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The Secretary of Commerce has determined that the publication of this periodical is necessary in the transaction of the public business required by law of this Department.

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NOTE.—This issue of the SURVEY went to the printer on Feb. 9, 1989. It incorporates data from the following monthly BEA news releases:

- Gross National Product (Jan. 27),
- Personal Income and Outlays (Jan. 30), and
- Composite Indexes of Leading, Coincident, and Lagging Indicators (Feb. 1).

the BUSINESS SITUATION

U.S. economic activity continued at a moderate pace in the fourth quarter of 1988. The pace of production slowed a little, and the pace of demand held steady. Inflation moderated slightly (chart 1).

- Real GNP, a measure of U.S. production, increased at an annual rate of 2 percent, following an increase of 2½ percent in the third quarter.
- Real gross domestic purchases, a measure of U.S. demand, increased at an annual rate of 2½ percent in both quarters.
- Both the GNP price index and the price index for gross domestic purchases increased at an annual rate of 4 percent, following third-quarter increases of 5½ percent and 4½ percent, respectively.¹

The fourth-quarter increases in real GNP and real gross domestic purchases concluded another year of mod-

erate expansion in the U.S. economy. On a year-to-year basis, real GNP increased 3.8 percent in 1988; on a fourth-quarter-to-fourth-quarter basis, real GNP increased 2.7 percent (table 1). In 1987, real GNP had increased 3.4 percent on the yearly basis and 5.0 percent on the fourth-quarter basis. (The different patterns are mainly the result of an unusually large inventory accumulation in the fourth quarter of 1987.)

Inflation in the prices of goods and services *produced* by the United States was somewhat higher in 1988 than in 1987; inflation in the prices of goods and services *purchased* in the United States was roughly the same in both years. On the year-to-year basis, GNP prices increased 4.2 percent in 1988 after increasing 3.6 percent in 1987; on the fourth-quarter-to-fourth-quarter basis, they increased 4.5 percent after increasing 4.0 percent. On the yearly basis, gross domestic purchases prices increased 4.1 percent in 1988, the same increase as in 1987; on the fourth-quarter basis, they increased 4.1 percent after increasing 4.5 percent.

Impact of the drought on real GNP.—BEA estimates that the losses in real farm output—predominately in the corn and soybean crops—resulting from drought conditions in 1988 amounted to \$12 billion. These losses reduced the year-to-year increase in real GNP for 1988 by 0.4

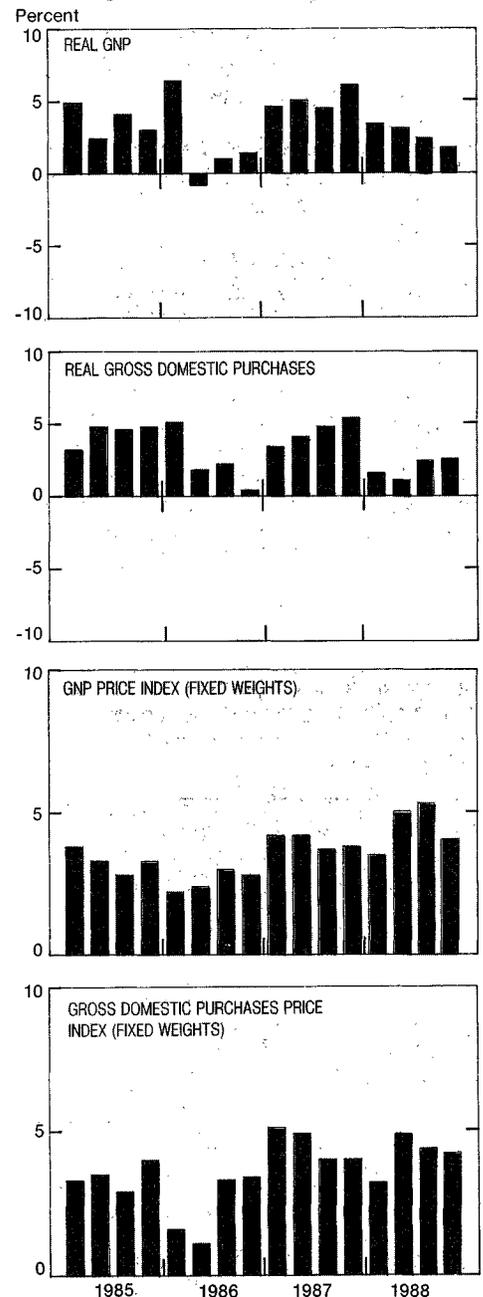
1. The regularly featured estimates of real GNP and GNP prices are based on 1982 weights. An alternative measure of price change that uses more current weights—the chain price index—is published in table 8.1 of the "Selected NIPA Tables." The GNP chain price index also increased at an annual rate of 4 percent in the fourth quarter, following a 4½-percent increase in the third. The chain price index can be used to calculate an alternative measure of real GNP growth based on more current weights; this measure increased at an annual rate of 2½ percent in both quarters. (See the August 1988 "Business Situation" for more information about these measures. Alternative estimates based on 1987 weights will be presented in the SURVEY OF CURRENT BUSINESS in the near future.)

Looking Ahead. . .

• **Business Cycle Indicators.** The composite indexes of leading, coincident, and lagging indicators will be revised as of the release of January 1989 data on March 3. The revision will incorporate changes in components, updated statistical factors, and historical revisions in component data. An article presenting the revision appears in this issue of the SURVEY.

• **Alternative Weighting of Real GNP.** An article considering the presentation by BEA of alternative weighting systems for real GNP will appear in an upcoming issue of the SURVEY.

CHART 1
Selected Measures:
Change From Preceding Quarter



Note.—Percent change at annual rate from preceding quarter; based on seasonally adjusted estimates.

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

89-1-1

percentage point; the fourth-quarter-to-fourth-quarter increase was reduced by 0.6 percentage point. BEA allocated the drought losses to the last three quarters of 1988 as follows: Second quarter, \$2.3 billion (\$9 billion annual rate); third quarter, \$3.6 billion (\$14½ billion annual rate); and fourth quarter, \$6.3 billion (\$25 billion annual rate). These losses reduced the second-quarter increase in real GNP by 0.9 percentage point, the third-quarter increase by 0.5 percentage point, and the fourth-quarter increase by 1.1 percentage points. (In the first quarter of 1989, when farm output returns to a level not affected by the drought, the change in real GNP will be raised by about 2.5 percentage points.)

BEA's estimate of crop losses is based on the difference between the U.S. Department of Agriculture's June 1988 forecast of the physical quantity of output, which represents conditions before the drought, and its January 1989 production report, which reflects the results of surveys conducted after most harvests were completed. BEA allocated the crop losses for the year over the quarters of the growing season, with the harvest periods receiving higher allocations. (See the August 1988 "Business Situation" for a description of this procedure, as well as for additional information about the effects of the drought on farm output.)

Components of Real GNP

All the major components of real GNP, except government purchases, did less well in the fourth quarter than in the third: Personal consumption expenditures and fixed investment increased less than in the third quarter,

Table 1.—Change in Real GNP and GNP Prices from 1987 to 1988

[Seasonally adjusted at annual rates; dollars are in billions of 1982 dollars, and percent changes in prices are based on fixed-weighted price indexes (1982=100)]

| | Year-to-year change | | | Fourth-quarter-to-fourth-quarter change | | |
|---|---------------------|---------|------------|---|---------|------------|
| | Real GNP | | GNP Prices | Real GNP | | GNP Prices |
| | Dollars | Percent | Percent | Dollars | Percent | Percent |
| GNP | 148.0 | 3.8 | 4.2 | 106.2 | 2.7 | 4.5 |
| Less: Exports | 75.9 | 17.7 | 5.2 | 58.4 | 12.7 | 6.8 |
| Plus: Imports | 46.1 | 8.3 | 4.3 | 33.1 | 5.7 | 2.9 |
| <i>Equals:</i> Gross domestic purchases | 118.2 | 3.0 | 4.1 | 80.9 | 2.0 | 4.1 |
| Personal consumption expenditures | 70.1 | 2.8 | 4.3 | 90.2 | 3.6 | 4.4 |
| Durable goods | 17.7 | 4.5 | 2.5 | 24.9 | 6.4 | 2.6 |
| Nondurable goods | 9.4 | 1.1 | 4.1 | 18.2 | 2.0 | 4.5 |
| Services | 43.1 | 3.5 | 4.8 | 47.1 | 3.8 | 4.8 |
| Fixed investment | 38.9 | 6.1 | 2.5 | 30.3 | 4.6 | 2.3 |
| Nonresidential | 42.1 | 9.5 | 2.3 | 25.6 | 5.5 | 2.7 |
| Residential | -3.1 | -1.6 | 3.0 | 4.7 | 2.4 | 1.0 |
| Change in business inventories | 8.1 | | | -37.9 | | |
| Nonfarm | 2.8 | | | -31.6 | | |
| Farm | 5.3 | | | -6.3 | | |
| Government purchases | 1.0 | .1 | 4.4 | -1.7 | -2 | 4.5 |
| Federal | -10.9 | -3.2 | 3.7 | -14.8 | -4.3 | 3.8 |
| State and local | 11.9 | 2.7 | 4.9 | 13.1 | 2.9 | 5.0 |
| <i>Addenda:</i> | | | | | | |
| Final sales of GNP | 139.9 | 3.7 | 4.2 | 144.1 | 3.7 | 4.5 |
| Final sales to domestic purchasers | 110.1 | 2.8 | 4.1 | 118.8 | 3.0 | 4.2 |
| Disposable personal income | 103.1 | 3.8 | | 103.9 | 3.8 | |

inventory investment decreased after an increase, and net exports decreased more than in the third quarter. Government purchases were up substantially after a sizable decrease.

Personal consumption expenditures

Real personal consumption expenditures (PCE) increased 3 percent in the fourth quarter—less than in the third, but within the 3- to 4½-percent range registered earlier in 1988 (table 2). The relative stability of PCE growth in 1988, which followed 3 years of uneven deceleration, was associated with pickups in both disposable personal income growth and consumer confidence (as measured by the Index of Consumer Sentiment prepared by the University of Michigan's Survey Research Center).

The slowdown in PCE in the fourth quarter was in nondurable goods and in services. Durable goods increased after a small decline.

Expenditures for nondurable goods increased 2 percent, following a 5-percent increase in the third quarter and very small increases in the first half of the year. The fourth-quarter slowdown was primarily due to clothing and shoes, which declined slightly after a large increase. "Other" nondurables, which increased less in the fourth quarter than in the third, also contributed. In contrast, both energy and food increased more than in the third quarter.

Expenditures for services increased 3½ percent after increasing 4½ percent in the third quarter; the increases were in line with those registered in the first half of the year. Increases in household operations and in housing were considerably smaller in the fourth quarter than in the third; in household operations, energy services were flat after a large increase that had reflected higher expenditures for air conditioning due to unusually hot weather in July and August. In contrast, increases in "other" services and in transportation were larger in the fourth quarter than in the third; in "other" services, brokerage fees and net foreign travel both increased after declining, and in transportation, airline travel increased more than in the third quarter.

Expenditures for durable goods increased 2 percent in the fourth quarter,

NOTE.—Quarterly estimates in the national income and product accounts are expressed at seasonally adjusted annual rates, and quarterly changes in them are differences between these rates. Quarter-to-quarter percent changes are annualized. Real, or constant-dollar, estimates are expressed in 1982 dollars.

The advance GNP estimates for the fourth quarter are based on the following major source data: For *personal consumption expenditures* (PCE), sales of retail stores through December, and unit auto and truck sales through December; for *nonresidential fixed investment*, the same information for autos and trucks as for PCE, construction put in place for October and November, and manufacturers' shipments of machinery and equipment for October and November; for *residential investment*, construction put in place for October and November, and housing starts through December; for *change in business inventories*, manufacturing and trade inventories for October and November, and unit auto inventories through December; for *net exports of goods and services*, merchandise exports and merchandise imports for October and November; for *government purchases of goods and services*, Federal outlays for October and November, and State and local construction put in place for October and November; and for *GNP prices*, the Consumer Price Index through December, the Producer Price Index through December, the unit-value index for petroleum imports for October and November, and unit-value indexes for exports and nonpetroleum imports for October. Some of the source data are subject to revision.

Table 2.—Real Personal Consumption Expenditures

[Seasonally adjusted at annual rates]

| | Billions of 1982 dollars | | | | | Percent change from preceding quarter | | | |
|--|--------------------------|-------------------------------|------|------|------|---------------------------------------|------|------|------|
| | Level | Change from preceding quarter | | | | 1988 | | | |
| | | 1988:IV | I | II | III | IV | I | II | III | IV |
| Personal consumption expenditures | 2,621.9 | 28.1 | 19.2 | 24.8 | 18.1 | 4.5 | 3.0 | 3.9 | 2.8 |
| Durables | 412.5 | 13.5 | 9.5 | -2 | 2.1 | 14.7 | 9.8 | -2 | 2.1 |
| Motor vehicles and parts..... | 177.7 | 6.8 | 5.5 | -3 | -1.0 | 17.3 | 13.3 | -7 | -2.2 |
| Furniture and household equipment..... | 163.1 | 5.4 | 4.5 | -3 | 2.1 | 15.0 | 11.9 | -2.0 | 5.3 |
| Other durables..... | 71.7 | 1.3 | -5 | .9 | 1.0 | 7.8 | -2.8 | 5.3 | 5.8 |
| Nondurables | 908.7 | 2.2 | .9 | 10.9 | 4.2 | 1.0 | .4 | 5.0 | 1.9 |
| Food..... | 455.3 | 2.2 | 1.8 | .6 | 1.5 | 2.0 | 1.6 | .5 | 1.3 |
| Clothing and shoes..... | 163.7 | -7 | -3.3 | 7.9 | -5 | -1.7 | -8.0 | 21.8 | -1.2 |
| Energy ¹ | 124.7 | .9 | .9 | .3 | 2.8 | 3.0 | 3.0 | 1.0 | 9.5 |
| Other nondurables..... | 165.0 | -2 | 1.4 | 2.2 | .4 | -5 | 3.5 | 5.5 | 1.0 |
| Services | 1,300.7 | 12.3 | 8.9 | 14.1 | 11.8 | 4.0 | 2.8 | 4.5 | 3.7 |
| Housing..... | 368.4 | 1.9 | 2.0 | 2.1 | .7 | 2.1 | 2.2 | 2.3 | .8 |
| Household operation..... | 166.5 | 2.3 | .7 | 4.8 | .6 | 5.9 | 1.8 | 12.5 | 1.5 |
| Energy ² | 83.9 | 1.3 | .1 | 3.2 | .1 | 6.7 | .5 | 16.9 | .5 |
| Other..... | 82.6 | 1.0 | .4 | 1.7 | .5 | 5.2 | 2.0 | 8.7 | 2.5 |
| Transportation..... | 96.3 | .9 | 1.2 | 1.3 | 2.1 | 4.0 | 5.3 | 5.7 | 9.2 |
| Medical care..... | 287.6 | 2.9 | 2.6 | 3.9 | 4.2 | 4.3 | 3.8 | 5.7 | 6.1 |
| Other services..... | 381.9 | 4.2 | 2.6 | 1.9 | 4.2 | 4.6 | 2.8 | 2.0 | 4.5 |

1. Gasoline and oil, and fuel oil and coal.

2. Electricity and gas.

NOTE.—Percent changes in major aggregates are found in table 8.1 of the "Selected NIPA Tables." Dollar levels are found in table 2.3.

following a small decline in the third; durable goods had increased strongly in the first half of the year. The fourth-quarter upswing was primarily accounted for by furniture and household equipment, which increased after declining in the third quarter. Motor vehicles and parts declined more in the fourth quarter than in the third. Truck purchases declined slightly after increases earlier in the year; new car purchases have changed little in the past three quarters.

Nonresidential fixed investment

Real nonresidential fixed investment declined 3½ percent in the fourth quarter, following a 4-percent increase in the third. Both structures and producers' durable equipment (PDE) registered moderate declines in the fourth quarter after moderate increases in the third (table 3).

The fourth-quarter downswing in structures reflected changes in construction by public utilities and in oil well drilling. In the third quarter, both these components had increased, offsetting a decline in the construction of nonresidential buildings; in the fourth, both components declined, augmenting another decline in nonresidential buildings.

None of the major categories of structures evidenced much strength during 1988; all registered sizable declines in the first quarter, and only public utilities fully rebounded subsequently. In oil well drilling, substantial additional declines occurred in two of the last three quarters of the year. In

nonresidential buildings, a partial rebound in the second quarter gave way to a sizable decline in the third and a small decline in the fourth. The quarterly pattern of changes in nonresidential buildings echoed the changes in its largest component, commercial buildings; the continued weakness in commercial buildings in 1988 partly reflected the curtailment of tax incentives by the Tax Reform Act of 1986.

The fourth-quarter downswing in PDE largely reflected changes in purchases of information processing equipment. In the third quarter, this category had accounted for more than one-half of the increase in PDE; in the fourth quarter, it more than accounted for the decline. In the first half of 1988, information processing equip-

ment, industrial equipment, and transportation equipment had all registered above-average growth, contributing to PDE growth of 20½ percent.

Residential investment

Real residential investment increased 12½ percent in the fourth quarter, following a 4½-percent increase in the third. An upswing in single-family construction more than accounted for the acceleration. Multifamily construction declined after an increase; the "other" component of residential investment increased, but only about one-half as much as in the third quarter. (The "other" component includes major replacements, additions and alterations, mobile home sales, and brokers' commissions on house sales.)

The fourth-quarter upswing in single-family construction, which followed several quarters of weakness, mirrored movements in the number of single-family housing starts; changes in the average value of starts—reflecting shifts in the mix of location, size, and amenities—also contributed (chart 2). Starts increased 64,000 (or 26½ percent) to 1,128,000 in the fourth quarter, after changing little in the third and dropping 34,000 in the second (seasonally adjusted annual rates).

The fourth-quarter drop in multifamily construction reflected the continued influence of high rental vacancy rates and the past tax law changes that sharply curtailed the advantages of multifamily investment. With the exception of a slight increase in the third quarter, multifamily construction has declined for the past 2½ years.

Table 3.—Real Gross Private Domestic Fixed Investment

[Seasonally adjusted at annual rates]

| | Billions of 1982 dollars | | | | | Percent change from preceding quarter | | | |
|--|--------------------------|-------------------------------|------|------|------|---------------------------------------|-------|-------|-------|
| | Level | Change from preceding quarter | | | | 1988 | | | |
| | | 1988:IV | I | II | III | IV | I | II | III | IV |
| Gross private domestic fixed investment | 687.9 | 5.3 | 16.8 | 6.9 | 1.3 | 3.3 | 10.5 | 4.1 | 0.8 |
| Nonresidential | 490.4 | 8.6 | 16.8 | 4.8 | -4.6 | 7.6 | 15.0 | 4.0 | -3.7 |
| Structures..... | 124.0 | -8.1 | 1.0 | .8 | -1.8 | -22.4 | 3.3 | 2.6 | -5.6 |
| Nonresidential buildings, excluding farm..... | 74.9 | -3.3 | 1.9 | -2.3 | -8 | -15.6 | 10.4 | -11.3 | -4.2 |
| Public utilities..... | 27.7 | -3.0 | .8 | 2.7 | -4 | -36.9 | 13.7 | 49.8 | -5.6 |
| Mining exploration, shafts, and wells..... | 18.1 | -1.3 | -1.1 | .3 | -.9 | -22.5 | -20.4 | 6.6 | -17.6 |
| Other..... | 3.3 | -6 | -5 | .1 | .3 | -47.8 | -47.1 | 14.5 | 46.4 |
| Producers' durable equipment..... | 366.4 | 16.7 | 15.7 | 4.1 | -2.8 | 21.6 | 19.2 | 4.6 | -3.0 |
| Information processing and related equipment..... | 162.5 | 8.9 | 9.1 | 2.4 | -4.9 | 26.5 | 25.5 | 5.9 | -11.2 |
| Industrial equipment..... | 72.5 | 1.8 | 2.8 | 1.9 | -2.6 | 11.8 | 18.3 | 11.7 | 15.7 |
| Transportation and related equipment..... | 68.3 | 5.1 | 3.4 | -3 | .3 | 38.7 | 22.7 | -1.7 | 1.8 |
| Other..... | 63.2 | .9 | .4 | .1 | -.7 | 7.0 | 2.5 | .6 | -4.3 |
| Residential | 197.4 | -3.2 | .1 | 2.0 | 5.8 | -6.5 | .2 | 4.3 | 12.7 |
| Single-family structures..... | 100.2 | -1.1 | .1 | -.8 | 4.7 | -4.4 | .4 | -3.3 | 21.2 |
| Multifamily structures..... | 17.2 | -1.8 | -1.0 | .3 | -.3 | -81.4 | -20.2 | 7.2 | -6.7 |
| Other..... | 80.1 | -2 | .9 | 2.5 | 1.5 | -1.1 | 4.9 | 13.8 | 7.9 |

NOTE.—Percent changes in major aggregates are found in table 8.1 of the "Selected NIPA Tables." Dollar levels are found in table 5.13.

In the "other" component of residential investment, brokers' commissions on house sales declined after increasing in the third quarter. In the third quarter, the increase in commissions reflected increases in both the average value and the number of houses sold; in the fourth quarter, an increase in the average value was more than offset by a decline in the number of units sold. Sales of new and existing residences declined 17,000 to 4,379,000 in the fourth quarter, after increasing 34,000 in the third (seasonally adjusted annual rates). Although short-term interest rates, which underlie most adjustable-rate mortgages, began to move upward in the spring, long-term rates, including the rate on fixed-rate mortgages, changed little (chart 3). As a result, the spread between fixed- and adjustable-rate mortgages (usually in the neighborhood of 2 percentage points) virtually disappeared by yearend.

Inventory investment

Real inventory investment—that is, change in business inventories (CBI)—decreased \$10½ billion in the fourth quarter, as inventory accumulation fell from \$39½ billion in the third quarter to \$29 billion in the fourth (table 4). In contrast, inventory investment had increased \$4 billion in the third quarter.

Nonfarm inventories were up substantially in the fourth quarter, as they had been in each quarter of 1988; accumulation over the four quarters amounted to \$40 billion. (This figure, which is the difference between fourth-quarter levels of nonfarm inventories in table 5.11 of the "Selected NIPA Tables," can be calculated from table 4 by averaging the changes in the level of nonfarm CBI for the four quarters of 1988.) All major categories of nonfarm inventories ended the year substantially higher than a year earlier: Manufacturing inventories were up \$8½ billion; wholesale inventories, up \$9½ billion; retail inventories, up \$11 billion; and "other" inventories, up \$11 billion.

Manufacturing inventories increased at the same pace in the fourth quarter as in the third; the fourth-quarter accumulation was primarily in electrical machinery and in transportation equipment other than motor vehicles. Although manufacturing inventories have increased strongly for six consecutive quarters, not until the fourth quarter did they regain the peak level reached 4 years ago. Within

manufacturing, inventories of durable goods increased steadily throughout the year; the accumulations were concentrated in nonelectrical machinery and in transportation equipment other than motor vehicles. Inventories of nondurable goods decreased in the last three quarters of the year.

Wholesale trade inventories increased at a slower pace in the fourth quarter than in the third. The slowdown was in inventories of durable goods, which had increased sharply in the third quarter and also in the first. These sharp accumulations were largely in inventories held by the motor vehicle industry and by the machinery, equipment, and supplies industry.

Retail trade inventories were up even more in the fourth quarter than they had been in the two preceding quarters. Auto dealers' inventories ac-

counted for most of the three-quarter buildup. Other retail inventories were up in each quarter of the year, especially the first; the accumulations were concentrated in department stores and in durable goods industries other than automotive.

"Other" nonfarm inventories—mainly inventories held by the mining, construction, public utility, transportation, communication, and services industries—registered sizable accumulations throughout the year.

Farm inventories progressively moved from substantial accumulation in the first quarter to sizable decumulation by the fourth; farm inventories ended the year \$3 billion higher than a year earlier. The quarterly pattern of inventory change largely reflected the impact of the losses in farm output due to the drought.

Table 4.—Change in Real Business Inventories

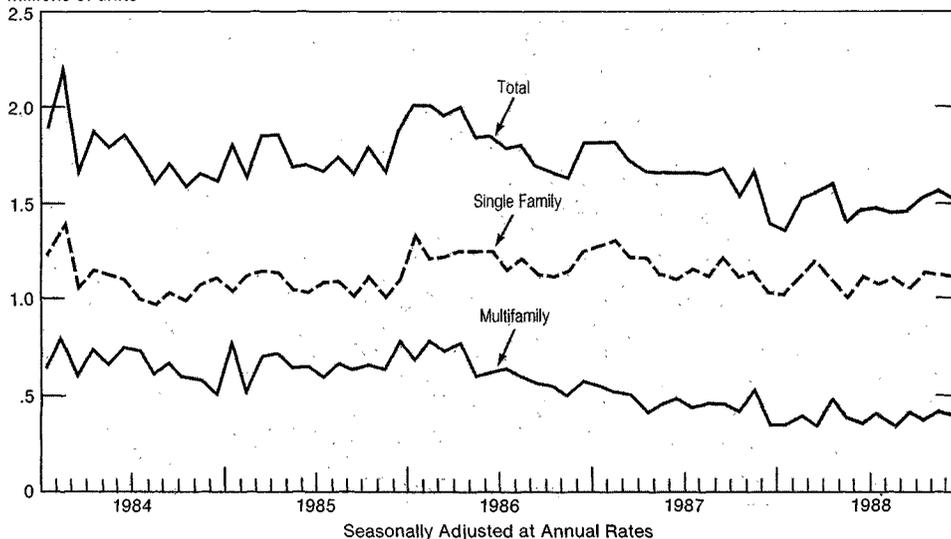
[Billions of 1982 dollars; seasonally adjusted at annual rates]

| | Level | | | | | Change from preceding quarter | | | |
|-------------------------------------|-------|-------|------|------|------|-------------------------------|-------|------|-------|
| | 1987 | 1988 | | | | 1988 | | | |
| | | IV | I | II | III | IV | I | II | III | IV |
| Change in business inventories..... | 67.1 | 66.0 | 35.3 | 39.5 | 29.2 | -1.1 | -30.7 | 4.2 | -10.3 |
| Farm | -1.1 | 14.1 | 5.3 | -8 | -7.4 | 15.2 | -8.8 | -6.1 | -6.6 |
| Nonfarm | 68.2 | 51.9 | 30.1 | 40.4 | 36.6 | -16.3 | -21.8 | 10.3 | -3.8 |
| Manufacturing | 14.4 | 15.8 | 5.8 | 5.7 | 5.8 | 1.4 | -10.0 | -1 | .1 |
| Wholesale trade | 19.4 | 24.9 | -1.2 | 11.2 | 3.1 | 5.5 | -26.1 | 12.4 | -8.1 |
| Retail trade | 25.1 | 1.5 | 13.7 | 11.7 | 16.2 | -23.6 | 12.2 | -2.0 | 4.5 |
| Auto dealers | 13.2 | -10.1 | 11.0 | 8.7 | 13.0 | -23.3 | 21.1 | -2.3 | 4.3 |
| Other retail trade | 11.9 | 11.6 | 2.7 | 3.0 | 3.2 | -.3 | -8.9 | -.3 | -.2 |
| Other | 9.3 | 9.7 | 11.8 | 11.8 | 11.5 | .4 | 2.1 | 0 | -.3 |
| Addendum: | | | | | | | | | |
| Nonfarm less auto dealers | 55.0 | 62.0 | 19.1 | 31.7 | 23.7 | 7.0 | -42.9 | 12.6 | -8.0 |

NOTE.—Dollar levels for most inventories are found in table 5.11 of the "Selected NIPA Tables."

Housing Starts

Millions of units



Data: Census
U.S. Department of Commerce, Bureau of Economic Analysis

Reflecting continued growth in inventories and final sales, the constant-dollar ratio of total inventories to total final sales held steady at 3.21 in the fourth quarter. The ratio has remained within the narrow range of 3.18 to 3.21 for the past four quarters. An alternative set of constant-dollar inventory-sales ratios for the manufacturing and trade industries provides a similar picture of stability. (These ratios cover manufacturers', merchant wholesalers', and retailers' inventories and sales—including intermediate sales, that is, sales from one industry to another.) The ratio for the manufacturing and trade total (through November) has remained at 1.52 for the past four quarters; the ratio for manufacturers was down some, that for merchant wholesalers was up some, and that for retailers was steady.

Net exports

Real net exports declined \$7 billion in the fourth quarter, following a decline of \$1½ billion in the third (table 5). The deterioration was more than accounted for by services; the real merchandise trade balance declined less than in the third quarter.

Merchandise exports increased only \$1½ billion (or 2 percent) in the fourth quarter, continuing a yearlong pattern of deceleration. Nonagricultural exports increased about one-half as much as in the third quarter. Industrial materials and supplies declined after increasing in the third quarter; capital goods (except autos) and consumer goods increased considerably less than in the third quarter. Agricultural exports declined \$2½ billion after a \$2 billion decline. These declines proba-

bly reflected, at least in part, the effect of the drought, which both curtailed supplies and raised prices.

Merchandise imports increased \$5 billion (or 4½ percent) in the fourth quarter, following a substantial increase in the third. The slowdown was more than accounted for by non-petroleum imports; after increasing in the third quarter, capital goods (except autos) declined in the fourth, reflecting a drop in imports of computers. Petroleum imports increased \$2½ billion after a \$1½ billion increase.

Exports of services increased \$2 billion, following an unusually large—\$10½ billion—increase in the third quarter. Most of the third-quarter increase was in investment income, largely interbank lending and direct investment; the fourth-quarter increase was more than accounted for by investment income.

Imports of services increased \$5½ billion, somewhat less than in the third quarter. Investment income accounted for most of the increase in both quarters.

Government purchases

Real government purchases increased \$17½ billion (or 9½ percent) in the fourth quarter, following a decline of \$10½ billion (or 5 percent) in the third (table 6). A sharp turnabout in Federal Government purchases reflected upswings in both defense and nondefense purchases. State and local government purchases increased more than in the third quarter.

Federal national defense purchases increased \$3 billion, following declines in the first three quarters of 1988. Over the four quarters, defense purchases were down \$8½ billion, the first yearlong decline since 1976; although evident in all categories of defense purchases, the decline was concentrated in purchases of aircraft.

Inventories held by the Commodity Credit Corporation (CCC) declined \$8½ billion in the fourth quarter, following decumulations ranging from \$16½ billion to \$19½ billion in the preceding three quarters. The year-long decumulations reflected both sales of crops by the CCC to the nonfarm sector and net withdrawals of crops by farmers under the CCC commodity loan program.

Federal nondefense purchases excluding CCC inventory transactions increased \$2 billion in the fourth quarter, following a \$4½ billion de-

Table 5.—Real Net Exports of Goods and Services

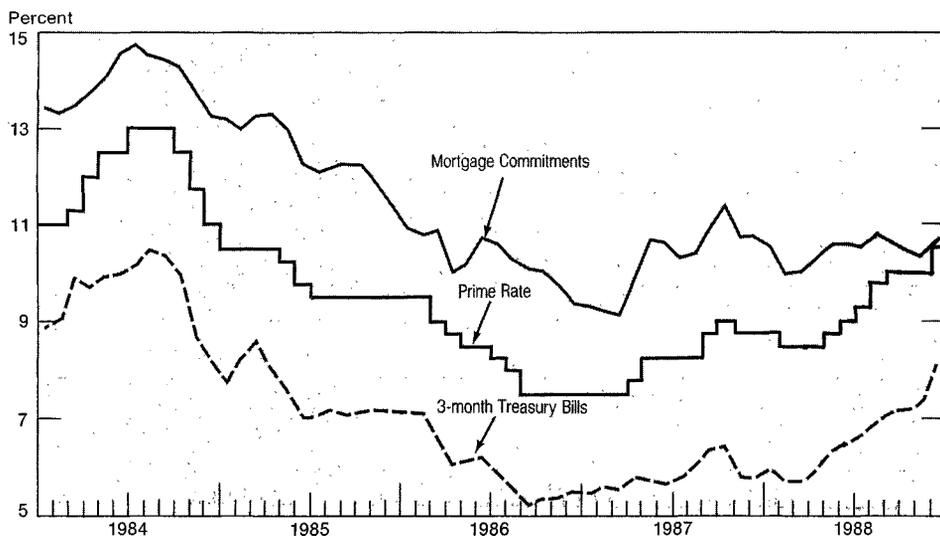
(Seasonally adjusted at annual rates)

| | Billions of 1982 dollars | | | | | Percent change from preceding quarter | | | |
|---|--------------------------|-------------------------------|------|------|------|---------------------------------------|------|-------|-------|
| | Level | Change from preceding quarter | | | | 1988 | | | |
| | 1988:IV | 1988 | | | | I | II | III | IV |
| | | I | II | III | IV | | | | |
| Net exports of goods and services | -100.7 | 17.0 | 16.4 | -1.3 | -6.8 | | | | |
| Exports | 517.6 | 27.0 | 10.7 | 17.1 | 3.6 | 25.7 | 9.1 | 14.5 | 2.8 |
| Merchandise | 347.6 | 24.4 | 10.1 | 6.8 | 1.7 | 36.1 | 12.9 | 8.3 | 2.0 |
| Agriculture | 35.2 | 4.1 | .5 | -1.9 | -2.7 | 55.4 | 5.2 | -17.8 | -25.6 |
| Nonagriculture | 312.4 | 20.3 | 9.6 | 8.7 | 4.4 | 38.7 | 18.9 | 12.1 | 5.8 |
| Services | 170.0 | 2.5 | .7 | 10.3 | 1.9 | 6.6 | 1.8 | 28.8 | 4.6 |
| Imports | 618.3 | 9.9 | -5.6 | 18.4 | 10.4 | 6.9 | -3.7 | 13.1 | 7.0 |
| Merchandise | 476.0 | 2.1 | -4.0 | 11.8 | 5.1 | 1.8 | -3.4 | 10.7 | 4.4 |
| Petroleum | 89.5 | .3 | 3.2 | 1.7 | 2.4 | 4.0 | 16.5 | 8.2 | 11.5 |
| Nonpetroleum | 386.5 | 1.8 | -7.2 | 10.1 | 2.7 | 1.4 | -7.3 | 11.3 | 2.8 |
| Services | 142.4 | 7.8 | -1.6 | 6.6 | 5.4 | 27.6 | -4.8 | 21.8 | 16.7 |

NOTE.—Percent changes in major aggregates are found in table 8.1 of the "Selected NIPA Tables." Dollar levels are found in table 4.2 (for major aggregates) and table 4.4 (for end-use category detail).

CHART 3

Selected Interest Rates



Data: FRB, FLHLMC.

Table 6.—Real Government Purchases of Goods and Services

[Seasonally adjusted at annual rates]

| | Billions of 1982 dollars | | | | | Percent change from preceding quarter | | | |
|---|--------------------------|-------------------------------|------|-------|------|---------------------------------------|------|-------|------|
| | Level | Change from preceding quarter | | | | 1988 | | | |
| | 1988:IV | I | II | III | IV | I | II | III | IV |
| Government purchases of goods and services | 790.9 | -16.2 | 7.4 | -10.3 | 17.4 | -7.9 | 3.9 | -5.2 | 9.3 |
| Federal | 332.9 | -19.9 | 3.8 | -11.5 | 12.8 | -21.0 | 4.7 | -13.2 | 17.0 |
| National defense | 259.5 | -3.6 | -1.0 | -7.2 | 3.1 | -5.3 | -1.5 | -10.5 | 4.9 |
| Nondefense | 73.5 | -16.3 | 4.7 | -4.2 | 9.8 | -60.1 | 33.2 | -22.5 | 77.3 |
| Commodity Credit Corporation inventory change | -8.7 | -18.2 | 2.5 | .3 | 7.8 | | | | |
| Other | 82.2 | 1.9 | 2.2 | -4.5 | 2.0 | 9.8 | 11.1 | -19.6 | 10.4 |
| State and local | 458.0 | 3.8 | 3.5 | 1.2 | 4.6 | 3.5 | 3.2 | 1.1 | 4.1 |
| Structures | 54.8 | 1.0 | .3 | -2.1 | 1.2 | 7.6 | 2.2 | -14.2 | 9.3 |
| Other | 403.2 | 2.8 | 3.2 | 3.3 | 3.4 | 2.9 | 3.3 | 3.4 | 3.4 |

NOTE.—Percent changes in major aggregates are found in table 8.1 of the "Selected NIPA Tables." Dollar levels are found in table 3.5B.

cline in the third. These purchases had registered moderate increases in the first two quarters of the year. Both the third-quarter decline and the fourth-quarter increase were concentrated in purchases of nondurables and of services other than employee compensation.

State and local government purchases increased \$4½ billion in the fourth quarter, following smaller increases in the first three quarters of the year. The pickup was due to a rebound in highway and sewer construction.

Prices

GNP prices and gross domestic purchases prices both increased 4 percent in the fourth quarter (table 7). In the third quarter, GNP prices had risen 5½ percent, and gross domestic purchases prices had risen 4½ percent. (Differences in the changes of these two price measures are due to differences in the changes of export and import prices.) In the third quarter, export prices had increased considerably more than import prices.

Increases in export prices exceeded 6 percent in each quarter of 1988 except the fourth. Prices of all major end-use categories except capital goods (except autos) registered sizable increases. Increases in import prices exceeded 5 percent only in the second quarter; in the other quarters, sharp decreases in the price of petroleum largely offset increases in prices of nonpetroleum imports.

The pattern of quarterly changes in gross domestic purchases prices in 1988—a step-up in the second quarter and slight moderation thereafter—reflected the course of PCE prices. Quarterly changes in PCE prices, in turn, reflected a combination of widely

disparate changes in food, energy, and "other" PCE prices.

PCE food prices increased 4 percent, following a 9½-percent jump in the third quarter. The third-quarter jump, which at least partly reflected the impact of the drought, was concentrated in prices of fresh fruits and vegetables and of cereals and bakery products. A 6-percent increase in food prices in the second quarter was largely attributable to a surge in meat prices.

PCE energy prices decreased 1 percent, following increases of 3½ percent in the third quarter and 5½ percent in the second. The third-quarter deceleration was traceable to prices of fuel oil and coal and of electricity and gas; the fourth-quarter downswing was traceable to prices of gasoline and oil and of fuel oil and coal.

"Other" PCE prices increased 5½ percent, somewhat more than in the third quarter and about the same as

Table 7.—Price Indexes (Fixed Weights): Change from Preceding Quarter

[Percent change at annual rates; based on seasonally adjusted index numbers (1982=100)]

| | 1988 | | | |
|--|------|-----|-----|------|
| | I | II | III | IV |
| GNP | 3.5 | 5.0 | 5.3 | 4.0 |
| Less: Exports | 6.2 | 6.9 | 9.6 | 2.2 |
| Plus: Imports | 3.5 | 5.7 | .1 | 2.6 |
| Equals: Gross domestic purchases | 3.2 | 4.9 | 4.4 | 4.1 |
| Less: Change in business inventories | | | | |
| Equals: Final sales to domestic purchasers | 3.3 | 4.9 | 4.4 | 4.1 |
| Personal consumption expenditures | 2.4 | 5.7 | 4.9 | 4.7 |
| Food | 2.1 | 6.0 | 9.4 | 3.8 |
| Energy | -7.5 | 5.7 | 3.7 | -1.2 |
| Other personal consumption expenditures | 3.5 | 5.6 | 3.9 | 5.5 |
| Nonresidential structures | 4.1 | 1.1 | 2.8 | 2.1 |
| Producers' durable equipment | 2.9 | 3.4 | .7 | 4.3 |
| Residential investment | 3.0 | .3 | .3 | .6 |
| Government purchases | 5.9 | 4.5 | 4.7 | 2.9 |

NOTE.—Percent changes in major aggregates are found in table 8.1 of the "Selected NIPA Tables." Most index number levels are found in tables 7.1 and 7.3.

in the second. The pattern partly reflected prices of clothing and shoes; these prices jumped 15½ percent in the second quarter, fell 8 percent in the third, and rebounded 11 percent in the fourth.

Among the components of fixed investment, prices of nonresidential structures continued to increase moderately in the fourth quarter. PDE prices picked up after a small increase in the third quarter. Most PDE components contributed to the pickup; in particular, new auto and truck prices increased more rapidly, and computer prices leveled off after a series of decreases. Prices of residential structures again increased only slightly.

Prices of government purchases were up less in the fourth quarter than in the first three quarters of 1988. The deceleration was evident in prices paid both by the Federal Government and by State and local governments. In particular, prices of Federal nondefense purchases increased much less than in the third quarter, reflecting a sharp downswing in prices of crops in net purchases by the CCC.

Personal Income

Personal income was up even more strongly—\$91 billion—in the fourth quarter than it had been in the two preceding quarters (chart 4 and table 8). The recent strength in personal income was mainly in wages and salaries and in personal interest income. The fourth-quarter acceleration was accounted for by a sharp turnabout in Federal subsidy payments to farm proprietors.

Wage and salary disbursements increased \$56 billion in the fourth quarter, following a \$52 billion increase in the third. The step-up, which was primarily in manufacturing, was attributable to increased average hourly earnings. The fourth-quarter gain in manufacturing was boosted \$2 billion by bonus payments to employees in the motor vehicle industry.

Farm proprietors' income declined \$4½ billion in the fourth quarter, following declines in the three preceding quarters. The fourth-quarter decline occurred despite a jump in Federal subsidy payments. Farm proprietors' income excluding subsidies dropped \$19 billion in the fourth quarter, following no change in the third and a small decline in the second. The fourth-quarter drop reflected the falloff in

output—largely due to the drought—and lower crop prices; in the second and third quarters, price increases had offset most of the falloff in output. Farm subsidies reached a level of \$14 billion in the second quarter, fell to \$1½ billion in the third, and then jumped to \$16 billion in the fourth. In the second quarter, deficiency payments were made to farmers under the 1988 Acreage Reduction Program; in the fourth quarter, deficiency payments (mostly for corn harvested in 1987), Conservation Reserve Program payments, and drought assistance payments were made.

Nonfarm proprietors' income increased more in the fourth quarter than in the third. The pickup largely reflected the upswing in single-family construction, the part of the construction industry in which proprietorships and partnerships are concentrated.

Personal interest income was up \$23½ billion, the fourth consecutive quarter of progressively larger in-

creases. These increases reflected upward trends in both short-term interest rates and asset holdings by persons.

Fourth-quarter changes in the other components of personal income—other labor income, rental income of persons, personal dividend income, and transfer payments—differed little from third-quarter changes. Personal contributions for social insurance, which is subtracted in deriving the personal income total, registered another small increase.

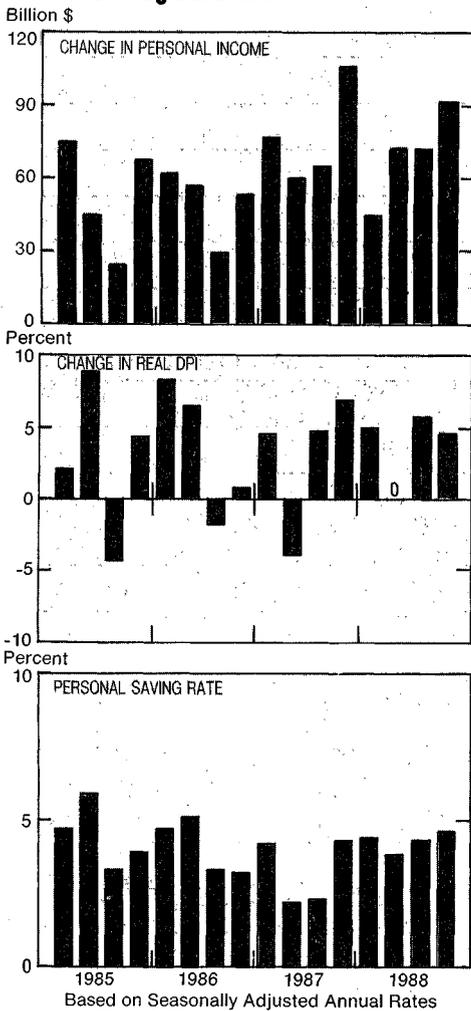
Personal tax and nontax payments increased \$11½ billion in the fourth quarter, following a \$14½ billion decline in the third. The fourth-quarter increase was due to growth in the taxable earnings base. Sharp swings in personal tax and nontax payments in the preceding several quarters largely reflected the indirect effects of the final stages of the Tax Reform Act of 1986. The act led to reduced taxes in 1988, largely through lower withholdings for Federal income taxes. The amounts by which taxes were reduced—\$33 billion in the first quarter, \$20½ billion in the second, \$46 billion in the third, and \$47 billion in the fourth—varied be-

cause of nonwithheld taxes, mainly net settlements. Net settlements dropped sharply in the third quarter after increasing substantially in the second; the second-quarter increase resulted from payments related to income that had been shifted from 1986 to 1987 to take advantage of the lower tax rates.

Disposable personal income (DPI) was up considerably in 1988; increases were particularly strong in the second half. DPI increased \$86 billion (or 10½ percent) in the third quarter and \$79½ billion (or 9½ percent) in the fourth; the fourth-quarter deceleration was entirely attributable to the upswing in personal tax and nontax payments. The strength in DPI largely carried through to real DPI, which accelerated to a 3.8-percent increase in 1988; real DPI was up 5½ percent in the third quarter and 4½ percent in the fourth.

In the fourth quarter, personal outlays—mainly PCE—again increased less than DPI; thus, personal saving continued to increase. The personal saving rate rose 0.4 percentage point to 4.6 percent, a rate somewhat higher than in the past 2½ years.

CHART 4
Selected Personal Income and Saving Measures



Note.—Changes are from preceding quarter.

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

69-14

Table 8.—Personal Income and Its Disposition

[Billions of dollars; seasonally adjusted at annual rates]

| | Level 1988:IV | Change from preceding quarter | | | |
|--|------------------|-------------------------------|--------------|-------------|-------------|
| | | 1988 | | | |
| | | I | II | III | IV |
| Wage and salary disbursements..... | 2,517.9 | 33.6 | 51.3 | 52.0 | 55.9 |
| Commodity-producing industries..... | 716.1 | 10.5 | 13.1 | 12.2 | 14.8 |
| Manufacturing..... | 538.0 | 3.3 | 7.8 | 3.5 | 12.1 |
| Other..... | 178.1 | 2.2 | 5.3 | 3.7 | 2.7 |
| Distributive industries..... | 595.5 | 10.9 | 13.9 | 13.7 | 13.7 |
| Service industries..... | 746.9 | 4.6 | 18.5 | 19.9 | 21.1 |
| Government and government enterprises..... | 455.4 | 7.6 | 5.8 | 6.2 | 6.3 |
| Other labor income..... | 222.5 | 2.2 | 1.9 | 3.0 | 3.0 |
| Proprietors' income..... | 324.6 | -2.1 | 4.9 | -7.2 | 3.0 |
| Farm..... | 26.4 | -2.3 | -1.3 | -12.5 | -4.5 |
| Nonfarm..... | 298.2 | .2 | 6.1 | 5.4 | 7.5 |
| Rental income of persons..... | 19.1 | 0 | -1.4 | .6 | -.6 |
| Personal dividend income..... | 99.4 | 1.6 | 1.5 | 2.3 | 2.1 |
| Personal interest income..... | 605.5 | 4.2 | 9.5 | 18.2 | 23.6 |
| Transfer payments..... | 596.3 | 19.5 | 6.5 | 5.8 | 7.7 |
| Less: Personal contributions for social insurance..... | 200.1 | 14.3 | 3.3 | 3.2 | 3.4 |
| Personal income..... | 4,185.1 | 44.6 | 71.0 | 71.6 | 91.1 |
| Less: Personal tax and nontax payments..... | 598.0 | -15.2 | 25.2 | -14.5 | 11.5 |
| Impact of the Tax Reform Act of 1986 ¹ | -47.2 | -23.2 | 12.6 | -25.7 | -1.0 |
| Other..... | 645.2 | 8.0 | 12.6 | 11.2 | 12.5 |
| Equals: Disposable personal income..... | 3,587.1 | 59.8 | 45.9 | 86.0 | 79.6 |
| Less: Personal outlays..... | 3,422.5 | 53.9 | 67.9 | 68.2 | 60.7 |
| Equals: Personal saving..... | 164.6 | 5.9 | -22.1 | 17.9 | 18.9 |
| Addenda: Special factors in personal income: | | | | | |
| In wages and salaries: | | | | | |
| Federal Government and Postal Service pay adjustments..... | | 1.9 | .1 | .3 | .3 |
| In farm proprietors' income: | | | | | |
| Agricultural subsidy payments..... | | -6.1 | 2.1 | -12.6 | 14.7 |
| In transfer payments: | | | | | |
| Social security retroactive payments..... | | 1.5 | -1.5 | | |
| Cost-of-living increases in Federal transfer payments..... | | 12.8 | | | |
| In personal contributions for social insurance: | | | | | |
| Social security rate and base changes and increase in premium for supplementary medical insurance..... | | 10.6 | | | |

1. Estimates of the impact of the Tax Reform Act of 1986 on Federal Government personal tax payments and indirect effects on State and local government personal tax payments.

Note.—Most dollar levels are found in table 2.1 of the "Selected NIPA Tables."

National Income and Product Accounts Tables

Selected NIPA Tables

New estimates in this issue: Fourth quarter and annual 1988.

The selected set of 54 national income and product accounts (NIPA) tables shown in this section presents quarterly estimates, which are updated monthly. (In most of these tables, annual estimates are also shown.) The full set of 132 tables usually shown in July presents annual NIPA revisions. For more information on the presentation of the estimates, see "National Income and Product Accounts Estimates: When They are Released, Where They Are Available, and How They Are Presented" in the July 1988 SURVEY.

The full set of estimates for 1985-87 is in the July 1988 issue of the SURVEY; estimates for 1984 are in the July 1987 issue; estimates for 1983 are in the July 1986 issue. Estimates for 1929-82 are in *National Income and Product Accounts, 1929-82: Statistical Tables* (GPO Stock No. 003-010-00174-7, price \$23.00). These publications are available from the Superintendent of Documents; see address on inside front cover.

The full set of NIPA tables is available on diskette for \$240 per year (12 updates, for the quarterly estimates prepared each month). For more information, write to the Bureau of Economic Analysis (BE-54), U.S. Department of Commerce, Washington, DC 20230.

Table 1.1.—Gross National Product

[Billions of dollars]

| | 1987 | 1988 | Seasonally adjusted at annual rates | | | | | |
|---|---------|---------|-------------------------------------|---------|---------|---------|---------|---------|
| | | | 1987 | | 1988 | | | |
| | | | III | IV | I | II | III | IV |
| Gross national product | 4,526.7 | 4,861.8 | 4,568.0 | 4,662.8 | 4,724.5 | 4,823.8 | 4,909.0 | 4,989.9 |
| Personal consumption expenditures | 3,012.1 | 3,226.0 | 3,058.2 | 3,076.3 | 3,128.1 | 3,194.6 | 3,261.2 | 3,320.1 |
| Durable goods..... | 421.9 | 449.9 | 441.4 | 422.0 | 437.8 | 449.8 | 452.9 | 459.3 |
| Nondurable goods..... | 997.9 | 1,047.2 | 1,006.6 | 1,012.4 | 1,016.2 | 1,036.6 | 1,060.8 | 1,075.2 |
| Services..... | 1,592.3 | 1,728.9 | 1,610.2 | 1,641.9 | 1,674.1 | 1,708.2 | 1,747.5 | 1,785.6 |
| Gross private domestic investment | 712.9 | 765.5 | 702.8 | 764.9 | 763.4 | 758.1 | 772.5 | 767.9 |
| Fixed investment..... | 673.7 | 717.4 | 688.3 | 692.9 | 698.1 | 714.4 | 722.8 | 734.3 |
| Nonresidential..... | 446.8 | 487.7 | 462.1 | 464.1 | 471.5 | 487.8 | 493.7 | 497.8 |
| Structures..... | 159.5 | 142.3 | 145.0 | 147.7 | 140.1 | 142.3 | 143.8 | 142.8 |
| Producers' durable equipment..... | 307.3 | 345.5 | 319.1 | 316.3 | 331.3 | 345.5 | 349.9 | 355.1 |
| Residential..... | 226.9 | 229.7 | 226.2 | 228.8 | 226.6 | 226.5 | 229.1 | 236.4 |
| Change in business inventories..... | 39.2 | 48.1 | 14.5 | 72.0 | 65.3 | 43.7 | 49.7 | 33.7 |
| Nonfarm..... | 40.7 | 41.8 | 17.8 | 72.8 | 49.4 | 33.1 | 41.9 | 42.7 |
| Farm..... | -1.5 | 6.3 | -3.3 | -8 | 15.9 | 10.6 | 7.8 | -9.0 |
| Net exports of goods and services | -123.0 | -93.2 | -125.2 | -125.7 | -112.1 | -90.4 | -80.0 | -90.3 |
| Exports..... | 428.0 | 518.7 | 440.4 | 459.7 | 487.8 | 507.1 | 536.1 | 543.8 |
| Imports..... | 551.1 | 611.9 | 565.6 | 585.4 | 599.9 | 597.5 | 616.0 | 634.1 |
| Government purchases of goods and services | 924.7 | 963.6 | 932.2 | 947.3 | 945.2 | 961.6 | 955.3 | 992.2 |
| Federal..... | 382.0 | 380.2 | 386.3 | 391.4 | 377.7 | 382.2 | 367.7 | 393.2 |
| National defense..... | 295.3 | 297.5 | 299.8 | 299.2 | 298.4 | 298.8 | 294.3 | 298.4 |
| Nondefense..... | 86.7 | 82.7 | 86.4 | 92.2 | 79.3 | 83.4 | 73.4 | 94.9 |
| State and local..... | 542.8 | 583.4 | 546.0 | 555.9 | 567.5 | 579.4 | 587.6 | 599.0 |

Note.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

Table 1.2.—Gross National Product in Constant Dollars

[Billions of 1982 dollars]

| | 1987 | 1988 | Seasonally adjusted at annual rates | | | | | |
|---|---------|---------|-------------------------------------|---------|---------|---------|---------|---------|
| | | | 1987 | | 1988 | | | |
| | | | III | IV | I | II | III | IV |
| Gross national product | 3,847.0 | 3,995.0 | 3,865.3 | 3,923.0 | 3,956.1 | 3,985.2 | 4,009.4 | 4,029.2 |
| Personal consumption expenditures | 2,521.0 | 2,591.1 | 2,545.2 | 2,531.7 | 2,559.8 | 2,579.0 | 2,603.8 | 2,621.9 |
| Durable goods..... | 390.9 | 408.6 | 406.5 | 387.6 | 401.1 | 410.6 | 410.4 | 412.5 |
| Nondurable goods..... | 890.5 | 899.9 | 891.9 | 890.5 | 892.7 | 893.6 | 904.5 | 908.7 |
| Services..... | 1,239.5 | 1,282.6 | 1,246.8 | 1,253.6 | 1,265.9 | 1,274.8 | 1,288.9 | 1,300.7 |
| Gross private domestic investment | 674.8 | 721.8 | 667.9 | 724.7 | 728.9 | 715.1 | 726.1 | 717.1 |
| Fixed investment..... | 640.4 | 679.3 | 654.9 | 657.6 | 662.9 | 679.7 | 686.6 | 687.9 |
| Nonresidential..... | 445.1 | 487.2 | 462.8 | 464.8 | 473.4 | 490.2 | 495.0 | 490.4 |
| Structures..... | 125.5 | 124.7 | 128.0 | 132.1 | 124.0 | 125.0 | 125.8 | 124.0 |
| Producers' durable equipment..... | 319.6 | 362.5 | 334.7 | 332.7 | 349.4 | 365.1 | 369.2 | 366.4 |
| Residential..... | 195.2 | 192.1 | 192.1 | 192.7 | 189.5 | 189.6 | 191.6 | 197.4 |
| Change in business inventories..... | 34.4 | 42.5 | 13.0 | 67.1 | 66.0 | 35.3 | 39.5 | 29.2 |
| Nonfarm..... | 36.9 | 39.7 | 18.3 | 68.2 | 51.9 | 30.1 | 40.4 | 36.6 |
| Farm..... | -2.5 | 2.8 | -5.3 | -1.1 | 14.1 | 5.3 | -8 | -7.4 |
| Net exports of goods and services | -128.9 | -99.1 | -130.7 | -126.0 | -109.0 | -92.6 | -93.9 | -100.7 |
| Exports..... | 427.8 | 503.7 | 440.9 | 459.2 | 486.2 | 496.9 | 514.0 | 517.6 |
| Imports..... | 556.7 | 602.8 | 571.6 | 585.2 | 595.1 | 589.5 | 607.9 | 618.3 |
| Government purchases of goods and services | 780.2 | 781.2 | 782.9 | 792.6 | 776.4 | 783.8 | 773.5 | 790.9 |
| Federal..... | 339.0 | 328.1 | 342.1 | 347.7 | 327.8 | 331.6 | 320.1 | 332.9 |
| National defense..... | 264.9 | 261.0 | 269.5 | 268.2 | 264.6 | 263.6 | 256.4 | 259.5 |
| Nondefense..... | 74.1 | 67.1 | 72.6 | 79.5 | 63.2 | 67.9 | 63.7 | 73.5 |
| State and local..... | 441.2 | 453.1 | 440.8 | 444.9 | 448.7 | 452.2 | 453.4 | 458.0 |

Note.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

Table 1.3.—Gross National Product by Major Type of Product

[Billions of dollars]

| | 1987 | 1988 | Seasonally adjusted at annual rates | | | | | |
|-------------------------------------|---------|---------|-------------------------------------|---------|---------|---------|---------|---------|
| | | | 1987 | | 1988 | | | |
| | | | III | IV | I | II | III | IV |
| Gross national product | 4,526.7 | 4,861.8 | 4,568.0 | 4,662.8 | 4,724.5 | 4,823.8 | 4,909.0 | 4,989.9 |
| Final sales..... | 4,487.5 | 4,813.7 | 4,553.5 | 4,590.7 | 4,659.2 | 4,780.1 | 4,859.3 | 4,956.3 |
| Change in business inventories..... | 39.2 | 48.1 | 14.5 | 72.0 | 65.3 | 43.7 | 49.7 | 33.7 |
| Goods | 1,792.5 | 1,938.5 | 1,812.9 | 1,849.3 | 1,879.5 | 1,928.0 | 1,960.1 | 1,986.3 |
| Final sales..... | 1,753.3 | 1,890.4 | 1,798.4 | 1,777.3 | 1,814.2 | 1,884.3 | 1,910.4 | 1,952.6 |
| Change in business inventories..... | 39.2 | 48.1 | 14.5 | 72.0 | 65.3 | 43.7 | 49.7 | 33.7 |
| Durable goods..... | 776.3 | 858.1 | 792.2 | 808.7 | 819.3 | 849.5 | 881.6 | 882.0 |
| Final sales..... | 749.7 | 826.9 | 789.3 | 758.2 | 792.7 | 831.6 | 836.4 | 846.9 |
| Change in business inventories..... | 26.6 | 31.2 | 2.9 | 50.5 | 26.6 | 17.8 | 45.1 | 35.1 |
| Nondurable goods..... | 1,016.2 | 1,080.4 | 1,020.7 | 1,040.7 | 1,060.1 | 1,078.5 | 1,078.5 | 1,104.2 |
| Final sales..... | 1,003.6 | 1,063.4 | 1,009.1 | 1,019.1 | 1,021.5 | 1,052.7 | 1,074.0 | 1,105.7 |
| Change in business inventories..... | 12.6 | 16.9 | 11.6 | 21.6 | 38.6 | 25.9 | 4.6 | -1.5 |
| Services..... | 2,295.7 | 2,476.8 | 2,314.4 | 2,363.9 | 2,405.2 | 2,451.5 | 2,501.6 | 2,548.8 |
| Structures..... | 438.4 | 446.6 | 440.6 | 449.5 | 439.9 | 444.3 | 447.3 | 454.8 |

Note.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

Table 1.4.—Gross National Product by Major Type of Product in Constant Dollars

[Billions of 1982 dollars]

| | 1987 | 1988 | Seasonally adjusted at annual rates | | | | | |
|-------------------------------------|---------|---------|-------------------------------------|---------|---------|---------|---------|---------|
| | | | 1987 | | 1988 | | | |
| | | | III | IV | I | II | III | IV |
| Gross national product | 3,847.0 | 3,995.0 | 3,865.3 | 3,923.0 | 3,956.1 | 3,985.2 | 4,009.4 | 4,029.2 |
| Final sales..... | 3,812.6 | 3,952.5 | 3,852.2 | 3,855.9 | 3,890.1 | 3,949.9 | 3,969.9 | 4,000.0 |
| Change in business inventories..... | 34.4 | 42.5 | 13.0 | 67.1 | 66.0 | 35.3 | 39.5 | 29.2 |
| Goods | 1,663.3 | 1,762.4 | 1,677.5 | 1,713.9 | 1,748.1 | 1,762.4 | 1,768.9 | 1,770.3 |
| Final sales..... | 1,628.9 | 1,719.9 | 1,664.5 | 1,646.8 | 1,682.2 | 1,727.1 | 1,729.4 | 1,741.1 |
| Change in business inventories..... | 34.4 | 42.5 | 13.0 | 67.1 | 66.0 | 35.3 | 39.5 | 29.2 |
| Durable goods..... | 774.6 | 864.3 | 793.7 | 812.7 | 832.5 | 861.7 | 885.0 | 877.8 |
| Final sales..... | 750.7 | 836.7 | 790.8 | 767.2 | 809.0 | 845.8 | 844.6 | 847.4 |
| Change in business inventories..... | 23.9 | 27.6 | 2.9 | 45.5 | 23.5 | 15.9 | 40.4 | 30.4 |
| Nondurable goods..... | 888.8 | 898.2 | 883.8 | 901.2 | 915.6 | 900.7 | 884.0 | 892.5 |
| Final sales..... | 878.2 | 883.3 | 873.7 | 879.6 | 873.2 | 881.3 | 884.9 | 893.7 |
| Change in business inventories..... | 10.5 | 14.9 | 10.1 | 21.6 | 42.4 | 19.4 | -9 | -1.2 |
| Services..... | 1,801.1 | 1,854.8 | 1,806.6 | 1,822.3 | 1,833.4 | 1,846.1 | 1,862.8 | 1,876.7 |
| Structures..... | 382.6 | 377.8 | 381.1 | 386.7 | 374.6 | 376.7 | 377.7 | 382.2 |

Note.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

Table 1.5.—Relation of Gross National Product, Gross Domestic Purchases, and Final Sales to Domestic Purchasers

[Billions of dollars]

| | 1987 | 1988 | Seasonally adjusted at annual rates | | | | | |
|---|----------------|----------------|-------------------------------------|----------------|----------------|----------------|----------------|----------------|
| | | | 1987 | | 1988 | | | |
| | | | III | IV | I | II | III | IV |
| Gross national product..... | 4,526.7 | 4,861.8 | 4,568.0 | 4,662.8 | 4,724.5 | 4,823.8 | 4,909.0 | 4,989.9 |
| Less: Exports of goods and services..... | 428.0 | 518.7 | 440.4 | 459.7 | 487.8 | 507.1 | 536.1 | 543.8 |
| Plus: Imports of goods and services..... | 551.1 | 611.9 | 565.6 | 585.4 | 599.9 | 597.5 | 616.0 | 634.1 |
| Equals: Gross domestic purchases¹ | 4,649.7 | 4,955.0 | 4,693.2 | 4,788.4 | 4,836.6 | 4,914.2 | 4,989.0 | 5,080.2 |
| Less: Change in business inventories..... | 39.2 | 48.1 | 14.5 | 72.0 | 65.3 | 43.7 | 49.7 | 33.7 |
| Equals: Final sales to domestic purchasers² | 4,610.5 | 4,906.9 | 4,678.7 | 4,716.4 | 4,771.3 | 4,870.5 | 4,939.3 | 5,046.6 |

1. Purchases in the United States of goods and services wherever produced.
2. Final sales in the United States of goods and services wherever produced.

NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

Table 1.7.—Gross National Product by Sector

[Billions of dollars]

| | 1987 | 1988 | Seasonally adjusted at annual rates | | | | | |
|---|---------|---------|-------------------------------------|---------|---------|---------|---------|---------|
| | | | 1987 | | 1988 | | | |
| | | | III | IV | I | II | III | IV |
| Gross national product..... | 4,526.7 | 4,861.8 | 4,568.0 | 4,662.8 | 4,724.5 | 4,823.8 | 4,909.0 | 4,989.9 |
| Gross domestic product..... | 4,497.2 | 4,837.8 | 4,541.2 | 4,631.8 | 4,702.1 | 4,802.5 | 4,882.2 | 4,964.3 |
| Business..... | 3,855.5 | 4,146.6 | 3,893.8 | 3,972.9 | 4,028.1 | 4,117.5 | 4,185.2 | 4,255.7 |
| Nonfarm..... | 3,787.8 | 4,088.0 | 3,832.2 | 3,905.8 | 3,965.4 | 4,048.0 | 4,123.7 | 4,214.8 |
| Nonfarm less housing..... | 3,416.5 | 3,689.8 | 3,457.7 | 3,522.7 | 3,576.0 | 3,654.0 | 3,722.5 | 3,806.6 |
| Housing..... | 371.3 | 398.2 | 374.5 | 383.1 | 389.4 | 394.0 | 401.2 | 408.2 |
| Farm..... | 75.9 | 70.7 | 76.8 | 73.4 | 77.7 | 74.6 | 75.6 | 55.0 |
| Statistical discrepancy..... | -8.1 | -12.0 | -15.1 | -6.4 | -15.0 | -5.1 | -14.0 | -14.0 |
| Households and institutions..... | 168.9 | 188.4 | 171.7 | 176.4 | 180.9 | 185.6 | 191.2 | 196.0 |
| Private households..... | 9.2 | 9.5 | 9.2 | 9.3 | 9.3 | 9.4 | 9.6 | 9.7 |
| Nonprofit institutions..... | 159.8 | 178.9 | 162.5 | 167.1 | 171.6 | 176.1 | 181.6 | 186.3 |
| Government..... | 472.7 | 502.8 | 475.7 | 482.5 | 493.1 | 499.4 | 505.8 | 512.6 |
| Federal..... | 151.0 | 157.8 | 151.3 | 152.7 | 156.7 | 157.4 | 158.1 | 159.0 |
| State and local..... | 321.7 | 345.0 | 324.4 | 329.9 | 336.4 | 342.1 | 347.8 | 353.6 |
| Rest of the world..... | 29.5 | 24.0 | 26.8 | 31.0 | 22.4 | 21.3 | 26.8 | 25.6 |
| Addendum: | | | | | | | | |
| Gross domestic business product less housing..... | 3,476.7 | | | | | | | |

NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

Table 1.6.—Relation of Gross National Product, Gross Domestic Purchases, and Final Sales to Domestic Purchasers in Constant Dollars

[Billions of 1982 dollars]

| | 1987 | 1988 | Seasonally adjusted at annual rates | | | | | |
|---|----------------|----------------|-------------------------------------|----------------|----------------|----------------|----------------|----------------|
| | | | 1987 | | 1988 | | | |
| | | | III | IV | I | II | III | IV |
| Gross national product..... | 3,847.0 | 3,995.0 | 3,865.3 | 3,923.0 | 3,956.1 | 3,985.2 | 4,009.4 | 4,029.2 |
| Less: Exports of goods and services..... | 427.8 | 503.7 | 440.9 | 459.2 | 486.2 | 496.9 | 514.0 | 517.6 |
| Plus: Imports of goods and services..... | 556.7 | 602.8 | 571.6 | 585.2 | 595.1 | 589.5 | 607.9 | 618.3 |
| Equals: Gross domestic purchases¹ | 3,975.9 | 4,094.1 | 3,996.0 | 4,049.0 | 4,065.1 | 4,077.9 | 4,103.4 | 4,129.9 |
| Less: Change in business inventories..... | 34.4 | 42.5 | 13.0 | 67.1 | 66.0 | 35.3 | 39.5 | 29.2 |
| Equals: Final sales to domestic purchasers² | 3,941.5 | 4,051.6 | 3,983.0 | 3,981.9 | 3,999.1 | 4,042.6 | 4,063.8 | 4,100.7 |

1. Purchases in the United States of goods and services wherever produced.
2. Final sales in the United States of goods and services wherever produced.

NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

Table 1.8.—Gross National Product by Sector in Constant Dollars

[Billions of 1982 dollars]

| | 1987 | 1988 | Seasonally adjusted at annual rates | | | | | |
|---|---------|---------|-------------------------------------|---------|---------|---------|---------|---------|
| | | | 1987 | | 1988 | | | |
| | | | III | IV | I | II | III | IV |
| Gross national product..... | 3,847.0 | 3,995.0 | 3,865.3 | 3,923.0 | 3,956.1 | 3,985.2 | 4,009.4 | 4,029.2 |
| Gross domestic product..... | 3,821.4 | 3,974.6 | 3,842.0 | 3,896.3 | 3,936.6 | 3,967.0 | 3,987.0 | 4,008.0 |
| Business..... | 3,322.5 | 3,464.4 | 3,341.2 | 3,393.6 | 3,430.5 | 3,458.9 | 3,475.1 | 3,493.1 |
| Nonfarm..... | 3,247.1 | 3,406.5 | 3,272.2 | 3,317.2 | 3,360.9 | 3,393.1 | 3,421.5 | 3,450.6 |
| Nonfarm less housing..... | 2,965.7 | 3,118.4 | 2,989.5 | 3,032.8 | 3,074.8 | 3,105.7 | 3,132.8 | 3,160.5 |
| Housing..... | 281.4 | 288.1 | 282.7 | 284.4 | 286.1 | 287.4 | 288.8 | 290.1 |
| Farm..... | 82.5 | 67.9 | 82.0 | 81.8 | 82.3 | 70.1 | 65.2 | 54.0 |
| Statistical discrepancy..... | -7.0 | -10.1 | -13.0 | -5.4 | -12.8 | -4.3 | -11.6 | -11.5 |
| Households and institutions..... | 129.0 | 135.6 | 130.0 | 130.7 | 133.3 | 134.4 | 136.8 | 138.1 |
| Private households..... | 8.8 | 9.0 | 8.8 | 8.8 | 8.9 | 8.9 | 9.0 | 9.1 |
| Nonprofit institutions..... | 120.2 | 126.7 | 121.2 | 121.9 | 124.4 | 125.5 | 127.8 | 129.0 |
| Government..... | 369.9 | 374.6 | 370.8 | 372.0 | 372.8 | 373.7 | 375.2 | 376.8 |
| Federal..... | 123.5 | 124.2 | 123.7 | 123.9 | 123.9 | 123.8 | 124.2 | 124.8 |
| State and local..... | 246.4 | 250.5 | 247.1 | 248.1 | 249.0 | 249.9 | 251.0 | 252.0 |
| Rest of the world..... | 25.6 | 20.3 | 23.3 | 26.7 | 19.5 | 18.3 | 22.4 | 21.2 |
| Addendum: | | | | | | | | |
| Gross domestic business product less housing..... | 3,032.1 | | | | | | | |

NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

Table 1.9.—Relation of Gross National Product, Net National Product, National Income, and Personal Income

[Billions of dollars]

| | 1987 | 1988 | Seasonally adjusted at annual rates | | | | | |
|---|---------|---------|-------------------------------------|---------|---------|---------|---------|---------|
| | | | 1987 | | 1988 | | | |
| | | | III | IV | I | II | III | IV |
| Gross national product | 4,526.7 | 4,861.8 | 4,568.0 | 4,662.8 | 4,724.5 | 4,823.8 | 4,909.0 | 4,989.9 |
| Less: Capital consumption allowances with capital consumption adjustment..... | 480.0 | 506.0 | 484.6 | 489.5 | 498.3 | 508.2 | 507.7 | 514.7 |
| Capital consumption allowances without capital consumption adjustment..... | 507.6 | 524.5 | 510.8 | 516.4 | 520.8 | 524.1 | 526.0 | 527.0 |
| Less: Capital consumption adjustment..... | 27.6 | 18.5 | 26.2 | 26.9 | 22.5 | 20.9 | 18.2 | 12.3 |
| Equals: Net national product | 4,046.7 | 4,355.8 | 4,083.4 | 4,173.3 | 4,226.2 | 4,320.5 | 4,401.3 | 4,475.2 |
| Less: Indirect business tax and nontax liability..... | 366.3 | 389.0 | 370.3 | 374.2 | 379.4 | 385.8 | 392.3 | 398.6 |
| Business transfer payments..... | 28.1 | 30.7 | 28.5 | 29.0 | 29.6 | 30.3 | 31.1 | 31.8 |
| Statistical discrepancy..... | -8.1 | -12.0 | -15.1 | -6.4 | -15.0 | -5.1 | -14.0 | ..... |
| Plus: Subsidies less current surplus of government enterprises..... | 18.3 | 16.1 | 8.3 | 25.6 | 18.6 | 19.2 | 8.8 | 17.8 |
| Equals: National income | 3,678.7 | 3,964.3 | 3,708.0 | 3,802.0 | 3,850.8 | 3,928.8 | 4,000.7 | ..... |
| Less: Corporate profits with inventory valuation and capital consumption adjustments..... | 310.4 | 323.6 | 322.0 | 316.1 | 316.2 | 326.5 | 330.0 | ..... |
| Net interest..... | 353.6 | 391.5 | 358.3 | 369.5 | 373.9 | 380.6 | 396.2 | 415.1 |
| Contributions for social insurance..... | 399.1 | 444.6 | 400.9 | 408.6 | 433.3 | 440.9 | 448.4 | 456.0 |
| Wage accruals less disbursements..... | 0 | 0 | .2 | -.2 | 0 | 0 | 0 | 0 |
| Plus: Government transfer payments to persons..... | 520.6 | 555.3 | 523.2 | 527.8 | 546.7 | 552.5 | 557.6 | 564.4 |
| Personal interest income..... | 527.0 | 576.3 | 533.0 | 550.0 | 554.2 | 563.7 | 581.9 | 605.5 |
| Personal dividend income..... | 88.6 | 96.3 | 89.9 | 91.9 | 93.5 | 95.0 | 97.3 | 99.4 |
| Business transfer payments..... | 28.1 | 30.7 | 28.5 | 29.0 | 29.6 | 30.3 | 31.1 | 31.8 |
| Equals: Personal income | 3,780.0 | 4,063.2 | 3,801.0 | 3,906.8 | 3,951.4 | 4,022.4 | 4,094.0 | 4,185.1 |

Table 1.10.—Relation of Gross National Product, Net National Product, and National Income in Constant Dollars

[Billions of 1982 dollars]

| | | | | | | | | |
|---|---------|---------|---------|---------|---------|---------|---------|---------|
| Gross national product | 3,847.0 | 3,995.0 | 3,865.3 | 3,923.0 | 3,956.1 | 3,985.2 | 4,009.4 | 4,029.2 |
| Less: Capital consumption allowances with capital consumption adjustment..... | 460.8 | 479.7 | 463.0 | 468.2 | 472.9 | 477.3 | 481.9 | 486.5 |
| Equals: Net national product | 3,386.2 | 3,515.3 | 3,402.2 | 3,454.8 | 3,483.2 | 3,507.9 | 3,527.5 | 3,542.7 |
| Less: Indirect business tax and nontax liability plus business transfer payments less subsidies plus current surplus of government enterprises..... | 319.2 | 327.4 | 321.8 | 321.0 | 324.4 | 326.2 | 328.1 | 330.7 |
| Statistical discrepancy..... | -7.0 | -10.1 | -13.0 | -5.4 | -12.8 | -4.3 | -11.6 | ..... |
| Equals: National income | 3,074.0 | 3,198.0 | 3,093.4 | 3,139.3 | 3,171.5 | 3,186.0 | 3,211.1 | ..... |

Table 1.11.—Command-Basis Gross National Product in Constant Dollars

[Billions of 1982 dollars]

| | | | | | | | | |
|--|---------|---------|---------|---------|---------|---------|---------|---------|
| Gross national product | 3,847.0 | 3,995.0 | 3,865.3 | 3,923.0 | 3,956.1 | 3,985.2 | 4,009.4 | 4,029.2 |
| Less: Net exports of goods and services..... | -128.9 | -99.1 | -130.7 | -126.0 | -109.0 | -92.6 | -93.9 | -100.7 |
| Exports..... | 427.8 | 503.7 | 440.9 | 459.2 | 486.2 | 496.9 | 514.0 | 517.6 |
| Imports..... | 556.7 | 602.8 | 571.6 | 585.2 | 595.1 | 589.5 | 607.9 | 618.3 |
| Equals: Gross domestic purchases | 3,975.9 | 4,094.1 | 3,996.0 | 4,049.0 | 4,065.1 | 4,077.9 | 4,103.4 | 4,129.9 |
| Plus: Command-basis net exports of goods and services..... | -124.3 | -91.8 | -126.5 | -125.6 | -111.2 | -89.2 | -78.9 | -88.0 |
| Command-basis exports ¹ | 432.4 | 511.0 | 445.1 | 459.6 | 483.9 | 500.3 | 529.0 | 530.3 |
| Imports..... | 556.7 | 602.8 | 571.6 | 585.2 | 595.1 | 589.5 | 607.9 | 618.3 |
| Equals: Command-basis gross national product | 3,851.6 | 4,002.3 | 3,869.4 | 3,923.4 | 3,953.9 | 3,988.7 | 4,024.5 | 4,041.9 |
| Addendum: | | | | | | | | |
| Terms of trade ² | 101.0 | 101.5 | 101.0 | 100.1 | 99.5 | 100.7 | 103.0 | 102.5 |

1. Exports of goods and services deflated by the implicit price deflator for imports of goods and services.
 2. Ratio of the implicit price deflator for exports of goods and services to the implicit price deflator for imports of goods and services with the decimal point shifted two places to the right.
 Note.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

Table 1.14.—National Income by Type of Income

[Billions of dollars]

| | 1987 | 1988 | Seasonally adjusted at annual rates | | | | | | | |
|---|---------|---------|-------------------------------------|---------|---------|---------|---------|---------|-------|--|
| | | | 1987 | | 1988 | | | | | |
| | | | III | IV | I | II | III | IV | | |
| National income | 3,678.7 | 3,964.3 | 3,708.0 | 3,802.0 | 3,850.8 | 3,928.8 | 4,000.7 | ..... | ..... |  |
| Compensation of employees | 2,683.4 | 2,904.9 | 2,702.8 | 2,769.9 | 2,816.4 | 2,874.0 | 2,933.2 | 2,996.3 | ..... |  |
| Wages and salaries..... | 2,248.4 | 2,437.1 | 2,265.3 | 2,324.8 | 2,358.7 | 2,410.0 | 2,462.0 | 2,517.9 | ..... |  |
| Government and government enterprises..... | 420.1 | 446.1 | 423.2 | 429.2 | 437.1 | 442.9 | 449.1 | 455.4 | ..... |  |
| Other..... | 1,828.3 | 1,991.0 | 1,842.1 | 1,895.6 | 1,921.6 | 1,967.1 | 2,012.9 | 2,062.5 | ..... |  |
| Supplements to wages and salaries..... | 435.0 | 467.8 | 437.5 | 445.1 | 457.7 | 464.0 | 471.1 | 478.4 | ..... |  |
| Employer contributions for social insurance..... | 227.1 | 249.5 | 228.2 | 232.7 | 243.1 | 247.5 | 251.7 | 255.9 | ..... |  |
| Other labor income..... | 207.9 | 218.3 | 209.3 | 212.4 | 214.6 | 216.5 | 219.5 | 222.5 | ..... |  |
| Proprietors' income with inventory valuation and capital consumption adjustments | 312.9 | 324.7 | 306.8 | 326.0 | 323.9 | 328.8 | 321.6 | 324.6 | ..... |  |
| Farm..... | 43.0 | 36.4 | 35.2 | 47.0 | 44.7 | 43.4 | 30.9 | 26.4 | ..... |  |
| Proprietors' income with inventory valuation adjustment..... | 50.6 | 43.5 | 42.9 | 54.5 | 52.2 | 50.8 | 37.9 | 33.2 | ..... |  |
| Capital consumption adjustment..... | -7.6 | -7.2 | -7.7 | -7.5 | -7.5 | -7.3 | -7.0 | -6.8 | ..... |  |
| Nonfarm..... | 270.0 | 288.3 | 271.5 | 279.0 | 279.2 | 285.3 | 290.7 | 298.2 | ..... |  |
| Proprietors' income..... | 283.0 | 254.1 | 285.1 | 243.4 | 243.7 | 250.9 | 256.8 | 265.1 | ..... |  |
| Inventory valuation adjustment..... | -1.0 | -1.4 | -1.1 | -1.7 | -1.2 | -1.7 | -1.5 | -1.2 | ..... |  |
| Capital consumption adjustment..... | 38.0 | 35.6 | 37.6 | 37.4 | 36.6 | 36.1 | 35.4 | 34.3 | ..... |  |
| Rental income of persons with capital consumption adjustment | 18.4 | 19.6 | 18.1 | 20.5 | 20.5 | 19.1 | 19.7 | 19.1 | ..... |  |
| Rental income of persons..... | 66.2 | 68.5 | 67.1 | 69.1 | 69.6 | 68.0 | 68.5 | 67.8 | ..... |  |
| Capital consumption adjustment..... | -47.8 | -48.9 | -49.0 | -48.6 | -49.1 | -49.0 | -48.8 | -48.6 | ..... |  |
| Corporate profits with inventory valuation and capital consumption adjustments | 310.4 | 323.6 | 322.0 | 316.1 | 316.2 | 326.5 | 330.0 | ..... |  |  |
| Corporate profits with inventory valuation adjustment..... | 258.7 | 277.8 | 269.9 | 263.7 | 266.8 | 278.5 | 284.6 | ..... |  |  |
| Profits before tax..... | 276.7 | 302.0 | 289.4 | 281.9 | 286.2 | 305.9 | 313.9 | ..... |  |  |
| Profits tax liability..... | 133.8 | 141.1 | 140.0 | 136.2 | 136.9 | 143.2 | 144.8 | ..... |  |  |
| Profits after tax..... | 142.9 | 160.9 | 149.5 | 145.7 | 149.4 | 162.7 | 169.1 | ..... |  |  |
| Dividends..... | 95.5 | 104.5 | 97.0 | 99.3 | 101.3 | 103.1 | 105.7 | 108.0 | ..... |  |
| Undistributed profits..... | 47.4 | 56.4 | 52.4 | 46.4 | 48.1 | 59.6 | 63.4 | ..... |  |  |
| Inventory valuation adjustment..... | -18.0 | -24.2 | -19.5 | -18.2 | -19.4 | -27.4 | -29.3 | -20.7 | ..... |  |
| Capital consumption adjustment..... | 51.7 | 45.8 | 52.1 | 52.4 | 49.4 | 48.0 | 45.4 | 40.3 | ..... |  |
| Net interest | 353.6 | 391.5 | 358.3 | 369.5 | 373.9 | 380.6 | 396.2 | 415.1 | ..... |  |
| Addenda: | | | | | | | | | | |
| Corporate profits after tax with inventory valuation and capital consumption adjustments..... | 176.6 | 182.5 | 182.1 | 179.9 | 179.3 | 183.2 | 185.2 | ..... |  |  |
| Net cash flow with inventory valuation and capital consumption adjustments..... | 378.6 | 393.5 | 384.7 | 384.2 | 387.8 | 393.4 | 396.4 | ..... |  |  |
| Undistributed profits with inventory valuation and capital consumption adjustments..... | 81.1 | 77.9 | 85.0 | 80.5 | 78.1 | 80.1 | 79.5 | ..... |  |  |
| Capital consumption allowances with capital consumption adjustment..... | 297.5 | 315.6 | 299.7 | 303.7 | 309.8 | 313.3 | 316.8 | 322.3 | ..... |  |
| Less: Inventory valuation adjustment..... | -18.0 | -24.2 | -19.5 | -18.2 | -19.4 | -27.4 | -29.3 | -20.7 | ..... |  |
| Equals: Net cash flow | 396.6 | 417.7 | 404.2 | 402.4 | 407.3 | 420.8 | 425.7 | ..... |  |  |

Table 1.16.—Gross Domestic Product of Corporate Business in Current Dollars and Gross Domestic Product of Nonfinancial Corporate Business in Current and Constant Dollars

| | 1987 | 1988 | Seasonally adjusted at annual rates | | | | | |
|--|---------|---------|-------------------------------------|---------|---------|---------|---------|---------|
| | | | 1987 | | 1988 | | | |
| | | | III | IV | I | II | III | IV |
| Billions of dollars | | | | | | | | |
| Gross domestic product of corporate business | 2,717.9 | 2,926.2 | 2,752.6 | 2,793.0 | 2,845.1 | 2,901.1 | 2,954.2 | |
| Capital consumption allowances with capital consumption adjustment..... | 297.5 | 315.6 | 299.7 | 303.7 | 309.8 | 313.3 | 316.8 | 322.3 |
| Net domestic product..... | 2,420.4 | 2,610.6 | 2,452.9 | 2,489.3 | 2,535.4 | 2,587.8 | 2,637.4 | |
| Indirect business tax and nontax liability plus business transfer payments less subsidies..... | 257.5 | 274.6 | 261.6 | 262.8 | 267.7 | 271.8 | 278.0 | 281.1 |
| Domestic income..... | 2,162.9 | 2,336.0 | 2,191.3 | 2,226.5 | 2,267.6 | 2,316.1 | 2,359.4 | |
| Compensation of employees... Wages and salaries..... | 1,803.7 | 1,949.6 | 1,816.0 | 1,858.4 | 1,887.7 | 1,927.9 | 1,968.8 | 2,014.0 |
| Supplements to wages and salaries..... | 1,520.6 | 1,649.9 | 1,531.4 | 1,569.3 | 1,594.7 | 1,630.8 | 1,667.0 | 1,707.1 |
| Corporate profits with inventory valuation and capital consumption adjustments..... | 283.0 | 299.7 | 284.6 | 289.1 | 293.1 | 297.1 | 301.8 | 306.9 |
| Profits before tax..... | 274.0 | 286.7 | 286.7 | 274.6 | 286.0 | 291.1 | 289.2 | |
| Profits tax liability..... | 240.3 | 265.1 | 254.1 | 240.4 | 256.0 | 270.5 | 273.1 | |
| Profits after tax..... | 133.8 | 141.1 | 140.0 | 136.2 | 136.9 | 143.2 | 144.8 | |
| Dividends..... | 106.5 | 124.0 | 114.2 | 104.2 | 119.2 | 127.3 | 128.3 | |
| Undistributed profits..... | 83.4 | 88.5 | 83.4 | 91.3 | 75.3 | 87.1 | 99.6 | 92.1 |
| Inventory valuation adjustment..... | 23.1 | 35.5 | 30.8 | 12.9 | 43.9 | 40.2 | 28.7 | |
| Capital consumption adjustment..... | -18.0 | -24.2 | -19.5 | -18.2 | -19.4 | -27.4 | -29.3 | -20.7 |
| Net interest..... | 51.7 | 45.8 | 52.1 | 52.4 | 49.4 | 48.0 | 45.4 | 40.3 |
| | 85.2 | 99.7 | 88.6 | 93.5 | 93.9 | 97.1 | 101.4 | 106.4 |
| Gross domestic product of financial corporate business | 204.4 | 219.6 | 205.7 | 207.4 | 212.0 | 217.1 | 222.2 | |
| Gross domestic product of nonfinancial corporate business | 2,513.5 | 2,706.5 | 2,546.9 | 2,585.6 | 2,633.2 | 2,684.0 | 2,732.1 | |
| Capital consumption allowances with capital consumption adjustment..... | 276.2 | 291.9 | 278.0 | 281.3 | 286.8 | 290.0 | 293.0 | 297.8 |
| Net domestic product..... | 2,237.3 | 2,414.6 | 2,268.8 | 2,304.3 | 2,346.4 | 2,394.0 | 2,439.1 | |
| Indirect business tax and nontax liability plus business transfer payments less subsidies..... | 239.8 | 255.6 | 243.6 | 244.5 | 249.2 | 253.0 | 258.8 | 261.5 |
| Domestic income..... | 1,997.5 | 2,159.0 | 2,025.3 | 2,059.7 | 2,097.2 | 2,141.1 | 2,180.3 | |
| Compensation of employees... Wages and salaries..... | 1,661.4 | 1,797.8 | 1,673.3 | 1,714.7 | 1,739.6 | 1,777.8 | 1,816.4 | 1,857.4 |
| Supplements to wages and salaries..... | 1,399.7 | 1,520.3 | 1,409.9 | 1,447.0 | 1,468.4 | 1,502.8 | 1,536.9 | 1,573.2 |
| Corporate profits with inventory valuation and capital consumption adjustments..... | 261.8 | 277.5 | 263.3 | 267.8 | 271.2 | 275.0 | 279.5 | 284.1 |
| Profits before tax..... | 237.5 | 247.5 | 250.4 | 238.4 | 250.6 | 252.6 | 248.2 | |
| Profits tax liability..... | 210.2 | 234.0 | 224.6 | 211.6 | 228.4 | 240.5 | 240.4 | |
| Profits after tax..... | 99.0 | 106.5 | 105.3 | 101.7 | 104.4 | 109.4 | 109.1 | |
| Dividends..... | 111.2 | 127.6 | 119.3 | 109.9 | 124.1 | 131.1 | 131.3 | |
| Undistributed profits..... | 83.8 | 87.6 | 83.9 | 90.8 | 74.6 | 86.2 | 98.7 | 91.0 |
| Inventory valuation adjustment..... | 27.4 | 39.9 | 35.4 | 19.1 | 49.5 | 44.9 | 32.7 | |
| Capital consumption adjustment..... | -18.0 | -24.2 | -19.5 | -18.2 | -19.4 | -27.4 | -29.3 | -20.7 |
| Net interest..... | 45.3 | 37.7 | 45.3 | 45.0 | 41.5 | 39.5 | 37.1 | 32.7 |
| | 98.6 | 113.7 | 101.6 | 106.6 | 107.1 | 110.7 | 115.7 | 121.4 |
| Billions of 1982 dollars | | | | | | | | |
| Gross domestic product of nonfinancial corporate business | 2,270.4 | 2,387.2 | 2,296.1 | 2,322.5 | 2,363.5 | 2,380.9 | 2,395.5 | |
| Capital consumption allowances with capital consumption adjustment..... | 269.4 | 279.3 | 270.6 | 273.2 | 275.7 | 278.1 | 280.6 | 283.0 |
| Net domestic product..... | 2,001.0 | 2,107.8 | 2,025.5 | 2,049.3 | 2,087.8 | 2,102.9 | 2,114.9 | |
| Indirect business tax and nontax liability plus business transfer payments less subsidies..... | 203.2 | 208.7 | 205.4 | 204.3 | 206.3 | 207.8 | 209.6 | 211.1 |
| Domestic income..... | 1,797.8 | 1,899.1 | 1,820.1 | 1,845.1 | 1,881.4 | 1,895.1 | 1,905.3 | |

Table 1.17.—Auto Output

[Billions of dollars]

| | 1987 | 1988 | Seasonally adjusted at annual rates | | | | | |
|---|-------|-------|-------------------------------------|-------|-------|-------|-------|-------|
| | | | 1987 | | 1988 | | | |
| | | | III | IV | I | II | III | IV |
| Auto output | 116.3 | 128.7 | 115.3 | 120.6 | 113.1 | 130.3 | 132.0 | 139.3 |
| Final sales | 109.4 | 125.9 | 126.2 | 106.6 | 117.8 | 129.3 | 128.0 | 128.7 |
| Personal consumption expenditures..... | 130.0 | 138.3 | 144.4 | 128.0 | 133.9 | 139.8 | 139.2 | 140.4 |
| New autos..... | 94.1 | 100.9 | 109.0 | 90.9 | 100.2 | 100.1 | 101.1 | 102.1 |
| Net purchases of used autos.. | 35.9 | 37.4 | 35.4 | 37.0 | 33.7 | 39.7 | 38.1 | 38.3 |
| Producers' durable equipment.. | 19.2 | 23.8 | 21.7 | 19.3 | 22.1 | 23.7 | 23.7 | 25.7 |
| New autos..... | 44.4 | 50.9 | 47.2 | 44.9 | 47.9 | 50.0 | 52.3 | 53.5 |
| Net purchases of used autos.. | -25.2 | -27.1 | -25.6 | -25.6 | -25.7 | -26.4 | -28.6 | -27.7 |
| Net exports of goods and services..... | -41.3 | -37.8 | -41.3 | -42.3 | -40.1 | -35.8 | -36.4 | -38.9 |
| Exports..... | 6.6 | 9.1 | 6.4 | 8.1 | 8.2 | 8.3 | 9.8 | 9.9 |
| Imports..... | 47.9 | 46.9 | 47.7 | 50.3 | 48.3 | 44.1 | 46.2 | 48.8 |
| Government purchases of goods and services..... | 1.5 | 1.6 | 1.4 | 1.6 | 1.9 | 1.6 | 1.5 | 1.5 |
| Change in business inventories of new and used autos | 6.9 | 2.8 | -10.8 | 14.0 | -4.7 | 1.1 | 4.0 | 10.7 |
| New..... | 6.7 | 1.7 | -12.4 | 14.0 | -9.1 | 3.4 | 2.7 | 9.9 |
| Used..... | .2 | 1.0 | 1.6 | 0 | 4.4 | -2.3 | 1.3 | .8 |
| Addenda: | | | | | | | | |
| Domestic output of new autos ¹ | 94.8 | 102.2 | 90.1 | 98.7 | 88.7 | 104.2 | 103.0 | 112.8 |
| Sales of imported new autos ² ... | 55.0 | 60.0 | 60.2 | 57.2 | 60.2 | 60.6 | 60.2 | 58.9 |

1. Consists of final sales and change in business inventories of new autos assembled in the United States.
2. Consists of personal consumption expenditures, producers' durable equipment, and government purchases.

Table 1.18.—Auto Output in Constant Dollars

[Billions of 1982 dollars]

| | 1987 | 1988 | Seasonally adjusted at annual rates | | | | | |
|---|-------|-------|-------------------------------------|-------|-------|-------|-------|-------|
| | | | 1987 | | 1988 | | | |
| | | | III | IV | I | II | III | IV |
| Auto output | 100.6 | 108.8 | 99.2 | 102.9 | 96.0 | 111.2 | 111.5 | 116.5 |
| Final sales | 95.1 | 107.0 | 109.0 | 91.4 | 101.0 | 110.4 | 108.5 | 108.2 |
| Personal consumption expenditures..... | 108.8 | 113.3 | 120.2 | 105.3 | 110.4 | 115.5 | 113.7 | 113.6 |
| New autos..... | 80.0 | 84.1 | 92.4 | 76.5 | 84.3 | 83.9 | 84.1 | 84.2 |
| Net purchases of used autos.. | 28.8 | 29.1 | 27.8 | 28.8 | 26.0 | 31.6 | 29.6 | 29.4 |
| Producers' durable equipment.. | 16.3 | 20.3 | 18.6 | 16.4 | 19.0 | 20.1 | 20.3 | 21.7 |
| New autos..... | 37.7 | 42.5 | 40.0 | 37.8 | 40.3 | 41.9 | 43.5 | 44.1 |
| Net purchases of used autos.. | -21.5 | -22.2 | -21.4 | -21.4 | -21.2 | -21.8 | -23.3 | -22.4 |
| Net exports of goods and services..... | -31.4 | -28.0 | -31.1 | -31.8 | -30.1 | -26.5 | -26.8 | -28.4 |
| Exports..... | 5.4 | 7.4 | 5.3 | 6.6 | 6.7 | 6.8 | 7.9 | 8.1 |
| Imports..... | 36.8 | 35.3 | 36.3 | 38.4 | 36.8 | 33.3 | 34.7 | 36.5 |
| Government purchases of goods and services..... | 1.4 | 1.4 | 1.3 | 1.4 | 1.7 | 1.4 | 1.3 | 1.3 |
| Change in business inventories of new and used autos | 5.5 | 1.8 | -9.8 | 11.5 | -4.9 | .8 | 3.0 | 8.4 |
| New..... | 5.3 | 1.0 | -11.2 | 11.5 | -8.5 | 2.8 | 2.0 | 7.8 |
| Used..... | .2 | .8 | 1.3 | 0 | 3.6 | -2.0 | 1.1 | .6 |
| Addenda: | | | | | | | | |
| Domestic output of new autos ¹ | 80.5 | 85.0 | 75.8 | 83.1 | 74.2 | 87.3 | 85.4 | 93.0 |
| Sales of imported new autos ² ... | 46.8 | 50.0 | 51.0 | 48.1 | 50.7 | 50.8 | 50.1 | 48.6 |

1. Consists of final sales and change in business inventories of new autos assembled in the United States.
2. Consists of personal consumption expenditures, producers' durable equipment, and government purchases.

Table 4.3.—Merchandise Exports and Imports by Type of Product and by End-Use Category

[Billions of dollars]

| | 1987 | 1988 | Seasonally adjusted at annual rates | | | | | |
|---|--------------|--------------|-------------------------------------|--------------|--------------|--------------|--------------|--------------|
| | | | 1987 | | 1988 | | | |
| | | | III | IV | I | II | III | IV |
| Merchandise exports | 254.8 | 320.7 | 264.8 | 276.7 | 300.8 | 316.9 | 331.0 | 334.0 |
| Foods, feeds, and beverages..... | 24.6 | 33.1 | 28.1 | 25.4 | 30.1 | 32.8 | 36.2 | 33.2 |
| Industrial supplies and materials..... | 66.5 | 82.6 | 68.2 | 71.0 | 77.8 | 82.1 | 86.0 | 84.4 |
| Durable goods..... | 20.9 | 27.3 | 21.5 | 22.8 | 24.6 | 28.0 | 28.4 | 28.4 |
| Nondurable goods..... | 45.6 | 55.2 | 46.7 | 48.1 | 53.3 | 54.1 | 57.6 | 56.0 |
| Capital goods, except autos..... | 88.1 | 111.2 | 93.3 | 96.5 | 105.4 | 109.2 | 114.1 | 116.0 |
| Autos..... | 26.3 | 33.2 | 25.4 | 30.5 | 31.7 | 32.2 | 32.2 | 36.8 |
| Consumer goods..... | 18.0 | 23.6 | 18.6 | 19.3 | 21.2 | 22.8 | 24.9 | 25.6 |
| Durable goods..... | 7.4 | 10.6 | 7.7 | 8.1 | 9.3 | 10.1 | 11.4 | 11.8 |
| Nondurable goods..... | 10.5 | 13.0 | 10.9 | 11.1 | 11.9 | 12.8 | 13.5 | 13.8 |
| Other..... | 31.3 | 37.0 | 31.2 | 34.1 | 34.6 | 37.8 | 37.5 | 38.0 |
| Durable goods ¹ | 15.7 | 18.5 | 15.6 | 17.0 | 17.3 | 18.9 | 18.8 | 19.0 |
| Nondurable goods ¹ | 15.7 | 18.5 | 15.6 | 17.0 | 17.3 | 18.9 | 18.8 | 19.0 |
| Merchandise imports | 413.0 | 446.8 | 421.7 | 438.0 | 441.7 | 439.4 | 448.6 | 457.8 |
| Foods, feeds, and beverages..... | 24.7 | 25.0 | 24.8 | 25.1 | 26.0 | 23.8 | 25.0 | 25.0 |
| Industrial supplies and materials, excluding petroleum..... | 66.6 | 77.3 | 66.2 | 72.3 | 76.7 | 75.3 | 77.4 | 79.7 |
| Durable goods..... | 35.6 | 41.5 | 35.1 | 38.6 | 41.8 | 40.1 | 41.2 | 42.9 |
| Nondurable goods..... | 31.0 | 35.8 | 31.0 | 33.7 | 35.0 | 35.2 | 36.2 | 36.8 |
| Petroleum and products..... | 42.9 | 39.2 | 51.0 | 45.2 | 39.8 | 41.1 | 39.4 | 36.3 |
| Capital goods, except autos..... | 84.8 | 100.6 | 87.0 | 93.2 | 96.4 | 100.7 | 101.9 | 103.4 |
| Autos..... | 85.2 | 87.5 | 84.1 | 88.7 | 87.4 | 84.5 | 86.4 | 91.6 |
| Consumer goods..... | 88.7 | 95.5 | 88.1 | 92.0 | 94.2 | 92.8 | 96.1 | 99.0 |
| Durable goods..... | 49.0 | 52.5 | 48.8 | 50.6 | 51.5 | 50.7 | 52.6 | 55.0 |
| Nondurable goods..... | 39.7 | 43.1 | 39.4 | 41.4 | 42.8 | 42.1 | 43.4 | 44.0 |
| Other..... | 20.2 | 21.8 | 20.5 | 21.4 | 21.1 | 21.1 | 22.4 | 22.7 |
| Durable goods ¹ | 10.1 | 10.9 | 10.2 | 10.7 | 10.5 | 10.6 | 11.2 | 11.4 |
| Nondurable goods ¹ | 10.1 | 10.9 | 10.2 | 10.7 | 10.5 | 10.6 | 11.2 | 11.4 |
| Addenda: | | | | | | | | |
| Exports of agricultural products ² | 29.5 | 38.6 | 33.1 | 30.5 | 36.1 | 38.5 | 41.6 | 38.1 |
| Exports of nonagricultural products..... | 225.3 | 282.1 | 231.7 | 246.2 | 264.7 | 278.4 | 289.4 | 295.9 |
| Imports of nonpetroleum products..... | 370.1 | 407.7 | 370.6 | 392.8 | 401.9 | 398.3 | 409.2 | 421.4 |

1. Because no data are available to distribute exports and imports of "other" merchandise between durable and nondurable goods, they are distributed equally.
2. Includes parts of line 2 and line 5.

NOTE.—Beginning with 1985, the definitions of the end-use categories have been changed. For a description of the new definitions, see the technical notes in "U.S. International Transactions, First Quarter 1988," SURVEY OF CURRENT BUSINESS 68 (June 1988): 34-39 and 57.

Table 4.4.—Merchandise Exports and Imports by Type of Product and by End-Use Category in Constant Dollars

[Billions of 1982 dollars]

| | 1987 | 1988 | Seasonally adjusted at annual rates | | | | | |
|---|--------------|--------------|-------------------------------------|--------------|--------------|--------------|--------------|--------------|
| | | | 1987 | | 1988 | | | |
| | | | III | IV | I | II | III | IV |
| Merchandise exports | 280.1 | 340.4 | 291.6 | 304.6 | 329.0 | 339.1 | 345.9 | 347.6 |
| Foods, feeds, and beverages..... | 29.9 | 33.2 | 34.3 | 30.5 | 34.1 | 34.9 | 33.2 | 30.7 |
| Industrial supplies and materials..... | 69.7 | 79.3 | 70.4 | 72.0 | 76.9 | 79.4 | 81.3 | 79.8 |
| Durable goods..... | 21.9 | 26.3 | 22.2 | 23.2 | 24.3 | 27.1 | 26.8 | 26.8 |
| Nondurable goods..... | 47.8 | 53.1 | 48.2 | 48.9 | 52.6 | 52.3 | 54.4 | 52.9 |
| Capital goods, except autos..... | 109.5 | 143.5 | 116.4 | 124.5 | 138.0 | 140.6 | 147.1 | 148.4 |
| Autos..... | 23.2 | 29.0 | 22.4 | 26.8 | 27.9 | 28.3 | 28.0 | 31.7 |
| Consumer goods..... | 16.7 | 21.1 | 17.3 | 17.6 | 19.1 | 20.5 | 22.2 | 22.6 |
| Durable goods..... | 7.3 | 9.8 | 7.5 | 7.8 | 8.8 | 9.4 | 10.4 | 10.7 |
| Nondurable goods..... | 9.5 | 11.3 | 9.8 | 9.8 | 10.3 | 11.1 | 11.8 | 11.9 |
| Other..... | 31.0 | 34.2 | 30.8 | 33.2 | 33.0 | 35.4 | 34.1 | 34.4 |
| Durable goods ¹ | 15.5 | 17.1 | 15.4 | 16.6 | 16.5 | 17.7 | 17.0 | 17.2 |
| Nondurable goods ¹ | 15.5 | 17.1 | 15.4 | 16.6 | 16.5 | 17.7 | 17.0 | 17.2 |
| Merchandise imports | 439.0 | 467.3 | 449.5 | 461.0 | 463.1 | 459.1 | 470.9 | 476.0 |
| Foods, feeds, and beverages..... | 23.9 | 22.6 | 23.8 | 23.7 | 23.8 | 21.7 | 22.7 | 22.4 |
| Industrial supplies and materials, excluding petroleum..... | 74.2 | 74.6 | 71.8 | 77.0 | 77.1 | 72.8 | 73.7 | 74.7 |
| Durable goods..... | 39.8 | 40.1 | 38.2 | 41.1 | 42.0 | 38.8 | 39.3 | 40.2 |
| Nondurable goods..... | 34.5 | 34.5 | 33.6 | 35.9 | 35.1 | 34.0 | 34.4 | 34.5 |
| Petroleum and products..... | 77.9 | 86.1 | 88.0 | 81.4 | 82.2 | 85.4 | 87.1 | 89.5 |
| Capital goods, except autos..... | 99.4 | 121.6 | 104.0 | 112.2 | 116.4 | 121.5 | 125.0 | 123.4 |
| Autos..... | 68.1 | 66.8 | 67.2 | 69.9 | 67.7 | 64.8 | 65.9 | 68.6 |
| Consumer goods..... | 77.1 | 77.3 | 76.2 | 77.8 | 77.6 | 75.0 | 77.7 | 78.7 |
| Durable goods..... | 43.8 | 43.8 | 43.5 | 44.1 | 43.8 | 42.2 | 44.0 | 45.1 |
| Nondurable goods..... | 33.4 | 33.5 | 32.7 | 33.7 | 33.8 | 32.8 | 33.8 | 33.6 |
| Other..... | 13.3 | 18.4 | 18.5 | 18.9 | 18.1 | 17.8 | 18.8 | 18.7 |
| Durable goods ¹ | 9.2 | 9.2 | 9.2 | 9.5 | 9.1 | 8.9 | 9.4 | 9.4 |
| Nondurable goods ¹ | 9.2 | 9.2 | 9.2 | 9.5 | 9.1 | 8.9 | 9.4 | 9.4 |
| Addenda: | | | | | | | | |
| Exports of agricultural products ² | 34.9 | 38.1 | 39.7 | 35.2 | 39.3 | 39.8 | 37.9 | 35.2 |
| Exports of nonagricultural products..... | 245.2 | 302.3 | 252.0 | 269.4 | 289.7 | 299.3 | 308.0 | 312.4 |
| Imports of nonpetroleum products..... | 361.1 | 381.2 | 361.5 | 379.6 | 380.9 | 373.7 | 383.8 | 386.5 |

1. Because no data are available to distribute exports and imports of "other" merchandise between durable and nondurable goods, they are distributed equally.
2. Includes parts of line 2 and line 5.

NOTE.—Beginning with 1985, the definitions of the end-use categories have been changed. For a description of the new definitions, see the technical notes in "U.S. International Transactions, First Quarter 1988," SURVEY OF CURRENT BUSINESS 68 (June 1988): 34-39 and 57.

Table 5.1.—Gross Saving and Investment

[Billions of dollars]

| | 1987 | 1988 | Seasonally adjusted at annual rates | | | | | |
|---|---------------|--------------|-------------------------------------|---------------|--------------|--------------|--------------|--------------|
| | | | 1987 | | 1988 | | | |
| | | | III | IV | I | II | III | IV |
| Gross saving | 560.4 | 643.0 | 556.8 | 603.4 | 627.0 | 634.1 | 665.4 | ..... |
| Gross private saving | 665.3 | 730.9 | 642.2 | 714.1 | 726.3 | 711.2 | 732.9 | ..... |
| Personal saving..... | 104.2 | 147.0 | 72.6 | 144.0 | 149.9 | 127.8 | 145.7 | 164.6 |
| Undistributed corporate profits with inventory valuation and capital consumption adjustments..... | 81.1 | 77.9 | 85.0 | 80.5 | 78.1 | 80.1 | 79.5 | ..... |
| Undistributed profits..... | 47.4 | 56.4 | 52.4 | 46.4 | 48.1 | 59.6 | 63.4 | ..... |
| Inventory valuation adjustment..... | -18.0 | -24.2 | -19.5 | -18.2 | -19.4 | -27.4 | -29.3 | -20.7 |
| Capital consumption adjustment..... | 51.7 | 45.8 | 52.1 | 52.4 | 49.4 | 48.0 | 45.4 | 40.3 |
| Corporate capital consumption allowances with capital consumption adjustment..... | 297.5 | 315.6 | 299.7 | 303.7 | 309.8 | 313.3 | 316.8 | 322.3 |
| Noncorporate capital consumption allowances with capital consumption adjustment..... | 182.5 | 190.4 | 184.9 | 185.8 | 188.5 | 189.9 | 190.9 | 192.4 |
| Wage accruals less disbursements..... | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Government surplus or deficit (-), national income and product accounts | -104.9 | -87.9 | -85.5 | -110.7 | -99.2 | -77.1 | -67.5 | ..... |
| Federal..... | -157.8 | -141.9 | -138.3 | -160.4 | -155.1 | -133.3 | -123.5 | ..... |
| State and local..... | 52.9 | 53.9 | 52.9 | 49.7 | 55.8 | 56.2 | 56.0 | ..... |
| Capital grants received by the United States (net) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Gross investment | 552.3 | 631.0 | 541.7 | 597.0 | 612.0 | 629.0 | 651.4 | 631.4 |
| Gross private domestic investment..... | 712.9 | 765.5 | 702.8 | 764.9 | 763.4 | 758.1 | 772.5 | 767.9 |
| Net foreign investment..... | -160.6 | -134.5 | -161.1 | -167.8 | -151.3 | -129.1 | -121.1 | -136.5 |
| Statistical discrepancy | -8.1 | -12.0 | -15.1 | -6.4 | -15.0 | -5.1 | -14.0 | ..... |

Table 5.12.—Fixed Investment by Type

| | [Billions of dollars] | | | | | | | |
|---|-----------------------|--------------|-------------------------------------|--------------|--------------|--------------|--------------|--------------|
| | 1987 | 1988 | Seasonally adjusted at annual rates | | | | | |
| | | | 1987 | | 1988 | | | |
| | | | III | IV | I | II | III | IV |
| Fixed investment | 673.7 | 717.4 | 688.3 | 692.9 | 698.1 | 714.4 | 722.8 | 734.3 |
| Nonresidential | 446.8 | 487.7 | 462.1 | 464.1 | 471.5 | 487.8 | 493.7 | 497.8 |
| Structures..... | 139.5 | 142.3 | 143.0 | 147.7 | 140.1 | 142.3 | 143.8 | 142.8 |
| Nonresidential buildings, excluding farm..... | 92.6 | 93.8 | 95.0 | 96.6 | 93.3 | 95.7 | 93.5 | 92.9 |
| Public utilities..... | 28.4 | 30.1 | 28.9 | 30.8 | 27.7 | 28.8 | 32.1 | 31.9 |
| Mining exploration, shafts, and wells..... | 13.9 | 14.5 | 14.6 | 15.8 | 15.1 | 14.3 | 14.6 | 14.0 |
| Other..... | 4.5 | 3.8 | 4.6 | 4.6 | 4.0 | 3.5 | 3.6 | 4.0 |
| Producers' durable equipment..... | 307.3 | 345.5 | 319.1 | 316.3 | 331.3 | 345.5 | 349.9 | 355.1 |
| Information processing and related equipment..... | 101.2 | 110.9 | 105.7 | 102.8 | 107.0 | 111.5 | 112.9 | 112.1 |
| Industrial equipment..... | 70.6 | 82.6 | 71.4 | 74.2 | 77.2 | 81.3 | 83.8 | 88.1 |
| Transportation and related equipment..... | 67.8 | 78.3 | 72.1 | 68.5 | 74.2 | 78.7 | 79.0 | 81.1 |
| Other..... | 67.6 | 73.7 | 69.9 | 70.9 | 73.0 | 74.0 | 74.1 | 73.8 |
| Residential | 226.9 | 229.7 | 226.2 | 228.8 | 226.6 | 226.5 | 229.1 | 236.4 |
| Single-family structures..... | 114.5 | 117.3 | 115.0 | 117.3 | 116.5 | 116.2 | 115.4 | 121.1 |
| Multifamily structures..... | 25.5 | 21.2 | 23.9 | 24.1 | 22.1 | 20.7 | 21.2 | 20.8 |
| Other..... | 87.0 | 91.2 | 87.3 | 87.4 | 87.9 | 89.6 | 92.6 | 94.6 |

Table 5.13.—Fixed Investment by Type in Constant Dollars

| | [Billions of 1982 dollars] | | | | | | | |
|---|----------------------------|--------------|-------------------------------------|--------------|--------------|--------------|--------------|--------------|
| | 1987 | 1988 | Seasonally adjusted at annual rates | | | | | |
| | | | 1987 | | 1988 | | | |
| | | | III | IV | I | II | III | IV |
| Fixed investment | 640.4 | 679.3 | 654.9 | 657.6 | 662.9 | 679.7 | 686.6 | 687.9 |
| Nonresidential | 445.1 | 487.2 | 462.8 | 464.8 | 473.4 | 490.2 | 495.0 | 490.4 |
| Structures..... | 125.5 | 124.7 | 128.0 | 132.1 | 124.0 | 125.0 | 125.8 | 124.0 |
| Nonresidential buildings, excluding farm..... | 77.1 | 76.2 | 78.3 | 79.4 | 76.1 | 78.0 | 75.7 | 74.9 |
| Public utilities..... | 25.7 | 26.4 | 26.0 | 27.6 | 24.6 | 25.4 | 28.1 | 27.7 |
| Mining exploration, shafts, and wells..... | 18.8 | 18.9 | 19.7 | 21.1 | 19.8 | 18.7 | 19.0 | 18.1 |
| Other..... | 3.9 | 3.2 | 4.0 | 4.0 | 3.4 | 2.9 | 3.0 | 3.3 |
| Producers' durable equipment..... | 319.6 | 362.5 | 334.7 | 332.7 | 349.4 | 365.1 | 369.2 | 366.4 |
| Information processing and related equipment..... | 139.4 | 162.7 | 148.0 | 147.0 | 155.9 | 165.0 | 167.4 | 162.5 |
| Industrial equipment..... | 61.4 | 68.9 | 62.1 | 63.4 | 65.2 | 68.0 | 69.9 | 72.5 |
| Transportation and related equipment..... | 59.1 | 67.3 | 62.9 | 59.8 | 64.9 | 68.3 | 68.0 | 68.3 |
| Other..... | 59.7 | 63.6 | 61.8 | 62.5 | 63.4 | 63.8 | 63.9 | 63.2 |
| Residential | 195.2 | 192.1 | 192.1 | 192.7 | 189.5 | 189.6 | 191.6 | 197.4 |
| Single-family structures..... | 97.5 | 97.0 | 96.5 | 97.3 | 96.2 | 96.3 | 95.5 | 100.2 |
| Multifamily structures..... | 21.7 | 17.5 | 20.1 | 20.0 | 18.2 | 17.2 | 17.5 | 17.2 |
| Other..... | 76.0 | 77.5 | 75.5 | 75.4 | 75.2 | 76.1 | 78.6 | 80.1 |

Table 6.3B.—National Income Without Capital Consumption Adjustment by Industry

| | [Billions of dollars] | | | | | | | |
|---|-----------------------|----------------|-------------------------------------|----------------|----------------|----------------|----------------|-------------|
| | 1987 | 1988 | Seasonally adjusted at annual rates | | | | | |
| | | | 1987 | | 1988 | | | |
| | | | III | IV | I | II | III | IV |
| National income without capital consumption adjustment | 3,644.4 | 3,938.9 | 3,675.0 | 3,768.3 | 3,821.4 | 3,901.1 | 3,975.6 | |
| Domestic industries | 3,614.9 | 3,914.9 | 3,648.2 | 3,737.3 | 3,799.1 | 3,879.8 | 3,948.9 | |
| Private industries..... | 3,085.7 | 3,351.5 | 3,115.5 | 3,196.8 | 3,246.7 | 3,320.2 | 3,381.8 | |
| Agriculture, forestry, and fisheries..... | 88.2 | 82.9 | 80.5 | 92.6 | 90.9 | 90.2 | 77.3 | |
| Mining..... | 31.0 | 35.9 | 32.7 | 35.2 | 35.3 | 36.1 | 36.5 | |
| Construction..... | 196.7 | 211.5 | 197.0 | 200.1 | 203.4 | 210.0 | 214.0 | |
| Manufacturing..... | 727.4 | 783.9 | 749.9 | 747.6 | 766.4 | 780.0 | 788.0 | |
| Durable goods..... | 419.4 | 446.5 | 424.7 | 420.6 | 432.7 | 445.9 | 450.4 | |
| Nondurable goods..... | 308.0 | 337.5 | 316.3 | 327.0 | 333.7 | 334.1 | 337.7 | |
| Transportation and public utilities..... | 276.8 | 298.5 | 278.8 | 285.8 | 286.4 | 296.8 | 304.0 | |
| Transportation..... | 120.7 | 130.7 | 120.6 | 124.4 | 124.8 | 129.4 | 133.0 | |
| Communication..... | 76.3 | 80.2 | 78.2 | 78.4 | 77.3 | 80.1 | 82.3 | |
| Electric, gas, and sanitary services..... | 79.9 | 87.7 | 79.9 | 83.1 | 84.2 | 87.3 | 88.8 | |
| Wholesale trade..... | 213.6 | 230.2 | 216.2 | 219.8 | 225.0 | 224.8 | 231.0 | |
| Retail trade..... | 316.2 | 339.6 | 319.8 | 324.6 | 331.4 | 336.5 | 342.6 | |
| Finance, insurance, and real estate..... | 524.0 | 578.0 | 529.8 | 545.9 | 553.6 | 567.2 | 585.1 | |
| Services..... | 711.6 | 790.7 | 719.8 | 745.1 | 754.4 | 778.7 | 803.2 | |
| Government and government enterprises | 529.2 | 563.4 | 532.7 | 540.5 | 552.3 | 559.6 | 567.1 | |
| Rest of the world | 29.5 | 24.0 | 26.8 | 31.0 | 22.4 | 21.3 | 26.8 | 25.6 |

Table 6.18B.—Corporate Profits by Industry

| | [Billions of dollars] | | | | | | | |
|---|-----------------------|--------------|-------------------------------------|--------------|--------------|--------------|--------------|----|
| | 1987 | 1988 | Seasonally adjusted at annual rates | | | | | |
| | | | 1987 | | 1988 | | | |
| | | | III | IV | I | II | III | IV |
| Corporate profits with inventory valuation and capital consumption adjustments | 310.4 | 323.6 | 322.0 | 316.1 | 316.2 | 326.5 | 330.0 | |
| Domestic industries | 274.0 | 286.7 | 286.7 | 274.6 | 286.0 | 291.1 | 289.2 | |
| Financial..... | 36.5 | 39.1 | 36.3 | 36.2 | 35.4 | 38.5 | 41.0 | |
| Nonfinancial..... | 237.5 | 247.5 | 250.4 | 238.4 | 250.6 | 252.6 | 248.2 | |
| Rest of the world | 36.4 | 36.9 | 35.3 | 41.4 | 30.2 | 35.4 | 40.8 | |
| Corporate profits with inventory valuation adjustment | 258.7 | 277.8 | 269.9 | 263.7 | 266.8 | 278.5 | 284.6 | |
| Domestic industries | 222.3 | 240.9 | 234.6 | 222.2 | 236.6 | 243.1 | 243.8 | |
| Financial..... | 30.1 | 31.1 | 29.5 | 28.8 | 27.6 | 30.0 | 32.7 | |
| Federal Reserve banks..... | 16.0 | 17.9 | 16.2 | 16.2 | 17.5 | 17.4 | 18.2 | |
| Other..... | 14.1 | 13.1 | 13.4 | 12.6 | 10.1 | 12.6 | 14.5 | |
| Nonfinancial..... | 192.1 | 209.8 | 205.1 | 193.4 | 209.0 | 213.1 | 211.1 | |
| Manufacturing..... | 96.8 | 111.4 | 107.0 | 101.7 | 110.6 | 114.5 | 111.4 | |
| Durable goods..... | 36.5 | 37.4 | 40.9 | 29.4 | 33.9 | 41.5 | 39.0 | |
| Primary metal industries..... | 1.4 | 4.6 | 1.9 | 2.6 | 3.2 | 5.1 | 5.2 | |
| Fabricated metal products..... | 5.7 | 6.4 | 7.2 | 6.7 | 8.0 | 7.5 | 5.4 | |
| Machinery, except electrical..... | 3.2 | 4.7 | 4.6 | 1.7 | 3.3 | 5.5 | 5.9 | |
| Electric and electronic equipment..... | 3.2 | 3.4 | 5.5 | — | 1.2 | 4.1 | 4.4 | |
| Motor vehicles and equipment..... | 7.3 | 5.1 | 5.6 | 4.5 | 4.2 | 4.6 | 5.8 | |
| Other..... | 15.7 | 13.1 | 16.2 | 14.6 | 14.0 | 14.7 | 12.4 | |
| Nondurable goods..... | 60.3 | 74.0 | 66.1 | 72.4 | 76.8 | 73.0 | 72.3 | |
| Food and kindred products..... | 12.8 | 16.7 | 14.0 | 14.9 | 15.9 | 17.5 | 15.9 | |
| Chemicals and allied products..... | 13.5 | 18.7 | 14.4 | 15.3 | 19.1 | 18.6 | 18.4 | |
| Petroleum and coal products..... | 12.2 | 16.4 | 14.7 | 18.8 | 17.4 | 14.8 | 16.8 | |
| Other..... | 21.9 | 22.2 | 22.9 | 23.4 | 24.5 | 22.1 | 21.2 | |
| Transportation and public utilities..... | 34.9 | 37.1 | 34.0 | 36.1 | 34.5 | 38.2 | 39.3 | |
| Wholesale and retail trade..... | 42.8 | 38.6 | 44.1 | 43.0 | 43.9 | 37.0 | 36.6 | |
| Other..... | 17.6 | 22.7 | 20.0 | 12.6 | 20.0 | 23.4 | 23.8 | |
| Rest of the world | 36.4 | 36.9 | 35.3 | 41.4 | 30.2 | 35.4 | 40.8 | |

Table 7.1.—Fixed-Weighted Price Indexes for Gross National Product, 1982 Weights

[Index numbers, 1982=100]

| | 1987 | 1988 | Seasonally adjusted | | | | | |
|---|-------|-------|---------------------|-------|-------|-------|-------|-------|
| | | | 1987 | | 1988 | | | |
| | | | III | IV | I | II | III | IV |
| Gross national product..... | 119.1 | 124.1 | 119.7 | 120.8 | 121.8 | 123.3 | 124.9 | 126.2 |
| Personal consumption expenditures..... | 120.4 | 125.6 | 121.1 | 122.5 | 123.2 | 124.9 | 126.5 | 127.9 |
| Durable goods..... | 109.7 | 112.5 | 110.2 | 111.0 | 111.4 | 111.9 | 112.8 | 113.9 |
| Nondurable goods..... | 112.6 | 117.2 | 113.4 | 114.3 | 114.6 | 116.7 | 118.2 | 119.4 |
| Services..... | 129.0 | 135.2 | 129.6 | 131.5 | 132.6 | 134.4 | 136.0 | 137.8 |
| Gross private domestic investment..... | | | | | | | | |
| Fixed investment..... | 108.8 | 111.5 | 109.3 | 109.9 | 110.8 | 111.3 | 111.6 | 112.4 |
| Nonresidential..... | 106.8 | 109.3 | 107.0 | 107.5 | 108.3 | 109.0 | 109.4 | 110.4 |
| Structures..... | 105.1 | 108.2 | 105.8 | 106.4 | 107.5 | 107.8 | 108.5 | 109.1 |
| Producers' durable equipment..... | 107.9 | 110.0 | 107.7 | 108.1 | 108.9 | 109.8 | 110.0 | 111.2 |
| Residential..... | 115.9 | 119.3 | 117.4 | 118.3 | 119.2 | 119.3 | 119.4 | 119.5 |
| Change in business inventories..... | | | | | | | | |
| Net exports of goods and services..... | | | | | | | | |
| Exports..... | 106.0 | 111.5 | 106.4 | 107.0 | 108.7 | 110.5 | 113.0 | 113.7 |
| Imports..... | 100.8 | 105.1 | 101.9 | 103.0 | 103.9 | 105.3 | 105.4 | 106.0 |
| Government purchases of goods and services..... | 119.6 | 124.9 | 120.1 | 121.2 | 122.9 | 124.3 | 125.7 | 126.6 |
| Federal..... | 113.5 | 117.7 | 113.7 | 114.4 | 116.3 | 117.2 | 118.5 | 118.8 |
| National defense..... | 114.0 | 117.5 | 114.2 | 114.8 | 116.6 | 117.4 | 118.0 | 118.2 |
| Nondefense..... | 112.1 | 118.2 | 112.5 | 113.6 | 115.7 | 116.9 | 119.7 | 120.2 |
| State and local..... | 124.1 | 130.2 | 124.9 | 126.1 | 127.8 | 129.5 | 131.0 | 132.4 |
| Addenda: | | | | | | | | |
| Final sales..... | 119.0 | 123.9 | 119.5 | 120.6 | 121.7 | 123.2 | 124.8 | 126.0 |
| Personal consumption expenditures, food..... | 117.2 | 122.2 | 117.8 | 118.6 | 119.2 | 121.0 | 123.7 | 124.9 |
| Personal consumption expenditures, energy..... | 91.7 | 92.4 | 93.4 | 92.9 | 91.1 | 92.3 | 93.2 | 92.9 |
| Other personal consumption expenditures..... | 124.9 | 130.7 | 125.5 | 127.2 | 128.3 | 130.0 | 131.3 | 133.1 |

NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

Table 7.2.—Fixed-Weighted Price Indexes for Gross National Product by Major Type of Product, 1982 Weights

[Index numbers, 1982=100]

| | 1987 | 1988 | Seasonally adjusted | | | | | |
|-------------------------------------|-------|-------|---------------------|-------|-------|-------|-------|-------|
| | | | 1987 | | 1988 | | | |
| | | | III | IV | I | II | III | IV |
| Gross national product..... | 119.1 | 124.1 | 119.7 | 120.8 | 121.8 | 123.3 | 124.9 | 126.2 |
| Final sales..... | 119.0 | 123.9 | 119.5 | 120.6 | 121.7 | 123.2 | 124.8 | 126.0 |
| Change in business inventories..... | | | | | | | | |
| Goods..... | 111.0 | 115.1 | 111.4 | 112.1 | 112.6 | 114.3 | 116.2 | 117.2 |
| Final sales..... | 110.8 | 114.9 | 111.2 | 111.9 | 112.5 | 114.1 | 116.0 | 117.1 |
| Change in business inventories..... | | | | | | | | |
| Durable goods..... | 107.1 | 108.1 | 107.2 | 107.0 | 107.2 | 107.6 | 108.4 | 109.0 |
| Final sales..... | 107.0 | 108.2 | 107.2 | 107.1 | 107.3 | 107.7 | 108.5 | 109.1 |
| Change in business inventories..... | | | | | | | | |
| Nondurable goods..... | 113.7 | 119.8 | 114.3 | 115.5 | 116.3 | 118.7 | 121.4 | 122.7 |
| Final sales..... | 113.5 | 119.6 | 114.1 | 115.3 | 116.1 | 118.5 | 121.2 | 122.4 |
| Change in business inventories..... | | | | | | | | |
| Services..... | 127.6 | 133.6 | 128.2 | 129.8 | 131.2 | 132.8 | 134.3 | 135.9 |
| Structures..... | 110.7 | 114.3 | 111.7 | 112.4 | 113.5 | 113.9 | 114.6 | 115.1 |

Table 7.3.—Fixed-Weighted Price Indexes for Relation of Gross National Product, Gross Domestic Purchases, and Final Sales to Domestic Purchasers, 1982 Weights

[Index numbers, 1982=100]

| | 1987 | 1988 | Seasonally adjusted | | | | | |
|---|-------|-------|---------------------|-------|-------|-------|-------|-------|
| | | | 1987 | | 1988 | | | |
| | | | III | IV | I | II | III | IV |
| Gross national product..... | 119.1 | 124.1 | 119.7 | 120.8 | 121.8 | 123.3 | 124.9 | 126.2 |
| Less: Exports of goods and services..... | 106.0 | 111.5 | 106.4 | 107.0 | 108.7 | 110.5 | 113.0 | 113.7 |
| Plus: Imports of goods and services..... | 100.8 | 105.1 | 101.9 | 103.0 | 103.9 | 105.3 | 105.4 | 106.0 |
| Equals: Gross domestic purchases ¹ | 118.7 | 123.5 | 119.3 | 120.5 | 121.4 | 122.9 | 124.2 | 125.5 |
| Less: Change in business inventories..... | | | | | | | | |
| Equals: Final sales to domestic purchasers ² | 118.5 | 123.4 | 119.2 | 120.3 | 121.3 | 122.8 | 124.1 | 125.3 |

1. Purchases in the United States of goods and services wherever produced.
2. Final sales in the United States of goods and services wherever produced.

NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

Composite Indexes of Leading, Coincident, and Lagging Indicators

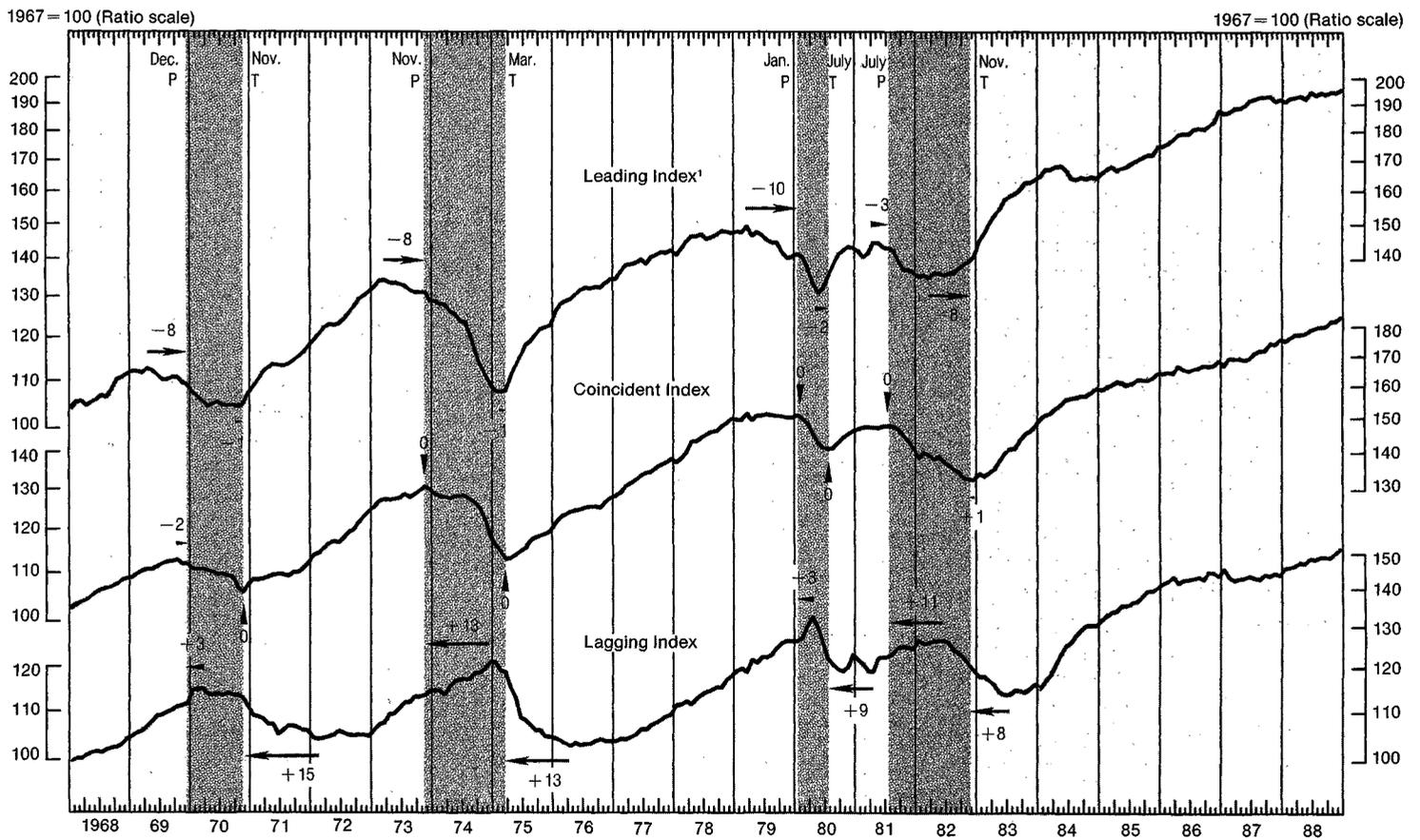
Recent Data and Percent Changes

| Index | 1988 | | | | | | | | | | | | 1988 | | | |
|-----------------------|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------------------|-------|-------|-------|-----------------|
| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. ^P | I | II | III | IV ^P |
| | Index (1967=100) | | | | | | | | | | | | | | | |
| Leading index..... | 189.8 | 191.4 | 191.7 | 192.2 | 190.9 | 193.7 | 192.3 | 193.4 | 192.7 | 193.7 | 193.4 | 194.6 | 191.0 | 192.3 | 192.8 | 193.9 |
| Coincident index..... | 173.7 | 175.0 | 176.1 | 176.0 | 176.4 | 177.7 | 178.3 | 178.9 | 178.9 | 180.7 | 180.8 | 182.1 | 174.9 | 176.7 | 178.7 | 181.2 |
| Lagging index..... | 144.7 | 145.1 | 145.5 | 146.4 | 146.1 | 147.6 | 147.2 | 148.1 | 148.0 | 147.9 | 149.3 | 150.5 | 145.1 | 146.7 | 147.8 | 149.2 |
| | Percent change from preceding month (quarter) | | | | | | | | | | | | | | | |
| Leading index..... | -.5 | .8 | .2 | .3 | -.7 | 1.5 | -.7 | .6 | -.4 | .5 | -.2 | .6 | 0 | .7 | .3 | .6 |
| Coincident index..... | -.4 | .7 | .6 | -.1 | .2 | .7 | .3 | .3 | 0 | 1.0 | .1 | .7 | .9 | 1.0 | 1.1 | 1.4 |
| Lagging index..... | 1.4 | .3 | .3 | .6 | -.2 | 1.0 | -.3 | .6 | -.1 | -.1 | .9 | .8 | 1.6 | 1.1 | .7 | .9 |

^r Revised.
^P Preliminary.

NOTE.—Quarterly data are averages of monthly figures. Quarterly percent changes are computed from quarterly data.

Long-Term Perspective: January 1968 to December 1988



Note.—Peak (P) indicates the end of business cycle expansion and the beginning of recession (shaded area). Trough (T) indicates the end of business cycle recession and the beginning of expansion. Business cycle peaks and troughs are designated by the National Bureau of Economic

Research, Inc. The numbers entered on the chart indicate the length of leads (-) and lags (+) in months from the business cycle turning dates.

1. Beginning with data for January 1984, the net business formation component has been suspended from this index.

Business Cycle Indicators: Revised Composite Indexes

BEA is revising its composite indexes of leading, coincident, and lagging indicators, the key indexes in its analytic system designed to help predict peaks and troughs in the business cycle. The revision will be effective with the release on March 3 of estimates for January 1989. Since their initial publication in *Business Conditions Digest (BCD)* in 1968, the indexes have been revised a number of times.¹

This revision, like the earlier ones, incorporates changes in the components, changes in methodology for computing the indexes, updated statistical factors, and historical revisions in component data. The revision includes the following changes:

- *Index of leading indicators:* Two components are dropped, two components are improved, and two components are added;
- *Index of lagging indicators:* One component is improved and one component is added; and
- *Methodology for computing the indexes:* A new method of smoothing irregular series and some other minor changes are introduced. In addition, the base year of the indexes is changed to 1982.

Elements of the Revision

Several characteristics of a time series are used to analyze and evaluate the existing and the potential composite index components. The most important of these characteristics are cyclical timing, economic significance, and currency. Cyclical timing is determined by the consistency with which the cyclical turning points in a series lead, coincide with, or lag the business cycle

1. The last overall revision was in 1983. In addition, in 1987 one component of the leading index was removed and one component of the lagging index was recalculated.

turns. Economic significance refers to the importance of the economic activity measured by the series. Currency takes into account both the periodicity of the data and the promptness with which they are available.

In addition, component series are considered in terms of statistical adequacy, conformity to business cycles, smoothness, and revisions. Statistical adequacy refers to the quality of the data and includes factors such as the type of reporting system, the coverage of the data, and the length of the series and its comparability over time. Conformity refers to the consistency of the cyclical pattern of the series in relation to the business cycles, and it includes the amplitude of the cycles and the existence of extra turning points. Smoothness refers to the ease with which the cyclical movements in the series can be observed. Revisions refers to the size and frequency of revisions in recently released data.

The components selected for the revised composite indexes, using these series characteristics, are listed in table 1 along with the components of the current indexes.

Changes in index components

The leading index.—Two series—the change in credit outstanding and the change in inventories on hand and on order—are dropped from the leading index because their current data are not available in time to be included in the initial estimate of the index. In the past, the major factor in the first revision of the index was the addition of data for these two components. (See “A Note on Revisions to the Leading Indicators” in the May 1988 *SURVEY OF CURRENT BUSINESS*, p. 21.) Excluding these components should reduce considerably the size of the first revisions in the index. Subsequent index revisions also should be smaller because the dropped components were subject

to substantial revisions after they became available. Because of the important role of credit in the economy, an improved, more promptly available series is being tested as a potential replacement for the change in credit outstanding. (See “Areas of Future Work.”) For the change in inventories on hand and on order, the on-order portion, which is available promptly, is included in the new change in unfilled orders component (see below). The inventories-on-hand portion, in addition to not being available promptly, does not qualify as a leader.

Two components of the leading index are improved. First, vendor performance, which has been derived from a survey of manufacturers in the Chicago area, is now based on a national survey conducted by the National Association of Purchasing Management. The

Data Availability

Data for 1948 through June 1988 for the revised composite indexes and their components, plus revised statistical factors and a description of the changes in the indexes, are available on printouts and on a diskette. To order, write to Economic and Statistical Analysis/BEA, U.S. Department of Commerce, Citizens and Southern National Bank, 222 Mitchell Street, P.O. Box 100606, Atlanta, GA 30384. Specify Revised Indicator Estimates (Accession No. BEA SID 89-201 for printouts or BEA SID 89-401 for diskette), and include a check or money order for \$4.00 for printouts or \$20.00 for diskette, payable to “Economic and Statistical Analysis/BEA.” Add 25 percent for foreign shipment. For further information about these products or how to order them, write to the Statistical Indicators Division (BE-60), Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230 or call (202) 523-0800.

These data and information will also be available about February 10 on the Commerce Department's Economic Bulletin Board, a subscription service providing electronic distribution of economic information to computer users. For specifications and costs, call (202) 377-1986.

national data, which begin in 1976, are judged to be more appropriate because of their broader coverage; the Chicago data continue to be used for the period before 1976. Data for both periods are seasonally adjusted. Second, the change in sensitive materials prices is recalculated: Price series that are no longer available are dropped for

the entire period, those that display seasonal variation are seasonally adjusted, and all are weighted equally. In addition, the method of smoothing the series is changed. (See the section on the changes in methodology for an explanation of smoothing.)

Two components are added to the leading index. First, the change in un-

filled orders (in 1982 dollars) of durable goods manufacturers is added. This series covers all durable goods, whereas the unfilled orders data previously included as a component of the change in inventories on hand and on order exclude capital goods and defense products. Second, the index of consumer expectations, compiled by the University of Michigan's Survey Research Center, is added to provide a new dimension to the leading index by including an aspect of economic activity not covered previously.

The coincident index.—No changes are made in the four components of this index.

The lagging index.—One component of the lagging index is improved. For the labor cost per unit of output in manufacturing, the revised index uses the percent changes in this measure rather than the deviations from trend used in the current index. This change eliminates the need to estimate the current trend, a difficult task in a period when the trend is changing.

One new component is added to the lagging index. The change in the consumer price index for services, compiled by the Bureau of Labor Statistics, increases the representation of services in the index.

Changes in methodology

Each composite index measures the average behavior of a group of economic time series that show similar timing at business cycle turns but that represent widely differing activities or sectors of the economy. The procedures used to construct the indexes offset the tendency of volatile series to dominate the average, and they enhance the usefulness of the three indexes as a consistent system. The current procedures were explained in the November 1987 SURVEY OF CURRENT BUSINESS (pp. 24–28). This revision incorporates four changes in those procedures. In addition, statistical factors—standardization factors for the components, standardization factors for the indexes, and trend adjustment factors—are updated, as shown in tables 2, 3, and 4; revised historical data are incorporated; and the base year of the indexes is changed from 1967 to 1982.

Table 1.—Components of Current and Revised Composite Indexes

| Current | Revised |
|---|---|
| Composite Index of Leading Indicators | |
| Average weekly hours of production or nonsupervisory workers, manufacturing. | Same. |
| Average weekly initial claims for unemployment insurance, State programs (inverted). | Same. |
| Manufacturers' new orders in 1982 dollars, consumer goods and materials industries. | Same. |
| Contracts and orders for plant and equipment in 1982 dollars. | Same. |
| Index of new private housing units authorized by local building permits. | Same. |
| Index of stock prices, 500 common stocks | Same. |
| Money supply M2 in 1982 dollars | Same. |
| Vendor performance, percent of companies receiving slower deliveries. | Same title; incorporates improved data source for recent years. |
| Change in sensitive materials prices, smoothed ... | Same title; based on revised methodology and consistent data for entire period. |
| Change in business and consumer credit outstanding. | Dropped. |
| Change in manufacturing and trade inventories on hand and on order in 1982 dollars, smoothed. | Dropped. |
| | Change in manufacturers' unfilled orders in 1982 dollars, durable goods industries, smoothed. |
| | Index of consumer expectations. |
| Composite Index of Coincident Indicators | |
| Employees on nonagricultural payrolls | Same. |
| Personal income less transfer payments in 1982 dollars. | Same. |
| Index of industrial production | Same. |
| Manufacturing and trade sales in 1982 dollars | Same. |
| Composite Index of Lagging Indicators | |
| Average duration of unemployment in weeks (inverted). | Same. |
| Ratio, manufacturing and trade inventories to sales in 1982 dollars. | Same. |
| Average prime rate charged by banks | Same. |
| Commercial and industrial loans outstanding in 1982 dollars. | Same. |
| Ratio, consumer installment credit outstanding to personal income. | Same. |
| Index of labor cost per unit of output, manufacturing—actual data as a percent of trend. | Change in index of labor cost per unit of output, manufacturing, smoothed. |
| | Change in consumer price index for services, smoothed. |

Smoothing of components.—For many economic time series, irregular short-term movements mask the underlying cyclical patterns in the series, particularly in the case of series that are expressed as differences or rates of change. To dampen the irregular fluctuations and to clarify the cyclical movements, smoothing techniques are used.

A commonly used smoothing technique is the moving average, which can be computed with equal or variable weights and can be placed at either the center or the end of the span. Although a properly selected moving average can smooth an erratic series, it does so at the expense of other desirable characteristics. Centered moving averages are not used in the composite indexes, because they lose currency for recent months. End-of-span moving

averages, such as those used to smooth two components of the current leading index, do not lose currency but shift the turning points forward, reducing their leads.

In the revised composite indexes, a technique developed by Statis-

tics Canada is used to smooth two leading index components and two lagging index components. This technique utilizes an autoregressive-moving-average filter that minimizes the amount of lead time sacrificed for a given amount of smoothing. The filtered series F is derived from the actual series A by applying the following formula²:

$$F_t = 0.134A_t + 1.451F_{t-1} - 0.586F_{t-2}$$

(The result is similar to a weighted average of series A with weights for the current month and the 6 preceding months equal to 0.134, 0.195, 0.204, 0.182, 0.145, 0.104, and 0.036, respectively.)

Weighting of components.—In the current composite indexes, each component is assigned a weight that reflects the overall performance score of that series as a cyclical indicator. The score for each indicator is based on an evaluation of the time series characteristics mentioned in the discussion of component selection: Cyclical timing, economic significance, currency, statistical adequacy, conformity to business cycles, smoothness, and revisions. Because only indicators of relatively high quality are included as components of the composite indexes, the weights fall into a narrow range, and the effect of the weighting is minimal (table 2).

In the computation of the revised indexes, the components of each index are assigned equal weights. This procedure simplifies the construction of the indexes and the analysis of each component's contribution.

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Table 2.—Standardization Factors and Weights for Components

| Component series | Current index | | Revised index | |
|--|-------------------------------------|--------|-------------------------------------|--------|
| | Standardization factor ¹ | Weight | Standardization factor ² | Weight |
| Leading index components: | | | | |
| Average weekly hours of production or nonsupervisory workers, manufacturing..... | 0.467 | 1.014 | 0.477 | 1.000 |
| Average weekly initial claims for unemployment insurance, State programs ³ | 5.374 | 1.041 | 5.236 | 1.000 |
| Manufacturers' new orders in 1982 dollars, consumer goods and materials industries..... | 2.818 | .973 | 2.714 | 1.000 |
| Vendor performance, percent of companies receiving slower deliveries* | 3.840 | 1.081 | 3.423 | 1.000 |
| Contracts and orders for plant and equipment in 1982 dollars | 6.194 | .946 | 6.110 | 1.000 |
| Index of new private housing units authorized by local building permits | 5.064 | 1.054 | 5.095 | 1.000 |
| Change in manufacturing and trade inventories on hand and on order in 1982 dollars, smoothed* ⁴ | 5.855 | .986 | | |
| Change in manufacturers' unfilled orders in 1982 dollars, durable goods industries, smoothed* ⁵ | | | .459 | 1.000 |
| Change in sensitive materials prices, smoothed* ⁴ ⁵ | .324 | .892 | .174 | 1.000 |
| Index of stock prices, 500 common stocks..... | 2.633 | 1.149 | 2.640 | 1.000 |
| Money supply M2 in 1982 dollars..... | .417 | .932 | .440 | 1.000 |
| Change in business and consumer credit outstanding* | 2.627 | .959 | | |
| Index of consumer expectations* | | | 1.951 | 1.000 |
| Coincident index components: | | | | |
| Employees on nonagricultural payrolls..... | .321 | 1.064 | .318 | 1.000 |
| Personal income less transfer payments in 1982 dollars..... | .502 | 1.003 | .481 | 1.000 |
| Index of industrial production..... | .924 | 1.028 | .901 | 1.000 |
| Manufacturing and trade sales in 1982 dollars | 1.021 | .905 | 1.000 | 1.000 |
| Lagging index components: | | | | |
| Average duration of unemployment in weeks ³ | 3.587 | 1.098 | 3.470 | 1.000 |
| Ratio, manufacturing and trade inventories to sales in 1982 dollars* | .016 | .894 | .016 | 1.000 |
| Index of labor cost per unit of output, manufacturing—actual data as a percent of trend* | .557 | .868 | | |
| Change in index of labor cost per unit of output, manufacturing, smoothed* ⁶ | | | 1.251 | 1.000 |
| Average prime rate charged by banks* | ⁶ .376 | 1.123 | ⁷ .355 | 1.000 |
| Commercial and industrial loans outstanding in 1982 dollars | .901 | 1.009 | .927 | 1.000 |
| Ratio, consumer installment credit outstanding to personal income* | .062 | 1.009 | .067 | 1.000 |
| Change in consumer price index for services, smoothed* ⁵ | | | .434 | 1.000 |

* First differences rather than symmetrical percent changes are computed for this series.

1. Except as noted, current standardization factors are computed over the period 1948-81.

2. Except as noted, revised standardization factors are computed over the period 1948-85 (or beginning with the first year after 1948 for which data are available).

3. Changes for this series are inverted; i.e., they are multiplied by -1 .

4. In the current index, this series is smoothed with a 4-term moving average (weighted 1,2,2,1) placed at the end of the span.

5. In the revised index, this series is smoothed with a filtering technique developed by Statistics Canada.

6. This standardization factor is computed over the period 1966-81.

7. This standardization factor is computed over the period 1966-85.

2. For the derivation of the formula, see Darryl Rhoades, "Converting Timeliness into Reliability in Economic Time Series or Minimum Phase Shift Filtering of Economic Time Series," *Canadian Statistical Review* 55 (February 1980): vi-xviii.

Table 3.—Standardization Factors for Composite Indexes

| Composite index | Current index ¹ | | Revised index ² | |
|-----------------------|--------------------------------------|---|--------------------------------------|---|
| | Average absolute change ³ | Index standardization factor ⁴ | Average absolute change ³ | Index standardization factor ⁴ |
| Leading index | 0.496 | 0.582 | 0.522 | 0.625 |
| Coincident index..... | .852 | 1.000 | .835 | 1.000 |
| Lagging index | .602 | .707 | .573 | .686 |

1. Factors are computed over the period 1948–81.
 2. Factors are computed over the period 1948–85.
 3. The average absolute change for each index is obtained as follows: (a) For each month, an average of the standardized changes of all components in that index is computed; (b) the average without regard to sign is calculated from these monthly averages for the entire period. For the current indexes, the average in step (a) is computed from weighted standardized changes.
 4. This measure is the ratio of the average absolute change in each index to the average absolute change in the coincident index.

Trend adjustment of composite indexes.—The current indexes include an adjustment that sets the trend in each index equal to a predetermined target trend. The revised indexes undergo the same trend adjustment procedure, but use a revised definition of the target trend (table 4). For the current indexes, the target trend is the average of the trends of the four components of the coincident index; for the revised indexes, the target trend is the trend of real gross national product (GNP). This change has little effect on the indexes, because the trend of real GNP is almost the same as the average trend of the coincident index components. (For the revised indexes, the target trend computed from real GNP is 0.261 percent per month; it would be 0.268 percent per month using the same method as used in the current indexes.) The change is made because economists consider the trend of real GNP to be the more appropriate measure of the growth in aggregate economic activity.

Updating of composite indexes.—Each month BEA updates the composite indexes to include the latest available data for their components. This updating includes both the computation of a preliminary index value for the latest data month and the recomputation of recent index values to incorporate revised component data. In the current indexes, the updating covers 12 index values—1 new value plus the 11 preceding values. In the revised indexes, only six index values will be computed each month—one new value plus the five preceding values.

The shorter recomputation period will pick up most routine monthly revisions

Table 4.—Trend Adjustment Factors for Composite Indexes

[Percent per month]

| Composite index | Current index ¹ | | Revised index ² | |
|-----------------------|----------------------------|--------------------------------------|----------------------------|--------------------------------------|
| | Trend in raw index | Trend adjustment factor ³ | Trend in raw index | Trend adjustment factor ³ |
| Leading index..... | 0.132 | 0.139 | 0.118 | 0.142 |
| Coincident index..... | .446 | -.175 | .447 | -.186 |
| Lagging index..... | .253 | .018 | .231 | .030 |

1. Trends are computed over the period 1948–81.
 2. Trends are computed over the period 1948–85.
 3. The trend adjustment factor is the target trend minus the trend in the raw index. The target trend is 0.271 for the current indexes and 0.261 for the revised indexes.

in the index components. In order to pick up longer term revisions, such as seasonal and benchmark revisions, the composite indexes will undergo annual recomputations to incorporate revised component data for earlier periods. The first recomputation is scheduled for the fall of 1989.

Cyclical Patterns in the Composite Indexes

The current and revised composite indexes for 1948 through June 1988 are shown in chart 5, where the lead or lag of each index at each business cycle turning point is indicated. The chart shows that the cyclical patterns in each pair of indexes are very much alike; that is, the current and revised indexes show similar cyclical amplitudes, similar degrees of smoothness, and relatively minor differences in turning points.

For the leading indexes, the revised and current versions each have average leads of about 9½ months at business cycle peaks. The leads range from 2 to 20 months for the revised index and from 3 to 23 months for the current index. At recent peaks, the lead of the revised index at the January 1980 peak is 5 months longer than the lead of the current index, and at the July 1981 peak it is 1 month shorter. The false signals in the indexes are similar; both indexes show obvious downturns in 1950–51, 1966, and 1984 that do not lead to recessions.

At business cycle troughs, the average lead of the revised leading index is 4.5 months, and the average lead of the current index is 3.2 months. This difference is largely accounted for by the 8-month longer lead of the revised index

at the February 1961 trough. The leads at troughs range from 1 to 10 months for the revised index and 1 to 8 months for the current index.

For the coincident indexes, the turning points of the two indexes are the same except for the July 1953 peak, where the revised index is exactly coincident and the current index has a 2-month lead. More than half of the turning points of each index are exact coincidences, and—except for the 6-month lead at the August 1957 peak—the rest fall within 3 months of the business cycle turns.

For the lagging indexes, the average lag at business cycle peaks is 4.5 months for the revised index and 5.9 months for the current index. This difference is largely accounted for by the 9-month longer lag of the current index at the July 1981 peak. The lags at peaks range from 2 to 13 months for both indexes.

At business cycle troughs, the average lag of the revised lagging index is 8.5 months, and the average lag of the current index is 9.8 months. The largest difference is at the July 1980 trough, where the lag of the current index is 6 months longer. The lags at troughs range from 3 to 15 months for the revised index and 4 to 15 months for the current index.

The differences in the turning points are caused by the addition, deletion, and modification of components, by the use of updated statistical factors and revised historical data, or by a combination of these. In all, there were 16 differences in turning points; in 9 of them, the differences were only 1 or 2 months.

- In the leading index, the differences at the July 1981 peak and the February 1961 and November 1982 troughs are caused primarily by updated statistical factors and revised historical data. The four other differences are caused primarily by changes in the selection of components.

- In the coincident index, the only difference in the turning points (July 1953 peak) is the result of updated statistical factors and revised historical data.

- In the lagging index, the differences at the March 1975 and July 1980 troughs are caused primarily by updated statistical factors and revised historical data. The six other differences are caused primarily by changes in the selection of components.

Areas of Future Work

BEA plans to review the selection, coverage, and presentation of data in *BCD*. In addition, BEA has under way further work on the composite indexes. This additional research is focused on three areas: First, on expanding the coverage of the indexes; second, on further improving the quality of some components; and third, on providing a theoretical framework for the indexes.

Coverage.—Users of the composite indexes have suggested that measures of service activity and of international activity, areas that have been increasing in importance, be added to the leading index. As part of the current revision, BEA searched for leading indicators in these areas, but results were marginal—one service series was added to the lagging index. Work in this area is continuing.

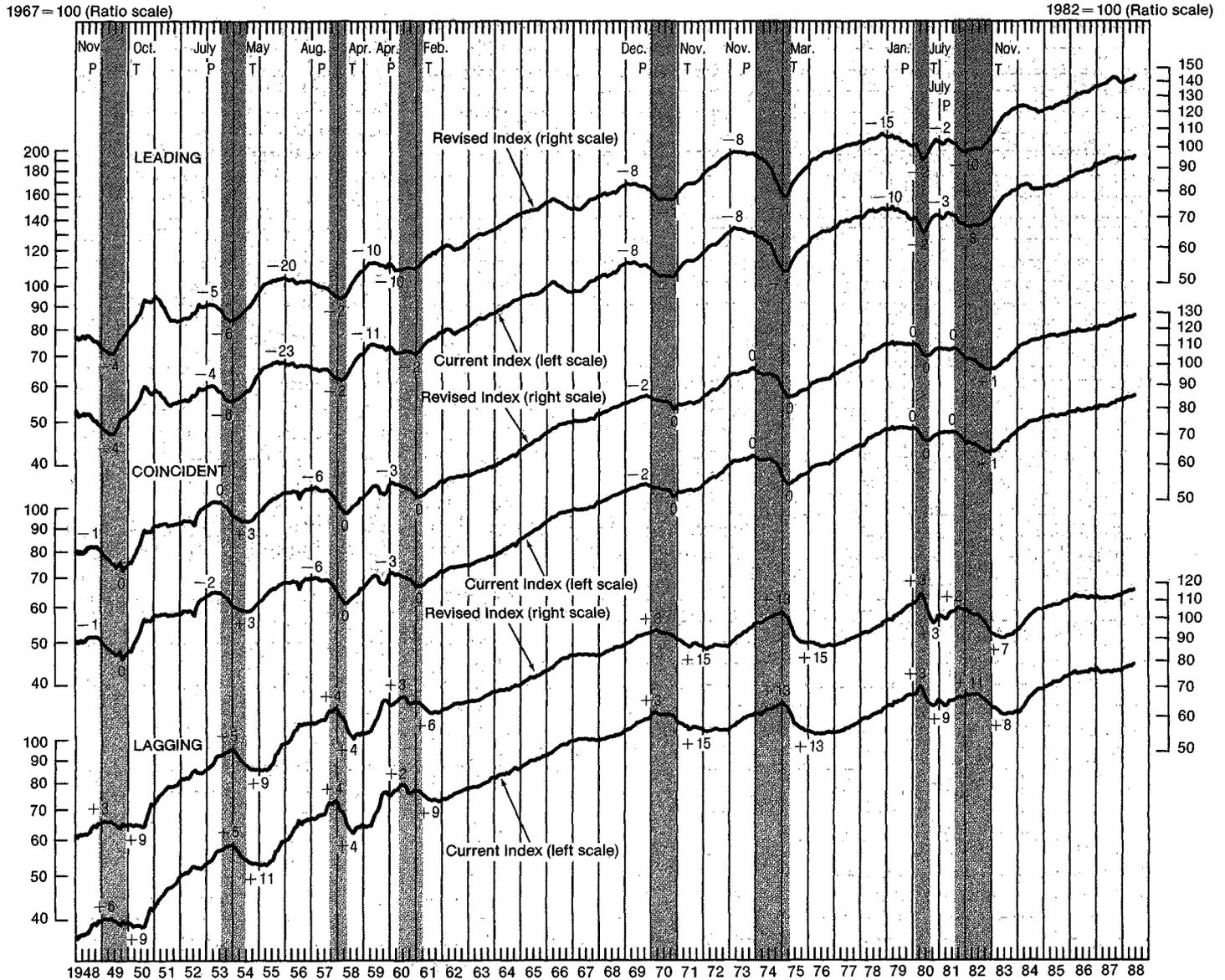
The available data on services were found not to contain much cyclical vari-

ation. Many service activities continue to grow during business cycle contractions as well as during expansions. In a recent review of the cyclical indicators system, Geoffrey H. Moore, of the Center for International Business Cycle Research, reached a similar conclusion; he concurred with BEA's relatively heavy reliance on manufacturing, construction, and trade in its system of indicators.

Moore developed a separate system of indicators for services, based on six

CHART 5

Composite Indexes of Leading, Coincident, and Lagging Indicators



NOTE.—Peak (P) indicates the end of a business cycle expansion and the beginning of a recession (shaded area). Trough (T) indicates the end of a business cycle recession and the beginning of an expansion. Business cycle peaks and troughs are designated by the National

Bureau of Economic Research, Inc. The numbers entered on the chart indicate the length of leads (-) and lags (+) in months from the business cycle turning dates.

monthly and two quarterly series, that focuses on growth rates rather than on levels of activity. The reference cycles of his system are based on a chronology of peaks and troughs in growth rates of service activity—therefore, they differ from the reference cycle chronology designated by the National Bureau of Economic Research and used by BEA to determine leads and lags. Although this system of service indicators provides some gauge of leads and lags in growth rates of services, it cannot be readily combined with BEA's system of composite indexes. When BEA revises the selection of data published in *BCD*, growth rates of some service activities will be added.

BEA will continue to monitor data on service activity. As service activity evolves further and more data become available, it may be possible to develop cyclical indicators of services suitable for inclusion in the leading index.

With respect to international activities, BEA attempted to find a measure that could be added to the leading index. However, an adequate measure of future foreign demand for U.S. goods is not available. In addition, in many cases data from foreign statistical agencies, which could be used to construct a series, are not available promptly. BEA will continue to monitor international data to determine if a suitable component for the leading index can be developed.

Quality of components.—BEA and the Board of Governors of the Federal Reserve System have compiled a new series on changes in business and consumer credit outstanding. The new series differs from the one dropped in the revision in two respects—preliminary data are available for the most recent month and the estimates cover all business and consumer credit rather than selected components. BEA is monitoring the suitability of the new series—particularly the size of its revisions—for inclusion in the leading index.

BEA is considering the substitution of employee hours in nonagricultural establishments for the number of employees on nonagricultural payrolls, which is now a component of the coincident index. Both series have shortcomings as business cycle indicators. Counting the number of employees gives equal weight to part-time and full-time workers and counts workers

Origin of Business Cycle Indicators

Research at the National Bureau of Economic Research, Inc. (NBER) explored the role of individual economic time series in the business cycle and established the foundation for later studies of leading, coincident, and lagging indicators. NBER's first list of cyclical indicators, compiled by Arthur F. Burns and Wesley C. Mitchell, was published in 1938.

In 1946, Burns and Mitchell described business cycles as follows: "Business cycles are a type of fluctuation found in the aggregate economic activity of nations that organize their work mainly in business enterprises; a cycle consists of expansions occurring at about the same time in many economic activities, followed by similarly general recessions, contractions, and revivals which merge into the expansion phase of the next cycle; this sequence of changes is recurrent but not periodic; in duration business cycles vary from more than one year to ten or twelve years; they are not divisible into shorter cycles of similar character with amplitudes approximating their own." (*Measuring Business Cycles*, NBER (1946).)

In 1961, the U.S. Department of Commerce began publishing a monthly report that featured the NBER's leading, coincident, and lagging indicators. The composite indexes of cyclical indicators were first published by the Department in 1968.

with more than one job more than once. The hours series does not have these drawbacks, but it may be distorted when a holiday or severe weather falls in the survey week. The Bureau of Labor Statistics is developing adjustments to remove the effects of holidays. Suitable adjustments for the effects of severe weather do not appear feasible. Once the adjustments for holidays are incorporated, BEA will compare the number of employees series with the hours series and will decide which is the better coincident indicator.

The Census Bureau is investigating data sources that could be used to compile a net business formation series that BEA could include in the leading index. A similar indicator was removed from the index in 1987 because of statistical inadequacy.

Theoretical framework.—A better understanding of the theoretical framework that underlies leading indicators can improve the analysis of indicators and may lead to a better system of indicators. BEA and researchers elsewhere are working on developing such a framework for the cyclical indicators. In a recent study, Frank de Leeuw, of BEA, notes five rationales that underlie one or more of the components of BEA's index of leading indicators:

- An early stage in a production process;
- An easily adaptable dimension of economic activity;
- A market highly sensitive to expectations about activity;

- A "prime mover" of the economy; or
- The first difference of a series that parallels economic activity.³

This study develops a theoretical model, based on the dynamic theory of production, that incorporates the first three of these rationales. Simulations demonstrate that under some conditions, but not under others, the theoretical model implies lead-lag relationships similar to those implied by the index of leading indicators. The model can be solved to yield a reduced form that resembles the composite index of leading indicators in some respects but that differs from it in others. This reduced form is the basis for a "theory-based" indicator that the study compares with the official composite index.

"Prime movers," the fourth rationale in this study, are defined as fiscal and monetary policies, foreign economic developments, technological changes, and other fundamental forces that most experts believe have a major impact on economic activity. A second study by Frank de Leeuw, which will appear in a forthcoming issue of the *SURVEY OF CURRENT BUSINESS*, documents the low representation of prime movers in leading indexes for many countries. It lists possible reasons for low representation and considers ways of improving the performance of prime movers as leaders. Finally, the study constructs a prime mover-based leading index.

3. Frank de Leeuw, "Toward a Theory of Leading Indicators," *Leading Economic Indicators: New Approaches and Forecasting Methods*, edited by Kajal Lahiri and Geoffrey H. Moore, Cambridge University Press, forthcoming.

Federal Fiscal Programs

THE fiscal year 1990 budget returns to the fiscal course charted early in the 1980's. The 1989 budget had veered from that course to comply with a bipartisan budget agreement negotiated by the Congress and the administration in late 1987. The 1990 budget, like its predecessors, calls for substantial reductions from current services outlays—that is, outlays that would take place without policy changes—to bring the deficit within the mandated limits of the Balanced Budget and Emergency Deficit Control Act of 1985 (as amended). The outlay reductions—which are not as deep as those in earlier budgets—are to be implemented by program reductions, terminations and recessions, credit reform, management improvements, and sales of loans and physical assets.

To increase receipts, the budget proposes to extend medicare hospital insurance coverage to State and local government employees, to implement administration actions to improve tax collections, and to introduce or increase a variety of fees—such as Nuclear Regulatory Commission fees and airport and airway fees—to be paid by users and beneficiaries of Federal services. These proposals increase receipts by a relatively small amount.

National defense outlays increase 1.6 percent in 1990; in real terms, according to the administration, national defense outlays decline 2.2 percent. Procurement outlays decline 2.4 percent in 1990, in contrast to a 4.5 percent increase in 1989. The largest increase—3.8 percent—is for operation and maintenance, which increases 1.0 percent in 1989. Nondefense outlays increase 1.2 percent in 1990; in real terms, the decline is 2.4 percent. Excluding net interest and social security, nondefense outlays decline 2.0 percent. The largest proposed reduction is for medicare. A large increase in the category of receipts—called undistributed offset-

ting receipts—that is a direct offset to outlays in the budget is proposed for 1990. The largest proposed increase is for social security.

Economic assumptions

According to the *Economic Report of the President*, the "economic forecast for 1989 reflects the three con-

tinuing changes in the U.S. economy: improved international competitiveness, more restrictive macroeconomic policies, and the effects of temporary shocks to the economy. The forecast anticipates a continuation of the transition of the U.S. economy from growth led by domestic demand to growth driven by expanding world markets... Tempering overall growth, however, are policies of monetary and fiscal restraint." Other economic assumptions underlying the fiscal year 1990 budget are shown in table 1.

Real GNP is forecast to increase 3.5 percent from the fourth quarter of 1988 to the fourth quarter of 1989 and 3.4 percent to the fourth quarter of 1990. Real GNP increased 2.6 percent during 1988. According to the Council of Economic Advisers, "these figures are not, however, representative of the underlying patterns of slower growth expected for most sectors of the economy in 1989. Distorting the picture of slower growth are the concluding effects of last year's drought." Removing the effect of the drought, real GNP is estimated to have increased 3.3 percent in 1988 and is forecast to increase 2.8 percent in 1989. The rate of inflation is expected to abate slightly in 1989: The GNP deflator is forecast to increase 3.7 percent (fourth quarter to fourth quarter). The Council states that "in line with slower growth in the nonfarm economy, little change is expected in capacity utilization rates and the rate of unemployment this year. This will help to contain sectoral capacity problems that can put upward pressure on prices." The unemployment rate is expected to drop slightly to 5.2 percent by the fourth quarter of 1989, and the level of employment is expected to increase 1.9 million by the end of the year. The interest rate for 91-day Treasury bills is expected to decline to 6.3 percent, consistent with slower growth and moderating inflation.

Table 1.—Economic Assumptions Underlying the Fiscal Year 1990 Budget

| | Calendar year | | | |
|---|------------------------------------|-----------|-------|-------|
| | Actual | Estimates | | |
| | 1987 | 1988 | 1989 | 1990 |
| | Billions of dollars | | | |
| GNP: | | | | |
| Current dollars | 4,527 | 4,857 | 5,211 | 5,570 |
| 1982 dollars..... | 3,847 | 3,994 | 4,123 | 4,254 |
| Incomes: | | | | |
| Personal income..... | 3,780 | 4,052 | 4,326 | 4,633 |
| Wages and salaries..... | 2,248 | 2,434 | 2,605 | 2,780 |
| Corporate profits before taxes | 277 | 301 | 351 | 396 |
| | Percent change from preceding year | | | |
| GNP in current dollars: | | | | |
| Annual average | 6.8 | 7.3 | 7.3 | 6.9 |
| Fourth quarter | 8.3 | 6.6 | 7.4 | 7.0 |
| GNP in 1982 dollars: | | | | |
| Annual average | 3.4 | 3.8 | 3.2 | 3.2 |
| Fourth quarter | 5.0 | 2.6 | 3.5 | 3.4 |
| GNP deflator: | | | | |
| Annual average | 3.3 | 3.4 | 3.9 | 3.6 |
| Fourth quarter | 3.1 | 3.9 | 3.7 | 3.5 |
| Consumer Price Index: ¹ | | | | |
| Annual average | 3.6 | 4.0 | 3.8 | 3.7 |
| Fourth quarter | 4.6 | 4.2 | 3.6 | 3.5 |
| | Percent | | | |
| Unemployment rate: ² | | | | |
| Annual average | 6.1 | 5.4 | 5.2 | 5.1 |
| Fourth quarter | 5.8 | 5.3 | 5.2 | 5.1 |
| Insured unemployment rate: ³ | | | | |
| Annual average | 2.4 | 2.1 | 2.0 | 1.9 |
| Interest rate: ⁴ | | | | |
| 91-day Treasury bills..... | 5.8 | 6.7 | 6.3 | 5.5 |
| 10-year Treasury notes..... | 8.4 | 8.9 | 8.3 | 7.2 |

1. Consumer Price Index for urban wage earners and clerical workers.

2. Percent of labor force, including armed forces residing in the United States.

3. Insured unemployment under the State regular unemployment insurance program, excluding recipients of extended benefits, as percentage of covered employment under that program.

4. Average rate on new issues within a year. The estimates assume, by convention, that interest rates vary with the rate of inflation.

Source: *The Budget of the United States Government, Fiscal Year 1990*.

For 1989, the Council based the real GNP increase (fourth quarter to fourth quarter) on the following assessment. Personal consumption expenditures are expected to increase 2.0 percent, down from 3.3 percent in 1988. Nonresidential fixed investment is expected to increase 4.9 percent, substantially under the 8.4 percent in 1988. The continued growth in nonresidential fixed investment is expected because of the "need for further capacity in the exporting and import-competing sectors of the economy." Residential investment is expected to increase 2.7 percent, in contrast to a 0.4-percent decline in 1988. The increase began in late 1988 and the Council states that it "comes after nearly a year and a half of decline, prompted by reduced incentives for multi-unit con-

struction arising under the Tax Reform Act of 1986." According to the Council, "exports will continue to be one of the biggest factors contributing to growth in 1989. Real import growth will slow compared with growth in recent years, as a result of slower drought-adjusted GNP growth and continued substitution away from more costly foreign, toward less costly domestically, produced products. Although the improvement in real net exports is not expected to continue at the record-setting pace of 1988, the trade sector... is projected to contribute to growth in 1989 and beyond."

Federal purchases of goods and services are expected to decline 0.6 percent, compared to a 4.4-percent decline in 1988. According to the Council, although "the decline in total Federal purchases appears to be slowing in 1989 relative to 1988, the drought explains much of the 1988 drop. Net Commodity Credit Corporation (CCC) farm inventory purchases were reduced as higher drought-related crop prices and lower production induced farmers to redeem crops and the CCC to sell inventories directly to the open market. Crop redemptions and government inventory sales are expected to diminish in 1989, as farm production recovers." State and local government purchases are expected to increase 3.0 percent, slightly faster than in 1988.

Current services estimates

Current services estimates show what receipts and outlays would be without policy changes. In concept, they are neither recommended amounts nor forecasts; they are bases with which administration or congressional proposals can be compared. The level of receipts generally assumes that tax changes occur as scheduled under current law. The level of outlays generally is that needed to maintain ongoing Federal programs and activities in real terms.

Unified budget receipts in 1990 are \$1.8 billion higher than current services receipts, reflecting the administration proposals to increase receipts, as previously mentioned (table 2). Unified budget outlays are \$32.6 billion lower than current services outlays; proposed program reductions (\$38.1 billion) exceed proposed program increases (\$5.7 billion).

The largest program increase—\$2.1 billion—is for national defense and reflects the administration proposal to increase real national defense spending by 2 percent annually from 1990 through 1994. Increased spending for a proposed space station, a space shuttle program, and basic research contributes to the \$1.3 billion increase for general science, space, and technology. Increased spending for Federal law enforcement and correctional activities contributes to the increase in the administration of justice.

The largest program reduction—\$5.0 billion—is for medicare and reflects proposals to reduce payments for hospitals' capital costs and to limit increases in payments to physicians and other nonhospital providers. A proposal to eliminate the January 1990 cost-of-living adjustment and to eliminate the lump-sum withdrawal of employee contributions reduces spending for Federal employee retirement and disability. Proposals to reduce target prices and to lower the share of production eligible for deficiency payments contribute to the reduction in spending for farm income stabilization. A proposal to renew the cost containment incentives that were originally authorized by the Omnibus Budget Reconciliation Act of 1981 and that expired at the end

Table 2.—Relation of Current Services Budget to Unified Budget

| | Fiscal year | |
|--|-------------|---------|
| | 1989 | 1990 |
| [Billions of dollars] | | |
| Receipts | | |
| Current services estimate..... | 975.5 | 1,057.5 |
| Plus: Proposed legislation: | | |
| Extend medicare hospital insurance coverage to State and local government employees..... | | 1.8 |
| Research and experimentation allocation rules..... | | -1.7 |
| Research and experimentation tax credit..... | | -4 |
| Other..... | | 2.0 |
| Equals: Unified budget..... | 975.5 | 1,059.3 |
| Outlays | | |
| Current services estimate..... | 1,135.5 | 1,184.5 |
| Plus: Proposed program increases: | | |
| National defense..... | | 2.1 |
| General science, space, and technology..... | | 1.3 |
| Farm income stabilization..... | | .9 |
| Administration of justice..... | | 1.2 |
| Social services..... | | .5 |
| Other..... | | .5 |
| Proposed program reductions: | | |
| Medicare..... | | -5.0 |
| Federal employee retirement and disability..... | | -3.5 |
| Mortgage credit and deposit insurance..... | | -3.3 |
| National resources and environment..... | | -3.2 |
| Farm income stabilization..... | | -3.1 |
| Energy..... | | -1.8 |
| Allowances..... | | -1.7 |
| Health: | | |
| Medicaid..... | | -1.7 |
| Other..... | | -1.2 |
| Food and nutritional assistance..... | | -1.4 |
| Ground transportation..... | | -1.2 |
| Undistributed offsetting receipts: | | |
| Federal Communication Commission fees..... | | -2.3 |
| Sale of power marketing administrations and naval petroleum reserve..... | | -2.3 |
| Other..... | | -9 |
| Net interest..... | | -8 |
| Other..... | | -4.7 |
| Equals: Unified budget..... | 1,137.0 | 1,151.8 |

* \$50 million or less.

Source: Special Analysis, *The Budget of the United States Government, Fiscal Year 1990*.

Table 3.—Federal Government Receipts and Expenditures

| | Fiscal year | | |
|---|-------------|-----------|---------|
| | Actual | Estimates | |
| | 1988 | 1989 | 1990 |
| [Billions of dollars] | | | |
| Unified budget | | | |
| Receipts..... | 909.0 | 975.5 | 1,059.3 |
| Outlays..... | 1,064.0 | 1,137.0 | 1,151.8 |
| Surplus or deficit (-)..... | -155.1 | -161.5 | -92.5 |
| National income and product accounts | | | |
| Receipts..... | 964.8 | 1,029.3 | 1,133.4 |
| Expenditures..... | 1,106.3 | 1,174.2 | 1,213.0 |
| Surplus or deficit (-)..... | -141.5 | -144.9 | -79.6 |
| Cyclically adjusted surplus or deficit (-) ¹ | -182.1 | -197.8 | -148.1 |

1. The cyclically adjusted budget is based on a middle-expansion trend GNP. A discussion of the middle-expansion trend GNP and the cyclical adjustment of the Federal Government budget is presented in the December 1983 *SURVEY OF CURRENT BUSINESS*. The middle-expansion period, which is used to calculate trend GNP and unemployment rate, was extended in August 1988. Previously it was from the third quarter of 1983 to the second quarter of 1986. The period was extended to the second quarter of 1988 to reflect the continuation of economic expansion without substantial inflation after the second quarter of 1986. As a result of extension, middle-expansion trend GNP was revised up by amounts that increased from \$2 billion in the third quarter of 1981 to \$65 billion in the first quarter of 1988, and the trend unemployment rate was revised down to 6.9 percent from 7.4 percent.

Sources: *The Budget of the United States Government, Fiscal Year 1990*, and the Bureau of Economic Analysis.

of 1984 contributes to the reduction in medicaid. A number of proposals increase undistributed offsetting receipts, including the use of a competitive bidding process to sell Federal Communication Commission radio licenses and the sale of various power marketing administrations and the naval petroleum reserve.

Unified budget

The unified budget deficit decreases from \$161.5 billion in fiscal year 1989 to \$92.5 billion in fiscal year 1990 (table 3 and chart 6). Of the \$69.0 billion decline in the deficit, \$33.1 billion is the result of an assumed decline in the current services budget deficit and \$35.9 billion is the result of administration deficit-reduction proposals.

Receipts increase \$83.8 billion—or 8.6 percent—in 1990, to \$1,059.3 billion. Receipts in 1989 are \$975.5 billion, up 7.3 percent from 1988. Administration proposals increase receipts \$1.8 billion in 1990. The largest proposed increase is \$1.8 billion from the extension of medicare hospital insurance coverage to State and local government employees not currently covered by social security. This increase is partly offset by a proposal to liberalize the research and experimentation allocation rules. (Currently, companies with foreign

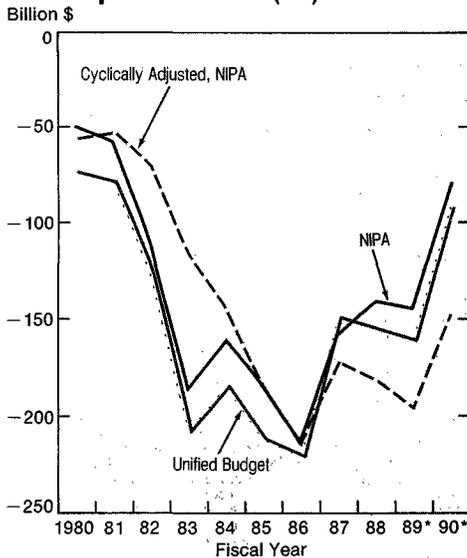
operations are allowed to allocate 64 percent of domestic research and experimentation expenses to their domestic operations and 64 percent of foreign expenses to their foreign operations. The remaining expenses are allocated on the basis of gross income or sales. The administration is proposing to allow companies to allocate at least 67 percent of total research and experimentation expenses to domestic operations.) Other proposals, on balance, increase receipts \$1.6 billion.

Outlays increase \$14.8 billion—or 1.3 percent—in 1990, to \$1,151.8 billion. Outlays in 1989 are \$1,137.0 billion, up 6.9 percent from 1988. The 1990 increase is the net result of \$48.4 billion in increases and \$33.4 billion in decreases. Table 4 shows unified budget outlays by function: Four functions—national defense, social security, net interest, and medicare—more than account for the increase in total outlays; on balance, outlays for all other functions decline. The largest increase—\$14.4 billion—is for social security and includes \$6.2 billion for a 3.6-percent cost-of-living adjustment, effective January 1, 1990. The largest decline—\$11.7 billion—is for commerce and housing credit and is due to large declines in spending by the Federal Savings and Loan Insurance Corporation (\$6.7 billion) and by the Federal Deposit Insurance Corporation (\$5.1 billion). A large increase in undistributed receipts in 1990 is the result of the proposals to sell radio licenses, the elective power marketing administrations, and the naval petroleum reserve.

The large declines in spending by the Federal Savings and Loan Insurance Corporation (FSLIC) and the Federal Deposit Insurance Corporation (FDIC) reflect a significant decline in the number of insolvencies of thrift institutions expected in 1990. The FSLIC insures deposits at savings institutions up to a statutory limit of \$100,000 per account. From January through November 1988, the FSLIC closed and/or assisted 150 savings institutions, an historic high number. Although the industry as a whole incurred losses during 1988, the aggregate loss in the third quarter of 1988 was only \$1.6 billion, down sharply from the more than \$3.5 billion losses in each of the previous two quarters. Net outlays for the FSLIC are estimated to be \$8.7 billion in 1989 and \$2.1 billion in 1990. According to the budget, this level of spending should allow the FSLIC to close at least 100 of the most unprofitable of the remaining insolvent institutions. The budget points out that this proposal will not solve the problems of the savings industry and that a comprehensive plan is being formulated within the administration to resolve remaining problems.

The FDIC insures deposits of all federally chartered and of many State-chartered commercial and savings banks. In 1988, the FDIC handled over 200 transactions involving failures and assistance. The FDIC anticipates bank failure and assistance agreements will decrease to approximately 150 in 1990. Net outlays for the FDIC are \$3.3 billion in 1989 (a net loss) and a negative \$1.3 billion in 1990 (a net gain).

CHART 6
Federal Fiscal Position: Surplus or Deficit (—)



* Estimates from OMB and BEA
Note—The cyclically adjusted surplus or deficit is based on middle-expansion trend GNP.

Table 4.—Unified Budget Outlays by Function

| | Fiscal year | | | | | | |
|--|-------------|---------|---------|---------|----------------------------|------|-------|
| | 1987 | 1988 | 1989 | 1990 | Change from preceding year | | |
| | | | | | 1988 | 1989 | 1990 |
| Total | 1,003.8 | 1,064.0 | 1,137.0 | 1,151.8 | 60.2 | 73.0 | 14.8 |
| National defense..... | 282.0 | 290.4 | 298.3 | 303.0 | 8.4 | 7.9 | 4.7 |
| Social security..... | 207.4 | 219.3 | 232.3 | 246.7 | 11.9 | 13.0 | 14.4 |
| Net interest..... | 138.6 | 151.7 | 165.7 | 170.1 | 13.1 | 14.0 | 4.4 |
| Income security..... | 123.3 | 129.3 | 136.9 | 136.8 | 6.0 | 7.6 | -1 |
| Medicare..... | 75.1 | 78.9 | 86.7 | 94.9 | 3.8 | 7.8 | 8.2 |
| Health..... | 40.0 | 44.5 | 49.8 | 52.2 | 4.5 | 5.3 | 2.4 |
| Education, training, employment, and social services..... | 29.7 | 31.9 | 36.4 | 39.5 | 2.2 | 4.5 | 3.1 |
| Veterans benefits and services..... | 26.8 | 29.4 | 29.2 | 29.9 | 2.6 | -2 | .7 |
| Agriculture..... | 26.6 | 17.2 | 20.9 | 15.9 | -9.4 | 3.7 | -5.0 |
| International affairs..... | 11.6 | 10.5 | 10.7 | 17.3 | -1.1 | .2 | 6.6 |
| General science, space, and technology..... | 9.2 | 10.8 | 12.6 | 14.9 | 1.6 | 1.8 | 2.3 |
| Commerce and housing credit..... | 6.2 | 18.8 | 20.0 | 8.3 | 12.6 | 1.2 | -11.7 |
| Energy..... | 4.1 | 2.3 | 4.1 | 2.3 | -1.8 | 1.8 | -1.8 |
| Undistributed offsetting receipts..... | -36.5 | -37.0 | -36.9 | -42.0 | -5 | .1 | -5.1 |
| All other functions..... | 59.8 | 65.9 | 70.2 | 62.2 | 6.1 | 4.3 | -8.2 |
| Addendum: | | | | | | | |
| National defense, social security, net interest, and medicare..... | 703.1 | 740.3 | 783.0 | 814.7 | 37.2 | 42.7 | 31.7 |
| All other functions..... | 300.7 | 323.7 | 354.0 | 337.1 | 23.0 | 30.3 | -16.9 |

Sources: *The Budget of the United States Government, Fiscal Year 1990*, and the Bureau of Economic Analysis.

Federal sector

BEA has prepared estimates of the Federal sector on the national income and product accounts (NIPA) basis that are consistent with the unified budget estimates (table 3). Estimates of the Federal sector, which are integrated conceptually and statistically with the rest of the NIPA's, differ in several respects from the unified budget estimates. Unlike the unified budget, these estimates exclude financial transactions, such as loans, and they record several categories of receipts and expenditures on a timing basis that is different from that of the budget. (For a more detailed dis-

ussion of the differences, see *Government Transactions*, Methodology Paper Series MP-5. See page 40 for information on where to order this latest paper in the BEA methodology series.) Table 5 shows the relation between unified budget receipts and NIPA receipts, and table 6 shows the relation between unified budget outlays and NIPA expenditures.

Federal receipts on the NIPA basis are \$1,133.4 billion in fiscal year 1990, up \$104.1 billion from 1989 (chart 7). The increase is the result of a \$63.8 billion increase due to higher tax bases and a \$40.3 billion increase due to tax changes (table 7). The increase due to tax changes is largely accounted for by the Tax Reform Act of 1986 (\$11.5 billion), by the Medicare Catastrophic Coverage Act of 1988 (\$6.5 billion), and by increases in the social security tax rates and bases (\$14.7 billion). Proposed legislation, including extension of current airport and airway trust fund taxes (which are scheduled to drop by 50 percent in 1990), increases indirect business tax and nontax accruals. The proposal to extend medicare hospital insurance coverage to State and local government employees increases contributions for social insurance.

Federal expenditures on the NIPA basis are \$1,213.0 billion in 1990,

up \$38.8 billion from 1989 (charts 8 and 9). Table 8 highlights the major factors that contribute to recent changes in Federal expenditures. The largest increase in 1990—\$13.9 billion—is for social security benefits, including \$8.6 billion for cost-of-living adjustments. Within purchases, Federal employee pay raises add \$3.9 billion, purchases of agricultural commodities by the Commodity Credit Corporation (CCC) increase \$3.8 billion, and purchases by the National Aeronautics and Space Administration increase \$2.1 billion; partly offsetting these increases is a \$2.7 billion decline in purchases of military hardware. Catastrophic health insurance contributes \$2.6 billion to the increase in transfer payments, and a decline in the CCC deficit accounts for the decline in subsidies less the current surplus of government enterprises.

Table 5.—Relation of Federal Government Receipts in the National Income and Product Accounts to the Unified Budget

[Billions of dollars]

| | Fiscal year | | |
|--|--------------|----------------|----------------|
| | 1988 | 1989 | 1990 |
| Unified budget receipts | 909.0 | 975.5 | 1,059.3 |
| Less: Coverage differences | 1.7 | 1.7 | 1.9 |
| Plus: Netting differences: | | | |
| Contributions to government employees retirement funds | 38.8 | 40.5 | 42.4 |
| Other | 16.4 | 19.4 | 26.7 |
| Timing differences: | | | |
| Corporate income tax | -0.5 | -5.5 | 5.7 |
| Federal and State unemployment insurance taxes | -0.1 | .5 | -2 |
| Withheld personal income tax and social security contributions | 4.1 | .6 | 1.3 |
| Excise taxes | -1.2 | | .1 |
| Other | | | |
| Miscellaneous | | | |
| Equals: Federal Government receipts, NIPA's | 964.8 | 1,029.3 | 1,133.4 |

Table 6.—Relation of Federal Government Expenditures in the National Income and Product Accounts to the Unified Budget

[Billions of dollars]

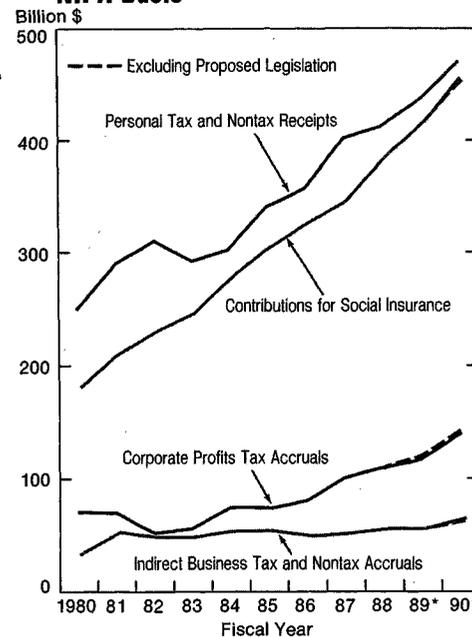
| | Fiscal year | | |
|--|----------------|----------------|----------------|
| | 1988 | 1989 | 1990 |
| Unified budget outlays | 1,064.0 | 1,137.0 | 1,151.8 |
| Less: Coverage differences: | | | |
| Geographic | 5.7 | 6.0 | 6.1 |
| Other | .2 | .2 | .2 |
| Financial transactions: | | | |
| Net lending | 17.4 | 19.7 | 6.0 |
| Other | -2.2 | -1.4 | -1.2 |
| Net purchases of land: | | | |
| Outer Continental Shelf | -1.3 | -.8 | -2.0 |
| Other | 1.2 | .2 | -1.2 |
| Plus: Netting differences: | | | |
| Contributions to government employees retirement funds | 38.8 | 40.5 | 42.4 |
| Other | 16.4 | 19.4 | 26.7 |
| Timing differences: | | | |
| National defense purchases | 7.0 | -.3 | -1.1 |
| Other | 1.0 | 1.4 | 1.0 |
| Miscellaneous | .1 | | |
| Equals: Federal Government expenditures, NIPA's | 1,106.3 | 1,174.2 | 1,213.0 |

Table 7.—Sources of Change in Federal Government Receipts, NIPA Basis

[Billions of dollars]

| | Change from preceding fiscal year | | |
|---|-----------------------------------|-------------|--------------|
| | 1988 | 1989 | 1990 |
| Total receipts | 63.1 | 64.5 | 104.1 |
| Due to tax bases | 70.9 | 63.0 | 63.8 |
| Due to tax changes | -7.8 | 1.5 | 40.3 |
| Tax Reform Act of 1986 | -25.9 | -10.5 | 11.5 |
| Omnibus Budget Reconciliation Act of 1987 | 8.3 | 4.3 | 3.0 |
| Technical and Miscellaneous Revenue Act of 1988 | | -.9 | .9 |
| Medicare Catastrophic Coverage Act of 1988 | | 1.8 | 6.5 |
| Social security ¹ | 12.8 | 8.1 | 14.7 |
| Proposed legislation | | -1.3 | 3.7 |
| Personal tax and nontax receipts | 11.5 | 23.7 | 33.7 |
| Due to tax bases | 36.8 | 34.9 | 32.0 |
| Due to tax changes | -25.3 | -11.2 | 1.7 |
| Tax Reform Act of 1986 | -26.0 | -11.7 | .5 |
| Omnibus Budget Reconciliation Act of 1987 | .7 | 1.1 | .8 |
| Technical and Miscellaneous Revenue Act of 1988 | | -.6 | .4 |
| Proposed legislation | | | |
| Corporate profits tax accruals | 8.2 | 8.6 | 22.2 |
| Due to tax bases | 7.5 | 6.9 | 9.2 |
| Due to tax changes | -.7 | 1.7 | 13.0 |
| Tax Reform Act of 1986 | -3.2 | 1.1 | 11.1 |
| Omnibus Budget Reconciliation Act of 1987 | 3.9 | 1.9 | 1.9 |
| Technical and Miscellaneous Revenue Act of 1988 | | | .2 |
| Proposed legislation | | -1.3 | -2 |
| Indirect business tax and nontax accruals | 3.8 | .5 | 8.2 |
| Due to tax bases | 1.2 | .1 | 6.0 |
| Due to tax changes | 2.6 | .4 | 2.2 |
| Tax Reform Act of 1986 | .2 | | -.1 |
| Omnibus Budget Reconciliation Act of 1987 | 2.4 | .7 | .2 |
| Technical and Miscellaneous Revenue Act of 1988 | | -.3 | .2 |
| Proposed legislation | | | 1.9 |
| Contributions for social insurance | 39.6 | 31.7 | 40.0 |
| Due to tax bases | 25.4 | 21.1 | 16.6 |
| Due to tax changes | 14.2 | 10.6 | 23.4 |
| Tax Reform Act of 1986 | .1 | .1 | |
| Omnibus Budget Reconciliation Act of 1987 | 1.3 | .6 | .1 |
| Technical and Miscellaneous Revenue Act of 1988 | | | .1 |
| Medicare Catastrophic Coverage Act of 1988 | | 1.8 | 6.5 |
| Social security ¹ | 12.8 | 8.1 | 14.7 |
| Proposed legislation | | | 2.0 |

**CHART 7
Federal Government Receipts, NIPA Basis**



* Estimates by BEA
U.S. Department of Commerce, Bureau of Economic Analysis 89-17

1. Consists of social security tax rate and base changes since 1987.

Table 8.—Sources of Change in Federal Government Expenditures, NIPA Basis

[Billions of dollars]

| | Change from preceding fiscal year | | |
|---|-----------------------------------|-------------|-------------|
| | 1988 | 1989 | 1990 |
| Total expenditures | 47.4 | 67.9 | 38.8 |
| Purchases of goods and services..... | 2.9 | 20.1 | 14.6 |
| Military hardware..... | -4.0 | -2.1 | -2.7 |
| Pay raises ¹ | 1.7 | 4.3 | 3.9 |
| National defense..... | 1.2 | 3.0 | 2.9 |
| Nondefense..... | .5 | 1.3 | 1.0 |
| Commodity Credit Corporation..... | -13.2 | 9.8 | 3.8 |
| National Aeronautics and Space Administration..... | 1.3 | 1.6 | 2.1 |
| Other..... | 17.1 | 6.5 | 7.5 |
| National defense..... | 9.6 | .5 | 6.3 |
| Nondefense..... | 7.5 | 6.0 | 1.2 |
| Transfer payments..... | 23.1 | 29.2 | 24.6 |
| Social security..... | 11.3 | 13.0 | 13.9 |
| Medicare..... | 4.3 | 8.6 | 7.4 |
| Military and civilian pensions..... | 3.3 | 2.6 | .4 |
| Unemployment benefits..... | -2.1 | .4 | .5 |
| Catastrophic health insurance..... | | 1.0 | 2.6 |
| Other..... | 6.3 | 3.6 | -2 |
| Grants-in-aid to State and local governments..... | 5.4 | 8.4 | .6 |
| Public assistance..... | 3.2 | 4.4 | 1.2 |
| Highways..... | 1.3 | -5 | -2 |
| Education..... | .7 | .9 | .5 |
| Other..... | .2 | 3.6 | -9 |
| Net interest paid..... | 10.7 | 15.5 | 5.2 |
| Subsidies less current surplus of government enterprises..... | 5.2 | -5.2 | -6.2 |
| Commodity Credit Corporation..... | 2.6 | -1.6 | -6.3 |
| Agriculture subsidies..... | 1.9 | -4.5 | -5 |
| Housing..... | 1.2 | 1.3 | 1.0 |
| Postal Service..... | -7 | -1.1 | 1.2 |
| Other..... | .2 | .7 | -1.6 |
| Less: Wage accruals less disbursements..... | -2 | .1 | |

1. Consist of pay raises beginning with January 1988.

Table 9 shows the relation between national defense outlays in the unified budget and national defense purchases on the NIPA basis. In 1990, outlays, which are recorded on a checks-issued basis, increase less than purchases, which are recorded on a delivery basis.

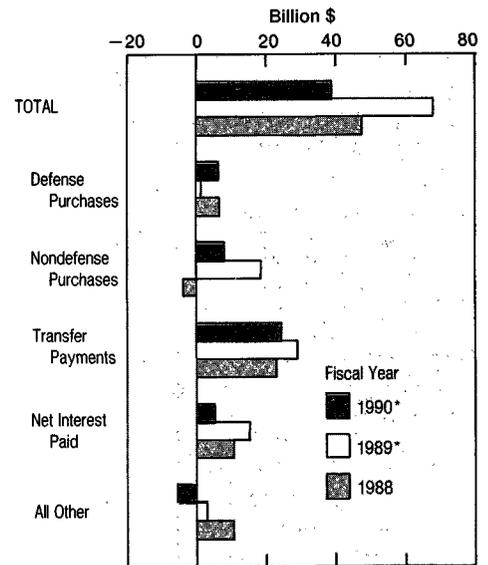
Quarterly pattern.—Table 10 shows the major factors that affect the quarterly pattern of receipts and expenditures through fiscal year 1990. Receipts reflect the pattern of enacted and proposed legislation and the administration's projected quarterly pattern of wages and profits. Expenditures reflect the pattern of proposed legislation and selected other items, mainly pay raises for Federal employees and cost-of-living adjustments in social security and Federal employee retirement benefits.

The Federal deficit increased sharply in the fourth quarter of 1988 and was largely due to transactions of the CCC. The deficit is essentially unchanged in the first quarter of 1989; increases in all categories in receipts, including a tax base increase for social security, are largely offset by expenditure increases, including cost-of-living adjustments in social security and other benefits. Thereafter,

the deficit declines steadily as increases in receipts outpace increases in expenditures.

Text continues on page 35.

CHART 8
Changes in Federal Government Expenditures, NIPA Basis



* Estimates by BEA

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

89-1-8

Table 9.—Relation of National Defense Purchases in the National Income and Product Accounts to National Defense Outlays in the Unified Budget

[Billions of dollars]

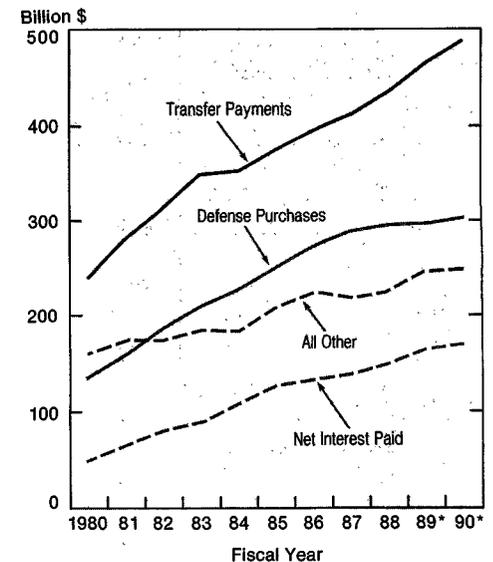
| | Fiscal year | | |
|---|--------------|--------------|--------------|
| | Actual 1988 | Estimates | |
| | | 1989 | 1990 |
| National defense outlays in the unified budget | 290.4 | 298.3 | 303.0 |
| Department of Defense, military..... | 281.9 | 289.8 | 293.8 |
| Military personnel..... | 76.3 | 78.2 | 79.4 |
| Operation and maintenance..... | 84.5 | 85.4 | 88.7 |
| Procurement..... | 77.2 | 80.7 | 78.7 |
| Aircraft..... | 28.2 | 28.8 | 26.5 |
| Missiles..... | 8.3 | 9.6 | 9.5 |
| Ships..... | 8.9 | 10.5 | 10.7 |
| Weapons..... | 8.1 | 7.9 | 8.2 |
| Ammunition..... | 2.2 | 2.1 | 2.0 |
| Other..... | 21.4 | 21.8 | 21.8 |
| Research, development, test and evaluation..... | 34.8 | 37.0 | 38.7 |
| Other..... | 9.2 | 8.5 | 8.3 |
| Atomic energy and other defense-related activities..... | 8.4 | 8.5 | 9.2 |
| Plus: Military assistance purchases..... | .6 | .4 | .4 |
| Less: Grants-in-aid and net interest paid..... | 2.3 | 2.3 | 2.4 |
| Timing difference..... | -5.8 | 1.2 | 1.6 |
| Other adjustments..... | -2.4 | -3.2 | -5.3 |
| Equals: National defense purchases, NIPA's | 296.9 | 298.3 | 304.7 |

Table 11.—Cyclically Adjusted Surplus or Deficit (-), NIPA Basis

[Billions of dollars; quarters at seasonally adjusted annual rates]

| | Based on middle-expansion trend GNP | | Based on 6-percent unemployment rate trend GNP | |
|-----------------------|-------------------------------------|--------|--|--------|
| | Level | Change | Level | Change |
| | | | | |
| Calendar year: | | | | |
| 1987..... | -176.9 | 29.5 | -157.6 | 30.0 |
| 1988..... | -182.0 | -5.1 | -162.3 | -4.7 |
| 1989..... | -192.5 | -10.5 | -171.7 | -9.4 |
| Quarters: | | | | |
| 1987: | | | | |
| I..... | -192.3 | -12.7 | -173.9 | -13.3 |
| II..... | -158.5 | 33.8 | -139.1 | 34.8 |
| III..... | -161.0 | -2.5 | -141.5 | -2.4 |
| IV..... | -195.9 | -34.9 | -176.0 | -34.5 |
| 1988: | | | | |
| I..... | -193.0 | 2.9 | -173.6 | 2.4 |
| II..... | -175.1 | 17.9 | -155.1 | 18.5 |
| III..... | -164.5 | 10.6 | -144.9 | 10.2 |
| IV..... | -195.5 | -31.0 | -175.5 | -30.6 |
| 1989: | | | | |
| I..... | -206.6 | -11.1 | -186.1 | -10.6 |
| II..... | -201.8 | 4.8 | -181.1 | 5.0 |
| III..... | -187.4 | 14.4 | -166.5 | 14.6 |
| IV..... | -174.3 | 13.1 | -152.9 | 13.6 |
| 1990: | | | | |
| I..... | -146.3 | 28.0 | -124.3 | 28.6 |
| II..... | -143.9 | 2.4 | -121.6 | 2.7 |
| III..... | -127.8 | 16.1 | -105.3 | 16.3 |

CHART 9
Federal Government Expenditures, NIPA Basis



* Estimates by BEA

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

89-1-9

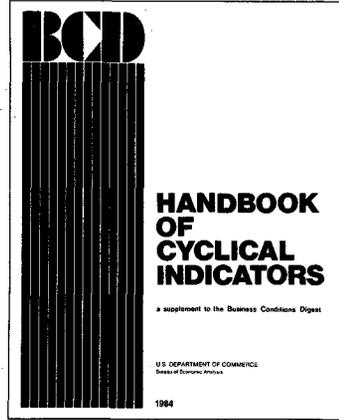
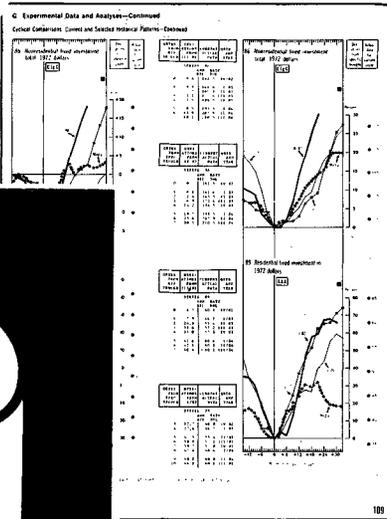
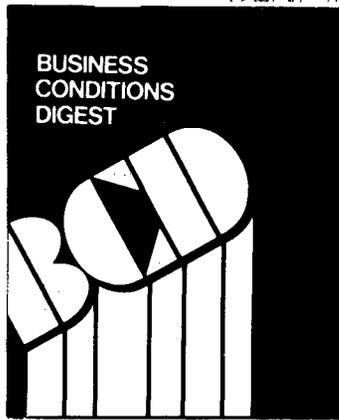
Cyclically adjusted deficit.—Cyclically adjusted receipts, expenditures, and surplus or deficit are estimates of what these measures would be if the economy were moving along a trend GNP path—a path free from cyclical fluctuations—rather than along its actual path. Consequently, cyclical fluctuations in the economy do not affect cyclically adjusted budgets. Two measures of the cyclically adjusted budget—one a middle-expansion trend GNP and

one based on a 6-percent unemployment rate trend GNP—are shown in table 11.

As measured using cyclical adjustments based on middle-expansion trend GNP, the Federal sector of the NIPA's was in deficit in calendar year 1987. The deficit increased in 1988 and is expected to continue to increase in 1989. In 1989 and 1990, the cyclically adjusted deficit, although at a higher level, follows a pattern sim-

ilar to that of the NIPA deficit. It increases in the first quarter of 1989 and then declines steadily through the third quarter of 1990.

The cyclically adjusted budget based on middle-expansion trend GNP is associated with a middle-expansion trend unemployment rate of 6.9 percent. The cyclically adjusted deficit based on a 6-percent unemployment rate is lower but follows the same quarterly pattern.



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Unless otherwise stated in footnotes below, data through 1986 and methodological notes are as shown in BUSINESS STATISTICS: 1986

Table with columns for Units, Annual (1986, 1987), 1987 (Nov., Dec.), and 1988 (Jan., Feb., Mar., Apr., May, June, July, Aug., Sept., Oct., Nov., Dec.). Rows include Industrial Production (Seasonally Adjusted) and Business Sales (Mfg. and trade sales).

See footnotes at end of tables.

FOOTNOTES FOR PAGES S-1 THROUGH S-32

General Notes for all Pages:

r Revised.
p Preliminary.
e Estimated.
c Corrected.

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Statistical Series Branch
Current Business Analysis Division
Bureau of Economic Analysis
U.S. Department of Commerce
Washington, D.C. 20230

Page S-1

- † Revised series. See Tables 2.6 - 2.9 in the July 1988 SURVEY for revised estimates for 1985-87.
- ‡ Includes inventory valuation and capital consumption adjustments.
- § Monthly estimates equal the centered three-month average of personal saving as a percentage of the centered three-month moving average of disposable personal income.
- ◇ See note "◇" for p. S-2.

Page S-2

- 1. Based on data not seasonally adjusted.
- ◇ Effective Oct. 1987 SURVEY, the industrial production index has been revised back to Jan. 1985. These revisions are available upon request.
- # Includes data not shown separately.
- ‡ Effective Sept. 1988 SURVEY, data have been revised back to January 1982. Revised data appear in the report "Manufacturing and Trade Inventories and Sales" CB-88-146, available from the Bureau of the Census, Washington, DC 20233.
- § Revised series. Data have been revised back to 1985. Revisions are available upon request.

Page S-3

- # Includes data for items not shown separately.
- † Revised series. Data have been revised back to 1982. A detailed description of the changes appear in the report "Manufacturers' Shipments, Inventories, and Orders: 1982-88" M3-1(88), available from the Bureau of the Census, Washington, DC 20233.
- ‡ See note "‡" for p. S-2.
- § See note "§" for p. S-2.

Page S-4

- 1. Based on data not seasonally adjusted.
- # Includes data for items not shown separately.
- ‡ Includes textile mill products, leather and products, paper and allied products, and printing and publishing industries; unfilled orders for other nondurable goods industries are zero.
- ◇ For these industries (food and kindred products, tobacco, apparel and other textile products, petroleum and coal, chemicals and allied products, and rubber and plastics products) sales are considered equal to new orders.
- † See note "†" for p. S-3.

Page S-5

- @ Compiled by Dun & Bradstreet, Inc.
- # Includes data for items not shown separately.
- § Ratio of prices received to prices paid (parity index).
- ‡ See note "‡" for p. S-4.
- † Effective with the Feb. 1988 SURVEY, data (back to 1984, for some commodities) have been revised. Effective with July 1988 SURVEY, data (back to 1982, for some commodities) have been revised. These revisions are available upon request.
- ◇ See note "◇" for p. S-6.
- †† See note "†" for p. S-3.

Page S-6

- § Effective with the release of the January 1988 index, all producer price indexes previously expressed on a base of 1967=100, or any other base through December 1981, have been rebased to 1982=100. Only indexes with a base later than December 1981 remain unchanged. Selection of the 1982 period was made to coincide with the reference year of the shipment weights, which have been taken primarily from the 1982 Census of Manufactures. The last rebasing of these indexes occurred in February 1971, when the 1967 base was substituted for the 1957-59 base. Historical data on the new base are available upon request. For producer price indexes of individual commodities, see respective commodities in the Industry section beginning p. S-19. All indexes subject to revision four months after original publication.
- # Includes data for items not shown separately.
- † Effective with the release of the January 1988 index, all consumer price indexes previously expressed on a base of 1967=100, or any other base through December 1981, have been rebased to 1982-84=100. Only indexes with a base later than December 1981 remain unchanged. Selection of the 1982-84 period was made to coincide with the updated expenditure weights, which are based upon data tabulated from the Consumer Expenditure Surveys for 1982, 1983, and 1984. The last rebasing of these indexes occurred in February 1971, when the 1967 base was substituted for the 1957-59 base. Historical data on the new base are available upon request. Beginning with January 1987, data are calculated using 1982-84 expenditure patterns and updated population weights. Additional information regarding these changes is available from the Bureau of Labor Statistics, Washington, DC 20212.

Page S-7

- 1. Computed from cumulative valuation total.
- 2. Index as of Jan. 1, 1989: building, 387.7; construction, 425.8.
- # Includes data for items not shown separately.
- § Data for Oct. and Dec. 1987, and Mar., June and Sept. 1988 are for five weeks; other months four weeks.
- ◇ Effective Feb. 1988 SURVEY, data for seasonally adjusted housing starts have been revised back to 1985. These revisions are available upon request.
- † Effective May 1988 SURVEY, data for seasonally adjusted building permits have been revised back to Jan. 1986. These revisions are available upon request.
- @ Effective July 1988 SURVEY, data have been revised back to Jan. 1985. In addition to the normal revisions to the unadjusted and seasonally adjusted data, the "Improvements" component of private residential buildings has been revised back to 1982 to adjust for a change in estimation of the monthly data. Revised data are available from the Construction Statistics Division at the Bureau of the Census, Washington, DC 20233.
- ‡ Effective July 1988 SURVEY, data have been revised back to 1985 and are available upon request.

Page S-8

- 1. Advance estimate.
- ◇ Home mortgage rates (conventional first mortgages) are under money and interest rates on p. S-14.
- § Data include guaranteed direct loans sold.
- # Includes data for items not shown separately.
- @ Effective Oct. 1987 SURVEY, data are for mortgage loans closed as FSLIC-insured institutions. Historical data back to 1976 are available upon request.
- † Effective April 1988 SURVEY, wholesale trade data have been revised back to Jan. 1983. Revised data and a summary of changes appear in the report *Revised Monthly Wholesale Trade Sales and Inventories BW-13-87S*, available from the Bureau of the Census, Washington, DC 20233.
- ‡ Effective April 1988 SURVEY, retail trade data have been revised. Estimates of retail sales and inventories have been revised back to January 1983. Some series have been revised back to 1978. Revised data and a summary of changes appear in the report *Revised Monthly Retail Sales and Inventories BR-13-87S*, available from the Bureau of the Census, Washington, DC 20233.
- †† Beginning with data for 1988, data will be reported on a quarterly basis only.

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- 1. Advance estimate.
- # Includes data for items not shown separately.
- ◇ Effective with the January 1989 SURVEY, the seasonally adjusted labor force series have been revised back to January 1984. The January 1989 issue of *Employment and Earnings* contains the new seasonal adjustment factors, a description of the current methodology, and revised data for the most recent 13 months or calendar quarters. Revised monthly data for the entire 1984-88 revision period will be in the February 1989 issue of *Employment and Earnings*.
- † The participation rate is the percent of the civilian noninstitutional population in the civilian labor force. The employment-population ratio is civilian employment as a percent of the civilian noninstitutional population, 16 years and over.
- @ Data include resident armed forces.
- ‡ See note "‡" for p. S-8.

Page S-10

- ◇ See note "◇" for p. S-9.
- § Effective June 1988 SURVEY, data have been revised back to April 1986 (not seasonally adjusted) and January 1983 (seasonally adjusted) to reflect new benchmarks and seasonal adjustment factors. The June 1988 issue of *Employment and Earnings* will contain a detailed discussion of the effects of the revisions.

Page S-11

- ‡ This series is not seasonally adjusted because the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.
- ◇ Production and nonsupervisory workers.
- § See note "§" for p. S-10.

Page S-12

1. This series is not seasonally adjusted because the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision. Use the corresponding unadjusted series.

§ See note "§" for p. S-10.

◇ Production and nonsupervisory workers.

‡ Earnings in 1977 dollars reflect changes in purchasing power since 1977 by dividing by Consumer Price Index. Effective Feb. 1988 SURVEY, this series has been revised back to 1983 to reflect new seasonal factors for the CPI-W. Revised data are available upon request.

§§ Wages as of Jan. 1, 1989: Common, \$17.63; Skilled, \$22.99.

† Excludes farm, household, and Federal workers.

‡‡ See note "‡" for p. S-11.

Page S-13

1. Beginning with Jan. 1988 data, the number of respondents in the bankers acceptance survey was reduced from 155 to 111 institutions—those with \$100 million or more in total acceptances. The new reporting group accounts for over 90 percent of total acceptances activity.

2. Effective December 31, 1987, eight brokers and dealers in commercial paper were added to the reporting panel resulting in a series break. End of month figures on the old basis are as follows: All issuers, 352,915; financial companies, 275,907; dealer placed, 103,667; directly placed, 172,240; and nonfinancial companies, 77,008.

3. Average for Dec.

† Effective Aug. 1988 SURVEY, free reserves have been restated to correspond with the Federal Reserve's computation, which is as follows: excess reserves, minus borrowings, plus extended credit. Historical data back to 1961 are available upon request.

‡ Effective Jan. 1988, series revised due to changes in the panel of reporting banks. The new reporting panel of 168 banks accounts for about 52 percent of total assets in U.S. offices of domestically-chartered banks. Back data have been estimated for the years 1984-87.

Includes data for items not shown separately.

* "Transaction balances other than demand deposits" consists of ATS, NOW, super NOW, and telephone transfer accounts.

§ Excludes loans and federal funds transactions with domestic commercial banks and includes valuation reserves (individual loan items are shown gross; i.e., before deduction of valuation reserves).

@ Insured unemployment (all programs) data include claims filed under extended duration provisions of regular State laws; amounts paid under these programs are excluded from state benefits paid data.

@@ Insured unemployment as a percent of average covered employment in a 12-month period.

** Effective Aug. 1987 SURVEY, data are provided by the Farm Credit Corporation of America on a quarterly basis. Quarterly data are available back to first quarter 1985, with annual data available back to 1961.

Page S-14

1. Data are for fiscal years ending Sept. 30 and include revisions not distributed to the months.

2. Weighted by number of loans.

3. Beginning Feb. 1988, data temporarily suspended by the Farm Credit Administration, which is revising the information it collects and amending the reports it distributes.

§ Effective Mar. 1988 SURVEY, data have been revised to reflect new benchmark and seasonal adjustments. These revisions are available upon request.

† Effective Apr. 1988 SURVEY, the consumer installment credit series have been revised back to Jan. 1980 to reflect newly available historical information and to incorporate new seasonal factors. These revisions are available upon request.

Includes data for items not shown separately.

◇ Adjusted to exclude domestic commercial interbank loans and federal funds sold to domestic commercial banks.

‡ Rates on the commercial paper placed for firms whose bond rating is Aa or the equivalent.

§§ Effective Sept. 1988 SURVEY, the outlays by month for fiscal year (FY) 1987 have been increased by a net of \$582 million to reflect reclassification of the Thrift Savings Fund receipts of \$736 million and Federal Retirement Thrift Investment Board (FRTIB) administrative expenses of \$154 million to a non-budgetary status. The FRTIB outlays by month for 1988 have been adjusted by a net of \$1,084 million. Data for fiscal years 1987 and 1988 previously reported by Treasury for Federal Savings and Loan Insurance Corporation (FSLIC) and FRTIB have been reclassified in consultation with the Office of Management and Budget resulting in revised totals back to April 1987. Effective Apr. 1988 SURVEY, a total adjustment of \$920 million for FY 1987 and \$1,565 million thru Feb. 1988 has been distributed by month for notes issued by the FSLIC in lieu of cash and not reported as outlays. The previous adjustment, in the Feb. 1988 SURVEY, has been reversed prior to these corrections. Effective Sept. 1987 SURVEY, the outlays for the Federal Deposit Insurance Corporation (FDIC) have been adjusted by \$442 million for 1986 and \$158 million for 1987 to reflect FDIC debentures issued in lieu of cash and not reported previously as outlays.

‡‡ Courtesy of *Metals Week*.

@@ Average effective rate

@ Revised for periods between October 1986 and February 1987. During this interval, outstanding gold certificates were inadvertently in excess of the gold stock.

Page S-15

1. Beginning in the first quarter 1987, the universe of manufacturing corporations was redefined to exclude corporations with less than \$250,000 in assets at the time of sample selection.

† Effective Feb. 1988 SURVEY, the money stock measures and components have been revised and are available from the Banking Section of the Division of Research and Statistics at the Federal Reserve Board, Washington, D.C. 20551.

‡‡ Includes ATS and NOW balances at all depository institutions, credit union share draft balances, and demand deposits at thrift institutions.

◇ Overnight (and continuing contract) RP's are those issued by commercial banks to the nonbank public, and overnight Eurodollars are those issued by Caribbean branches of member banks to U.S. nonbank customers.

@ Small time deposits are those issued in amounts of less than \$100,000. Large time deposits are those issued in amounts of \$100,000 or more and are net of the holdings of domestic banks, thrift institutions, the U.S. Government, money market mutual funds, and foreign banks and official institutions.

Includes data for items not shown separately.

§ Effective Apr. 1988 SURVEY, 1987 data have been revised. Revisions for Jan. 1987: long-term, 7,486; short-term, 372.

Page S-16

@ Effective with the June 1988 SURVEY, total exports and imports have been revised back to Jan. 1986. These revisions are available upon request. Data may not equal the sum of the geographic regions, or commodity groups and principal commodities, because the revisions to the totals are not reflected in the component items.

† Effective with the June 1988 SURVEY, seasonal adjustment of exports and imports was reintroduced. The monthly data were last adjusted for December 1985. Historical data from Jan. 1986 forward are available upon request.

§ Number of issues represents number currently used; the change in number does not affect the continuity of the series.

‡ For bonds due or callable in 10 years or more.

Includes data for items not shown separately.

Page S-17

1. Effective Sept. 1988 SURVEY, data have been revised for Jan.-June 1988, due to revised undocumented exports to Canada, which are based on official Canadian import totals.

@ See note "@" for p. S-16.

† See note "†" for p. S-16.

Includes data not shown separately.

Page S-18

1. Annual total; quarterly or monthly revisions are not available.

2. Restaurant sales index data represent hotels and motor hotels only.

3. For month shown.

Includes data for items not shown separately.

§ Total revenues, expenses, and income for all groups of carriers also reflect nonscheduled service.

* Data have been revised back to 1981. They now include commuter railroads and small transit systems. Revised data are available upon request.

‡ The threshold for Class I railroad status is adjusted annually by the Interstate Commerce Commission to compensate for inflation.

◇ Average daily rent per room occupied, not scheduled rates.

Data represent entries to a national park for recreational use of the park, its services, conveniences, and/or facilities.

† Before extraordinary and prior period items.

@ Changes in these unit value indexes may reflect changes in quality or product mix as well as price changes.

Page S-19

1. Reported annual total; monthly revisions are not available.

2. Less than 500 short tons.

Includes data for items not shown separately.

§ Data are reported on the basis of 100 percent content of the specified material unless otherwise indicated.

‡ Data for 1985-86 (and 1984, for inorganic chemical production items) have been revised. Effective with the Jan. 1989 SURVEY, series for industrial gases have been revised for 1986 and 1987. These revisions are available upon request.

◇ Beginning January, 1986, data are not directly comparable to earlier periods because the data represent only companies that have annual revenues over \$100 million.

Page S-20

1. Reported annual total; monthly or quarterly revisions are not available.

2. Data are no longer available.

§ Data are not wholly comparable from year to year because of changes from one classification to another.

◇ Effective with the Jan. 1989 SURVEY, data for 1986 and 1987 have been revised and are available upon request.

@ Includes less than 500 electric generation customers not shown separately.

† Effective with the May 1988 SURVEY, data have been revised back to 1985 and are available upon request.

‡ Effective with the Nov. 1988 SURVEY, data for 1986 and 1987 have been revised and are available upon request.

Page S-21

1. Previous year's crop. New crop is not reported until Sept. (crop year: Sept. 1-Aug. 31).
 2. Crop estimate for the year.
 3. Stocks as of June 1.
 4. Stocks as of June 1 and represents previous year's crop; new crop not reported until June (beginning of new crop year).
 5. Less than 50,000 bushels.
 6. Stock estimates are available once a year as June 1 stocks and shown here in the May column and (as previous year's crop) in the annual column.
 7. Stocks as of Dec. 1.
 8. See note "\$" for p. S-6 regarding a change to a new reference base in 1988.
 9. Prices are no longer available.
 10. Based on quotations for fewer than 12 months.
 11. Crop estimate for 1988.
 12. Beginning with Sept. 1, 1988 data, quarterly stock estimates have been reinstated.
- § Excludes pearl barley.
Bags of 100 lbs.
@ Quarterly data represent the 3-month periods Dec.-Feb., Mar.-May, June-Aug., and Sept.-Nov. Annual data represent Dec.-Nov.
† Coverage for 21 selected States, representing approximately 85 percent of U.S. production.

Page S-22

1. Monthly quotation not available.
 2. See note "\$" for p. S-6 regarding a change to a new reference base in 1988.
 3. See note "†" for this page.
 4. See note "‡" for this page.
- ‡ Beginning with Sept. 1988 data, price represents dollars per head and is not comparable with earlier prices, which represent dollars per 100 pounds.
§ Cases of 30 dozen.
◇ Bags of 60 kilograms.
† Effective with the release of 1st Qtr. 1988 data, the import price index for coffee has been discontinued by BLS and replaced in the SURVEY with the import price index for coffee and coffee substitutes. The weighting structure used for the import price index reflects U.S. foreign trade flows based on 1985 data. Indexes, beginning with 2nd Qtr. 1975, are available upon request.

Page S-23

1. Crop estimate for the year.
 2. Reported annual total; revisions not distributed to the months.
 3. Data suppressed because they did not meet publication standards of the Bureau of the Census.
 4. See note "\$" for p. S-6 regarding a change to a new reference base in 1988.
 5. Crop estimate for 1988.
- # Totals include data for items not shown separately.
◇ Effective Oct. 1988 SURVEY, the footwear production series have been revised for 1986 and 1987. These revisions are available upon request.

Page S-24

1. Annual data; monthly revisions not available.
 2. See note "\$" for p. S-6 regarding a change to a new reference base in 1988.
 3. Less than 500 tons.
- * New series from the American Metal Market. The composite scrap price represents the average of consumers' buying prices, delivered, at the following markets: Chicago, Pittsburgh, and Philadelphia. Annual and monthly composite price data are available back to January 1982.

Page S-25

1. Annual data; monthly revisions are not available.
 2. For month shown.
- @ Beginning 1987, includes foreign ores.
† Beginning January 1982, data represent metallic (mostly aluminum) content. Data for 1981 and prior years represent aluminum content only.
◇ The source for these series is now the Bureau of Mines.
§ Source: *Metals Week*.

Page S-26

1. Annual data; monthly revisions are not available.
 2. Less than 50 tons.
 3. Total for 5 months; data for May, June, Sept., Nov., and Dec.
 4. Total for 10 months; no data for Jan. and Feb.
- ◇ Includes secondary smelters' lead stocks in refinery shapes and in copper-base scrap.
@ All data (except annual production figures) reflect GSA remelted zinc and zinc purchased for direct shipment.
‡ Source for monthly data: American Bureau of Metal Statistics. Source for annual data: Bureau of Mines.
Includes data not shown separately.
§ Beginning with the Aug. 1985 SURVEY, unadjusted fluid power shipments indexes are shown. Seasonally adjusted indexes are no longer available.
* New series from The Material Handling Institute, Inc. and Cahners Economics. Includes bookings (new orders) for automatic guided vehicles, automated storage and retrieval systems, below hook lifters, cranes, hoists, monorails, racks, shelving, casters and floor trucks, and conveyors. Annual and quarterly historical data back to 1972 are available upon request.
@@ Beginning Oct. 1986, the Lead price represents North American Mean.

Page S-27

1. See note "\$" for p. S-6 regarding a change to a new reference base in 1988.
 2. Beginning January 1986, data have been restated because a new methodology has been adopted.
- # Includes data for items not shown separately.
§ Includes nonmarketable catalyst coke. See also note "††" for this page.
◇ Includes small amounts of "other hydrocarbons and alcohol new supply (field production)," not shown separately.

† Effective with the Oct. 1987 SURVEY, coal production data for 1986 have been revised. Effective with the May 1988 SURVEY, coal consumption and stocks back through 1986 have been revised. Effective with the Oct. 1988 SURVEY, coal production data for 1987 have been revised. These revisions are available upon request.

@ Includes U.S. produced and imported microwave ovens and combination microwave oven/ranges.

‡ "Tractor shovel loaders" includes some front engine mount wheel tractors that had previously been included in "Tractors, wheel, farm, and nonfarm."

†† Effective with the June 1988 SURVEY, data for 1987 have been revised and are available upon request.

‡‡ March, June, September and December are five-week months. All others consist of four weeks.

Page S-28

1. Reported annual totals; revisions not allocated to the months.
 2. See note "\$" for p. S-6 regarding a change to a new reference base in 1988.
- # Includes data for items not shown separately.
† Except for price data, see note "††" for p. S-27.

Page S-29

1. Reported annual totals; revisions not allocated to the months.
 2. See note "\$" for p. S-6 regarding a change to a new reference base in 1988.
- ◇ Source: American Paper Institute. Total U.S. estimated consumption by all newspaper users.
Compiled by the American Newspaper Publishers Association.
† Effective with the April 1988 SURVEY, the import price index for natural rubber has been revised. The index is now expressed on a base of 1985=100. Also new weights based on 1985 trade flows have been applied to all data from 1985 onward. Revised data are available back to 4th qtr. 1983.

Page S-30

1. Reported annual total; revisions not allocated to the months.
 2. Monthly data are being withheld to avoid disclosing data from individual firms. Annual total covers 9 months.
 3. Data cover five weeks; other months, four weeks.
- # Includes data for items not shown separately.
◇ Cumulative ginnings to the end of month indicated.
§ Bales of 480 lbs.
† Data for 1987 have been revised and are available upon request.

Page S-31

1. Less than 500 bales.
 2. Annual total includes revisions not distributed to the months.
 3. Average for crop year; Aug. 1-Jul. 31.
 4. For five weeks; other months four weeks.
5. See note "\$" for p. S-6 regarding a change to a new reference base in 1988.
◇ Based on 480-lb. bales, preliminary price reflects sales as of the 15th; revised price reflects total quantity purchased and dollars paid for the entire month (revised price includes discounts and premiums).
Beginning 1st Qtr. 1986; quarterly data are estimated by the American Textile Manufacturers Institute based on annual data collected by the Bureau of Census.
§ Bales of 480 lbs..
† Beginning 1st Qtr. 1987, data are not comparable with earlier periods. Girls apparel are now included with women's, misses' and juniors' and boys' apparel are now included with men's. Also, some classification changes were made.

Page S-32

1. Annual total includes revisions not distributed to the months.
 2. Production of new vehicles (thous. of units) for Dec. 1988: *passenger cars*, 566; *trucks and buses*, 314.
 3. Data are reported on an annual basis only.
 4. Effective with the Feb. 1988 SURVEY, data have been revised back to 1985 and are available upon request.
 5. Beginning with January 1987, data include Honda, Nissan, and Toyota passenger cars produced in U.S. plants.
 6. Beginning with January 1987, data include Nissan trucks produced in U.S. plants.
 7. Beginning with 1st qtr. 1987, jeans, jean-cut casual and dungarees are included with trousers.
 8. See note "†" for this page.
 9. Effective with July 1988 SURVEY, data have been revised back to 1985 and are available upon request.
 10. Data for jumpers are included with dresses to avoid disclosing information for individual companies.
- # Total includes backlog for nonrelated products and services and basic research.
§ Domestic comprise all cars assembled in the U.S. and cars assembled in Canada and imported to the U.S. under the provisions of the Automotive Products Trade Act of 1965. Imports comprise all other cars.
◇ Courtesy of R.L. Polk & Co.; republication prohibited. Because data for some states are not available, month-to-month comparisons are not strictly valid.
‡ Excludes railroad-owned private refrigerator cars and private line cars.
† Effective with the Mar. 1988 SURVEY, retail inventories for trucks and buses have been restated to exclude captive imports (vehicles manufactured overseas by U.S. affiliates). These data are available back through 1966.
‡‡ See note "†" for page S-31.

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| Subject | Release Date* | Subject | Release Date* |
|--|---------------|--|---------------|
| State Personal Income, 3d quarter 1988 | Jan. 24 | State Personal Income, 1st quarter 1989 | July 20 |
| Gross National Product, 4th quarter 1988 (advance) | Jan. 27 | Gross National Product, 2d quarter 1989 (advance) | July 27 |
| Personal Income and Outlays, December 1988 | Jan. 30 | Personal Income and Outlays, June 1989 | July 28 |
| Composite Indexes of Leading, Coincident, and Lagging Indicators, December 1988 | Feb. 1 | Composite Indexes of Leading, Coincident, and Lagging Indicators, June 1989 | Aug. 3 |
| Gross National Product, 4th quarter 1988 (preliminary) | Feb. 28 | State Per Capita Personal Income, 1988 (revised) | Aug. 23 |
| Merchandise Trade (balance of payments basis), 4th quarter 1988 | Feb. 28 | Merchandise Trade (balance of payments basis), 2d quarter 1989 | Aug. 28 |
| Personal Income and Outlays, January 1989 | Mar. 1 | Gross National Product, 2d quarter 1989 (preliminary) | Aug. 29 |
| Composite Indexes of Leading, Coincident, and Lagging Indicators, January 1989 | Mar. 3 | Corporate Profits, 2d quarter 1989 | Aug. 29 |
| Summary of International Transactions, 4th quarter 1988 | Mar. 14 | Personal Income and Outlays, July 1989 | Aug. 30 |
| Gross National Product, 4th quarter 1988 (final) | Mar. 23 | Composite Indexes of Leading, Coincident, and Lagging Indicators, July 1989 | Sept. 1 |
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| Personal Income and Outlays, February 1989 | Mar. 24 | Gross National Product, 2d quarter 1989 (final) | Sept. 21 |
| Composite Indexes of Leading, Coincident, and Lagging Indicators, February 1989 | Mar. 29 | Corporate Profits, 2d quarter 1989 (revised) | Sept. 21 |
| State Personal Income, 4th quarter 1988 and Per Capita Personal Income, 1988 (preliminary) | Apr. 20 | Personal Income and Outlays, August 1989 | Sept. 22 |
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| Personal Income and Outlays, March 1989 | Apr. 27 | Gross National Product, 3d quarter 1989 (advance) | Oct. 26 |
| Composite Indexes of Leading, Coincident, and Lagging Indicators, March 1989 | May 3 | Personal Income and Outlays, September 1989 | Oct. 27 |
| Metropolitan Area Personal Income, 1987 | May 4 | Composite Indexes of Leading, Coincident, and Lagging Indicators, September 1989 | Oct. 31 |
| Gross National Product, 1st quarter 1989 (preliminary) | May 25 | Merchandise Trade (balance of payments basis), 3d quarter 1989 | Nov. 28 |
| Corporate Profits, 1st quarter 1989 | May 25 | Gross National Product, 3d quarter 1989 (preliminary) | Nov. 29 |
| Merchandise Trade (balance of payments basis), 1st quarter 1989 | May 26 | Corporate Profits, 3d quarter 1989 | Nov. 29 |
| Personal Income and Outlays, April 1989 | May 26 | Personal Income and Outlays, October 1989 | Nov. 30 |
| Composite Indexes of Leading, Coincident, and Lagging Indicators, April 1989 | May 31 | Composite Indexes of Leading, Coincident, and Lagging Indicators, October 1989 | Dec. 1 |
| Summary of International Transactions, 1st quarter 1989 | June 13 | Summary of International Transactions, 3d quarter 1989 | Dec. 13 |
| Gross National Product, 1st quarter 1989 (final) | June 22 | Gross National Product, 3d quarter 1989 (final) | Dec. 20 |
| Corporate Profits, 1st quarter 1989 (revised) | June 22 | Corporate Profits, 3d quarter 1989 (revised) | Dec. 20 |
| Personal Income and Outlays, May 1989 | June 23 | Personal Income and Outlays, November 1989 | Dec. 21 |
| Composite Indexes of Leading, Coincident, and Lagging Indicators, May 1989 | June 28 | Composite Indexes of Leading, Coincident, and Lagging Indicators, November 1989 | Dec. 29 |

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