA, the base increase is annualized when it occurs. Thus, the January 1973 increase raises contributions about \$3½ billion beginning in the first quarter of calendar 1973, and the January 1974 increase raises contributions about \$2 billion beginning in the first quarter of calendar 1974.

vember 1971 added \$2.3 billion to defense purchases in 1972, and are expected to add \$4.8 billion in 1973 and \$6.5 billion in 1974; excluding these

Fiscal 1974 Expenditures

FEDERAL expenditures as measured in NIA are projected to increase \$15.6 billion in fiscal 1974, compared with \$26.8 billion in the current fiscal year (table 3). Personal transfers account for almost two-thirds of the gain (\$10.2 billion) followed by increases in non-defense purchases (\$4.5 billion), defense purchases (\$1.3 billion), and net interest (\$1.2 billion). Subsidies decline \$1.5

billion while grants-in-aid show no change. As shown in table 8, social security benefit and pay increases account for \$9.6 billion, or over 60 percent, of the 1974 advance. General revenue sharing, which contributes \$6.8 billion to the 1973 increase, declines \$0.8 billion in 1974. Of the remaining \$6.8 billion, \$6.4 billion is in nondefense expenditures, a significant decline from 1973 when this category rises \$12 billion.

Pay raises account for rise in defense purchases

National defense purchases reached a peak of \$78 billion in 1969, declined in 1970 and 1971, and turned upward in 1972. They are expected to edge up in the current fiscal year, and to rise somewhat more than \$1 billion in 1974 to nearly \$76 billion.

National defense outlays in the unified budget increase \$4.6 billion in 1974, considerably more than the increase in NIA defense purchases. The large gap is primarily attributable to a sharp decline in the excess of deliveries over payments and a larger than usual increase in retired pay, which is recorded in the NIA as a transfer payment rather than a purchase. Table 9 shows the functional detail of unified budget defense spending, and a reconciliation of those outlays with NIA defense purchases.

Increases in the average compensation of military and civilian personnel have been a major factor in maintaining high levels of national defense purchases for many years (chart 12), and this trend continues in 1973 and 1974. Pay raises going into effect since No-

Table 8.—Breakdown of Changes in Federal Expenditures, NIA Basis

(Billions of dollars)

	Change from previous fiscal year	
	1973	1974
Total expenditures	26.8	15.6
Social security benefit increases ¹	6.9	7.2
General revenue sharing.....	6.8	-.8
Pay raises.....	2.8	2.4
Other.....	10.3	6.8
Defense ²	-1.7	.4
Nondefense.....	12.0	6.4

1. Includes the 20 percent benefit increase, the effect of social security liberalizations, extended medicare benefits, and supplemental security income.

2. Includes purchases, transfers, grants, and interest.

Source: Estimates by BEA.

Table 9.—Breakdown of National Defense Outlays in the Unified Budget, and Their Relationship to National Defense Purchases on the NIA Basis, Fiscal Years 1972-74

(Billions of dollars)

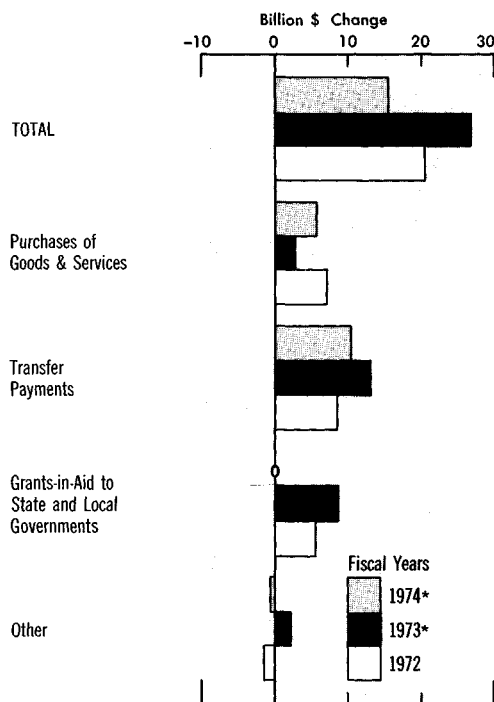
	1972 actual	1973	1974
		Estimates	
Department of Defense, military	75.2	74.2	78.2
Military personnel.....	23.0	23.1	22.5
Retired military personnel.....	3.9	4.4	4.7
Operation and maintenance.....	21.7	21.5	21.7
Procurement.....	17.1	15.6	16.5
Aircraft.....	5.9	n.a.	n.a.
Missiles.....	3.0	n.a.	n.a.
Ships.....	2.0	n.a.	n.a.
Vehicles and ordnance.....	3.5	n.a.	n.a.
Electronics and communications.....	.9	n.a.	n.a.
Other.....	1.7	n.a.	n.a.
Research, development, test, and evaluation.....	7.9	7.6	8.1
Other.....	1.5	1.2	1.6
Civilian and military pay increases ¹.....		.7	2.7
All-volunteer force.....			.1
Military retirement system reform.....			.4
Military assistance.....	.8	.6	.8
Atomic energy and other defense-related activities	2.4	1.6	2.1
Total unified budget outlays for national defense	78.3	76.4	81.1
Less: Transfers, grants, interest.....	4.2	4.7	5.5
Timing differences and other adjustments.....	-.2	-2.9	-.3
Equals: National defense purchases, NIA	74.3	74.6	75.9

1. Includes only pay raises effective January 1, 1973 and 1974.

Sources: "The Budget of the United States Government, 1974," Department of Defense, and BEA.

CHART 11

Changes in Federal Government Expenditures (NIA Basis)



*Estimate by BEA

amounts, defense purchases are projected to decline \$2.2 billion in 1973 and \$0.4 billion in 1974. Excluding the pay raises shown in table 9, military personnel costs decline \$0.6 billion in 1974. Military personnel at June 30, 1974, is estimated at 2.2 million, the lowest level since before the Korean War and more than 1.3 million below the Vietnam War peak reached in mid-1968.

Operation and maintenance outlays increase slightly to \$21.7 billion in 1974, reflecting increased civilian pay (despite a drop of 24,000 in civilian employment) and ship alterations and weapons modification. Procurement of military hard goods as recorded on a delivery basis in NIA declines more than \$1.5 billion in 1974 after advancing \$1 billion in the current fiscal year. (This is in contrast to cash payments for procurement, shown in table 9, which increase \$1.5 billion in 1973 and decline \$0.9 billion in 1974.) Other increases in defense spending occur in research and development (\$0.5 billion), new construction and other DOD activities (\$0.4 billion), and atomic energy and

other defense related activities (\$0.5 billion).

Budget estimates of Department of Defense (DOD) outlays (which were prepared prior to the cease fire agreement) include \$5.9 billion for expenditures in Southeast Asia in the current fiscal year and \$4.1 billion in 1974. It is estimated that the bulk of the \$5.9 billion has already been spent. It is uncertain how much of the remaining funds will be needed for other purposes in Southeast Asia, such as clearing harbors of mines. Excluding these outlays, DOD expenditures in the unified budget would show an increase of \$5.8 billion in fiscal 1974.

Large gain in nondefense purchases

Nondefense purchases advance \$4.5 billion in 1974, compared with \$2.3 billion in the current fiscal year. The purchase of agricultural products by the Commodity Credit Corporation (CCC) accounts for \$1½ billion of the advance, pay raises for about \$¼ billion, capital outlays of the Postal Service for \$½ billion, administrative costs associated

with the Federal takeover of certain State welfare programs for \$½ billion, with the remaining increases—about \$1¼ billion—distributed over a wide range of other programs.

The advance in CCC purchases reflects a modest increase in activity in 1974 following a large decline in 1973 resulting from higher market prices and expanded exports. Increases occur in other nondefense purchases for such programs as veterans' medical care and hospital services, law enforcement and justice, and civil rights enforcement. Space outlays, which have continuously declined since 1966—from about \$6 billion to \$3 billion in 1973—show a modest gain.

Transfer payments continue to advance

Expenditures other than for purchases of goods and services increase about \$10 billion in 1974, following a rise of more than \$24 billion in fiscal 1973. The 1974 advance is entirely in personal transfer payments; other expenditures combined—grants to State and local governments, net interest paid, subsidies (less the current surplus of government enterprises), and foreign transfers—are unchanged.

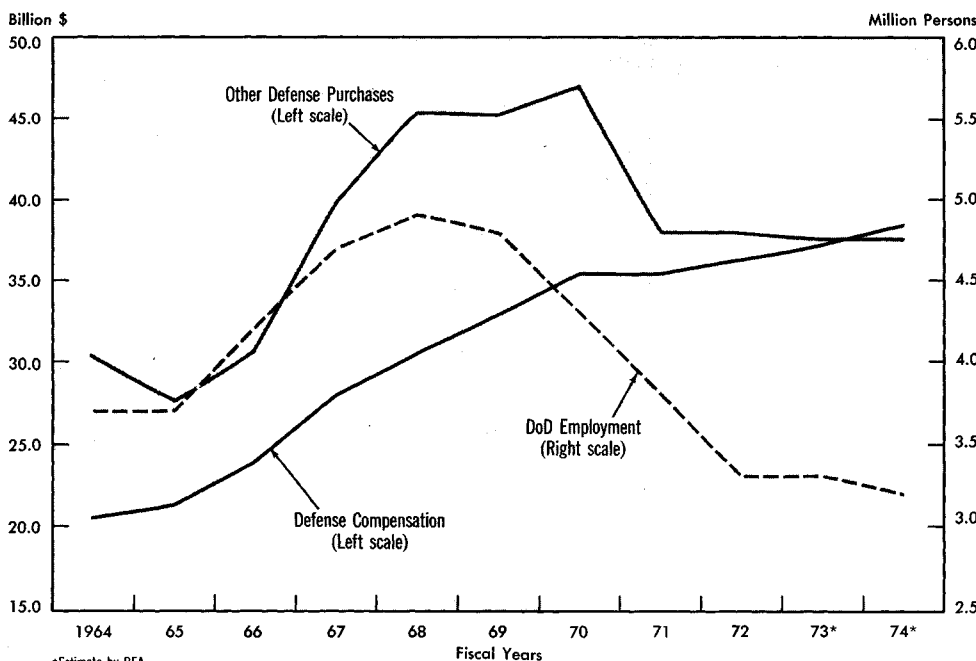
Personal transfer payments rise \$10.2 billion, following an increase of \$13.1 billion. The increase will raise transfers to over \$99 billion—3½ times the level of a decade ago and more than \$23 billion larger than 1974 defense purchases. This growth of transfers has resulted from increases in average benefits and in the number of beneficiaries as well as from the introduction of new programs, such as medicare, food stamps, and special benefits for disabled coal miners.

Social security benefits (excluding medicare) account for more than \$5½ billion of the 1974 advance in personal transfers, with over \$2 billion resulting from the 20 percent benefit increase effective in October 1972. About \$1½ billion results from various social security amendments enacted in late 1972 (effective January 1973) which: (1) increased widows' benefits up to the amount their deceased

CHART 12

National Defense Purchases and Defense Department Employment

Compensation continues to rise as employment drops



*Estimate by BEA

husbands would have received; (2) allowed beneficiaries to earn more without a reduction in benefits; and (3) included other changes, such as a new minimum benefits calculation. Hospital and medical payments under the medicare program are expected to advance \$2¼ billion in 1974. Included in this increase is over \$1¼ billion for extension of benefits (effective July 1973) to disabled persons under 65 years of age.

In 1974, the Federal takeover of certain State administered programs providing welfare payments to the aged, blind, and disabled add \$1¼ billion to transfers. On January 1, 1974, the Federal Government will take over these programs, but States will continue to administer the large program of aid to families with dependent children (AFDC). Under the existing adult welfare program, Federal

grants to States finance part of the State transfer payment to individuals. The new program will provide for a minimum Federal payment of \$130 a month to a single person without other income and \$195 to a couple. Matching grants for the current program will be discontinued.

Unemployment benefits decline \$¼ billion in both 1973 and 1974, from a level of \$6 billion in 1972 to slightly over \$4½ billion in 1974. These estimates are consistent with the expectation, stated in the *Annual Report of the Council of Economic Advisers*, that the unemployment rate will decline to about 4.5 percent by the end of calendar 1973, as compared with 5.1 percent in December 1972.

Other transfer payments advance \$1¼ billion in 1974 as compared with about \$4¼ billion in the current fiscal year. The 1974 gain is the net result of growth

Table 10.—Estimated General Revenue Sharing Outlays, Fiscal Years 1973-77

[Billions of dollars]	
1973.....	6.8
1974.....	6.0
1975.....	6.2
1976.....	6.3
1977.....	4.9
Total.....	30.2

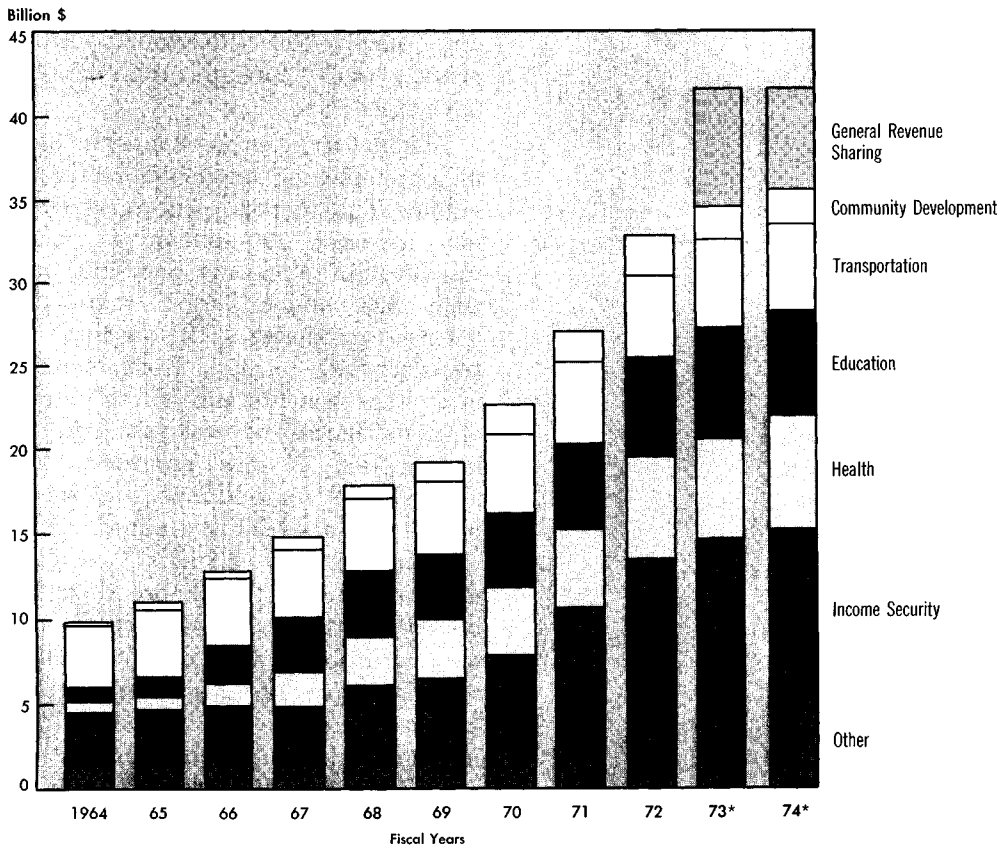
Source: "The Budget of the United States Government, 1974".

in student assistance and civilian and military retirement benefits, and declines in special benefits for coal miners (\$½ billion) which were boosted by retroactive payments in 1973, and in veterans' benefits (\$½ billion). The food stamp program—which increased nearly \$2 billion in the 1969-73 period—is unchanged in 1974.

Foreign transfer payments, mainly economic assistance to foreign governments and retirement payments to individuals living abroad, are also unchanged. The budget estimates do not include post-war economic assistance to Southeast Asia.

CHART 13

Federal Grants-in-Aid
Revenue sharing boosts grants in 1973 and 1974



*Estimate

Grants are stable

The new budget projects grants of \$41.6 billion in 1974, the same as in 1973, when grants increased \$9 billion (chart 13). This unusually large gain is the result of several factors: (1) the beginning of general revenue sharing, which was enacted in October 1972, retroactive to January (\$6¼ billion); (2) a peaking of grants under the Emergency Employment Assistance Act (\$½ billion); and (3) unexpected increases in grants for social services under the public assistance program (\$½ billion).

While total grants show no gain in 1974, there are major shifts among the grant programs. Increases are shown for environmental protection (over \$¼ billion), and law enforcement assistance (\$¼ billion including special revenue sharing). On the other hand, older programs, such as public assistance, highways, and education, decline. Grants under the Emergency Employment Assistance Act also decline from over \$1 billion in 1973 to \$½ billion in 1974.

Expenditures for general revenue sharing amount to \$6.8 billion in 1973 and decline to \$6 billion in 1974. The decline results from the fact that 1973 includes the equivalent of five quarterly payments (representing the entire calendar 1972 entitlement plus the first quarter entitlement for calendar 1973) while 1974 includes only four quarterly payments (representing the remaining three quarters of calendar 1973 and the first quarter of calendar 1974).

General revenue sharing authorizes quarterly payments totaling \$30.2 billion over the period calendar 1972 to 1977 (table 10). These funds are distributed among the States on the basis of formula, with one-third of the funds going to State governments and two-thirds going direct to local governments.

Expenditures for the largest grant program, public assistance, decline about $\frac{1}{4}$ billion to \$12½ billion in fiscal 1974. This decline is the result of: (1) program savings (effective January 1, 1973) under enacted legislation which allows States to curtail certain medicaid services and begin to charge a fee to medicaid beneficiaries; (2) the elimination on January 1, 1974, of grants for welfare assistance to the aged, blind, and disabled; as already noted, these grants are replaced by direct transfer payments; and (3) a leveling off of outlays for the AFDC program.

Education grants are down slightly and there are also significant shifts in the composition of the programs: (1) the replacement of grants to universities by over $\frac{1}{2}$ billion of direct payments to students; and (2) the substitution of special revenue sharing of about \$1¼ billion for 30 categorical grant programs.

The budget includes a renewed proposal for special revenue sharing. The new proposal combines the existing funds from many current categorical grant programs into four programs of broad-purpose grants. When fully effective, it would provide more than \$7 billion to State and local governments for education (\$2.8 billion), urban community development (\$2.3 billion), manpower training (\$1.3 billion), and law enforcement (\$0.8 billion).

Continuing deficits increase interest payments

Net interest paid increases \$1.2 billion to \$15.8 billion in 1974. This large increase, and the \$1.1 billion increase in the current year, are primarily the result of budget deficits, and secondarily of higher interest rates. Debt held by the public (including the Federal Reserve System) increases \$25 billion in the current fiscal year and \$16½ billion in 1974. Government interest payments to foreigners, which have risen rapidly in recent years, are excluded from this NIA category. They are treated as a government purchase and also as an import, and thus do not affect total GNP.

Subsidies (less the current surplus of government enterprises) decline \$1.5 billion in 1974 after advancing \$1.1 billion in the current fiscal year. Major declines are in payments to farmers (\$1 billion), the operating deficit of the CCC ($\frac{1}{2}$ billion), and in the temporary disaster relief program ($\frac{1}{2}$ billion). Increases occur in the postal deficit and in housing subsidies.

New financing agencies

The budget introduces three new institutions intended to improve the financing of Federal programs. These are the Federal Financing Bank (FFB), the

Environmental Financing Authority (EFA), and the Student Loan Marketing Association (SLMA). Under proposed legislation, the FFB, a Government-owned agency, would consolidate and improve the efficiency of financing Federal agency obligations and federally guaranteed private loans. It would purchase many of these obligations, financing the acquisitions with sale of its own debt issues to the public. Federally sponsored, but privately owned agencies such as FNMA, would be excluded from use of the FFB, but their borrowings would continue to be coordinated with Treasury under existing arrangements. The EFA, also a Government-owned enterprise, will begin operating in fiscal 1974. State or local public bodies, eligible for a grant from the Environmental Protection Agency for 75 percent of the cost of constructing waste treatment facilities under the Federal Water Pollution Control Act, and unable to borrow at reasonable terms in the private market, would apply to EFA for loans to meet their 25 percent share under that act. EFA would issue its own taxable securities to finance these loans. SLMA, a Government-sponsored, privately owned agency, will begin in 1973 to purchase student loans from private lenders, financing its purchases by borrowing from the public.

Fiscal 1975 Expenditures

THIS year's budget presents for the first time a detailed preview of outlays and receipts on a full employment basis beyond the budget year. It projects full employment outlays of \$288 billion and full employment receipts of \$290 billion in fiscal 1975. Outlays are presented in agency and functional detail; no detail is shown for receipts. Fiscal 1975 outlays on the NIA basis shown in table 11 are estimates of BEA.

Federal expenditures on the NIA basis increase \$18½ billion from 1974 to 1975. Transfer payments account for about \$9 billion of this advance, followed by grants-in-aid (\$3½ billion), defense purchases (\$3 billion), non-

Table 11.—Unified Budget Outlays and Federal Expenditures on the NIA Basis, Fiscal Years 1974 and 1975

[Billions of dollars]

	1974	1975
Unified budget outlays.....	269	288
Reconciliation items.....	7	6
Federal expenditures, NIA basis.....	276	294
Purchases of goods and services.....	112	117
Defense.....	76	79
Other.....	36	38
Transfer payments.....	102	111
Personal.....	99	108
Foreign.....	3	3
Grants-in-aid.....	42	45
Net interest paid.....	16	16
Subsidies less current surplus.....	5	5

Sources: "The Budget of the United States Government, 1974," and 1975 estimates by BEA.

defense purchases (\$2½ billion), and subsidies (less the current surplus of government enterprises) and net interest (about \$¼ billion each).

Automatic increases in social security benefits (under legislation enacted in 1972) are a factor in the advance of transfer payments as is the full year

impact of the previously discussed Federal takeover of selected State welfare programs. Grants are boosted by additional funds for waste treatment and for special revenue sharing. Pay increases account for a significant part of the advance in defense and other purchases.

Unified Budget-NIA Reconciliation

THE differences between the unified budget and the NIA Federal sector can be summarized under the following major categories: (1) coverage; (2) financial transactions; (3) netting and grossing; (4) timing; (5) land transactions; and (6) miscellaneous. Table 12 shows a summary reconciliation of Federal receipts and outlays as recorded in the unified budget and in the NIA.

Coverage

The unified budget includes receipts and expenditures associated with territories and possessions—such as the Virgin Islands, Puerto Rico, and Guam—that are excluded from the NIA. An adjustment is made to both receipts and expenditures for these transactions. Adjustment is also made for various deposit fund transactions which are excluded from the budget but included in the NIA. In recent years, the major deposit fund adjustment has involved royalties received from Louisiana off-shore oil leases. Because of a dispute over the ownership of these royalties, the Federal Government put the annual payments into an escrow account. A Supreme Court order awarded over \$1 billion of these funds to the Federal Government, and the unified budget records the transfer as an offset to 1973 expenditures. The NIA has recorded the annual royalty payments as business nontax receipts, necessitating an adjustment from the budget basis to the NIA basis. In 1973, an adjustment is necessary in order to offset the

negative impact of these receipts on budget expenditures.

Beginning with fiscal 1974, the unified budget totals include only the Federal payments to the Postal Service; in contrast, the NIA continues to record capital spending by the Postal Service as part of nondefense purchases, and the postal operating deficit as part of subsidies net of the current surplus of government enterprises. In 1974, the excess of NIA Postal Service expenditures over the Federal payment included in the unified budget is \$1.2 billion.

Financial transactions

Unified budget outlays include net lending, while the NIA excludes all loans except most CCC price-support loans, which are recorded as Federal purchases and as a part of farm income. Loan transactions excluded from the NIA but included in the unified budget are \$1.5 billion in fiscal 1974. Also in the category of financial transactions is an adjustment for purchases of foreign currency. The unified budget includes them while the NIA excludes them as an exchange of assets.

Netting and grossing

This adjustment affects only the levels of receipts and expenditures and not the difference between the NIA deficit and the unified budget deficit. The largest item in this category is the Federal Government's contribution to employee retirement funds. These con-

Table 12.—Relationship of Federal Government Receipts and Expenditures in the National Income Accounts to the Unified Budget, Fiscal Years 1972-74

	(Billions of dollars)		
	1972	1973	1974
Receipts			
Unified budget receipts.....	208.6	225.0	256.0
Coverage differences.....	-.1	-.2	-.3
Netting and grossing.....	4.6	5.3	5.7
Timing differences.....	-1.2	3.6	1.7
Miscellaneous.....		-.4	-.1
Federal receipts, NIA basis.....	211.9	233.3	263.0
Expenditures			
Unified budget outlays.....	231.9	249.8	268.7
Coverage differences.....	-.4	.6	.6
Outer continental shelf deposit funds.....		1.1	
Postal Service.....			1.2
Other.....	-.4	-.5	-.6
Financial transactions.....	-2.4	-.9	-1.5
Net purchases of land.....	.3	2.9	1.9
Netting and grossing.....	4.6	5.3	5.7
Timing differences.....	-.3	2.8	-.3
Miscellaneous.....	-1.2	-.6	-.2
Federal expenditures, NIA basis.....	233.1	259.9	275.5

Sources: Estimates by the Office of Management and Budget and BEA.

tributions are excluded from total budget expenditures as intragovernmental transactions. The NIA considers these contributions to be part of employee compensation and includes them as purchases of goods and services and as contributions for social insurance. In fiscal 1974, this adjustment amounts to \$4 billion.

Other netting and grossing consists primarily of money received from the public recorded as offsets to expenditures in the unified budget. For instance, receipts from two major veterans' insurance programs—National Service Life Insurance and U.S. Government Life Insurance—are netted against expenditures of these programs. In the NIA, this income is treated as receipts in the form of social insurance contributions. These and similar netting and grossing adjustments add about \$1.7 billion to the level of NIA receipts and expenditures in 1974.

Timing

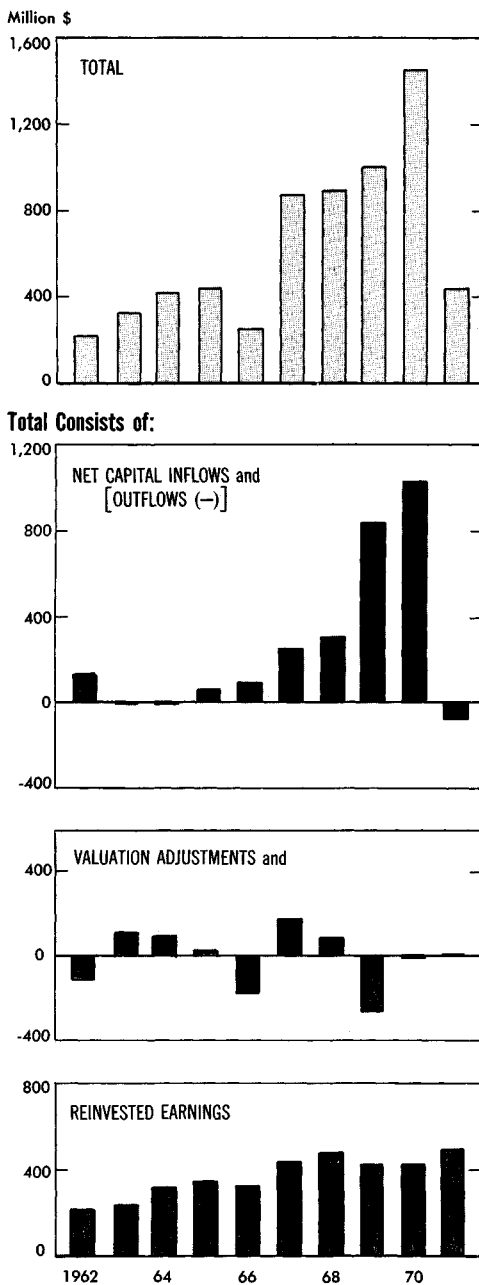
The unified budget records receipts at the time cash is collected regardless of when the income is earned; expenditures—except interest, which is recorded

(Continued on page 40)

Foreign Direct Investments in the United States, 1962-71

CHART 14

Annual Additions to Foreign Direct Investments in the United States



U.S. Department of Commerce, Bureau of Economic Analysis

73-2-14

THIS article presents annual data on foreign direct investments in the United States for the 1962-71 period. Breakdowns, by country and by industry, of the value of foreign direct investments, net capital inflows, earnings, reinvested earnings, and income paid out in the form of dividends, interest, and branch earnings are shown in tables 1 and 2. (These items are defined either in the text or in the Technical Note at the end of the article.) More detailed country by industry data are presented in tables 5 and 6. This is the first time since the 1962 publication of *Foreign Business Investments in the United States*¹ that such detailed information has been made available. That report presented data for the 1950-61 period.

The data presented in this article are based on a sample of approximately 400 of the larger foreign-owned U.S.

firms.² The sample has been matched against the 1959 benchmark universe of foreign direct investments in the United States, and sample data on earnings, reinvested earnings, income paid out, and the value of foreign direct investments in the United States have been blown up to universe estimates for each of the years presented. The data on net capital inflows, however, are as reported by the 400 companies. Since the benchmark is out of date, the universe estimates are subject to a significant margin of error; a new benchmark survey is planned as resources become available.

This article is in two parts. The first part summarizes trends in foreign direct investments and in earnings on such investments during the past decade. The second part presents the results of an empirical investigation of the determinants of foreign direct investment in the United States.

Highlights of the Past Decade

Growth of foreign direct investments

As chart 14 shows, the annual change in the value of the foreign direct investment position in the United States is the sum of net capital inflows, valuation adjustments of the foreign share of assets held by U.S. affiliates of foreign firms, and the foreign share of reinvested earnings of incorporated U.S. affiliates. The value of foreign

NOTE.—Statistical material for this article was prepared under the supervision of Julius N. Freidlin with significant contributions from Gregory G. Fouch, Cynthia L. Loitsch, Robert Boyke, and Zalie V. Warner.

1. Samuel Pizer and Zalie Warner, *Foreign Business Investments in the United States*, Office of Business Economics (now Bureau of Economic Analysis). 1962.

direct investments in the United States increased substantially in the 1962-71 period, from \$7.4 billion at yearend 1961 to \$13.7 billion at yearend 1971. The rate of growth showed a marked increase after 1966: From yearend 1961 to yearend 1966, foreign direct investments grew an average \$332 million per year, while from yearend 1966 to yearend 1971, they grew an average \$930 million per year. These figures correspond to annually com-

2. Foreign-owned U.S. firms include all U.S. firms in which a foreign person or organization holds 25 percent or more of the voting stock or an equivalent interest.

sets of transactions (totaling \$640 million), the value of foreign direct investments in the United States would have risen 8.1 percent in 1971. Preliminary data suggests that the rate of growth of foreign direct investments in 1972 was similar to the average growth rate in the 1967-71 period.

One factor encouraging the acceleration in direct investment here in recent years was probably the growth of the Eurodollar market. Foreign

firms that are discouraged by exchange controls from using national funds to invest abroad can tap the unregulated Eurodollar market for financing such investments.

Foreign investment here may have also been encouraged by the 1967 action of the Securities and Exchange Commission whereby it modified its rules regarding financial reporting of foreign-owned U.S. firms. The new regulations allow such firms' accounting practices to deviate from those com-

monly employed by U.S. firms in order to mesh better with those of their foreign parents.

Another factor is the merger movement among European firms. Given the scale of the U.S. economy, the size of the required investments in the United States is large by European standards. This problem appears to have been alleviated in the latter part of the 1960's by a merger movement among Western European firms. The investments related to this movement occurred primarily in the U.S. chemical, steel, and fabricated metals industries.

In addition to these institutional factors, the empirical results presented in the second part of this article suggest that the expanding U.S. market has had a substantial impact on the size of the annual additions to foreign direct investments in the United States.

It might be noted that, with a few exceptions, foreign-owned U.S. firms are small by U.S. standards and no U.S. industry is dominated by such firms. They do, however, have a significant position in a few industries (e.g., pharmaceuticals and nickel production). In addition, a very common characteristic is that the foreign ownership share in an affiliate is large, often reaching 95 percent.

Country of ownership

Despite the acceleration in investment here by foreigners, there has been little change over the 1962-71 period in the distribution of foreign direct investments by country of ownership (chart 15). European countries continue to hold the major share of foreign direct investments here, accounting for 69 percent of the total at yearend 1962 and for 73 percent at yearend 1971.

The United Kingdom has traditionally had the largest holdings in U.S. firms (\$4.4 billion in 1971). However, the industry distribution of those investments has changed considerably. In 1962, the largest British direct investments were in insurance (mainly fire, marine, and casualty), but British investments in manufacturing and petroleum firms are now considerably larger than their investments in insurance firms (see table 5).

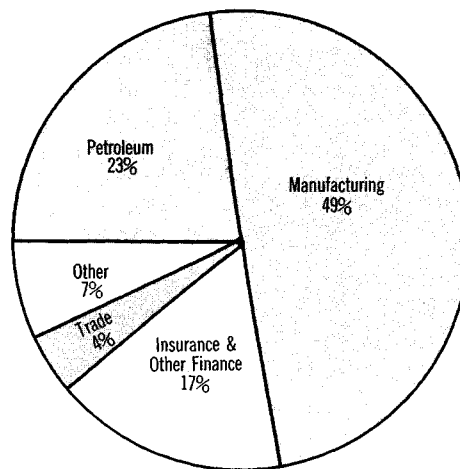
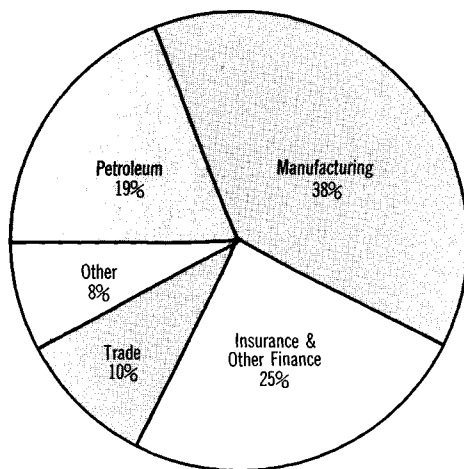
CHART 15

Distribution of Foreign Direct Investments in the United States, 1962 and 1971

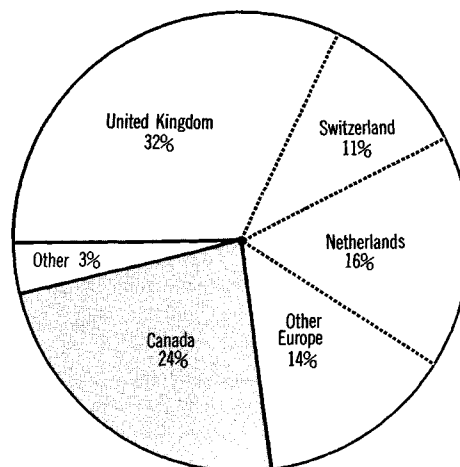
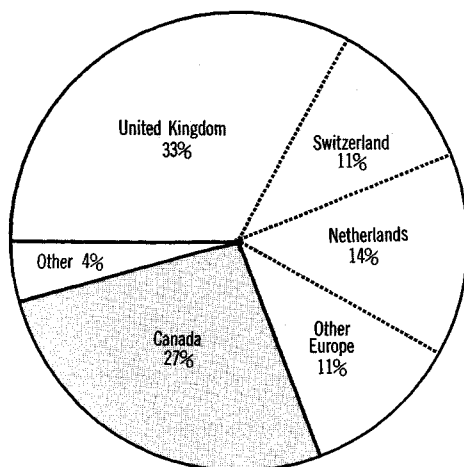
1962 (\$7,612 million)

1971 (\$13,704 million)

BY MAJOR INDUSTRY OF AFFILIATE



BY COUNTRY OF OWNERSHIP



Canadian direct investments in the United States (\$3.3 billion in 1971) have ranked next in size to those of the United Kingdom. A large part of that investment has been in manufacturing (\$2.0 billion in 1971), but investment in the "other industry" category has also been significant. In fact, the largest foreign direct investment in U.S. utilities arises from the extension into the United States of two major Canadian railroads.

The Netherlands and Switzerland are the two continental European countries with sizable positions in U.S. firms. The largest Dutch investments have been in the petroleum industry, primarily consisting of an interest (shared by the British) in a major U.S. oil company. Swiss investments are largely in manufacturing, especially in pharmaceuticals and food products.

Industry of investment

The foreign direct investment position in U.S. manufacturing (\$6.7 billion at yearend 1971) greatly exceeds that in any other industry and manufacturing's share of total investment has grown significantly during the decade, from 38 percent in 1962 to 49 percent in 1971 (chart 15). As with total foreign direct investment, the investment in manufacturing has grown more rapidly in recent years than earlier in the 1960's. Petroleum investments have also grown substantially in the past decade and are now larger than those in the "insurance and other finance" category, which was the second largest in 1962. The fact that many States limit or prohibit foreign ownership in banks has probably contributed to the decline in the share of total investment represented by "insurance and other finance". Trading companies' share of total investment has also declined over the decade. Such affiliates provide marketing outlets in the United States for goods produced by their foreign parents. Most of the decline shown in chart 15 reflected developments in 1971 when there was a sharp decline in trading company investments due to the activities of Japanese-owned trading companies as noted earlier. However, there was a significant ero-

sion before 1971 in the trading companies' share of total investment.

Components of annual additions to foreign direct investment

The two main components of the annual addition to the foreign direct investment position in U.S. enterprises have been net capital inflows and reinvested earnings; valuation adjustments have generally been small. Of the approximately \$6.3 billion added to the value of foreign direct investment in the years 1962 through 1971, \$2.6 billion came from net capital inflows while nearly \$3.8 billion was reinvested earnings. The value of the foreign share of U.S. firms' assets was adjusted downward by only \$100 million net during the decade.

Reinvested earnings are defined to include only the foreign share of undistributed earnings of incorporated affiliates. All earnings of branches are treated in the U.S. balance of payments accounts as if they were remitted to the parent as income and any actual reinvestment in the United States is treated as an offsetting capital inflow. This treatment tends to understate the importance of reinvestment. For example, if branches in 1971 reinvested the same proportion of earnings as incorporated affiliates did, total reinvestment including that of branches would have been \$100 million greater than the \$498 million reported by incorporated affiliates.

Chart 14 shows that reinvested earnings have been a much more stable component of the annual addi-

tions to foreign direct investment than have net capital inflows, particularly in the 1967-71 period. (Net capital inflows are the sum of new investments, liquidations, and changes in intercompany accounts.) Two factors are principally responsible for the instability of net capital inflows: (1) balances on intercompany accounts—which primarily show the indebtedness of the affiliates to their parents or vice versa—are affected by expectations of changes in exchange rates, as evidenced by the Japanese trading company activities of 1971; and (2) new investments tend to be lumpy and discontinuous. For example, in 1970, when the total flow of new investments was \$796 million, a single transaction involving a U.S. and a British petroleum firm accounted for almost \$400 million of the total. In 1971, there was no comparable transaction and the total flow of new investments decreased to \$255 million. This also contributed to the smallness of the 1971 increase in the value of foreign direct investments in the United States, as mentioned above.

Since 1962 there has been a steady decline in the share of earnings reinvested by foreign-owned U.S. petroleum firms, largely reflecting the use by a foreign parent company of the earnings of one U.S. affiliate to finance production facilities outside the United States. Manufacturing firms, on the other hand, repatriated a significantly smaller share of earnings in the 1967-71 period than in 1962-66 and this contributed to the rapid growth of manufacturing investments in recent years.

The Return on Foreign Direct Investments

TABLE 3 gives alternative measures of the return on foreign direct investments in the United States. Lines A through F give the basic components used to calculate the various measures; panel G gives the dollar return on the basis of each of the four measures; and panel H gives the percentage rates of return, based on the value of the foreign direct investment position at

the beginning of the year, for three of the measures. The following paragraphs deal with the components one by one. Definitions are given in the text or in the Technical Note at the end of this article.

Net earnings of foreign-owned U.S. branches were \$232 million in 1971, an increase of \$111 million from 1970 (line A). Insurance branches accounted

Table 4.—Payments of Royalties and Fees on Foreign Direct Investments in the United States, by Area of Ownership

(Millions of dollars)					
	Total	Canada	United Kingdom	Europe except United Kingdom	Other
1962.....	57	32	10	14	1
1963.....	61	40	9	12	1
1964.....	66	35	11	19	1
1965.....	67	38	11	17	1
1966.....	64	41	12	10	1
1967.....	63	43	11	8	1
1968.....	80	47	21	9	3
1969.....	101	56	25	16	4
1970 ^r	111	62	19	23	7
1971 ^p	94	64	11	15	4

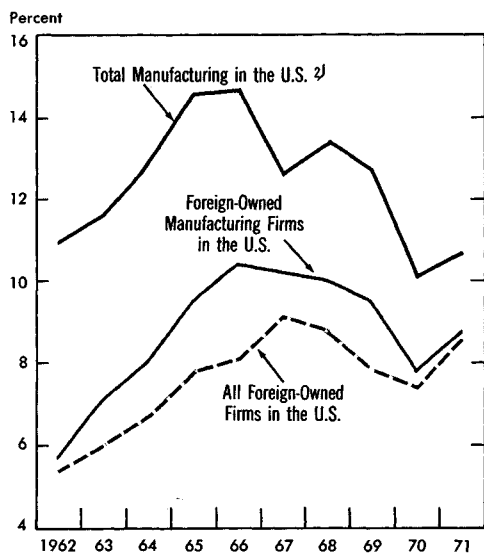
^r Revised. ^p Preliminary.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

in the United States. Interest paid by foreign-owned U.S. firms on loans from their parents has always been small; therefore, the difference between earnings and adjusted earnings has been slight. Withholding taxes are excluded since only the dividends actually received represent a benefit to parent firms. In 1971 adjusted earnings were \$1,122 million.

CHART 17

Rates of Return on Foreign Direct Investments in the United States and on Total Manufacturing in the United States¹⁾



1. Rate of return on foreign direct investments is adjusted earnings divided by book value at beginning of year. Rate of return on total manufacturing in the United States is after-tax income divided by net worth at beginning of year, as computed by First National City Bank of New York.

2. Excluding petroleum.

The *broad earnings* concept is the most complete measure of the benefits received by foreign direct investors from their U.S. affiliates. It is calculated by adding royalties and fees to adjusted earnings (lines A+B+D+E+F). In 1971, broad earnings totaled \$1,216 million.

The *balance of payments income* measure (lines A+B+E+F) focuses on other nations' returns on direct investments in the United States as recorded in the U.S. balance of payments accounts. Reinvested earnings are thus excluded. (A revision of the U.S. balance of payments accounting framework that would include reinvested earnings is being considered.) From the balance of payments viewpoint, the return to other countries on foreign direct investments in the United States was \$718 million in 1971.

Chart 16 indicates that all the alternative measures of the dollar return on foreign direct investments in the United States increased substantially over the 1962-71 period. The increase was sharpest on the earnings basis and slowest on the broad earnings basis.

Chart 17 presents rates of return from all foreign-owned U.S. firms, foreign-owned U.S. manufacturing

firms, and all U.S. manufacturing firms. The rate of return from all U.S. manufacturing firms (as computed by the First National City Bank of New York) is a return on net worth; adjusted earnings, the most comparable measure, is used for calculating rates of return from all foreign-owned U.S. firms and from foreign-owned U.S. manufacturing firms.³ The chart indicates that the rates of return from foreign-owned U.S. manufacturing firms and from all U.S. manufacturing firms are both related to the U.S. business cycle. While the rate of return from all U.S. manufacturing firms has always been higher than that from foreign-owned U.S. manufacturing firms, the gap has narrowed substantially in recent years (to only 2.0 percent in 1971). This probably reflects the fact that many of the foreign direct investments in manufacturing, which were started in the late 1950's, are only now becoming seasoned investments. The rate of return from all foreign-owned U.S. firms has always been less than that from foreign-owned U.S. manufacturing firms since the generally low rates of return on foreign-owned U.S. banks and insurance firms have pulled down the all-industry rate of return.

The Determinants of Foreign Direct Investment in the United States

THIS section of the article presents the results of an investigation of three possible determinants of foreign direct investment in the United States: (1) the size of the host country's market (the host country being that in which the investment takes place); (2) the market's rate of growth; and (3) the level of tariffs in the host country. Our investigation was limited to these three factors, although it is recognized that other factors—such as rates of return, wage differentials, transportation costs, the supply of available funds, and differential rates of inflation—may also have influenced foreign investment.

It was hypothesized that the three

factors are each positively related to foreign direct investment in the United States. The evidence indicated that only the size-of-market hypothesis can be supported statistically. In this respect, the findings presented here are similar to those of a recent study of the determinants of U.S. direct investment in the Common Market.⁴

3. The latter two rates of return are returns on the book value of the foreign parents' position in their affiliates, which is the sum of the parents' share in the net worth of the affiliates and any balances on intercompany accounts (including long-term debt). Since U.S. affiliates are generally net debtors with respect to their foreign parents, rates of return calculated on the basis of book value are probably lower than those calculated on the basis of net worth.

4. A. E. Scaperlanda and L. T. Mauer, "The Determinants of U.S. Direct Investment in the E. E. C.," *American Economic Review*, Vol. LIX (September 1969), pp. 558-568. The investigation of foreign direct investment in the United States for which results are presented here followed the general line of attack taken by Scaperlanda and Mauer.

United States, Country by Industry Detail

outflows (-)

Other industries				Year
Total	New investments	Liquidations	Inter-company accounts	
66	5	-18	79	1962
-3	38	-19	-22	1963
-42	20	-4	-57	1964
45	15	-	30	1965
-8	33	-	-41	1966
89	46	-15	58	1967
59	73	-15	1	1968
44	108	-4	-60	1969
12	18	-	-7	1970
-467	29	-	-496	1971
24	2	-	23	1962
-1	1	-10	8	1963
(*)	-	-1	1	1964
20	5	-	15	1965
30	12	-	18	1966
33	13	-	20	1967
38	5	-	33	1968
39	-	-	39	1969
39	-	-	39	1970
19	2	-	17	1971
7	-	-18	25	1962
42	18	-3	27	1963
3	17	-3	-11	1964
-13	3	-1	-15	1965
-3	13	-	-16	1966
10	(*)	-2	12	1967
-6	(*)	-15	9	1968
-5	38	(*)	-39	1969
19	3	(*)	16	1970
-22	2	-1	-23	1971
-1	-	-	-1	1962
2	-	-	2	1963
(*)	-	-	(*)	1964
2	-	-	2	1965
-3	-	-	-3	1966
47	47	-	(*)	1967
33	17	-	16	1968
-10	-	-	-10	1969
-5	-	-	-5	1970
5	-	-	5	1971
-4	-	-	-4	1962
-1	-	-	-1	1963
-6	14	-13	-7	1964
-1	-	-	-1	1965
(*)	-	-	(*)	1966
-1	-	-	-1	1967
5	3	-	2	1968
24	3	-	21	1969
-16	-	-1	-15	1970
-8	1	-	-8	1971
15	7	-	7	1962
-5	6	-	-11	1963
57	3	-	54	1964
-20	-	-	-20	1965
13	-	-	13	1966
-51	10	-	-61	1967
-5	10	-	-15	1968
21	-	-	21	1969
-14	19	-	-33	1970
-43	1	-	-44	1971
30	2	-	27	1962
-26	3	-	-29	1963
-8	16	-	-24	1964
52	68	-	16	1965
-39	22	-	-61	1966
-3	-	-	-3	1967
-477	9	-	-486	1968
1	-	-	1	1969
-10	(*)	-5	-5	1970
-1	-	-	-1	1971
-2	-	-	-2	1962
-2	-	-	-2	1963
1	-	(*)	1	1964
-1	-	-	-1	1965
-11	1	-	-12	1966
-24	-12	-	-11	1967
13	3	(*)	10	1968

Analytical framework

The dependent variable used is the annual change in the foreign direct investment position, denoted by ΔI . The size-of-market hypothesis is tested by relating ΔI to host country GNP, denoted by Y . GNP is thus assumed to adequately reflect the potential demand for an affiliate's output. The market-growth hypothesis is tested in two alternative ways, by relating ΔI to the absolute change in U.S. GNP (ΔY) and to the percentage rate of growth of U.S. GNP ($\Delta Y/Y$).

Because tariffs make a foreign country's exports less competitive with goods produced in the host country, it is frequently argued that high tariff levels encourage direct investment. However, the irreversible nature of many direct investments suggests that it may not be so much the current level but expected changes in the level of tariff which affect direct investment. Both forms of the hypothesis were examined.

The level of the U.S. tariff barrier is represented by the ratio

$$T = \frac{\text{total tariff proceeds}}{\text{total value of dutiable imports}}$$

Another proxy used in other studies replaces the denominator of T by the total value of all imports.⁵ However, a ratio calculated that way could move, suggesting a change in the level of the tariff barrier, if there were simply a change in the dutiable-nondutiable composition of imports. This is not to suggest that the ratio T suffers from no conceptual difficulties. For example, T could move if there were a change in the composition of dutiable imports since tariff rates differ among commodity groups. In addition, T could fall as tariff barriers become high enough to be completely prohibitive; however, the other proxy is subject to this same criticism.

Expected changes in tariff barriers are represented by the annual change

in the ratio T , denoted by ΔT . This implies that firms use past experience in predicting the future—a common assumption in economic literature. While the relationship between ΔI and T should be positive (i.e., the two variables should move in the same direction), that between ΔI and ΔT may be either positive or inverse. If firms expect tariff levels to rise in the future because they rose in the past, the relationship between ΔI and ΔT would be positive. If, on the other hand, a rise in the level of tariffs was expected to be temporary and reversible (as with "temporary" surcharges), the relationship between ΔI and ΔT could be inverse.

Empirical results

A number of combinations and variants of the three hypotheses (size-of-market, market-growth, tariff-barrier) were tested by applying the ordinary least squares regression technique to annual data for the 1952-71 period. The most interesting results of these tests are summarized in table 7. Equations (1)-(4) each contain three explanatory variables representing different versions of the three hypotheses. Equations (5) and (6) test all three hypotheses but also examine the possibility that foreign direct investment in the United States is influenced by both the level of and expected changes in tariff barriers.

The size of the U.S. market (Y) was the only variable statistically significant (at the one percent level) in all equations and its coefficient always had the expected positive sign. However, there were relatively large fluctuations in the size of its coefficient among equations. All other coefficients whose signs could be theoretically specified were incorrectly signed (the sign of the coefficient of ΔT was left unspecified), but the only statistically significant coefficient for these other variables as indicated by the "t" ratio was that of the annual change in the size of the U.S. market (ΔY) in equation (3). However, the Durbin-Watson statistic for equation (3) indicates the presence of positive serial correlation; this imparts an upward bias to the "t" ratio (the measure of statistical sig-

5. Scaperlanda and Mauer employed neither of these proxies but instead used U.S. exports to the E.E.C. ÷ exports from E.E.C. countries to other E.E.C. countries. The use of this ratio is based on the assumption that a higher E.E.C. tariff barrier for countries outside the E.E.C. will have the effect of decreasing U.S. exports to the E.E.C. (the numerator of the ratio) while simultaneously increasing intra-area exports (the denominator).

Table 7.—Equations for Explaining Changes in the Value of Foreign Direct Investments in the United States: Annual Data, 1952-71

Equation	Con- stant	Y	ΔY	$\Delta Y/Y$	T	ΔT	\overline{SEE}	$\overline{SEE}\dagger$	\overline{R}^2	DW
1.....	974.28 (0.82)	1.54 ** (3.04)	-6.56 (1.65)		-97.47 (1.12)		166.0	0.31	0.74	**1.44
2.....	1,456.16 (1.26)	1.04 ** (3.13)		-21.75 (1.11)	-121.63 (1.36)		173.0	.33	.72	**1.60
3.....	-332.56 (2.62)	1.90 ** (5.29)	-8.19 * (2.23)			-53.15 (.62)	153.0	.29	.73	1.39
4.....	-117.35 (0.87)	1.37 ** (6.42)		-30.80 (1.64)		-60.21 (.66)	181.0	.34	.70	**1.56
5.....	876.88 (0.66)	1.55 ** (2.95)	-6.56 (1.60)		-90.0 (.91)	-17.74 (.19)	171.0	.32	.73	1.45
6.....	1,380.22 (1.06)	1.05 ** (3.01)		-21.64 (1.07)	-115.82 (1.15)	-14.24 (.14)	179.0	.34	.70	**1.61

NOTE.— \overline{R}^2 is the coefficient of determination corrected for degrees of freedom. Values in parentheses are t ratios, DW is the Durbin-Watson statistic, \overline{SEE} is the standard error of estimate corrected for degrees of freedom (measured in millions of dollars), and $\overline{SEE}\dagger$ is \overline{SEE} as a percentage of the average value of the dependent variable.

The dependent variable in each equation is ΔI , the annual change in foreign direct investment in the United States (measured in millions of dollars). The independent variables Y, ΔY , $\Delta Y/Y$, T, and ΔT represent U.S. GNP, the annual change in U.S. GNP, the percentage change in U.S. GNP, the level of tariff barriers, and the annual change in the level of tariff barriers, respectively. The variables Y and ΔY are measured in billions of dollars.

The symbols * and ** above the t ratios indicate that the regression coefficients are significantly different from zero at 5 percent and 1 percent confidence levels respectively.

The symbol ** above the Durbin-Watson statistics indicate that the null hypothesis of serial independence of the residuals cannot be rejected at the 1 percent level of significance. Tests of the Durbin-Watson statistic are based on the Theil-Nagar one-tailed testing procedure.

nificance) and thus may lead one to erroneously find a variable significant when it is not.

These results resemble those of the Scaperlanda and Mauer study of U.S. direct investment in the Common Market, in that only the size-of-market hypothesis can be supported. However, Scaperlanda and Mauer obtained coefficients of determination (\overline{R}^2) in the neighborhood of 0.95, while the values for the equations presented here cluster around 0.72. More importantly, the standard error of estimate for the equations presented here is consistently a much higher percentage of the average value of the dependent variable than was the case in the Scaperlanda-Mauer work.

It should be noted that this is a relatively simple model of direct investors' behavior compared to the accelerator and neoclassical investment models employed in recent years. Most of these models, however, also rest on the notion that direct investment is related to the size of the market for the output of the direct investment firm.

Technical Note

The various components of the four measures of return on foreign direct investments presented in table 3 are defined below.

Item and definition

1. Branch earnings (line A): The net earnings of U.S. branches of foreign companies after U.S. income taxes, but before depletion charges (except amortization of the actual costs of capital assets) and foreign taxes. Included in branch earnings are the foreign share in the net earnings of U.S. partnerships, sole proprietorships, and other types of unincorporated organizations.

2. Dividends (line B): Dividends on common or voting stock only, net of U.S. withholding taxes; dividends are included in income as balance of payments flow items.

3. U.S. withholding taxes (line C): Taxes withheld on the payment of dividends (to be distinguished from income taxes imposed on the earnings of a business). Taxes are also withheld by the payor on interest and preferred dividends but both interest and preferred dividends are reported to BEA on a net basis and, therefore, our data on withholding taxes relate only to those on common stock dividends.

4. Reinvested earnings (line D): The foreign parents' share in the net earnings of their U.S. corporations less gross dividends (before withholding taxes) on common stock.

5. Interest (line E): The net interest received on intercompany accounts or on long-term debt of foreign

owned U.S. affiliates held by the parent or other nonbank foreign investors plus preferred dividends—all after deduction of any U.S. withholding taxes. Interest is included in income as a balance of payments flow item.

6. Royalties and fees (line F): Net payments by U.S. affiliates to foreign direct investors (after withholding taxes) for the use of tangible property, intangible property or rights (patents, techniques, trademarks, copyrights, etc.), and for professional, administrative, and management services.

(Continued from page 28)

on an accrual basis in both the budget and the NIA—are generally recorded in the budget at the time the checks are issued. The NIA records taxes paid by business in the time period in which the income is earned rather than at the time the taxes are paid. Personal income taxes are recorded at the time of payment. NIA receipts in 1974 exceed cash collections by \$1.7 billion.

The principal timing adjustment on the expenditure side is for purchases of goods and services. In the NIA, purchases from the private sector are recorded mainly at the time of delivery to the Government. In 1974, deliveries exceed checks issued by \$0.3 billion.

Land transactions and miscellaneous adjustments

All purchases and sales of land are excluded from the Federal sector of the NIA. The NIA also excludes receipts from the sale of oil leases which offset expenditures in the unified budget. The sum of these items add \$1.9 billion to NIA expenditures in 1974.

There are a number of other differences between the two concepts, including certain foreign currency transactions, capital gains, other smaller timing adjustments, and several other items of lesser importance.

Inventory-Sales Ratios in Manufacturing and Trade, 1961-72

INVENTORY-SALES ratios are frequently used to evaluate current holdings of inventories and to project this volatile component of GNP. The usefulness of these ratios stems from well-known regularities in their behavior. Cyclically, they are inversely related to business activity: they tend to rise as sales fall and fall as sales rise. Over the longer run, management is always eager to reduce I-S ratios, and this desire may have intensified. Technological developments, for instance improved transportation and increasing use of computers, facilitate the reduction of I-S ratios. Factors such as these may have accounted for whatever secular decline in the ratios can be identified in the postwar period.

However, from time to time major irregularities in I-S ratios crop up, and it is important to understand their causes so that the ratios can be used judiciously. A major event of this type occurred in 1966 when I-S ratios rose rapidly and, contrary to general expectation, remained high for a prolonged period. It may still be remembered that many forecasters of the business outlook went wrong because they foresaw a decline in inventories that never occurred. The major purpose of this study is to analyze the causes of this irregularity in 1966 and its influence on subsequent I-S ratio patterns.¹ A brief account of the 1961-65 period provides the background for this analysis.

The I-S ratios for this study were

NOTE.—Douglas R. Fox assisted in the preparation of this study.

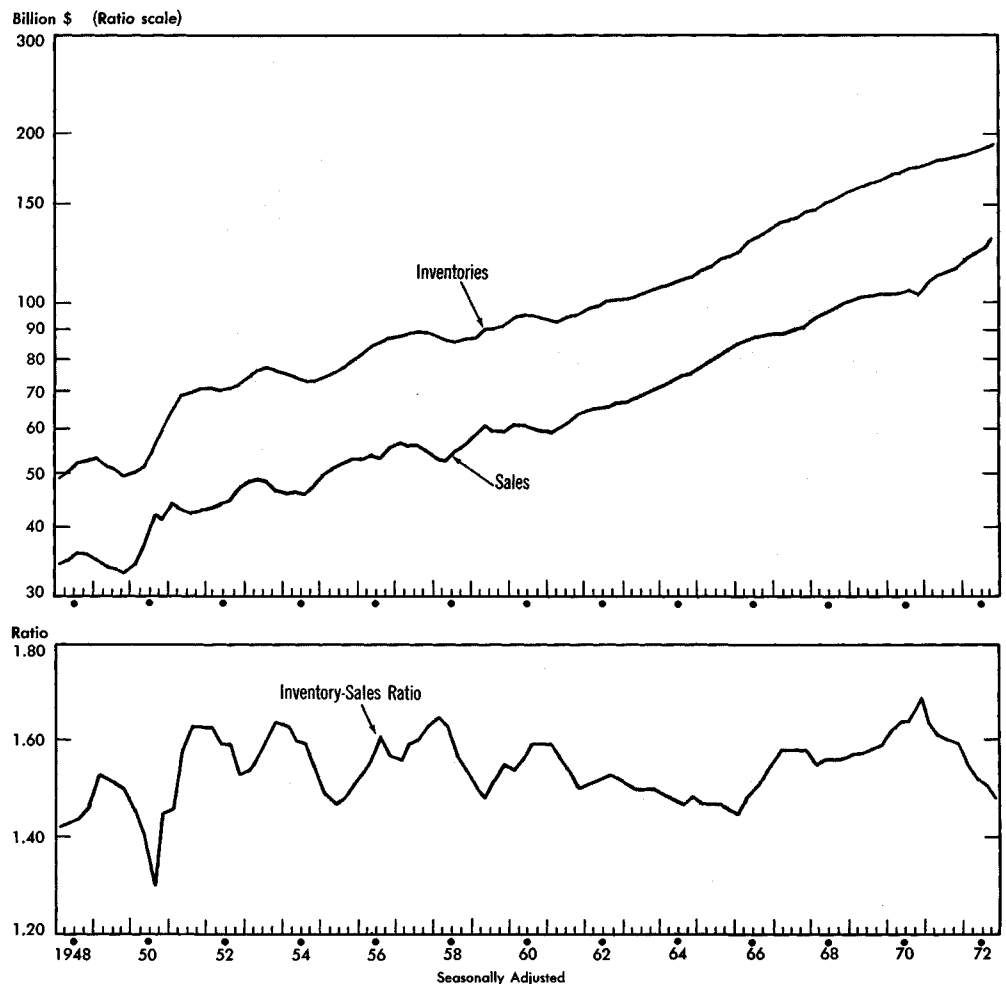
1. Another study that concentrated on this period came to conclusions generally similar to those below. See Barry Bosworth, "Current Inventory-Sales Relationships," *Brookings Papers on Economic Activity*, 1970:1, pp. 134-140.

calculated on a quarterly basis using seasonally adjusted end-of-quarter book value inventories and seasonally adjusted average monthly sales for the quarter. These book value data undergo

adjustment before use in the national income and product accounts. In these accounts, inventories used up are uniformly valued at replacement cost. Their valuation in book value data

CHART 18

Inventories, Sales, and Inventory-Sales Ratio for Total Manufacturing and Trade



Data: BEA-Census

U.S. Department of Commerce, Bureau of Economic Analysis

73-2-18

depends on the particular accounting method employed and in general differs from replacement cost. Further, the

industrial coverage of the book value data is narrower, but greater industrial detail is available.

That, in combination with moderate upward movement in the ratio for the automotive group (largely importers and auto parts dealers), precluded further decline in 1965 in the ratio for durables wholesalers and wholesalers overall. The ratio for nondurables wholesalers, representing over half of wholesale trade volume, is dominated by the stability of the groceries and related products group and so was stable throughout the period 1961-65.

Decline in the Inventory-Sales Ratio, 1961-65

THROUGH 1961, the movement of the I-S ratio for manufacturing and trade firms was dominated by the pattern of cyclical rise and fall (chart 1). The decline from 1.59 to 1.50 during 1961 can be viewed as a retreat from the high level of the 1960-61 recession as inventories were first liquidated and then accumulated at a rate slower than that at which sales recovered.

The ratio recorded a gradual but steady decline from 1962 to the first quarter of 1966, when it reached 1.45. In addition to developments in specific industries, there were general factors that probably contributed to the slower growth of inventories than of sales. While sales grew steadily, capacity utilization and order backlogs in

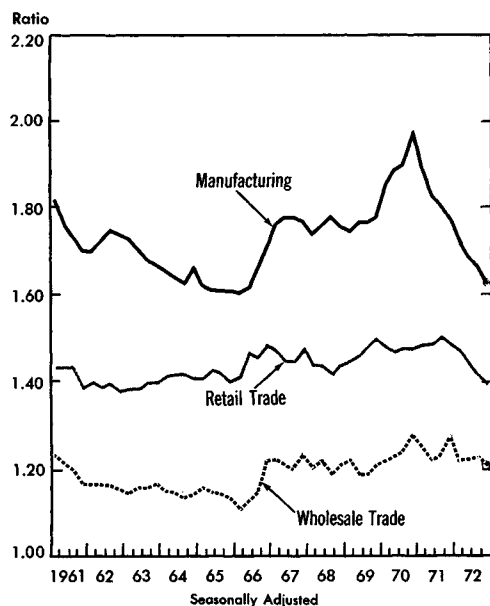
manufacturing increased only moderately at least through 1964, indicating a relatively easy supply situation. Also, a long period of industrial price stability dampened the motive to hedge against price increases.

The decline in the I-S ratio from 1961 through the end of this period was pronounced in manufacturing (chart 2). Most manufacturing industries, both durables and nondurables, showed a decline in the ratio over this period. The principal exceptions were the automobile and aircraft industries, neither of which showed any decisive downward movement in the ratio. For manufacturing as a whole, the I-S ratios for stocks of finished goods and of materials and supplies both declined from 1961 to 1965, while the ratio for work-in-process inventories held steady.

In the trade sector, it is difficult to identify a trend. The I-S ratio declined gradually for merchant wholesalers from 1962 through late 1964, reflecting the declining ratio for durable goods wholesalers. Thereafter, reduced levels of sales of furniture and home furnishings and of lumber and construction materials—related to the weakness in housing activity—pushed the ratios higher for wholesalers in those two Census Bureau “kinds of business.”

The I-S ratio for retailers declined from 1961 to 1962; thereafter, it was roughly stable with disparate movements in the components. The overall ratio for nondurable goods retailers, who accounted for approximately two-thirds of total retail sales, was steady in the period 1961-65. This reflected a very steady ratio for the food group with mild offsetting movements in the general merchandise and “all other” groups. The ratio for the automotive group advanced during 1962-65, as it did over the 1960's as a whole. This uptrend was partly caused by the proliferation over time of auto models and accessories, as well as the competitive desire to provide quick delivery. In the case of nonautomotive durable goods dealers, the overall I-S ratio and the ratios for component kinds of business during 1961-65 reflected fairly clear alternations between periods of rising sales with relatively flat inventories and rising inventories with relatively flat sales. As in wholesale trade, the period of rising ratios, comprising most of 1964 and early 1965, corresponded with the period in which the weakness in residential construction had an impact on lumber-building-hardware dealers and furniture and appliance dealers.

CHART 19
Inventory-Sales Ratios for Manufacturing and Retail and Wholesale Trade



Ratio Rises to a High Plateau, 1966-69

BY 1965, factors in the general economic situation tended to encourage an increase in holdings of inventories relative to sales: capacity utilization was approaching moderately high levels,

slower deliveries were becoming more frequent, and prices were rising more rapidly. Reflecting such factors, manufacturing and trade firms added \$10.1 billion to their inventories between the

first quarters of 1965 and of 1966—about twice as much as the average annual addition during the 3 previous years. However, sales advanced strongly, increasing \$8.2 billion during the same period, and the I-S ratio dropped to a 15-year low at the beginning of 1966. Thereafter, the situation altered significantly as sales advanced slowly, increasing only \$2.2 billion through the first quarter of 1967, and the sales slowdown evidently resulted in some unintended inventory accumulation. Firms added \$15.1 billion to their inventories between the first quarters of 1966 and of 1967, and the I-S ratio increased sharply over that period from 1.45 to 1.58, a level that was maintained through the rest of 1967. Compared with other three- or four-quarter increases in the ratio in the years since World War II, this advance was second in size only to that which occurred during the 1950-51 upsurge related to the outbreak of the Korean war.

In addition to these developments usually associated with a recession, the rise in the ratio during 1966 was in part caused by the impact that higher military spending had on specific manufacturing industries. Manufacturers thus affected and others in the machinery and nonautomotive transportation equipment industries, together with dealers in certain durable goods lines of trade—electrical goods, and machinery, equipment, and supplies in wholesaling, and furniture and appliances, and “all other” durables in retailing—largely account for the quite high and steady ratio for total manufacturing and trade through the 1967-69 period. In general, the movements of the ratios of component industries and kinds of business showed greater diversity during 1967-69 than they had in 1961-65.

Manufacturing

Producers of nondurables were not greatly affected by the slowdown of economic growth in late 1966 and early 1967. The rise in their overall I-S ratio was mild, and for those industries in which a cyclical type of rise occurred, corrections moved the ratio back to or near earlier levels by late 1967 or early 1968.²

Producers of durables encountered a slowing of sales expansion in 1966 followed by a widespread sales decline in the first quarter of 1967. This slowing and decline occurred in most industries, although it was less noticeable in defense-related production. Inventory accumulation, apparently unintended to some degree, continued throughout the sales slowdown, and the resulting rises in durables producers' I-S ratios were generally steep.

By mid-1967, the ratios had begun to move lower in most major durables industries. By mid-1968, the ratios for manufacturers of instruments and related products, stone-clay-glass products, and “all other” durables had dropped back below their 1963-65 averages and close to the levels of early 1966. Complicated by the threat of a mid-1968 steel strike, the ratio for producers of primary metals moved irregularly in 1967-69, but by the final quarter of 1969 was back almost to the 1966 low. The ratio for producers of fabricated metals reached its lowest point in the decade in the first quarter of 1968, rose as a consequence of the strike-related inventory buildup, and after the strike was averted again moved lower.

The ratio for producers of motor vehicles was slightly higher and its movement more irregular in 1967-69 than in the early 1960's. The major groups of durables not yet accounted for—aircraft and electrical and nonelectrical machinery—may be combined for further analysis into the Census Bureau's market category “equipment and defense products (except automotive).”

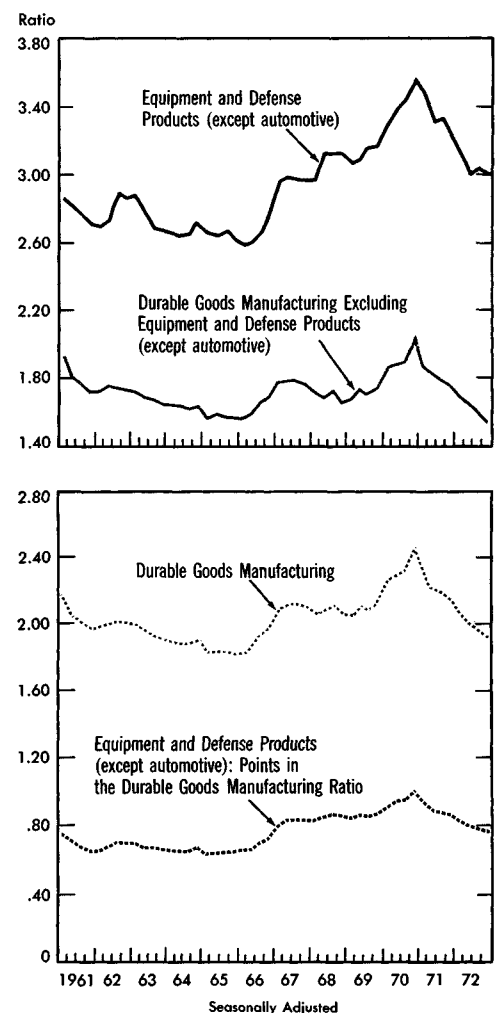
Equipment and defense products

It will be shown below that the high ratio for durable goods manufacturing during 1967-69 is largely attributable to the equipment and defense products market group. When a rough division

of that market group is made, defense products industries had greater influence in raising the I-S ratio for that group than did producers' capital goods. Further, a large part of the upward shift in the ratio of goods-in-process inventories to sales for durables manufacturing can be traced to defense products industries.

The influence of a particular component on the I-S ratio of an aggregate depends on the weight, or importance, of that component within the aggregate and the I-S ratio of the component. Therefore, the influence of the equipment and defense products group on the ratio for all durables manufacturing can be traced to two elements: (1) the mix of industries, i.e., the importance of

CHART 20
Manufacturing Inventory-Sales Ratios



2. The average of the quarterly I-S ratios for 1963-65 is used in the text and table as a marker from which to gauge the subsequent changes in the I-S ratios. Although the 1963-65 period has characteristics that would suggest its being interpreted as having a “normal” I-S ratio—no wide inventory swings, steady sales growth, reasonable price stability, and others—such an interpretation was not intended in calculating the average.

equipment and defense products within durables manufacturing; (2) the I-S ratio of the equipment and defense products group. The second element is in turn separable into: (2a) the mix of industries within the equipment and defense products group; (2b) the I-S ratios within the equipment and defense products group. The elements are reviewed in turn below.

To examine the first element, the industrial mix is measured by the percentage that shipments of the component industry or group are of total shipments. Shipments of equipment and defense products averaged 24 percent of total manufacturing durables shipments during 1963-65, expanded during 1966-67 to 28 percent, and remained at 27 or 28 percent through 1969.

The upper panel of chart 3 presents the data for examining the second element. It shows that the I-S ratio for equipment and defense products is high relative to the ratio for the rest of durables manufacturing. It also shows that the ratio for equipment and defense products rose sharply from mid-1966 to early 1967, steadied through the first quarter of 1968, then moved intermittently higher through 1969.

The combined influence of the two elements can be calculated by multi-

plying the equipment and defense products group's recorded I-S ratio for each quarter by the percentage that the shipments of that group were of total durables shipments for that quarter. The product is the number of points that the two elements together contribute to the I-S ratio for durable goods manufacturing. As is shown in the lower panel of chart 3, equipment and defense products gave significant upward push to the ratio for durables manufacturers through 1967: from the first quarter of 1966 to the fourth quarter of 1967, this group contributed 19 points of the total net rise of 29 points. The number of points contributed by this group held steady at a high level through 1969, partly offsetting the effect on the total durables manufacturing ratio of the decline in the contribution of other industries.

The relative influence of the two elements can be roughly measured as follows. First, the I-S ratio for the equipment and defense products group is held constant while the industrial mix in durables manufacturing is allowed to take its actual value each quarter. This isolates the change in the number of points due to the changing industrial mix. Second, the industrial mix is held constant while the group's I-S ratio is allowed to take its actual

value each quarter. This isolates the change in the number of points due to the changing I-S ratio. Such separation shows that, from the first quarter of 1966 to the fourth quarter of 1967, of the 19 points contributed by equipment and defense products to the rise in the durables ratio, 10 points were due to the increasing importance of equipment and defense products in the industrial mix and 9 points were due to the rising I-S ratio for this group. Then, during 1968-69, a rising I-S ratio for equipment and defense products offset a decline in this group's importance in total manufacturing durables shipments.

As noted above, the behavior of the I-S ratio for the equipment and defense products group can be analyzed by considering two elements—the industrial mix within the group and I-S ratios within the group. To do this, the group was roughly divided into defense products industries and producers' capital goods industries.³ In the period 1966-

3. These are the Census Bureau's "old" series, which have been discontinued. They have been recalculated for this study using recently revised inventory and sales data because the "new" series, designated as defense capital goods (or defense products) and nondefense capital goods, extend back only to 1968. The defense products industries include communications equipment, complete aircraft, aircraft parts, and ordnance; the series includes significant amounts of nondefense work in these industries and omits defense work performed in the shipbuilding industry. The producers' capital goods industries include nonelectrical machinery (except farm machinery and machine shops), electrical machinery (except household appliances, communications equipment, and electronic components), shipbuilding and repairing, and railroad and streetcar equipment.

Table 1.—Inventory-Sales Ratios in Manufacturing, by Stage of Fabrication

	Nondurables			Transportation equipment			Electrical and nonelectrical machinery			Other durables		
	Materials and supplies	Goods in process	Finished goods	Materials and supplies	Goods in process	Finished goods	Materials and supplies	Goods in process	Finished goods	Materials and supplies	Goods in process	Finished goods
1963-65.....	0.56	0.20	0.62	0.42	0.89	0.16	0.59	1.09	0.66	0.68	0.56	0.61
1966:												
I.....	.54	.20	.60	.39	.88	.16	.59	1.08	.59	.65	.55	.56
II.....	.55	.20	.60	.40	.94	.16	.61	1.08	.59	.65	.56	.55
III.....	.54	.20	.61	.47	1.07	.18	.63	1.10	.60	.66	.57	.55
IV.....	.55	.21	.62	.44	1.06	.18	.64	1.13	.62	.69	.59	.57
1967-69.....	.54	.21	.63	.47	1.35	.19	.66	1.20	.66	.68	.60	.59
1970:												
I.....	.53	.21	.65	.51	1.63	.23	.72	1.30	.74	.70	.61	.61
II.....	.53	.21	.67	.47	1.57	.22	.72	1.28	.75	.71	.66	.65
III.....	.53	.21	.67	.50	1.64	.22	.71	1.26	.78	.70	.65	.65
IV.....	.54	.21	.68	.60	1.94	.27	.72	1.25	.81	.74	.67	.69
1971:												
I.....	.52	.21	.67	.46	1.54	.21	.72	1.20	.80	.72	.65	.70
II.....	.52	.21	.65	.47	1.50	.21	.72	1.19	.77	.71	.60	.64
III.....	.51	.20	.65	.40	1.43	.19	.69	1.14	.75	.74	.63	.65
IV.....	.51	.20	.64	.42	1.54	.19	.66	1.09	.72	.71	.60	.63
1972:												
I.....	.49	.20	.62	.38	1.52	.18	.62	1.02	.68	.67	.59	.62
II.....	.49	.19	.61	.35	1.52	.18	.60	1.01	.67	.64	.57	.61
III.....	.48	.20	.61	.35	1.47	.18	.61	1.02	.67	.64	.56	.59
IV ^p.....	.47	.19	.59	.32	1.49	.14	.61	1.01	.63	.62	.53	.56

^p Preliminary.

69 the two components were subject to distinctly different demand situations which diversely affected the industrial mix and the I-S ratios.

The share of defense products industries within equipment and defense products increased from 44 percent at the beginning of 1966 to almost 53 percent by early 1968 and declined steadily thereafter. In contrast, the I-S ratio for defense products industries rose substantially through 1969. Thus, from 1966 into 1968, the changing mix within the equipment and defense products group and the rising I-S ratio for defense products industries both were operating to raise the I-S ratio for the group. However, from late 1968 onward the two elements were largely offsetting.

The major factor contributing to the rising ratio for defense products industries during 1966-69 was the continued very sharp rise in the ratio for aircraft producers, which had an impact even though their share of defense products industries sales declined after early 1966. Communications equipment producers had both a gradually rising I-S ratio and, after late 1967, a rising share of sales. The movement and the high level of I-S ratios in these industries reflect expanded production, in this case defense production. Characteristically these industries have long manufacturing leadtimes. As a result, the inventory accumulation relative to sales was largest in goods-in-process.⁴ This was particularly striking in the aircraft industry.⁵ This development had a clear impact on the goods-in-process I-S ratio for total durables. That ratio, which had been stable during 1963-65, rose sharply from mid-1966 to mid-1967, and remained high through 1969. The rise in the goods-in-process I-S ratio that can be attributed to the aircraft industry accounted for roughly one-half of the rise from mid-1966 to

mid-1967 in the total durables ratio. Then, as the goods-in-process I-S ratio for all other durables fell halfway back to the early 1966 level, the still rising ratio in the aircraft industry sustained the total (table 1).

The share of producers' capital goods industries in the equipment and defense products group dropped during 1966 and 1967 and increased steadily for the remainder of the period. The I-S ratio for capital goods rose sharply from mid-1966 to mid-1967 and then steadied through the end of 1968. The 1966-67 rise was associated with a decline in sales. This was the first period of depressed activity for this group in 4 years, so that some difficulty in adjusting inventory was to be expected. Subsequently, sales showed strength during the last half of 1968 and the first half of 1969 when the I-S ratio dropped moderately for several quarters. Thus, during 1966-67 the I-S ratio for capital goods producers was rising, but their share in the equipment and defense products group was falling; in 1968, changes in both factors were small; only in 1969 did they move together to give a moderate upward push to the I-S ratio of the equipment and defense products group (and thus to the ratio for total durables manufacturing). On the whole, then, the net effect of the two factors was not large.

Trade

The merchant wholesalers' I-S ratio moved up during 1966, reaching a plateau in the fourth quarter which held through the next 3 years. The ratio for wholesalers of nondurable goods showed a slight upward trend after 1966 but generally moved little. The slowdown of economic activity in late 1966 and early 1967 had a widespread impact on durables wholesaling; sales leveled off and then declined, causing substantial inventory buildup and higher I-S ratios. The ratios for most lines of durables wholesaling moved lower over the next 2 years, back to levels which had prevailed before the 1966-67 runup. However, there were two clear exceptions that were largely responsible for the durables wholesaling

ratio being higher during 1967-69 than earlier in the decade. The ratio for electrical goods dealers dropped somewhat after the first quarter of 1967, but because the 1967-69 ratios in both the consumer and the industrial segments were higher than they had been earlier in the decade, the ratio stabilized at a high level in contrast to the downtrend in the first half of the decade. The ratio for the machinery, equipment, and supplies group remained well above earlier levels.

The ratio for retail dealers rose very sharply in 1966. It then fell gradually and by the end of 1968 had returned almost to the 1963-65 level. The ratio for nonautomotive durables rose in 1966 and 1967, as sales slowed in 1966 and declined early in 1967. The ratio remained high during the next 2 years as the net result of diverse component movements. In the lumber-building hardware group, which had had a large sales decline in 1966 and a steep rise in the I-S ratio, the ratio moved down over the period 1967-69. However, the ratio for the furniture and appliance group did not decline after the 1966-67 rise. Within that group, the ratio for appliance-TV-radio stores had shown a sharp rise in 1964-66, and the 1966 level was maintained in 1967-69. The need to carry inventories of color as well as monochrome TV's may explain this shift. The ratio for the heterogeneous "all other" durables category—including outlets for jewelry, books, sporting goods, secondhand goods, optical goods, farm equipment, and bicycles—continued to rise sharply through mid-1968 and was the major source of subsequent sharp moves in the overall ratio for nonautomotive durables retailers. Because "all other" durables is an inventory-intensive grouping (the I-S ratio varied between 3.00 and 4.00), sharp rises and falls in the ratio are generated readily, especially by fluctuations in sales, as was the case during 1967-69.

A drop in automotive dealers' sales in the first quarter of 1966 resulted in a sharp rise in inventories and an even sharper rise in the I-S ratio. Sales also fell in the fourth quarter of 1966 and markedly so in the first quarter of 1967.

4. A similar pattern was observed during the Korean war buildup. See "Distribution and Trends of Manufacturers' Inventories by Stage of Fabrication," SURVEY OF CURRENT BUSINESS, March 1952, pp. 5-7.

5. The goods-in-process I-S ratio for transportation equipment rose from 0.88 in the first quarter of 1966 to 1.41 in the fourth quarter of 1967. Finer stage of fabrication detail by industrial component is not available quarterly. On the basis of data from the Annual Survey of Manufactures it is reasonable to attribute the rise in the goods-in-process ratio for transportation equipment largely to the aircraft industry.

This I-S ratio remained high through early 1967 and then fell sharply in the second and third quarters of that year. A strike distorted the ratio late in 1967, but it then moved steadily up, continuing the uptrend of the 1960's.

The ratio for nondurables retailers

remained steady in 1966-69, due mainly to continued stability in the ratio for the food group and offsetting movements elsewhere—up a few points in the case of the general merchandise group and down a few points in the case of "all other" nondurables.

during the first three quarters of 1971. Sales fell off during those quarters and goods-in-process inventories (which predominate in the aircraft industry) rose steeply at first and then declined moderately. Beginning with the fourth

Recession and Recovery, 1969-72

THE movements of inventories, sales, and the I-S ratio during the 1969-70 recession and subsequent recovery contrast significantly with movements during the other postwar recessions and recoveries (chart 4). In contrast to the inventory liquidations in other recessions, total manufacturing and trade inventories continued a steady rise throughout the recent recession. The contrast is especially striking in the behavior of durable goods inventories, which in the past recessions accounted for most of the typical inventory liquidation. In the recent recession inventories of durables advanced each quarter. This advance in manufacturing and trade inventories produced the largest cyclical peak-to-trough rise in the I-S ratio of the five postwar recessions even though the dip in total sales was comparatively mild.

There were significant differences also in the recovery phases of the business cycle. In other postwar recoveries, the ratio reached a minimum by the third or fourth quarter after the trough and then turned up. The minimums ranged from 88 percent to 96 percent of the ratio's value in the business cycle peak quarter. In the latest recovery, the ratio has declined continuously as sales growth has outpaced inventory growth. However, though protracted, the decline was mild. Four quarters after the trough the ratio was no lower than it had been at the peak, and it was only in the fourth quarter of 1972 (8 quarters after the trough) that it was down to 93 percent of the peak quarter value.

In terms of general factors, this unusual inventory pattern is probably related to fulfilled expectations: first, as evidence pointing to recession

mounted during 1969, expectations counseled moderation in inventory accumulation; second, once the recession began, expectations that it would be relatively short and mild counseled against extensive inventory liquidation.

Manufacturing

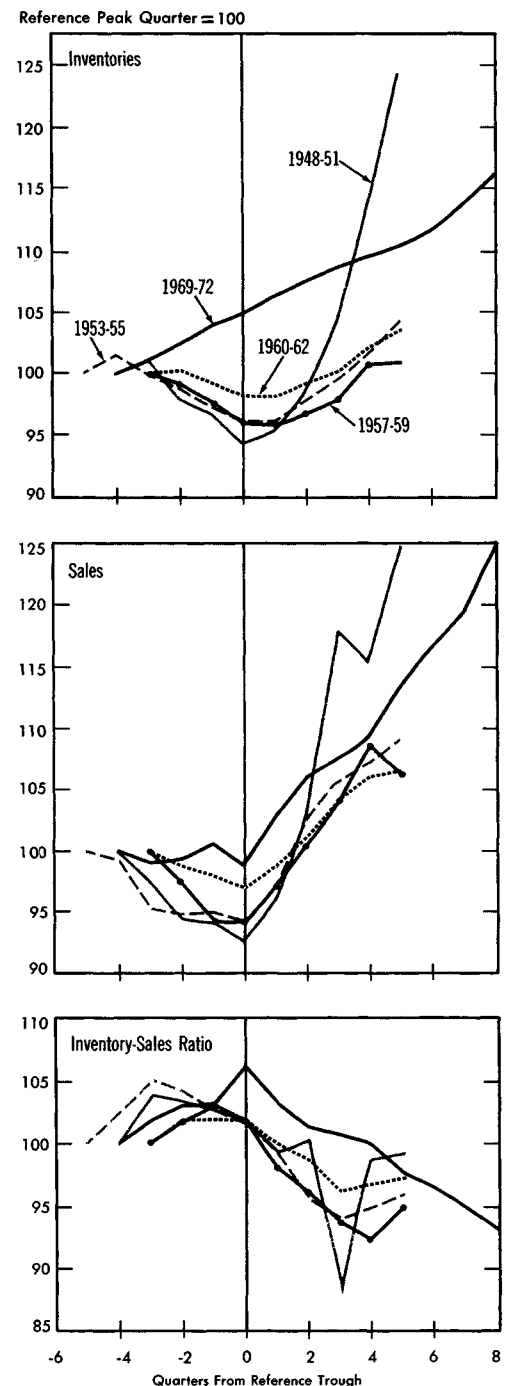
During 1970, sales of both durables and nondurables declined, while inventories continued to increase throughout the year. As a result, by the fourth quarter of 1970 (the cyclical trough), the I-S ratio for total manufacturing reached the highest level of any postwar recession (even after abstracting from the effect of the auto strike in that quarter). In 1971 sales recovered rapidly, while inventories did not advance, turning the ratio down. The ratio has moved down since, and by the fourth quarter of 1972 it was close to its 1966 low (table 2).

The ratio for nondurables advanced through 1970, and thereafter moved down steadily. By the end of 1972 it was at the lowest quarterly level of the postwar period. The durables ratio rose steeply in 1970, advancing from its 1967-69 plateau by the same relative amount as it had during 1966-67. Even though the ratio reached an unprecedented high due to the recession and auto strike, it dropped so sharply each quarter thereafter that by the end of 1972 it was very close to the 1963-65 average.

Most durables ratios now stand close to or even below the 1963-65 level. However, the ratio for the aircraft industry remains high. This ratio had risen very sharply during 1970 to well over 5.00 and averaged about the same

CHART 21

Contraction and Recovery Comparisons: Inventories, Sales, and Inventory-Sales Ratios for Total Manufacturing and Trade



Data: BEA-Census

Conclusion

It is apparent from the preceding discussion that I-S ratios for all groupings except aircraft and wholesale trade are back to 1963-65 or lower levels. These are unusually low levels, because it is unlikely that whatever long-term downward trend in I-S ratios is operative can fully account for them.

The I-S ratios in aircraft remain higher than and in wholesaling are equal to the plateaus to which they climbed in 1966 and remained during 1967-69, but are lower than the ratios reached in the subsequent recession. In terms of the evaluation of more aggregative I-S ratios, developments in the aircraft industry are of importance because of the high level of the ratio and its great

variability. An assessment of the future influence of the I-S ratio in the aircraft industry is difficult not only because it is difficult to forecast the future course of production and sales in this industry, but also because it is difficult to forecast technological and other developments which may lead to changes in the I-S ratios irrespective of the pattern of production and sales.



1972 economic censuses

Conducted in 1973 by the Bureau of the Census



BUSINESSMEN - MANUFACTURERS - CONSTRUCTION FIRMS

The Economic Censuses are for you
... by you ... about you

You need the results (The basic information about your industry comes from the Economic Censuses)

We (The Bureau of the Census) collect the data (to tell you about the latest developments in your industry)

The sooner you get answers to the Census Bureau
The sooner you can use the data to your advantage

Fill out your questionnaire **now**
Mail it to The Bureau of the Census **now**

It's Your Census ... It's Your Duty ...

**Confidential by Law – which protects the privacy of all
information reported to the Census Bureau**

U.S. DEPARTMENT OF COMMERCE
Social and Economic Statistics Administration
BUREAU OF THE CENSUS

Table with columns for years 1970, 1971, 1972 (Jan-Dec), and 1973 (Jan). Includes a note: 'Unless otherwise stated in footnotes below, data through 1970 and descriptive notes are as shown in the 1971 edition of BUSINESS STATISTICS'

GENERAL BUSINESS INDICATORS—Continued

Main data table with columns for years 1970, 1971, 1972 (Jan-Dec), and 1973 (Jan). Rows include 'MANUFACTURERS' SALES, INVENTORIES, AND ORDERS', 'Shipments (seas. adj.)', 'By industry group', 'By market category', 'Inventories, end of year or month', 'Book value (unadjusted)', 'Book value (seasonally adjusted)', 'By industry group', 'By stage of fabrication', 'Work in process', 'Finished goods', 'Nondurable goods industries', 'By market category', 'Supplementary series', 'New orders, net (not seas. adj.)', 'New orders, net (seas. adj.)', 'By industry group', 'Fabricated metal products', 'Machinery, except electrical', 'Electrical machinery', 'Transportation equipment', 'Aircraft, missiles, and parts', 'Nondurable goods industries', 'Industries with unfilled orders', 'Industries without unfilled orders'

* Revised. † Based on data not seasonally adjusted. ‡ Advance estimate; total mfrs. new orders for Dec. 1972 do not reflect revisions for selected components. § See corresponding note on p. S-7. ¶ For these industries (food and kindred products, tobacco manufactures, apparel and other textile products, petroleum and coal products, chemicals and allied products, and rubber and plastics products) sales are considered seasonal. ¶ Capital goods industries series is comparable to the previous producers' capital goods and defense products

Unless otherwise stated in footnotes below, data through 1970 and descriptive notes are as shown in the 1971 edition of BUSINESS STATISTICS	1970	1971	1971	1972												1973
	Annual		Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.

COMMODITY PRICES—Continued

CONSUMER PRICES																
(U.S. Department of Labor Indexes)																
Unadjusted indexes:																
All items..... 1967=100.....																
Special group indexes:																
All items less shelter..... do.....																
All items less food..... do.....																
All items less medical care..... do.....																
Commodities..... do.....																
Nondurables..... do.....																
Nondurables less food..... do.....																
Durables..... do.....																
Commodities less food..... do.....																
Services..... do.....																
Services less rent..... do.....																
Food..... do.....																
Meats, poultry, and fish..... do.....																
Dairy products..... do.....																
Fruits and vegetables..... do.....																
Housing..... do.....																
Shelter..... do.....																
Rent..... do.....																
Homeownership..... do.....																
Fuel and utilities..... do.....																
Fuel oil and coal..... do.....																
Gas and electricity..... do.....																
Household furnishings and operation..... do.....																
Apparel and upkeep..... do.....																
Transportation..... do.....																
Private..... do.....																
New cars..... do.....																
Used cars..... do.....																
Public..... do.....																
Health and recreation..... do.....																
Medical care..... do.....																
Personal care..... do.....																
Reading and recreation..... do.....																
WHOLESALE PRICES ¹																
(U.S. Department of Labor Indexes)																
Spot market prices, basic commodities:																
22 Commodities..... 1967=100.....																
9 Foodstuffs..... do.....																
13 Raw industrials..... do.....																
All commodities..... do.....																
By stage of processing:																
Crude materials for further processing..... do.....																
Intermediate materials, supplies, etc..... do.....																
Finished goods..... do.....																
Consumer finished goods..... do.....																
Producer finished goods..... do.....																
By durability of product:																
Durable goods..... do.....																
Nondurable goods..... do.....																
Total manufactures..... do.....																
Durable manufactures..... do.....																
Nondurable manufactures..... do.....																
Farm prod., processed foods and feeds..... do.....																
Farm products..... do.....																
Fruits and vegetables, fresh and dried..... do.....																
Grains..... do.....																
Live poultry..... do.....																
Livestock..... do.....																
Foods and feeds, processed..... do.....																
Beverages and beverage materials..... do.....																
Cereal and bakery products..... do.....																
Dairy products..... do.....																
Fruits and vegetables, processed..... do.....																
Meats, poultry, and fish..... do.....																
Industrial commodities..... do.....																
Chemicals and allied products..... do.....																
Agric. chemicals and chem. prod..... do.....																
Chemicals, industrial..... do.....																
Drugs and pharmaceuticals..... do.....																
Fats and oils, inedible..... do.....																
Prepared paint..... do.....																
Fuels and related prod., and power..... do.....																
Coal..... do.....																
Electric power..... do.....																
Gas fuels..... do.....																
Petroleum products, refined..... do.....																
Furniture and household durables..... do.....																
Appliances, household..... do.....																
Furniture, household..... do.....																
Home electronic equipment..... do.....																

¹ Computed by BEA. ² Includes data for items not shown separately. ³ For actual wholesale prices of individual commodities, see respective commodities.

⁴ Goods to users, incl. raw foods and fuels.

Table with columns for years 1970, 1971, 1972 (Jan-Dec), and 1973 (Jan). Rows include MAN-HOURS, HOURLY AND WEEKLY EARNINGS, and various industry categories like Manufacturing, Wholesale and Retail Trade, etc.

* Revised. † Preliminary. ‡ Includes adjustments not distributed by months. †† See corresponding note, p. S-13. ††† Production and non-supervisory workers. *New series. ⊕ Source, USDL, Bureau of Labor Statistics; the indexes exclude effects of changes in the proportion of workers in high-wage and low-wage industries, and the total and manufacturing

indexes also exclude, for the manufacturing sector only, effects of fluctuations in overtime premiums. See also note "†," p. S-13. ††† Wages as of Feb. 1, 1973; Common, \$6.89; skilled, \$9.41. Δ Earnings expressed in 1967 dollars are adjusted for changes in purchasing power since the base period, 1967, by dividing by the Consumer Price Index for the respective period.

Table header with columns for years 1970, 1971, 1971 (Dec), 1972 (Jan-Dec), and 1973 (Jan). Includes sub-headers for Annual and Dec. for 1970 and 1971.

FINANCE—Continued

LIFE INSURANCE—Continued

Table for Life Insurance—Continued. Rows include Institute of Life Insurance, Life Insurance Agency M, Payments to policyholders, Death benefits, Matured endowments, etc.

Life Insurance Agency M management Association: Insurance written (new/paid-for insurance):†

Table for Life Insurance Agency M management Association: Insurance written (new/paid-for insurance):†. Rows include Value, estimated total, Ordinary, Group, Industrial.

Premiums collected:

Table for Premiums collected. Rows include Total life insurance premiums, Ordinary, Group, Industrial.

MONETARY STATISTICS

Gold and silver:

Table for Monetary Statistics. Rows include Gold: Monetary stock, Net release from earmark\$, Exports, Imports, Production; Silver: Exports, Imports, Price at New York, Production; Currency in circulation (end of period); Money supply and related data; Turnover of demand deposits.

PROFITS AND DIVIDENDS (QTRLY.)

Table for Profits and Dividends (Qtrly.). Rows include Manufacturing corps. (Fed. Trade and SEC): Net profit after taxes, all industries; Food and kindred products; Textile mill products; Lumber and wood products; Paper and allied products; Chemicals and allied products; Petroleum refining; Stone, clay, and glass products; Primary nonferrous metal; Primary iron and steel; Fabricated metal products; Machinery and transport. equip.; Elec. machinery, equip., and supplies; Transportation equipment; Motor vehicles and equipment; All other manufacturing industries; Dividends paid (cash), all industries; Electric utilities, profits after taxes (Federal Reserve).

SECURITIES ISSUED

Table for Securities Issued. Rows include Securities and Exchange Commission: Estimated gross proceeds, total; Bonds and notes, total; Corporate; Common stock; Preferred stock.

† Revised. ‡ Preliminary. † Includes \$17 bil. SGLI. ‡ Beginning Jan. 1972 valued at \$38 per fine ounce. § Increase in earmarked gold (-). ¶ Effective February 1973 SURVEY, data revised to reflect: Annual review of seasonal factors; regular benchmark adjustment; effect of changes in check collection procedures (Regulation J); and adjustments to include new figures from inter-nationally oriented banking institutions.

Table header with columns for years 1970, 1971, 1971 (Dec), 1972 (Jan-Dec), and 1973 (Jan). Includes text: 'Unless otherwise stated in footnotes below, data through 1970 and descriptive notes are as shown in the 1971 edition of BUSINESS STATISTICS'

TRANSPORTATION AND COMMUNICATION—Continued

Main data table for Transportation and Communication. Sections include: TRANSPORTATION—Continued (Motor Carriers, Freight, Passengers), Class I Railroads, Traffic, Travel, and COMMUNICATION (QTRLY.) (Telephone and Telegraph carriers).

CHEMICALS AND ALLIED PRODUCTS

Main data table for Chemicals and Allied Products. Section: CHEMICALS, Inorganic chemicals, production. Lists various chemical products with units and values for 1970-1972.

Footnotes providing details on data revisions, reporting periods, and specific notes for certain items like AMTRAK operations and National Parks.

Unless otherwise stated in footnotes below, data through 1970 and descriptive notes are as shown in the 1971 edition of BUSINESS STATISTICS

Table with columns for years 1970, 1971, 1971 (Dec.), 1972 (Jan-Dec), and 1973 (Jan).

LUMBER AND PRODUCTS

Main data table for LUMBER AND PRODUCTS, including categories like LUMBER-ALL TYPES, SOFTWOODS, and HARDWOOD FLOORING.

METALS AND MANUFACTURES

Main data table for METALS AND MANUFACTURES, including categories like IRON AND STEEL and various product metrics.

Revised. Preliminary. Beginning Jan. 1971, data reflect changes in size specifications... Less than 500 tons. Annual data: monthly revisions are not available. Totals include data for types of lumber not shown separately.

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