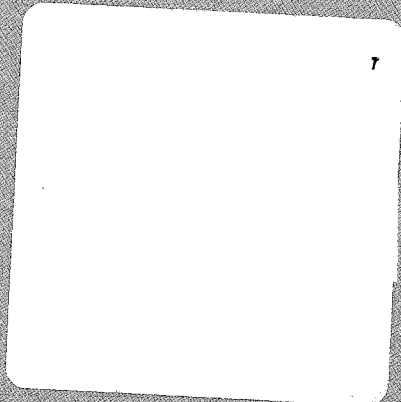


SURVEY of CURRENT BUSINESS



IN THIS ISSUE . . .

- *Mid-Decade Strategic Review of BEA's Economic Accounts*
- *Redefinition of the BEA Economic Areas*



U.S. DEPARTMENT OF COMMERCE ~ ECONOMICS AND STATISTICS ADMINISTRATION
BUREAU OF ECONOMIC ANALYSIS



SURVEY of CURRENT BUSINESS

SURVEY OF CURRENT BUSINESS. Published monthly by the Bureau of Economic Analysis of the U.S. Department of Commerce. Editorial correspondence should be addressed to the Editor-in-Chief, SURVEY OF CURRENT BUSINESS, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230.

Subscriptions to the SURVEY OF CURRENT BUSINESS are maintained, and their prices set, by the Government Printing Office, an agency of the U.S. Congress. Postmaster: Send address changes to:

Superintendent of Documents,
U.S. Government Printing Office,
Washington, DC 20402.

The GPO order desk number is (202) 512-1800. The subscription complaint desk number is (202) 512-1806.

Subscription and single-copy prices:

Second-class mail: \$34.00 domestic,
\$42.50 foreign.

First-class mail: \$71.00.

Single copy: \$9.00 domestic,
\$11.25 foreign.

Make checks payable to the Superintendent of Documents.

Second-class postage paid at Washington, DC and at additional mailing offices. (USPS 337-790).

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.

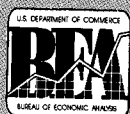
U.S. Department of Commerce

Ronald H. Brown, *Secretary*



Economics and Statistics Administration

Everett M. Ehrlich, *Under Secretary for Economic Affairs*



Bureau of Economic Analysis

Carol S. Carson, *Director*

J. Steven Landefeld, *Deputy Director*

Editor-in-Chief Douglas R. Fox

Executive Editor Leland L. Scott

Publication Staff: W. Ronnie Foster, M. Gretchen Gibson,
Ernestine T. Gladden, Eric B. Manning

THIS ISSUE of the SURVEY went to the printer on March 10, 1995. It incorporates data from the following monthly BEA news releases: Gross Domestic Product (March 1), Personal Income and Outlays (March 2), and Composite Indexes of Leading, Coincident, and Lagging Indicators (March 3).

T A B L E O F C O N T E N T S

Special in this issue

36 Mid-Decade Strategic Review of BEA's Economic Accounts: Maintaining and Improving Their Performance

BEA has undertaken a comprehensive review of the U.S. economic accounts—national, international, and regional. The Review consists of three steps: Preparation of a series of background papers to evaluate the state of the accounts, development of a draft plan—presented in this article—to maintain and improve the accounts, and solicitation of outside comment and discussion to help shape and refine the final plan. The Review is an integral part of BEA's overall plan to achieve its goal of providing customers with the right numbers at the right time in the right way.

75 Redefinition of the BEA Economic Areas

BEA has grouped the Nation's counties and metropolitan areas into 172 economic areas for use in regional economic analysis. This set of areas, which replaces an earlier set of 183 areas, reflects the incorporation of newly available information on commuting patterns and of refinements in the procedure for defining these areas. Each of the BEA economic areas includes, as far as possible, the place of work and the place of residence of its labor force.

Regular features

1 Business Situation

According to the "preliminary" estimates for the fourth quarter of 1994, real GDP increased 4.6 percent after increasing 4.0 percent in the third quarter and 4.1 percent in the second. The "preliminary" estimate of GDP growth was little changed from that shown by the "advance" estimate issued a month earlier; however, final sales of domestic product was revised up substantially, while inventory accumulation was revised down substantially.

— Continued on next page —

67 Federal Budget Estimates, Fiscal Year 1996

In BEA's annual "translation" of the administration's budget, the Federal deficit on a NIPA basis rises to \$187.9 billion in fiscal year 1996 from \$173.7 billion in fiscal year 1995. Before translation, the budget shows the deficit rising to \$196.6 billion from \$192.5 billion.

Reports and statistical presentations

9 National Income and Product Accounts

- 9 Selected NIPA Tables
- 28 NIPA Charts
- 30 Reconciliation and Other Special Tables
- 31 A Look at How BEA Presents the NIPA's

34 Selected Monthly Estimates

C-1 Business Cycle Indicators

- C-1 Data tables
- C-6 Footnotes for pages C-1 through C-5
- C-7 Charts
- C-28 Index to historical data for selected series

LOOKING AHEAD

- ❖ ***Guide to BEA Statistics on U.S. Multinational Companies.*** A guide to BEA statistics on U.S. multinational companies—that is, U.S. parent companies and their foreign affiliates—will appear in the March SURVEY. The guide will describe each data series on U.S. direct investment abroad and will discuss the uses and limitations of each series.
-

THE BUSINESS SITUATION

This article was prepared under the direction of Daniel Larkins.

REAL GROSS domestic product (GDP) increased 4.6 percent in the fourth quarter of 1994, according to the "preliminary" estimates of the national income and product accounts (NIPA's).¹ The "advance" estimates of the NIPA's, reported in the January "Business Situation," showed a 4.5-percent increase. Although the revision to GDP growth was small, revisions to some components of GDP were large. For example, according to the preliminary estimates, final sales of domestic product surged 5.3 percent while inventory accumulation slowed; according to the advance estimates, in contrast, final sales had increased much less—3.7 percent—while inventory accumulation had accelerated. Real gross domestic purchases was also revised substantially; according to the preliminary estimates, it increased 3.9 percent, 1.1 percentage points less than reported a month ago. The fixed-weighted price index for gross domestic purchases increased 2.5 percent, the same as reported a month ago. (The sources of the revisions are discussed in "Revisions" later in this article.)

The 4.6-percent increase in real GDP in the fourth quarter represented a continuation of the

strong economic growth of recent quarters: GDP increased 4.0 percent in the third quarter and 4.1

1. Quarterly estimates in the national income and product accounts are expressed at seasonally adjusted annual rates, and quarterly changes are differences between these rates. Quarter-to-quarter percent changes are annualized.

Real, or constant-dollar, estimates are expressed in 1987 dollars and are based on 1987 weights. Estimates based on weights of more recent periods are shown in the section "Alternative measures."

Table 1.—Real Gross Domestic Product, by Major Type of Product
[Seasonally adjusted at annual rates]

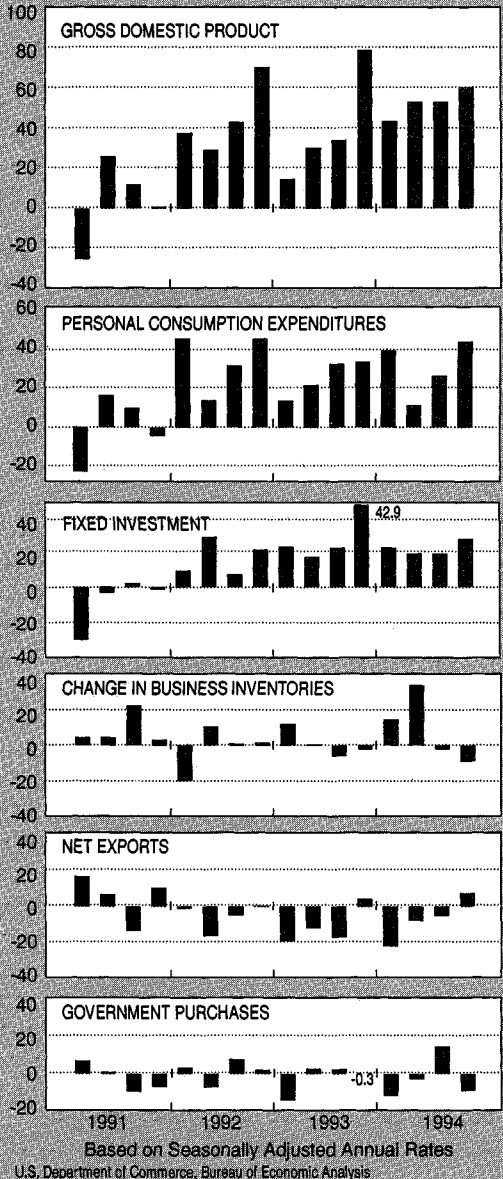
	Billions of 1987 dollars					Percent change from preceding quarter			
	Level	Change from preceding quarter				1994			
		1994:IV	I	II	III	IV	I	II	III	IV
Gross domestic product ..	5,427.2	43.1	53.0	52.9	60.2	3.3	4.1	4.0	4.6
Goods	2,283.5	33.3	32.5	34.2	48.0	6.4	6.1	6.4	8.9
Motor vehicles	235.3	18.0	-12.2	4.8	7.1	37.4	-19.2	8.9	13.0
Other	2,048.2	15.3	44.7	29.4	40.9	3.2	9.6	6.1	8.4
Services	2,660.7	14.6	10.0	18.1	6.8	2.3	1.5	2.8	1.0
Structures	483.0	-4.8	10.4	.7	5.4	-4.0	9.2	.6	4.6

NOTE.—Most series are found in NIPA table 1.4. Output of motor vehicles is the sum of auto output and truck output (from tables 8.4 and 8.5, respectively).

CHART 1

Real Product: Change from Preceding Quarter

Billions 1987 \$



percent in the second (chart 1, table 1). Output of goods stepped up sharply in the fourth quarter, reflecting a surge in computer output. Excluding computers, GDP increased about 3.8 percent in both the third and fourth quarters.²

The 3.9-percent increase in real gross domestic purchases followed an increase of 4.4 percent (table 2). The fourth-quarter increase reflected increases in personal consumption expenditures

2. The change in the output of computers cannot be precisely estimated in the NIPA's, but it may be roughly approximated as the sum of the changes in computer purchases in personal consumption expenditures, in producers' durable equipment, and in net exports.

and nonresidential fixed investment. Residential investment was up only slightly, while inventory investment and government purchases decreased.

Imports and exports are the link between goods and services produced in the United States (GDP) and goods and services purchased by U.S. residents (gross domestic purchases). In the fourth quarter, gross domestic purchases increased less than GDP for the first time in a year, as exports increased more than imports.

Table 2.—Real Gross Domestic Product, Real Gross Domestic Purchases, and Real Final Sales to Domestic Purchasers

[Seasonally adjusted at annual rates]

	Billions of 1987 dollars					Percent change from preceding quarter			
	Level	Change from preceding quarter				1994			
		1994				I	II	III	IV
		1994:IV	I	II	III					IV
Gross domestic product	5,427.2	43.1	53.0	52.9	60.2	3.3	4.1	4.0	4.6
Less: Exports of goods and services	697.8	-5.6	24.3	22.6	31.3	-3.5	16.6	14.8	20.1
Plus: Imports of goods and services	807.4	16.2	32.0	27.9	23.9	9.5	18.9	15.6	12.8
Equals: Gross domestic purchases	5,536.8	64.9	60.7	58.2	52.8	5.0	4.6	4.4	3.9
Less: Change in business inventories	48.1	14.6	33.8	-2.1	-9.0				
Equals: Final sales to domestic purchasers	5,488.7	50.3	26.9	60.3	61.8	3.9	2.0	4.6	4.6
Personal consumption expenditures	3,629.1	40.1	11.5	26.9	44.4	4.7	1.3	3.1	5.0
Nonresidential fixed investment	705.9	16.4	14.3	22.1	25.9	10.9	9.2	14.1	16.1
Residential investment	230.6	5.4	3.9	-3.6	4	10.0	7.0	-6.0	.7
Government purchases	923.0	-11.6	-2.8	14.9	-9.0	-4.9	-1.2	6.7	-3.8

NOTE.—Dollar levels are found in NIPA tables 1.2 and 1.6. Percent changes are found in table 8.1.

Table 3.—Real Personal Consumption Expenditures

[Seasonally adjusted at annual rates]

	Billions of 1987 dollars					Percent change from preceding quarter			
	Level	Change from preceding quarter				1994			
		1994				I	II	III	IV
		1994:IV	I	II	III					IV
Personal consumption expenditures	3,629.1	40.1	11.5	26.9	44.4	4.7	1.3	3.1	5.0
Durable goods	554.6	10.9	.5	7.4	25.0	8.8	.4	5.8	20.3
Motor vehicles and parts	212.0	9.0	-8.4	-3.3	10.0	18.8	-14.8	-6.3	21.3
New autos	84.1	-1.6	-1.8	-4.9	5.2	-7.1	-8.1	-21.4	29.1
New trucks	48.7	1.0	-2.4	-2.7	6.1	8.8	-18.7	-21.8	70.8
Other	79.2	9.6	-4.2	4.3	-1.3	66.3	-19.3	24.6	-6.3
Furniture and household equipment	254.3	1.3	6.6	9.2	12.6	2.3	12.2	16.8	22.5
Other	88.3	.5	2.4	1.6	2.3	2.5	12.2	7.8	11.1
Nondurable goods	1,122.4	10.3	6.0	9.1	9.0	3.8	2.2	3.3	3.3
Food	538.8	3.8	4.2	-4	3.1	2.9	3.2	-3	2.3
Clothing and shoes	216.5	1.4	1.1	5.3	6.3	2.8	2.2	10.8	12.5
Energy ¹	99.6	.7	-1.4	1.6	-1	2.9	-5.5	6.7	-4
Other	267.5	4.3	2.0	2.7	-3	6.8	3.1	4.1	-4
Services	1,952.1	18.9	5.1	10.4	10.3	4.0	1.1	2.2	2.1
Housing	505.0	2.3	2.3	2.6	2.4	1.9	1.9	2.1	1.9
Household operation	226.8	1.8	.4	-1.0	-1.3	3.2	.7	-1.7	-2.3
Energy ²	94.2	1.5	-9	-3.0	-3.0	6.2	-3.5	-11.4	-11.8
Other household operation	132.6	.5	1.2	2.0	1.7	1.6	3.8	6.4	5.3
Transportation	134.9	1.1	.9	.6	2.5	3.4	2.8	1.8	7.8
Medical care	484.2	2.8	4.2	3.6	3.2	2.4	3.6	3.1	2.7
Other	601.3	11.0	-2.8	4.6	3.6	7.7	-1.9	3.1	2.4

1. Gasoline and oil, and fuel oil and coal.
2. Electricity and gas.

NOTE.—Dollar levels are found in NIPA table 2.3. New auto and truck purchases are found in tables 8.4 and 8.6, respectively. Percent changes in major aggregates are found in table 8.1.

Personal consumption expenditures

Real personal consumption expenditures (PCE) increased 5.0 percent in the fourth quarter after increasing 3.1 percent in the third (table 3). Durable goods accounted for the acceleration; increases in nondurable goods and in services were about the same in each quarter.

In the fourth quarter, most indicators associated with PCE were strong. Real disposable personal income jumped 7.7 percent, more than twice the increase in each of the first three quarters of the year and the largest increase in 2 years (chart 2). The unemployment rate fell for the third consecutive quarter, to 5.6 percent, the lowest rate in more than 4 years. The Index of Consumer Sentiment (prepared by the University of Michigan's Survey Research Center) jumped sharply after decreasing in the second and third quarters.

Expenditures for durable goods jumped 20.3 percent in the fourth quarter after increasing 5.8 percent in the third; the fourth-quarter increase

was the largest in nearly 7 years. Most of the step-up was accounted for by motor vehicles and parts, up 21.3 percent after a decrease of 6.3 percent, and reflected a turnaround in purchases of new domestic cars and trucks. Purchases of furniture and household equipment and of "other" durable goods both increased somewhat more than in the third quarter.

Expenditures for nondurable goods increased 3.3 percent in the fourth quarter, the same as in the third. Clothing and shoes accounted for more than half of the increase in each quarter. Food increased in the fourth quarter after decreasing in the third. Energy and "other" nondurable goods decreased slightly after increasing.

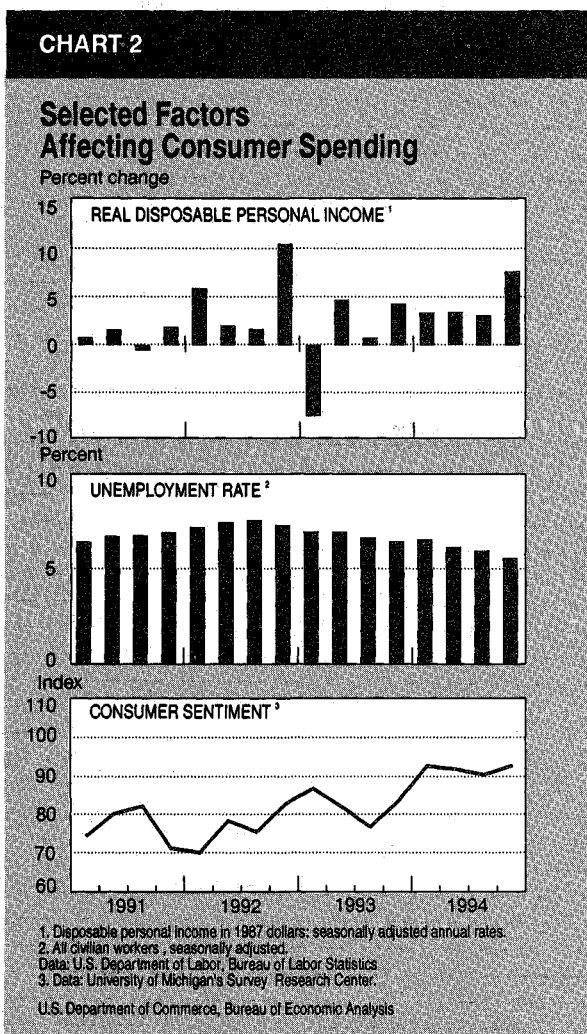
Expenditures for services increased 2.1 percent in the fourth quarter, about the same as in the third. Changes in housing, medical care, and household operation were similar to those posted in the third quarter. Transportation increased more than in the third quarter; the step-up reflected, at least in part, consumer reaction to sharply lower fares. "Other" services increased less than in the third quarter; downturns and decelerations in most of the categories of "other" services were partly offset by an upturn in personal business services, especially brokerage and investment counseling.

Nonresidential fixed investment

Real nonresidential fixed investment increased 16.1 percent in the fourth quarter after increasing 14.1 percent in the third (table 4). Structures stepped up, and producers' durable equipment increased about as much as in the third quarter.

Factors that affect investment spending were generally favorable in the fourth quarter. Real final sales of domestic product surged 5.3 percent after increasing 4.3 percent. The capacity utilization rate in manufacturing continued its uptrend, increasing 0.8 percentage point to 84.4 percent. Borrowing costs were one of the few factors that were less favorable to investment spending; for example, the yield on new high-grade corporate bonds increased for the fourth consecutive quarter.

Structures increased 9.3 percent after increasing 1.6 percent. Nonresidential buildings increased after a small decrease, as both industrial and commercial buildings increased much more than in the third quarter. Construction by utilities increased a little less than in the third quarter, and mining exploration, shafts, and wells—mainly oil-well drilling—decreased a little more than in the third quarter.



Producers' durable equipment increased 18.2 percent, virtually the same as in the third quarter. The fourth-quarter increase was attributable to increases in all major categories of equipment except "other" equipment, which dipped slightly. The increase in information processing equipment was almost entirely accounted for by computers and communication equipment; instruments and photocopy equipment contributed much less. The increase in transportation equipment was more than accounted for by trucks; autos decreased, and aircraft changed little. Half of the increase in industrial equipment was accounted for by engines and turbines.

Residential investment

Real residential investment increased 0.7 percent in the fourth quarter after decreasing 6.0 percent in the third. Single-family structures decreased less than in the third quarter, multifamily structures accelerated, and "other" residential investment turned up.

Single-family construction decreased 8.7 percent after decreasing 11.4 percent. The fourth-quarter decrease occurred despite generally flat, or even rising, housing starts in recent quarters (chart 3). This divergence between the NIPA estimates and the housing starts estimates reflects a decrease in the "quality" (that is, the size, location, or amenities) of the units; such a decrease in quality is reflected in the NIPA estimates of real

single-family construction but not in the average number of starts.

Multifamily construction increased 59.6 percent after increasing 31.5 percent. The increase in the fourth quarter was the fourth in succession; it occurred despite a slight increase in the rental vacancy rate.

"Other" residential investment increased 7.4 percent after decreasing 2.5 percent. Increases in mobile home sales and in major improvements

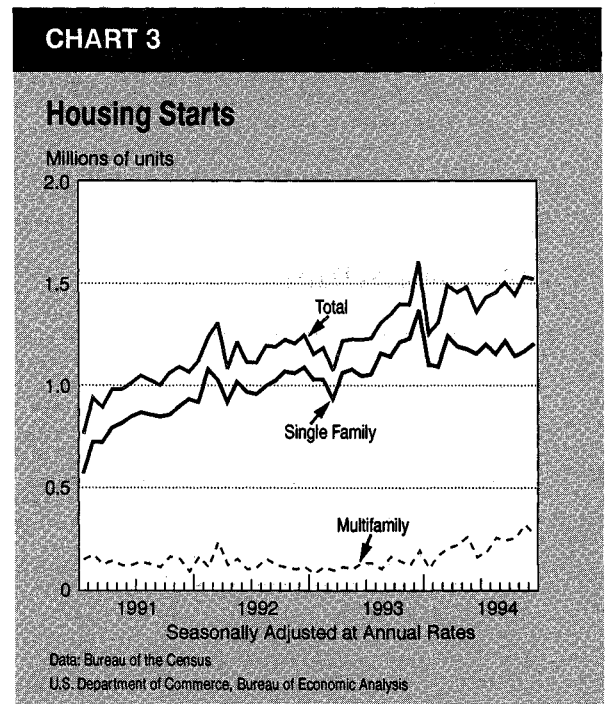


Table 4.—Real Gross Private Domestic Fixed Investment

[Seasonally adjusted at annual rates]

	Billions of 1987 dollars					Percent change from preceding quarter			
	Level	Change from preceding quarter				1994			
		1994				I	II	III	IV
		1994:IV	I	II	III					IV
Gross private domestic fixed investment	936.6	21.7	18.3	18.5	26.4	10.6	8.6	8.6	12.1
Nonresidential	705.9	16.4	14.3	22.1	25.9	10.9	9.2	14.1	16.1
Structures	155.0	-4.6	6.9	.6	3.4	-11.8	20.6	1.6	9.3
Nonresidential buildings, including farm	109.5	-3.5	6.2	-3	4.4	-13.0	27.4	-1.1	17.8
Utilities	30.2	-1	.6	.7	.5	-1.4	8.7	10.0	6.9
Mining exploration, shafts, and wells	8.5	-3	.2	-5	-8	-11.6	8.6	-18.9	-30.2
Other	6.8	-7	-1	.5	-5	-32.1	-5.7	32.8	-24.7
Producers' durable equipment	550.9	20.9	7.5	21.5	22.5	18.6	6.1	18.1	18.2
Information processing and related equipment	270.0	8.0	9.0	9.0	18.8	15.0	16.4	15.7	33.5
Computers and peripheral equipment	146.6	4.7	3.1	4.8	11.5	16.3	10.1	15.6	38.6
Other	123.3	3.3	5.8	4.3	7.2	13.5	23.7	16.3	27.2
Industrial equipment	93.4	2.8	2.5	3.2	1.3	14.1	12.1	15.2	5.8
Transportation and related equipment	101.9	7.6	-6.2	6.8	2.8	37.9	-22.9	32.9	11.8
Motor vehicles	92.7	9.0	-3.9	5.8	2.6	53.8	-16.5	30.5	12.1
Other	9.2	-1.4	-2.3	1.0	.2	-39.9	-63.6	60.2	9.2
Other	85.6	2.4	2.3	2.5	-5	12.7	11.8	12.5	-2.3
Residential	230.6	5.4	3.9	-3.6	.4	10.0	7.0	-6.0	.7
Single-family structures	121.0	6.8	2.5	-3.8	-2.8	25.1	8.2	-11.4	-8.7
Multifamily structures	13.6	.3	1.3	.8	1.5	13.0	63.0	31.5	59.6
Other	96.1	-1.7	.2	-6	1.7	-6.9	.8	-2.5	7.4

NOTE.—Dollar levels are found in NIPA table 5.5. Motor vehicles are found in tables 8.4 (autos) and 8.6 (trucks). Percent changes in major aggregates are found in table 8.1.

more than offset a decrease in brokers' commissions. Sales of new and existing homes dropped 153,000 units (seasonally adjusted annual rate), as mortgage rates continued to rise: The mortgage commitment rate on 30-year fixed-rate loans increased 50 basis points to 9.1 percent, the fourth consecutive quarterly increase (chart 4).

Inventory investment

Real inventory investment—that is, the change in business inventories—decreased \$9.0 billion in the fourth quarter after decreasing \$2.1 billion in the third (table 5). The fourth-quarter decrease mainly reflected a slowdown in nonfarm inventory accumulation.

Nonfarm inventories increased \$40.4 billion in the fourth quarter after increasing \$47.4 billion in the third; accumulation had also been large, \$51.7 billion, in the second quarter. In all three quarters, wholesale and retail trade accounted for more than three-fourths of the accumulation.

In retail trade, inventories held by auto dealers increased more than in the third quarter. Inventories of other durable goods increased much less than in the third quarter; inventories of furniture and appliance stores, which increased sharply in the third quarter, increased only modestly in the fourth. Inventories of nondurable goods increased slightly less than in the third quarter.

In wholesale trade, inventories of durable goods increased less than in the third quarter; most of the fourth-quarter increase was accounted for by machinery, equipment, and supplies and by sporting goods. Inventories of nondurable goods increased more than in the third quarter; about two-thirds of the fourth-quarter increase was accounted for by farm products.

Manufacturing inventories increased less than in the third quarter. The fourth-quarter increase was more than accounted for by durable goods, especially electrical and industrial equipment.

"Other" nonfarm inventories increased about as much as in the third quarter. (This component consists mainly of inventories held by the mining, construction, public utilities, transportation, communication, and service industries.)

Farm inventories increased \$7.7 billion after increasing \$9.7 billion. Two-thirds of the slowdown was accounted for by crop inventories and reflected a decrease in crop output.

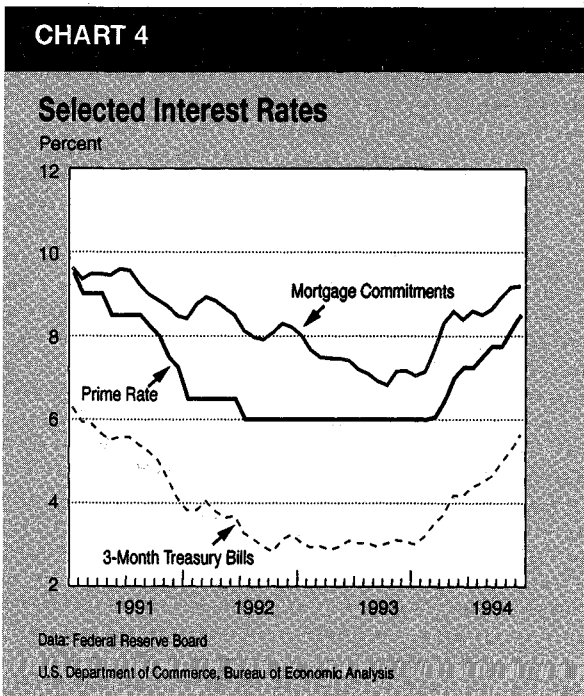


Table 5.—Change in Real Business Inventories

[Billions of 1987 dollars; seasonally adjusted at annual rates]

	Level					Change from preceding quarter			
	1993	1994				1994			
	IV	I	II	III	IV	I	II	III	IV
Change in business inventories	10.8	25.4	59.2	57.1	48.1	14.6	33.8	-2.1	-9.0
Farm .....	.1	3.3	7.5	9.7	7.7	3.2	4.2	2.2	-2.0
Nonfarm	10.7	22.1	51.7	47.4	40.4	11.4	29.6	-4.3	-7.0
Manufacturing	-7.7	9.9	.7	4.5	2.5	17.6	-9.2	3.8	-2.0
Wholesale trade .....	.7	-1.0	17.7	16.9	15.4	-1.7	18.7	-.8	-1.5
Retail trade	5.0	2.0	22.3	19.9	16.5	-3.0	20.3	-2.4	-3.4
Automotive	-4.5	2.5	-1.9	7.9	11.2	7.0	-4.4	9.8	3.3
Other retail trade	9.5	-.5	24.2	12.0	5.3	-10.0	24.7	-12.2	-6.7
Other	12.7	11.3	11.0	6.1	5.9	-1.4	-.3	-4.9	-.2
Addenda:									
Motor vehicles .....	.6	-1.9	3.5	7.9	10.6	-2.5	5.4	4.4	2.7
Nonfarm less motor vehicles	10.1	24.0	48.2	39.5	29.8	13.9	24.2	-8.7	-9.7

NOTE.—Dollar levels for change in real business inventories are found in NIPA table 5.11. Motor vehicles are found in tables 8.4 (autos) and 8.6 (trucks).

The constant-dollar ratio of nonfarm inventories to all final sales of domestic businesses edged down to 2.48 from 2.49. A different ratio, in which final sales are limited to goods and structures, fell to 4.23 from 4.29. Both ratios are low by historical standards.

Net exports of goods and services

Real exports increased 20.1 percent in the fourth quarter after increasing 14.8 percent in the third. Real imports increased 12.8 percent after increasing 15.6 percent (table 6).

Exports of goods increased 24.1 percent after increasing 18.0 percent. Exports of both agricultural and nonagricultural products increased strongly. Nonautomotive capital goods accounted for more than half of the increase in goods exports; computers increased substantially. Autos and nonautomotive consumer goods also increased substantially. Exports of services increased more than in the third quarter.

Imports of goods increased 13.4 percent after increasing 17.2 percent. Most of the fourth-quarter increase was accounted for by nonautomotive capital goods. Nonautomotive consumer goods posted a much smaller, but still substantial, increase. In contrast, petroleum and petroleum products turned down, posting its largest decrease in 4 years. Imports of services increased more than in the third quarter.

Government purchases

Real government purchases decreased 3.8 percent in the fourth quarter after increasing 6.7 percent in the third (table 7). Federal Government purchases decreased after increasing; the decrease was more than accounted for by a substantial reduction in national defense purchases. State and local government purchases increased less than in the third quarter.

Federal defense purchases decreased 22.0 percent in the fourth quarter after increasing 12.8 percent in the third. The sharp decrease rep-

Table 6.—Real Net Exports of Goods and Services

[Seasonally adjusted at annual rates]

	Billions of 1987 dollars					Percent change from preceding quarter				
	Level	Change from preceding quarter					1994			
		1994					I	II	III	IV
		1994:IV	I	II	III	IV				
Net exports of goods and services	-109.6	-21.8	-7.8	-5.2	7.4	.....	.....	.....	.....
Exports of goods and services	697.8	-5.6	24.3	22.6	31.3	-3.5	16.6	14.8	20.1	
Goods	533.1	-3.7	20.2	20.5	28.0	-3.1	18.6	18.0	24.1	
Agricultural products	46.1	-2.5	.9	3.2	5.4	-23.2	10.2	38.8	64.6	
Nonagricultural products	487.0	-1.3	19.3	17.3	22.6	-1.2	19.3	16.4	20.9	
Services	164.7	-1.9	4.0	2.1	3.4	-4.8	10.7	5.4	8.7	
Imports of goods and services	807.4	16.2	32.0	27.9	23.9	9.5	18.9	15.6	12.8	
Goods	696.2	15.3	33.1	26.3	21.6	10.6	23.3	17.2	13.4	
Petroleum and products	57.1	-1.6	3.8	4.0	-7.2	-10.6	29.7	29.3	-37.8	
Nonpetroleum products	639.2	16.8	29.3	22.4	26.9	13.0	22.7	16.1	20.3	
Services	111.2	.9	-1.1	1.5	2.3	3.4	-4.0	5.7	8.7	

NOTE.—Dollar levels are found in NIPA tables 4.2 and 4.4, and percent changes in major aggregates are found in table 8.1.

Table 7.—Real Government Purchases

[Seasonally adjusted at annual rates]

	Billions of 1987 dollars					Percent change from preceding quarter				
	Level	Change from preceding quarter					1994			
		1994					I	II	III	IV
		1994:IV	I	II	III	IV				
Government purchases	923.0	-11.6	-2.8	14.9	-9.0	-4.9	-1.2	6.7	-3.8	
Federal	331.2	-9.4	-7.0	8.8	-12.3	-10.3	-7.9	10.9	-13.6	
National defense	219.0	-10.2	-2.4	6.9	-14.0	-16.0	-4.1	12.8	-22.0	
Nondefense	112.3	.8	-4.5	1.8	1.8	2.9	-15.0	6.8	6.7	
State and local	591.8	-2.1	4.1	6.1	3.3	-1.4	2.9	4.3	2.3	
Structures	91.5	-6.0	1.7	2.5	.9	-23.6	8.1	11.8	4.0	
Other	500.3	3.9	2.4	3.6	2.4	3.2	2.0	2.9	1.9	

NOTE.—Dollar levels are found in NIPA table 3.8B, and percent changes are found in table 8.1.

resents the resumption of a long downtrend in defense purchases; it reflected decreases in all major categories of purchases. The largest decreases were in purchases of durable goods, particularly aircraft, and in purchases of services. Within services, compensation of employees declined for the 15th consecutive quarter.

Federal nondefense purchases increased 6.7 percent, about the same as in the third quarter. The fourth-quarter increase was accounted for by purchases of structures and by changes in the inventories of farm products held by the Commodity Credit Corporation.

State and local government purchases increased 2.3 percent after increasing 4.3 percent. The slowdown was largely attributable to structures and to compensation of employees.

Revisions

The preliminary fourth-quarter estimate of a 4.6-percent increase in real GDP is 0.1 percentage point higher than the advance estimate (table 8). Preliminary estimates of the fourth-quarter increases in the fixed-weighted price indexes for gross domestic purchases (2.5 percent) and for GDP (2.6 percent) are the same as the advance estimates.

The estimate of GDP was raised by revisions to exports, imports, personal consumption expenditures, government purchases, and residential investment. However, the effect of these revisions was nearly offset by a big downward revision to inventory investment and by a modest downward revision to nonresidential fixed investment.

An upward revision to exports and a downward revision to imports mainly reflected the incorporation of newly available source data on exports and imports of goods for December. An upward revision to personal consumption expenditures reflected the incorporation of revised source data on retail sales for November and December and of newly available source data on motor vehicle registrations for November. An upward revision to government purchases was mostly in Federal nondefense purchases, reflecting the incorporation of newly available source data on detailed Federal outlays for December and of revised source data on construction put in place for December.

The downward revision to inventory investment reflected the incorporation of revised source data on inventories for November and of newly available source data for December. The downward revision to nonresidential fixed investment was in producers' durable equipment

and reflected the incorporation of newly available data on imports of capital goods in December and on motor vehicle registrations for November.

Alternative measures

For the fourth quarter of 1994, BEA's chain-type annual-weighted measure of real GDP increased 3.5 percent, 1.1 percentage points less than the featured fixed-1987-weighted measure; the benchmark-years-weighted alternative measure increased 3.6 percent (table 9). About three-fifths of the difference between the fixed-weighted measure and the alternative measures was ac-

Table 8.—Revisions to Real Gross Domestic Product and Prices, Fourth Quarter 1994

[Seasonally adjusted at annual rates]

	Percent change from preceding quarter		Preliminary estimate minus advance estimate	
	Advance estimate	Preliminary estimate	Percentage points	Billions of 1987 dollars
Gross domestic product	4.5	4.6	0.1	0.4
<i>Less:</i> Exports of goods and services	14.2	20.1	5.9	8.8
Goods	17.4	24.1	6.7	7.3
Services	4.8	8.7	3.9	1.5
<i>Plus:</i> Imports of goods and services	16.0	12.8	-3.2	-5.7
Goods	17.1	13.4	-3.7	-5.6
Services	9.1	8.7	-4	-1
Equals: Gross domestic purchases	5.0	3.9	-1.1	-14.1
Personal consumption expenditures	4.6	5.0	.4	4.0
Durable goods	18.4	20.3	1.9	2.2
Nondurable goods	2.8	3.3	.5	1.3
Services	2.1	2.1	0	.4
Fixed investment	12.3	12.1	-.2	-.3
Nonresidential	17.6	16.1	-1.5	-2.3
Structures	9.0	9.3	.3	.1
Producers' durable equipment	20.2	18.2	-2.0	-2.4
Residential	-2.6	.7	3.3	1.9
Change in business inventories				-19.9
Nonfarm				-19.5
Farm				-.4
Government purchases	-4.7	-3.8	.9	2.1
Federal	-15.6	-13.6	2.0	2.0
National defense	-22.5	-22.0	.5	.4
Nondefense .....	.4	6.7	6.3	1.7
State and local	2.3	2.3	0	0
Addenda:				
Final sales of domestic product	3.7	5.3	1.6	20.3
Gross domestic purchases price index (fixed weights) ¹	2.5	2.5	0	.....
GDP price index (fixed weights) ¹	2.6	2.6	0	.....

1. Based on 1987 weights.

NOTE.—Preliminary estimates for the fourth quarter of 1994 incorporate the following revised or additional major source data that were not available when the advance estimates were prepared a month ago.

Personal consumption expenditures: Revised retail sales for November and December, and consumers' share of new car purchases for November.

Nonresidential fixed investment: Construction put in place for October and November (revised) and December, manufacturers' shipments of machinery and equipment for November and December (revised), and business' share of new car purchases for November.

Residential investment: Construction put in place for October and November (revised) and December.

Change in business inventories: Manufacturing and trade inventories for November (revised) and December, and revised unit inventories of motor vehicles for December.

Net exports of goods and services: Exports and imports of goods for November (revised) and December.

Government purchases: Detailed Federal outlays for December, State and local construction put in place for October and November (revised) and December, and State and local government employment for November and December (revised).

Wages and salaries: Revised employment, average hourly earnings, and average weekly hours for November and December.

GDP prices: Detailed merchandise export and import price indexes for October through December, values and quantities of petroleum imports for December, and housing prices for the quarter.

Table 9.—Fixed-Weighted and Alternative Quantity and Price Indexes

[Percent change at annual rates; based on seasonally adjusted index numbers (1987=100)]


	1993	1994	1994			
			I	II	III	IV
Gross domestic product:						
Quantity indexes:						
Fixed 1987 weights	3.1	4.0	3.3	4.1	4.0	4.6
Chain-type annual weights	2.5	3.5	3.2	4.2	3.6	3.5
Benchmark-years weights	2.5	3.5	3.2	4.1	3.6	3.6
Price indexes:						
Fixed 1987 weights	3.0	2.7	3.1	2.9	3.0	2.6
Chain-type annual weights	2.8	2.7	3.2	2.7	2.8	2.5
Benchmark-years weights	2.8	2.7	3.2	2.7	2.7	2.6
Gross domestic purchases:						
Price indexes:						
Fixed 1987 weights	2.8	2.6	2.5	3.2	3.5	2.5
Chain-type annual weights	2.6	2.6	2.5	3.1	3.2	2.3
Benchmark-years weights	2.6	2.6	2.6	3.1	3.2	2.4

NOTE.—Percent changes are found in NIPA table 8.1. Index number levels are found in tables 7.1 and 7.2.

counted for by a strong increase in purchases of computers, a product whose prices have decreased steadily since 1987. In the third quarter, both of the alternative measures increased 3.6

percent—0.4 percentage point less than the fixed-weighted measure. Almost all of this difference was also due to an increase in purchases of computers.

Both of the alternative measures of gross domestic purchases prices increased less than the featured fixed-1987-weighted measure in the fourth quarter. The chain-type measure increased 2.3 percent—0.2 percentage point less than the fixed-weighted measure; the benchmark-years-weighted measure increased 2.4 percent. In the third quarter, both of the alternative measures increased 3.2 percent—0.3 percentage point less than the fixed-weighted measure.

Compared with the advance estimates published in the January "Business Situation," these preliminary estimates reflect downward revisions of 0.1 percentage point to both alternative measures of real GDP; there were no revisions to the alternative measures of gross domestic purchases prices. 

NATIONAL INCOME AND PRODUCT ACCOUNTS

Selected NIPA Tables

New estimates in this issue: "Preliminary" estimates for the fourth quarter of 1994.

The selected set of national income and product accounts (NIPA) tables shown in this section presents quarterly estimates, which are updated monthly. (In most tables, the annual estimates are also shown.) These tables are available on the day of the gross domestic product (GDP) news release on printouts and diskettes on a subscription basis or from the Commerce Department's Economic Bulletin Board. For order information, write to the National Income and Wealth Division (BE-54), Bureau of Economic Analysis, Washington, DC 20230 or call (202) 606-9700.

Tables containing the estimates for 1929-87 are available in the two-volume set *National Income and Product Accounts of the United States*; see inside back cover for order information. For 1988-93, the complete official time series of NIPA estimates can be found as follows:

	1988	1989	1990	1991-93
Most tables.....	NIPA's, vol. 2	July 1992 SURVEY	Aug. 1993 SURVEY	July 1994 SURVEY
Tables 1.15, 1.16, and 7.15.....	"	"	Sept. 1993 SURVEY	"
Tables 3.15-3.20 and 9.1-9.6....	"	Sept. 1992 SURVEY	"	Sept. 1994 SURVEY
Tables 7.1, 7.2, 7.3, and 8.1....	Aug. 1994 SURVEY	Aug. 1994 SURVEY	Aug. 1994 SURVEY	Aug. 1994 SURVEY
Tables 7.4-7.12.....	Apr. 1993 SURVEY	Apr. 1993 SURVEY	Aug. 1993 SURVEY	July 1994 SURVEY

Summary NIPA series back to 1929 are in the September 1994 issue of the SURVEY. Errata to published NIPA tables appear in the September 1992, April 1993, October 1993, March 1994, and November 1994 issues. NIPA tables are also available, most beginning with 1929, on diskettes. For more information on the presentation of the estimates, see "A Look at How BEA Presents the NIPA's" in this issue.

NOTE.—This section of the SURVEY is prepared by the National Income and Wealth Division and the Government Division.

1. National Product and Income

Table 1.1.—Gross Domestic Product

[Billions of dollars]

			Seasonally adjusted at annual rates					
	1993	1994	1993		1994			
			III	IV	I	II	III	IV
Gross domestic product	6,343.3	6,736.1	6,359.2	6,478.1	6,574.7	6,689.9	6,791.7	6,888.1
Personal consumption expenditures	4,378.2	4,628.0	4,401.2	4,469.6	4,535.0	4,586.4	4,657.5	4,732.9
Durable goods	538.0	591.4	541.9	562.8	576.2	580.3	591.5	617.6
Nondurable goods	1,339.2	1,394.4	1,340.2	1,355.2	1,368.9	1,381.4	1,406.1	1,421.2
Services	2,501.0	2,642.1	2,519.1	2,551.6	2,589.9	2,624.7	2,659.9	2,694.1
Gross private domestic investment	882.0	1,031.6	882.2	922.5	966.6	1,034.4	1,055.1	1,070.2
Fixed investment	866.7	979.6	868.3	913.5	942.5	967.0	992.5	1,016.6
Nonresidential	618.1	696.9	619.0	646.3	665.4	683.3	709.1	729.7
Structures	173.4	182.6	173.9	176.7	172.7	181.8	184.6	191.4
Producers' durable equipment	442.7	514.3	445.1	469.6	492.7	501.5	524.5	538.4
Residential	250.6	282.8	249.3	267.2	277.1	283.6	283.4	286.9
Change in business inventories	15.4	51.9	13.9	9.0	24.1	67.4	62.6	53.6
Farm	20.1	45.5	24.2	10.7	22.3	60.4	53.4	46.1
Farm	-4.7	6.4	-10.3	-1.7	1.8	7.0	9.2	7.5
Net exports of goods and services	-65.3	-98.6	-77.0	-71.2	-86.7	-97.6	-109.6	-100.6
Exports	659.1	718.7	649.0	680.3	674.2	704.5	730.5	765.6
Imports	724.3	817.3	726.0	751.4	760.9	802.1	840.1	866.2
Government purchases	1,148.4	1,175.2	1,152.9	1,157.2	1,159.8	1,166.7	1,188.8	1,185.5
Federal	443.6	437.3	442.7	439.8	437.8	435.1	444.3	431.8
National defense	302.7	292.2	299.0	299.1	291.7	291.7	300.5	284.7
Nondefense	140.9	145.1	143.6	140.7	146.1	143.5	143.8	147.1
State and local	704.7	737.9	710.2	717.4	722.0	731.5	744.5	753.7

Table 1.2.—Gross Domestic Product in Constant Dollars

[Billions of 1987 dollars]

			Seasonally adjusted at annual rates					
	1993	1994	1993		1994			
			III	IV	I	II	III	IV
Gross domestic product	5,134.5	5,342.4	5,139.4	5,218.0	5,261.1	5,314.1	5,367.0	5,427.2
Personal consumption expenditures	3,458.7	3,579.5	3,472.2	3,506.2	3,546.3	3,557.8	3,584.7	3,629.1
Durable goods	489.9	532.0	492.7	510.8	521.7	522.2	529.6	554.6
Nondurable goods	1,078.5	1,109.6	1,081.7	1,088.0	1,098.3	1,104.3	1,113.4	1,122.4
Services	1,890.3	1,937.9	1,897.8	1,907.4	1,926.3	1,931.4	1,941.8	1,952.1
Gross private domestic investment	819.9	950.4	821.8	862.5	898.9	950.9	967.3	984.6
Fixed investment	804.6	903.0	808.8	851.7	873.4	891.7	910.2	936.6
Nonresidential	591.6	671.9	597.9	627.2	643.6	657.9	680.0	705.9
Structures	147.7	150.4	147.5	148.7	144.1	151.0	151.6	155.0
Producers' durable equipment	443.9	521.4	450.3	478.5	499.4	506.9	528.4	550.9
Residential	213.0	231.1	211.0	224.5	229.9	233.8	230.2	230.6
Change in business inventories	15.3	47.4	13.0	10.8	25.4	59.2	57.1	48.1
Nonfarm	18.5	40.4	20.9	10.7	22.1	51.7	47.4	40.4
Farm	-3.2	7.0	-7.9	.1	3.3	7.5	9.7	7.7
Net exports of goods and services	-73.9	-110.6	-86.3	-82.2	-104.0	-111.8	-117.0	-109.6
Exports	602.5	656.9	595.3	625.2	619.6	643.9	666.5	697.8
Imports	676.3	767.5	681.6	707.4	723.6	755.6	783.5	807.4
Government purchases	929.8	923.0	931.8	931.5	919.9	917.1	932.0	923.0
Federal	356.6	337.8	355.6	351.1	341.7	334.7	343.5	331.2
National defense	243.7	226.6	240.9	238.7	228.5	226.1	233.0	219.0
Nondefense	113.0	111.2	114.7	112.4	113.2	108.7	110.5	112.3
State and local	573.1	585.2	576.2	580.4	578.3	582.4	588.5	591.8

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

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

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

[Billions of dollars]

	1993	1994	Seasonally adjusted at annual rates					
			1993		1994			
			III	IV	I	II	III	IV
Gross domestic product	6,343.3	6,736.1	6,359.2	6,478.1	6,574.7	6,689.9	6,791.7	6,888.1
Final sales of domestic product	6,327.9	6,684.2	6,345.4	6,469.2	6,550.6	6,622.5	6,729.1	6,834.5
Change in business inventories	15.4	51.9	13.9	9.0	24.1	67.4	62.6	53.6
Goods ¹	2,405.8	2,583.4	2,395.8	2,461.6	2,513.2	2,561.2	2,606.2	2,653.2
Final sales	2,390.4	2,531.5	2,381.9	2,452.6	2,489.1	2,493.7	2,543.6	2,599.6
Change in business inventories	15.4	51.9	13.9	9.0	24.1	67.4	62.6	53.6
Durable goods	1,041.0	1,151.8	1,041.7	1,081.9	1,118.7	1,137.6	1,170.0	1,180.7
Final sales	1,032.4	1,117.9	1,026.8	1,072.9	1,098.2	1,099.4	1,125.8	1,148.3
Change in business inventories	8.6	33.8	14.9	9.0	20.6	38.2	44.1	32.4
Nondurable goods	1,364.8	1,431.7	1,354.0	1,379.7	1,394.5	1,423.5	1,436.3	1,472.4
Final sales	1,358.0	1,413.6	1,355.1	1,379.7	1,390.9	1,394.3	1,417.8	1,451.3
Change in business inventories	6.7	18.1	-1.1	0	3.5	29.2	18.5	21.1
Services ¹	3,405.5	3,575.6	3,429.3	3,459.3	3,503.8	3,555.4	3,603.6	3,639.5
Structures	532.0	577.1	534.1	557.2	557.7	573.4	581.9	595.4

1. Exports and imports of certain goods, primarily military equipment purchased and sold by the Federal Government, are included in services.
NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

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

[Billions of dollars]

Gross domestic product	6,343.3	6,736.1	6,359.2	6,478.1	6,574.7	6,689.9	6,791.7	6,888.1
Less: Exports of goods and services	659.1	718.7	649.0	680.3	674.2	704.5	730.5	765.6
Plus: Imports of goods and services	724.3	817.3	726.0	751.4	760.9	802.1	840.1	866.2
Equals: Gross domestic purchases ¹	6,408.6	6,834.7	6,436.3	6,549.3	6,661.4	6,787.5	6,901.3	6,988.7
Less: Change in business inventories	15.4	51.9	13.9	9.0	24.1	67.4	62.6	53.6
Equals: Final sales to domestic purchasers ²	6,393.2	6,782.8	6,422.4	6,540.3	6,637.3	6,720.1	6,838.7	6,935.1

1. Purchases by U.S. residents of goods and services wherever produced.
2. Final sales to U.S. residents 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 Domestic Product by Sector

[Billions of dollars]

Gross domestic product	6,343.3	6,736.1	6,359.2	6,478.1	6,574.7	6,689.9	6,791.7	6,888.1
Business	5,371.4	5,720.8	5,382.1	5,494.4	5,575.7	5,677.9	5,771.8	5,857.8
Nonfarm	5,293.8	5,661.6	5,322.3	5,431.7	5,524.7	5,618.7	5,710.7	5,792.2
Nonfarm less housing	4,771.0	5,110.9	4,796.4	4,899.5	4,975.0	5,075.0	5,159.7	5,233.7
Housing	522.7	550.7	525.8	532.2	549.6	543.8	551.0	558.5
Farm	75.3	84.8	65.4	79.2	87.1	83.2	82.3	86.7
Statistical discrepancy	2.3	-25.6	-5.5	-16.5	-36.1	-24.0	-21.1	-21.1
Households and institutions	285.3	302.7	286.9	291.0	295.7	300.1	304.7	310.2
Private households	10.8	11.4	10.8	10.9	11.1	11.3	11.5	11.6
Nonprofit institutions	274.5	291.3	276.1	280.0	284.5	288.8	293.2	298.5
General government	686.6	712.6	690.2	692.7	703.3	711.8	715.2	720.1
Federal	203.6	206.2	204.3	202.5	206.3	208.4	205.4	204.7
State and local	483.0	506.4	485.9	490.2	497.1	503.4	509.8	515.3
Addendum:								
Gross domestic business product less housing	4,844.0							

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

[Billions of 1987 dollars]

	1993	1994	Seasonally adjusted at annual rates					
			1993		1994			
			III	IV	I	II	III	IV
Gross domestic product	5,134.5	5,342.4	5,139.4	5,218.0	5,261.1	5,314.1	5,367.0	5,427.2
Final sales of domestic product	5,119.3	5,294.9	5,126.5	5,207.2	5,235.7	5,254.9	5,310.0	5,379.1
Change in business inventories	15.3	47.4	13.0	10.8	25.4	59.2	57.1	48.1
Goods ¹	2,081.8	2,222.3	2,078.2	2,135.5	2,168.8	2,201.3	2,235.5	2,283.5
Final sales	2,066.5	2,174.8	2,065.3	2,124.7	2,143.3	2,142.1	2,178.4	2,235.4
Change in business inventories	15.3	47.4	13.0	10.8	25.4	59.2	57.1	48.1
Durable goods	986.0	1,090.7	991.4	1,033.6	1,061.4	1,071.9	1,102.5	1,126.8
Final sales	977.7	1,060.3	977.9	1,024.7	1,041.7	1,038.2	1,063.2	1,098.1
Change in business inventories	8.3	30.4	13.5	8.9	19.7	33.7	39.3	28.7
Nondurable goods	1,095.8	1,131.6	1,086.8	1,101.9	1,107.4	1,129.4	1,133.0	1,156.6
Final sales	1,088.8	1,114.5	1,087.4	1,100.0	1,101.7	1,103.9	1,115.2	1,137.3
Change in business inventories	7.0	17.1	-6	1.9	5.7	25.5	17.8	19.3
Services ¹	2,597.6	2,644.1	2,606.1	2,611.2	2,625.8	2,635.8	2,653.9	2,660.7
Structures	455.1	476.0	455.1	471.3	466.5	476.9	477.6	483.0

1. Exports and imports of certain goods, primarily military equipment purchased and sold by the Federal Government, are included in services.
NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

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

[Billions of 1987 dollars]

Gross domestic product	5,134.5	5,342.4	5,139.4	5,218.0	5,261.1	5,314.1	5,367.0	5,427.2
Less: Exports of goods and services	602.5	656.9	595.3	625.2	619.6	643.9	666.5	697.8
Plus: Imports of goods and services	676.3	767.5	681.6	707.4	723.6	755.6	783.5	807.4
Equals: Gross domestic purchases ¹	5,208.4	5,452.9	5,225.8	5,300.2	5,365.1	5,425.8	5,484.0	5,536.8
Less: Change in business inventories	15.3	47.4	13.0	10.8	25.4	59.2	57.1	48.1
Equals: Final sales to domestic purchasers ²	5,193.1	5,405.5	5,212.8	5,289.4	5,339.7	5,366.6	5,426.9	5,488.7

1. Purchases by U.S. residents of goods and services wherever produced.
2. Final sales to U.S. residents 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 Domestic Product by Sector in Constant Dollars

[Billions of 1987 dollars]

Gross domestic product	5,134.5	5,342.4	5,139.4	5,218.0	5,261.1	5,314.1	5,367.0	5,427.2
Business	4,409.4	4,611.6	4,413.3	4,491.7	4,532.6	4,583.6	4,635.4	4,694.7
Nonfarm	4,336.4	4,550.1	4,353.8	4,433.2	4,486.1	4,521.3	4,567.9	4,625.0
Nonfarm less housing	3,925.5	4,131.3	3,941.1	4,017.9	4,070.6	4,103.5	4,148.1	4,203.1
Housing	410.9	418.8	412.7	415.3	415.5	417.8	419.8	421.9
Farm	71.0	82.1	64.0	72.0	75.9	81.6	84.4	86.7
Statistical discrepancy	1.9	-20.6	-4.5	-13.5	-29.3	-19.3	-17.0	-16.9
Households and institutions	215.6	223.0	217.0	218.1	220.1	222.5	223.8	225.7
Private households	9.0	9.2	9.0	9.0	9.1	9.2	9.3	9.3
Nonprofit institutions	206.5	213.8	208.0	209.1	211.0	213.3	214.5	216.3
General government	509.6	507.8	509.1	508.2	508.4	508.0	507.9	506.8
Federal	146.0	139.0	145.1	143.2	141.9	139.9	137.9	136.1
State and local	363.6	368.8	364.0	365.1	366.5	368.1	369.9	370.7
Addendum:								
Gross domestic business product less housing	3,994.9							

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

[Billions of dollars]

	1993	1994	Seasonally adjusted at annual rates							
			1993		1994					
			III	IV	I	II	III	IV		
Gross domestic product	6,343.3	6,736.1	6,359.2	6,478.1	6,574.7	6,689.9	6,791.7	6,888.1		
Plus: Receipts of factor income from the rest of the world ¹	136.6		137.1	141.3	145.4	162.1	176.7			
Less: Payments of factor income to the rest of the world ²	132.1		128.6	143.3	146.1	169.5	188.8			
Equals: Gross national product	6,347.8	6,367.8	6,476.2	6,574.0	6,682.5	6,779.6				
Less: Consumption of fixed capital	669.1	715.4	677.3	674.0	734.1	698.1	709.9	719.5		
Capital consumption allowances	635.1	680.3	644.8	650.3	683.2	669.8	679.4	688.9		
Less: Capital consumption adjustment	-33.9	-35.1	-32.6	-23.8	-50.9	-28.3	-30.5	-30.6		
Equals: Net national product	5,678.7	5,690.5	5,802.2	5,840.0	5,984.5	6,069.8				
Less: Indirect business tax and nontax liability	525.3	554.0	524.7	539.7	544.7	550.3	557.2	564.0		
Business transfer payments	28.7	30.6	28.9	28.6	30.1	30.3	30.8	31.4		
Statistical discrepancy	2.3		-5.5	-16.5	-36.1	-24.0	-21.1			
Plus: Subsidies less current surplus of government enterprises	9.0	.7	-3.9	11.7	7.4	3.0	-8.0	.4		
Equals: National income	5,131.4	5,138.5	5,262.0	5,308.7	5,430.7	5,494.9				
Less: Corporate profits with inventory valuation and capital consumption adjustments	485.8		493.5	533.9	508.2	546.4	556.0			
Net interest	399.5		396.7	389.1	394.2	399.7	415.7			
Contributions for social insurance	585.6	626.0	590.9	597.2	614.7	623.5	628.9	636.8		
Wage accruals less disbursements	20.0	0	0	0	0	0	0	0		
Plus: Personal interest income	637.9	664.3	634.1	627.7	631.1	649.4	674.2	702.4		
Personal dividend income	181.3	194.3	182.8	184.1	185.7	191.7	196.9	202.7		
Government transfer payments to persons	892.6	939.9	898.8	908.3	924.2	934.3	945.4	955.8		
Business transfer payments to persons	22.8	23.5	22.8	22.7	23.2	23.4	23.6	23.8		
Equals: Personal income	5,375.1	5,701.9	5,395.9	5,484.6	5,555.8	5,659.9	5,734.5	5,857.5		
Addenda:										
Net domestic product	5,674.2	6,020.7	5,681.9	5,804.1	5,840.7	5,991.8	6,081.8	6,168.6		
Domestic income	5,126.9	5,130.0	5,264.0	5,309.4	5,438.1	5,506.9				
Gross national income	6,345.5	6,373.3	6,492.7	6,610.1	6,706.5	6,800.8				

1. Consists largely of receipts by U.S. residents of interest and dividends and reinvested earnings of foreign affiliates of U.S. corporations.

2. Consists largely of payments to foreign residents of interest and dividends and reinvested earnings of U.S. affiliates of foreign corporations.

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

[Billions of 1987 dollars]

	1993	1994	Seasonally adjusted at annual rates							
			1993		1994					
			III	IV	I	II	III	IV		
Gross domestic product	5,134.5	5,342.4	5,139.4	5,218.0	5,261.1	5,314.1	5,367.0	5,427.2		
Plus: Receipts of factor income from the rest of the world ¹	109.1		109.4	112.4	114.8	127.1	137.8			
Less: Payments of factor income to the rest of the world ²	103.4		100.4	111.7	113.2	130.7	144.9			
Equals: Gross national product	5,140.3	5,148.4	5,218.7	5,262.7	5,310.5	5,359.9				
Less: Consumption of fixed capital	599.5	628.5	605.5	602.0	648.1	614.8	621.9	629.4		
Equals: Net national product	4,540.8	4,542.9	4,616.7	4,614.6	4,695.7	4,738.0				
Less: Indirect business tax and nontax liability plus business transfer payments less subsidies plus current surplus of government enterprises	421.2	438.0	423.1	428.3	432.7	434.9	439.2	445.1		
Statistical discrepancy	1.9		-4.5	-13.5	-29.3	-19.3	-17.0			
Equals: National income	4,117.7	4,124.3	4,201.8	4,211.3	4,280.2	4,315.8				
Addenda:										
Net domestic product	4,535.1	4,713.8	4,533.9	4,616.0	4,613.0	4,699.3	4,745.2	4,797.8		
Domestic income	4,112.0	4,115.3	4,201.1	4,209.7	4,283.8	4,322.9				
Gross national income	5,138.4	5,153.0	5,232.2	5,292.1	5,329.8	5,376.9				

1. Consists largely of receipts by U.S. residents of interest and dividends and reinvested earnings of foreign affiliates of U.S. corporations.

2. Consists largely of payments to foreign residents of interest and dividends and reinvested earnings of U.S. affiliates of foreign corporations.

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

[Billions of 1987 dollars]

Gross national product	5,140.3	5,148.4	5,218.7	5,262.7	5,310.5	5,359.9		
Less: Exports of goods and services and receipts of factor income from the rest of the world	711.6	704.7	737.6	734.5	771.0	804.3		
Plus: Command-basis exports of goods and services and receipts of factor income ¹	724.4	719.3	752.2	756.2	790.6	818.6		
Equals: Command-basis gross national product	5,153.1	5,163.1	5,233.3	5,284.5	5,330.1	5,374.2		
Addendum:								
Terms of trade ²	101.8	102.1	102.0	103.0	102.5	101.8		

1. Exports of goods and services and receipts of factor income deflated by the implicit price deflator for imports of goods and services and payments of factor income.

2. Ratio of the implicit price deflator for exports of goods and services and receipts of factor income to the corresponding implicit price deflator for imports 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]

	1993	1994	Seasonally adjusted at annual rates							
			1993				1994			
			III	IV	I	II	III	IV		
National income	5,131.4		5,138.5	5,262.0	5,308.7	5,430.7	5,494.9			
Compensation of employees	3,780.4	4,004.6	3,801.7	3,845.8	3,920.0	3,979.3	4,023.7	4,095.6		
Wages and salaries	3,100.8	3,279.0	3,115.9	3,148.4	3,208.3	3,257.2	3,293.9	3,356.6		
Government	583.8	602.8	586.1	587.8	595.7	601.9	604.4	609.1		
Other	2,517.0	2,676.2	2,529.8	2,560.7	2,612.6	2,655.4	2,689.6	2,747.5		
Supplements to wages and salaries	679.6	725.6	685.9	697.4	711.7	722.0	729.7	739.0		
Employer contributions for social insurance	324.3	344.6	327.0	330.6	338.5	343.6	346.0	350.3		
Other labor income	355.3	381.0	358.8	366.8	373.2	378.4	383.7	388.7		
Proprietors' income with IVA and CCAAdj	441.6	473.6	420.3	462.9	471.0	471.3	467.0	485.3		
Farm	37.3	39.4	15.8	44.4	47.2	39.3	29.8	41.4		
Proprietors' income with IVA	44.5	46.8	23.2	51.5	54.5	46.6	37.2	48.7		
CCAAdj	-7.2	-7.3	-7.4	-7.0	-7.3	-7.3	-7.4	-7.3		
Nonfarm	404.3	434.2	404.5	418.5	423.8	431.9	437.1	443.8		
Proprietors' income	390.2	420.1	389.8	403.7	409.3	417.5	423.1	430.4		
IVA	-8	-1.1	-1	-9	-6	-1.1	-1.1	-1.7		
CCAAdj	14.9	15.2	14.8	15.7	15.2	15.5	15.2	15.1		
Rental income of persons with CCAAdj	24.1	27.7	26.3	30.3	15.3	34.1	32.6	28.8		
Rental income of persons	86.3	98.8	88.9	92.4	101.7	98.6	98.8	96.2		
CCAAdj	-62.2	-71.1	-62.6	-62.1	-86.4	-64.5	-66.2	-67.4		
Corporate profits with IVA and CCAAdj	485.8		493.5	533.9	508.2	546.4	556.0			
Corporate profits with IVA	456.2		461.7	495.1	471.2	509.0	518.5			
Profits before tax	462.4		458.7	501.7	483.5	523.1	538.1			
Profits tax liability	173.2		169.9	191.5	184.1	201.7	208.6			
Profits after tax	289.2		288.9	310.2	299.4	321.4	329.5			
Dividends	191.7	205.2	193.2	194.8	196.3	202.5	207.9	213.9		
Undistributed profits	97.5		95.6	115.6	103.0	118.9	121.6			
IVA	-6.2	-19.3	3.0	-6.5	-12.3	-14.1	-19.6	-31.2		
CCAAdj	29.5	37.7	31.7	38.8	37.0	37.4	37.5	38.8		
Net interest	399.5		396.7	389.1	394.2	399.7	415.7			
Addenda:										
Corporate profits after tax with IVA and CCAAdj	312.5		323.6	342.4	324.1	344.8	347.4			
Net cash flow with IVA and CCAAdj	528.7		543.6	558.9	559.9	568.2	572.1			
Undistributed profits with IVA and CCAAdj	120.9		130.3	147.9	127.7	142.3	139.5			
Consumption of fixed capital	407.8	432.2	413.3	411.1	432.2	425.9	432.6	438.1		
Less: IVA	-6.2	-19.3	3.0	-6.5	-12.3	-14.1	-19.6	-31.2		
Equals: Net cash flow	534.9		540.6	565.5	572.2	582.3	591.7			

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

	1993	1994	Seasonally adjusted at annual rates							
			1993				1994			
			III	IV	I	II	III	IV		
Billions of dollars										
Gross domestic product of corporate business	3,796.2	3,817.9	3,904.8	3,957.0	4,036.0	4,096.0				
Consumption of fixed capital ..	407.8	432.2	413.3	411.1	432.2	425.9	432.6	438.1		
Net domestic product	3,388.4		3,404.6	3,493.7	3,524.8	3,610.0	3,663.4			
Indirect business tax and nontax liability plus business transfer payments less subsidies	377.5	401.0	377.6	388.3	393.5	397.8	403.9	409.0		
Domestic income	3,010.9		3,027.0	3,105.4	3,131.3	3,212.2	3,259.6			
Compensation of employees	2,471.6	2,622.6	2,484.4	2,513.8	2,564.0	2,803.3	2,635.4	2,687.8		
Wages and salaries	2,045.6	2,170.7	2,055.7	2,079.6	2,121.1	2,154.2	2,180.8	2,226.9		
Supplements to wages and salaries	426.1	451.9	428.7	434.2	442.9	449.0	454.6	460.9		
Corporate profits with IVA and CCAAdj	420.5		424.3	472.2	447.1	485.7	495.7			
Profits before tax	397.2		389.6	440.0	422.4	462.3	477.8			
Profits tax liability ..	173.2		169.9	191.5	184.1	201.7	208.6			
Profits after tax	223.9		219.7	248.5	238.3	260.7	269.1			
Dividends	177.2		177.1	180.2	177.0	183.6	177.1			
Undistributed profits	46.7		42.7	68.3	61.3	77.1	92.0			
IVA	-6.2	-19.3	3.0	-6.5	-12.3	-14.1	-19.6	-31.2		
CCAAdj	29.5	37.7	31.7	38.8	37.0	37.4	37.5	38.8		
Net interest	118.8		118.3	119.4	120.2	123.3	128.5			
Gross domestic product of financial corporate business ..	386.5		389.1	405.5	388.4	409.3	416.6			
Gross domestic product of nonfinancial corporate business ..	3,409.7		3,428.7	3,499.3	3,568.6	3,626.7	3,679.4			
Consumption of fixed capital ..	361.5	382.2	366.5	363.7	383.7	376.3	382.0	386.6		
Net domestic product	3,048.2		3,062.2	3,135.6	3,184.8	3,250.3	3,297.5			
Indirect business tax and nontax liability plus business transfer payments less subsidies	344.0	365.8	344.3	354.3	358.9	362.9	368.4	373.1		
Domestic income	2,704.2		2,717.9	2,781.3	2,825.9	2,887.5	2,929.0			
Compensation of employees	2,259.2	2,392.0	2,269.1	2,293.9	2,337.1	2,373.1	2,405.1	2,452.5		
Wages and salaries	1,866.2	1,975.8	1,873.9	1,893.8	1,929.4	1,959.8	1,986.2	2,027.9		
Supplements to wages and salaries	393.0	416.1	395.2	400.1	407.7	413.4	418.9	424.6		
Corporate profits with IVA and CCAAdj	330.9		334.3	371.6	372.2	394.7	399.1			
Profits before tax	293.5		285.7	325.4	332.8	355.9	365.2			
Profits tax liability ..	116.8		113.5	130.8	132.5	143.4	147.1			
Profits after tax	176.7		172.2	194.6	200.3	212.5	218.1			
Dividends	159.8		159.4	162.3	159.5	164.3	157.3			
Undistributed profits	16.9		12.8	32.2	40.8	48.1	60.8			
IVA	-6.2	-19.3	3.0	-6.5	-12.3	-14.1	-19.6	-31.2		
CCAAdj	43.6	53.3	45.7	52.7	51.7	52.9	53.6	55.2		
Net interest	114.0		114.4	115.8	116.6	119.6	124.8			
Billions of 1987 dollars										
Gross domestic product of nonfinancial corporate business ..	2,942.9		2,963.3	3,019.5	3,062.6	3,098.9	3,131.2			
Consumption of fixed capital ..	325.3	339.1	329.0	327.0	342.4	333.9	337.8	342.1		
Net domestic product	2,617.6		2,634.2	2,692.5	2,720.2	2,765.0	2,793.3			
Indirect business tax and nontax liability plus business transfer payments less subsidies	272.4	284.8	273.7	277.3	280.6	282.1	285.8	290.5		
Domestic income	2,345.2		2,360.5	2,415.2	2,439.6	2,482.9	2,507.6			

2. Personal Income and Outlays

Table 2.1.—Personal Income and Its Disposition

(Billions of dollars)

	1993	1994	Seasonally adjusted at annual rates					
			1993		1994			
			III	IV	I	II	III	IV
Personal income	5,375.1	5,701.9	5,395.9	5,484.6	5,555.8	5,659.9	5,734.5	5,857.5
Wage and salary disbursements	3,080.8	3,279.0	3,115.9	3,148.4	3,208.3	3,257.2	3,293.9	3,356.6
Commodity-producing industries	773.8	818.1	781.4	791.0	801.9	811.6	821.8	837.1
Manufacturing	588.4	617.5	594.9	601.7	609.4	612.8	618.3	629.3
Distributive industries	701.9	748.6	709.6	712.6	728.6	742.5	753.5	769.9
Service industries	1,021.4	1,109.5	1,038.8	1,057.0	1,082.0	1,101.2	1,114.3	1,140.5
Government	583.8	602.8	586.1	587.8	595.7	601.9	604.4	609.1
Other labor income	355.3	381.0	358.8	366.8	373.2	378.4	383.7	388.7
Proprietors' income with inventory valuation and capital consumption adjustments	441.6	473.6	420.3	462.9	471.0	471.3	467.0	485.3
Farm	37.3	39.4	15.8	44.4	47.2	39.3	29.8	41.4
Nonfarm	404.3	434.2	404.5	418.5	423.8	431.9	437.1	443.8
Rental income of persons with capital consumption adjustment	24.1	27.7	26.3	30.3	15.3	34.1	32.6	28.8
Personal dividend income	181.3	194.3	182.8	184.1	185.7	191.7	196.9	202.7
Personal interest income	637.9	664.3	634.1	627.7	631.1	649.4	674.2	702.4
Transfer payments to persons	915.4	963.4	921.6	931.0	947.4	957.6	969.0	979.6
Old-age, survivors, disability, and health insurance benefits	444.4	473.5	446.8	452.1	463.8	470.7	476.5	483.0
Government unemployment insurance benefits	33.9	23.3	34.5	32.7	27.9	23.5	21.4	20.5
Veterans benefits	20.1	20.1	20.2	20.0	20.0	19.8	20.3	20.1
Government employees retirement benefits	118.7	126.9	119.6	121.1	122.8	126.2	128.5	130.2
Other transfer payments	298.3	319.6	300.5	305.1	312.9	317.4	322.3	325.8
Aid to families with dependent children	23.9	24.2	24.0	24.1	24.2	24.3	24.3	24.2
Other	274.4	295.4	276.5	281.0	288.7	293.1	298.0	301.7
Less: Personal contributions for social insurance	261.3	281.4	263.8	266.6	276.3	279.9	282.9	286.6
Less: Personal tax and nontax payments	686.4	742.1	695.4	707.0	723.0	746.4	744.1	754.9
Equals: Disposable personal income	4,688.7	4,959.8	4,700.5	4,777.6	4,832.8	4,913.5	4,990.3	5,102.6
Less: Personal outlays	4,496.2	4,756.1	4,518.2	4,588.2	4,657.3	4,712.4	4,787.0	4,867.5
Personal consumption expenditures	4,378.2	4,628.0	4,401.2	4,469.6	4,535.0	4,586.4	4,657.5	4,732.9
Interest paid by persons	108.2	117.6	107.2	108.7	111.7	115.5	119.3	123.9
Personal transfer payments to rest of the world (net)	9.9	10.5	9.9	9.8	10.5	10.5	10.3	10.7
Equals: Personal saving	192.6	203.7	182.3	189.4	175.5	201.1	203.3	235.1
Addenda:								
Disposable personal income:								
Total, billions of 1987 dollars	3,704.1	3,836.1	3,708.4	3,747.8	3,779.2	3,811.5	3,840.9	3,912.6
Per capita:								
Current dollars	18,153	19,004	18,174	18,421	18,588	18,853	19,095	19,476
1987 dollars	14,341	14,698	14,338	14,451	14,535	14,825	14,697	14,934
Population (mid-period, millions)	258.3	261.0	258.6	259.4	260.0	260.6	261.3	262.0
Personal saving as percentage of disposable personal income	4.1	4.1	3.9	4.0	3.6	4.1	4.1	4.6

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

Table 2.2.—Personal Consumption Expenditures by Major Type of Product

(Billions of dollars)

	1993	1994	Seasonally adjusted at annual rates					
			1993		1994			
			III	IV	I	II	III	IV
Personal consumption expenditures	4,378.2	4,628.0	4,401.2	4,469.6	4,535.0	4,586.4	4,657.5	4,732.9
Durable goods	538.0	591.4	541.9	562.8	576.2	580.3	591.5	617.6
Motor vehicles and parts	228.0	251.2	228.4	241.4	253.0	245.8	245.5	260.6
Furniture and household equipment	208.9	229.7	210.6	217.7	218.1	225.3	233.7	241.6
Other	101.1	110.6	102.9	103.7	105.1	109.3	112.3	115.5
Nondurable goods	1,339.2	1,394.4	1,340.2	1,355.2	1,368.9	1,381.4	1,406.1	1,421.2
Food	649.7	679.6	651.7	660.8	667.9	675.5	683.7	691.3
Clothing and shoes	235.4	246.6	235.9	240.7	241.9	243.9	247.8	252.7
Gasoline and oil	105.6	107.3	104.1	104.4	103.2	103.7	110.6	111.7
Fuel oil and coal	14.0	13.7	14.2	13.9	15.5	13.1	13.4	12.6
Other	334.4	347.2	334.2	335.4	340.4	345.2	350.5	352.9
Services	2,501.0	2,642.1	2,519.1	2,551.6	2,589.9	2,624.7	2,659.9	2,694.1
Housing	629.0	660.0	632.4	638.8	648.2	655.2	663.9	672.9
Household operation	256.3	264.1	260.4	261.3	261.1	265.9	265.3	264.0
Electricity and gas	112.8	112.9	115.5	115.1	116.3	115.2	111.9	108.4
Other household operation	143.5	151.1	144.9	146.2	144.8	150.7	153.5	155.6
Transportation	170.6	179.4	171.5	173.6	175.4	178.5	180.5	183.0
Medical care	680.5	726.8	686.1	697.3	707.4	720.9	733.2	745.7
Other	764.7	811.9	768.8	780.7	797.8	804.3	817.0	828.5

Table 2.3.—Personal Consumption Expenditures by Major Type of Product in Constant Dollars

(Billions of 1987 dollars)

Personal consumption expenditures	3,458.7	3,579.5	3,472.2	3,506.2	3,546.3	3,557.8	3,584.7	3,629.1
Durable goods	489.9	532.0	492.7	510.8	521.7	522.2	529.6	554.6
Motor vehicles and parts	196.1	208.2	195.0	204.7	213.7	205.3	202.0	212.0
Furniture and household equipment	214.1	238.6	216.6	224.6	225.9	232.5	241.7	254.3
Other	79.7	85.2	81.1	81.5	82.0	84.4	86.0	88.3
Nondurable goods	1,078.5	1,109.6	1,081.7	1,088.0	1,098.3	1,104.3	1,113.4	1,122.4
Food	524.0	535.7	525.1	528.1	531.9	536.1	535.7	538.8
Clothing and shoes	197.8	208.8	198.6	202.4	203.8	204.9	210.2	216.5
Gasoline and oil	86.5	87.3	87.5	86.6	86.1	86.7	88.0	88.5
Fuel oil and coal	12.1	11.9	12.2	12.2	13.4	11.4	11.7	11.1
Other	258.2	265.9	258.4	258.8	263.1	265.1	267.8	267.5
Services	1,890.3	1,937.9	1,897.8	1,907.4	1,926.3	1,931.4	1,941.8	1,952.1
Housing	492.6	501.3	493.7	495.4	497.7	500.0	502.6	505.0
Household operation	225.3	228.2	227.4	226.9	228.7	229.1	228.1	226.8
Electricity and gas	98.6	98.1	99.9	99.6	101.1	100.2	97.2	94.2
Other household operation	126.7	130.0	127.5	127.2	127.7	128.9	130.9	132.6
Transportation	127.9	132.5	128.4	129.8	130.9	131.8	132.4	134.9
Medical care	466.4	479.0	467.6	470.4	473.2	477.4	481.0	484.2
Other	578.2	597.0	580.7	584.9	595.9	593.1	597.7	601.3

3. Government Receipts and Expenditures

Table 3.2.—Federal Government Receipts and Expenditures

[Billions of dollars]

	1993	1994	Seasonally adjusted at annual rates				
			1993		1994		
			III	IV	I	II	
Receipts	1,265.7	1,272.7	1,313.6	1,337.4	1,380.7	1,388.8	.....
Personal tax and nontax receipts	520.3	565.6	527.5	536.8	550.2	571.1	566.9
Income taxes	505.9	548.9	513.3	521.4	533.6	552.5	550.8
Estate and gift taxes	12.9	15.0	12.6	13.8	14.8	16.9	14.3
Nontaxes	1.6	1.8	1.6	1.7	1.7	1.8	1.8
Corporate profits tax accruals	143.0	.....	140.2	157.8	151.8	166.3	172.4
Federal Reserve banks	16.0	.....	15.7	15.8	16.0	16.9	18.0
Other	127.0	.....	124.4	142.0	135.8	149.4	154.4
Indirect business tax and nontax accruals	84.6	91.2	82.3	90.7	90.4	90.4	91.9
Excise taxes	48.5	53.4	46.3	53.9	53.1	52.9	54.0
Property taxes	19.9	21.3	20.3	20.2	20.2	21.5	21.1
Nontaxes	16.3	16.5	15.7	16.6	17.1	15.9	16.8
Contributions for social insurance	517.8	555.1	522.7	528.3	545.1	553.0	557.6
Expenditures	1,507.0	1,537.6	1,497.6	1,533.7	1,513.7	1,525.9	1,542.8
Purchases	443.6	437.3	442.7	439.8	437.8	435.1	444.3
National defense	302.7	292.2	299.0	299.1	291.7	291.7	300.5
Nondefense	140.9	145.1	143.6	140.7	146.1	143.5	143.8
Transfer payments (net)	658.0	682.2	660.2	674.1	671.5	676.2	683.0
To persons	642.2	666.6	645.9	649.8	659.9	663.5	668.5
To rest of the world (net) ..	15.7	15.7	14.3	24.3	11.6	12.7	14.4
Grants-in-aid to State and local governments	186.1	197.2	187.8	197.0	190.0	194.4	200.3
Net interest paid	183.6	191.6	183.6	183.5	179.3	188.8	194.4
Interest paid	214.3	220.5	214.9	213.9	208.3	217.7	223.2
To persons and business ..	172.7	174.1	172.6	171.4	165.1	172.8	175.8
To rest of the world (net) ..	41.6	46.5	42.2	42.4	43.2	44.9	47.3
Less: Interest received by government	30.7	28.9	31.2	30.4	29.1	28.9	28.8
Subsidies less current surplus of government enterprises ..	35.7	29.2	23.3	39.3	35.1	31.3	20.9
Subsidies	37.4	33.1	26.1	41.6	37.7	34.6	25.9
Less: Current surplus of government enterprises ..	1.7	3.9	2.8	2.3	2.6	3.3	5.0
Less: Wage accruals less disbursements	0	0	0	0	0	0	0
Surplus or deficit (-), national income and product accounts	-241.4	.....	-224.9	-220.1	-176.2	-145.1	-154.0
Social insurance funds	34.0	53.1	36.0	39.3	49.3	53.5	54.1
Other	-275.4	.....	-260.9	-259.4	-225.5	-198.7	-208.1

Table 3.3.—State and Local Government Receipts and Expenditures

[Billions of dollars]

	1993	1994	Seasonally adjusted at annual rates				
			1993		1994		
			III	IV	I	II	
Receipts	891.0	896.0	918.8	919.1	935.6	950.3	.....
Personal tax and nontax receipts	166.1	176.5	167.9	170.2	172.9	175.3	177.3
Income taxes	123.3	131.5	124.9	126.6	128.7	130.6	132.0
Nontaxes	22.7	23.8	22.8	23.2	23.5	23.7	23.9
Other	20.1	21.2	20.2	20.4	20.7	21.1	21.4
Corporate profits tax accruals	30.3	.....	29.7	33.7	32.3	35.4	36.2
Indirect business tax and nontax accruals	440.7	462.9	442.4	449.0	454.2	460.0	465.3
Sales taxes	212.4	226.2	212.8	217.8	220.7	224.2	227.8
Property taxes	184.0	190.8	184.8	186.4	188.0	189.8	191.6
Other	44.3	45.9	44.8	44.9	45.6	46.0	45.8
Contributions for social insurance	67.8	70.9	68.2	68.9	69.7	70.5	71.3
Federal grants-in-aid	186.1	197.2	187.8	197.0	190.0	194.4	200.3
Expenditures	864.7	917.0	872.1	884.3	893.9	908.6	926.4
Purchases	704.7	737.9	710.2	717.4	722.0	731.5	744.5
Compensation of employees	483.0	506.4	485.9	490.2	497.1	503.4	509.8
Other	221.7	231.6	224.3	227.2	224.9	228.1	234.7
Transfer payments to persons ..	250.4	273.3	252.9	258.6	264.3	270.7	276.8
Net interest paid	-53.4	-54.8	-53.4	-53.6	-54.1	-54.6	-55.1
Interest paid	65.1	65.5	65.1	65.2	65.3	65.5	65.6
Less: Interest received by government	118.4	120.4	118.5	118.8	119.4	120.1	120.7
Less: Dividends received by government	10.4	10.9	10.4	10.5	10.7	10.8	10.9
Subsidies less current surplus of government enterprises ..	-26.7	-28.6	-27.2	-27.6	-27.7	-28.3	-28.9
Subsidies .....	.4	.4	.4	.4	.4	.4	.4
Less: Current surplus of government enterprises ..	27.1	28.9	27.5	27.9	28.1	28.7	29.2
Less: Wage accruals less disbursements	0	0	0	0	0	0	0
Surplus or deficit (-), national income and product accounts	26.3	.....	23.9	34.5	25.2	27.0	23.9
Social insurance funds	66.3	65.6	66.3	66.2	65.9	65.9	65.3
Other	-40.0	.....	-42.4	-31.7	-40.7	-38.9	-41.4

5. Saving and Investment

Table 5.1.—Gross Saving and Investment

[Billions of dollars]

	1993	1994	Seasonally adjusted at annual rates					
			1993		1994			
			III	IV	I	II	III	IV
Gross saving	787.5		788.9	825.8	886.2	923.3	922.6	
Gross private saving	1,002.5		989.9	1,011.4	1,037.3	1,041.4	1,052.7	
Personal saving	192.6	203.7	182.3	189.4	175.5	201.1	203.3	235.1
Undistributed corporate profits with inventory valuation and capital consumption adjustments	120.9		130.3	147.9	127.7	142.3	139.5	
Undistributed profits	97.5		95.6	115.6	103.0	118.9	121.6	
Inventory valuation adjustment	-6.2	-19.3	3.0	-6.5	-12.3	-14.1	-19.6	-31.2
Capital consumption adjustment	29.5	37.7	31.7	38.8	37.0	37.4	37.5	38.8
Corporate consumption of fixed capital	407.8	432.2	413.3	411.1	432.2	425.9	432.6	438.1
Noncorporate consumption of fixed capital	261.2	283.2	264.1	263.0	301.8	272.1	277.3	281.4
Wage accruals less disbursements	20.0	0	0	0	0	0	0	0
Government surplus or deficit (-), national income and product accounts	-215.0		-201.0	-185.6	-151.1	-118.1	-130.1	
Federal	-241.4		-224.9	-220.1	-176.2	-145.1	-154.0	
State and local	26.3		23.9	34.5	25.2	27.0	23.9	
Capital grants received by the United States (net)	0	0	0	0	0	0	0	0
Gross investment	789.8		783.4	809.3	850.2	899.3	901.5	
Gross private domestic investment	882.0	1,031.6	882.2	922.5	966.6	1,034.4	1,055.1	1,070.2
Net foreign investment	-92.3		-98.8	-113.2	-116.4	-135.1	-153.6	
Statistical discrepancy	2.3		-5.5	-16.5	-36.1	-24.0	-21.1	

Table 5.4.—Fixed Investment by Type

[Billions of dollars]

	1993	1994	Seasonally adjusted at annual rates					
			1993		1994			
			III	IV	I	II	III	IV
Fixed investment	866.7	979.6	868.3	913.5	942.5	967.0	992.5	1,016.6
Nonresidential	616.1	696.9	619.0	646.3	665.4	683.3	709.1	729.7
Structures	173.4	182.6	173.9	176.7	172.7	181.8	184.6	191.4
Nonresidential buildings, including farm	117.6	127.6	118.7	122.3	119.0	127.2	128.6	135.7
Utilities	34.4	36.2	34.1	34.4	34.7	35.6	36.7	37.7
Mining exploration, shafts, and wells	12.2	10.8	12.0	11.4	11.1	11.2	10.7	10.0
Other structures	9.2	8.1	9.1	8.6	7.9	7.9	8.6	8.0
Producers' durable equipment	442.7	514.3	445.1	469.6	492.7	501.5	524.5	538.4
Information processing and related equipment	151.5	180.3	155.0	164.4	169.3	177.0	182.5	192.6
Computers and peripheral equipment ¹	47.0	54.1	49.1	51.5	52.6	53.4	54.2	56.3
Other	104.5	126.2	105.9	112.9	116.7	123.5	128.3	136.3
Industrial equipment	96.7	113.0	97.9	102.9	107.0	111.0	115.8	118.3
Transportation and related equipment	104.2	118.8	101.4	107.9	118.6	112.1	121.3	123.2
Other	90.4	102.1	90.7	94.4	97.8	101.5	104.9	104.3
Residential	250.6	282.8	249.3	267.2	277.1	283.6	283.4	286.9
Structures	242.8	274.4	241.5	259.2	269.1	275.3	274.9	278.1
Single family	133.3	154.0	132.0	143.2	152.5	156.2	154.4	153.1
Multifamily	10.8	13.7	11.2	11.1	11.4	13.0	14.2	16.2
Other structures	98.8	106.6	98.3	105.0	105.2	106.2	106.4	108.8
Producers' durable equipment	7.7	8.4	7.8	8.0	8.0	8.3	8.5	8.8

1. Includes new computers and peripheral equipment only.

Table 5.5.—Fixed Investment by Type in Constant Dollars

[Billions of 1987 dollars]

	1993	1994	Seasonally adjusted at annual rates					
			1993		1994			
			III	IV	I	II	III	IV
Fixed investment	804.6	903.0	808.8	851.7	873.4	891.7	910.2	936.6
Nonresidential	591.6	671.9	597.9	627.2	643.6	657.9	680.0	705.9
Structures	147.7	150.4	147.5	148.7	144.1	151.0	151.6	155.0
Nonresidential buildings, including farm	100.0	104.8	100.5	102.7	99.2	105.4	105.1	109.5
Utilities	28.8	29.3	28.5	28.5	28.4	29.0	29.7	30.2
Mining exploration, shafts, and wells	10.7	9.3	10.5	9.9	9.6	9.8	9.3	8.5
Other structures	8.2	7.0	8.0	7.6	6.9	6.8	7.3	6.8
Producers' durable equipment	443.9	521.4	450.3	478.5	499.4	506.9	528.4	550.9
Information processing and related equipment	200.9	249.1	208.9	225.2	233.2	242.2	251.2	270.0
Computers and peripheral equipment ¹	105.4	134.8	112.2	122.5	127.2	130.3	135.1	146.6
Other	95.5	114.3	96.7	102.7	106.0	111.8	116.1	123.3
Industrial equipment	79.2	90.2	79.9	83.6	86.4	88.9	92.1	93.4
Transportation and related equipment	87.8	97.9	85.3	90.9	98.5	92.3	99.1	101.9
Other	76.1	84.1	76.2	78.9	81.3	83.6	86.1	85.6
Residential	213.0	231.1	211.0	224.5	229.9	233.8	230.2	230.6
Structures	205.7	223.3	203.5	216.9	222.4	226.0	222.3	222.4
Single family	112.1	124.4	110.2	118.3	125.1	127.6	123.8	121.0
Multifamily	9.6	11.7	9.9	9.7	10.0	11.3	12.1	13.6
Other structures	84.1	87.2	83.5	88.9	87.3	87.2	86.5	87.9
Producers' durable equipment	7.4	7.8	7.5	7.6	7.5	7.8	7.9	8.2

1. Includes new computers and peripheral equipment only.

6. Income, Employment, and Product by Industry

Table 6.1C.—National Income Without Capital Consumption Adjustment by Industry
[Billions of dollars]

	1993	1994	Seasonally adjusted at annual rates					
			1993		1994			
			III	IV	I	II	III	IV
National income without capital consumption adjustment	5,156.4		5,162.1	5,276.7	5,350.3	5,449.6	5,515.8	
Domestic industries	5,151.9		5,153.5	5,278.7	5,351.0	5,457.0	5,527.8	
Private industries	4,386.7		4,385.2	4,507.0	4,567.5	4,664.6	4,732.0	
Agriculture, forestry, and fisheries	95.1		73.4	103.8	107.9	101.0	92.8	
Mining	40.4		39.8	40.9	39.7	38.7	41.5	
Construction	215.4		217.7	222.7	227.9	238.9	241.5	
Manufacturing	911.9		913.1	945.5	967.1	970.3	979.6	
Durable goods	514.3		518.2	539.1	554.9	554.9	560.8	
Nondurable goods	397.6		394.9	406.4	412.2	415.4	418.8	
Transportation and public utilities	384.8		388.1	392.2	391.0	404.8	412.1	
Transportation	166.1		168.9	170.2	169.3	175.9	180.3	
Communications	107.6		108.4	107.7	110.1	112.6	113.0	
Electric, gas, and sanitary services	111.1		110.9	114.3	111.6	116.3	118.8	
Wholesale trade	288.6		288.3	294.3	300.2	312.6	311.7	
Retail trade	444.9		449.4	451.4	455.8	472.2	482.3	
Finance, insurance, and real estate	846.0		848.4	865.2	860.7	885.0	903.0	
Services	1,159.6		1,167.1	1,190.9	1,217.2	1,241.1	1,267.5	
Government	765.2		768.3	771.7	783.5	792.4	795.8	
Rest of the world	4.5		8.5	-1.9	-7	-7.4	-12.0	

Table 6.16C.—Corporate Profits by Industry
[Billions of dollars]

	1993	1994	Seasonally adjusted at annual rates					
			1993		1994			
			III	IV	I	II	III	IV
Corporate profits with inventory valuation and capital consumption adjustments	485.8		493.5	533.9	508.2	546.4	556.0	
Domestic industries	420.5		424.3	472.2	447.1	485.7	495.7	
Financial	89.5		90.0	100.6	74.9	90.9	96.6	
Nonfinancial	330.9		334.3	371.6	372.2	394.7	399.1	
Rest of the world	65.3		69.1	61.7	61.1	60.7	60.3	
Receipts from the rest of the world	74.2		75.2	74.7	77.6	79.1	89.9	
Less: Payments to the rest of the world	8.9		6.1	13.0	16.6	18.4	29.6	
Corporate profits with inventory valuation adjustment	456.2		461.7	495.1	471.2	509.0	518.5	
Domestic industries	391.0		392.6	433.4	410.1	448.2	458.1	
Financial	103.7		103.9	114.6	89.6	106.4	112.6	
Federal Reserve banks	16.0		15.7	15.8	16.0	16.9	18.0	
Other	87.7		88.2	98.8	73.6	89.6	94.6	
Nonfinancial	287.3		288.7	318.8	320.5	341.8	345.5	
Manufacturing	114.2		112.4	134.2	145.1	143.0	143.3	
Durable goods	49.4		52.2	64.0	71.4	69.4	70.3	
Primary metal industries .....	.2		-.2	1.8	.2	.9	.6	
Fabricated metal products	6.8		6.7	7.8	9.0	9.0	9.0	
Industrial machinery and equipment	7.4		9.1	7.6	9.3	9.0	7.9	
Electronic and other electric equipment	11.9		13.0	14.9	16.6	17.9	21.4	
Motor vehicles and equipment	4.1		3.1	10.3	14.4	9.7	8.8	
Other	19.0		20.4	21.5	21.8	22.9	22.6	
Nondurable goods	64.9		60.2	70.2	73.8	73.5	73.0	
Food and kindred products	16.9		16.3	15.9	20.9	20.3	20.3	
Chemicals and allied products	17.5		15.7	18.8	18.4	19.1	18.4	
Petroleum and coal products	4.7		5.4	9.1	5.5	4.6	6.6	
Other	25.8		22.9	26.4	29.0	29.5	27.8	
Transportation and public utilities	65.0		67.0	69.7	63.4	73.2	74.4	
Wholesale and retail trade	61.2		62.0	63.7	59.0	72.0	70.1	
Other	46.9		47.3	51.3	53.0	53.6	57.7	
Rest of the world	65.3		69.1	61.7	61.1	60.7	60.3	

Table 7.1.—Fixed-Weighted and Alternative Quantity and Price Indexes for Gross Domestic Product—Continued

[Index numbers, 1987=100]

	1993	1994	Seasonally adjusted					
			1993		1994			
			III	IV	I	II	III	IV
Government purchases:								
Current dollars	130.3	133.3	130.8	131.3	131.6	132.3	134.9	134.5
Quantity indexes:								
Fixed 1987 weights	105.5	104.7	105.7	105.7	104.4	104.0	105.7	104.7
Chain-type annual weights	105.3	104.6	105.4	105.3	104.4	104.1	105.6	104.4
Benchmark-years weights	105.1	104.4	105.2	105.1	104.2	103.8	105.3	104.2
Price indexes:								
Fixed 1987 weights	124.5	128.6	124.9	125.4	126.7	128.3	129.2	130.2
Chain-type annual weights	123.7	127.6	124.1	124.6	126.1	127.3	128.1	129.1
Benchmark-years weights	124.0	127.9	124.3	124.9	126.3	127.6	128.3	129.3
Implicit price deflator	123.5	127.3	123.7	124.2	126.1	127.2	127.6	128.4
Federal:								
Current dollars	115.2	113.6	115.0	114.2	113.7	113.0	115.4	112.2
Quantity indexes:								
Fixed 1987 weights	92.7	87.8	92.4	91.2	88.8	87.0	89.2	86.1
Chain-type annual weights	92.5	86.0	91.9	90.9	89.2	87.4	89.3	86.0
Benchmark-years weights	92.1	87.6	91.6	90.5	88.9	87.1	89.0	85.6
Price indexes:								
Fixed 1987 weights	126.1	131.1	126.5	127.0	128.5	130.9	131.9	133.0
Chain-type annual weights	124.6	129.6	125.0	125.7	127.5	129.6	130.1	131.3
Benchmark-years weights	125.1	130.0	125.5	126.2	128.0	130.0	130.5	131.7
Implicit price deflator	124.4	129.4	124.5	125.3	128.1	130.0	129.3	130.4
National defense:								
Current dollars	103.7	100.0	102.4	102.4	99.9	99.9	102.9	97.5
Quantity indexes:								
Fixed 1987 weights	83.4	77.6	82.5	81.7	78.2	77.4	79.8	75.0
Chain-type annual weights	82.8	77.4	81.5	80.9	78.2	77.3	79.5	74.7
Benchmark-years weights	82.7	77.4	81.5	80.8	78.1	77.3	79.4	74.6
Price indexes:								
Fixed 1987 weights	126.6	131.5	127.0	127.9	129.0	131.1	132.5	133.3
Chain-type annual weights	125.3	129.9	125.6	126.6	127.8	129.5	130.7	131.5
Benchmark-years weights	125.3	129.9	125.6	126.7	127.9	129.5	130.6	131.5
Implicit price deflator	124.2	128.9	124.1	125.3	127.7	129.0	129.0	130.0
Nondefense:								
Current dollars	151.7	156.2	154.6	151.4	157.3	154.5	154.8	158.4
Quantity indexes:								
Fixed 1987 weights	121.7	119.7	123.5	121.0	121.8	117.0	119.0	120.9
Chain-type annual weights	123.4	121.6	125.1	122.6	124.4	119.5	120.8	121.9
Benchmark-years weights	122.0	120.2	123.6	121.2	122.9	118.0	119.4	120.6
Price indexes:								
Fixed 1987 weights	124.3	129.9	125.1	124.4	127.2	130.5	130.1	132.0
Chain-type annual weights	122.9	128.6	123.6	123.5	126.5	129.4	128.5	130.3
Benchmark-years weights	124.4	130.2	125.1	125.0	127.9	130.9	130.0	131.8
Implicit price deflator	124.7	130.5	125.2	125.1	129.1	132.0	130.1	131.0
State and local:								
Current dollars	141.9	148.6	143.0	144.5	145.4	147.3	149.9	151.8
Quantity indexes:								
Fixed 1987 weights	115.4	117.8	116.0	116.9	116.4	117.3	118.5	119.2
Chain-type annual weights	115.1	117.5	115.7	116.5	116.2	116.9	118.1	118.8
Benchmark-years weights	115.2	117.5	115.7	116.5	116.2	117.0	118.1	118.8
Price indexes:								
Fixed 1987 weights	123.4	126.6	123.7	124.1	125.3	126.2	127.1	128.0
Chain-type annual weights	123.3	126.5	123.6	124.0	125.2	126.0	126.9	127.8
Benchmark-years weights	123.2	126.4	123.6	124.0	125.2	126.0	126.9	127.8
Implicit price deflator	123.0	126.1	123.3	123.6	124.9	125.6	126.5	127.4

NOTE.—The quantity and price indexes in this table are calculated from weighted averages of the detailed output and prices used to prepare each aggregate and component. The fixed-weighted measures use as weights the composition of output in 1987. For the alternative indexes, the chain-type indexes with annual weights use weights for the preceding and current years, and the indexes with benchmark-years weights use weights of 1959, 1963, 1967, 1972, 1977, 1982, 1987, 1992, and the most recent year. Percent changes from preceding period for selected items in this table are shown in table 8.1.

Table 7.2.—Fixed-Weighted and Alternative Quantity and Price Indexes for Gross Domestic Product, Final Sales, and Purchases

[Index numbers, 1987=100]

	1993	1994	Seasonally adjusted					
			1993		1994			
			III	IV	I	II	III	IV
Gross domestic product:								
Current dollars	139.7	148.4	140.1	142.7	144.8	147.4	149.6	151.7
Quantity indexes:								
Fixed 1987 weights	113.1	117.7	113.2	114.9	115.9	117.1	118.2	119.5
Chain-type annual weights	112.2	116.1	112.2	113.6	114.5	115.6	116.7	117.7
Benchmark-years weights	112.0	115.9	112.0	113.4	114.3	115.5	116.5	117.5
Price indexes:								
Fixed 1987 weights	125.5	128.9	125.8	126.6	127.5	128.5	129.4	130.3
Chain-type annual weights	124.6	127.9	124.9	125.6	126.6	127.5	128.4	129.1
Benchmark-years weights	124.8	128.1	125.1	125.8	126.8	127.7	128.5	129.3
Implicit price deflator	123.5	126.1	123.7	124.1	125.0	125.9	126.5	126.9
Final sales of domestic product¹:								
Current dollars	140.2	148.1	140.6	143.3	145.1	146.7	149.1	151.4
Quantity indexes:								
Fixed 1987 weights	113.4	117.3	113.6	115.4	116.0	116.4	117.6	119.2
Chain-type annual weights	112.4	115.7	112.4	114.0	114.6	115.0	116.1	117.3
Benchmark-years weights	112.3	115.7	112.4	113.9	114.5	114.9	116.0	117.2
Price indexes:								
Fixed 1987 weights	125.6	129.0	125.9	126.7	127.7	128.6	129.5	130.4
Chain-type annual weights	124.7	128.1	125.0	125.8	126.8	127.6	128.5	129.3
Benchmark-years weights	124.8	128.1	125.1	125.9	126.9	127.7	128.6	129.4
Implicit price deflator	123.6	126.2	123.8	124.2	125.1	126.0	126.7	127.1
Gross domestic purchases²:								
Current dollars	136.8	145.9	137.4	139.9	142.2	144.9	147.4	149.2
Quantity indexes:								
Fixed 1987 weights	111.2	116.4	111.6	113.2	114.6	115.9	117.1	118.2
Chain-type annual weights	110.0	114.5	110.2	111.5	112.8	114.0	115.1	115.9
Benchmark-years weights	110.0	114.4	110.2	111.5	112.8	114.0	115.1	115.9
Price indexes:								
Fixed 1987 weights	125.2	128.5	125.4	126.2	127.0	128.0	129.1	129.9
Chain-type annual weights	124.4	127.6	124.7	125.4	126.2	127.2	128.2	128.9
Benchmark-years weights	124.5	127.7	124.7	125.5	126.3	127.2	128.2	129.0
Implicit price deflator	123.0	125.3	123.2	123.6	124.2	125.1	125.8	126.2
Final sales to domestic purchasers³:								
Current dollars	137.3	145.7	137.9	140.4	142.5	144.3	146.9	148.9
Quantity indexes:								
Fixed 1987 weights	111.5	116.1	111.9	113.6	114.7	115.2	116.5	117.9
Chain-type annual weights	110.2	114.1	110.5	111.9	112.9	113.4	114.5	115.6
Benchmark-years weights	110.3	114.2	110.5	111.9	112.9	113.5	114.6	115.6
Price indexes:								
Fixed 1987 weights	125.3	128.6	125.5	126.3	127.1	128.1	129.2	130.0
Chain-type annual weights	124.6	127.8	124.8	125.6	126.4	127.3	128.3	129.1
Benchmark-years weights	124.5	127.7	124.8	125.5	126.3	127.3	128.3	129.0
Implicit price deflator	123.1	125.5	123.2	123.6	124.3	125.2	126.0	126.4

1. Equals GDP less change in business inventories.

2. Equals GDP less net exports of goods and services or equals the sum of personal consumption expenditures, gross private domestic investment, and government purchases.

3. Equals gross domestic purchases less change in business inventories or equals the sum of personal consumption expenditures, gross private domestic fixed investment, and government purchases.

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

Table 7.3.—Fixed-Weighted and Alternative Quantity and Price Indexes for Gross National Product and Command-Basis Gross National Product

[Index numbers, 1987=100]

	1993	1994	Seasonally adjusted					
			1993		1994			
			III	IV	I	II	III	IV
Gross national product:								
Current dollars	139.7		140.1	142.5	144.7	147.0	149.2	
Quantity indexes:								
Fixed 1987 weights	113.1		113.3	114.8	115.8	116.9	117.9	
Chain-type annual weights	112.2		112.3	113.5	114.4	115.4	116.4	
Benchmark-years weights	112.0		112.1	113.3	114.2	115.3	116.2	
Price indexes:								
Fixed 1987 weights	125.4		125.7	126.5	127.5	128.4	129.4	
Chain-type annual weights	124.5		124.8	125.6	126.6	127.4	128.3	
Benchmark-years weights	124.7		125.0	125.8	126.8	127.6	128.5	
Implicit price deflator	123.5		123.7	124.1	124.9	125.8	126.5	
Less: Exports of goods and services and receipts of factor income:								
Current dollars	169.6		167.6	175.2	174.8	184.8	193.4	
Quantity index, fixed 1987 weights ..	151.7		150.2	157.3	156.6	164.4	171.5	
Plus: Command-basis exports of goods and services and receipts of factor income:								
Current dollars	181.1		178.3	186.9	185.3	193.6	200.7	
Quantity index, fixed 1987 weights ..	154.5		153.4	160.4	161.2	168.6	174.5	
Equals: Command-basis gross national product:								
Current dollars	139.7		140.1	142.5	144.7	147.0	149.2	
Quantity index, fixed 1987 weights ..	113.4		113.6	115.2	116.3	117.3	118.3	

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

Table 7.4.—Price Indexes for Personal Consumption Expenditures by Major Type of Product, Fixed 1987 Weights

[Index numbers, 1987=100]

Personal consumption expenditures	128.1	131.2	128.3	129.1	129.8	130.7	131.8	132.6
Durable goods	113.9	117.0	114.3	115.0	115.5	116.7	117.8	118.1
Motor vehicles and parts	116.1	120.5	117.0	117.8	118.3	119.7	121.5	122.7
Furniture and household equipment ..	104.3	105.7	104.2	104.9	105.3	105.9	106.1	105.5
Other	126.8	130.1	126.8	127.1	128.3	129.9	131.2	131.0
Nondurable goods	125.0	126.6	124.7	125.4	125.4	125.9	127.3	127.7
Food	124.4	127.3	124.5	125.6	125.9	126.3	128.0	128.9
Clothing and shoes	119.2	118.3	118.9	119.1	118.9	119.3	118.1	116.9
Gasoline and oil	122.1	122.8	118.9	120.5	119.9	119.5	125.7	126.2
Fuel oil and coal	116.0	114.2	116.2	113.6	115.3	114.4	114.5	112.9
Other	131.8	133.1	131.8	131.7	131.6	132.7	133.5	134.6
Services	133.5	137.6	133.9	135.0	135.9	137.0	138.1	139.2
Housing	127.9	131.9	128.3	129.2	130.5	131.3	132.3	133.4
Household operation	115.4	117.5	116.2	116.7	117.0	117.4	117.7	117.9
Electricity and gas	114.4	115.0	115.6	115.6	115.0	115.0	115.1	115.0
Other household operation	116.3	119.7	116.7	117.7	118.8	119.5	120.0	120.3
Transportation	134.3	136.4	134.5	134.5	135.1	136.4	137.3	137.0
Medical care	147.3	153.5	148.2	149.8	151.2	152.7	154.2	155.9
Other	134.5	138.2	134.6	135.8	136.5	137.7	138.8	139.9
Addenda:								
Price indexes for personal consumption expenditures:								
Chain-type annual weights	127.5	130.7	127.7	128.6	129.2	130.2	131.3	132.0
Benchmark-years weights	127.5	130.7	127.7	128.6	129.2	130.2	131.3	132.0

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

Table 7.6.—Price Indexes for Fixed Investment by Type, Fixed 1987 Weights

[Index numbers, 1987=100]

	1993	1994	Seasonally adjusted					
			1993		1994			
			III	IV	I	II	III	IV
Fixed investment	114.4	117.5	114.7	115.3	116.2	117.0	118.1	118.8
Nonresidential	113.0	115.5	113.3	113.7	114.4	115.2	116.0	116.4
Structures	117.3	121.2	117.8	118.8	119.7	120.3	121.7	123.2
Nonresidential buildings, including								
farm	117.5	121.8	118.1	119.2	120.0	120.7	122.4	124.0
Utilities	118.9	122.9	119.4	120.3	121.7	122.7	123.1	124.1
Mining exploration, shafts, and wells	114.3	115.4	114.3	114.7	115.8	114.4	114.6	116.9
Other structures	112.7	116.0	112.9	113.5	114.3	115.4	116.7	117.8
Producers' durable equipment	110.7	112.5	110.9	111.1	111.7	112.5	113.0	112.8
Information processing and related equipment	91.7	91.1	91.3	91.2	91.1	91.3	91.1	90.8
Computers and peripheral equipment ¹	51.5	46.5	50.3	48.5	47.7	47.4	46.0	44.8
Other	109.7	111.1	109.7	110.3	110.6	111.0	111.2	111.4
Industrial equipment	122.3	125.1	122.6	123.2	123.8	124.6	125.5	126.3
Transportation and related equipment	119.2	122.5	119.7	119.6	121.2	122.9	123.8	122.3
Other	119.4	122.0	119.7	120.3	120.9	121.9	122.6	122.8
Residential	117.4	122.0	118.0	118.8	120.2	121.0	122.8	124.2
Structures	117.7	122.4	118.3	119.2	120.5	121.3	123.2	124.6
Single family	118.9	123.9	119.8	121.0	121.9	122.4	124.7	126.6
Multifamily	112.8	116.7	113.2	114.0	114.9	115.3	117.5	119.3
Other structures	117.5	122.1	117.8	118.2	120.3	121.7	122.8	123.4
Producers' durable equipment	105.5	108.0	105.9	106.3	106.8	107.8	108.8	108.6
Addenda:								
Price indexes for fixed investment:								
Chain-type annual weights	112.4	114.9	112.7	113.0	113.8	114.6	115.5	115.8
Benchmark-years weights	111.9	114.4	112.1	112.4	113.3	114.0	114.9	115.3

1. Includes new computers and peripheral equipment only.

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

Table 7.9.—Price Indexes for Exports and Imports of Goods and Services and for Receipts and Payments of Factor Income, Fixed 1987 Weights

[Index numbers, 1987=100]

Exports of goods and services	115.3	118.1	115.4	115.6	116.7	117.5	118.4	119.9
Merchandise ¹	110.3	113.1	110.4	110.6	111.8	112.4	113.2	115.1
Durable	110.6	111.8	110.7	110.7	111.2	111.5	111.9	112.7
Nondurable	109.8	115.4	110.0	110.4	112.9	114.0	115.4	119.3
Services ¹	127.3	130.1	127.6	127.8	128.4	129.7	130.9	131.5
Receipts of factor income²	125.1	125.3	125.7	126.6	127.5	128.2	128.2	128.2
Imports of goods and services	115.2	117.2	115.0	115.3	114.5	116.2	118.5	119.4
Merchandise ¹	111.8	114.0	111.7	111.7	110.9	113.0	115.5	116.4
Durable	114.0	116.6	114.2	115.1	115.4	116.1	116.9	118.2
Nondurable	107.9	109.2	107.3	105.6	103.2	107.7	112.9	113.2
Services ¹	130.7	131.5	130.0	131.9	130.8	130.4	132.1	132.9
Payments of factor income³	128.0	128.2	128.7	129.6	130.5	131.2	131.2	131.2
Addenda:								
Price indexes for exports of goods and services:								
Chain-type annual weights	113.4	115.4	113.4	113.5	114.2	114.9	115.7	116.9
Benchmark-years weights	112.6	114.7	112.7	112.7	113.5	114.2	115.0	116.2
Price indexes for imports of goods and services:								
Chain-type annual weights	112.8	113.9	112.5	112.5	111.6	113.1	115.1	115.8
Benchmark-years weights	111.7	112.9	111.4	111.4	110.5	112.1	114.1	114.8

1. Exports and imports of certain goods, primarily military equipment purchased and sold by the Federal Government, are included in services.

2. Consists largely of receipts by U.S. residents of interest and dividends and reinvested earnings of foreign affiliates of U.S. corporations.

3. Consists largely of payments to foreign residents of interest and dividends and reinvested earnings of U.S. affiliates of foreign corporations.

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

Table 7.10.—Price Indexes for Exports and Imports of Merchandise by End-Use Category, Fixed 1987 Weights

[Index numbers, 1987=100]

	1993	1994	Seasonally adjusted					
			1993		1994			
			III	IV	I	II	III	IV
Exports of merchandise	110.3	113.1	110.4	110.6	111.8	112.4	113.2	115.1
Foods, feeds, and beverages	116.2	120.4	118.2	120.2	125.8	122.4	115.8	117.8
Industrial supplies and materials	109.2	116.7	109.1	108.4	110.6	113.6	118.5	124.2
Durable goods	125.3	130.4	126.3	125.1	127.8	128.7	130.5	134.6
Nondurable goods	102.0	110.5	101.3	100.9	102.8	106.7	113.1	119.5
Capital goods, except automotive	105.7	105.9	105.6	105.8	105.9	105.9	106.0	106.1
Civilian aircraft, engines, and parts ...	126.0	129.7	126.4	127.6	127.9	128.6	130.4	131.8
Computers, peripherals, and parts	50.6	45.7	49.4	47.7	46.9	46.5	45.1	44.0
Other	117.9	118.9	118.1	118.6	118.8	118.8	119.0	119.0
Automotive vehicles, engines, and parts	113.2	114.3	113.0	113.3	113.8	114.0	114.3	115.0
Consumer goods, except automotive	119.7	120.0	119.6	119.8	120.0	120.0	119.8	120.2
Durable goods	114.9	115.4	114.7	114.7	115.2	115.4	115.2	115.6
Nondurable goods	123.8	124.1	123.9	124.2	124.2	124.1	123.9	124.2
Other	113.8	116.1	113.7	114.1	114.8	115.4	116.3	117.8
Durable goods	113.8	116.0	113.7	114.1	114.8	115.3	116.3	117.8
Nondurable goods	113.8	116.0	113.7	114.1	114.8	115.3	116.3	117.8
Imports of merchandise	111.8	114.0	111.7	111.7	110.9	113.0	115.5	116.4
Foods, feeds, and beverages	108.0	119.7	109.0	110.8	110.8	115.0	125.6	127.5
Industrial supplies and materials, except petroleum and products	113.1	116.6	112.7	112.7	113.5	114.9	117.0	121.1
Durable goods	114.6	118.7	114.1	114.7	115.9	117.4	118.8	122.5
Nondurable goods	111.5	114.5	111.2	110.5	110.9	112.2	115.2	119.6
Petroleum and products	91.1	85.7	88.4	81.9	73.6	85.2	94.3	89.6
Capital goods, except automotive	107.8	109.5	108.3	108.6	108.3	109.0	110.0	110.6
Civilian aircraft, engines, and parts ...	126.1	129.7	126.4	127.6	127.9	128.6	130.4	131.7
Computers, peripherals, and parts	54.3	49.0	53.2	51.1	50.0	49.6	48.8	47.5
Other	118.4	121.5	119.3	120.1	119.9	120.8	122.1	123.1
Automotive vehicles, engines, and parts	116.9	120.9	117.1	119.0	119.5	120.3	121.0	122.8
Consumer goods, except automotive	119.7	120.7	120.0	120.3	120.1	120.4	120.9	121.3
Durable goods	118.8	119.8	119.2	119.5	119.6	119.7	119.9	120.1
Nondurable goods	120.7	121.7	121.0	121.3	120.7	121.3	122.1	122.7
Other	115.9	119.0	116.3	117.3	117.2	118.2	119.4	121.2
Durable goods	115.9	118.9	116.3	117.2	117.1	118.1	119.4	121.1
Nondurable goods	115.9	118.9	116.3	117.2	117.1	118.1	119.4	121.1
Addenda:								
Exports of agricultural products ¹	113.3	119.0	114.9	116.7	122.6	120.0	115.2	118.3
Exports of nonagricultural products ...	109.9	112.4	109.9	109.8	110.5	111.4	112.9	114.7
Imports of nonpetroleum products	114.2	117.3	114.4	115.2	115.3	116.3	118.0	119.6

1. Includes parts of: Exports of foods, feeds, and beverages, of nondurable industrial supplies and materials, and of nondurable consumer goods.

Table 7.11.—Price Indexes for Government Purchases by Type, Fixed 1987 Weights

[Index numbers, 1987=100]

	1993	1994	Seasonally adjusted					
			1993		1994			
			III	IV	I	II	III	IV
Government purchases	124.5	128.6	124.9	125.4	126.7	128.3	129.2	130.2
Federal	126.1	131.1	126.5	127.0	128.5	130.9	131.9	133.0
National defense	126.6	131.5	127.0	127.9	129.0	131.1	132.5	133.3
Durable goods	116.7	121.4	116.0	116.7	117.6	121.0	122.6	124.4
Nondurable goods	113.8	112.9	112.6	111.9	107.3	111.7	115.5	116.9
Services	131.9	137.1	132.7	133.7	135.3	136.7	137.9	138.3
Compensation of employees	140.8	148.2	141.9	143.3	146.0	147.9	149.1	149.7
Military	140.3	145.7	140.1	141.2	143.8	145.7	146.4	147.0
Civilian	141.8	153.2	145.6	147.6	150.4	152.4	154.6	155.2
Other services	119.1	121.3	119.5	120.2	120.9	122.0	122.0	122.1
Structures	132.4	139.2	136.6	137.2	138.0	138.7	139.6	140.6
Nondefense	124.3	129.9	125.1	124.4	127.2	130.5	130.1	132.0
Durable goods	93.0	93.2	94.0	90.2	92.4	92.4	93.1	94.9
Nondurable goods								
Commodity Credit Corporation inventory change								
Other nondurables	106.3	106.5	106.3	105.5	105.9	105.6	106.7	107.6
Services	129.9	137.0	130.7	130.7	134.4	138.2	136.8	138.8
Compensation of employees	136.9	148.2	138.5	137.7	143.7	150.3	147.9	151.0
Other services	120.1	121.4	119.8	120.9	121.5	121.3	121.3	121.6
Structures	116.3	119.8	116.6	117.4	118.2	119.1	120.3	121.5
State and local	123.4	126.6	123.7	124.1	125.3	126.2	127.1	128.0
Durable goods	115.1	117.2	115.5	115.3	116.4	117.2	117.9	117.4
Nondurable goods	116.2	117.1	115.6	114.5	116.2	116.4	117.9	117.8
Services	126.9	130.5	127.4	128.0	129.1	130.1	130.8	131.8
Compensation of employees	133.0	137.4	133.6	134.4	135.8	136.9	137.9	139.2
Other services	60.4	54.2	59.4	57.3	56.4	55.6	53.0	52.0
Structures	112.8	116.6	112.9	113.9	115.0	115.6	117.1	118.5
Addenda:								
Price indexes for government purchases:								
Chain-type annual weights	123.7	127.6	124.1	124.6	126.1	127.3	128.1	129.1
Benchmark-years weights	124.0	127.9	124.3	124.9	126.3	127.6	128.3	129.3
Price indexes for Federal national defense purchases:								
Chain-type annual weights	125.3	129.9	125.6	126.6	127.8	129.5	130.7	131.5
Benchmark-years weights	125.3	129.9	125.6	126.7	127.9	129.5	130.6	131.5
Price indexes for Federal nondefense purchases:								
Chain-type annual weights	122.9	128.6	123.6	123.5	126.5	129.4	128.5	130.3
Benchmark-years weights	124.4	130.2	125.1	125.0	127.9	130.9	130.0	131.8
Price indexes for State and local purchases:								
Chain-type annual weights	123.3	126.5	123.6	124.0	125.2	126.0	126.9	127.8
Benchmark-years weights	123.2	126.4	123.6	124.0	125.2	126.0	126.9	127.8

Table 7.12.—Price indexes for National Defense Purchases, Fixed 1987 Weights

[Index numbers, 1987=100]

	1993	1994	Seasonally adjusted					
			1993		1994			
			III	IV	I	II	III	IV
National defense purchases ...	126.6	131.5	127.0	127.9	129.0	131.1	132.5	133.3
Durable goods	116.7	121.4	116.0	116.7	117.6	121.0	122.6	124.4
Military equipment	117.9	122.9	117.1	117.9	118.8	122.5	124.3	126.2
Aircraft	124.6	133.6	125.3	124.3	125.7	133.3	137.2	138.2
Missiles	95.7	95.7	89.6	95.8	95.3	94.6	92.6	100.3
Ships	121.7	125.4	122.6	122.1	123.3	124.5	125.8	128.0
Vehicles	128.2	132.9	127.1	128.5	129.9	131.5	135.5	134.9
Electronic equipment	109.5	110.4	109.3	109.7	110.1	111.1	110.2	110.2
Other	118.4	119.7	118.2	118.7	118.9	120.0	119.9	119.8
Other durable goods	105.1	105.4	104.8	105.1	105.4	105.5	105.3	105.3
Nondurable goods	113.8	112.9	112.6	111.9	107.3	111.7	115.5	116.9
Petroleum products	113.1	109.3	111.6	109.5	95.1	107.1	116.5	118.4
Ammunition	112.6	114.8	111.4	112.1	113.0	113.7	115.3	117.1
Other nondurable goods	115.6	114.9	114.7	114.2	115.0	114.7	114.6	115.2
Services	131.9	137.1	132.7	133.7	135.3	136.7	137.9	138.3
Compensation of employees	140.8	148.2	141.9	143.3	146.0	147.9	149.1	149.7
Military	140.3	145.7	140.1	141.2	143.8	145.7	146.4	147.0
Civilian	141.8	153.2	145.6	147.6	150.4	152.4	154.6	155.2
Other services	119.1	121.3	119.5	120.2	120.2	120.9	122.0	122.1
Contractual research and development	113.5	114.0	113.4	114.2	113.3	113.9	114.3	114.6
Installation support ¹	117.3	120.1	118.3	118.1	118.6	119.6	121.3	121.1
Weapons support ²	124.4	127.2	124.4	126.1	127.7	126.8	127.1	127.3
Personnel support ³	136.6	141.5	137.2	138.0	137.4	140.6	143.3	144.6
Transportation of material	105.3	105.3	105.8	105.4	105.3	105.5	105.1	105.4
Travel of persons	116.5	117.4	116.4	118.5	119.5	117.8	118.1	114.4
Other								
Structures	132.4	139.2	136.6	137.2	138.0	138.7	139.6	140.6
Military facilities	131.0	139.2	137.4	137.8	138.3	139.3	139.5	139.8
Other	135.1	139.2	135.1	136.2	137.3	137.7	139.9	142.0
Addenda:								
Price indexes for national defense purchases:								
Chain-type annual weights	125.3	129.9	125.6	126.6	127.8	129.5	130.7	131.5
Benchmark-years weights	125.3	129.9	125.6	126.7	127.9	129.5	130.6	131.5

1. Includes utilities, communications, rental payments, maintenance and repair, and payments to contractors to operate installations.
 2. Includes depot maintenance and contractual services for weapons systems, other than research and development.
 3. Includes compensation of foreign personnel, consulting, training, and education.

Table 7.13.—Implicit Price Deflators for the Relation of Gross Domestic Product, Gross National Product, Net National Product, and National Income

[Index numbers, 1987=100]

Gross domestic product	123.5	126.1	123.7	124.1	125.0	125.9	126.5	126.9
Plus: Receipts of factor income from the rest of the world ¹	125.1		125.3	125.7	126.6	127.5	128.2	
Less: Payments of factor income to the rest of the world ²	127.8		128.1	128.3	129.1	129.7	130.2	
Equals: Gross national product	123.5		123.7	124.1	124.9	125.8	126.5	
Less: Consumption of fixed capital	111.6	113.8	111.9	112.0	113.3	113.6	114.2	114.3
Equals: Net national product	125.1		125.3	125.7	126.6	127.4	128.1	
Less: Indirect business tax and nontax liability plus business transfer payments less subsidies plus current surplus of government enterprises	129.4	133.3	131.8	130.0	131.1	132.8	135.7	133.7
Statistical discrepancy	121.8		122.0	122.3	123.0	123.9	124.5	
Equals: National income	124.6		124.6	125.2	126.1	126.9	127.3	
Addenda:								
Net domestic product	125.1	127.7	125.3	125.7	126.6	127.5	128.2	128.6
Domestic income	124.7		124.7	125.3	126.1	126.9	127.4	

1. Consists largely of receipts by U.S. residents of interest and dividends and reinvested earnings of foreign affiliates of U.S. corporations.
 2. Consists largely of payments to foreign residents of interest and dividends and reinvested earnings of U.S. affiliates of foreign corporations.

Table 7.14.—Implicit Price Deflators for Gross Domestic Product by Sector

[Index numbers, 1987=100]

	1993	1994	Seasonally adjusted					
			1993		1994			
			III	IV	I	II	III	IV
Gross domestic product	123.5	126.1	123.7	124.1	125.0	125.9	126.5	126.9
Business	121.8	124.1	122.0	122.3	123.0	123.9	124.5	124.8
Nonfarm	122.1	124.4	122.2	122.5	123.2	124.3	125.0	125.2
Nonfarm less housing	121.5	123.7	121.7	121.9	122.2	123.7	124.4	124.5
Housing	127.2	131.5	127.4	128.2	132.3	130.2	131.2	132.4
Farm	106.1	103.3	102.1	110.1	114.9	101.9	97.4	100.1
Statistical discrepancy	121.8	124.1	122.0	122.3	123.0	123.9	124.5	124.8
Households and institutions	132.3	135.7	132.2	133.4	134.3	134.9	136.1	137.4
Private households	119.4	123.1	119.9	121.1	121.8	122.5	123.5	124.4
Nonprofit institutions	132.9	136.3	132.8	133.9	134.9	135.4	136.7	138.0
General government	134.7	140.3	135.6	136.3	138.4	140.1	140.8	142.1
Federal	139.4	148.4	140.8	141.4	145.4	148.9	148.9	150.4
State and local	132.9	137.3	133.5	134.3	135.6	136.8	137.8	139.0
Addendum:								
Gross domestic business product less housing	121.3							

Table 7.15.—Current-Dollar Cost and Profit Per Unit of Constant-Dollar Gross Domestic Product of Nonfinancial Corporate Business

[Dollars]

Current-dollar cost and profit per unit of constant-dollar gross domestic product ¹ ..	1.159	1.157	1.159	1.165	1.170	1.175	
Consumption of fixed capital .....	.123	.124	.120	.125	.121	.122	
Net domestic product	1.036	1.033	1.038	1.040	1.049	1.053	
Indirect business tax and nontax liability plus business transfer payments less subsidies .....	.117	.116	.117	.117	.117	.118	
Domestic income .....	.919	.917	.921	.923	.932	.935	
Compensation of employees .....	.768	.766	.760	.763	.766	.768	
Corporate profits with inventory valuation and capital consumption adjustments .....	.112	.113	.123	.122	.127	.127	
Profits tax liability .....	.040	.038	.043	.043	.046	.047	
Profits after tax with inventory valuation and capital consumption adjustments .....	.073	.075	.080	.078	.081	.080	
Net interest .....	.039	.039	.038	.038	.039	.040	

1. Equals the deflator for gross domestic product of nonfinancial corporate business with the decimal point shifted two places to the left.

Table 8.1.—Percent Change From Preceding Period in Selected Series—Continued

	[Percent]							
	1993	1994	Seasonally adjusted at annual rates					
			1993		1994			
			III	IV	I	II	III	IV
Nondefense:								
Current dollars	4.5	3.0	12.6	-7.8	16.3	-6.9	8	9.5
Quantity indexes:								
Fixed 1987 weights .....	.7	-1.6	12.0	-7.8	2.9	-15.0	6.8	6.7
Chain-type annual weights .....	.8	-1.5	10.6	-7.9	6.0	-14.8	4.5	3.7
Benchmark-years weights .....	.8	-1.4	10.8	-7.7	5.8	-14.8	4.7	3.9
Price indexes:								
Fixed 1987 weights	3.7	4.5	1.1	-2.0	9.1	10.9	-1.1	5.8
Chain-type annual weights	3.7	4.7	1.7	-2	9.8	9.4	-2.7	5.9
Benchmark-years weights	3.7	4.6	1.5	-4	9.9	9.5	-2.7	5.8
State and local:								
Current dollars	4.2	4.7	5.2	4.1	2.6	5.4	7.3	5.0
Quantity indexes:								
Fixed 1987 weights	1.7	2.1	3.7	2.9	-1.4	2.9	4.3	2.3
Chain-type annual weights	1.6	2.0	3.5	2.7	-1.1	2.7	4.1	2.2
Benchmark-years weights	1.6	2.0	3.5	2.7	-1.2	2.7	4.1	2.2
Price indexes:								
Fixed 1987 weights	2.5	2.7	1.8	1.5	3.9	2.7	2.9	2.8
Chain-type annual weights	2.5	2.6	1.7	1.4	3.8	2.6	3.0	2.8
Benchmark-years weights	2.5	2.6	1.7	1.4	3.8	2.6	3.0	2.8
Addenda:								
Final sales of domestic product:								
Current dollars	5.2	5.6	4.1	8.0	5.1	4.5	6.6	6.4
Quantity indexes:								
Fixed 1987 weights	2.9	3.4	3.2	6.4	2.2	1.5	4.3	5.3
Chain-type annual weights	2.3	3.0	2.1	5.5	2.2	1.5	3.9	4.2
Benchmark-years weights	2.3	3.0	2.2	5.4	2.2	1.5	3.9	4.3
Price indexes:								
Fixed 1987 weights	3.0	2.7	2.0	2.5	3.2	2.9	3.0	2.6
Chain-type annual weights	2.8	2.7	2.0	2.5	3.2	2.7	2.7	2.5
Benchmark-years weights	2.8	2.7	1.9	2.4	3.2	2.7	2.7	2.5
Gross domestic purchases:								
Current dollars	5.9	6.6	4.7	7.2	7.0	7.8	6.9	5.2
Quantity indexes:								
Fixed 1987 weights	3.9	4.7	4.0	5.8	5.0	4.6	4.4	3.9
Chain-type annual weights	3.2	4.1	3.0	4.7	4.7	4.4	3.8	2.9
Benchmark-years weights	3.2	4.1	3.0	4.7	4.7	4.4	3.8	3.0
Price indexes:								
Fixed 1987 weights	2.8	2.6	1.6	2.4	2.5	3.2	3.5	2.5
Chain-type annual weights	2.6	2.6	1.6	2.4	2.5	3.1	3.2	2.3
Benchmark-years weights	2.6	2.6	1.6	2.4	2.6	3.1	3.2	2.4
Final sales to domestic purchasers:								
Current dollars	5.7	6.1	5.0	7.5	6.1	5.1	7.2	5.8
Quantity indexes:								
Fixed 1987 weights	3.7	4.1	4.5	6.0	3.9	2.0	4.6	4.6
Chain-type annual weights	3.0	3.5	3.4	5.1	3.7	1.8	4.1	3.6
Benchmark-years weights	3.0	3.5	3.4	5.0	3.7	1.8	4.1	3.7
Price indexes:								
Fixed 1987 weights	2.8	2.6	1.6	2.4	2.5	3.2	3.5	2.5
Chain-type annual weights	2.6	2.6	1.6	2.4	2.5	3.1	3.2	2.3
Benchmark-years weights	2.6	2.6	1.6	2.4	2.6	3.1	3.2	2.3
Gross national product:								
Current dollars	5.3	.....	4.2	7.0	6.2	6.8	5.9	.....
Quantity indexes:								
Fixed 1987 weights	3.1	.....	3.0	5.6	3.4	3.7	3.8	.....
Chain-type annual weights	2.5	.....	2.1	4.4	3.2	3.7	3.3	.....
Benchmark-years weights	2.5	.....	2.1	4.4	3.2	3.7	3.4	.....
Price indexes:								
Fixed 1987 weights	3.0	.....	2.0	2.4	3.1	2.9	3.0	.....
Chain-type annual weights	2.8	.....	1.9	2.5	3.2	2.7	2.8	.....
Benchmark-years weights	2.8	.....	1.9	2.4	3.2	2.7	2.7	.....
Command-basis gross national product:								
Quantity index, fixed 1987 weights ...	3.3	.....	3.4	5.6	4.0	3.5	3.4	.....
Disposable personal income:								
Current dollars	4.1	5.8	1.9	6.7	4.7	6.8	6.4	9.3
1987 dollars	1.5	3.6	.8	4.3	3.4	3.5	3.1	7.7

NOTE.—Except for disposable personal income, the quantity and price indexes in this table are calculated from weighted averages of the detailed output and prices used to prepare each aggregate and component. The fixed-weighted measures use as weights the composition of output in 1987. For the alternative indexes, the chain-type indexes with annual weights use weights for the preceding and current years, and the indexes with benchmark-years weights use weights of 1959, 1963, 1967, 1972, 1977, 1982, 1987, 1992, and the most recent year.

Table 8.2.—Selected Per Capita Product and Income Series in Current and Constant Dollars and Population of the United States

	[Dollars]							
	1993	1994	Seasonally adjusted at annual rates					
			1993		1994			
			III	IV	I	II	III	IV
Current dollars:								
Gross domestic product	24,559	25,810	24,588	24,978	25,288	25,669	25,988	26,290
Gross national product	24,576	.....	24,621	24,970	25,285	25,640	25,942	.....
Personal income	20,810	21,847	20,863	21,147	21,369	21,717	21,943	22,357
Disposable personal income	18,153	19,004	18,174	18,421	18,588	18,853	19,095	19,476
Personal consumption expenditures ...	16,951	17,732	17,017	17,233	17,443	17,598	17,821	18,065
Durable goods	2,083	2,266	2,095	2,170	2,216	2,227	2,263	2,357
Nondurable goods	5,185	5,343	5,182	5,225	5,265	5,300	5,380	5,425
Services	9,683	10,123	9,740	9,838	9,961	10,071	10,178	10,283
Constant (1987) dollars:								
Gross domestic product	19,879	20,469	19,871	20,119	20,235	20,390	20,537	20,714
Gross national product	19,901	.....	19,906	20,122	20,242	20,376	20,509	.....
Disposable personal income	14,341	14,698	14,338	14,451	14,535	14,625	14,697	14,934
Personal consumption expenditures ...	13,391	13,715	13,425	13,519	13,640	13,651	13,717	13,852
Durable goods	1,897	2,038	1,905	1,970	2,007	2,004	2,026	2,117
Nondurable goods	4,176	4,251	4,182	4,195	4,224	4,237	4,260	4,284
Services	7,318	7,425	7,338	7,354	7,409	7,410	7,430	7,451
Population (mid-period, thousands)	258,290	260,991	258,635	259,356	259,997	260,627	261,340	262,000

Table 8.3.—Auto Output

[Billions of dollars]

	1993	1994	Seasonally adjusted at annual rates					
			1993		1994			
			III	IV	I	II	III	IV
Auto output	144.5	158.5	137.5	151.0	162.7	153.4	158.2	159.7
Final sales	142.2	154.4	142.0	148.3	164.2	150.1	153.1	150.1
Personal consumption expenditures ..	139.3	153.1	140.5	146.5	154.7	149.6	151.4	156.6
New autos	93.4	98.6	92.3	101.3	100.1	99.1	94.4	101.1
Net purchases of used autos	45.9	54.4	48.2	45.2	54.6	50.5	57.1	55.5
Producers' durable equipment	38.8	44.0	38.8	38.8	43.4	43.9	46.4	42.3
New autos	68.3	81.3	69.0	68.2	78.8	79.1	86.0	81.2
Net purchases of used autos	-29.6	-37.3	-30.2	-29.5	-35.4	-35.2	-39.6	-38.8
Net exports	-37.7	-44.7	-39.2	-38.6	-35.8	-45.4	-46.8	-50.8
Exports	14.5	16.7	13.7	15.2	16.7	16.3	18.4	15.4
Imports	52.2	61.4	52.8	53.8	52.5	61.7	65.2	66.2
Government purchases	1.9	2.0	1.9	1.7	2.0	2.1	2.1	2.0
Change in business inventories of new and used autos	2.2	4.1	-4.5	2.7	-1.5	3.3	5.1	9.6
New	1.9	3.1	-4.5	1.6	.3	1.3	4.5	6.1
Used .....	.3	1.0	-1.1	1.1	-1.8	2.0	.5	3.5
Addenda:								
Domestic output of new autos ¹	112.6	131.6	103.9	119.9	133.7	126.6	133.6	132.4
Sales of imported new autos ²	65.1	68.4	68.7	65.3	66.2	69.3	68.0	70.2

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 8.5.—Truck Output

[Billions of dollars]

	1993	1994	1995	1996	1997	1998	1999	2000
Truck output ¹	101.9	126.9	99.5	110.8	124.3	123.0	127.9	132.5
Final sales	102.1	124.1	101.4	112.5	122.7	120.2	121.8	131.5
Personal consumption expenditures ..	52.3	58.2	50.8	57.3	58.9	56.9	54.5	62.3
Producers' durable equipment	48.7	63.3	48.8	54.7	62.2	58.4	63.6	68.9
Net exports	-5.5	-5.0	-5.0	-3.8	-4.1	-4.6	-5.6	-5.9
Exports	5.8	6.8	5.3	6.8	6.7	6.7	6.4	7.2
Imports	11.2	11.8	10.3	10.6	10.7	11.3	12.0	13.2
Government purchases	6.5	7.7	6.8	4.4	5.6	9.6	9.4	6.2
Change in business inventories	-2	2.9	-1.9	-1.7	1.6	2.8	6.1	1.0

1. Includes new trucks only.

Table 8.4.—Auto Output in Constant Dollars

[Billions of 1987 dollars]

	1993	1994	Seasonally adjusted at annual rates					
			1993		1994			
			III	IV	I	II	III	IV
Auto output	121.6	130.0	114.2	127.2	135.1	125.9	128.3	130.6
Final sales	121.1	127.2	119.4	125.2	138.3	124.5	125.0	120.8
Personal consumption expenditures ..	119.3	125.4	119.1	123.2	129.8	123.8	122.9	125.2
New autos	81.3	83.1	80.0	87.2	85.6	83.8	78.9	84.1
Net purchases of used autos	38.0	42.3	39.1	36.0	44.2	40.0	44.0	41.1
Producers' durable equipment	34.4	38.5	34.6	34.6	38.0	38.1	40.4	37.7
New autos	59.5	68.4	59.8	58.7	67.4	66.9	71.9	67.6
Net purchases of used autos	-25.1	-29.9	-25.2	-24.2	-29.4	-28.8	-31.5	-29.9
Net exports	-34.2	-38.5	-36.0	-34.0	-31.0	-39.1	-40.0	-43.7
Exports	12.8	14.4	12.0	13.3	14.6	14.0	15.8	13.2
Imports	47.0	52.9	47.9	47.3	45.6	53.1	55.8	56.9
Government purchases	1.6	1.6	1.6	1.4	1.6	1.7	1.7	1.6
Change in business inventories of new and used autos .....	.5	2.8	-5.2	2.0	-3.2	1.4	3.3	9.8
New .....	.6	2.0	-4.8	1.5	-1.7	-3	2.9	7.1
Used	-1	.8	-4	.5	-1.5	1.6	.4	2.7
Addenda:								
Domestic output of new autos ¹	97.6	110.9	89.6	104.3	112.9	106.4	111.6	112.6
Sales of imported new autos ²	56.7	57.6	59.6	56.2	56.6	58.7	56.8	58.5

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 8.6.—Truck Output in Constant Dollars

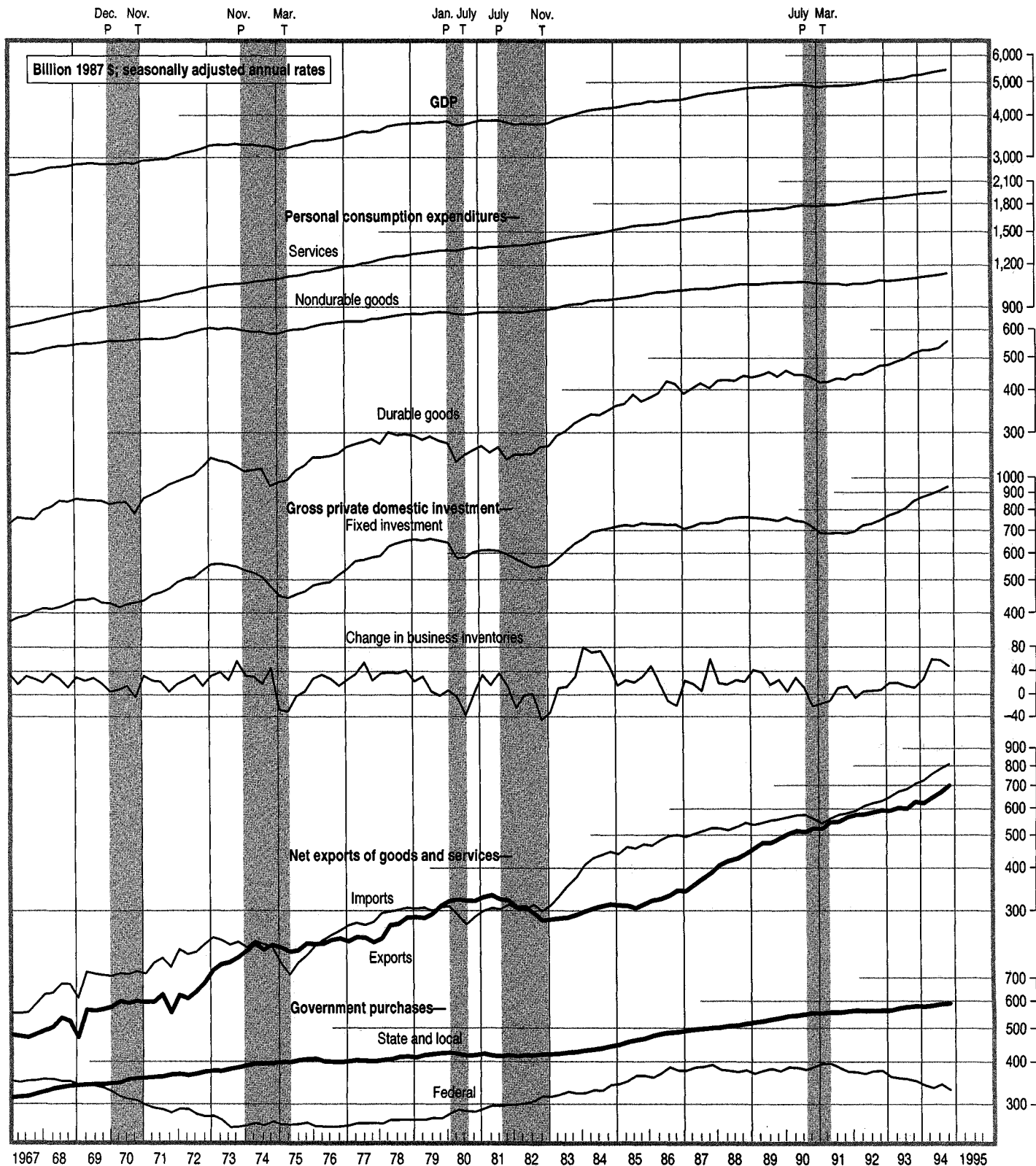
[Billions of 1987 dollars]

	1993	1994	1995	1996	1997	1998	1999	2000
Truck output ¹	83.9	100.7	81.2	90.4	100.5	97.5	99.9	104.7
Final sales	84.1	98.4	82.6	91.8	99.2	95.4	95.3	103.9
Personal consumption expenditures ..	43.3	46.1	41.6	46.7	47.7	45.3	42.6	48.7
Producers' durable equipment	39.9	50.3	39.6	44.6	50.2	46.2	49.7	55.0
Net exports	-4.5	-4.0	-4.1	-3.1	-3.3	-3.6	-4.4	-4.7
Exports	4.7	5.4	4.3	5.5	5.4	5.3	5.0	5.8
Imports	9.2	9.4	8.4	8.6	8.7	8.9	9.4	10.4
Government purchases	5.4	6.1	5.5	3.6	4.5	7.6	7.3	4.9
Change in business inventories	-1	2.2	-1.5	-1.4	1.3	2.1	4.6	.8

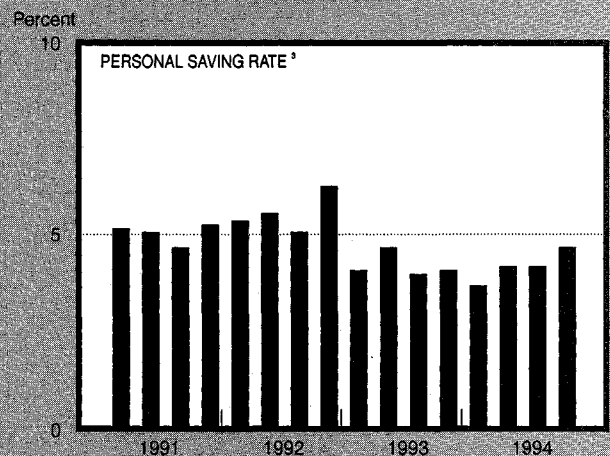
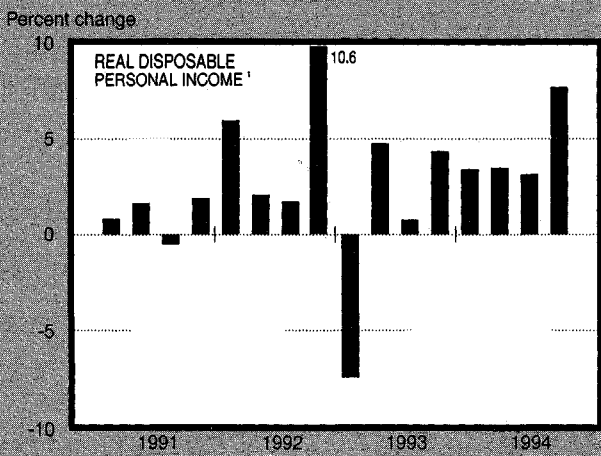
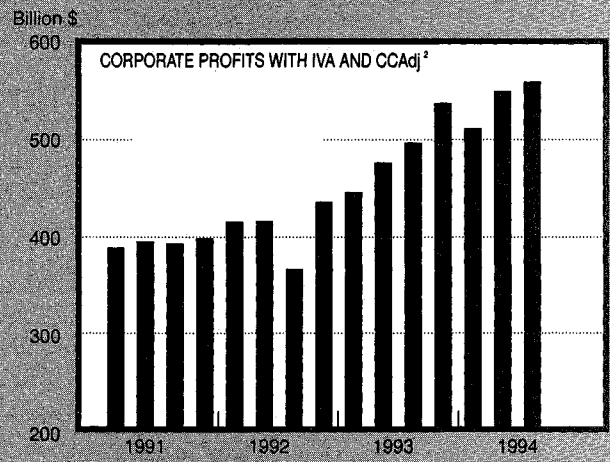
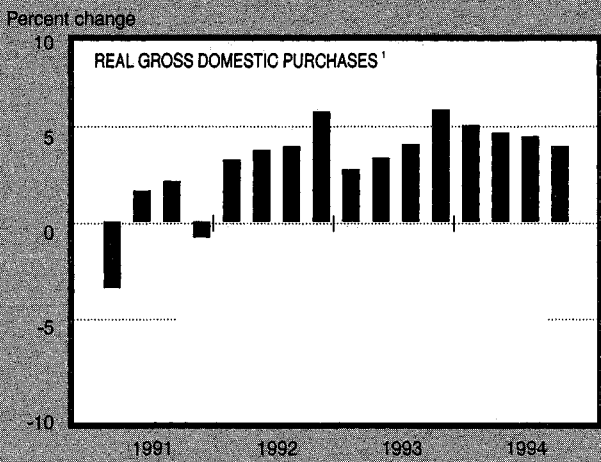
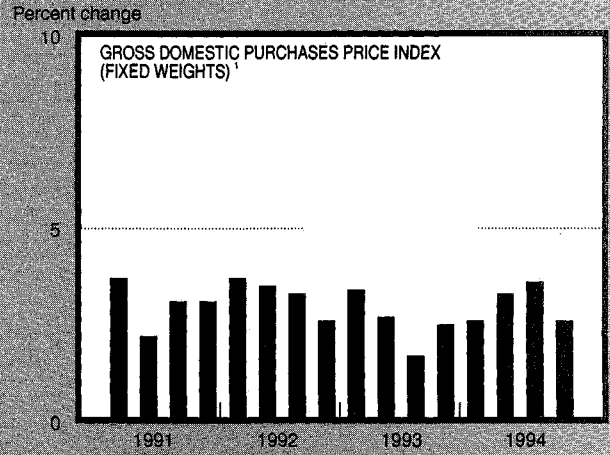
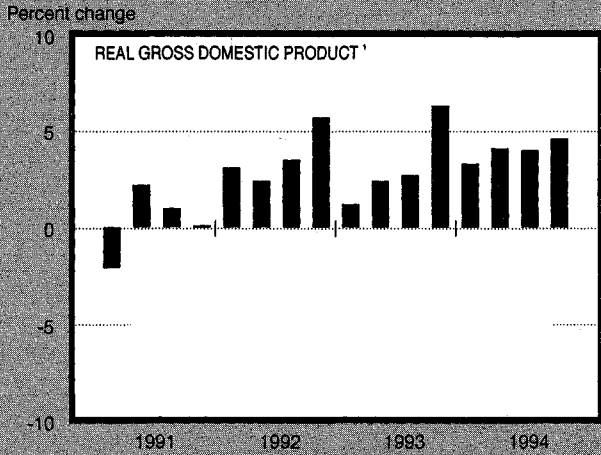
1. Includes new trucks only.

NIPA Charts

REAL GDP AND ITS COMPONENTS: TRENDS AND CYCLES



SELECTED SERIES: RECENT QUARTERS



1. Percent change at annual rate from preceding quarter; based on seasonally adjusted estimates.
 2. Seasonally adjusted annual rate; IVA is inventory valuation adjustment, and CCAdj is capital consumption adjustment.
 3. Personal saving as percentage of disposable personal income; based on seasonally adjusted estimates.

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

Reconciliation and Other Special Tables

Table 1.—Reconciliation of Changes in BEA-Derived Compensation Per Hour with BLS Average Hourly Earnings
[Percent change from preceding period]

	1992	1993	1994 ^P	Seasonally adjusted at annual rates			
				1994			
				I	II	III ^r	IV ^P
BEA-derived compensation per hour of all persons in the nonfarm business sector (less housing)	5.1	3.3	3.2	6.1	0.7	3.1	3.4
<i>Less:</i> Contribution of supplements to wages and salaries per hour .....	.5	.2	.2	0	-.1	.1	-.3
<i>Plus:</i> Contribution of wages and salaries per hour of persons in housing and in nonprofit institutions ...	.1	-.1	0	-2	.1	.1	0
<i>Less:</i> Contribution of wages and salaries per hour of persons in government enterprises, unpaid family workers, and self-employed	0	0	0	.5	0	-.2	-.2
<i>Equals:</i> BEA-derived wages and salaries per hour of all employees in the private nonfarm sector	4.7	3.0	2.9	5.4	.9	3.3	3.9
<i>Less:</i> Contribution of wages and salaries per hour of nonproduction workers in manufacturing	0	0	-.3	-.5	-.4	-.2	-.4
<i>Less:</i> Other differences ¹	2.3	.4	.5	2.8	-.5	1.1	.7
<i>Equals:</i> BLS average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls	2.4	2.5	2.7	3.1	1.8	2.4	3.6
Addendum:							
BLS estimates of compensation per hour in the nonfarm business sector ²	5.1	3.3	3.1	6.1	.7	3.1	3.7

^r Revised.

^P Preliminary.

1. Includes BEA use of non-BLS data and differences in detailed weighting. Annual estimates also include differences in BEA and BLS benchmarking procedures; quarterly estimates also include differences in seasonal adjustment procedures.

2. These estimates differ from the BEA-derived estimates (first line) because the BLS estimates

include compensation and hours of tenant-occupied housing. BEA estimates for the third quarter of 1994 also include statistical revisions not yet incorporated in the BLS estimates.

NOTE.—The table incorporates BLS February 1995 revisions and updated seasonal adjustment factors.

BLS Bureau of Labor Statistics

A Look at How BEA Presents the NIPA's

THIS GUIDE IS designed to assist users in locating national income and product accounts (NIPA) estimates and to explain some of the conventions used in their presentation. The system of presentation has evolved over a number of years and has been shaped by many factors—for example, the frequency of the series (annual, quarterly, or monthly) and the extent of historical coverage. The system is best explained by beginning with a brief description of BEA's release schedule for the estimates.

Release schedule

Quarterly estimates of gross domestic product (GDP) are released on the following schedule: "Advance" estimates are released near the end of the first month after the end of a quarter; as more detailed and more comprehensive data become available, "preliminary" and "final" estimates are released near the end of the second and third months, respectively. Quarterly estimates of gross national product, national income, corporate profits, and net interest lag the GDP estimates by 1 month: The first estimates of these items are released with the preliminary GDP estimates, and the revised estimates are released with the final GDP estimates. (The fourth-quarter estimates of these items lag by an additional month.) Monthly estimates of personal income and outlays are released near the end of the month following the reference month; estimates for the most recent 2–4 months are revised at that time.

Comprehensive revisions are carried out at about 5-year intervals. Definitional or classificational changes made to improve the NIPA's as a tool of economic analysis are usually introduced at the time of comprehensive revisions; the next such revision is scheduled for late 1995. Ordinarily, annual revisions are carried out each July and cover the months and quarters of the most recent calendar year and the 2 preceding years. These revisions are timed to incorporate newly available major annual source data. (Because a comprehensive revision is scheduled for late 1995, an annual revision will not be carried out in July 1995.)

Presentation of NIPA estimates

Organization of the NIPA tables.—The NIPA tables are grouped into nine categories:

1. National Product and Income
2. Personal Income and Outlays
3. Government Receipts and Expenditures
4. Foreign Transactions
5. Saving and Investment
6. Income, Employment, and Product by Industry
7. Quantity and Price Indexes
8. Supplementary Tables
9. Seasonally Unadjusted Estimates

In the "Supplementary Tables" category, the first table shows percentage changes in the major NIPA aggregates. Other tables cover the following: Selected per capita series; auto, truck, farm sector, and housing sector output; detail on several components of gross national income (consumption of fixed capital, capital consumption adjustment, business transfer payments, supplements to wages and salaries, rental income of persons, dividends, and interest); imputations; and reconciliations of several NIPA measures with the source data (for example, tax return tabulations) from which they are derived or to which they are closely related.

The table numbers have two parts. The first part indicates the category number, and the second part indicates the table number within that category. A letter suffix is used to represent major discontinuities in coverage—for example, the edition of the Standard Industrial Classification (SIC) underlying the estimates.

From time to time, changes in the coverage or in the quality of the statistics result in discontinuities in NIPA time series. For example, beginning with 1960, the estimates cover the 50 States and the District of Columbia; before 1960, Alaska and Hawaii were partly omitted. While it is not possible to identify all discontinuities, major discontinuities are highlighted. In addition to the use of letter suffixes to indicate major discontinuities in coverage, other types of discontinuities are referenced in the footnotes; see, for example, those for tables 2.2–2.7 and tables 4.1–4.4.

The full set of NIPA tables, which consists of 132 tables and about 5,100 line items, contains annual, quarterly, and monthly estimates. Annual estimates are based on source data that are typically not available on a quarterly or monthly basis. Many of the tables with only annual estimates show detailed breakdowns of components; for example, tables 5.6 and 5.7 show purchases of structures by type (in current and constant dollars, respectively).

Alternative Media

Within minutes of their official release, BEA makes the NIPA estimates available electronically through the Economic Bulletin Board maintained by the U.S. Department of Commerce's STAT-USA. In addition, BEA provides annual and quarterly NIPA estimates to the National Trade Data Bank and the National Economic, Social, and Environmental Data Bank, which are published by STAT-USA on CD-ROM. For information, call STAT-USA at (202) 482-1986.

BEA also prepares recorded telephone messages summarizing key estimates immediately after their release: For gross domestic product, call (202) 606-5306; for personal income and outlays, call (202) 606-5303.

NIPA estimates are available on diskettes. For a list of NIPA information products, write the National Income and Wealth Division, BE-54, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230, or call (202) 606-9700.

An index is available to help users locate NIPA series and topics covered by the NIPA's. For each series or topic, the index identifies the NIPA table (or tables) containing the item. Commonly used terms that differ from the NIPA wording are cross-referenced to the appropriate NIPA item. This index appeared most recently in the July 1994 SURVEY.

Publication of the NIPA tables.—The “National Income and Product Accounts” section of the SURVEY is the primary vehicle for the publication of the NIPA's. Except for years in which comprehensive revisions are released, a full set of NIPA tables is published in the SURVEY at the time of the annual revision, usually in July. In other months, the SURVEY contains a set of “Selected NIPA Tables,” which presents the quarterly estimates that are released each month (and the corresponding annual estimates). The selected set comprises 53 tables from the first eight NIPA categories. (Seasonally unadjusted estimates are compiled only once a year and thus are not included in the selected set of tables.) For users' convenience in tracking specific estimates, the numbering system established for the full set of tables is retained in the selected set; as a result, gaps in table numbering occur in the presentation of the selected tables. A note preceding the NIPA tables indicates whether the estimates are advance, preliminary, or final.

The SURVEY presents estimates only for the most recent 2–4 years. A separate volume or set of volumes containing historical estimates is published after comprehensive revisions. The most recently published set is *The National Income and Product Accounts of the United States: Volume 1, 1929–58*, and *Volume 2, 1959–88*. (These two volumes are available from the U.S. Government Printing Office; see inside back cover of this issue for

order information.) This set of historical volumes contains the most up-to-date estimates for the years 1929–87. For 1988–93, the complete official time series of NIPA estimates can be found in the historical volumes or in issues of the SURVEY, as follows:

	1988	1989	1990	1991–93
Most tables.....	NIPA's, vol. 2	July 1992	Aug. 1993	July 1994
Tables 1.15, 1.16, and 7.15....	”	”	Sept. 1993	”
Tables 3.15–3.20 and 9.1–9.6..	”	Sept. 1992	”	Sept. 1994
Tables 7.1, 7.2, 7.3, and 8.1...	Aug. 1994	Aug. 1994	Aug. 1994	Aug. 1994
Tables 7.4–7.12.....	Apr. 1993	Apr. 1993	Aug. 1993	July 1994

(The complete official time series are also available on alternative media; see the box on the preceding page.)

Some detailed tables in the historical volumes cover shorter time spans than the volume title indicates. In addition, tables with an “A” or a “B” suffix (for example, 6.4A) appear only in the historical volumes. A letter suffix, as explained earlier, is used to represent major discontinuities in coverage.

Historical summary NIPA series are presented each year in the SURVEY, most recently in the September 1994 issue. In this summary presentation, most of the components found in tables 1.1 and 1.2 and several other major components are shown back to 1929 annually, to 1946 quarterly on a current-dollar basis, and to 1947 quarterly on a constant-dollar basis. In addition, the fixed-weighted price indexes for several major components and the implicit price deflator are shown back to 1959 annually and quarterly (some price indexes start in 1982), and most of the major components of national income and personal income found in tables 1.14 and 2.1 are shown back to 1929 annually and to 1946 quarterly.

Additional Information About the NIPA's

NIPA methodology papers

No. 1: *An Introduction to National Economic Accounting*. (1985). 19 pp. \$12.50 (NTIS Accession No. PB 85–247567).

No. 2: *Corporate Profits: Profits Before Tax, Profits Tax Liability, and Dividends*. (1985). 67 pp. \$19.50 (NTIS Accession No. PB 85–245397).

No. 3: *Foreign Transactions*. (1987). 52 pp. \$19.50 (NTIS Accession No. PB 88–100649).

No. 4: *GNP: An Overview of Source Data and Estimating Methods*. (1987). 36 pp. \$17.50 (NTIS Accession No. PB 88–134838). The source data and estimating methods are updated in the August 1993 SURVEY OF CURRENT BUSINESS (see below).

No. 5: *Government Transactions*. (1988). 120 pp. \$27.00 (NTIS Accession No. PB 90–118480).

No. 6: *Personal Consumption Expenditures*. (1990). 92 pp. \$19.50 (NTIS Accession No. PB 90–254244).

NIPA Methodology Papers 1 through 6 (photocopies) are available from the National Technical Information Service (NTIS); to order, write to U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161 or call (703) 487–4650.

Reliability of the NIPA's

- *The Use of National Income and Product Accounts for Public Policy: Our Successes and Failures* (BEA Staff Paper No. 43). (1985). 32 pp. \$17.50 (NTIS Accession No. PB 86–191541).

- “Evaluation of the GDP Estimates,” October 1993 SURVEY OF CURRENT BUSINESS.

Recent revisions of the NIPA's

The following is a list of articles in the SURVEY OF CURRENT BUSINESS that cover the 1991 comprehensive revision and the 1992, 1993, and 1994 annual revisions.

- “Gross Domestic Product as a Measure of U.S. Production,” August 1991.
- “A Preview of the Comprehensive Revision of the National Income and Product Accounts: Definitional and Classificational Changes,” September 1991.
- “A Preview of the Comprehensive Revision of the National Income and Product Accounts: New and Redesigned Tables,” October 1991.
- “The Comprehensive Revision of the U.S. National Income and Product Accounts: A Review of Revisions and Major Statistical Changes,” December 1991.
- “Alternative Measures of Change in Real Output and Prices,” April 1992.
- “Annual Revision of the U.S. National Income and Product Accounts,” July 1992, August 1993, and July 1994.

Additional presentations of NIPA estimates.—Certain NIPA estimates also appear in other parts of the SURVEY. These presentations show estimates or analyses that do not fit neatly into the system or publication schedule for the standard presentation.

“Gross Product by Industry” shows current- and constant-dollar estimates of gross product, or gross product originating (GPO), by industry. GPO by industry is the contribution of each industry—including government—to GDP. The most recent SURVEY article is in the October 1994 issue; it presents estimates for 1991–92. The article updates and extends the GPO estimates for 1989–91 that were published in the November 1993 issue of the SURVEY and the estimates for 1977–90 that were published in the May and July 1993 issues of the SURVEY.

“Reconciliation and Other Special Tables” regularly shows tables that reconcile NIPA estimates with related series and that present analytically useful extensions of NIPA estimates. At present, tables in this section show the reconciliation of relevant NIPA series with those in the balance of payments accounts and the reconciliation of BEA compensation with Bureau of Labor Statistics earnings.

“Constant-Dollar Inventories, Sales, and Inventory-Sales Ratios for Manufacturing and Trade” (scheduled in March, June, September, and December) shows quarterly and monthly estimates for the series indicated. Also shown are quarterly fixed-weighted inventory-sales ratios (using sales as weights) and quarterly and monthly inventories for manufacturing by stage of fabrication. The current-dollar sales figures are from the Census Bureau and are deflated by BEA; the inventory estimates are from the NIPA’s. Historical series, quarterly for 1977–89, are in the January 1993 SURVEY; updated historical series for 1990 forward are in the September 1993 and September 1994 issues.

“Fixed Reproducible Tangible Wealth in the United States” (usually in August) shows annual estimates of stocks for fixed private capital, government-owned fixed capital, and durable goods owned by consumers. Historical estimates and related investment series are available in *Fixed Reproducible Tangible Wealth in the United States, 1925–89* (see inside back cover). A summary of wealth estimates in current and constant dollars for 1925–93 is in the August 1994 SURVEY.

“Selected Monthly Estimates” shows monthly estimates for personal income by source and for the disposition of personal income, including personal consumption expenditures. (These monthly estimates are also shown in the full set of NIPA tables.)

“Business Cycle Indicators” (the “yellow,” or “C,” pages) shows monthly or quarterly estimates and historical charts for a number of NIPA series.

“Relationship Between Personal Income and Adjusted Gross Income” shows a detailed reconciliation between the BEA measure of personal income and the IRS measure of adjusted gross income. This article and its tables expand on table 8.24 that is regularly presented as part of the annual NIPA revision. The

most recent article, covering 1991 and 1992, is in the August 1994 SURVEY.

Statistical conventions used for NIPA estimates


Most of the estimates are presented in billions of dollars. The major exceptions are certain current-dollar annual estimates, which are presented in millions of dollars, and estimates presented as index numbers. Current-dollar estimates are valued in the prices of the period in which the transaction takes place. Constant-dollar estimates are valued in the prices of a period designated the base period (at present, 1987), thus removing price change from any period-to-period movement in the series. The designation of 1987 as the base period also means that levels in 1987 are set equal to 100 in calculating quantity and price indexes and implicit price deflators.¹

For quarters and months, the estimates (except indexes) are presented at annual rates. Annual rates show values for a quarter or a month at their annual equivalent (that is, the value that would be registered if the rate of activity measured for a month or a quarter were maintained for a full year). Annual rates make it easier to compare values for time periods of different lengths—for example, quarters and years.

The percent changes shown in table 8.1 are also expressed at annual rates and are calculated from the published quarterly estimates, which are rounded to the nearest one-tenth of a billion dollars. The annual rates for quarterly percent changes are calculated with a variant of the compound interest rate formula:

$$r = \left[\left(\frac{Q_t}{Q_{t-1}} \right)^4 - 1 \right] \times 100,$$

where r = the percent change at an annual rate and Q_t and Q_{t-1} = the quarterly estimates for a quarter and the preceding quarter, respectively.

Quarterly and monthly NIPA estimates are seasonally adjusted, if necessary. Seasonal adjustment removes from the time series the average impact of variations that normally occur at about the same time and in about the same magnitude each year—for example, weather, holidays, and tax payment dates. In most cases, BEA uses source data that are seasonally adjusted by the source agency; in others, the statistical procedures used by BEA—for example, the X-11 variant of the Census Method II seasonal adjustment program—are based on historical experience. After seasonal adjustment, cyclical and other short-term changes in the economy stand out more clearly. 

1. BEA also prepares two alternative measures of real output and prices. These alternatives use the Fisher Ideal index formula to provide a measure of change between two periods. In one alternative, the weights change each year; in the other, the weights change each benchmark year—that is, at about 5-year intervals. These alternative indexes are released 3 business days after the quarterly GDP release.

Table 3.—U.S. International Transactions in Goods and Services
 [Millions of dollars; monthly estimates seasonally adjusted]

	1993	1994	1994												1995	
			Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. ^r		Dec. ^p	Jan.
Exports of goods and services	641,677	696,430	56,728	53,625	52,866	58,386	55,977	56,257	58,333	56,297	60,292	60,063	59,847	61,613	63,572	.....
Goods	456,866	502,804	40,953	38,533	37,425	42,065	40,378	40,276	42,028	40,128	44,121	43,596	43,380	44,872	46,699	.....
Foods, feeds, and beverages	40,628	42,017	3,665	3,346	3,163	3,405	3,087	3,268	3,088	3,052	3,676	3,698	3,925	4,060	4,272	.....
Industrial supplies and materials	111,814	121,326	9,630	8,974	8,721	10,604	9,625	9,914	9,820	10,254	10,739	10,320	10,604	10,682	11,263	.....
Capital goods, except automotive	181,696	205,302	16,894	16,022	15,318	17,309	16,747	16,556	17,727	16,284	17,656	17,830	16,893	18,067	18,942	.....
Automotive vehicles, engines, and parts	52,404	57,253	4,529	4,417	4,417	4,760	4,721	4,543	4,723	4,275	5,204	5,036	5,030	4,921	5,625	.....
Consumer goods (nonfood), except automotive	54,656	59,989	4,715	4,500	4,468	4,882	4,659	4,804	5,114	4,859	5,310	5,186	5,409	5,482	5,329	.....
Other goods	23,893	26,783	2,224	1,988	2,020	1,849	2,250	2,018	2,340	2,261	2,517	2,346	2,474	2,467	2,255	.....
Adjustments ¹	-8,224	-9,866	-705	-714	-681	-743	-711	-828	-783	-857	-980	-820	-955	-807	-987	.....
Services	184,811	193,626	15,774	15,092	15,440	16,322	15,599	15,982	16,305	16,169	16,171	16,467	16,467	16,741	16,873	.....
Travel	57,621	59,152	5,066	4,567	4,671	5,162	4,718	4,835	5,036	4,901	4,765	4,977	5,040	5,199	5,282	.....
Passenger fares	16,550	17,147	1,410	1,311	1,373	1,505	1,382	1,407	1,489	1,404	1,382	1,441	1,437	1,503	1,512	.....
Other transportation	23,151	24,537	1,996	1,901	1,864	2,107	2,001	2,017	2,030	1,996	2,125	2,084	2,100	2,168	2,146	.....
Royalties and license fees	20,398	22,502	1,697	1,763	1,780	1,790	1,795	1,816	1,847	1,930	1,954	1,960	1,960	1,955	1,952	.....
Other private services	54,870	58,438	4,782	4,678	4,867	4,851	4,745	4,919	4,890	4,895	4,886	4,937	4,871	4,922	4,976	.....
Transfers under U.S. military agency sales contracts ² ..	11,413	11,117	784	802	816	841	908	940	964	980	992	998	1,000	934	942	.....
U.S. Government miscellaneous services	808	733	60	70	70	67	50	48	49	63	67	69	59	61	62	.....
Imports of goods and services	717,402	804,539	61,253	61,455	62,460	65,285	64,559	65,477	67,178	67,250	69,352	69,417	69,944	71,649	70,912	.....
Goods	589,441	669,091	50,068	50,501	50,968	53,511	53,717	54,548	56,048	56,083	58,222	58,029	58,431	60,012	59,359	.....
Foods, feeds, and beverages	27,867	30,959	2,339	2,440	2,364	2,543	2,492	2,531	2,593	2,624	2,699	2,714	2,675	2,639	2,658	.....
Industrial supplies and materials	145,606	161,987	11,495	11,653	11,932	12,659	12,771	13,155	14,007	14,375	14,687	14,305	13,950	14,536	14,156	.....
Capital goods, except automotive	152,365	184,540	13,888	14,121	14,028	14,467	14,727	14,883	15,129	15,195	15,304	16,470	16,582	16,975	16,792	.....
Automotive vehicles, engines, and parts	102,420	118,636	8,728	8,683	8,787	9,549	9,491	9,481	10,153	9,911	11,057	9,870	10,230	10,743	10,688	.....
Consumer goods (nonfood), except automotive	134,015	146,303	11,281	11,603	11,502	11,335	11,845	12,136	12,138	12,023	12,479	12,630	12,787	12,912	12,901	.....
Other goods	18,386	21,344	1,710	1,598	1,556	1,837	1,808	1,801	1,820	1,701	1,632	1,815	1,926	1,936	1,901	.....
Adjustments ¹	8,763	5,323	629	404	789	1,120	582	560	209	254	364	225	281	271	263	.....
Services	127,961	135,448	11,185	10,953	11,492	11,774	10,842	10,929	11,130	11,167	11,130	11,388	11,513	11,636	11,553	.....
Travel	40,564	43,150	3,690	3,591	3,720	3,930	3,344	3,423	3,376	3,462	3,378	3,611	3,716	3,816	3,784	.....
Passenger fares	11,416	12,592	992	955	1,006	1,069	1,009	1,039	1,029	1,024	1,012	1,075	1,105	1,134	1,135	.....
Other transportation	24,502	25,735	2,039	1,952	1,980	2,159	2,080	2,096	2,175	2,190	2,271	2,211	2,248	2,247	2,184	.....
Royalties and license fees	4,840	6,002	448	450	713	444	434	436	481	516	491	499	507	513	519	.....
Other private services	32,119	34,806	2,889	2,861	2,926	3,025	2,866	2,840	2,980	2,896	2,891	2,906	2,873	2,871	2,880	.....
Direct defense expenditures ²	12,176	10,561	946	938	932	926	890	877	868	867	864	863	853	845	838	.....
U.S. Government miscellaneous services	2,344	2,602	181	207	216	221	219	220	221	222	222	223	209	210	213	.....
Memoranda:																
Balance on goods	-132,575	-166,287	-9,115	-11,968	-13,542	-11,446	-13,339	-14,272	-14,020	-15,955	-14,101	-14,433	-15,051	-15,140	-12,661	.....
Balance on services	56,850	58,178	4,589	4,138	3,948	4,548	4,757	5,052	5,175	5,002	5,041	5,079	4,954	5,105	5,320	.....
Balance on goods and services	-75,725	-108,109	-4,526	-7,830	-9,594	-6,899	-8,582	-9,220	-8,845	-10,953	-9,060	-9,354	-10,097	-10,035	-7,340	.....

^p Preliminary.

^r Revised.

1. Reflects adjustments necessary to bring the Census Bureau's component data in line with the concepts and

definitions used to prepare BEA's international and national accounts.

2. Contains goods that cannot be separately identified.

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

Mid-Decade Strategic Review of BEA's Economic Accounts: Maintaining and Improving Their Performance

Contents

Part 1. Economic Accounts	37
Economic accounting	37
BEA's economic accounts and their uses	37
Characteristics required of BEA's accounts	39
Accuracy	39
Reliability	39
Relevance	40
Part 2. Source Data and Methods Used to Prepare the Accounts	40
The interaction of source data and estimating methods	40
Source data as determinants of initial release and revision schedules	42
Source data and methods: Examples, special requirements, and publications	42
The effect of source data and methods on the performance of the accounts	44
Accuracy	44
Reliability	46
Relevance	48
Part 3. A Comprehensive Review of BEA's Economic Accounts	48
A comprehensive review: Scope and approaches	49
Background papers	50
Economic change and the economic accounts	51
Recommendations from outside experts	51
Changes in data sources and estimating methods as they affect the economic accounts	52
The newly revised international guidelines for economic accounting	52
Revisions in the economic accounts: Implications for improvements	53
The priority areas of concern: Three cross-cutting issues	55
Change in the nature of output and the organization of production: The need for new and improved output measures	55
Investment: The need for better measures of investment, saving, and wealth	55
Internationalization: The need for measures to fill gaps in the coverage of international transactions	56
Part 4. BEA's Strategic Plan for Maintaining and Improving the Economic Accounts	56
The need for new and improved output measures	56
Difficult-to-measure components of real GDP	56
Reliability of key components of GDP	60
Substitution bias in real GDP	61
Outdated and inconsistent view of the structure and organization of production	61
The need for better measures of investment, saving, and wealth	62
Issues about the scope of existing measures	62
Issues in the measurement of investment, saving, and wealth	63
The need for measures to fill gaps in the coverage of international transactions	63
Milestones in implementing the proposed actions	65
An environment for change in the accounts	65

A comprehensive review of BEA's economic accounts—national, international, and regional—is underway. The purpose of this Review is similar to that of reviews in earlier decades, but some other important features differ. Rather than being conducted by a “blue-ribbon” panel of outside experts, this Review is being conducted by BEA, and the outside perspective that is vitally important to such a review is being obtained in a different way and at a different step in the process.

For this Review, the outside perspective is being obtained, as the third and final step, by comment and discussion of the draft strategic plan that BEA is presenting in this article. Did BEA correctly identify the priority issues for maintaining and improving the accounts? Are the actions that BEA proposes to address the problems the best ones? Your answers to these questions and your comments on other aspects of the draft plan are invited. Please send your comments, by April 14, by mail to Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230; by fax to (202) 606-5311; or to carol.carson@bea.doc.gov on Internet.

Carol S. Carson

Director, Bureau of Economic Analysis

A COMPREHENSIVE REVIEW of the U.S. economic accounts produced by the Bureau of Economic Analysis (BEA) was put in motion in mid-1994. Its purpose is to evaluate the performance of the economic accounts and to develop a plan to maintain and improve that performance. The Review is one of three initiatives that will be used to guide BEA's work over the next decade. The other two are a benchmarking of BEA's information technology system to guide the reengineering of BEA's data collection, processing, and dissemination and a customer survey to guide a program of improved customer service at BEA. The resulting overall plan is meant to help BEA achieve its goal: Providing its customers with the right numbers at the right time in the right way.

The Review consists of three steps. The first step was the preparation of a series of background papers to evaluate the state of the eco-

conomic accounts—their strengths, problems, and prospects for improvement. These papers, which were made available in January 1995, identify needs and conclude with a “menu” of recommendations for addressing these needs. The second step is to transform this menu into a prioritized agenda, or strategic plan, to maintain and improve the economic accounts over the next decade. This article presents a draft plan to users of the accounts and others interested in their future. As a third step, the plan will be discussed and refined in a process that includes public comment, comment from the Federal agencies whose assistance will be needed to implement some of the improvements, and a meeting in March 1995 of users of the accounts. With the refined plan in hand, BEA will be in a position to work with others to develop detailed implementation plans.

As indicated in the table of contents, the draft plan is presented in part 4, structured around the three priority issues it is designed to address. The first three parts provide summary background and may be read at several levels of detail. Executive summaries, shown in italics at the beginning of each part, allow readers who wish to do so to proceed to the plan with minimal detail. The main text in parts 1–3 introduce economic accounting and BEA’s economic accounts, describe the source data and estimating methods used to prepare them, and summarize the background papers that identified issues to be addressed in the draft plan. Boxes in each part support the main text by providing examples and further explanations.

Part 1. Economic Accounts

Economic accounts provide statistical pictures of the economy. BEA’s economic accounts—national, regional, and international—serve as tools for tracking and projecting economic activity, for macroeconomic analysis of the economy’s workings, and for operational decisions in which the economy plays a major role. For these uses, accuracy, reliability, and relevance are the interrelated characteristics that are required of the accounts.

Economic accounting

Economic accounting—now in its sixth decade as a specialty at the intersection of economics

and statistics—organizes economic information about transactions and stocks, or holdings, to provide complete and consistent statistical pictures of the economy. These pictures include summary measures, component detail, and a framework that defines the interrelationships among the summary measures and their components.

Economic accounting, and thus the economic accounts themselves, are guided by theoretically based or empirically useful concepts. These include—to name just a few—income, consumption, and investment. The accounts resemble, at a macroeconomic level, the income and balance sheet accounts that describe the operations and gauge the performance of a business enterprise.

As statistical pictures, the accounts are designed to be complete in the sense that they count all economic transactions or stocks, but they do not double count. The estimates in the accounts are designed to be consistent with respect to when the transactions and stocks are recorded and how they are valued.

BEA’s economic accounts and their uses

The best known of BEA’s accounts are the national income and product accounts (NIPA’s), the balance of payments accounts (also called the international transactions accounts), and the regional accounts. The NIPA’s show the Nation’s production, distribution, consumption, and saving. The keystone of the NIPA’s is their summary measure—gross domestic product (GDP). The balance of payments accounts are known by their summary measures—the goods and services balance and the broader current-account balance. The regional accounts provide estimates of personal income for States and local areas and of gross state product, the counterpart of GDP for States. In addition to these systems of accounts, BEA maintains input-output accounts, which detail the interaction of industries, and wealth accounts, which provide estimates of the Nation’s reproducible capital stock.^{1 2}

The NIPA’s, the balance of payments accounts, the regional accounts, and the other accounts and statistics prepared by BEA are used by a wide range of individuals and organizations, both public and private. Business economists and Federal

1. This Review of the economic accounts does not include BEA’s system of cyclical indicators, best known for its composite index of leading indicators.

2. The Board of Governors of the Federal Reserve System maintains another set of economic accounts, the flow of funds accounts. The flow of funds accounts show the acquisition of physical and financial assets throughout the U.S. economy and the sources of funds used to acquire the assets. An associated set of balance sheets shows holdings of physical and financial assets.

Questions That BEA's Economic Accounts Help To Answer

National income and product accounts (NIPA's)

The keystone of the NIPA's—gross domestic product (GDP)—measures the market value of the goods and services produced in the United States. From the product side, GDP is the total of final sales plus the change in business inventories (goods that have been produced but not yet sold). From the income side, it is the sum of costs, including compensation of employees and profits associated with producing GDP. The usefulness of GDP stems in part from providing answers about the output of the economy—its size, its composition, and its use.

This system of accounts also traces the principal economic flows among the major sectors of the economy. In this way, the system helps to answer questions about the process by which output is produced and distributed.

The NIPA's, sometimes described as the mainstay of macroeconomic analysis, are presented in a set of 132 quarterly and annual tables. They help to answer questions such as these:

- How much has the Nation's production, as measured by GDP, grown in the last quarter? the last year? the last decade?
- How much have prices—of goods and services produced in the United States, or of goods and services purchased in the United States irrespective of where produced—increased over the same periods?
- How much have standards of living, as measured by real personal income per capita, grown in the last decade?
- How much of GDP goes for investment? How does the U.S. investment rate compare with that of other nations?
- How much of personal income goes to purchase goods and services? to pay taxes? for saving?

Balance of payments accounts

The balance of payments accounts provide information on international flows of goods, services, investment income, international assistance, and capital. This system of accounts also provides integrated balance-sheet information on the U.S. international investment position. The accounts help to answer questions such as these:

- How large is the U.S. deficit in trade in goods? the surplus in trade in services? the surplus or deficit in investment income?
- How do the rates of return to foreign-owned companies in the United States compare with the rates of return to U.S.-owned companies abroad?
- How much have foreigners invested in the United States? How much has the United States invested abroad?

Regional economic accounts

BEA's regional accounts provide estimates of gross state product and of total and per capita personal income by region, State, metropolitan area, and county. They help to answer questions such as these:

- Which regions had the fastest growth in per capita income in the last decade? The slowest growth?

- In which States is the share of residents' income from wages and salaries the highest? from dividends, interest, and rent? from transfer payments such as social security?
- Is gross state product from manufacturing becoming less concentrated geographically? In which States are "high-tech" industries growing the fastest?

Other accounts and data

BEA also produces the following sets of statistics that are related to its best-known accounts.

Input-output accounts: These national accounts detail the interaction of industries. They allow users to track the effects of changes in resource costs, or changes in final demand, on specific industries, on the users of these industries' products, and on suppliers of labor and other products to these industries.

- How much of manufacturing industries' inputs are from other manufacturing industries? are from domestic industries? are labor inputs?
- What are the effects on industry output of a general increase in exports? an increase in industrial chemical exports? a decrease in agricultural exports?

Wealth accounts: BEA produces estimates of the Nation's reproducible tangible wealth in the form of nonresidential structures and equipment, residential structures, consumer durable goods, and inventories. These accounts detail the U.S. capital stock by industry and by legal form of ownership.

- Over the last decade, how much has the Nation's infrastructure, as measured by its stock of fixed capital, grown? How does this compare with past rates of capital formation?
- What portion of the capital stock is owned by persons? by corporations? by others?

U.S. direct investment abroad and foreign direct investment in the United States: This detailed data set on the operations of foreign-owned companies is used to estimate investment income and capital flows for the balance of payments accounts and holdings for the international investment position. By itself, it helps to answer questions such as these:

- What percentage of the U.S. workforce is employed in foreign-owned companies?
- Which countries account for the largest share of foreign direct investment in the United States?
- In what countries do U.S. companies invest? What share of U.S. exports and imports are accounted for by trade between U.S. companies and their foreign subsidiaries?

economic policy analysts use estimates from the NIPA's to track business cycles, trends in overall economic activity, and the contributions of the various sectors. (See the box, "Questions That BEA's Economic Accounts Help To Answer," on page 38.) Economic forecasting is largely directed toward explaining and predicting NIPA measures, and the behavioral equations in econometric models—consumption function, investment function, profits equation—use variables defined by the NIPA's. For example, the "Economic Assumptions" section of the *Budget of the United States Government* is framed largely in terms of NIPA measures. Academic and other researchers use various combinations of NIPA estimates in econometric and other studies of such topics as economic growth, productivity, and saving.

Estimates from the balance of payments accounts are used by policy analysts to track the flows of goods and services needed to assess the U.S. competitive position in world trade and by the Federal Reserve, the Treasury Department, and financial market analysts to monitor capital flows and exchange-rate developments. The U.S. Government reports its balance of payments accounts to the International Monetary Fund in support of the Fund's roles in monitoring countries' economic policies and in providing financial assistance to help correct balance-of-payments disequilibria.

Estimates from the regional accounts are used by State Government offices to project tax revenue and to prepare State economic development policies, by Federal agencies in allocation formulas for over \$90 billion in Federal funds annually, and by private industry for market analysis and plant location studies.

Public interest in BEA's estimates is widespread, and its monthly and quarterly news releases are reported in the general, as well as the business, press. This wide coverage indicates both the degree of public interest in the state of the economy as depicted in the accounts and the trust the public places in the objectivity of BEA's estimates.

Characteristics required of BEA's accounts

The uses made of the estimates in the accounts determine the characteristics required of them. Some characteristics that may be required, such as for comparability with the estimates prepared in other countries or for long time series, reflect specific uses. More generally, users require three interrelated characteristics that may

be summarized in terms of accuracy, reliability, and relevance.

Accuracy.—In an abstract sense, accuracy may be thought of as referring to the level of an estimate. For example, an estimate of GDP, which is a measure of the goods and services produced, is accurate when it captures all production but does not double count. Thus, GDP would be inaccurate to the extent that it did not fully capture the production of, for example, a new service such as the "online" services now available to households. GDP is also inaccurate to the extent that production is not correctly allocated between final purchases, which can be added up as one of the ways to measure GDP, and intermediate purchases, which should be excluded from this total. For example, one difficult allocation that is made by BEA is for spending at restaurants; spending by households should enter GDP, but spending by business should not.

However, users often focus on the change in levels—for example, the change from quarter to quarter in real GDP, or the change over a decade in State per capita personal income. Thus, miscounted flows of goods and services, of income, or of other components that are subject to cyclical fluctuations or that grow or decline over time are of particular concern because they affect the change in levels.

Reliability.—Reliability refers to the size and frequency of revisions to BEA's estimates. It is a characteristic that arises because additional information used in preparing an estimate—information that is more complete, more detailed, or otherwise better—is incorporated into the estimate as it becomes available over a period of time. (See also the discussion of timeliness as part of relevance.) Revisions, then, are indicative of measurement error in estimates that do not incorporate all the information that will eventually become available.

Users express continuing concern about reliability and the impact of revisions on their analysis, but on occasion they have been particularly vocal. For example, for 1990 and 1991, the first annual revised estimates of real GDP showed a different picture than did the earlier estimates. According to the annual revision released in July 1992, the cyclical peak in real GDP occurred one quarter earlier than was initially estimated, and the contraction was deeper than previously estimated. In their annual report for 1993, the Council of Economic Advisers noted that the reliability of such estimates is critical to policymakers

and the public and made the comment, "Policy might have been conducted in a different fashion if the true severity of the recession had been known earlier."³

BEA's most accurate estimates presumably are the ones for which there will be no further revisions—that is, the ones in which all the information that will become available has been incorporated. Even for these estimates, there remains some unknown amount of inaccuracy. Measures of this error cannot be determined for economic accounting estimates even to the extent that they can for statistical surveys for several reasons: Not all information used in the accounts is from surveys, the relevant measures of error from data based on surveys are not always available, and even if they are, they cannot meaningfully be added together.

In practical terms, estimates that undergo little revision as additional information is incorporated may accordingly be viewed as reliable; however, they may or may not be accurate. For example, if the information from which estimates are prepared has no gaps in its intended coverage, the estimates are both reliable and accurate. If, however, the information has gaps in coverage, the estimates may be viewed—strange as it may seem—as reliable but inaccurate.

Relevance.—Relevance has at least two dimensions. One, timeliness, refers to the length of time between the close of the period to which the estimates refer and the release of the estimates for that period. Timeliness can be viewed as a dimension of relevance because estimates that are not available soon enough for a particular intended use are, in fact, irrelevant for that use. In this sense, relevance is often thought of in the context of a tradeoff with accuracy and reliability, and the preferred tradeoff depends on the use to be made of the estimates. For estimates used in tracking cyclical and other short-term developments, there is a premium on timeliness; for estimates that show detailed interrelationships, such as input-output accounts, there is more of a premium on accuracy.

The second dimension of relevance refers to the ability of the accounts to provide summary measures, the kind and amount of detail, and the analytical frameworks that answer the questions about the economy that are being asked. Issues of relevance change as the economy changes, as policy concerns evolve, and as economic theory

advances. For example, in the mid-1950's, relevance was the attribute at issue when users sought the development of constant-dollar quarterly estimates of GNP to supplement the current-dollar measures, and it was the attribute at issue when, as international services grew in importance in world trade, users sought to focus on a trade balance that included both goods and services.

Part 2. Source Data and Methods Used to Prepare the Accounts

Source data are the information BEA uses to prepare estimates, and estimating methods are the steps BEA takes to transform these data into estimates. The accounts are built up as a mosaic from a wide range of source data using a variety of estimating methods to adjust the available source data to the concepts needed, to fill in gaps in coverage, and to obtain the time of recording and valuation needed for the accounts. The interaction of source data and estimating methods determines the accuracy and reliability of the accounts and sets the statistical limits for estimating relevant measures. Source data also determine the initial release and revision schedules for the estimates.

The interaction of source data and estimating methods

In an ideal world, source data for each detailed component of the accounts would map exactly to the concept specified by the accounting framework. Further, the source data would be accurate, would have the needed coverage, would have the needed time of recording and valuation, and would be available quickly.

Of course, source data do not fit this description, nor are they ever likely to do so. Individuals and businesses do not keep their records in a way that would make it easy to provide what BEA needs. Most individuals do not keep records of what they spend at the level of detail needed for the accounts. Many businesses—for example, restaurants and gasoline service stations—do not keep records that distinguish sales to a business from sales to a household, and many businesses do not keep records on the commodity composition of their inventories or on the geographic breakdown of their profits. Many businesses—especially small businesses—do their accounting

3. *Economic Report of the President* (Washington, DC: U.S. Government Printing Office, January 1993): 61.

annually and cannot provide monthly, or even quarterly, data. As a result, to provide BEA with everything needed to prepare the accounts would impose an unacceptably high reporting burden on respondents and would greatly increase the cost to the government of collecting statistics. Thus, the source data that BEA uses are collected from a variety of sources and, with few exceptions, for purposes other than the preparation of BEA's estimates.

Data collected by Federal Government agencies provide the backbone of the estimates; these data are supplemented by data from trade associations, businesses, international organizations, and other sources. The Government data are from a number of agencies, mainly the Commerce Department's Bureau of the Census, the Labor Department's Bureau of Labor Statistics, the Internal Revenue Service and other agencies of the Treasury Department, the Office of Management and Budget, and the Agriculture Department. Some of the Government-collected data, referred to as "administrative" data, are byproducts of government functions such as education programs, tax collection, defense, and regulation. Nonadministrative data, sometimes referred to as "general purpose" or "statistical" data, include the periodic economic and population censuses and a wide range of sample surveys, such as those that collect data on manufacturing and farm activity, prices, and corporate profits. Of the relatively few data items that BEA collects, most refer to international transactions. These include international trade in services and direct investment (both by foreign residents in the United States and by U.S. residents in foreign countries).

Because the source data available are not ideal from the point of view of preparing the economic accounts, BEA must "make do." To continue the mosaic metaphor for the accounts, the source data are the small pieces of colored stone, and BEA must develop estimating methods to shape the stones to fit and hold them together according to the artist's design. The estimating methods adjust the best available data to the concepts needed for the accounts, fill gaps in coverage of the source data, and make adjustments to the source data to obtain the needed time of recording and valuation. Some examples of these estimating methods follow.

Adjustments to needed concepts:

- Internal Revenue Service *Corporate Returns* data include gains (net of losses) from the

sale of property in corporate profits. BEA subtracts these gains to arrive at a measure of profits consistent with the concept of income from current production underlying the income side of GDP.

- Wages and salaries reported in the State employment security agencies' tabulations of payroll data are on a place-of-work basis. BEA makes a residence adjustment to put them on the needed place-of-residence basis for personal income by State.

Filling gaps in coverage:

- Census Bureau censuses and surveys of trade do not include inventories of nonmerchant wholesalers. BEA estimates the change in the inventories of these wholesalers—of petroleum bulk stations, using physical quantities and a price index, and of manufacturing sales branches, using changes in the corresponding manufacturing industries—to provide full coverage of wholesalers for the change in business inventories component of GDP.
- The monthly survey of establishments conducted for the Bureau of Labor Statistics includes data on employment and on average weekly hours and average hourly earnings of production and nonsupervisory workers, which are used by BEA to estimate wages and salaries. The data do not include bonus payments, such as are common in the securities industry. BEA makes estimates of these bonus payments, often on the basis of fragmentary information, to provide fuller coverage of wage and salary disbursements for the initial monthly and quarterly estimates of NIPA personal income and for the preliminary quarterly estimates of State personal income.

Adjustments to needed time of recording and valuation:

- Financial statements for State and local governments, compiled and published by the Census Bureau in *Census of Governments* and *Government Finances*, report receipts and expenditures data on a fiscal year basis that is not uniform for all governments. For example, in estimating the government purchases component of GDP, BEA makes adjustments to put the data on a calendar year basis.
- Depreciation charges used by business in tax accounting—which are compiled and published by the Internal Revenue Service in

Corporate Returns, Partnership Returns, and Sole Proprietorship Returns—reflect several depreciation patterns and service lives. BEA adjusts profits and other business incomes to put the depreciation charges on a consistent accounting basis (based on straight-line depreciation and uniform service lives).

- Data on imports from Canada, as received by the Census Bureau in a data exchange with Canada, value certain goods at the point of manufacture. BEA adds the cost of inland transport to provide the valuation at point of foreign export to be consistent with other trade data and approximate the market price used throughout the accounts.

The source data BEA uses represent a variety of different economic statistics—wages and salaries, premiums, interest rates, mortgage and other debt outstanding, tax collections, employment, unit sales, and average prices, to name a few. In most cases, the source data are “value data”; that is, they embody both the quantity and price dimensions that are required for current-dollar estimates. (Most of the estimating methods just sampled are adjustments to value data.) When value data are not used, data with separate quantity and price dimensions are combined to derive the required value estimates (along with any needed adjustments). For example, the estimate for purchases of new autos is prepared by multiplying unit sales by average price.

For estimates of GDP, gross state product, trade in the balance of payments accounts, and other series that measure goods and services, BEA uses additional source data for the preparation of price-adjusted, or real, estimates. The estimating method used for most of these series is deflation. In deflation, real estimates are obtained by dividing the most detailed current-dollar components by appropriate prices indexes, with the base period—at present, the year 1987—equal to 100. Components of the Consumer Price Index, the Producer Price Index, and the International Price Index prepared by the Bureau of Labor Statistics are the source data used to deflate many components.

Source data as determinants of initial release and revision schedules

Because source data are the colored stones—the essential material—in BEA’s mosaics, they largely determine the schedules for the initial release of the estimates and the schedules on which they

are revised. One factor is the speed with which the source data first become available. A second is whether or not the source data are part of a program that, over time, provides more complete or otherwise better coverage—for example, if the sample is larger for annual than quarterly surveys or if the amount of detail is larger for annual surveys.

For the first, or advance, quarterly estimate of GDP, the availability of the monthly series on sales, shipments, and trade in goods from the Census Bureau (along with the time it takes BEA to process it) determines the release date. Once these data become available, the initial estimate of each major component of GDP can be based on at least 2 months of source data or on reliable BEA projections. For the quarterly balance of payments estimates, the availability of monthly series on exports and imports of goods determines the release schedule. For the quarterly State personal income estimates, the availability of wage and salary data from the States plays a similar role.

The estimating schedule for GDP illustrates the link with source data that are part of a program that, over time, provides better coverage. In general, the most comprehensive source data for the product components of GDP are available at the 5-year intervals associated with the economic censuses conducted by the Census Bureau. The economic census data are used to “benchmark” BEA’s estimates for the quinquennial census years—for example, 1987, 1982, and 1977. The related annual surveys are drawn from a sample of establishments covered in the census and provide less detailed data than the census. A smaller sample provides monthly data for most of the annual surveys. These monthly data are used to produce the monthly and quarterly estimates of several product components. These estimates are revised when more reports become available from the monthly samples, when data from the annual surveys become available, and when data from the census become available; thus, a given estimate of a GDP product component may be revised as many as six times over a 5-year period.

Source data and methods: Examples, special requirements, and publications

An accompanying box, “Examples of Source Data and Methods Used To Prepare the Economic Accounts,” demonstrates several of these points: The variety of source data BEA uses, the methods BEA has developed to provide estimates that fit the concepts, coverage, and other needs of the accounts, and the incorporation by BEA of more

Examples of Source Data and Methods Used To Prepare the Economic Accounts

Example estimate from the NIPA's: Personal consumption expenditures on goods

Personal consumption expenditures (PCE) makes up about two-thirds of GDP, and durable and nondurable goods account for over two-fifths of that (services account for the remainder). The table below shows the methodology for the advance quarterly and annual current-dollar estimates for goods (with estimates for 1993).

In the context of the discussion of sources and methods, there are several points of interest:

- *Diverse source data:* Among the source data are the Census Bureau's sequence of a monthly survey, an annual survey, and a census for retail trade; the Bureau of Labor Statistics Consumer Price Indexes; data from several trade sources; administrative data from several Federal agencies; and data from BEA's balance of payments accounts.

- *Sequence of revisions:* The "most goods" category undergoes a sequence of revisions as the source data become more complete.

Census Bureau retail sales data are available for all 3 months of the quarter at the time of the advance quarterly estimate; data for the third month are preliminary and subject to revision. The retail sales data are further revised with the release of the annual survey, and these are incorporated into the PCE estimates in the second annual revision. The data are further revised with the release of the economic census, and these are incorporated into the PCE estimates in the NIPA comprehensive revision.

- *Role of estimating methods:* The retail control method mentioned in the "most goods" description provides both an indicator series used in interpolating and extrapolating and a total to which the categories in the group must sum. This method makes it possible to use retail sales by type of business to obtain type-of-goods detail (assuming that the types of goods purchased at various kinds of stores do not change rapidly).

SOURCE: SURVEY OF CURRENT BUSINESS, July 1994.

Subcomponent (billions of dollars) of PCE, which was \$4,378.2 billion	Annual estimates: Source data and methods used to determine level for benchmark and other final years or, for other years, used to prepare an extrapolator or interpolator	Advance quarterly estimates: Source data and methods used to prepare an extrapolator
Durable and nondurable goods: (\$1,877.2) ¹		
Most goods (goods except subcomponents listed separately) (\$1,562.0).	Benchmark years—Commodity-flow method, starting with manufacturers' shipments from Census Bureau quinquennial census and including an adjustment for exports and imports from Census Bureau merchandise trade.	Same as annual for most recent year.
New autos (\$93.4)	Other years—Retail-control method, using retail trade sales from Census Bureau annual survey or, for most recent year, monthly survey of retail trade.	Same as annual.
Net purchases of used autos (\$45.9)	Physical quantity purchased times average retail price: Unit sales, information with which to allocate sales among consumers and other purchasers, and average list prices, all from trade sources.	Same as annual.
	Benchmark years—For net transactions, change in the consumer stock of autos from trade sources. For dealers' margin, retail sales from Census Bureau quinquennial census and margin rate from Census Bureau annual survey of retail trade.	For net transactions, residual based on net sales by other sectors. For dealers' margin, unit sales of franchised dealers from trade source and sales price from Bureau of Labor Statistics consumer price index for used cars.
New trucks (\$52.3)	Other years except most recent—For net transactions, same as benchmark. For dealers' margin, franchised dealers' unit sales times sales price, both from trade sources, times margin rate for independent dealers from Census Bureau annual survey; independent dealers' margin from Census Bureau annual survey.	Same as annual for most recent year.
	Most recent year—For net transactions, same as benchmark. For dealers' margin, for franchised dealers, unit sales and sales price from trade sources; for independent dealers, sales from Census Bureau monthly survey of retail trade.	
	Benchmark years—Commodity-flow method, starting with manufacturers' shipments from Census Bureau quinquennial census and including an adjustment for exports and imports from Census Bureau merchandise trade.	
Gasoline and oil ² (\$105.6)	Other years except most recent—Abbreviated commodity-flow method, starting with manufacturers' shipments from Census Bureau annual survey and including an adjustment for exports and imports from Census Bureau merchandise trade.	Same as annual for most recent year.
	Most recent year—Physical quantity purchased times average retail price: Unit sales and information with which to allocate sales among consumers and other purchasers from trade sources and average price based on Bureau of Labor Statistics consumer price index for new trucks.	
	Benchmark years—Physical quantity purchased times average retail price: Gallons consumed from the Department of Transportation, information with which to allocate that total among consumers and other purchasers from Federal agencies and trade sources, and average retail price from Census Bureau quinquennial census.	Same as annual for most recent year.
Food furnished to employees (including military) (\$12.0).	Years except most recent—Same as benchmark years, except average retail price from the Energy Information Administration.	For commercial employees, same as annual for years other than benchmark years; for military personnel, judgmental trend.
	Most recent year—Physical quantity purchased times average retail price: Gallons consumed and average price both from the Energy Information Administration.	
	Benchmark years—For commercial employees, number of employees of appropriate industries from Bureau of Labor Statistics tabulations times BEA estimate of per capita expenditures for food; for military personnel, outlays from the Budget of the United States prepared by the Office of Management and Budget.	
Expenditures abroad by U.S. residents (\$3.2) less personal remittances in kind to nonresidents (\$0.8).	Years other than benchmark years—Same as benchmark years, except per capita expenditures for food based on Bureau of Labor Statistics consumer price index for food.	Judgmental trend.
	Estimated as part of the balance of payments; see the entry for service exports and imports, net, under net exports of goods and services.	

1. Includes \$3.6 billion for food produced and consumed on farms, standard clothing issued to military personnel, and used trucks.
2. The retail-control method cited under PCE for most goods is based on retail trade sales data that include

sales of gasoline service stations. Estimates of PCE for gasoline and oil are derived separately and are deducted from the retail-control totals (that include goods sold by gasoline service stations) to derive the estimates for PCE for most goods.

complete and more consistent source data as they become available. (The box begins on page 43 and continues on pages 45 and 47.)

All of BEA's accounts are built up from source data in a similar way, but each system of accounts has special requirements according to the dimensions of the economy on which it focuses. For the regional accounts, data must be found that either are available by State or county and add up to a reliable national total, as do the wage and salary data, or that can be used to allocate a national total to the States and counties. Of particular concern is the distinction between data that are on a place-of-residence basis (such as receipts of dividends, interest, and rental income) and data that are on a place-of-work basis (such as wages and salaries and other labor income). For the international accounts, data must be found that distinguish between transactions and holdings of residents and nonresidents, with a particular focus on the geography of the nonresidents.

BEA publishes papers that describe in detail the methodologies it uses—that is, its source data and methods.⁴ Changes in methodologies—for example, when a source is discontinued or when new source data are introduced—are typically described in the SURVEY OF CURRENT BUSINESS. For example, the source data for each component of GDP are published in the SURVEY articles on the annual revisions of the accounts. Publishing these methodologies provides users with information to evaluate the estimates and their suitability for actual and intended applications.

The effect of source data and methods on the performance of the accounts

The interaction of source data and estimating methods determines the accuracy and reliability of the accounts and sets the statistical limits for implementing relevant measures. This section uses examples to make this point.

Accuracy.—As explained in part 1, accuracy deals with the possibility of error in the level of, and

change in, the estimates. One of the two examples that follow focuses on gaps in coverage of the source data that affected both the level and rate of change in the estimates. The other focuses on the effect of an estimating method on the rate of change in the estimates.

International portfolio capital flows.—During the 1980's, major advances in computer and communications technology, combined with deregulation in financial services industries, sparked dynamic changes in global financial markets. These changes opened new financing channels and inspired the introduction of new financial instruments. These developments, in turn, led to gaps in BEA's coverage of international transactions, particularly international flows of portfolio capital. Inaccurate portfolio capital measures also had implications for the current account because the capital positions are used in estimating income flows.

To meet the need for improved coverage of these transactions, BEA launched a multiyear effort starting early in the 1990's. First, BEA greatly expanded the use of counterparty data—that is, data from the country in which the foreign transactor is resident—in the June 1994 revision of the balance of payments accounts, which covered 1984–93. Use of these data added nearly \$100 billion in capital outflows and nearly \$116 billion in capital inflows that were previously not recorded.

Second, BEA has supported expansion in the coverage of the Treasury Department's surveys of portfolio investment to capture direct transactions between large U.S. pension funds and investment managers, on the one hand, and foreign residents, on the other. Previously, these transactions had bypassed the survey system, which was based on data provided by U.S. financial intermediaries. Third, the Treasury Department is currently processing a benchmark survey of U.S. portfolio investment abroad for BEA, the first in more than 50 years.

Although the use of counterparty data has helped fill gaps in coverage of international capital flows, increased use of such data to capture direct financial transactions will require further work in establishing standardized definitions and data collection systems across countries. In addition, counterparty data are unlikely to be available to provide measures of new financial instruments, one of the largest and most rapidly widening gaps in coverage. According to data collected by the Bank for International Settlements from its reporting banks alone, the notional principal value on interest rate swaps—

4. A complete list of BEA's methodologies is in *User's Guide to BEA Information*, which is updated annually (most recently in the January 1995 SURVEY OF CURRENT BUSINESS). The NIPA methodology is being described in a series of papers; see the listing in *User's Guide to BEA Information*. See also U.S. Department of Commerce, Bureau of Economic Analysis, *Benchmark Input-Output Accounts of the United States, 1987* (Washington, DC: U.S. Government Printing Office, November 1994). The methodologies for personal income in the regional accounts are in U.S. Department of Commerce, Bureau of Economic Analysis, *State Personal Income, 1929–93* (Washington, DC: U.S. Government Printing Office, forthcoming) and in U.S. Department of Commerce, Bureau of Economic Analysis, *Local Area Personal Income, 1969–92* (Washington, DC: U.S. Government Printing Office, September 1994). The methodology for the balance of payments is in U.S. Department of Commerce, Bureau of Economic Analysis, *The Balance of Payments of the United States: Concepts, Data Sources, and Estimating Procedures* (Washington, DC: U.S. Government Printing Office, May 1990).

one of the new derivative instruments—grew from \$1.5 trillion in 1989 to \$3.9 trillion in 1992, and the value of currency swaps grew from \$0.9 trillion in 1989 to \$1.7 trillion in 1992. Consistent data on U.S. transactions in derivatives, or

the market value of U.S. exposure to foreign risk through derivative instruments, are not available.

Fixed-weighted real GDP.—Rapid change in the composition of output and in relative prices has

Examples of Source Data and Methods Used To Prepare the Economic Accounts—Continued

Example estimate from the balance of payments accounts: Transactions in securities other than U.S. Treasury securities

Portfolio investment—that is, securities transactions between U.S. and unaffiliated foreign residents other than foreign official agencies—is measured in two capital accounts: “U.S. securities—net foreign purchases,” which was \$80.1 billion in 1993, and “foreign securities—net U.S. purchases,” which was \$120.0 billion.

The securities covered are stocks and bonds with an original maturity of more than 1 year. The accounts cover new issues in the United States and abroad as well as trading in, and redemptions of, outstanding U.S. and foreign securities.

The primary source data are from the U.S. Department of the Treasury’s International Capital reporting system—specifically, the monthly S form, “Purchases and Sales of Long-Term Securities by Foreigners.” Filing of S forms is required for all securities brokers, dealers, and other persons in the United States who, on their own behalf or on behalf of customers, engage in transactions in long-term securities with foreigners.

The methodology described in the table below (which follows the order of the standard quarterly balance of payments tables) is for “foreign securities—net U.S. purchases”; the methodology for “U.S. securities—net foreign purchases” is similar.

In the context of the discussion of sources and methods, there are several points of interest:

- *Source data coverage:* The S form covers mainly intermediated transactions; however, direct transactions for large pension and investment managers are covered.

- *Role of estimating methods:* BEA makes numerous adjustments, some from fragmentary data, to arrive at the needed coverage (for example, with respect to coverage of commissions, taxes, and other charges) and timing (for example, transactions not yet recorded in S-form data).

- *Relations among the estimates:* Positions—that is, outstanding holdings—that correspond to these capital flows are shown in the net international investment position; the positions are estimated by cumulating the capital flows from periodic benchmark survey-based levels and adjusting for price change. (The positions, along with an estimated representative yield, are used to estimate income flows for the current account of the balance of payments.)

Net U.S. purchases of foreign stocks (line 2): BEA estimates net transactions in outstanding stocks (line 4) as follows:

- (1) Data on gross sales and gross purchases of foreign stocks in the United States by foreigners are based on the monthly S reports. BEA adjusts the data to exclude estimates of commissions, taxes, and other charges from reported gross foreign purchases; to include estimates of commissions, taxes, and other charges from reported gross foreign purchases; and to include estimates of charges in reported gross foreign sales.
- (2) The value of stocks representing U.S. direct investment abroad is deducted from the net figure.
- (3) The value of stocks exchanged as part of a foreign direct investment in the United States is added.
- (4) Other adjustments include additions or subtractions for transactions that have not yet been incorporated into the Treasury data and additions for transactions that have been omitted, but that have been verified from other sources.

BEA estimates new foreign issues (line 3) on the basis of financial market information.

Net U.S. purchases of foreign bonds (line 5): BEA estimates net transactions in outstanding bonds other than redemptions (line 8) as follows:

- (1) Data on gross sales and gross purchases in the United States by foreigners of foreign corporate bonds are based on the monthly S reports. BEA adjusts the data to include estimates of commissions, taxes, and other charges from reported gross foreign purchases and to include estimates of underwriting fees on new issues, other fees, taxes, and other charges in reported gross foreign sales.
- (2) Adjustments are made to the data covering U.S. purchases of Canadian bonds to account for additional redemptions of Canadian-issued bonds that are held by U.S. residents.
- (3) Other adjustments include additions or subtractions for transactions that have not been incorporated into the Treasury data; additions for transactions that have been omitted from the S form, but that have been verified from other sources; and additions for acquisitions of foreign debt securities by U.S. residents through the exchange of securities with foreign residents, including those resulting in foreign direct investment in the United States.

BEA estimates new foreign issues (line 6) on the basis of financial market information, with separate estimates by type of issuer.

BEA estimates bond redemptions (line 7) from information on scheduled retirements.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *The Balance of Payments of the United States: Concepts, Data Sources, and Estimating Procedures* (Washington, DC: U.S. Government Printing Office, May 1990) as updated in the June issues of the SURVEY OF CURRENT BUSINESS, 1991–94.

Line	Foreign securities, net U.S. purchases (-)	1993 (Billions of dollars)
1	Total	-120.0
2	Stocks	-80.6
3	New issues in the United States	-13.8
4	Transactions in outstanding stocks, net	-46.8
5	Bonds	-59.4
6	New issues in the United States	-46.8
7	Redemptions of U.S.-held foreign bonds	8.9
8	Other transactions in outstanding bonds, net	-21.5

brought into question the longstanding methods that underlie constant-dollar GDP and other estimates. Constant-dollar estimates are the familiar kind of "real" estimates, the ones that are currently denominated in 1987 dollars because they value each component in the price of a base year that is currently 1987. This method is the equivalent of output measures that have fixed price weights—those of the base year. (Similarly, the fixed-weighted price indexes have fixed output weights—those of the base year.) Use of the same (fixed) price weights over all time periods provides a set of estimates in which the components add up to the totals. BEA has featured such measures partly because many users consider this additive property to be useful—for example, it facilitates analysis of contributions to growth and changes in shares of economic activity.

The professional literature has long recognized that output measures that have fixed price weights tend to overstate current-period growth as one moves further from the base period. This tendency, often called "substitution bias," reflects the fact that the commodities for which output grows rapidly tend to be those that register declines, or the smallest increases, in prices.

Two developments contributed to the need to investigate alternatives that did not exhibit the substitution bias found in the fixed-weighted index. First, beginning in the 1970's, changes in the prices and quantities of the energy and food components of GDP were large enough in certain periods for the choice of price weights to affect the measurement of change in real GDP. Second, computers provided a classic, but extreme, case of the source of the bias: Computer prices have declined rapidly, while computer output has grown rapidly.

Recognizing the important effect of changes in relative prices on real GDP growth rates, BEA initiated a research program to investigate alternative measures. In April 1992, BEA published two alternative measures of annual change in real GDP for the period 1959–90, and in March 1993, BEA began publishing them for quarterly changes. The two alternative measures are not based on the price weights of a single base year. Rather, they are indexes that account for changes in relative prices over the periods for which growth rates are computed. In the chain-type annual-weighted quantity index, the weights are from adjacent years. In the benchmark-years-weighted quantity

index, the weights are from adjacent benchmark years—about 5-year intervals.⁵

Further work in this area will involve examination of other methods that attempt to combine the advantages of fixed-weighted measures with the more up-to-date weights embodied in the alternative measures.

Reliability.—As explained in part 1, reliability is gauged by the size and frequency of revisions. It should be noted that filling gaps, such as those just described for international capital flows, and making other improvements give rise to revisions. Thus, in these cases, revisions are a symptom that improvements *have been made*. In other cases, revisions are a symptom that there is potential for improvement.

Among the major sources of revision are the following: Incorporation of source data with more complete reporting, replacement of judgmental projections with source data, incorporation of source data that more closely match economic accounting concepts and other needs, and incorporation of updated seasonal adjustments. These sources of revision, reflecting the interaction of source data and estimating methods, are explained by referring to the results of BEA studies of NIPA revisions.

Incorporation of source data with more complete reporting.—Some revisions are due to the incorporation of revisions in monthly source data that embody more complete reporting. Among the larger sources of revision from the advance to the preliminary current quarterly estimates of GDP are the incorporation of revised Census Bureau data on retail sales, manufacturing and trade inventories, manufacturers' shipments, and new construction put in place. Revisions from the preliminary to the final current estimates, and from the final current estimates to the annual and comprehensive revision estimates, are often due to the introduction of annual and benchmark surveys that are progressively more comprehensive in coverage than the quarterly and monthly data. For example, large revisions in personal consumption expenditures for goods in the 1993 annual revision were mainly due to revisions that reflected the incorporation in the data of the large and growing number of discount "clubs," which had not been fully covered in the monthly and annual retail trade surveys.

5. Both of the alternatives are what are known in the economic literature as "Fisher" or "superlative" price indexes.

Examples of Source Data and Methods Used To Prepare the Economic Accounts—Continued

Example estimate from the regional accounts: Wage and salary disbursements

Wage and salary disbursements makes up about 57 percent of personal income. The estimates are prepared by industry. As shown in the table that follows, there are two major sources of data: (1) The monthly survey of more than 400,000 nonagricultural establishments conducted by the State employment security agencies and coordinated by the Bureau of Labor Statistics (the BLS-790 series) and (2) the tabulations (sometimes called the ES-202 series) of the wages and salaries reported by employers on their quarterly unemployment insurance (UI) tax returns to the State employment security agencies.

The State-level BLS-790 series is used as the extrapolator for the preliminary quarterly estimates. The State-level UI series is used as the extrapolator for the second quarterly estimates, as the principal basis for the revised annual State estimates (which incorporate more detailed and more reliable data), and as the interpolator of the annual estimates used to prepare the revised quarterly State estimates.

The preliminary, second, and revised quarterly State estimates and the revised annual State estimates of wages and salaries are all controlled to the totals in the NIPA's. The quarterly and monthly national estimates of wages and salaries are based mainly on the

BLS-790 series; the annual estimates are based mainly on the UI series.

In the context of the discussion of sources and methods, there are several points of interest.

- *Sequence of revisions:* The UI data, which become available only in time for the second quarterly estimates (7 months after the quarter to which the data refer), include the wages and salaries of all employees, whereas the BLS-790 wage data for States are confined to the wages of production and nonsupervisory workers in the manufacturing industries. The UI wage data include bonus payments, which are not reflected in the BLS-790 data.

- *Relation of State and national estimates:* Until the preliminary annual State estimates for 1989 (published in April 1990), BEA had automatically controlled the annual estimates for the most current year to the BLS-790-based U.S. totals for wages and salaries in the NIPA's. Now, if the national total of the UI wage data for the first three quarters of a year differs substantially from the BLS-790-based estimates for those quarters, the U.S. total for wages and salaries that is used for the preliminary annual State estimates is based on the UI wage data. This change reduces the revisions between the preliminary and final annual State estimates of wages and salaries and personal income.

Source: Table H in the methodology text in *State Personal Income, 1929-93* (forthcoming).

Industry: ¹ (Billions of dollars in 1993; U.S. total: \$3,072.3)	Preliminary quarterly estimates (4 months after the close of quarter)	Second quarterly estimates (7 months after the close of quarter)	Revised annual estimates (8 months after the close of the year)
Farm (\$11.9)	Trend extrapolation ²	Trend extrapolation ²	USDA estimates of farm labor expenses
Agricultural services, forestry, fisheries, and other (\$16.2)	Trend extrapolation	Quarterly UI data for wages and salaries.	Annual UI data for wages and salaries and USDA estimates of farm labor expenses
Mining (\$25.8)	BLS-790 monthly employment data	Quarterly UI wage data	Annual UI wage data
Construction (\$132.8)	BLS-790 monthly employment data	Quarterly UI wage data	Annual UI wage data
Manufacturing:			
Nondurable goods (\$235.0)	BLS-790 monthly data for employment and average weekly hours and average hourly earnings for production and nonsupervisory workers.	Quarterly UI wage data	Annual UI wage data
Durable goods (\$353.5)	BLS-790 monthly data for employment and average weekly hours and average hourly earnings for production and nonsupervisory workers.	Quarterly UI wage data	Annual UI wage data
Transportation and public utilities:			
Excluding railroads (\$188.6)	BLS-790 monthly employment data	Quarterly UI wage data	Annual UI wage data
Railroads (\$12.9)	Monthly ICC payroll data and AAR State employment data for Class I railroads.	Monthly ICC payroll data and AAR State employment data.	Annual ICC payroll data and AAR State employment data
Wholesale trade (\$204.8); retail trade (\$295.4); finance, insurance, and real estate (\$250.7).	BLS-790 monthly employment data	Quarterly UI wage data	Annual UI wage data
Services (770.8)	BLS-790 monthly employment data	Quarterly UI wage data	Annual UI wage data, data from Census Bureau <i>County Business Patterns</i> and Census Bureau population data
Federal civilian (\$115.0)	BLS-790 monthly employment data	BLS-790 monthly employment data	Annual UI wage data
Federal military:			
Active duty (\$42.0)	DOD number of personnel and average pay by service and Coast Guard payroll data.	DOD number of personnel and average pay and Coast Guard payroll data.	DOD and Coast Guard data
Reserves (\$7.5)	Trend extrapolation	Trend extrapolation	DOD payroll outlay data
State and local government (\$409.5)	BLS-790 monthly employment data	Quarterly UI wage data	Annual UI wage data

1. The quarterly estimates of wages and salaries are prepared at the standard industrial classification (SIC) division level, and the annual estimates are prepared at the SIC two-digit level.
 2. The trend extrapolation is based on a regression that estimates a State's share of the Nation historically by industry.

AAR Association of American Railroads
 DOD Department of Defense
 ICC Interstate Commerce Commission
 UI Unemployment insurance
 USDA U.S. Department of Agriculture

Replacement of projections with source data.—Some other revisions are due to the replacement of BEA's judgmental projections for the quarters and the year with newly available annual and economic census data. Some of the largest revisions to GDP have come from annual services survey data and from annual State and local government finances data. Data such as State and local government purchases other than structures and employee compensation are available only annually; quarterly estimates must be extrapolated and interpolated.

Incorporation of source data that more closely match the needs of the accounts.—Revisions to the quarterly and annual estimates can come from the introduction of more comprehensive source data or alternative source data that are more consistent with the concepts, coverage, time of recording, and valuation needed for the economic accounts. For example, revisions to corporate profits are often sizable when tabulations of tax-return data replace tabulations of publicly available shareholder reports. The tax-return data provide coverage of all firms and all industries, and they are based on accounting guidelines that are closer to NIPA concepts than are the shareholder reports.

Seasonal adjustment.—Another of the sources of revision to the quarterly estimates, and one that affects many components, is seasonal adjustment. For some series, particularly volatile series (such as merchandise trade, inventories, and structures), the effect of revisions in seasonal adjustments may account for a large part of the revision between the final current estimate and the first annual revision estimate. In most of these cases, however, the revisions shift growth between adjacent quarters and have little effect on the general picture of economic growth.

Relevance.—In the mid-1990's, there is probably more concern about the ability of the accounts to provide answers about the economy to policymakers, analysts, and others than about their timeliness, the other aspect of relevance. (The major exceptions to this statement are concerns about the timeliness of BEA's input-output tables and about some of the regional estimates.)

Within the existing structure of the accounts, the source data and estimating methods set the statistical limits for implementing some relevant measures. For example, there is considerable interest in identifying purchases of computer software and in making more consistent use of

quality-adjusted prices for preparing real estimates of "high-tech" goods and services, but both improvements would require new source data and estimating methods.

Looking further, changes in the economy, the evolution of policy concerns, and advances in theory suggest changes in the structure of the accounts and the definitions embodied in them that would enhance the relevance of the estimates. One longstanding set of questions involves the definition of investment. Investment in the NIPA's consists of purchases of structures, durable equipment, and inventories by the private business sector. Should other sectors—notably government—be viewed as making investment when structures and durable equipment are purchased? Should some purchases of intangibles, such as research and development, be treated as investment? Once economic theory, experience in economic accounting, interest in international comparability, and other elements are brought to bear in deciding on a change in definition to enhance relevance, the implementation would again require new source data and estimating methods.

In addition, satellite accounts may be developed, as described in the newly revised international guidelines in the *System of National Accounts 1993*, to expand the analytical capacity of the accounts. BEA has prepared prototypes of two satellite accounts—one to show the interaction of the economy and the environment and the other to identify research and development expenditures within the NIPA's and to show the capital stock that results from treating them as investment. Both efforts pointed to source data and methodological improvements needed to strengthen and extend the estimates. Additional satellite accounts, such as those pioneered in other countries for health and education, are likely to point in the same direction.

Part 3. A Comprehensive Review of BEA's Economic Accounts

For the Mid-Decade Strategic Review, BEA undertook to replicate the scope and approaches of the "blue ribbon" panels and other comprehensive evaluations that have helped shape the economic accounts in the past. As part of this process, BEA prepared background papers that looked at the accounts from five perspectives: Past experience in adapting the economic accounts to changes in

the economy, outside evaluations of the accounts, changes in source data available to BEA (resulting, for example, from deregulation) and in estimating methods, the newly revised international guidelines for an integrated system of national accounts and for the balance of payments, and the size and sources of revisions in key components of the accounts as suggesting an agenda for future work.

BEA identified three priority issues for maintaining and improving the accounts:

- *Change in the nature of output and the organization of production: The need for new and improved output measures,*
- *Investment: The need for better measures of investment, saving, and wealth, and*
- *Internationalization: The need for measures to fill gaps in the coverage in international transactions.*

A comprehensive review: Scope and approaches

In past decades, a series of reviews have evaluated the performance of the economic accounts in terms of their ability to provide a relevant picture of the changing economy and to adapt to changes in source data, estimating methods, and economic accounting. These reviews also evaluated the accuracy of the accounts through some combination of revision and other statistical studies. (See the box, "Earlier Reviews of the Economic Accounts," below.) The reviews provided guidance, in most cases confirming BEA's own directions, for expanding and updating the accounts. The last review was in the early 1980's.

Given the pace of change in the economy, a comprehensive review seemed overdue. Earlier experience suggests that such a review should cover methodological and statistical issues as well as concepts and accounting structure. Further,

Earlier Reviews of the Economic Accounts

In the 1950's, there were two major reviews of the accounts. The first, *National Economic Accounts of the United States: Review, Appraisal, and Prospects*, was prepared in 1957 by the National Accounts Review Committee of the National Bureau of Economic Research at the request of the Bureau of the Budget (predecessor of the Office of Management and Budget). The Committee was chaired by Raymond Goldsmith, and the members included Richard Easterlin, Joseph Pechman, and Richard Ruggles. The report was presented at a hearing of the Subcommittee on Economic Statistics of the Joint Economic Committee. The second review, *Critique of the United States Income and Product Accounts*, from 1958, was the result of a symposium on the accounts held by the Conference on Research in Income and Wealth, which functions as a research forum for work on economic measurement. These reviews dealt with emerging issues of the time, many of which related to the expansion in the complexity and scope of the accounts that was necessary to accurately portray the U.S. economy. They also dealt with conceptual issues, such as the treatment of capital gains and the coverage of nonmarket production and consumption, and they discussed the need for better integration of the income and product, flow of funds, and other components of the existing accounts.

In 1971, BEA published *The Economic Accounts of the United States: Retrospect and Prospect*. This volume, on the occasion of the 50th anniversary of the SURVEY OF CURRENT BUSINESS, was a series of 43 papers contributed by some of the country's most prominent economists, including past and future Federal Reserve Board chairpersons (Arthur Burns and Alan Greenspan), Nobel laureates (Wassily Leontief, Simon Kuznets, Lawrence Klein, and Paul Samuelson), Council of Economic Advisers chairpersons (Arthur Okun and Raymond Saulnier), and American Economic Association presidents (Robert

Eisner, Robert Gordon, and Charles Kindleberger). BEA catalogued and prioritized the suggestions from these papers, and BEA's Director at that time, George Jaszi, responded.

In 1977, the *Gross National Product Data Improvement Project Report* was released. This report was prepared by the Advisory Committee on Gross National Product Data Improvement under the auspices of the Office of Management and Budget. The committee was chaired by Daniel Creamer, and the members were Rosanne Cole, Edward Denison, Raymond Goldsmith, Alan Greenspan, and John Kendrick. The report, referred to as the Creamer Report, was undertaken as a result of concerns over relatively large revisions in the GNP accounts in the early 1970's and focused on needed improvements in the source data, rather than on needed extensions and conceptual modifications.

In 1979, the Conference on Research in Income and Wealth addressed several aspects of the national income and product accounts pertaining to their role as a system of information about the behavior of the economy. Topics included the concepts and structure of the accounts, the issues involved in deflation and the treatment of quality change in price indexes, and source data. The last topic included an evaluation of major parts of the Creamer Report.

In 1982, the General Accounting Office published *The Bureau of Economic Analysis Should Lead Efforts to Improve GNP Estimates*. This study was intended to evaluate revisions to GNP estimates and to assign different priorities to the Creamer Report's 155 recommendations, made to 24 Federal agencies, for improving the accounts. It, too, focused more on statistical than on conceptual issues and—as the title indicates—urged BEA to take a more proactive role in obtaining the source data needed to improve the accounts.

it should look at the accounts from at least five perspectives:

- The changes in the economy in the 1980's and 1990's and BEA's responses to these changes, to serve both as an agenda for future work and as a guide to success in the future.
- Recommendations by outside experts.
- Updated international guidelines in economic accounting, mainly the *System of National Accounts 1993* and the *Balance of Payments Manual*.
- Changes in source data available to BEA (reflecting changes such as those due to

deregulation and those in data collection technology) and changes in estimating methods.

- Revisions in key components of GDP and the other accounts, examining the size and sources of revisions as an agenda for future work.

Background papers

As the first step in the Mid-Decade Review, BEA prepared a set of background papers that cover the five perspectives just described. Papers II-VI

Table 1.—Selected Changes in the Economy and Changes in the Economic Accounts

Economic development	Issue	Action ¹
Structural change:		
Constant-dollar gross product originating	Estimates were not capturing changes; needed better picture of growth in services and imports and the role of information processing equipment.	Revised the gross product by industry series (1991)
Input-output accounts	Incomplete picture of industries; needed more timely detail on industry interaction.	Improved the benchmark input-output accounts (1994)
Gross state product	Incomplete picture of industries; needed more frequent information on changing industry structure.	Published annual input-output tables (1987)
Other structural developments	Incomplete picture of regional activity; needed detail on State contributions to GDP to understand changes in economy's regional structure.	Introduced gross state product by industry (1988)
	Changing nature of Federal deposit insurance; needed to reflect the exposure due to savings and loan crisis.	Developed a new classification of federal deposit insurance (1991)
	Changing nature of health care programs; needed consistent picture.	Reclassified medicaid outlays (to conform its treatment with medicare) (1985)
Price change	Substitution bias of fixed-weighted index	Published new alternative measures of real GDP change that reflect changing relative prices (1992)
	Changing relative prices and/or unique products	Introduced new index for deflation of computers based on hedonic techniques (1985)
		Introduced a new price index for deflation of multifamily structures based on hedonic techniques (1991)
		Used BLS import price indexes for deflation of imported producers' equipment (1988)
		Improved the deflation of Federal defense purchases (1980)
Internationalization:		
Trade in services	Gap in coverage; as trade (especially in financial services) increased, gap became larger.	Conducted new surveys of 30 services (1989)
		Improved the foreign travel survey (1989)
		Developed new benchmark survey of financial services (1994)
	Incomplete monthly picture of trade	Presented new monthly estimates of international services (1994)
International investment	Position: Valuation at historical cost and therefore understated and inconsistent.	Revalued direct investment and used market values for U.S. gold reserves (1991)
	Direct investment in the United States: Needed establishment detail for analysis of specific industries.	Linked BEA database of foreign-owned companies with Census database of U.S. establishments (1992)
International capital transactions	Gap in coverage; needed to capture new channels and new financial instruments.	Expanded use of partner-country data (1994)
		Supported improvements in Treasury surveys of portfolio investment
Other international developments	Increased interest in multinational firms; needed more detail on ownership.	Developed supplemental balance-of-payments accounting frameworks and estimates (1994)
	Other	Improved end-use classifications and deflation for trade (1988)
Other developments	Increased concern about the impact of economic growth on the use of natural resources and environmental quality.	Developed integrated economic and environmental satellite accounts (1994)
	Growth of the underground economy	Improved the adjustments for the underground economy (1984)

1. Years in parentheses are the years in which the change was introduced.

are summarized in this section. (Paper I is an introduction and executive summary to the set.)

Economic change and the economic accounts.—Paper II considers BEA's experience of the last 50 years in adapting the accounts to the changing economy. The bulk of the paper is about the period beginning in the late 1970's. A table in the paper that highlighted many of these changes is summarized in table 1 in this article. The first group of changes in table 1 deals with the structure of the economy, ranging from broad changes such as the growth of imports and services to changes in regional patterns and to changes in specific government programs. The second group deals with changes in price structure. The third group deals with the international aspects of the economy, focusing on trade in services, capital flows, and international investment. The actions listed as BEA's responses to the changes include some that deal with methodology, some that modify and extend surveys, and two that deal with new surveys. In some cases, even though an action is indicated, the issue has not been completely resolved.

Recommendations from outside experts.—Paper III summarizes a number of external reviews of the accounts during the last two decades. This sample of 13 wide-ranging reviews and of 10 that are more subject-specific includes the following: Several administration-sponsored reviews, from the comprehensive Gross National Product Data Improvement Report of the 1970's through the Economic Statistics ("Boskin") Initiative of the early 1990's; several volumes by the Conference on Research in Income and Wealth; two studies by the International Monetary Fund; two presidential addresses at the American Economic Association; papers by other individual researchers; and a continuing effort by a trade group.

The recommendations of outside experts have a "living" nature. As the economy changes, new concerns arise and generate new recommendations so that the accounts are under evolving pressures. As well, users are persistent in their efforts to influence economic accounting; concerns are expressed repeatedly if left unaddressed. For example, the adequacy of services estimates has been questioned by many groups over the last two decades. Similarly, the coverage of government purchases, particularly of State and local government purchases, has been a concern for many years.

National accounts.—The reviews provided a substantial number of recommendations about concepts (such as the scope of investment), source data, and estimating methods for the major components of GDP. (See the next section for recommendations about net exports.)

- Within consumer spending, by far the largest number of recommendations focus on improvements in services.
- Among the components of investment, the largest number of recommendations deal with improvements in inventories, followed by nonresidential fixed investment (mainly construction).
- Among the components of government purchases, by far the largest number of recommendations deal with State and local government purchases.

A number of comments call directly for better constant-dollar estimates or do so indirectly by calling for better price indexes to use in deflation. Many of these recommendations address the demands that a rapidly changing economy puts on price measures. Rapid changes in the nature of goods and services require that price indexes be able to separate price change from quality change, and shifts in the pattern of demand require that the product samples underlying price indexes be kept up to date.

Other recommendations classified as "national accounts recommendations" include those on input-output accounts, GDP by industry, and saving and wealth.

International accounts.—The largest number of recommendations about the balance of payments are for improvements to the capital account, followed by the current account and by prices used for deflation of exports and imports. Within the capital account, the largest number of recommendations are for improved estimates of portfolio investment, followed by direct investment. Within the current account, most of the recommendations are for improved estimates of trade in services.

Other recommendations.—A number of the recommendations address generic issues. Several recommendations, especially those from the 1980's, focus on the need for better documentation of BEA's methodology, and several suggest ways, such as an advisory committee, to formalize contact with users of the accounts. A number of recommendations focus on increased funding,

both for BEA and for source data agencies. Others deal with improving coordination and tapping possible efficiencies across the Federal statistical agencies; these include recommendations for data sharing and revised industry classification systems.

Changes in data sources and estimating methods as they affect the economic accounts.—Paper IV focuses on the developments that have caused, or that call for, changes in source data and methods. It also notes BEA's assessment of the additional steps that should be taken to deal with these developments.

The supply of administrative data used in the accounts has been adversely affected by factors that are not primarily statistical in origin. Perhaps the most important of these is the deregulation of the transportation, telecommunications, and finance industries in the late 1970's and early 1980's, which has resulted in the disappearance of some of the data once used to monitor and regulate them. BEA is currently working with the Census Bureau to expand the coverage of the services annual survey to all services, including transportation and communications, to recover the lost data. In addition, changes in tax laws have caused discontinuities in the tax-based data used in the accounts. In the 1980's, these included changes in the pass-through of income to shareholders, limitations on business entertainment expenses, capitalization of interest, and the uniform capitalization of inventories. More generally, reductions in government budgets have caused nonstatistical agencies to eliminate, or place a lower priority on, those statistics not critical to their central mission. Continued reductions in the availability of tax and other administrative data raise questions about reliance on these data sources. It is clear that there are large efficiencies in the dual use of such data, but certain generic questions—for example, about the funding of such data—need to be resolved.

Many of the changes in the economy noted in paper II appear in paper IV as reasons to change data collection, data processing, and estimating methodology. For example, rapid changes in the nature of retail outlets call for more frequent updating of sample frames, and sharp changes in relative prices call for less reliance on fixed-weighted GDP measures. For the national estimates, progress includes the introduction of alternative output and price indexes that use more frequently updated weights, use of hedonic price indexes to capture increased quality, and

improved adjustments to tax-based data to account for the underground economy. For the international estimates, progress in adapting to the effects of changes in the economy include the use of counterparty data to fill gaps in coverage and the use of data sharing. BEA's recent link of its data on foreign-owned companies with Census Bureau and Bureau of Labor Statistics data on U.S. establishments resulted in a significant increase in the amount of information available on foreign-owned companies—without an increase in respondent burden. However, further work is required in improving real output and price indexes, in updating sample frames, in measuring new services, in revamping data collection systems for international capital flows, and in updating industry classification systems.

The adverse effects on the accounts of these changes in data sources have been partly offset by changes in data collection technology and statistical methods. Electronic data collection and transfer methods are beginning to improve the collection and editing of data. One of the most important improvements that BEA can make to address the problems discussed in this paper is the reengineering of its information technology system.

The newly revised international guidelines for economic accounting.—International standards, or guidelines, in statistics are designed to guide country statistical offices in the development of their own statistics and, in the interests of international comparability, to serve as a framework in which countries report their statistics to international organizations. Globalization of trade and financial markets has made international policy coordination, supported by consistency in the underlying statistics that guide policy, increasingly important.

In the last decade, the United States took a lead role in the development of newly revised international economic accounting guidelines found in the *System of National Accounts 1993 (SNA 1993)* and the *Balance of Payments Manual (BPM)*. The revised guidelines reflect efforts to bring them up to date with changes in economies around the world—including many of the same changes affecting the U.S. economy described in other background papers—and with developments in economic accounting, such as those that reflect longer experience in compiling balance sheets.

As discussed in paper V, modernizing and extending the existing U.S. accounts to make them compatible with the *SNA 1993* and the *BPM* will require work in several areas. Compatibility with

the *SNA 1993* would mean developing accounts for sectors as well as for the entire economy; improving the statistical picture of government's role in the economy; improving the treatment of financial and insurance services; and better integrating the *NIPA's*, financial accounts, and balance sheets. Further, the *SNA 1993* encourages the development of satellite accounts to increase the flexibility of the accounting system.

Compatibility with the revised *BPM* would mean changes in the treatment of goods, particularly intellectual property, investment goods, and goods acquired in ports. Changes would also be necessary to the treatment of services, such as affiliated services, rental services, and financial services, to name a few. Other changes would be required in the treatment of income, unilateral transfers, the coverage of the capital accounts, and the coverage of the international investment position.

Revisions in the economic accounts: Implications for improvements.—Paper VI focuses on revisions and other statistical studies of national estimates—specifically, the *NIPA* estimates. Many of the implications of these studies hold, however, for the international and regional estimates as well. First, a large component of national estimates—net exports—comes from the balance of payments accounts. Second, regional estimates are, in many cases, extensions of national estimates and thus exhibit similar characteristics.

Studies of revisions are often used as a basis for recommendations for improvements, although revisions can be quite misleading for such purposes. Revisions in series do not necessarily reflect errors, nor does a lack of revisions reflect the absence of errors. Revisions due to the replacement of initial estimates with those based on more complete source data can reflect errors associated with *BEA* projections or with the small sample frame or other features of the source data used for the early estimates. However, revisions can also reflect changes in accounting structure, such as definitional changes to provide more up-to-date or otherwise more relevant measures, that should not be regarded as the correction of errors.

Revisions in GDP.—*BEA* has made a number of studies of revisions in the *NIPA's*. Many of these studies featured estimates of dispersion and bias of estimates of *GDP* (or of *GNP*) and its major components. (Dispersion is the average, or mean, of the absolute values of the revisions, typically calculated using percent change from quarter to

quarter at annual rates. Bias is the average, or mean, of the values of the revisions.)

The studies indicate that the current estimates of *GDP*—advance, preliminary, and final—are generally able to tell us whether the economy is expanding or contracting, whether growth is accelerating or decelerating, and whether the growth rate is high or low relative to trend. However, their ability to do so is least when economic growth is hovering near zero and—although the evidence is less clear on this point—at turning points in the economy. The following paragraphs summarize results of the studies for the period 1978–91:

- The current estimates correctly indicated the direction of change in real *GDP* between 88 and 89 percent of the time. If quarters in which growth is 1 percent or less are excluded, the percentage correct rises to between 92 and 94 percent.
- The current estimates correctly indicated whether real *GDP* was accelerating or decelerating between 75 and 78 percent of the time. If quarters in which growth was 1 percent or less are excluded, the percentage correct rises to between 81 and 86 percent.
- The estimates also correctly indicated high growth (above 4 percent) versus low growth (below 1 percent) between 66 and 75 percent of the time.
- Dispersion in the current estimates of real *GDP* was 1.3 percentage points, or between 37 and 40 percent of average real *GDP* growth of 3.5 percent during this period. Bias was small and averaged between 0 and 0.1 percentage point, or between 1 and 4 percent of average real *GDP* growth.

The revisions of *GDP* for the United States compare quite favorably with those of other countries. Using estimates from the mid-1960's to the mid-1970's, one study found that revisions in quarterly *GDP* growth in Canada, Japan, Australia, West Germany, and the United Kingdom were all distinctly larger than those in the United States, even though U.S. estimates are released more quickly than their counterparts. Later, but less comprehensive, studies suggest some convergence, but that the U.S. estimates are still among the most reliable and timely.

Revisions in NIPA components.—The *BEA* revision studies also provided information about the size and sources of revisions in the *NIPA* components. Among the relevant points about the revisions for

1983–91 for the product components and selected income components are the following:

- *Personal consumption expenditures (PCE):* Dispersion in the quarterly estimates is roughly equal to that in GDP; revisions, measured in dollars, are about three-quarters of the size of the revisions in GDP. Among the PCE components, the largest revisions in percentage points are to durable goods; the largest dollar revisions are to services. For services, revisions to the initial current estimates are mainly due to the replacement of judgmental projections with partial source data. Revisions from the final current estimates to the first annual revision were largely due to the incorporation of a large and diverse volume of annual source data from a variety of government agencies and trade sources, quarterly survey data, and monthly data on residential energy use.
- *Investment:* The largest single source of revisions between the successive current quarterly estimates of GDP growth is from inventory investment. The first revisions occur between the advance and preliminary estimates of inventories, as judgmental estimates for the third month of the quarter are replaced with preliminary estimates based on source data from surveys of manufacturing and trade inventories and as the source data are revised. Revisions are also large between the final current quarterly estimates of inventories and the latest estimates. These revisions reflect (in addition to a conceptual change for 1983–91) the replacement of monthly survey data with annual survey data and revisions of seasonal adjustments. They also reflect the replacement of BEA projections for nonfarm inventories other than manufacturing, merchant wholesale trade, and retail trade.
Most of the revisions to fixed investment are due to a combination of past improvements in source data and methods that affected revisions for 1983–91 and of revisions in source data. Substantial revisions to the current estimates of nonresidential investment are due to revisions in the monthly data on manufacturers' shipments and in the data on the value of construction put in place that are mainly related to incomplete reporting. Large annual revisions reflect the incorporation of source data that provide more complete and up-to-date coverage.
- *Exports and imports:* Despite the relatively small size of net exports, large revisions to exports and imports cause the dispersion in their current estimates to be large relative to dispersion in the current estimates of GDP. In dollars, exports and imports are second only to inventories as a source of revisions; in percentage points, their dispersions are 4–7 times the size of the dispersion in GDP. The sources of these revisions include the replacement of judgmental projections for the last month of each quarter with source data and improvements in the estimates of international services.
- *Government purchases:* The major source of revisions (aside from a conceptual change that had an offset in inventories) is the replacement of judgmental projections with source data. For the Federal Government, detailed data from the *Monthly Treasury Statement* for the third month of each quarter and monthly data on civilian wages and salaries replace judgmental projections. For State and local governments, data on government purchases (except compensation and structures) become available and replace quarterly extrapolations of as many as 10 quarters.
- *Compensation of employees:* The largest dollar revisions in national income are to compensation of employees. A large share of the revisions to the final current estimates of wages and salaries occurs as those estimates are replaced with estimates based on data providing fuller coverage.
In terms of dispersion and, in certain years, in terms of dollars, revisions to other labor income are larger than those to wages and salaries. These revisions mainly reflect the paucity of current quarterly data and the long lag before annual data are available.
- *Proprietors' income:* The dispersion for this component, especially for farm proprietors' income, is the largest of all the major components of national income. The volatility of farm output and inventories results in large revisions in source data and in seasonal adjustment factors. For nonfarm proprietors' income, current quarterly and first-annual-revision estimates are based on indicators of industry activity and judgmental trends. In the second annual revision, tabulations of noncorporate business tax returns become available.

- *Corporate profits:* In terms of dispersion, revisions to corporate profits are second in size only to proprietors' income among the components of national income. Revisions reflect more complete coverage of the source data on domestic profits and more complete reporting on BEA's surveys of multinational companies.

Other studies.—A number of studies of revisions in the NIPA's have been prepared outside BEA. The principal implication of these studies is that some improvements could be made in the early estimates. Despite several limitations, these studies have provided BEA with tools to further evaluate its revisions.

Although the evidence is mixed, revisions to GDP appear to account for a substantial share of the errors in short-term econometric forecasts used for business and macroeconomic policy purposes.

The priority areas of concern: Three cross-cutting issues

BEA has identified three priority issues that cut across the subjects of the background papers. For example, certain changes in the nature of the economy were referred to in all papers because they have led to gaps in coverage and to problems with existing source data and methods, as well as to significant revisions. These three issues are also likely to be the focus of current policy interest and the subject of outside experts' recommendations.

Change in the nature of output and the organization of production: The need for new and improved output measures.—Measuring output is fundamental to economic accounting, but an increasing share of output is in sectors in which output is difficult to define and measure. How does one define, for example, the output of a legal firm or of an economic consulting firm? If hourly billing rates for such firms rise over time, how does one determine whether there are offsetting improvements to the value of the services performed for the firms' clients? There are no easy answers to such questions, and answers are necessary in order to separate current-dollar measures into price and quantity, or real output, terms.

Similar problems also arise in some portions—the more dynamic portions—of the goods-producing sectors. For example, new products typically enter the market at very high prices;

subsequently, prices fall very rapidly, with resulting expansions in the size of the market. The pricing histories of these new products must include the periods of their sharpest price declines, even though the initial market shares of these new products are small, because otherwise overall price measures may be biased. In times of rapid introduction of new products, however, it may be very difficult to keep product samples sufficiently up to date to track the price declines of new products.

More broadly, changes in the composition of output have caused problems as newly emerging services and goods have opened gaps in the coverage of existing surveys, methods, and classification systems. For example, sample frames for retail trade become outdated as distribution channels shift, as when "wholesale" outlets began to account for an increasing share of direct sales to consumers. New and rapidly growing products, such as computer software and exports of international financial services may—for any of several reasons—escape the statistical nets, while products on their way out, such as LP records, are still fully covered.

Rapid changes in output and prices also cause problems for statistical methods. Notable among these is the use of fixed weights for output and price indexes, a method introduced when updating such indexes every 5 years was thought to be sufficient.

Finally, changes in the structure and organization of the economy threaten the relevance of some estimates in the economic accounts. For example, accounting for the changing role of government, for the interaction between the economy and the environment, and for research and development is limited.

Investment: The need for better measures of investment, saving, and wealth.—Changes in the economy have also increased the need for broader and more reliable measures of investment, saving, and capital stocks. For example, changes in technology call for broader coverage of products, such as computer software, whose investment-like properties are increasingly apparent. At the same time, integration in world financial markets and the effect of changes in wealth on consumer spending, investment, and international capital flows have increased the importance of developing integrated accounts for real and financial transactions and stocks for macroeconomic analysis.

Longstanding problems affect the measures of depreciation, capital stocks, and inventories. Al-

though BEA's straight-line depreciation and capital stocks at replacement cost were a significant improvement over tax-based estimates at historical cost when they were introduced in the 1970's, an overhaul of these estimates is overdue.

Internationalization: The need for measures to fill gaps in the coverage of international transactions.—One of the most obvious aspects of economic change affecting the accounts is the international integration of markets. The integration of world capital markets has significantly increased monetary and regulatory authorities' interest in accurate and complete information on capital flows. At the same time, the integration of markets for goods and services has increased business and trade officials' interest in newly emerging goods and services.

Unfortunately, while increased integration has increased the importance of such data, it has also increased the difficulty of measuring such transactions. Gaps have developed in the coverage of newly emerging categories of international trade in services and goods, in the coverage of derivatives and other new financial instruments, and in the coverage of security and other portfolio transactions that bypass U.S. brokers, banks, and other financial institutions. Changes in the structure of international markets have also resulted in outdated and incomplete source data for existing measures of goods and services.

Part 4. BEA's Strategic Plan for Maintaining and Improving the Economic Accounts

BEA's draft strategic plan is framed around the three priority issues identified in the background papers. Within each issue, BEA first identified the most important measurement problems in terms of the accuracy, reliability, and relevance of the accounts. BEA then screened the recommendations in the consolidated "menu" that addressed these problems to identify the most cost-effective actions in terms of both direct cost and respondent burden. The actions BEA proposes include changes in methodology and accounting structure, source data modifications and extensions, and, in a few cases, new source data. Milestones in the implementation of the actions are proposed through 1999.

BEA's draft plan for maintaining and improving the economic accounts is framed around the

three issues identified in the background papers: The need for new and improved output measures; the need for better measures of investment, saving, and wealth; and the need for measures to fill gaps in the coverage of international transactions. Within each issue, BEA assessed the practical importance and relative size of the various measurement problems and then identified the ones that were most important in terms of the accuracy, reliability, and relevance of the accounts. BEA then focused on the recommendations in the consolidated "menu" that addressed these problems. These recommendations were screened to identify the most cost-effective actions in terms of both direct cost and respondent burden. The results of this process are summarized in table 2.

Table 2 shows, in column two, some quantitative indicators of the importance of various measurement problems in the accounts. All of these indicators should be used with caution. For gaps in coverage, the indicators are no better than educated guesses; if a precise estimate were known, it would be possible to simply plug it in and fill the gap. For revisions, the quantitative indicators are based on past experience, and that experience may not hold for the future. In some cases, the indicator may only be suggestive of importance; in others, no quantitative indicator of the importance of the problem can be given.

In screening the recommendations to identify the most cost-effective actions, the choice was clear where the measurement problem is amenable to resolution by improvements in methodology and accounting structure using existing, but heretofore unexploited, source data. (See the box "A Three-Way Grouping of Actions To Improve the Accounts," on page 59.) However, many of the measurement problems exist largely because there are no reliable source data upon which to base estimates. In these cases, the least burdensome and most efficient action has been suggested. Wherever possible, the modification or extension of an existing survey has been suggested; a new survey has been suggested only as a last resort. In either case, BEA would work with the Census Bureau, the Bureau of Labor Statistics, other source data agencies, data users, and the respondent community to obtain the necessary information with the lowest possible respondent burden.

The need for new and improved output measures

Difficult-to-measure components of real GDP.—Difficulties in measuring and defining real output

and prices may have a significant effect on key components of GDP, as well as on GDP and its growth rate. Because price measures are used to deflate current-dollar expenditures to obtain real output measures, any errors in existing price measures will impart an equivalent error—but of opposite sign—to the growth rate of real GDP and of productivity. For example, if the net effect of price measurement difficulties is to overstate the

rate of inflation, then the effect is to understate the growth rate of real GDP.

Determining the magnitude of the net error, if any, imparted to real GDP growth is difficult. Some of the broader-based studies are now dated in that they do not cover the 1980's, when significant methodological improvements were made by the Bureau of Labor Statistics in the Producer Price Index and the Consumer Price Index,

Table 2.—Issues and Proposed Actions

Issues, problems, and uses affected	Quantitative indicators (e.g., potential size of gap, size of revision, size of component treated differently or added)	Statistical source(s) of the problem	Proposed actions
Need for new and improved output measures			
<p>Difficulties in measuring and defining certain components of real GDP. <i>Uses affected:</i> Analysis of economic growth, especially of economy's long-term, noninflationary growth potential; macroeconomic policy; forecasting; business, budget, and investment planning.</p>	<p>Possible understatement of growth, especially in fixed investment; potential for understatement in real GDP growth¹.</p>	<p>Difficulties in measuring quality changes, especially in investment goods.</p>	<p><i>Methodology and structure:</i> Extension of quality adjustment of prices used in real GDP, including hedonic work on goods amenable to such measurement: High-tech goods and nonresidential structures.</p>
	<p>No quantitative indicator of the difficulties of defining output.</p>	<p>Difficulties in defining output</p>	<p><i>Methodology and structure:</i> Further conceptual work on more difficult-to-measure goods and services.</p>
<p>Revisions to key components of GDP and national income. <i>Uses affected:</i> Macroeconomic policy; forecasting; business, budget, and investment planning.</p>	<p>1.4–9.4 percentage point (±) revisions to quarterly changes (SAAR) for key components of current-dollar GDP:² Change in business inventories, \$13 billion. Trade in goods and services, \$9 billion. Government purchases, \$8 billion. Consumer expenditures for services, \$6 billion. Consumer expenditures for goods, \$4–\$5 billion.</p>	<p>Inability of existing source data used in the quarterly estimates to capture change in the economy.</p>	<p><i>Data modification and extension:</i> More frequent updating of sample frames for existing surveys, including trade and manufacturing. <i>Data extension:</i> More frequent surveys for certain growing sectors such as international trade in services, medical care, and State and local government purchases. <i>Data extension:</i> Extension of existing surveys such as those for inventories, services, and employee compensation (including bonus payments) to fill gaps in coverage.</p>
	<p>1.4–8.5 percentage point (±) revisions to quarterly changes (SAAR) for key components of national income.</p>	<p>Difficulties in seasonal adjustment</p>	<p><i>Methodology and structure:</i> Improvements in seasonal adjustment for volatile components such as inventories and trade in goods and services.</p>
		<p>Errors in projections for missing source data.</p>	<p><i>Methodology and structure:</i> Improvements in projections for components such as inventories, trade in goods and services, and bonus payments.</p>
		<p>Substitution bias, specifically the use of fixed weights (1987) inappropriate for the current period.</p>	<p><i>Methodology and structure:</i> Introduction of more current weights for real GDP for current estimates and more appropriate weights for historical estimates.</p>
<p>Overstatement of real GDP growth in recent years (and understatement in earlier years). <i>Uses affected:</i> Analysis of economic growth, especially of current growth relative to long-term, noninflationary growth; macroeconomic policy; forecasting; business, budget, and investment planning.</p>	<p>0–1.2 percentage point overstatement of quarterly rates of change in real GDP (average 1991:I–1994:III, 0.4 percentage point)³.</p>		
<p>Outdated and inconsistent view of the structure and organization of production. <i>Uses affected:</i> Federal and State and local tax analysis and budget planning; business location and marketing studies; regional analysis; industrial organization studies; and cross-border analysis of trade effects.</p>	<p>For industry classifications, inconsistencies across U.S. industries and incompatibilities among North American countries, with special attention needed for new and emerging industries, service industries, and high-tech industries (for a discussion of quantitative indicators, see text).</p>	<p>Outdated and inconsistent industry classification system, source data, and industry accounts.</p>	<p><i>Methodology and structure:</i> Develop a new industrial classification system. <i>Data modification and extension:</i> Implement a new industrial classification system, starting with a restructuring of surveys. <i>Methodology and structure:</i> Update and better integrate the input-output, industry, gross state product, and GDP estimates within the context of modernizing the accounts along the lines of the new international guidelines.</p>

See footnotes at end of table.

which provide most of the detailed components for deflation of real GDP. Nevertheless, there is substantial evidence to suggest that price measurement difficulties may be severe for sectors in which rapid technological change has led to a substantial drop in the quality-adjusted price of output. For example, BEA's hedonic computer equipment price indexes, which were introduced into the accounts in 1985, have declined at an annual rate of 15–20 percent for 1959–94. Studies on some other products—including semiconductors and medical scanners—also suggest large rates of

price decline. Other studies, including studies of prescription drugs, have pointed to measurement problems that arise when the turnover of new products is quite rapid; in the case of prescription drugs, these studies have led to methodological improvements in the Producer Price Index.

On the other hand, quality-adjusted measures have been criticized for overstating the increase in output. For example, prominent macroeconomic modeling firms have reservations about the hedonic indexes for computer equipment and do

Table 2.—Issues and Proposed Actions—Continued

Issues, problems, and uses affected	Quantitative indicators (e.g., potential size of gap, size of revision, size of component treated differently or added)	Statistical source(s) of the problem	Proposed actions
Need for better measures of investment, savings, and wealth			
<p>Extend the concept and update the measurement of investment and wealth/capital stock. <i>Uses affected:</i> Analysis of sources of economic growth, productivity, returns to public and private investment; tax and expenditures policies.</p>	<p>Treating government spending on structures and equipment and government and business spending on computer software as fixed investment would raise investment and reproducible capital stock in national wealth by about 20 percent. Government capital, \$2,863 billion. Computer software, \$20–\$40 billion. Treating other candidates as investment in satellite accounts would raise wealth/capital stock, for example: R&D capital, \$1,050–\$1,380 billion. Natural resources, \$950–\$1,600 billion.</p>	<p>Exclusion of certain types of public and private expenditures that contribute to the nation's wealth and productive capacity.</p>	<p><i>Methodology and structure:</i> Expand the accounting for investment and wealth/capital stock by (1) inclusion of government spending on structures and equipment and government and business spending on computer software and other intangibles in investment in the national accounts and (2) inclusion of research and development and natural resources in satellite accounts, in the context of modernizing the accounts along the lines of the new international guidelines.</p>
	<p>No quantitative indicator of the need to update measurement.</p>	<p>Use of straight-line depreciation</p>	<p>Use of conceptually and empirically based depreciation patterns and valuation methods</p>
<p>Need for better integration and measurement of investment, saving, and wealth/capital stocks. <i>Uses affected:</i> Analysis of sources of economic growth, productivity, returns to public and private investment, and saving; tax and expenditure policies.</p>	<p>3–9 percentage point differences—conceptual and statistical—between NIPA and flow of funds measures of personal saving rates⁴. Treating government "investment" in GDP consistently with international guidelines would eliminate more than half of the apparent 5.8 percentage point shortfall in U.S. versus European investment rates⁵.</p>	<p>Lack of complete integration between financial and real accounts.</p>	<p><i>Methodology and structure:</i> Better integration of real and financial accounts in the context of modernizing the accounts along the lines of the new international guidelines. For 1993, investment as a percent of GDP: NIPA rate is 13.7 percent; adding government "investment" raises the rate to 16.7 percent. Average rate for Europe is 19.5 percent.</p>
Need to fill gaps in the coverage of international transactions			
<p>Gaps in the coverage of international trade in certain goods and services, income, and capital. <i>Uses affected:</i> Analysis of trade, monetary, and regulatory policy; forecasting; business and investment planning.</p>	<p>Gaps in key components: Trade in goods and services, as much as \$10–\$20 billion⁶. Capital flows, as much as \$100, and stocks as much as \$200 billion⁶.</p>	<p>Inability of existing data collection systems to capture new markets and types of goods, services, and financial instruments and intermediaries.</p>	<p><i>Data modification and extension:</i> Extension of existing surveys to cover new products, services, and markets. <i>Methodology and structure:</i> Extension of data exchanges with other countries and central banks. <i>New data:</i> Development of new surveys such as for financial services and portfolio investment.</p>

1. For a discussion of quantitative indicators, see text.
2. Based on BEA revision studies; see text for details.
3. Based on BEA alternative output and price indexes; see text for details.
4. Based on historical difference between BEA's NIPA measures and the Federal Reserve Board's flow-of-funds estimates; most of the difference between the two series are conceptual, with statistical

differences ranging between 0 and 2.9 percentage points over the last 10 years.
5. Calculated from *Quarterly National Accounts*, compiled by the Organisation for Economic Co-operation and Development. "Europe" includes the 13 countries for which data were published.
6. Based on indicator series and past revisions for similar components.

not use them in certain aspects of their analyses and forecasts.

The potential importance of price measurement problems in measuring investment may be illustrated as follows: For every 1-percentage-point overstatement (understatement) in the rate of quality-adjusted price change for "high-tech" equipment other than computers, the annual growth rate of real nonresidential fixed investment will be lowered (raised) by about 0.2 percentage point. For example, if quality-adjusted prices for this "high-tech" equipment over the decade 1983–93 fell at an annual rate of 5 percent rather than increased at the 2.1-percent rate measured by BEA deflators (that is, a difference of about 7 percentage points), the growth rate of real nonresidential fixed investment would have been understated by 1.4 percentage points and the growth rate of real GDP by 0.2 percentage point.

Of particular interest is the potential for understatement of real GDP growth. In recent years, concerns have been raised that if problems in measuring output have become worse over the last several decades and have resulted in a progressively larger understatement in real GDP growth, measurement problems may be partly responsible for the reduction in the growth trend for real GDP and productivity since the early 1970's. Understatement of the economy's growth trend can be quite important because of its role in

analyzing the economy's noninflationary growth potential.

However, resolution of the question of the overall impact of measurement problems on real GDP growth will have to await the development of improved price indexes for a number of key products; it is not now clear whether improvements in the deflators of the many affected products would, on balance, increase or decrease the growth rate of real GDP, nor is it clear whether measurement problems have increased or decreased over time.

Improvement of the measures of real output will require a long-term, coordinated program involving both BEA and the Bureau of Labor Statistics, because improved real output measures depend heavily upon improved price indexes for deflating current-dollar GDP. BEA's proposed short-term priorities include working closely with the Bureau of Labor Statistics to lay the ground for improvements for components that appear to be amenable to hedonic methods and for which adequate commercial data are available to implement these methods. These components include high-tech products—such as medical scanners and semiconductor manufacturing equipment—and nonresidential construction.

Moreover, because some of these problems arise from the difficulty in defining output, BEA should undertake a long-term program to de-

A Three-Way Grouping of Actions To Improve the Accounts

Methodology and structure: These actions include advances in economic accounting structures and concepts and changes in estimating methods that improve the accuracy, reliability, and relevance of the accounts. The actions reflect empirical and conceptual research—either directly or indirectly—through reference to international guidelines in economic accounting. They build on existing—albeit heretofore un- or underexploited—source data. Such improvements have several practical advantages: They often can be undertaken within BEA and require few additional resources in comparison with the resources required to pursue a new survey; the lead and start-up times are relatively short; and perhaps most important, because they build on existing source data, they do not increase respondent burden.

Source data modification and extension: These actions feature changes that can be made to existing sources of data: Adding new questions and detail to a survey, broadening the coverage of a survey, increasing the frequency of a survey, or speeding up the processing of a survey or administrative source. In revising existing surveys, an effort is always made to see if outdated questions can be dropped or exemption levels raised by wider use of

sampling and statistical estimation. Such efforts usually involve another statistical agency and, hence, tend to be more complicated and have longer start-up periods. Revising an existing survey also involves consultation with data users and respondents and clearance of the revised form through the Office of Management and Budget; these steps—along with time for notification, collection, and processing—add significantly to the lead time before the improved source data can be incorporated in the accounts. Data extensions also usually involve some increase in respondent burden and processing cost, but these costs are still significantly lower than those involved in conducting a new survey.

New source data: New surveys are pursued only when methodological solutions are not adequate and there is no existing survey that can be modified to fill a statistical gap. As in the cases of data extension, new surveys normally involve another statistical agency. New surveys also require a more extensive development process because both the benefits to the data users and the costs to respondents and statistical agencies are higher. As a result, the start-up and lead times are significantly longer.

velop new concepts and methods for measuring output in areas such as banking, insurance, financial and legal services, and management consulting activities.

Reliability of key components of GDP.—Revisions to key components of GDP, national income, and personal income—especially the occasional large revisions—cause significant difficulties for forecasting, for budget, business, and investment planning, and for macroeconomic policy. For example, in 1990 as part of the mid-session review of the budget, the Office of Management and Budget revised upward the projected Federal Government deficit by over \$10 billion as a result of the impact of BEA's \$58 billion downward revision to wages and salaries on the Treasury Department's projections of tax receipts.

The average revisions (without regard to sign) to the quarterly changes for key components of current-dollar GDP range from 1.4 to 9.4 percentage points for 1983–91. The average revisions (without regard to sign) in the quarterly changes were \$13 billion for change in business inventories, \$9 billion for trade in goods and services, \$8 billion for government purchases, \$6 billion for consumer spending for services, and \$4–\$5 billion in consumer spending for goods. Within national income, the largest dollar revisions to quarterly changes were in compensation of employees. (These revisions also affect personal income, both the national and regional estimates.)

These revisions reflect both methodological problems and gaps in source data. Among the methodological problems, the most significant relate to seasonal adjustment and to projections for missing source data. Although past research suggests that the scope for improvements in seasonal adjustments is limited, BEA will continue to explore improvements for volatile components such as change in business inventories and trade in goods and services, because of the importance of this problem and the large potential “bang for the buck” associated with these improvements. In addition to these improvements, there may be some room, albeit limited, for improvements in BEA's methods of projecting missing months and quarters of source data for components such as inventories, trade in goods and services, and bonus payments.

These methodological improvements notwithstanding, the largest improvements in the reliability of key components are likely to come from improvements in source data. These improvements include more frequent updating of sample frames, improving response rates, and

modifying and extending existing surveys to fill gaps in coverage. One of the most important of these is more frequent updating of sample frames for the annual surveys that serve as benchmarks for the monthly surveys. The Census Bureau has already initiated several programs relevant to key source data used by BEA. For example, the annual and monthly trade surveys were recently put on a schedule that would update them more frequently using improved procedures that make more timely use of administrative records data. Similar work is underway at the Bureau of Labor Statistics to address recommendations by an American Statistical Association panel to improve reporting for the monthly survey of employment, hours, and earnings through use of a frequently updated probability sample at the State and national levels.

In addition to these and other projects to update sample frames, efforts are needed to improve reporting on existing surveys—either through restoration of cutbacks in sample size, improved followup procedures, or mandatory reporting for key indicators.

Improvements in other components of GDP will require extensions of existing surveys. For these components, revisions are due to gaps in monthly and annual survey coverage. Reducing revisions in these areas will thus largely depend on extending coverage: In construction, transportation, finance, insurance, and real estate, by extending the annual services survey to cover all service activities; in inventories, by extending the annual wholesale trade survey to cover nonmerchant wholesalers; in nonresidential construction, by extending the monthly value-put-in-place survey to better cover nonresidential reconstruction; in wages and salaries, by extending the monthly establishment survey to cover hours and earnings for all workers and to provide data on bonus payments; in profits, by extending the *Quarterly Financial Report* to cover construction, communications, utilities, and insurance.

In other components, revisions are due to the lag with which survey data become available and the difficulty in making projections for missing data. Many of these components were once sufficiently small that they could be reasonably estimated for quarters by projecting past trends from annual surveys. However, as these components have grown in size and volatility, large revisions have occurred when annual and benchmark data are finally incorporated into the estimates to replace projections. Reducing revisions of this kind will require increasing the

frequency of existing surveys: In State and local purchases by extending the existing annual survey to cover State and local government purchases on a quarterly basis; in international trade in services, by extending the existing annual selected services surveys to cover key categories on a quarterly basis.

In summary, BEA's proposed priority improvements in this area are as follows:

- Improvements in seasonal adjustments and in BEA's projections for certain key components such as inventories, merchandise trade, and bonus payments.
- Improvements of the coverage of existing surveys by more frequent and more complete updating of samples.
- Extension of existing surveys to fill gaps in coverage by more frequent surveys for volatile and growing categories and by extending the scope of surveys.

Substitution bias in real GDP.—Rapid change in the composition of output (and prices) has not only opened coverage gaps in source data, but has worsened pre-existing difficulties with some of the statistical methods used in the accounts. A bias occurs in fixed-weighted measures, such as BEA's featured measure of real GDP, because these measures do not reflect substitution by consumers and producers in response to changing relative prices. This "substitution bias" reflects the fact that the commodities for which output grows rapidly tend to be those that register declines, or the smallest increases, in prices. Thus, when real GDP is recalculated using more recent prices, the commodities with strong output growth generally receive less weight, and real GDP growth is reduced. Changes in the economy in the 1970's and 1980's exacerbated this bias, and in response BEA developed two alternative measures of real GDP that allow for changes in the relative structure of prices. Comparisons of these alternative measures with BEA's featured measure based on 1987 weights indicate the degree of substitution bias. In general, fixed weights are an accurate measure for time periods relatively close to the base year, but they begin to overstate growth the further one moves forward in time from the base period (and understate growth the further one moves back in time):

- For 1985–92, there was no evidence of significant substitution bias in BEA's fixed-1987-weighted measure of real GDP growth; the

fixed-weighted and alternative indexes increased at the same rate. However, by 1993 and 1994, real GDP growth as measured by fixed 1987 weights was overstated; the fixed-weighted index increased an average of 0.6 percentage point more than the alternative indexes.

- Since the recession trough in the first quarter of 1991, the average annual growth rate of the fixed-1987-weighted measure has been overstated by an average of 0.4 percentage point. In contrast, for the economic expansions between 1960 and 1980, the average annual growth rate of the fixed-1987-weighted measure is understated by an average of 0.6 or 0.7 percentage point, depending upon the alternative index used.

Bias of this magnitude causes significant problems for budget, investment, and business planning and for forecasting. It may pose particular problems for business cycle and policy analysts trying to assess current growth relative to long-term growth potential because the bias distorts both estimates and hence exacerbates the problems associated with quality change in measuring long-term growth potential.

The challenge for BEA will be to develop a program that provides users with featured measures of output and prices that reflect weights appropriate to each period and with information that can be used to assess the underlying sources of changes in real GDP. Later this year, BEA will present an article in the SURVEY OF CURRENT BUSINESS that lays out the plan for this program.

Outdated and inconsistent view of the structure and organization of production.—Change in the U.S. economy has affected not only the composition of output, but also the way output is produced and distributed. The rapid pace of change has highlighted the need for improved measurement systems.

The existing standard industrial classification (sic) system presents an outdated and conceptually inconsistent picture of economic activity. It is outdated especially in that it does not adequately detail the range of services in the economy, and it is inconsistent in that it distinguishes among some industries on the basis of how they produce and among others on the basis of to whom they market.

The sic system is focused on manufactured goods, and although for the foreseeable future, users will probably continue to want finer detail for manufacturing than for other sectors,

the focus in the existing system seems somewhat skewed. Manufacturing industries account for 46 percent of the industry codes in the SIC, yet in today's economy, manufacturing accounts for only 19 percent of GDP by industry and 17 percent of employment.

The United States, Canada, and Mexico are working together to develop a new industry classification system. This new system, the North American Industry Classification System (NAICS), will use a production-oriented economic concept that will provide the following benefits: More consistent classification of industries for use in analyses of industry performance, productivity, and employment; consistent data across the three countries; and more consistent data for new and emerging industries, for service industries, and for high-technology industries.

An updated industry classification system will provide the platform for modernizing BEA's industry-based accounting systems. It will provide more consistent source data and structure for BEA's estimates of GDP and gross state product by industry, for the input-output accounts, for estimates of pollution abatement and control by industry, and for estimates of foreign direct investment and international services by industry.

Introduction of data collected under NAICS will complement BEA's efforts to improve the timeliness and degree of integration in BEA's industry-based accounting systems. Although a quantitative indicator of these problems is not available, there is ample evidence of the need for updating and better integrating these systems. Problems with these accounts and the need for better industry data have been a continuing theme of outside experts. Affected uses include analyses of the interindustry and regional impact of Federal, State, and local policies, business location and marketing analyses, and various studies in the field of industrial organization. Indeed, the gaps in coverage, lack of integration, and lack of timeliness have contributed to a sharp decline in the use of the input-output and related accounts.

An integrated and modernized structure for economic accounts is available at the international level in the newly revised and harmonized international guidelines for national accounts—the *SNA 1993* and the *Balance of Payments Manual*. These guidelines can provide the broad outlines for BEA's efforts to update concepts and to provide a more integrated accounting structure. Modernization along these lines will allow the United States to take advantage of the experience and expertise embodied in the revisions and to

make U.S. estimates more comparable with those prepared by other countries.

Completion of the several projects to update and better integrate the structure of the economic accounts is a high priority. These projects include the following:

- Completion and implementation of the new NAICS in conjunction with other statistical agencies.
- Modernization and better integration of BEA's industry accounts, especially the input-output accounts, GDP and gross state product by industry, and pollution abatement and control expenditures by industry.
- Modernization of BEA's NIPA's and balance of payments accounts in line with the newly revised international guidelines.

The need for better measures of investment, saving, and wealth

Issues about the scope of existing measures.—

In the NIPA's, investment is limited to business investment in inventories, structures, and equipment, but a broader view of the Nation's wealth would include highways, dams, schools, and other public infrastructure, natural resources, and intangible assets, such as computer software and, even more broadly, training and education.

A broader definition of investment may be quite helpful in understanding the sources of economic growth and the returns to, and adequacy of, various types of public and private investment. Treatment of government capital outlays as fixed investment would add \$2,863 billion, and the inclusion of computer software in investment, between \$20 billion and \$40 billion—together about 20 percent—to the net stock of reproducible capital in the national wealth. The expansion of the definition of investment through satellite accounts can also aid in developing a more comprehensive picture of the stock of productive capital and wealth. The inclusion of research and development capital would add between \$1,050 and \$1,380 billion, or 8–10 percent, to the net stock of wealth; mineral and other marketed natural resources would add between \$950 and \$1,600 billion, or 7–12 percent.

BEA's proposed projects to address these issues largely rely on new methods and existing source data. In order of importance, they are as follows:

- Expansion of NIPA investment to include government expenditures on structures and durable equipment and pur-

chases of computer software and some other intangibles.⁶

- Extension of BEA's satellite accounts for research and development and for natural resources.

Issues in the measurement of investment, saving, and wealth.—Differences in source data, methods, and concepts result in inconsistencies among BEA's NIPA and capital stock estimates, the Federal Reserve Board's flow of funds accounts and balance sheets, and the Bureau of Labor Statistics capital services estimates. These inconsistencies present significant difficulties for integrated analysis of such issues as productivity, domestic and international capital flows, returns to investment, the adequacy of domestic saving and capital formation, and the effect of changes in financial holdings on consumer and business spending.

The importance of such integrated analysis was underscored by the depressing effect on household saving of the appreciation in the net worth of households as housing and securities prices rose in the 1980's. To researchers trying to understand the sources of the decline in the U.S. household saving rate—and the potential effect of tax incentives on raising it—the 3- to 9-percentage-point difference between the personal saving rates derived from BEA's NIPA's and those derived from the Federal Reserve Board's flow-of funds accounts posed significant problems.

In addition to these inconsistencies between the various accounts, researchers have long been concerned with conceptual and empirical problems associated with the use of straight-line depreciation in BEA's estimates of depreciation and capital stocks.

BEA's proposed priorities in this area deal largely with methodology and structure:

- Development of measures of depreciation and capital stocks that are consistent with economic theory and with existing empirical measures of the decline in used-asset prices.
- Better integration of BEA and Federal Reserve Board real and financial accounts along the lines of the *System of National Accounts 1993*.

The need for measures to fill gaps in the coverage of international transactions

Increased integration in world markets for goods, services, and capital, in combination with major advances in computer and communications

technology, have resulted in large gaps in BEA's coverage of international transactions. These gaps pose difficulties for the analysis of trade, monetary, and regulatory policy. For example, in 1990, with the economy in the midst of what was described as a credit-crunch-induced recession, a \$73 billion statistical discrepancy in the balance of payments accounts made it difficult to tell whether or not foreign capital flows were drying up: Based on the financing implied by the current account, there was only a modest dropoff, whereas the direct measure from the capital account suggested a sharp reduction. At the same time, on the regulatory policy side, gaps in the coverage of foreign lending to U.S. nonfinancial corporations by banks in the Caribbean caused the official statistics to understate by roughly one-third the indebtedness of U.S. companies and the penetration of foreign banks into U.S. markets.

Since then, BEA has been able to close many of these gaps in coverage by data exchanges with other countries and by improvements in survey coverage through its work with the Treasury Department and the Federal Reserve. Nevertheless, gaps remain in some areas, and new gaps are emerging in others.

Two of the largest remaining gaps in the coverage of goods and services are in financial services and computer software. The proliferation of new financial services traded in international markets has left a hole in BEA's coverage of services, while the rapid growth in trade in computer software has caused a growing gap in what was once a miscellaneous category in the harmonized tariff code that was valued by the cost of the media (for example, the value of a blank diskette) rather than the market value of the software itself. The size of these and other gaps in trade in services may be as large as \$10-\$20 billion.

In the capital accounts, large gaps remain in the coverage of U.S. portfolio investments abroad and foreign portfolio investments in the United States. These gaps result from direct transactions between U.S. and foreign residents that bypass the U.S. brokers, dealers, banks, and other financial institutions that form the U.S. data collection system. In addition to these existing gaps, new gaps are emerging through growth in new financial instruments that are not separately identified or fully covered by the existing data collection system. A rough guess of the size of the omissions in U.S. international capital flows and stocks due to remaining and newly emerging gaps might be as large as \$100 billion for the flows and \$200 billion for the stocks.

6. Government purchases of capital goods is included in GDP; treating them as investment would reallocate them from government purchases to fixed investment.

Table 3.—Proposed Actions and Milestones in Implementation

Proposed actions	Milestones in implementation				
	1995	1996	1997	1998	1999
Need for new and improved output measures					
Extension of quality adjustment of prices used in real GDP.	.....	Incorporate quality-adjusted measures for selected high-tech products.	Develop new estimates for nonresidential construction using model pricing or hedonic methods.	Continue work on extension of quality adjustments.	
Further conceptual work on difficult-to-measure goods and services.	.....	Develop new concepts and methods for measuring banking and other financial services.	Publish new estimates for banking and other financial services.	Identify and develop new concepts and methods for measuring other difficult-to-measure goods and services.	Publish new estimates for other difficult-to-measure goods and services
More frequent updating of sample frames for existing surveys, more frequent surveys for certain sectors, and extension of existing surveys to fill gaps in coverage.	Begin work with other agencies to identify cost-effective actions.	Continue work, extending consultations to business community.	Conduct new and revised surveys using new sample frames and methods.	Incorporate data from new and revised surveys.	
Improvements in seasonal adjustments.	.....	Begin work with other agencies on improving seasonal adjustment. Begin work on revised seasonal adjustment as part of reengineering.	Incorporate revised seasonal adjustment methods for categories such as inventories and merchandise trade.	Incorporate revised seasonal adjustment methods for other key components.	
Improvements in projections for missing source data.	.....	Begin design work for built-in analytics and projections methods as part of reengineering.	Incorporate improved methods into current quarter projections for categories such as inventories and merchandise trade.	Incorporate improved methods into current quarter projections for other key components.	
Introduction of new weighting schemes.	Introduce more current weights for real GDP.	.....	.....	.....	Update base-year weights for current estimates
Develop a new industry classification system.	Present NAICS priority categories to industry groups and data users for comment and revision.	Continue work with industry groups and data users and finalize NAICS.	Work with Census to redesign forms on the basis of NAICS.		
Update and better integrate BEA's accounts within the context of new international guidelines.	.....	.....	Complete the 1992 benchmark input-output accounts 5 years after the reference year.		
Need for better measures of investment, saving, and wealth					
Expand the coverage of investment along the outlines of the new international guidelines.	.....	Publish new estimates of computer software. Update and improve estimates of research and development. Extend integrated economic and environmental satellite accounts (IEESA's) to include selected renewable resource estimates and revise nonrenewable resource estimates.	Continue long-term improvements in computer software and work on other intangibles. Expand disaggregation of existing NIPA items in the IEESA's.		
Use of improved depreciation and valuation methods.	Introduce new depreciation and capital estimates.	Extend empirical work on used asset prices to other assets.	Extend empirical work on used asset prices to other assets.		
Integration of real and financial accounts.	Begin work with the Federal Reserve Board to develop multiyear plan for better integration.				

BEA's proposed priorities in these areas are as follows:

- Modification and extension of existing surveys and customs documents to better capture exports and imports of computer software and of courier and other rapidly growing services.
- Completion of BEA's benchmark financial services survey and establishment of a new annual survey of financial services.
- Completion, and institutionalization, of work with the Treasury Department on their benchmark survey of U.S. portfolio investment abroad.
- Extension of data exchanges with other countries and central banks through the adoption of standard definitions and coverage and the international coordination of benchmark surveys.

- Extension of existing portfolio surveys to separately identify and better cover derivatives and other new financial instruments.

Milestones in implementing the proposed actions

Although some of the methodological improvements can be implemented in the next year or so, many of the proposed projects are multiyear efforts. The timing of these projects is naturally dependent on the availability of resources. The milestones for each of the projects included in table 3 are based on the assumption that funding is commensurate with that of similar projects in the past.

These projects have been chosen so as to focus on those with the highest relative importance at the lowest possible cost. Despite this focus on getting the largest "bang for the buck," many of the projects cannot be accomplished with exist-


Table 3.—Proposed Actions and Milestones in Implementation—Continued

Proposed actions	Milestones in implementation				
	1995	1996	1997	1998	1999
Need to fill gaps in the coverage of international transactions					
Extension and revision of existing surveys and forms to cover new products, services, and financial instruments.	Revise product code and data collection to include a separate category for computer software.	Develop initial estimates of the full market value of computer software based on revised methods and source data.	Update and improve estimates of the full market value of computer software		
	.....	Work with the business community to develop revised and extended "selected services" survey to cover new, growing, and volatile services categories.	Conduct extended services surveys.	Process and incorporate results from extended surveys into national and international accounts	
Extension of data exchanges with other countries and central banks.	Begin work with Treasury and the Federal Reserve on cost-effective means of collecting data on derivatives and new financial instruments.	Work with the business community to develop a revised survey to cover derivatives and other new financial instruments.	Conduct revised survey to capture derivatives and other new financial instruments.	Process and incorporate results from revised survey into national and international accounts	
	Continue work on internationally coordinated definitions for data exchanges.	Incorporate data, as appropriate, from countries adopting new standardized definitions.	Incorporate data, as appropriate, from countries adopting new standardized definitions.	Incorporate data, as appropriate, from countries adopting new standardized definitions.	Incorporate data, as appropriate, from countries adopting new standardized definitions
Development of new surveys.	.....	Incorporate results from benchmark financial services survey and conduct annual financial services survey.	Incorporate results from annual financial services survey		
	Process new benchmark survey of U.S. portfolio investment abroad.	Continue processing new benchmark survey of U.S. portfolio investment abroad.	Incorporate results from new benchmark survey of U.S. portfolio investment abroad		
	Continue international coordination in development of international benchmark survey.	Continue international coordination in development of international benchmark survey.	Finalize design and collection of internationally coordinated benchmark survey.	Collect and process data from internationally coordinated benchmark survey.	Continue processing results of internationally coordinated benchmark survey

ing resources; this time schedule and project list will clearly have to be adjusted in light of future resources. The milestones in table 3, however, do provide a notion of the sequencing and timing of the returns from an integrated strategic plan to maintain and improve the accounts. Implementation of such a plan would update the accounts in a timely manner to reflect changes in the economy. Thus, the accounts could continue to provide the degrees of accuracy, reliability, and relevance that their users have come to expect.

An environment for change in the accounts

Outside experts, in commenting on BEA's work, have made at least two other recommendations that should be noted. One is that BEA should

extend and update its documentation of methodology, and the other is that BEA should form an advisory committee. Both recommendations take on increased importance in an environment of change in the accounts. BEA takes seriously its obligations to provide documentation and will be working toward a revamped system of documentation that is as up to date and readily available as its estimates. Over the years, BEA's accounts have benefited from critique and comment, ranging from formal but intermittent "blue ribbon" panels to informal day-to-day contact with users. Just as BEA is seeking advice as it puts together this plan, BEA would welcome advice—especially regularized advice from a group of users of the accounts—as it seeks to carry out the plan. 

Federal Budget Estimates, Fiscal Year 1996

By Peter G. Beall and Joyce Northwood

THE FISCAL 1996 budget transmitted by the President to Congress shows a \$4.1 billion increase in the Federal deficit, from \$192.5 billion in 1995 to \$196.6 billion in 1996.¹ The budget proposes a tax cut for middle-class taxpayers that reduces revenues by \$3.8 billion; this reduction is partly offset by other proposals to increase taxes and to trim spending.

The tax cut has three elements:

- Phased-in tax credit of up to \$500 for dependent children under 13 years of age (\$3.5 billion in 1996).
- Phased-in deduction of up to \$10,000 for post-secondary education and training expenses (\$0.7 billion 1996).
- Expanded eligibility for deductible "front-loaded" individual retirement accounts. (This provision is expected to raise \$0.4 billion in 1996 but to reduce receipts in later years.)

To offset the loss of revenue due to the tax cut, the budget proposes an acceleration of efforts to reinvent the Federal Government (\$1.4 billion), including the following: A consolidation of 271 existing programs into 27 new programs, the termination of approximately 90 programs, the privatization of certain government functions, and the transfer of other programs to State and local governments. The budget also proposes cuts in discretionary spending, the largest of which is in national defense spending (\$7.6 billion).

The budget also includes \$1.1 billion in tax increases to help offset the tax cuts. The three largest provisions are as follows:

- Tighten rules for taxing foreign trusts (\$0.3 billion).
- Expand fees collected under the securities laws to better match and fund services provided by the Securities and Exchange Commission (\$0.3 billion).
- Extend the environmental taxes on corporate taxable income (\$0.3 billion).

This article summarizes the administration's budget estimates and the economic assumptions underlying them, and it provides a translation of the estimates into the national income and product accounts (NIPA) framework.²

Economic assumptions

In all four quarters of 1994, economic activity was strong; growth in real gross domestic product (GDP) ranged between 3.3 percent and 4.5 percent

2. A package of tables—"National Income and Product Accounts Translation of the Federal Budget"—is available from BEA shortly after the release of the budget; this year's package is \$12.00. For further information, write to Government Division (BE-57), Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230, or call (202) 606-9775.

Table 1.—Economic Assumptions Underlying the Budget

	Calendar year		
	1994	1995	1996
	Billions of dollars		
Gross domestic product:			
Current dollars	6,735	7,117	7,507
1987 dollars	5,337	5,488	5,622
Incomes:			
Personal income	5,691	6,026	6,366
Wages and salaries	3,273	3,429	3,610
Corporate profits before taxes	522	544	572
	Percent change from preceding year		
Gross domestic product in current dollars:			
Annual average	6.2	5.7	5.5
Fourth quarter	6.3	5.4	5.5
Gross domestic product in 1987 dollars:			
Annual average	3.9	2.8	2.5
Fourth quarter	3.6	2.4	2.5
Consumer Price Index: ¹			
Annual average	2.6	3.1	3.2
Fourth quarter	2.8	3.2	3.2
	Percent		
Unemployment rate (pre-1994 basis): ²			
Annual average	6.1	5.8	5.9
Fourth quarter	5.8	6.0	5.8
Interest rate (annual average): ³			
91-day Treasury bills	4.2	5.9	5.5
10-year Treasury notes	7.1	7.9	7.2

Source: *The Budget of the United States Government, Fiscal Year 1996*.

1. Consumer Price Index for all urban consumers.

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

3. Average rate on new issues within a year.

1. Office of Management and Budget, *The Budget of the United States Government, Fiscal Year 1996* (Washington, DC: U.S. Government Printing Office, February 1995).

(seasonally adjusted annual rates).³ Inflation remained low throughout the year; the Consumer Price Index rose only 2.7 percent. However, to head off potential inflationary pressures, the Federal Reserve Board tightened monetary policy by raising its target for the Federal funds rate six times in 1994, for a cumulative increase of 2.5 percentage points.

The administration forecasts that real GDP will increase 2.4 percent during 1995 and 2.5 percent during 1996, compared with a 3.6-percent increase during 1994 (table 1). (These changes are from fourth quarter to fourth quarter.) Inflation as measured by the increase in the Consumer Price Index is forecast to be 3.2 percent during both 1995 and 1996, compared with 2.8 percent during 1994. The unemployment rate is forecast

to be 5.8 percent in 1995 and 5.9 percent in 1996, close to the 1994 level of 6.1 percent.

Current-services estimates

Current-services estimates show what receipts and outlays would be without policy change. In concept, these estimates are neither recommended amounts nor forecasts; they form a base with which administration or congressional proposals can be compared. The estimates are based on the same economic assumptions as those underlying the budget.

Budget receipts in fiscal year 1996 are \$3.0 billion lower than the current-services estimate of receipts, primarily reflecting the proposed middle-class tax cut (table 2). Budget outlays in 1996 are \$7.0 billion lower than the current-services estimate of outlays. The proposed reduction in spending mainly reflects decreases in defense programs and savings from Government reinvention. These savings are partly offset by proposed increases in other functional areas, such as a \$2.7 billion increase in community and regional development and a \$1.1 billion increase in administration of justice.

3. The economic assumptions are based on incomplete 1994 information that may differ from the currently published information.

Table 2.—Relation of Current-Services Estimates to the Budget
[Billions of dollars]

	Fiscal year	
	1995	1996
Receipts		
Current services estimates	1,346.4	1,418.5
<i>Plus:</i> Proposed legislation:		
Tax credit for dependent children		-3.5
Tax deduction for education/training		-7
Expand individual retirement accounts .....		.4
<i>Subtotal:</i> Middle-class tax cut		-3.8
Deter expatriation tax avoidance .....		.1
Tighten rules for taxing foreign trusts .....		.3
Increase empowerment zones		-1
Reduce excise taxes on vaccines		-1
Expand fees collected under securities laws .....	.1	.3
Assess fees for examination of Federal Deposit Insurance Corporation-insured banks .....		.1
Modify federal pay raise		-1
Extend environmental taxes on corporate taxable income .....		.3
<i>Equals:</i> The budget	1,346.4	1,415.5
Outlays		
Current services estimates	1,535.5	1,619.1
<i>Plus:</i> Proposed program changes:		
National defense	1.8	-7.6
Social security .....		.6
Income security		-5
Health .....		.2
Education, training, employment, and social services .....		.2
Commerce and housing credit		-2
Natural resources and environment		-3
Agriculture		-2
General science, space, and technology		-1
International affairs .....	.9	-4
Energy		-3
Transportation		-1.0
Administration of justice		1.1
Community and regional development .....	.7	2.7
Undistributed offsetting receipts		-1.0
Other .....	.1	
<i>Equals:</i> The budget	1,538.9	1,612.1

Source: The Budget of the United States Government, Fiscal Year 1996.

The budget estimates

Under the administration's budget, receipts in fiscal year 1996 increase \$69.1 billion, or 5.1 percent, to \$1,415.5 billion. Receipts in 1995 are \$1,346.4 billion, up 7.1 percent from 1994. These increases are largely due to assumed increases in income resulting from both real economic growth and inflation. The increase in 1996 is smaller than that in 1995 because of the administration's proposed middle-class tax cut.

Budget outlays in fiscal year 1996 increase \$73.2 billion, or 4.8 percent, to \$1,612.1 billion (table 3). Outlays in 1995 are \$1,538.9 billion, up 5.3 percent from 1994. The 1996 increase is the net result of increases of \$99.8 billion and decreases of \$21.8 billion. As in recent years, the majority of the increase—84 percent—represents increases in mandatory spending, such as net interest, and in entitlement programs such as social security and medicare. The largest increase in both 1995 and 1996 is in net interest. The largest decrease in both years is in national defense.

The 1996 budget deficit is \$196.6 billion, up \$3.1 billion from 1995 (table 4). The increase reflects an \$11.4 billion increase in the current-services budget deficit that is largely offset by proposed administration cuts, primarily program cuts for national defense. The budget deficit is smaller

than the current-services deficit because of decreases in most Federal spending functions that more than offset revenue losses from the middle-class tax cut. In fiscal year 1995, the budget deficit is larger than the current-services deficit because of proposed increases in several Federal spending functions.

NIPA estimates for the Federal sector

The Bureau of Economic Analysis prepares estimates of the Federal sector on the NIPA basis that are consistent with the budget estimates. Estimates of the Federal sector, which are integrated conceptually and statistically with the rest of the NIPA's, differ in several respects from the budget estimates; unlike the budget estimates, these estimates exclude financial transactions, such as loans, and they record categories of receipts and expenditures on a timing basis different from that of the budget.⁴ Table 4 summarizes the differences between the current services estimates, the administration's budget, and the budget estimates on the NIPA basis. Table 5 shows the relation between budget receipts and NIPA receipts, and table 6 shows the relation between budget outlays and NIPA expenditures.⁵

Federal receipts on the NIPA basis increase \$68.3 billion in fiscal year 1996, to \$1,504.0 billion, reflecting a \$71.3 billion increase from higher tax bases and a \$0.8 billion increase from other tax changes (table 7). These increases are partly offset by the proposed middle-class tax cut (\$3.8 billion). The increase in total receipts slowed for the second consecutive year in 1996, reflecting slower growth in personal tax and nontax receipts and in contributions for social insurance. The growth in corporate profits tax accruals levels out in 1996 after decelerating in 1995. Chart 1 shows the components of receipts on the NIPA basis for 1986-96.

Federal expenditures on the NIPA basis increase \$82.5 billion in fiscal year 1996 to \$1,691.9 billion (table 8). Federal expenditure growth decelerates slightly in 1996 because of slower growth in net interest paid, nondefense purchases, and grants-in-aid to State and local governments (chart 2);

the growth in transfer payments remains robust. Transfer payments increase \$47.1 billion—\$20.4 billion for medicare and \$17.3 billion for social

Table 3.—Budget Outlays by Function

[Billions of dollars]

	Fiscal year						
	1993	1994	1995	1996	Change from preceding year		
					1994	1995	1996
Budget outlays	1,408.2	1,460.9	1,538.9	1,612.1	52.7	78.0	73.2
National defense	291.1	281.6	271.6	261.4	-9.5	-10.0	-10.2
Social security	304.6	319.6	336.1	354.5	15.0	16.6	18.4
Net interest	198.8	203.0	234.2	257.0	4.2	31.3	22.8
Income security	207.3	214.0	223.0	223.2	6.7	9.0	10.1
Medicare	130.6	144.7	157.3	177.8	14.1	12.5	20.5
Health	99.4	107.1	115.1	124.0	7.7	8.0	8.9
Education, training, employment, and social services	50.0	46.3	56.1	57.2	-3.7	9.8	1.1
Veterans benefits and services	35.7	37.6	38.4	38.1	1.9	.8	-0.3
Commerce and housing credit	-22.7	-5.1	-12.0	-7.6	17.6	-6.8	4.4
Natural resources and environment	20.2	21.1	21.9	21.8	.9	.8	-1
Agriculture	20.4	15.1	14.4	13.6	-5.3	-7	-8
General science, space, and technology	17.0	16.2	17.0	16.9	-.8	.8	-1
International affairs	16.8	17.1	18.7	16.7	.3	1.6	-2.0
Energy	4.3	5.2	4.6	4.4	.9	-6	-2
Transportation	35.0	38.1	39.2	38.6	3.1	1.0	-5
Administration of justice	15.0	15.3	17.6	19.7	.3	2.4	2.1
General government	13.0	11.3	14.5	14.6	-1.7	3.2	.1
Community and regional development	9.1	10.5	12.6	12.8	1.4	2.1	.2
Undistributed offsetting receipts and allowances	-37.4	-37.8	-41.4	-42.6	-.4	-3.6	-1.3
Addenda:							
Social security, net interest, health and medicare	634.0	667.3	727.7	789.4	33.3	60.4	61.7
All other functions	774.2	793.6	811.2	822.7	19.4	17.6	11.5

Source: *The Budget of the United States Government, Fiscal Year 1996.*

Table 4.—Current-Services, Budget, and NIPA Estimates of Federal Government Receipts and Expenditures

[Billions of dollars]

	Fiscal year				
	Actual	Estimates			Change
		1994	1995	1996	
Current services estimates					
Receipts	1,257.7	1,346.4	1,418.5	88.7	72.1
Outlays	1,480.9	1,535.5	1,619.1	74.6	83.6
Surplus or deficit (-)	-203.2	-189.1	-200.6	14.0	-11.4
Administration budget					
Receipts	1,257.7	1,346.4	1,415.5	88.7	69.1
Outlays	1,480.9	1,538.9	1,612.1	78.0	73.2
Surplus or deficit (-)	-203.2	-192.5	-196.6	10.7	-4.1
National income and product accounts					
Receipts	1,349.4	1,435.7	1,504.0	86.3	68.3
Outlays	1,521.9	1,609.4	1,691.9	87.5	82.5
Surplus or deficit (-)	-172.5	-173.7	-187.9	-1.2	-14.2
Differences					
Current services estimates less administration budget					
Receipts	0	0	3.0	0	3.0
Outlays	0	-3.4	7.0	-3.4	10.4
Surplus or deficit (-)	0	3.4	-4.0	3.4	-7.4
Administration budget less national income and product accounts					
Receipts	-91.7	-89.3	-88.5	2.4	.8
Outlays	-61.0	-70.5	-79.8	-9.5	-9.3
Surplus or deficit (-)	-30.7	-18.8	-8.7	11.9	10.1

Sources: *The Budget of the United States Government, Fiscal Year 1996* and the Bureau of Economic Analysis.

4. For a detailed discussion of the differences, see *Government Transactions, NIPA Methodology Paper Series MP-5* (November 1988). (MP-5 is available from the National Technical Information Service, Accession No. PB 90-118480.) In addition, the comprehensive NIPA revision released in December 1991 made several changes to the definitions and classifications used to measure the Federal sector. All of these changes are discussed in detail in "A Preview of the Comprehensive Revision of the National Income and Product Accounts: Definitional and Classificational Changes," *SURVEY OF CURRENT BUSINESS* 71 (September 1991):23-31.

5. The relation of budget receipts and outlays to NIPA receipts and expenditures is shown in NIPA table 3.18B, last published in the September 1994 SURVEY.

security (of which \$10.2 billion is cost-of-living adjustments). Other large increases include net interest paid (\$21.5 billion), grants-in-aid to State

and local governments for medicaid (\$7.5 billion), and nondefense purchases (\$5.3 billion). National defense purchases decrease \$3.7 billion, reflecting

Table 5.—Relation of Federal Government Receipts in the NIPA's to Receipts in the Budget

[Billions of dollars]

	Fiscal year		
	1994	1995	1996
Budget receipts	1,257.7	1,346.4	1,415.5
Less: Coverage differences ¹	2.0	2.1	2.2
Plus: Netting and grossing differences:			
Contributions to government employees retirement funds	56.9	58.0	60.2
Taxes received from the rest of the world ²	-2.7	-2.7	-2.7
Other ³	30.7	30.6	28.6
Timing differences:			
Corporate income tax	9.0	1.8	1.4
Federal and State unemployment insurance taxes	-1.5	-2	.1
Withheld personal income tax and social security contributions	1.1	4.2	2.9
Excise taxes .....	.1	-.8	.2
Other .....	.1	.3	-.1
Equals: Federal Government receipts, NIPA's ...	1,349.4	1,435.7	1,504.0

Sources: *The Budget of the United States Government, Fiscal Year 1996* and the Bureau of Economic Analysis.

1. Consists largely of contributions of social insurance by residents of U.S. territories and Puerto Rico.

2. Taxes received from the rest of the world are included in the budget and netted against expenditures (transfer payments) in the NIPA's.

3. Consists largely of proprietary receipts that are netted against outlays in the budget and classified as receipts in the NIPA's.

Table 6.—Relation of Federal Government Expenditures in the NIPA's to Outlays in the Budget

[Billions of dollars]

	Fiscal year		
	1994	1995	1996
Budget outlays	1,460.9	1,538.9	1,612.1
Less: Coverage differences:			
Geographic ¹	8.8	9.3	9.2
Other ²	-6	-1	-1.2
Financial transactions:			
Net lending	12.6	16.5	9.1
Deposit insurance	-2.0	-8.3	-3.8
Other	-1.7	-2.1	-2.9
Net purchases of land:			
Outer Continental Shelf	-2	-2	-2
Other .....	.2	.2	.2
Auction of radio spectrum		-4.4	-4.6
Plus: Netting and grossing differences:			
Contributions to government employees retirement funds	56.9	58.0	60.2
Taxes received from rest of the world ³	-2.7	-2.7	-2.7
Other ⁴	30.7	30.6	28.6
Timing differences:			
National defense purchases	-3	.6	4.7
Other	-5.3	-2.8	-3.2
Miscellaneous	-1.1	-2.3	-2.0
Equals: Federal Government expenditures, NIPA's	1,521.9	1,609.4	1,691.9

Sources: *The Budget of the United States Government, Fiscal Year 1996* and the Bureau of Economic Analysis.

1. Consists largely of transfer payments, subsidies, and grants-in-aid to residents of U.S. territories and Puerto Rico.

2. Consists of agencies not included in the budget, and includes net purchases of silver and minor coins.

3. Taxes received from the rest of the world are included in the budget and netted against expenditures (transfer payments) in the NIPA's.

4. Consists largely of proprietary receipts that are netted against outlays in the budget, and classified as receipts in the NIPA's.

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

[Billions of dollars]

	Change from preceding fiscal year		
	1994	1995	1996
Total receipts	108.1	86.3	68.3
Due to tax bases	108.1	86.3	71.3
Due to proposed legislation	0	0	-3.0
Middle-class tax cut		0	-3.8
Other	0	0	.8
Personal tax and nontax receipts	40.3	46.5	38.8
Due to tax bases	40.3	46.5	42.6
Due to proposed legislation		0	-3.5
Middle-class tax cut		0	-3.8
Other		0	.3
Corporate profits tax accruals	26.5	9.3	6.3
Due to tax bases	26.5	9.3	5.7
Due to proposed legislation		0	.6
Indirect business tax and nontax accruals	10.4	.6	-3
Due to tax bases	10.4	.6	-2
Due to proposed legislation		0	-.1
Contributions for social insurance	30.9	29.9	23.4
Due to tax bases	30.9	29.9	23.4
Due to proposed legislation		0	0

Sources: *The Budget of the United States Government, Fiscal Year 1996* and the Bureau of Economic Analysis.

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

[Billions of dollars]

	Change from preceding fiscal year		
	1994	1995	1996
Total expenditures	26.5	87.5	82.5
Purchases	-11.1	3.1	1.6
National defense	-10.8	-7.1	-3.7
Pay raise and locality pay ¹		2.6	4.6
Other	-10.8	-9.7	-8.3
Nondefense	-5	10.2	5.3
Pay raise and locality pay ¹		1.7	2.9
Other	-5	8.5	2.4
Transfer payments	22.8	36.8	47.1
Social security	14.8	16.3	17.3
Medicare	16.1	14.8	20.4
Supplemental security income	1.5	1.3	2.6
Federal employee retirement	2.4	2.1	3.0
Earned income and child care credits	1.6	5.8	3.4
Veterans benefits .....	.2	1.1	-.9
Unemployment benefits	-8.7	-5.1	1.8
Other	-5.1	.5	-.5
Grants-in-aid to State and local governments	17.2	15.7	12.9
Medicaid	6.3	6.4	7.5
Education .....	.6	2.0	-.7
Highways	2.3	.5	-.2
Health care .....	.4	.8	.2
Food and nutrition .....	.6	1.2	.6
Other	7.0	4.8	5.1
Net interest paid	3.5	30.4	21.5
Subsidies less current surplus of government enterprises	-5.9	1.4	-.5
Agriculture subsidies	-3.7	-.3	1.3
Housing subsidies	-.2	1.2	-1.8
Other subsidies .....	.5	.9	-.6
Less: Current surplus of government enterprises:			
Postal Service .....	.3	-.7	.1
Other	2.2	1.1	-.7

Source: Bureau of Economic Analysis

1. Consists of pay raises and locality pay beginning in January 1994.

the continuing decline in procurement of military equipment. Subsidies less the current surplus of government enterprises decrease \$0.5 billion. Chart 3 shows the components of expenditures on the NIPA basis for 1986-96.

National defense outlays in the budget differ from national defense purchases in the NIPA's (see table 9) for three principal reasons. First, some

defense outlays, such as disbursements for foreign military sales, are not treated as purchases in the NIPA's. Second, a timing difference exists because the NIPA's are on a delivery basis, while budget outlays are on a cash basis. Third, the two series treat the financing of the military retirement program differently. In defense outlays, this item is measured as a cash payment from the military personnel appropriation account to the military retirement trust fund; in the NIPA's, total military retired pay is used as the measure of the retirement program's cost. At present, the budget

CHART 1

Federal Government Receipts, NIPA Basis

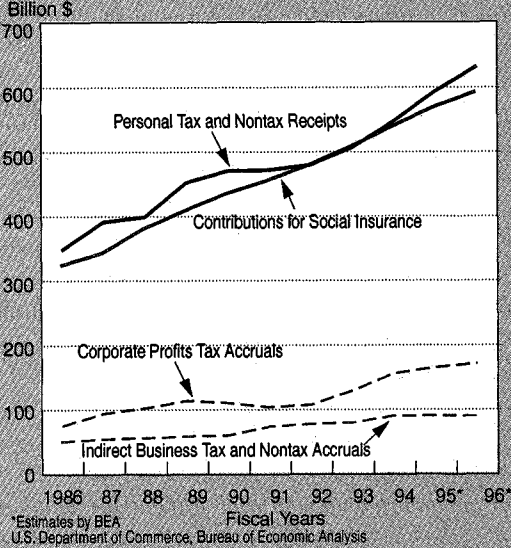


CHART 3

Federal Government Expenditures, NIPA Basis

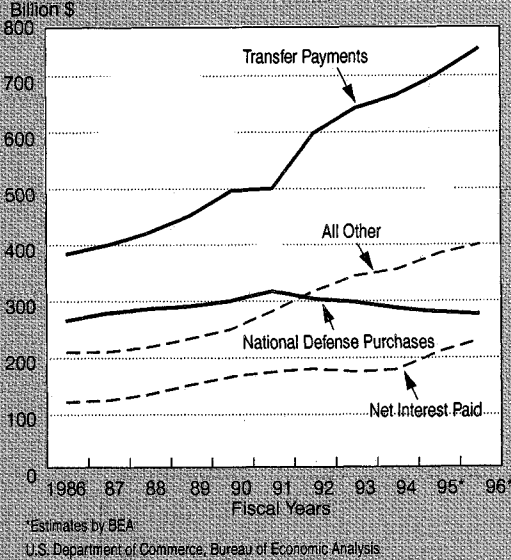


CHART 2

Changes in Federal Government Expenditures, NIPA Basis

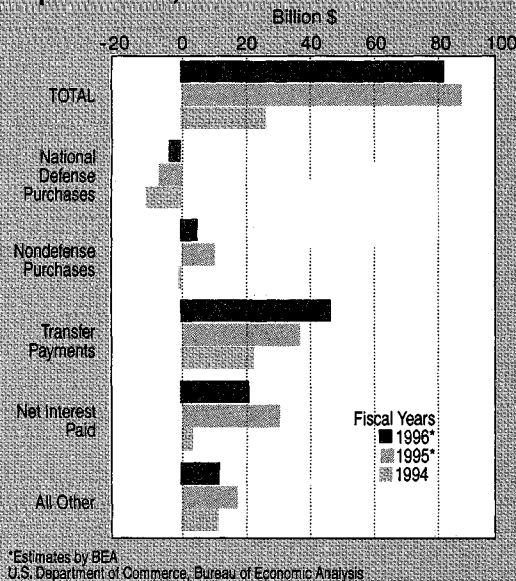
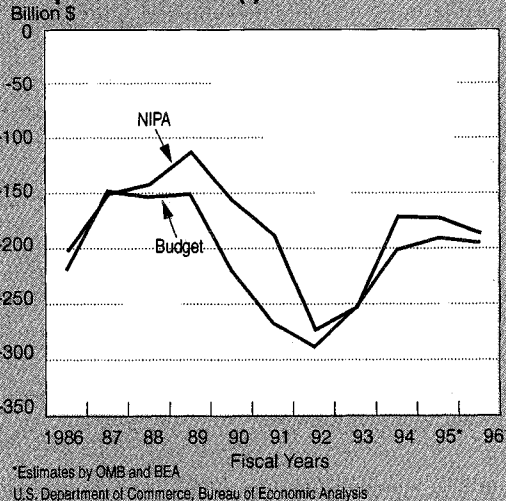


CHART 4

Federal Fiscal Position, Surplus or Deficit (-)



measure of the retirement program shows a decline because of a reduction in military payrolls, but the NIPA series shows an increase because of the rising number of retirees and higher benefits.

The deficit for fiscal year 1996 on the NIPA basis increases \$14.2 billion after increasing only \$1.2 billion in 1995. This acceleration is primarily due to slowdowns in the growth of personal tax and nontax receipts and of contributions for social insurance. Since 1988, the NIPA deficit has remained smaller than the budget deficit primarily because lending transactions and payments to residents of U.S. territories and Puerto Rico are

removed from the expenditures on the NIPA basis (chart 4).

Quarterly pattern.—Quarterly estimates of NIPA receipts and expenditures that are consistent with the fiscal year receipts and outlays in the budget are shown in table 10. Receipts reflect the quarterly pattern resulting from enacted and proposed legislation that would decrease personal and excise taxes and increase corporate taxes; they also reflect the administration's projected quarterly pattern of wages and profits. Expenditures reflect the quarterly pattern resulting from enacted and proposed legislation that would reduce defense purchases, adjust Federal pay, and provide for cost-of-living increases in social security and in Federal employee retirement benefits.

The deficit shows an upward trend from the first quarter of 1995 through the third quarter of 1996. It grows in the first quarter of 1995, driven by an increase in net interest paid, the social security cost-of-living adjustments (2.8 percent), the Federal civilian pay increase (2-percent pay raise and 0.6-percent locality differential), and the Federal military pay raise (2.6 percent). The deficit plummets in the second quarters of both 1995 and 1996, reflecting surges in personal tax collections for deferred 1993 tax payments. These personal tax liabilities, which were retroactively imposed in 1993, can be spread without penalty over the 1994, 1995, and 1996 tax years. The deficit returns to trend in the third quarters of 1995 and 1996, reflecting a normalization of personal tax payment levels.


Table 10 follows. 

Table 9.—Relation of National Defense Purchases in the NIPA's to National Defense Outlays in the Budget
[Billions of dollars]

	Fiscal year		
	1994	1995	1996
National defense outlays in the budget	282.0	271.6	261.4
Department of Defense, military	268.6	260.3	250.0
Military personnel	73.1	70.7	66.2
Operation and maintenance	87.9	90.1	91.5
Procurement	61.4	54.7	48.6
Aircraft	18.8	16.3	14.5
Missiles	5.4	5.4	4.9
Ships	9.1	8.1	7.3
Weapons	5.0	4.4	3.8
Ammunition	1.0	1.3	1.0
Other	21.8	19.2	17.1
Research, development, test and evaluation	34.8	35.1	35.3
Other	11.9	9.6	8.4
Atomic energy and other defense-related activities	13.3	11.3	11.4
<i>Plus:</i> Military assistance purchases .....	.2	.2	.2
<i>Less:</i> Grants-in-aid to State and local governments and net interest paid	2.9	2.7	2.8
Timing difference	0	-.7	-4.6
Military retired pay adjustment	-13.9	-14.9	-17.0
Other differences	-2.4	-3.8	-4.4
Equals: National defense purchases, NIPA's	295.6	288.5	284.8

Sources: *The Budget of the United States Government, Fiscal Year 1996* and the Bureau of Economic Analysis.

Table 10.—Federal Government Receipts and Expenditures, NIPA Basis—Continued

(Billions of dollars; calendar year and quarters at seasonally adjusted annual rates)

	Fiscal year estimates ¹			Calendar year		Published				Estimates						
	1994	1995	1996	Pub- lished 1994	Esti- mate 1995	1994				1995				1996		
						I	II	III	IV	I	II	III	IV	I	II	III
Grants-in-aid to State and local governments	197.9	213.6	226.5	197.2	217.1	190.0	194.4	200.3	204.1	213.2	215.6	218.8	220.8	224.4	228.4	232.4
Highways	18.0	18.5	18.7	18.1	18.2	18.3	18.1	18.5	17.5	18.1	18.1	18.1	18.5	18.5	18.7	19.0
Public assistance	101.0	108.5	117.1	101.4	110.3	97.0	100.9	101.2	106.5	108.0	108.8	110.9	113.6	116.0	118.4	120.5
Medicaid	81.9	88.3	95.8	82.3	90.0	78.0	83.6	81.9	85.9	87.9	89.0	90.4	92.8	94.9	96.9	98.7
Aid to families with dependent children	16.4	17.2	18.0	16.2	17.4	16.7	14.5	16.4	17.4	17.2	17.2	17.4	17.6	17.8	18.1	18.4
Social services	2.7	3.0	3.3	2.8	3.0	2.3	2.8	2.9	3.2	2.9	2.6	3.1	3.2	3.3	3.4	3.4
Education	16.1	18.1	17.4	16.1	18.1	15.0	16.1	17.3	16.2	18.2	18.2	18.4	17.4	17.3	17.4	17.6
Community development	4.3	5.4	5.7	3.8	5.9	3.6	3.7	4.0	4.0	5.8	5.8	6.3	5.5	5.6	5.7	5.8
Mass transit	2.5	2.8	2.5	2.4	2.7	2.2	2.2	2.2	3.0	2.8	2.8	2.7	2.6	2.5	2.5	2.5
Environmental protection	1.9	2.1	2.1	1.9	2.1	2.0	2.0	1.9	1.9	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Food and nutrition	11.3	12.5	13.1	11.7	12.8	11.2	11.5	12.4	11.7	12.6	12.7	13.0	12.7	13.0	13.2	13.4
Health care	6.9	7.7	7.9	7.0	7.8	6.5	5.3	7.1	6.9	7.6	7.9	7.9	7.7	7.8	7.9	8.1
All other	35.9	38.2	42.1	34.8	39.3	32.3	34.7	35.8	36.4	38.0	39.2	39.4	40.7	41.6	42.5	43.4
Net interest paid	187.0	217.4	238.9	191.6	226.5	179.3	188.8	194.4	203.9	213.7	224.8	231.3	236.0	230.7	224.8	249.9
Subsidies less current surplus of government enterprises	27.6	29.0	28.5	29.5	28.5	35.1	31.3	20.9	30.7	28.4	28.4	28.2	28.8	28.8	28.2	28.2
Agriculture subsidies	9.0	8.7	10.0	7.6	8.9	12.3	8.9	.5	8.8	8.4	8.4	9.2	9.6	10.0	10.0	10.4
Housing subsidies	21.1	22.3	20.5	23.1	21.7	22.5	23.1	23.2	23.6	22.0	22.0	21.6	21.2	20.4	20.4	20.0
Other subsidies	2.3	3.2	2.6	2.5	3.4	3.0	2.6	2.2	2.3	3.8	3.6	3.2	2.8	2.8	2.4	2.4
Less: Current surplus of government enterprises: ²																
Postal Service .....	.6	-.1	0	-.7	.3	-.6	-.6	-.3	-1.5	.6	.3	.2	0	0	0	0
Other	4.2	5.3	4.6	4.5	5.2	3.2	3.9	5.3	5.5	5.2	5.3	5.6	4.8	4.4	4.6	4.6
Less: Wage accruals less disbursements	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Surplus or deficit (-)	-172.5	-173.7	-187.9	-160.0	-178.5	-176.2	-145.1	-154.0	-164.6	-173.1	-161.7	-185.1	-194.3	-197.1	-166.2	-207.3

Sources: *The Budget of the United States Government, Fiscal Year 1996* and the Bureau of Economic Analysis (BEA).

- Fiscal year estimates are the sum of quarterly totals not seasonally adjusted.
- BEA's estimate of corporate profits tax accruals for the fourth quarter of 1994 is not available until the release of the final estimates of Gross domestic product on March 31, 1995. The value shown is taken from *The Budget*.
- The Budget of the United States Government, Analytical Perspectives, Fiscal Year 1996*, "National Income and Product Accounts", page 267 contains incorrect estimates of subsidies less current surplus of government enterprises (SCS); the SCS estimates also carried through to the budget estimates for total expenditures and the deficit. The differences between the estimates of SCS shown in *The Budget* and those shown in table 10 (above) are shown below:

	Fiscal year			Calendar year									
	1994	1995	1996	1995				1996					
				I	II	III	IV	I	II	III			
Subsidies less current surplus of government enterprises, Budget	27.6	29.0	31.9	28.4	27.6	28.8	31.2	31.6	32.4	32.4			
Amount of correction	0	0	-3.4	0	.8	-.6	-2.4	-2.6	-4.2	-4.2			

Redefinition of the BEA Economic Areas

By Kenneth P. Johnson

THIS ARTICLE presents the new regional economic areas defined by the Bureau of Economic Analysis (BEA) and discusses the procedures used to arrive at this disaggregation of the Nation on an economic basis.¹ The new disaggregation has 172 economic areas, and it replaces the 183-area disaggregation that BEA first defined in 1977 and then revised slightly in 1983 (table 1 and charts 1 and 2). The redefinition was undertaken in 1993 largely to incorporate newly available information on commuting patterns.²

To facilitate regional economic analysis, BEA provides geographically detailed economic data by economic area, as well as by State and by local area. BEA assembles economic area data on earnings by industry, employment by industry, total personal income, population, and per capita personal income. These data may be used to analyze local area economic activity, local interindustry economic relationships, and interarea population movements. In addition, the areas are used as major units for BEA's local area economic projections.³ Historical and projected economic area data are used by government agencies for planning public-sector projects and programs, by businesses for determining plant locations and sales territories, and by university and other research groups for doing regional economic studies.

Each economic area consists of one or more economic nodes—metropolitan areas or similar areas that serve as centers of economic activity—and the surrounding counties that are economically related to the nodes. The main factor used in determining the economic relationships among counties is commuting patterns, so each economic area includes, as far as possible, the place of work and the place of residence of its

labor force. The decision to redefine the areas reflects substantial changes in the commuting patterns, as indicated by data from the 1990 Census of Population, and changes in the definitions of metropolitan areas.⁴

In general, the redefinition procedure has three major elements. The first element is the identification of nodes. The second element is the assignment of counties to relatively small economic units known as "component economic areas" (CEA's); each CEA consists of a single economic node and the surrounding counties that are economically related to the node.⁵ The third element is the aggregation of the CEA's to the larger economic areas. For a diagrammatic representation of the redefinition procedure, see chart 3.

Identification of nodes

Economic nodes are metropolitan areas or similar areas that serve as centers of economic activity. Of the 3,141 counties in the Nation, 836 are metropolitan counties that make up the 310 metropolitan areas; each of these areas was identified as the node of a CEA.⁶ In addition, in parts of the Nation remote from metropolitan areas, 38 nonmetropolitan counties were each identified as a node.

Identification of most of the nonmetropolitan nodes was a four-part process. First, analysis of commuting data for the Nation's 2,305 nonmetropolitan counties showed that 1,112 of these counties are not closely related to a metropolitan area. Second, of these 1,112 counties, 130

1. See "Proposed Redefinition of the BEA Economic Areas," *Federal Register* 59 (November 7, 1994): 55,416–20; and "Final Redefinition of the BEA Economic Areas," *Federal Register* 60 (March 10, 1995): 13,114–18.

2. See "Intent to Revise the Boundaries of the BEA Economic Areas," *Federal Register* 58 (March 9, 1993): 13,049–50. See also Kenneth P. Johnson and Lyle Spatz, "BEA Economic Areas: A Progress Report on Redefinition," *SURVEY OF CURRENT BUSINESS* 73 (November 1993): 77–79.

3. See Regional Economic Analysis Division, "BEA Economic Area Projections of Income, Employment, and Population to the Year 2000," *SURVEY* 70 (November 1990): 39–43.

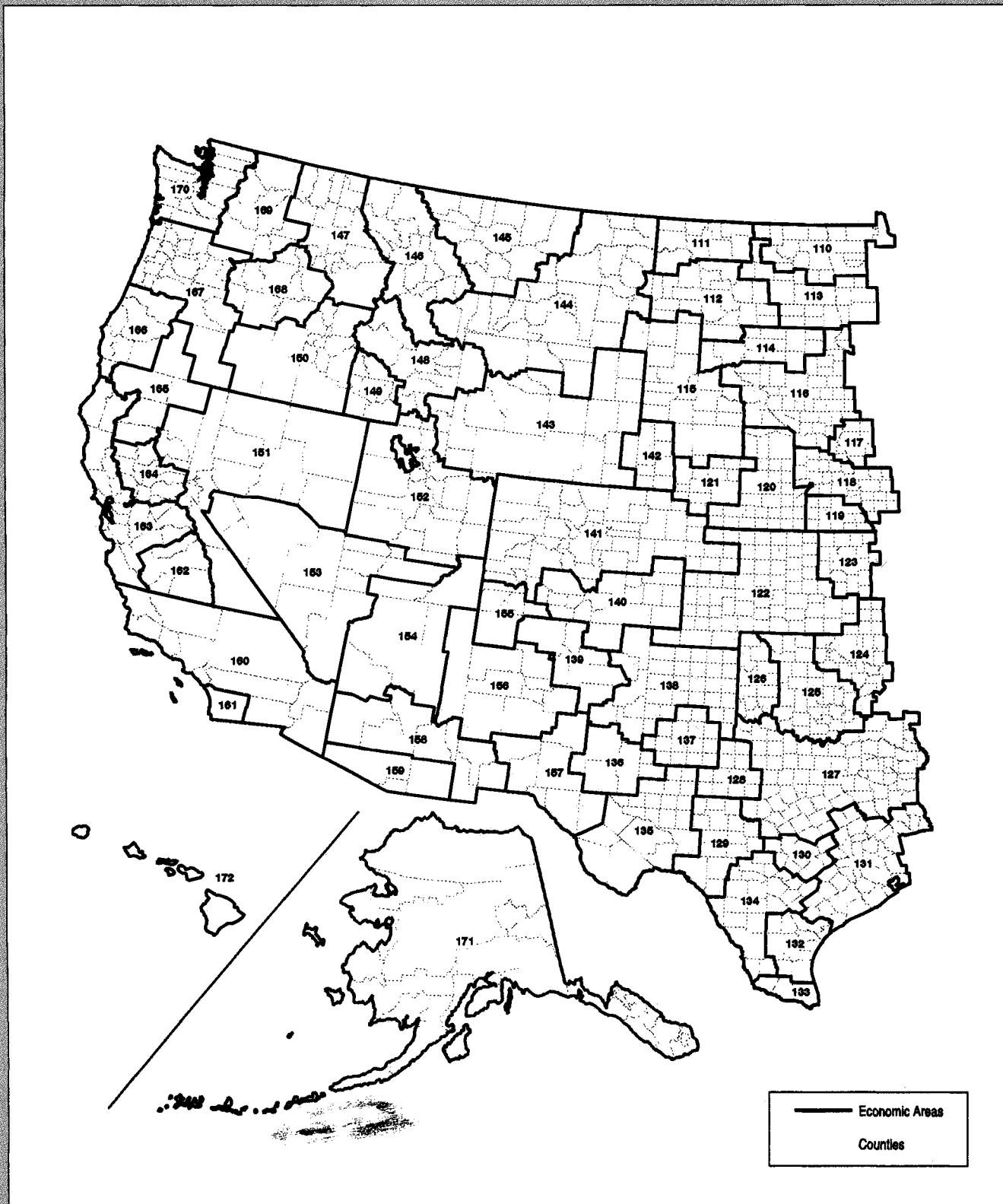
4. The redefinition reflects the changes in the metropolitan-area definitions issued in June 1993 by the Office of Management and Budget for statistical purposes; the definitions of metropolitan areas used by BEA are the county-based definitions. The 310 metropolitan areas consist of 240 metropolitan statistical areas, 59 primary metropolitan statistical areas (PMSA's), and 11 New England county metropolitan areas (NECMA's). (BEA treats the New Haven-Bridgeport-Stamford-Danbury-Waterbury, CT NECMA as a PMSA.)

5. Data for the CEA's can be used by government agencies for administering regulatory programs for small areas and by businesses for developing marketing programs for small areas.

6. The 3,141 counties are those defined as of January 1, 1990; they consist of counties and of areas classified as county equivalents for the 1990 census.

CHART 1

BEA Economic Areas, 110-172



NOTE.—The 172 BEA Economic Areas are defined as of February 1995. For economic-area codes and names, see table 1.

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

CHART 2

BEA Economic Areas, 1-109



— Economic Areas
- - - Counties

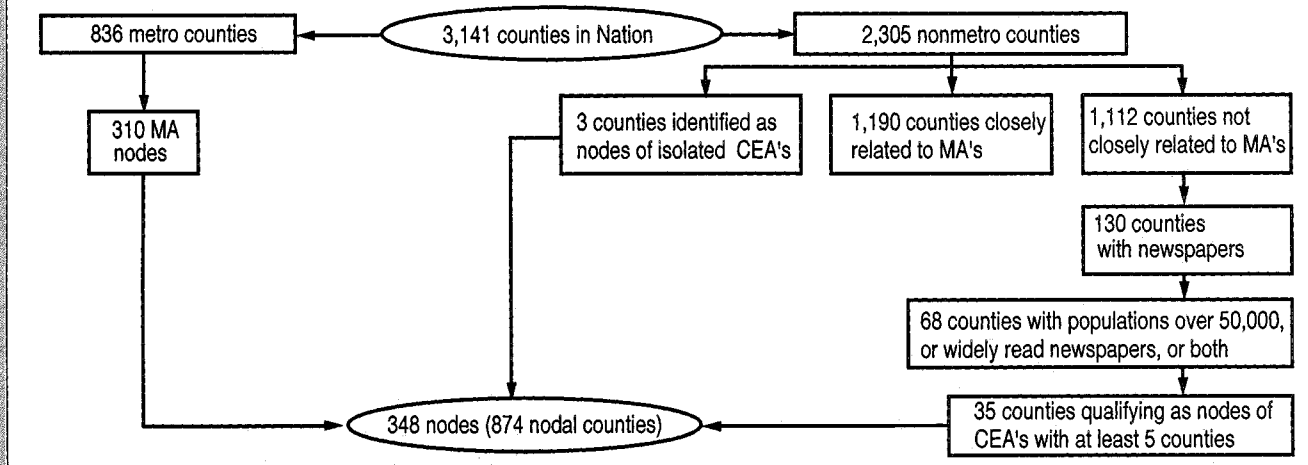
NOTE—The 172 BEA Economic Areas are defined as of February 1995. For economic-area codes and names, see table 1.

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

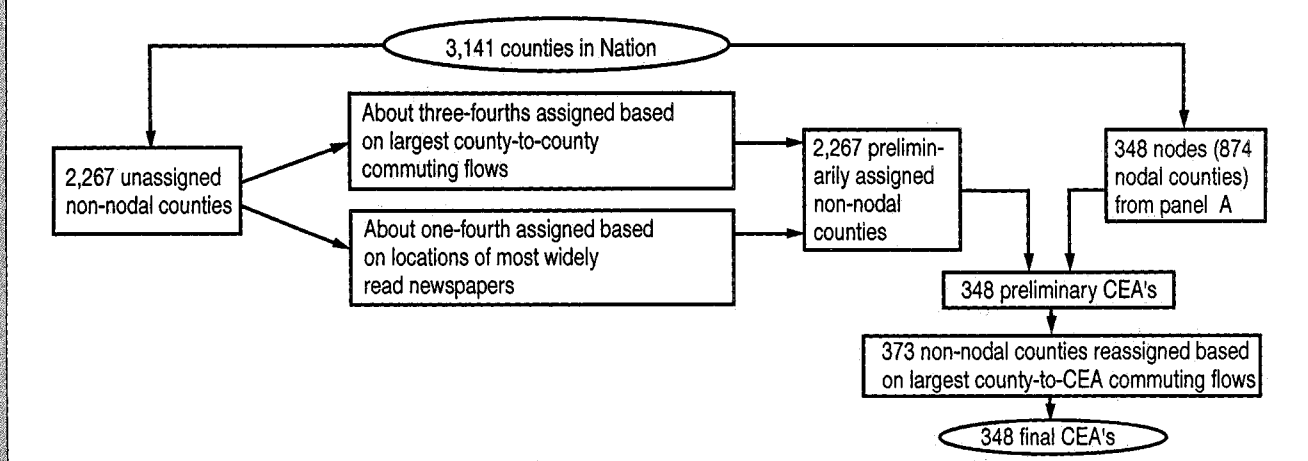
CHART 3

Redefinition Procedure

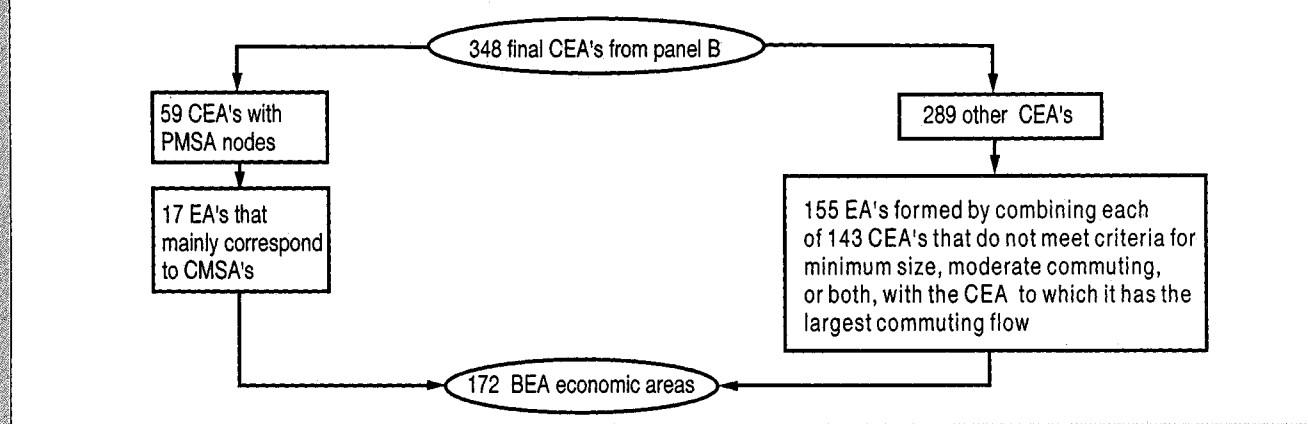
A. IDENTIFICATION OF NODES



B. ASSIGNMENT OF COUNTIES TO COMPONENT ECONOMIC AREAS



C. AGGREGATION TO ECONOMIC AREAS



CEA Component economic area
 CMSA Consolidated metropolitan statistical area
 EA Economic area
 MA Metropolitan area
 Metro Metropolitan
 Nonmetro Nonmetropolitan
 PMSA Primary metropolitan statistical area

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

are locations of newspapers.⁷ Third, of these 130 counties, 68 have populations of more than 50,000, or their newspapers are widely read in at least five counties, or both. Fourth, only 35 of the 68 counties qualified as nodes of CEA's that could contain at least five counties. The CEA of each of these 35 nodal counties was named for the city in which the county's major newspaper is published.⁸

In addition, three nonmetropolitan counties were identified as nodes of CEA's because the county contained the largest city in the CEA. These CEA's, which are characterized by their relative economic isolation, are the Alaska panhandle, western Oklahoma, and northern Michigan.

Assignment of counties to component economic areas

Of the 3,141 counties in the Nation, 836 counties constitute the 310 metropolitan area nodes, and 38 counties are identified as nonmetropolitan nodes; together, these 874 counties constitute 348 nodes. Each of the remaining 2,267 non-nodal counties was analyzed to determine the node to which it is most closely related. About three-fourths of these counties were preliminarily assigned to nodes on the basis of their largest county-to-county commuting flows, according to journey-to-work data from the 1990 census. In many instances, the assignment reflected commuting flows to non-nodal counties already assigned to nodes rather than commuting flows to nodal counties. Most of the other counties were preliminarily assigned to nodes on the basis of the locations of the regional newspapers that are most widely read in those counties, according to newspaper circulation data.⁹ For all preliminary assignments, the non-nodal counties had to be contiguous to either the nodes or to non-nodal counties already assigned to the nodes.

The preliminary assignment of non-nodal counties to nodes—based on data at the county level—resulted in a preliminary set of CEA's. Data

7. Data by county on newspaper publication and circulation are from the Audit Bureau of Circulations, an organization whose membership accounts for about 98 percent of U.S. newspaper circulation.

8. The cities are Flagstaff, AZ; Jonesboro, AR; Idaho Falls, ID; Twin Falls, ID; Quincy, IL; Manhattan, KS; Paducah, KY; Bowling Green, KY; Salisbury, MD; Traverse City, MI; Marquette, MI; Mankato, MN; Worthington, MN; Hattiesburg, MS; Meridian, MS; Tupelo, MS; Greenville, MS; Missoula, MT; Butte, MT; Grand Island, NE; North Platte, NE; Norfolk, NE; Scottsbluff, NE; Lebanon, NH; Hobbs, NM; Farmington, NM; Minot, ND; Pendleton, OR; Aberdeen, SD; Watertown, SD; Cookeville, TN; Lufkin, TX; Staunton, VA; Clarksburg, WV; and Bluefield, WV. Hattiesburg, MS was defined as a metropolitan statistical area by the Office of Management and Budget in mid-1994, after the redefinition was under way (see footnote 4).

9. The preliminary assignment of a small number of counties with special features, such as unusually small populations, was based on other procedures.

Availability of Additional Information

The codes, names, and numbers of the counties in each economic area and CEA and of the CEA's in each economic area are available electronically on the Economic Bulletin Board (EBB) from the Commerce Department's STAT-USA. To access the EBB, use a personal computer and modem, dial (202) 482-3870, and follow the instructions. To access the EBB through Internet, use Telnet address "ebb.stat-usa.gov" for remote login, and download the file named "eacodes.exe." For prices and other information about these services, call (202) 482-1986.

The economic area information is also available on a 3½-inch, high-density diskette for \$20. When ordering, please specify the BEA Accession Number 61-95-40-101. Send your order, along with a check or money order payable to "Bureau of Economic Analysis," to Public Information Office, Order Desk, BE-53, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230. For further information or to order using MasterCard or VISA, call (202) 606-3700.

at both the county and CEA levels were then analyzed to ensure that, to the extent possible, each county was assigned to the CEA to which it has the largest commuting flow. This analysis resulted in the reassignment of 373 counties and in the definition of the final set of 348 CEA's.

Aggregation to economic areas

The 348 CEA's were used as "building blocks" for the new 172 economic areas. The CEA's were aggregated to economic areas so that (1) each economic area includes, as far as possible, the place of work and the place of residence of its labor force and (2) each economic area is economically large enough to be part of BEA's local area economic projections program.¹⁰ In general, the aggregation had two parts. First, the 59 CEA's with primary metropolitan statistical areas (PMSA's) as nodes were combined into 17 economic areas, which mainly correspond to the 17 consolidated metropolitan statistical areas (CMSA's) that comprise the PMSA's.¹¹ Second, each of the 143 CEA's that do not meet criteria for minimum size, for moderate commuting across CEA boundaries, or for both, was combined with the CEA to which it has the largest commuting flow.¹²

10. In its forthcoming set of regional projections, BEA plans to publish projections for States in the summer of 1995 and projections for the new economic areas and for metropolitan areas in early 1996.

11. A CMSA has more than 1 million residents and comprises two or more PMSA's.

12. The criteria for minimum size were developed from a combination of data on land area, on number of employed residents, and on number of


By definition, the labor force of an economic area should work and reside in that area, so commuting across boundaries should be limited. An evaluation of journey-to-work data from the 1990 census indicated that net numbers of commuters across the new economic area boundaries are indeed relatively low.¹³ About 80 percent of the 172 areas have net commuting rates of 1 percent or less.¹⁴ In contrast, again according to the 1990

counties, and the commuting criteria were developed from journey-to-work data from the 1990 census.

13. The net number of commuters is the difference between the number of in-commuters (nonresidents who commute to work in an economic area) and the number of out-commuters (residents who commute to work out of an economic area).

14. The net commuting rate is the difference between the in-commuting rate and the out-commuting rate; the rate of in-commuting (or out-

journey-to-work data, only about 60 percent of the 183 areas defined in 1977 have net commuting rates of 1 percent or less.¹⁵

Table 1 follows. 

commuting) is the number of in-commuters (or out-commuters) as a percentage of the number of employed residents, regardless of their place of work.

15. In the early 1980's, when definitions of the 183 areas were confirmed on the basis of commuting data from the 1980 census, about 80 percent of the 183 areas then had net commuting rates of 1 percent or less.

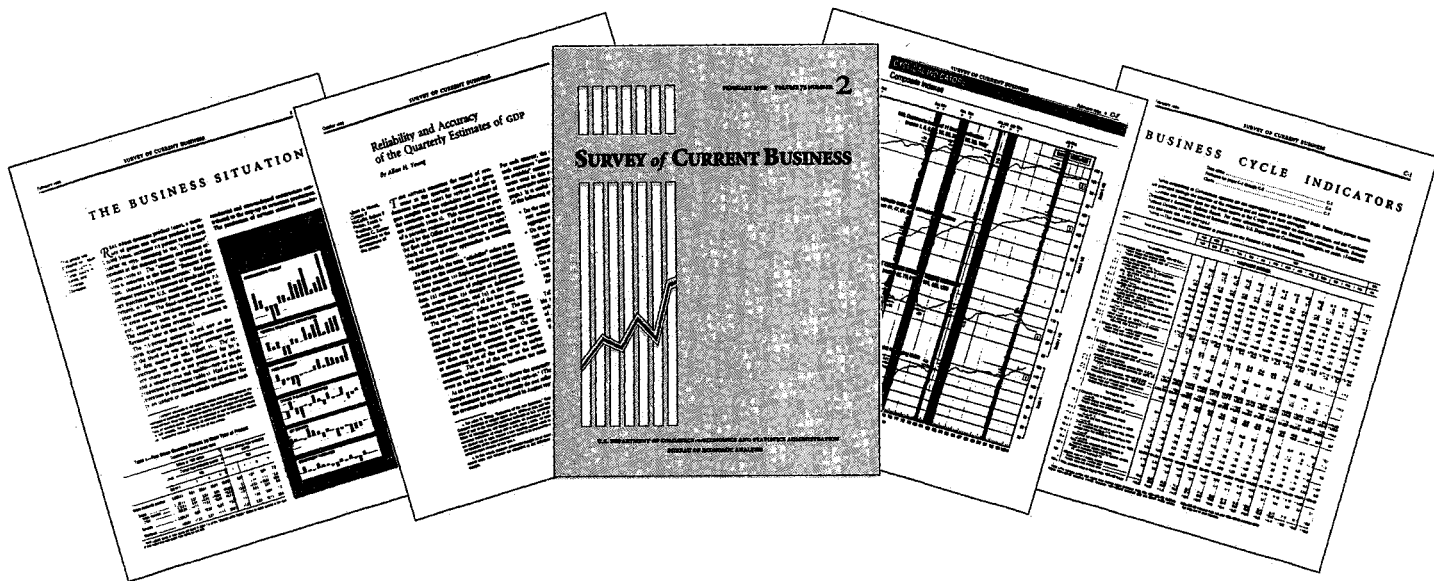
Table 1.—Codes and Names for BEA Economic Areas

Code	Name	Code	Name
001	Bangor, ME	088	Shreveport-Bossier City, LA-AR
002	Portland, ME	089	Monroe, LA
003	Boston-Worcester-Lawrence-Lowell-Brockton, MA-NH-RI-VT	090	Little Rock-North Little Rock, AR
004	Burlington, VT-NY	091	Fort Smith, AR-OK
005	Albany-Schenectady-Troy, NY	092	Fayetteville-Springdale-Rogers, AR-MO-OK
006	Syracuse, NY-PA	093	Joplin, MO-KS-OK
007	Rochester, NY-PA	094	Springfield, MO
008	Buffalo-Niagara Falls, NY-PA	095	Jonesboro, AR-MO
009	State College, PA	096	St. Louis, MO-IL
010	New York-No. New Jersey-Long Island, NY-NJ-CT-PA-MA-VT	097	Springfield, IL-MO
011	Harrisburg-Lebanon-Carlisle, PA	098	Columbia, MO
012	Philadelphia-Wilmington-Atlantic City, PA-NJ-DE-MD	099	Kansas City, MO-KS
013	Washington-Baltimore, DC-MD-VA-WV-PA	100	Des Moines, IA-IL-MO
014	Salisbury, MD-DE-VA	101	Peoria-Pekin, IL
015	Richmond-Petersburg, VA	102	Davenport-Moline-Rock Island, IA-IL
016	Staunton, VA-WV	103	Cedar Rapids, IA
017	Roanoke, VA-NC-WV	104	Madison, WI-IL-IA
018	Greensboro-Winston-Salem-High Point, NC-VA	105	La Crosse, WI-MN
019	Raleigh-Durham-Chapel Hill, NC	106	Rochester, MN-IA-WI
020	Norfolk-Virginia Beach-Newport News, VA-NC	107	Minneapolis-St. Paul, MN-WI-IA
021	Greenville, NC	108	Wausau, WI
022	Fayetteville, NC	109	Duluth-Superior, MN-WI
023	Charlotte-Gastonia-Rock Hill, NC-SC	110	Grand Forks, ND-MN
024	Columbia, SC	111	Minot, ND
025	Wilmington, NC-SC	112	Bismarck, ND-MT-SD
026	Charleston-North Charleston, SC	113	Fargo-Moorhead, ND-MN
027	Augusta-Aiken, GA-SC	114	Aberdeen, SD
028	Savannah, GA-SC	115	Rapid City, SD-MT-NE-ND
029	Jacksonville, FL-GA	116	Sioux Falls, SD-IA-MN-NE
030	Orlando, FL	117	Sioux City, IA-NE-SD
031	Miami-Fort Lauderdale, FL	118	Omaha, NE-IA-MO
032	Fort Myers-Cape Coral, FL	119	Lincoln, NE
033	Sarasota-Bradenton, FL	120	Grand Island, NE
034	Tampa-St. Petersburg-Clearwater, FL	121	North Platte, NE-CO
035	Tallahassee, FL-GA	122	Wichita, KS-OK
036	Dothan, AL-FL-GA	123	Topeka, KS
037	Albany, GA	124	Tulsa, OK-KS
038	Macon, GA	125	Oklahoma City, OK
039	Columbus, GA-AL	126	Western Oklahoma, OK
040	Atlanta, GA-AL-NC	127	Dallas-Fort Worth, TX-AR-OK
041	Greenville-Spartanburg-Anderson, SC-NC	128	Abilene, TX
042	Asheville, NC	129	San Angelo, TX
043	Chattanooga, TN-GA	130	Austin-San Marcos, TX
044	Knoxville, TN	131	Houston-Galveston-Brazoria, TX
045	Johnson City-Kingsport-Bristol, TN-VA	132	Corpus Christi, TX
046	Hickory-Morgantown, NC-TN	133	McAllen-Edinburg-Mission, TX
047	Lexington, KY-TN-VA-WV	134	San Antonio, TX
048	Charleston, WV-KY-OH	135	Odessa-Midland, TX
049	Cincinnati-Hamilton, OH-KY-IN	136	Hobbs, NM-TX
050	Dayton-Springfield, OH	137	Lubbock, TX
051	Columbus, OH	138	Amarillo, TX-NM
052	Wheeling, WV-OH	139	Santa Fe, NM
053	Pittsburgh, PA-WV	140	Pueblo, CO-NM
054	Erie, PA	141	Denver-Boulder-Greeley, CO-KS-NE
055	Cleveland-Akron, OH-PA	142	Scottsbluff, NE-WY
056	Toledo, OH	143	Casper, WY-ID-UT
057	Detroit-Ann Arbor-Flint, MI	144	Billings, MT-WY
058	Northern Michigan, MI	145	Great Falls, MT
059	Green Bay, WI-MI	146	Missoula, MT
060	Appleton-Oshkosh-Neenah, WI	147	Spokane, WA-ID
061	Traverse City, MI	148	Idaho Falls, ID-WY
062	Grand Rapids-Muskegon-Holland, MI	149	Twin Falls, ID
063	Milwaukee-Racine, WI	150	Boise City, ID-OR
064	Chicago-Gary-Kenosha, IL-IN-WI	151	Reno, NV-CA
065	Elkhart-Goshen, IN-MI	152	Salt Lake City-Ogden, UT-ID
066	Fort Wayne, IN	153	Las Vegas, NV-AZ-UT
067	Indianapolis, IN-IL	154	Flagstaff, AZ-UT
068	Champaign-Urbana, IL	155	Farmington, NM-CO
069	Evansville-Henderson, IN-KY-IL	156	Albuquerque, NM-AZ
070	Louisville, KY-IN	157	El Paso, TX-NM
071	Nashville, TN-KY	158	Phoenix-Mesa, AZ-NM
072	Paducah, KY-IL	159	Tucson, AZ
073	Memphis, TN-AR-MS-KY	160	Los Angeles-Riverside-Orange County, CA-AZ
074	Huntsville, AL-TN	161	San Diego, CA
075	Tupelo, MS-AL-TN	162	Fresno, CA
076	Greenville, MS	163	San Francisco-Oakland-San Jose, CA
077	Jackson, MS-AL-LA	164	Sacramento-Yolo, CA
078	Birmingham, AL	165	Redding, CA-OR
079	Montgomery, AL	166	Eugene-Springfield, OR-CA
080	Mobile, AL	167	Portland-Salem, OR-WA
081	Pensacola, FL	168	Pendleton, OR-WA
082	Biloxi-Gulfport-Pascagoula, MS	169	Richland-Kennewick-Pasco, WA
083	New Orleans, LA-MS	170	Seattle-Tacoma-Bremerton, WA
084	Baton Rouge, LA-MS	171	Anchorage, AK
085	Lafayette, LA	172	Honolulu, HI
086	Lake Charles, LA		
087	Beaumont-Port Arthur, TX		

NOTE.—Codes are assigned, beginning with 001 in northern Maine, continuing south to Florida, then north to the Great Lakes, and continuing in a serpentine pattern to the West Coast. Except for the Western Oklahoma economic area (126), the Northern Michigan economic area (058), and the 17 economic areas mainly corresponding to CMSA's, each economic area is named for the

metropolitan area or city that is the node of its largest CEA and that is usually, but not always, the largest metropolitan area or city in the economic area. The name of each economic area includes each State that contains counties in that economic area.

Comprehensive Information on the U.S. Economy



The SURVEY OF CURRENT BUSINESS provides the broad scope and the statistical detail to keep you informed, month by month, about U.S. economic conditions. It is the journal of record for many of the headline-making economic statistics that influence decisionmakers in business and government, including:

- Gross domestic product (GDP),
- Personal income (both national and regional),
- Leading economic indicators, and
- U.S. balance of payments.

The SURVEY's articles analyze these numbers and present the statistical detail and methodologies that underlie them.

The SURVEY also contains the "Business Cycle Indicators" section, which consists of tables for about 270 series and charts for about 130 series that are widely used in analyzing current cyclical developments.

To keep up with the rapidly changing U.S. economy, subscribe to the SURVEY OF CURRENT BUSINESS today.

Superintendent of Documents **Subscriptions** Order Form

Order Processing Code:
*6121

YES, enter my subscription(s) as follows:

S3
Charge your order.  
It's Easy!
To fax your orders (202) 512-2233

_____ subscription(s) of SURVEY OF CURRENT BUSINESS, SCUB: *second-class mail* — \$34.00 domestic, \$42.50 foreign; *first-class mail* — \$71.00 domestic. For foreign air mail prices or to place an order by telephone, call (202) 512-1800.

The total cost of my order is \$_____.

(Company or Personal Name) (Please type or print)

(Additional address/attention line)

(Street address)

(City, State, ZIP Code)

(Daytime phone including area code)

(Purchase Order No.)

For privacy protection, check the box below:

Do not make my name available to other mailers

Please choose method of payment:

Check Payable to the Superintendent of Documents

GPO Deposit Account -

VISA or MasterCard Account

(Credit card expiration date)

**Thank you for
your order!**

(Authorizing Signature)

03/9

Mail To: Superintendent of Documents
P.O. Box 371954, Pittsburgh, PA 15250-7954 U

BUSINESS CYCLE INDICATORS

Series originating in Government agencies are not copyrighted and may be reprinted freely. Series from private sources are provided through the courtesy of the compilers and are subject to their copyrights.

Current and historical data for the series shown in the C-pages are available on diskettes, printouts, and the Commerce Department's Economic Bulletin Board. For more information, contact the Business Cycle Indicators Branch, Business Outlook Division (BE-52), Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230. (Telephone: (202) 606-5366; fax: (202) 696-5313.)

NOTE.—This section of the SURVEY is prepared by the Business Cycle Indicators Branch.

Series no.	Series title and timing classification	Year		1994												1995
		1994	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
1. COMPOSITE INDEXES																
The Leading Index																
910 ♦	Composite index of leading indicators, 1987=100 (L,L,L) ...	101.7	100.3	100.5	100.7	101.3	101.4	101.5	101.7	101.7	102.3	102.3	102.2	102.3	102.5	P 102.5
	Percent change from previous month .....	.2	.7	.2	.2	.6	.1	.1	.2	0	.6	0	-.1	.1	.2	P 0
	Percent change over 3-month span, AR	2.3	5.3	4.5	4.0	3.6	3.2	1.6	1.2	3.2	2.4	2.0	0	.8	P 1.2	
Leading index components:																
1 ♦	Average weekly hours, mfg. (L,L,L)	42.0	41.7	41.7	41.3	42.1	42.2	42.1	42.0	42.0	42.0	42.0	42.1	42.1	42.2	P 42.2
5 ♦	Average weekly initial claims for unemployment insurance, thous. (L,C,L) † §	337	327	361	344	328	344	368	339	335	323	321	329	327	325	P 329
8 ♦	Mfrs.' new orders, consumer goods and materials, bil. 1987\$ (L,L,L)	1,430.55	114.60	116.08	115.62	118.25	117.64	118.72	117.72	115.36	122.00	120.15	120.86	123.31	124.84	P 124.90
32 ♦	Vendor performance, slower deliveries diffusion index, percent (L,L,L)	60.1	52.3	54.5	58.3	55.1	57.2	59.8	59.7	57.2	61.4	62.1	64.7	65.2	65.7	62.6
20 ♦	Contracts and orders for plant and equipment, bil. 1987\$ (L,L,L) §	528.94	41.26	42.68	42.04	43.19	42.06	42.28	44.30	43.18	44.51	46.53	45.72	47.68	44.77	P 47.79
29 ♦	Index of new private housing units authorized by local building permits, 1987=100 (L,L,L) §	86.0	95.6	87.5	80.4	83.7	86.6	86.9	84.0	84.7	86.9	89.0	87.4	85.2	89.3	81.9
92 ♦	Change in mfrs.' unfilled orders, durable goods, bil. 1987\$, smoothed (L,L,L) † §	-70	-2.98	-2.29	-1.71	-1.40	-.98	-.54	-.12	-.16	-.43	-.49	-.41	-.19	.27	P .62
99 ♦	Change in sensitive materials prices, percent, smoothed (L,L,L) † §	1.71	.24	.52	.84	1.05	1.21	1.44	1.84	2.36	2.50	2.37	2.13	2.14	2.09	2.08
19 ♦	Index of stock prices, 500 common stocks, 1941-43=10, NSA (L,L,L) *	460.33	465.95	472.99	471.58	463.81	447.23	450.90	454.83	451.40	464.24	466.96	463.81	461.01	455.19	465.25
106 ♦	Money supply M2, bil. 1987\$ (L,L,L) §	2,764.1	2,784.5	2,788.7	2,777.8	2,780.1	2,781.9	2,780.0	2,769.0	2,769.1	2,755.8	2,748.3	2,741.3	2,739.9	2,736.9	P 2,738.6
83 ♦	Index of consumer expectations, U. of Michigan, 1966=100, NSA (L,L,L) © 2	83.8	78.8	86.4	83.5	85.1	82.6	84.2	82.7	78.5	80.8	83.5	85.1	84.8	88.8	88.4
950	Diffusion index of 11 leading indicator components:															
	Percent rising over 1-month span	59.5	81.8	77.3	45.5	81.8	54.5	63.6	45.5	40.9	77.3	59.1	45.5	59.1	63.6	P 45.5
	Percent rising over 6-month span		90.9	86.4	63.6	63.6	63.6	72.7	72.7	81.8	77.3	90.9	72.7			
The Coincident Index																
920 ♦	Composite index of coincident indicators, 1987=100 (C,C,C)	113.9	111.5	111.4	112.1	112.7	112.9	113.2	113.6	113.7	114.4	114.7	115.4	115.8	116.4	3 116.7
	Percent change from previous month .....	.4	.5	-.1	.6	.5	.2	.3	.4	.1	.6	.3	.6	.3	.5	3.3
	Percent change over 3-month span, AR	4.5	4.0	4.4	4.4	5.5	4.0	3.2	2.9	4.3	3.9	6.1	5.0	6.1	4.6	
Coincident index components:																
41 ♦	Employees on nonagricultural payrolls, thous. (C,C,C) ...	113,427	111,610	111,711	111,919	112,298	112,699	112,951	113,334	113,624	113,914	114,186	114,348	114,882	115,092	P 115,226
51 ♦	Personal income less transfer payments, bil. 1987\$, AR (C,C,C)	3,665.3	3,589.3	3,666.9	3,618.9	3,629.0	3,641.9	3,652.7	3,649.3	3,654.2	3,683.6	3,735.9	3,730.8	3,755.4	3,767.1	P 3,767.1
47 ♦	Index of industrial production, 1987=100 (C,C,C)	118.1	114.7	114.7	115.6	116.6	116.7	117.4	118.0	118.2	119.1	119.0	119.5	120.4	121.4	P 121.9
57 ♦	Manufacturing and trade sales, mil. 1987\$ (C,C,C)	6,692,440	541,601	540,133	545,678	553,121	549,559	550,330	553,961	550,123	565,671	564,812	567,383	573,517	578,152	
951	Diffusion index of 4 coincident indicator components:															
	Percent rising over 1-month span	83.3	100.0	50.0	100.0	100.0	75.0	100.0	75.0	75.0	100.0	50.0	100.0	75.0	100.0	3 100.0
	Percent rising over 6-month span		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
The Lagging Index																
930 ♦	Composite index of lagging indicators, 1987=100 (Lg,Lg,Lg)	97.5	96.2	96.4	96.0	95.8	96.4	96.8	97.4	97.6	97.8	98.4	98.8	99.4	99.5	4 100.1
	Percent change from previous month .....	.3	-.1	.2	-.4	-.2	.6	.4	.6	.2	.6	.4	.6	.1	.6	4.6
	Percent change over 3-month span, AR	3.5	-.4	-1.2	-1.7	0	3.4	6.9	5.1	4.2	4.2	5.0	6.7	4.5	4.5	
Lagging index components:																
91 ♦	Average duration of unemployment, weeks (Lg,Lg,Lg) † §	18.8	18.2	18.4	18.8	19.2	19.1	19.4	18.4	19.0	18.9	18.8	19.3	18.2	17.8	16.7
77 ♦	Ratio, mfg. and trade inventories to sales in 1987\$ (Lg,Lg,Lg)	1.47	1.48	1.49	1.48	1.45	1.47	1.48	1.47	1.49	1.45	1.46	1.46	1.45	1.44	
62 ♦	Change in labor cost per unit of output, mfg., percent, AR, smoothed (Lg,Lg,Lg) †	-2.3	-1.1	-1.2	-1.2	-2.4	-3.3	-4.0	-3.7	-3.5	-3.6	-.2	-.1	-.5	-1.6	P -1.8
109 ♦	Average prime rate charged by banks, percent, NSA (Lg,Lg,Lg) *	7.14	6.00	6.00	6.00	6.06	6.45	6.99	7.25	7.25	7.51	7.75	7.75	8.15	8.50	8.50
101 ♦	Commercial and industrial loans outstanding, mil. 1987\$ (Lg,Lg,Lg) §	383,802	373,476	376,245	372,661	369,567	372,390	375,953	378,153	382,875	384,743	391,948	398,827	399,002	403,262	P 406,431
95 ♦	Ratio, consumer installment credit outstanding to personal income, percent (Lg,Lg,Lg)	14.95	14.40	14.57	14.40	14.51	14.60	14.77	14.94	14.98	15.18	15.25	15.25	15.47	15.48	
120 ♦	Change in Consumer Price Index for services, percent, AR, smoothed (Lg,Lg,Lg) † §	3.1	3.5	3.2	3.4	3.5	3.4	3.2	3.0	2.8	3.0	3.1	3.1	3.1	2.9	3.1
952	Diffusion index of 7 lagging indicator components:															
	Percent rising over 1-month span	61.9	42.9	50.0	35.7	42.9	78.6	57.1	71.4	64.3	71.4	100.0	57.1	57.1	57.1	4 70.0
	Percent rising over 6-month span		28.6	35.7	42.9	42.9	50.0	42.9	71.4	57.1	71.4	100.0	100.0			
940 ♦	Ratio, coincident index to lagging index, 1987=100 (L,L,L)	116.8	115.9	115.6	116.8	117.6	117.1	116.9	116.6	116.5	117.0	116.6	116.8	116.5	117.0	P 116.6

NOTE.—The following current high values were reached before December 1993: June 1991—BCI-106 (2,868.4); December 1991—BCI-77 (1.65); January 1992—BCI-120 smoothed (4.3); October 1992—BCI-62 smoothed (1.7); and December 1992—BCI-83 (89.5).

See page C-6 for other footnotes.

Series no.	Series title and timing classification	Year	1993	1994												1995
		1994	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.

8. PROFITS AND CASH FLOW

16 ♦	Profits and profit margins:																
18 ♦	Corporate profits after tax, bil.\$, AR (L,L,L)				299.4				321.4				329.5				
22 ♦	Ratio, corporate domestic profits after tax to corporate domestic income, percent (L,L,L)				7.6				8.1				8.3				
81 ♦	Ratio, corporate domestic profits after tax with IVA and COAdj to corporate domestic income, percent(U,L,L)				8.4				8.8				8.8				
26 ♦	Ratio, implicit price deflator to unit labor cost, all persons, nonfarm business sector, 1982=100 (L,L,L)	104.6			104.1				104.5				105.0			P 104.8	
35	Corporate net cash flow, bil. 1987\$, AR (L,L,L)				527.1				535.0				542.6				

9. WAGES, LABOR COSTS, AND PRODUCTIVITY

345	Wages and compensation:																
	Index of average hourly compensation, all employees, nonfarm business sector, 1982=100	163.0			161.9				162.2				163.5			P 165.0	
	Percent change from previous quarter, AR	3.1			5.8				.7				3.2			P 3.6	
346	Index of real average hourly compensation, all employees, nonfarm business sector, 1982=100	106.2			106.5				106.0				105.9			P 106.2	
	Percent change from previous quarter, AR .....	.5			3.6				-2.0				-4			P 1.3	
53 ♦	Wages and salaries in mining, mfg., and construction, bil. 1987\$, AR (C,C,C) §	617.7	608.5	610.4	612.4	613.1	615.0	615.0	616.4	616.8		616.6	619.6	627.2	624.5	625.3	625.8
63	Unit labor costs:																
	Index of unit labor cost, all persons, business sector, 1982=100 (Lg,Lg)	138.1			137.4				138.2				138.1			P 138.7	
	Index of labor cost per unit of output, mfg., 1987=100	108.4	109.6	110.0	109.9	109.0	108.6	108.2	108.3	108.0	107.5	107.9	109.0	107.4	106.9	107.4	107.0
	Percent change from previous month, AR	-2.2	-6.3	4.5	-1.1	-9.4	-4.3	-4.3	1.1	-3.3	-5.4	4.6	12.9	-16.3	-5.4	-16.3	-5.4
62 ♦	Percent change from previous month, AR, smoothed (Lg,Lg) †	-2.3	-1.1	-1.2	-1.2	-2.4	-3.3	-4.0	-3.7	-3.5	-3.6	-2.6	1.1	-5	-1.6	-1.8	-1.8
370	Productivity:																
	Index of output per hour, all persons, business sector, 1982=100	119.9			119.8				119.2				120.3			P 120.8	
	Percent change over 1-quarter span, AR	2.3			2.9				-2.0				3.7			P 1.7	
	Percent change over 4-quarter span, AR	2.5			2.5				1.5								
358	Index of output per hour, all persons, nonfarm business sector, 1982=100	117.9			117.9				117.2				118.2			P 118.7	

10. PERSONAL INCOME AND CONSUMER ATTITUDES

52	Personal income:																
51 ♦	Personal income, bil. 1987\$, AR (C,C,C)	4,410.6	4,323.4	4,307.9	4,369.7	4,370.6	4,385.2	4,395.2	4,392.3	4,398.1	4,411.5	4,430.4	4,485.7	4,480.4	4,509.7	4,530.8	
	Personal income less transfer payments, bil. 1987\$, AR (C,C,C)	3,665.3	3,589.3	3,566.9	3,618.9	3,629.0	3,641.9	3,652.7	3,649.3	3,654.2	3,665.0	3,683.6	3,735.9	3,730.8	3,755.4	3,767.1	
58	Indexes of consumer attitudes:																
	Consumer sentiment, U. of Michigan, 1966:1=100, NSA (L,L,L) ⊗ 1	92.3	88.2	94.3	93.2	91.5	92.6	92.8	91.2	89.0	91.7	91.5	92.7	91.6	95.1	97.6	
83 ♦	Consumer expectations, U. of Michigan, 1966:1=100, NSA (L,L,L) ⊗ 1	83.8	78.8	86.4	83.5	85.1	82.6	84.2	82.7	78.5	80.8	83.5	85.1	84.8	88.8	88.4	
122	Consumer confidence, The Conference Board, 1985=100 (L,L,L) †	90.6	79.8	82.6	79.9	86.7	92.1	88.9	92.5	91.3	90.4	89.5	89.1	100.4	103.4	101.4	
123 ♦	Consumer expectations, The Conference Board, 1985=100 (L,L,L) †	92.3	91.8	92.6	84.4	92.6	95.4	93.6	94.6	91.9	89.4	89.5	87.9	97.5	98.1	94.8	

11. SAVING

290	Gross saving, bil.\$, AR				896.2				923.3				922.6				
295	Business saving, bil.\$, AR				861.8				840.4				849.4				
292	Personal saving, bil.\$, AR	203.7			175.5				201.1				203.3				
298 ♦	Government surplus or deficit, bil.\$, AR				-151.1				-118.1				-130.1			235.1	
293 ♦	Personal saving rate, percent	4.1			3.6				4.1				4.1			4.8	

12. MONEY, CREDIT, INTEREST RATES, AND STOCK PRICES

85 ♦	Money:																
102 ♦	Percent change in money supply M1 (L,L,L) § .....	.14	55	35	40	36	15	06	31	45	12	02	25	05	03	10
105	Percent change in money supply M2 (L,C,U) § .....	.07	19	15	08	32	22	09	09	31	10	04	11	03	12	37
106 ♦	Money supply M1, bil. 1987\$ (L,L,L) §	878.0	876.9	880.0	880.7	881.8	881.8	881.0	882.2	877.8	876.0	872.4	871.3	869.5	867.7	867.7	
	Money supply M2, bil. 1987\$ (L,L,L) §	2,764.1	2,784.5	2,788.7	2,777.8	2,780.1	2,781.9	2,780.0	2,769.0	2,769.1	2,755.8	2,748.3	2,741.3	2,739.9	2,736.9	2,738.6	
107	Velocity of money:																
	Ratio, gross domestic product to money supply M1 (C,C,C) §	5.882			5.783				5.846				5.899			6.001	
108	Ratio, personal income to money supply M2 (C,Lg,C) §	1.582	1.539	1.528	1.555	1.559	1.564	1.570	1.574	1.577	1.586	1.597	1.620	1.619	1.629	1.637	
93	Bank reserves:																
	Free reserves, mil.\$, NSA (L,U,U) ‡	814	981	1,375	1,070	912	1,027	715	772	649	535	573	424	759	959	1,207	
94	Member bank borrowings from the Federal Reserve, mil.\$, NSA (L,Lg,U)	259	82	73	70	55	124	200	333	458	469	487	380	249	209	136	
112 ♦	Credit flows:																
	Net change in business loans, bil.\$, AR (L,L,L) §	46.87	-21.72	56.41	-40.86	-25.33	39.43	58.79	58.01	75.60	49.40	92.53	92.36	31.20	74.94	64.08	
113 ♦	Net change in consumer installment credit, bil.\$, AR (L,L,L)	116.91	98.39	54.53	46.51	132.36	115.10	163.13	129.35	81.04	181.91	124.00	139.70	146.75	88.58		
110 ♦	Funds raised by private nonfinancial borrowers in credit markets, mil.\$, AR (L,L,L)				374,304			418,552			474,748						
14	Credit difficulties:																
	Current liabilities of business failures, mil.\$, NSA (L,L,L) ‡	30,910.3	2,534.6	2,556.7	2,141.3	2,166.0	1,688.7	2,565.0	2,328.6	2,111.7	2,459.5	3,533.5	3,674.4	2,576.9	3,108.0	2,240.2	
39	Percent of consumer installment loans delinquent 30 days and over (L,L,L) ⊗ 2 ‡		1.77	1.98	1.87	1.74	1.78	1.72	1.71	1.82	1.68	1.66					

NOTE.—The following current high values were reached before December 1993: June 1991—BCI-106 (2,868.4); July 1991—BCI-93 (345); August 1991—BCI-94 (764); October 1991—BCI-62 change (17.6); December 1991—BCI-62 index (112.1); October 1992—BCI-62 smoothed (1.7); December 1992—BCI-53 (664.2), BCI-83 (89.5), and BCI-123 (103.9); May 1993—BCI-85 (1.86) and BCI-102 (0.65); 3d Q 1993—BCI-110 (522.972); and 4th Q 1993—BCI-81 (9.0). See page C-6 for other footnotes.

FOOTNOTES FOR PAGES C-1 THROUGH C-5

a	Anticipated.	NSA	Not seasonally adjusted.
AR	Annual rate.	p	Preliminary.
c	Corrected.	r	Revised.
©	Copyrighted.	♦	Graph included for this series.
e	Estimated.	§	Major revision—see notes.
*	Later data listed in notes.	◇	End of period.

L,C,Lg,U Cyclical indicator series are classified as L (leading), C (coincident), Lg (lagging), or U (unclassified) at reference cycle peaks, troughs, and overall. Series classifications are shown in parentheses following the series titles.

‡ Cyclical indicator series denoted by ‡ are inverted (i.e., the sign is reversed) for cyclical analysis calculations, including classifications, contributions to composite indexes, and current high values.

† Cyclical indicator series denoted by † are smoothed by an autoregressive-moving-average filter developed by Statistics Canada.

For information on composite indexes and other concepts used in this section, see "Business Cycle Indicators: Upcoming Revision of the Composite Indexes" in the October 1993 SURVEY OF CURRENT BUSINESS and "The Composite Index of Coincident Indicators and Alternative Coincident Indexes" in the June 1992 SURVEY.

References to series in this section use the prefix "BCI-" followed by the series number. Unless otherwise noted, series are seasonally adjusted.

Percent change data are centered within the spans: 1-month changes are placed in the ending month, 3-month changes are placed in the 3d month, 6-month changes are placed in the 4th month, 1-quarter changes are placed in the ending quarter, and 4-quarter changes are placed in the 3d quarter.

Diffusion indexes are defined as the percent of components rising plus one-half of the percent of components unchanged. Diffusion index data are centered within the spans: 1-month indexes are placed in the ending month and 6-month indexes are placed in the 4th month.

High values reached by cyclical indicators in the expansion following the last reference cycle trough (March 1991) are shown in boldface type; high values reached prior to the period shown in the table are listed at the bottom of each page. For inverted series, low values are indicated as highs.

Sources for series in this section are shown on pages C-53 through C-55 in the October 1994 Survey.

Page C-1

NOTE.—Major data revisions:

New seasonal adjustments for series BCI-5, -20, and -101—see note for page C-2.

Index of new private housing units authorized by local building permits (BCI-29)—see note for page C-3.

Change in manufacturers' unfilled orders in 1987 dollars for durable goods (BCI-92)—see note for page C-2.

Change in sensitive materials prices (BCI-99)—see note for page C-3.

Money supply M2 in 1987 dollars (BCI-106)—see note for page C-4.

Change in Consumer Price Index for services (BCI-120)—see note for page C-3.

* Preliminary February 1995 values: BCI-32 = 62.5, BCI-19 = 481.92, and BCI-109 = 9.00.

1. Data exclude Puerto Rico, which is included in figures published by the source agency. From August 1992 through April 1994, data include initial claims made under the July 1992 Emergency Unemployment Compensation amendments.

2. Copyrighted. This series may not be reproduced without written permission from the University of Michigan, Survey Research Center, P.O. Box 1248, Ann Arbor, MI 48106-1248.

3. Excludes BCI-57, for which data are not available.

4. Excludes BCI-77 and BCI-95, for which data are not available.

5. Data beginning January 1994 are based on the revised Current Population Survey and are not directly comparable with data for earlier periods.

Page C-2

NOTE.—Major data revisions:

For the following series, new seasonal adjustment factors have been computed by the Bureau of Economic Analysis and applied beginning with the month indicated: BCI-5, -9, -10, -20, -604, -606, -614, and -616 (January 1993) and BCI-72, -101, -112, -570, -732, -733, -735, -736, -737, and -738 (January 1994). For further information, contact the U.S. Department of Commerce, Bureau of Economic Analysis, Business Outlook Division, Washington, DC 20230.

Manufacturer's new orders in 1987 dollars for durable goods (BCI-7) and the change in manufacturers' unfilled orders in 1987 dollars for durable goods (BCI-92) have been revised from 1990 forward to incorporate revisions in the Producer Price Indexes used as deflators—see note for page C-3. For further information, contact the U.S. Department of Commerce, Bureau of Economic Analysis, Business Outlook Division, Washington, DC 20230.

* Preliminary February 1995 value: BCI-32 = 62.5.

1. Data beginning January 1994 are based on the revised Current Population Survey and are not directly comparable with data for earlier periods.

2. Data exclude Puerto Rico, which is included in figures published by the source agency. From August 1992 through April 1994, data include initial claims made under the July 1992 Emergency Unemployment Compensation amendments.

3. Data exclude Puerto Rico, which is included in figures published by the source agency.

4. Copyrighted. This series may not be reproduced without written permission from F.W. Dodge, McGraw-Hill, Inc., 24 Hartwell Avenue, Lexington, MA 02173.

Page C-3

NOTE.—Major data revisions:

New private housing units started (BCI-28) has been revised from 1992 forward to reflect a new seasonal adjustment. For further information, contact the U.S. Department of Commerce, Bureau of the Census, Manufacturing and Construction Division, Washington, DC 20233.

The series on new private housing units authorized by local building permits (BCI-29) has been revised from 1946 forward to reflect an increase in coverage to 19,000 permit-issuing places (from 1994 forward) and the conversion of the index base year to 1987. Data for 1946-1993, which are based on fewer permit-issuing places, have been adjusted to the level of the more recent data. For further information, contact the U.S. Department of Commerce, Bureau of the Census, Manufacturing

and Construction Division, Washington, DC 20233 and Bureau of Economic Analysis, Business Outlook Division, Washington, DC 20230.

Producer Price Indexes and related series (BCI-98, -99, -331, -332, -333, -334, -336, and -337) have been revised from 1990 forward to reflect new seasonal adjustments. For further information, contact the U.S. Department of Labor, Bureau of Labor Statistics, Office of Prices and Living Conditions, Division of Industrial Prices and Price Indexes, Washington, DC 20212 and the U.S. Department of Commerce, Bureau of Economic Analysis, Business Outlook Division, Washington, DC 20230.

Seasonally adjusted Consumer Price Indexes (BCI-120, -323, and the percent change in BCI-320) have been revised from 1990 forward to reflect new seasonal adjustments. For further information, contact the U.S. Department of Labor, Bureau of Labor Statistics, Office of Prices and Living Conditions, Division of Consumer Prices, Washington, DC 20212.

* Preliminary February 1995 value: BCI-23 = 340.5.

1. Copyrighted. This series may not be reproduced without written permission from Knight-Ridder Financial Publishing, 30 South Wacker Drive, Suite 1810, Chicago, IL 60606.

Page C-4

NOTE.—Major data revisions:

Wages and salaries in 1987 dollars for mining, manufacturing, and construction (BCI-53) has been revised from 1990 forward to incorporate revisions in its seasonally adjusted CPI deflator—see note for page C-3. For further information, contact the U.S. Department of Commerce, Bureau of Economic Analysis, Business Outlook Division, Washington, DC 20230.

Money supply measures (BCI-85, -102, -105, -106, -107, and -108) have been revised to incorporate benchmark revisions and updated seasonal adjustment factors. Periods covered by these revisions are as follows: BCI-102 and BCI-106 from 1974 forward; BCI-85 and BCI-105 from 1975 forward; BCI-107 from 1976 forward; and BCI-108 from 1977 forward. In addition, series BCI-105 and BCI-106 have been revised from 1990 forward to incorporate revisions in their seasonally adjusted CPI deflator—see note for page C-3. For further information, contact the Board of Governors of the Federal Reserve System, Monetary Affairs Division, Money and Reserve Projections, Washington, DC 20551 and the U.S. Department of Commerce, Bureau of Economic Analysis, Business Outlook Division, Washington, DC 20230.

New seasonal adjustment for series BCI-112—see note for page C-2.

* Preliminary February 1995 values: BCI-122 = 99.0, BCI-123 = 90.4, and BCI-85 = 0.09.

1. Copyrighted. This series may not be reproduced without written permission from the University of Michigan, Survey Research Center, P.O. Box 1248, Ann Arbor, MI 48106-1248.

2. Copyrighted. This series may not be reproduced without written permission from the American Bankers Association, 1120 Connecticut Avenue, NW, Washington, DC 20036.

Page C-5

NOTE.—Major data revisions:

New seasonal adjustments for series BCI-72, -101, -570, -604, -606, -614, -616, -732, -733, -735, -736, -737, and -738—see note for page C-2.

Consumer Price Index (percent change in BCI-320)—see note for page C-3.

* Preliminary February 1995 values: BCI-119 = 5.86, BCI-114 = 5.80, BCI-116 = 8.39, BCI-115 = 7.71, BCI-117 = 6.22, BCI-109 = 9.00, BCI-19 (1941-43=10) = 481.92, BCI-19 (1967=100) = 524.2, BCI-748 = 1,296.8, BCI-745 = 367.8, BCI-746 = 921.2, BCI-742 = 1,408.5, BCI-747 = 696.4, BCI-743 = 466.1, BCI-750 = 87.51, BCI-758 = 98.42, BCI-755 = 1.5075, BCI-756 = 5.2364, BCI-752 = 0.6367, BCI-757 = 1,614.66, and BCI-753 = 1.4011.

1. Balance of payments basis: Excludes transfers under military grants and Department of Defense sales contracts (exports) and Department of Defense purchases (imports).

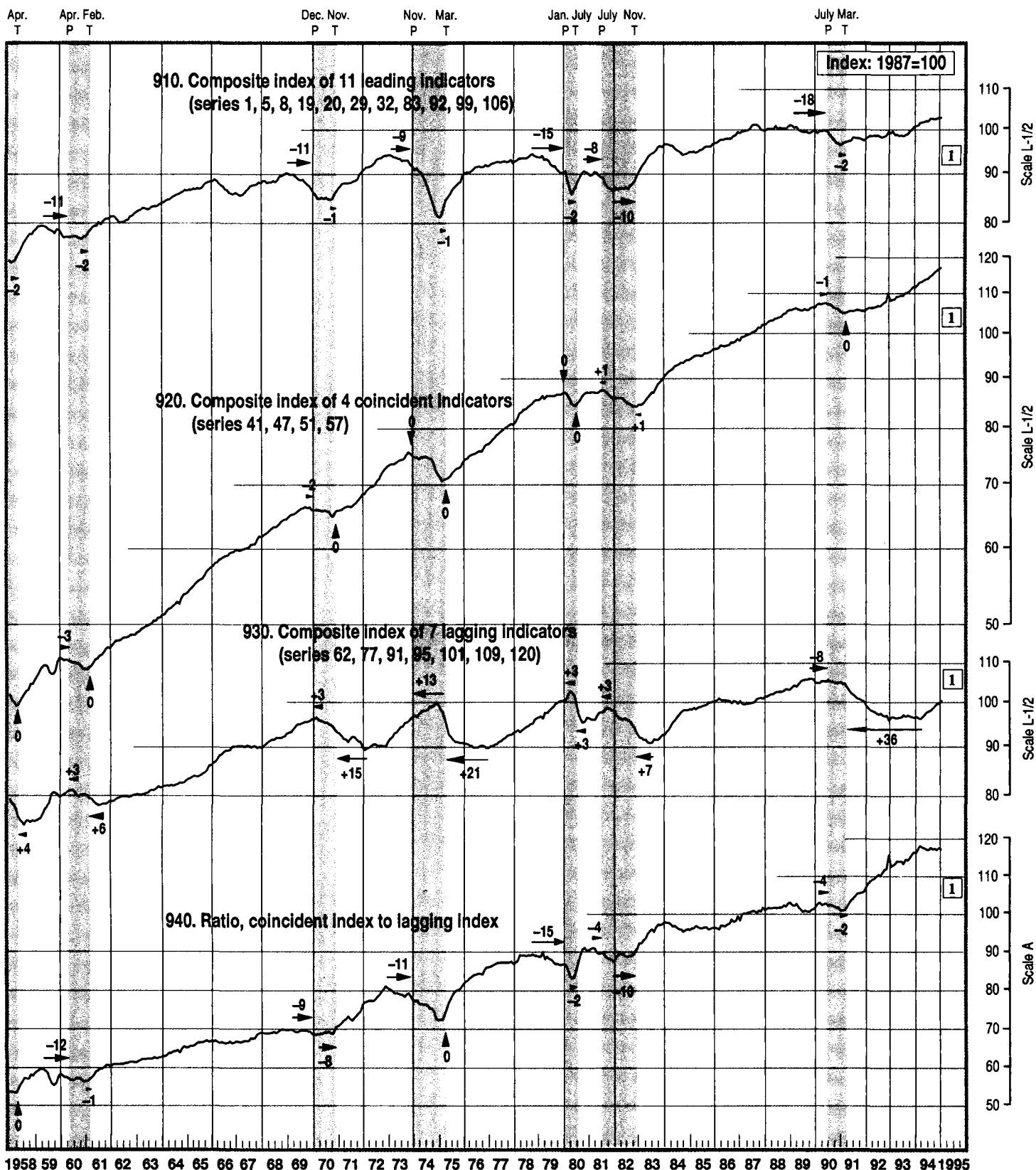
2. Organisation for Economic Co-operation and Development.

3. This index is the weighted-average exchange value of the U.S. dollar against the currencies of the other G-10 countries plus Switzerland. Each country is weighted by its 1972-76 global trade. For a description of this index, see the August 1978 *Federal Reserve Bulletin* (p. 700).

4. This index is compiled by the Center for International Business Cycle Research (CIBCRC), Graduate School of Business, Columbia University, New York, NY 10027.

CYCLICAL INDICATORS

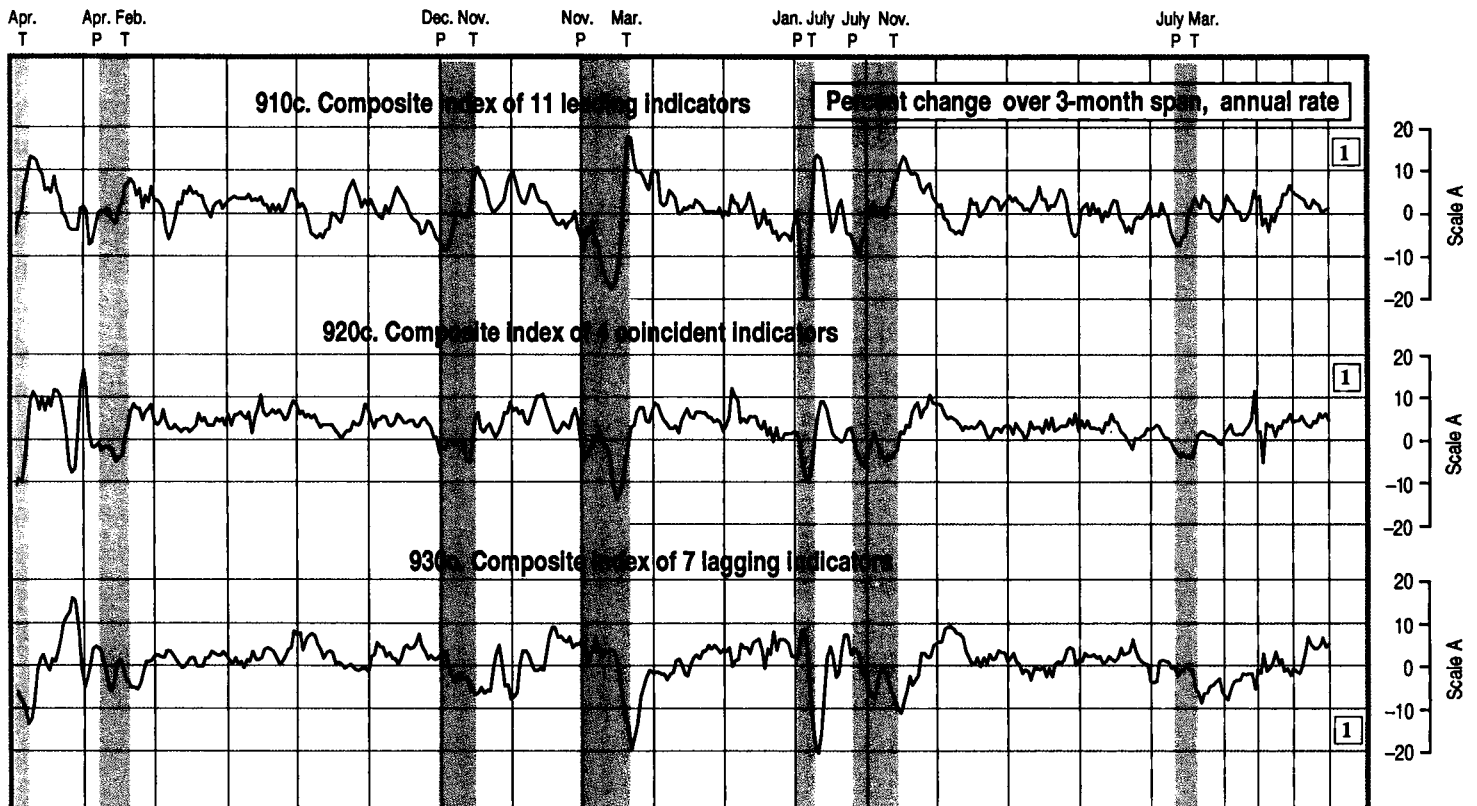
Composite Indexes



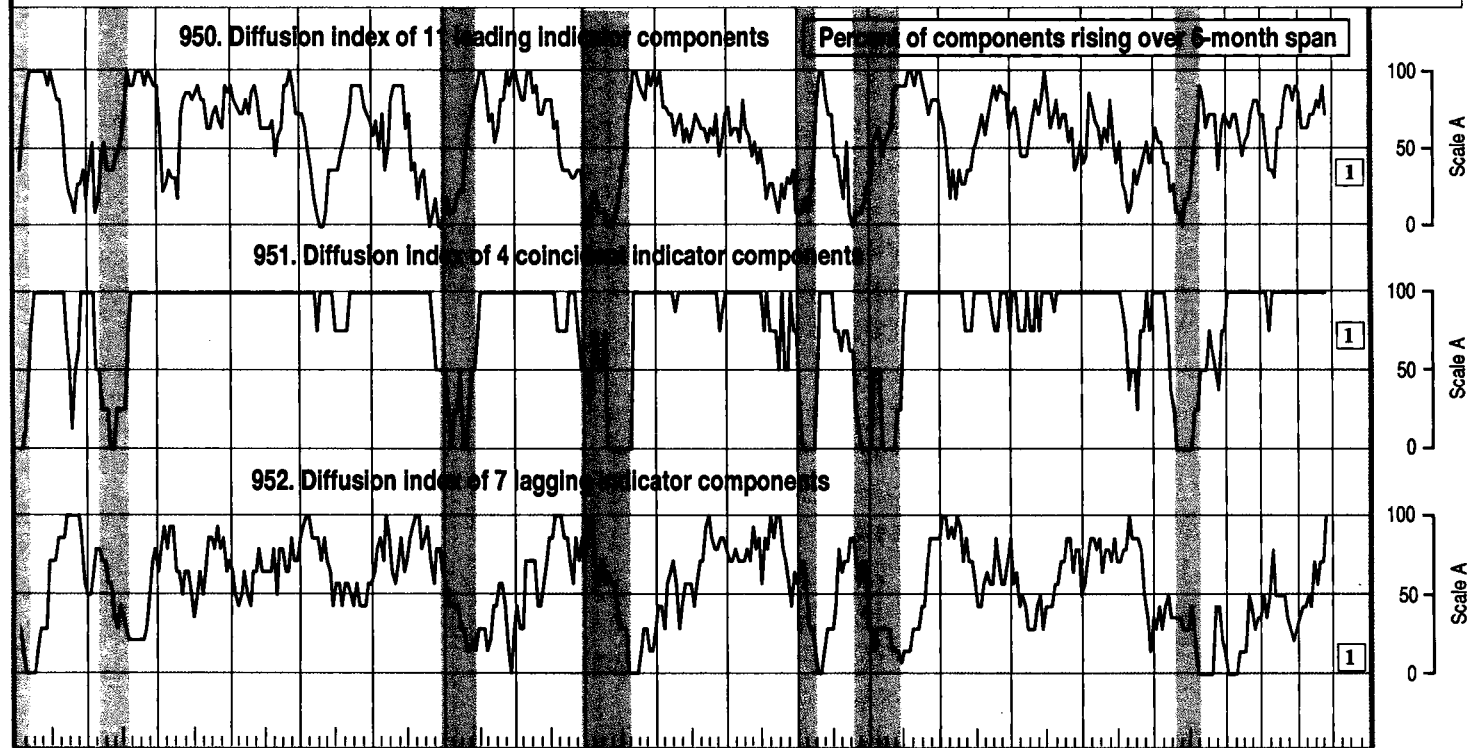
NOTE.—The numbers and arrows indicate length of leads (-) and lags (+) in months from business cycle turning dates. Current data for these series are shown on page C-1.

CYCLICAL INDICATORS

Composite Indexes: Rates of Change



Composite Indexes: Diffusion

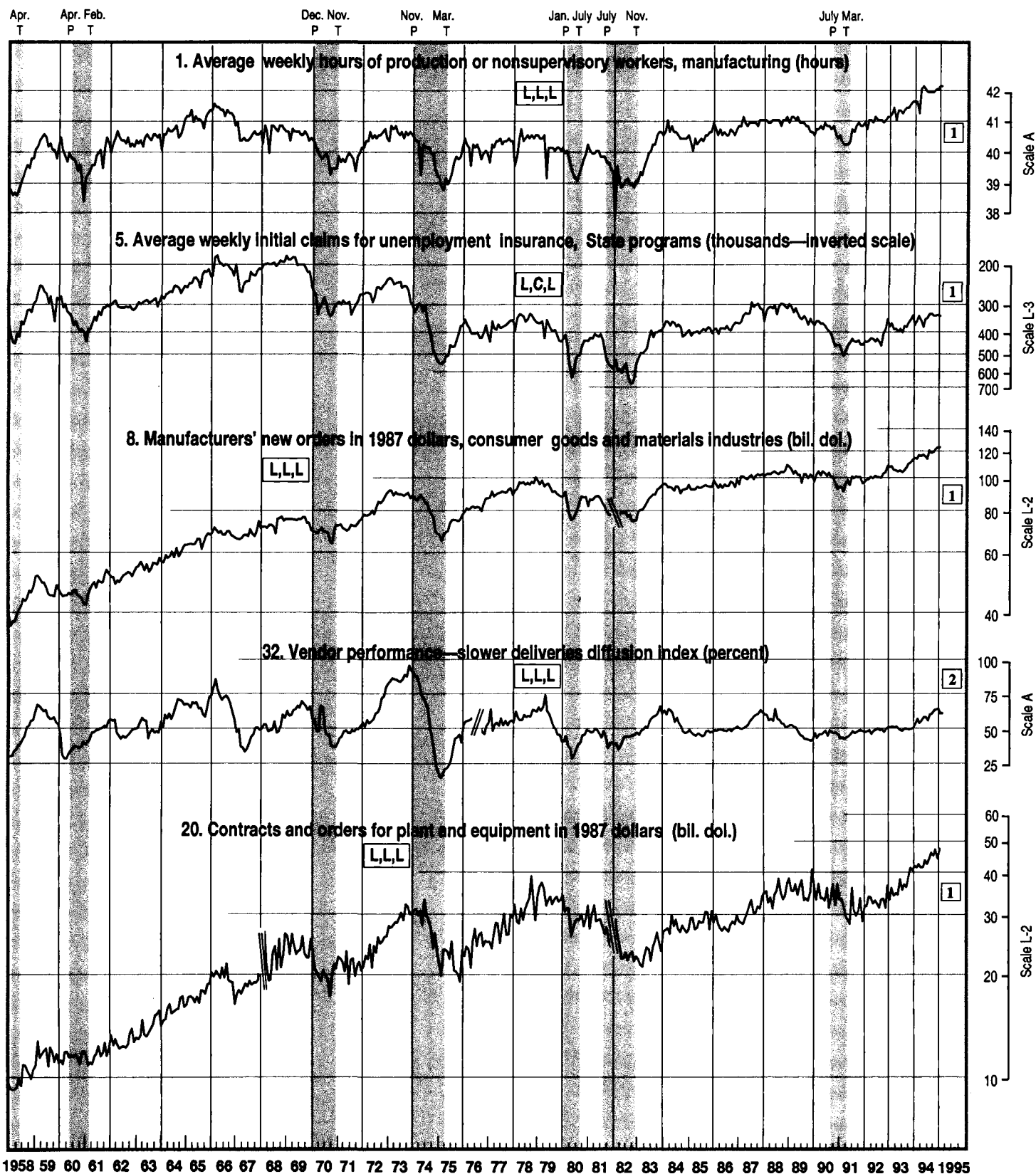


1958 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 1995

NOTE.—Current data for these series are shown on page C-1.

CYCLICAL INDICATORS

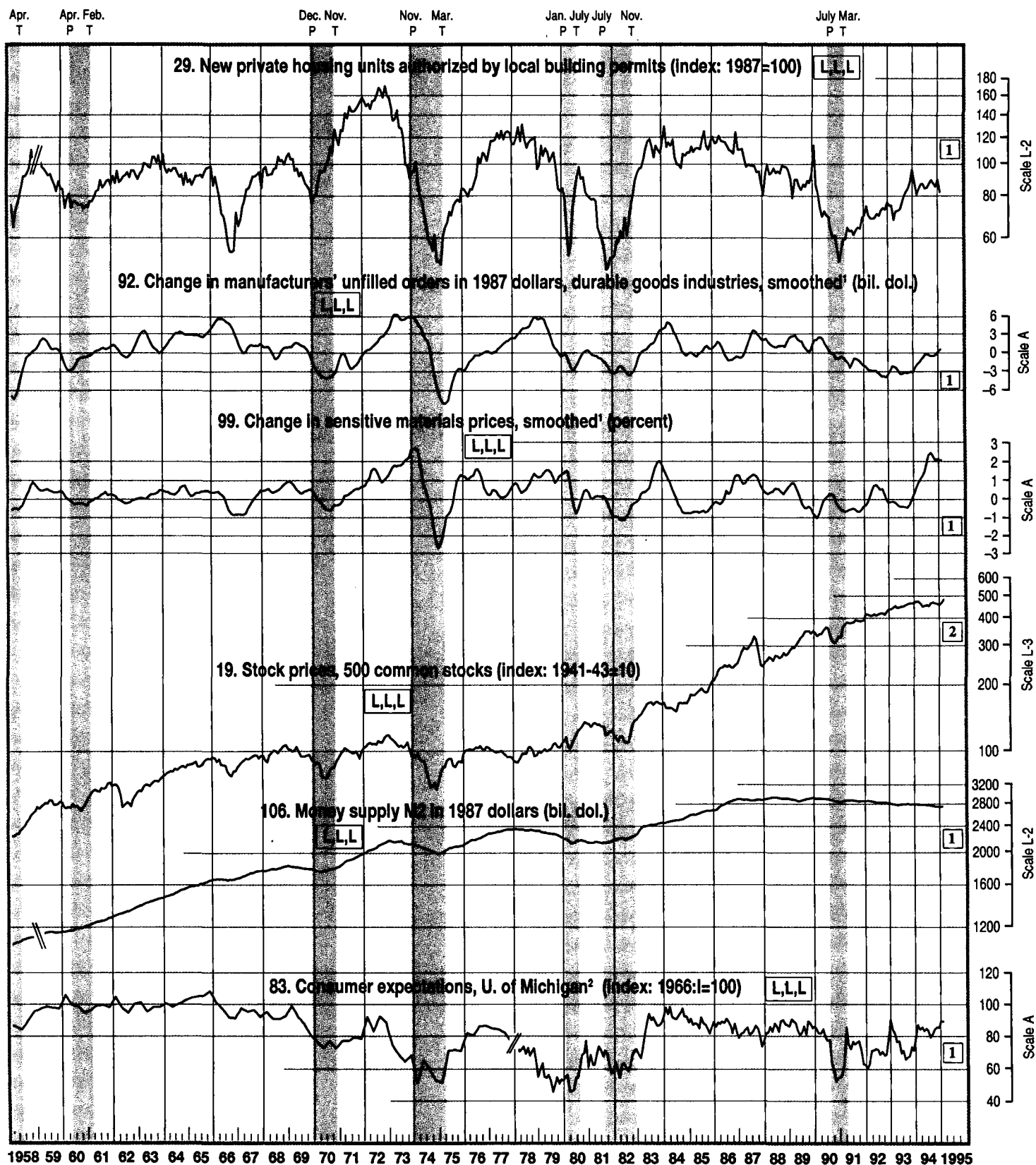
Composite Indexes: Leading Index Components



NOTE.—Current data for these series are shown on page C-1.

CYCLICAL INDICATORS

Composite Indexes: Leading Index Components—Continued

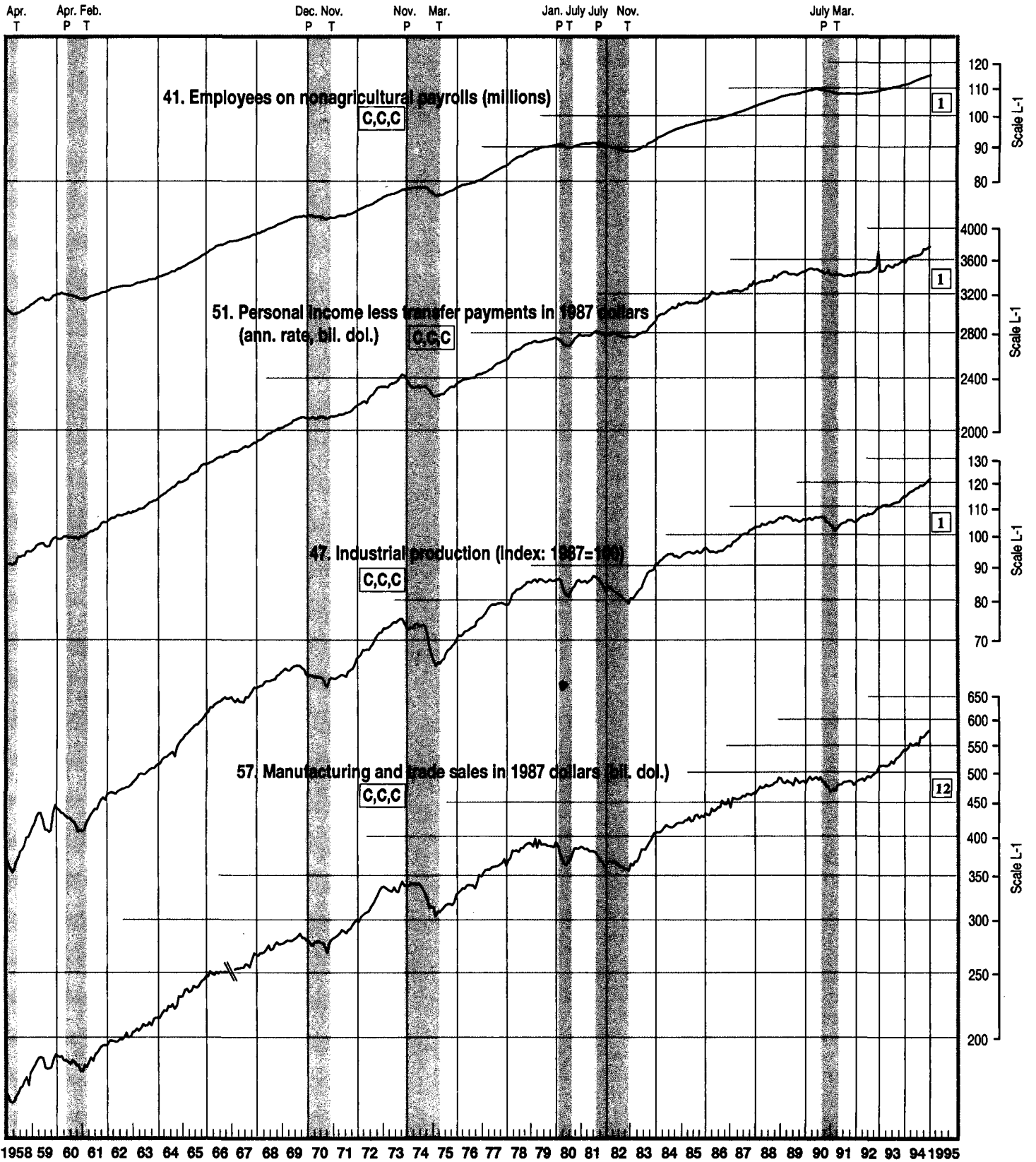


1. This series is smoothed by an autoregressive-moving-average filter developed by Statistics Canada.
 2. This is a copyrighted series used by permission; it may not be reproduced without written permission from the University of Michigan, Survey Research Center.

NOTE.—Current data for these series are shown on page C-1.

CYCLICAL INDICATORS

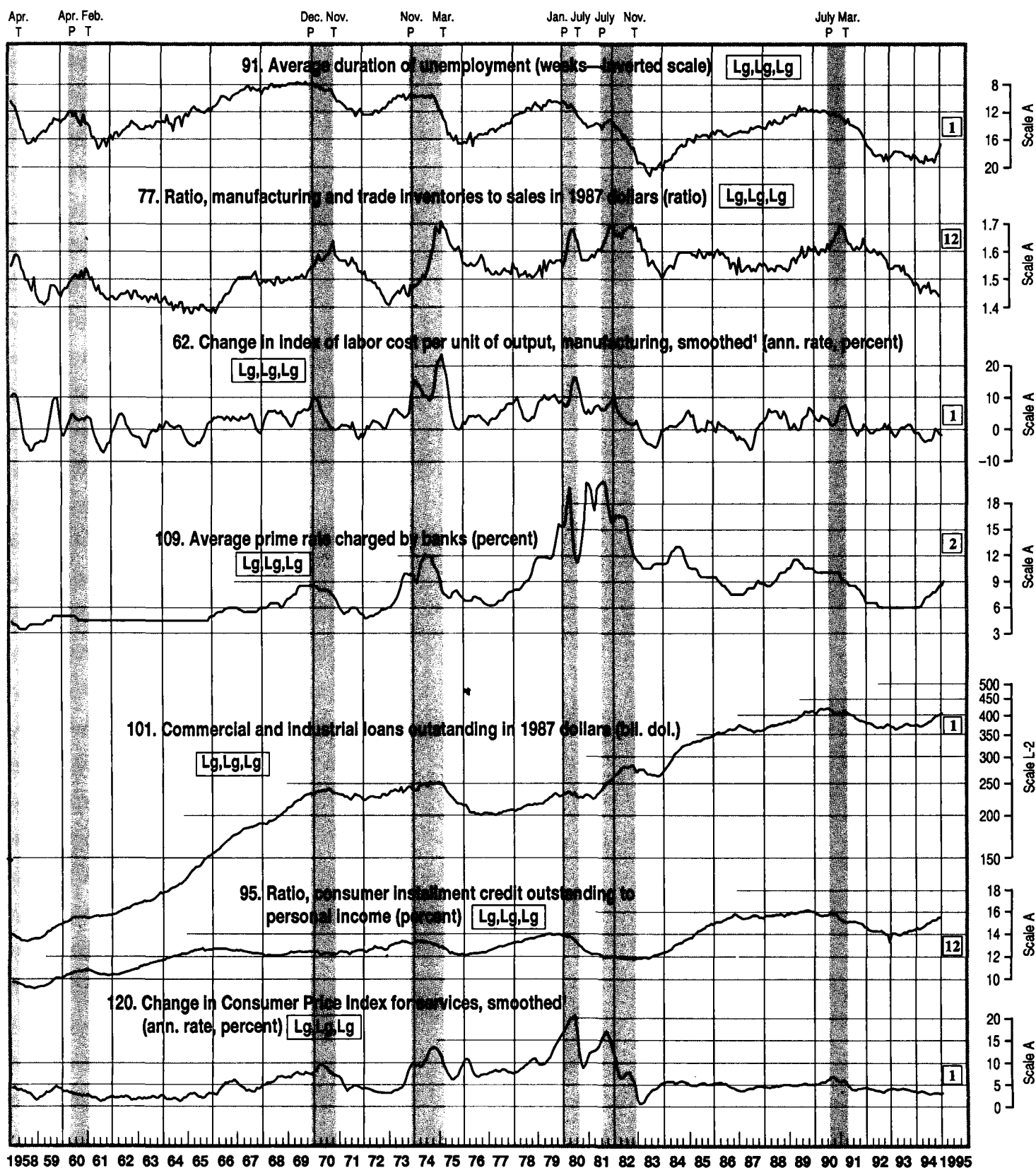
Composite Indexes: Coincident Index Components



NOTE.—Current data for these series are shown on page C-1.

CYCLICAL INDICATORS

Composite Indexes: Lagging Index Components

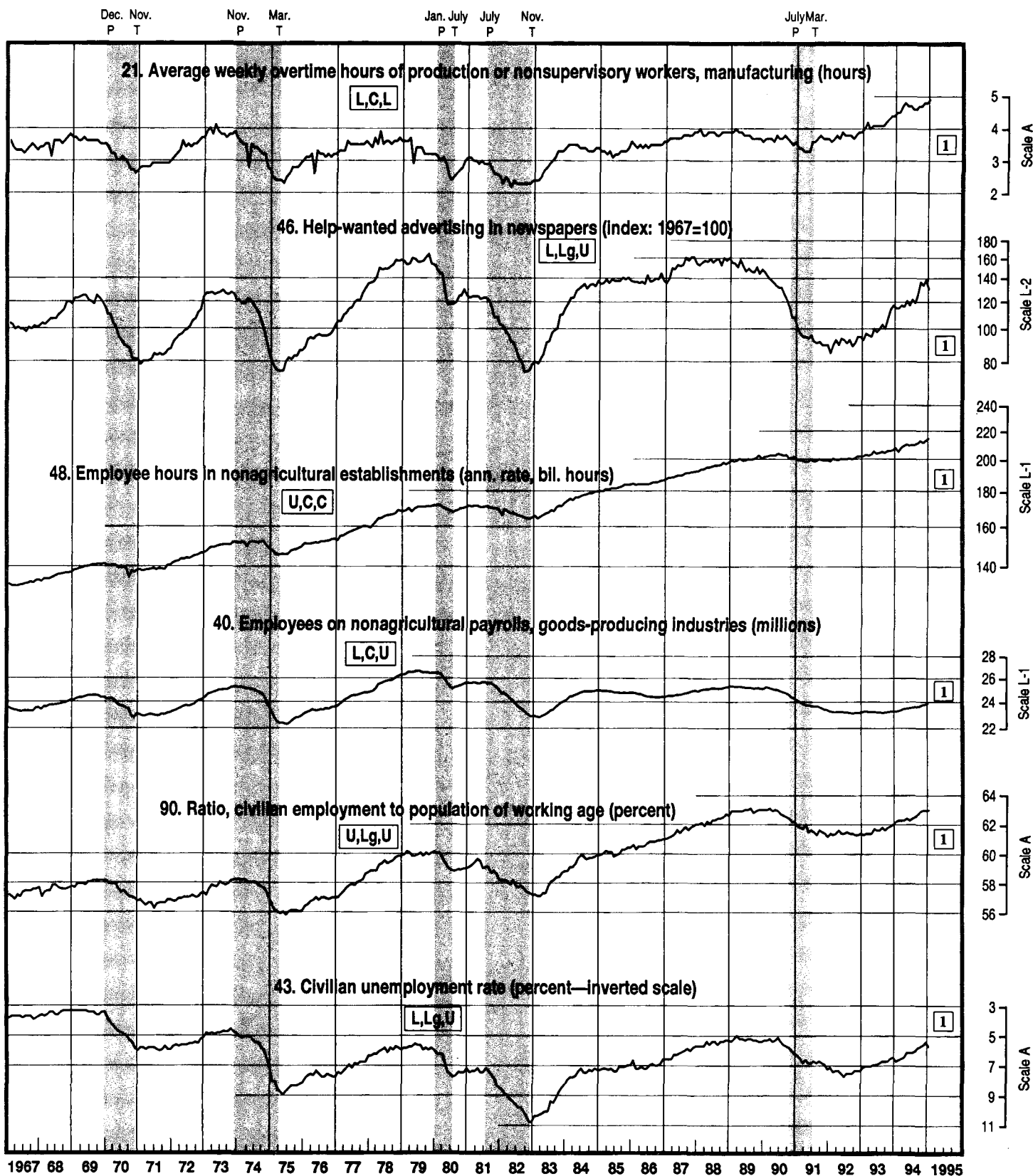


1. This series is smoothed by an autoregressive-moving-average filter developed by Statistics Canada.

NOTE.—Current data for these series are shown on page C-1.

CYCLICAL INDICATORS

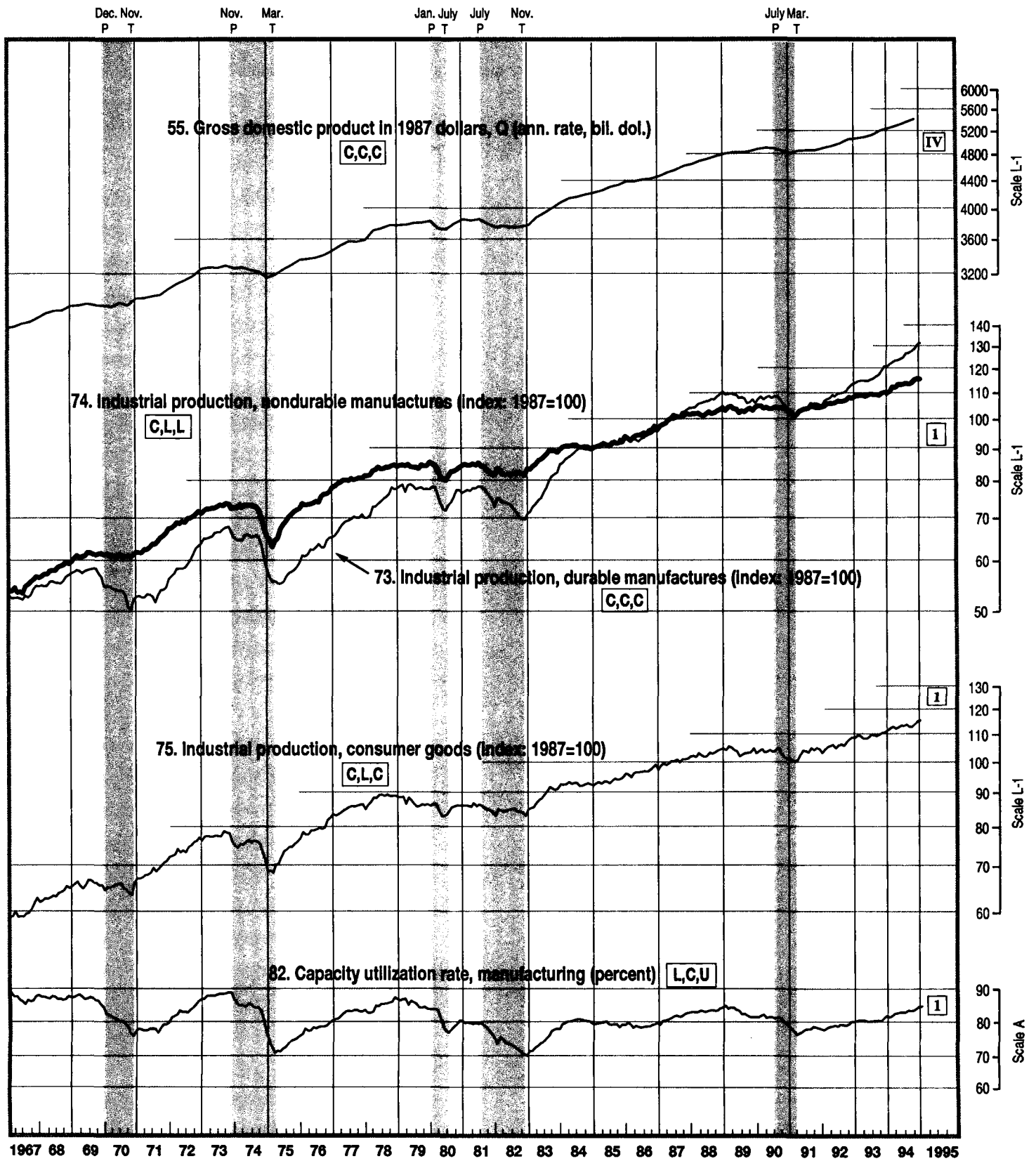
Employment and Unemployment



NOTE.—Current data for these series are shown on page C-2.

CYCLICAL INDICATORS

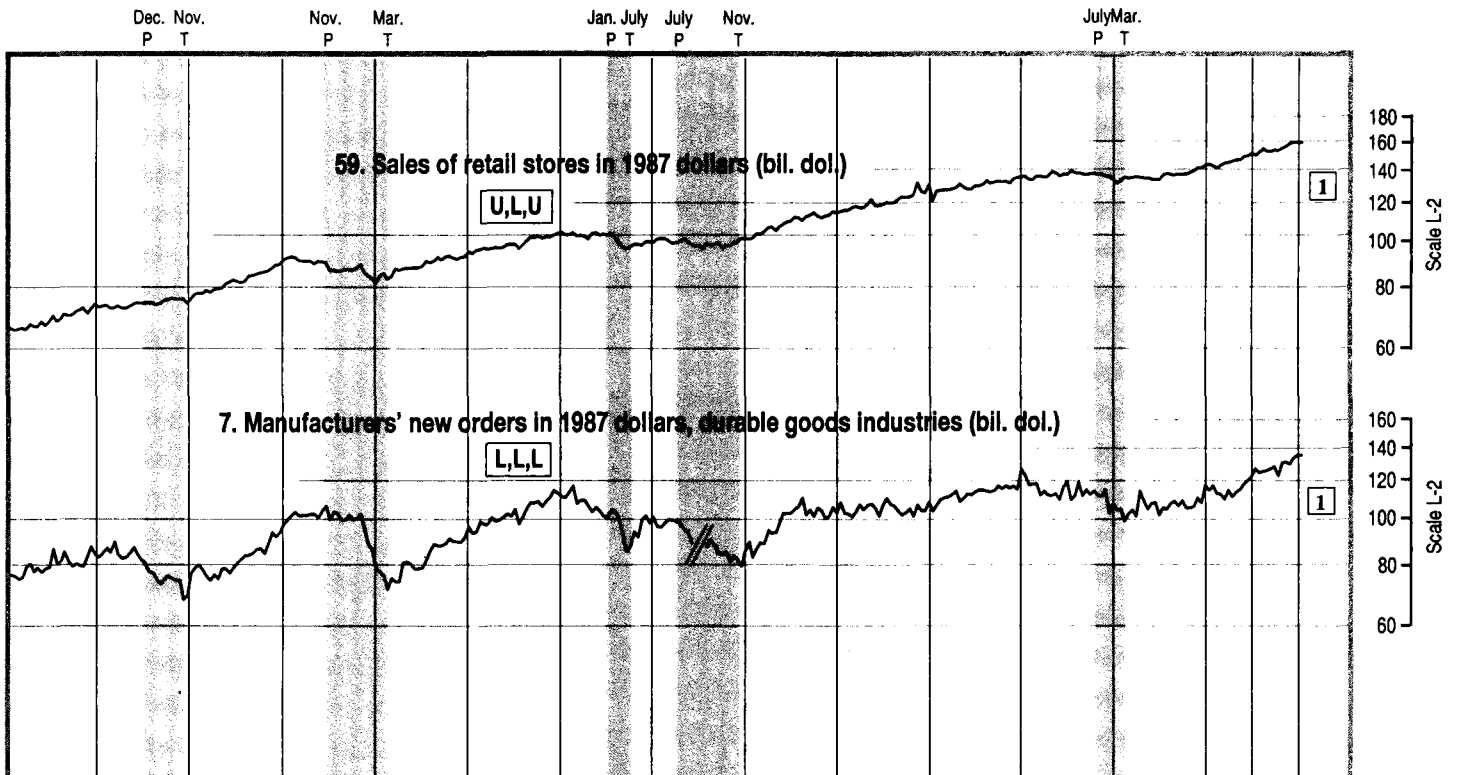
Output, Production, and Capacity Utilization



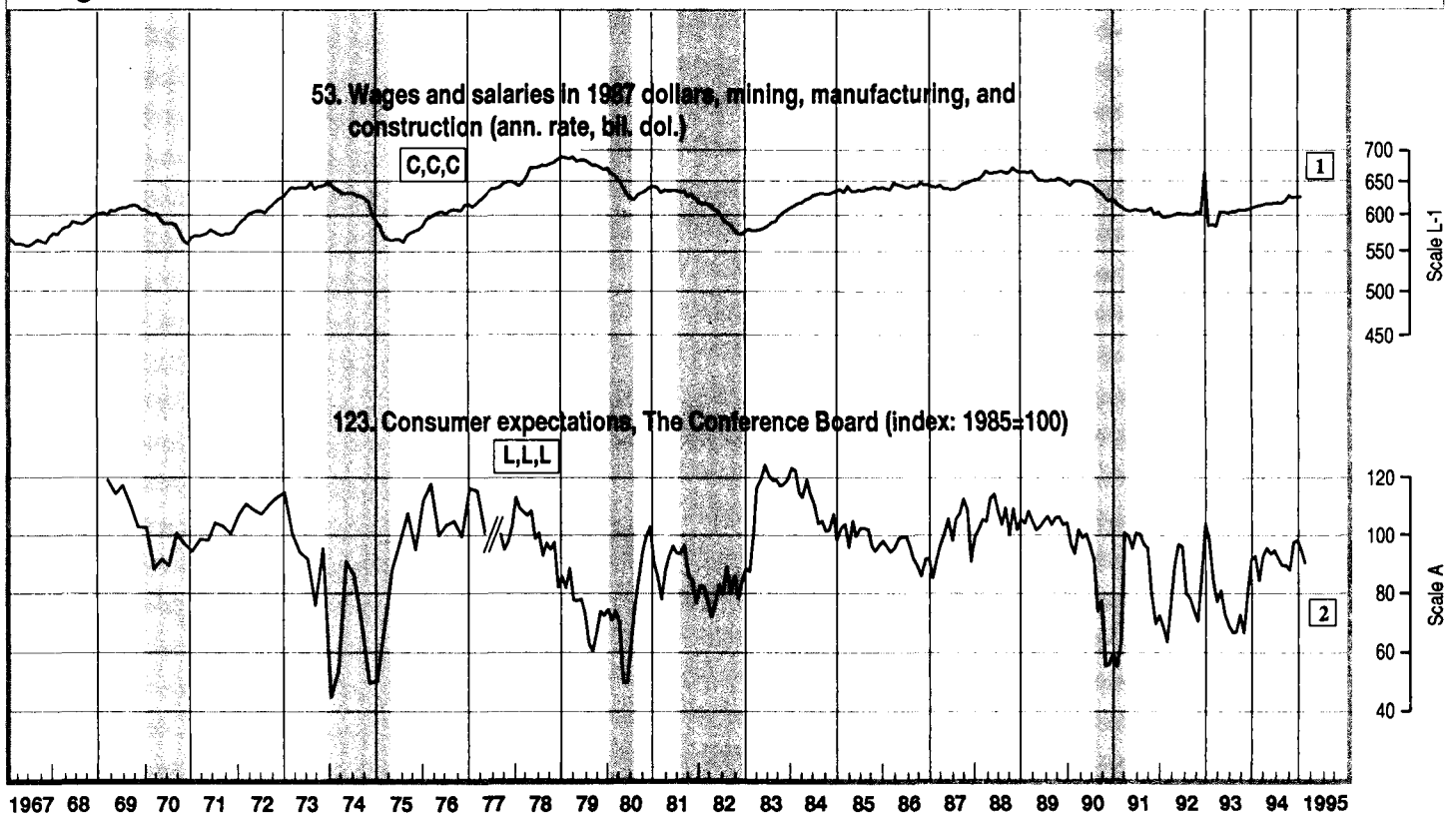
NOTE.—Current data for these series are shown on page C-2.

CYCLICAL INDICATORS

Sales and Orders



Wages and Consumer Attitudes

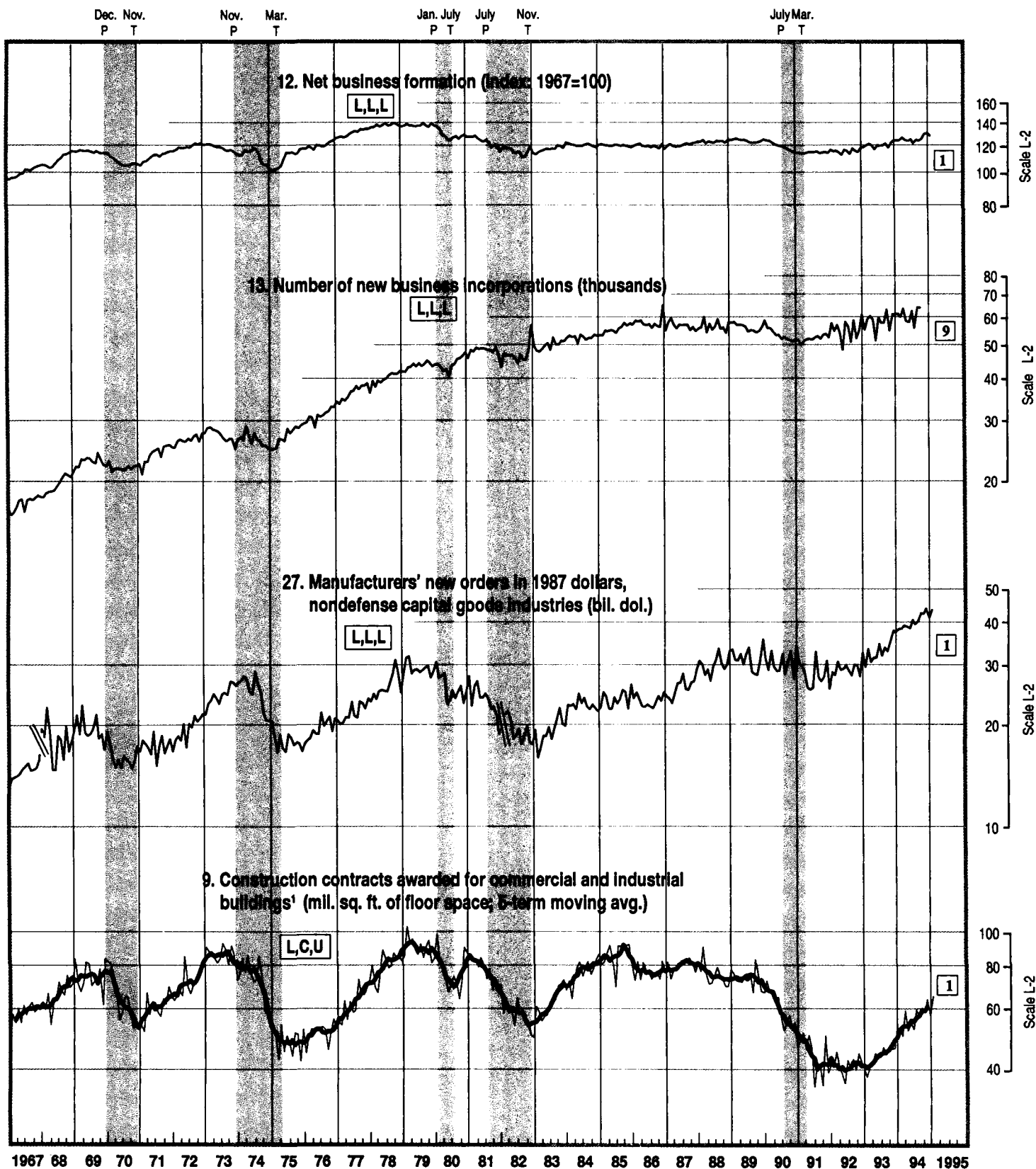


1967 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 1995

NOTE.—Current data for these series are shown on pages C-2 and C-4.

CYCLICAL INDICATORS

Fixed Capital Investment

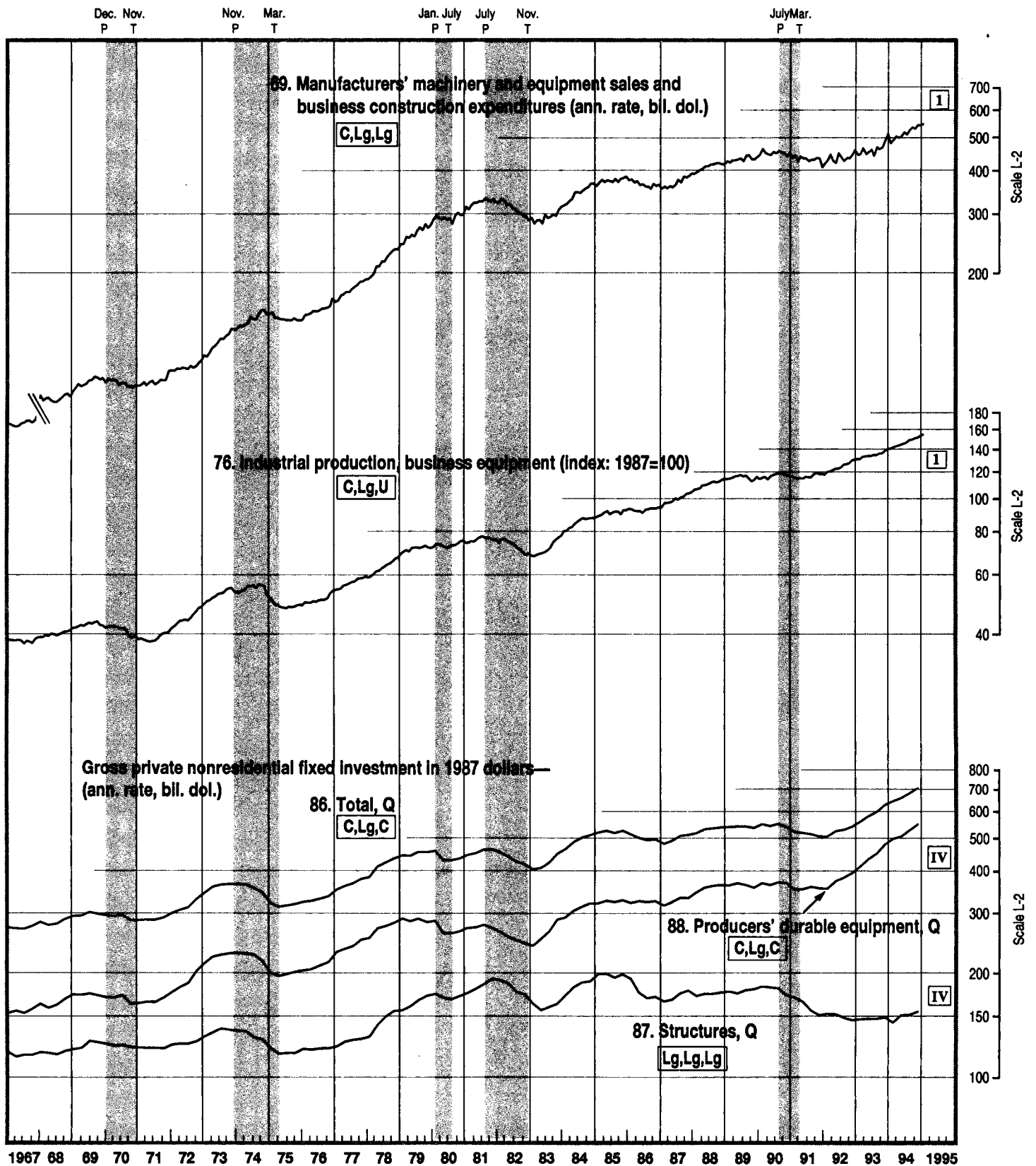


1. This is a copyrighted series used by permission; it may not be reproduced without written permission from F.W. Dodge, McGraw-Hill, Inc.

NOTE.—Current data for these series are shown on page C-2.

CYCLICAL INDICATORS

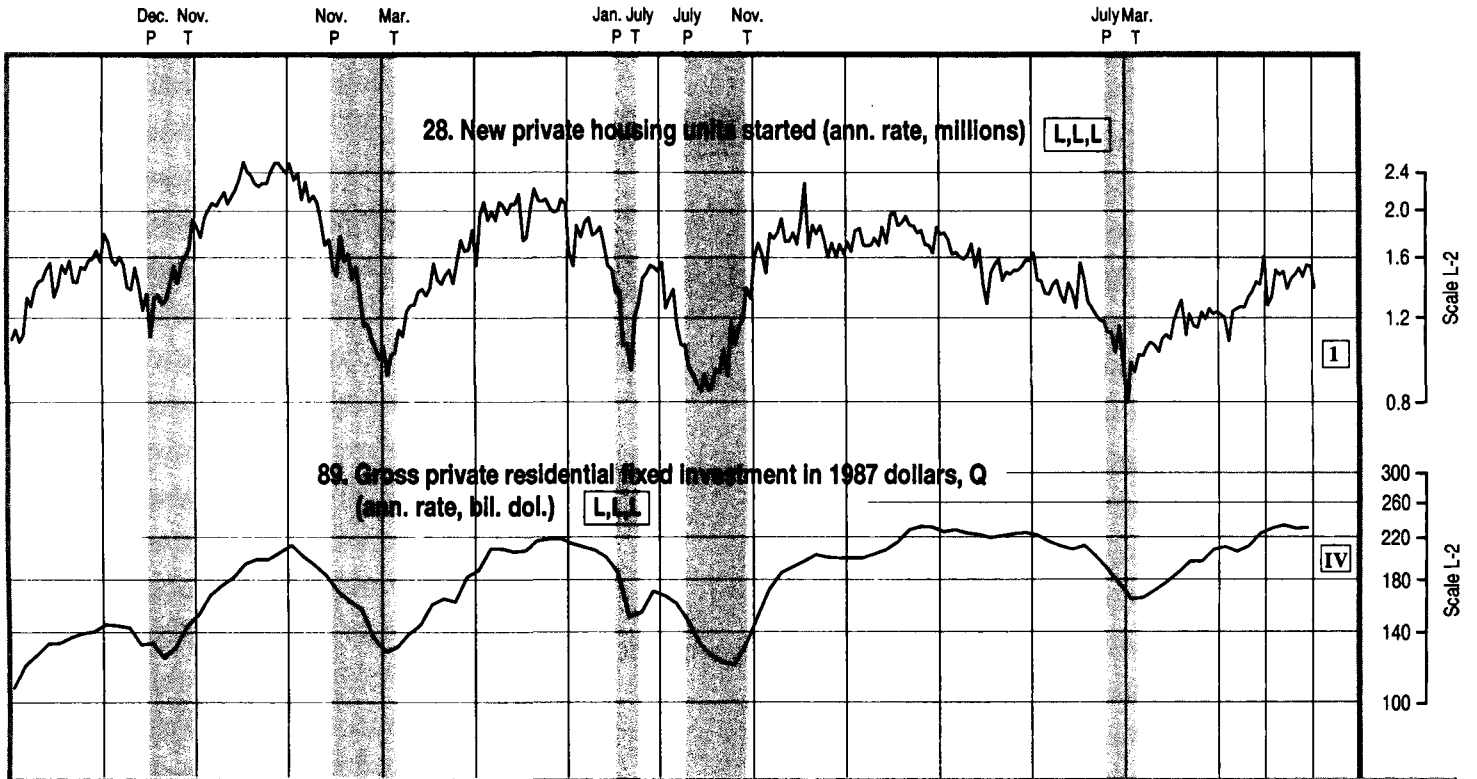
Fixed Capital Investment—Continued



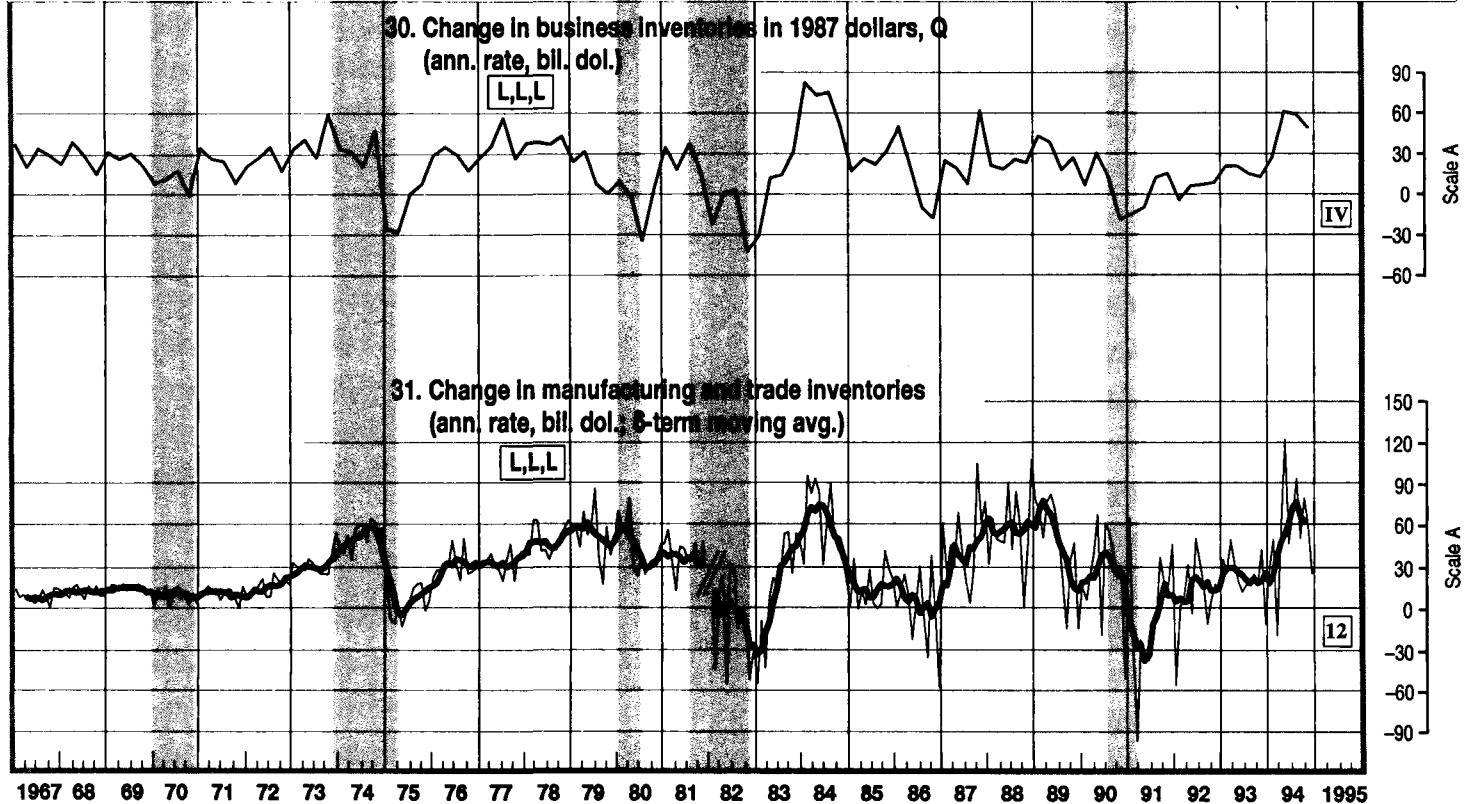
NOTE.—Current data for these series are shown on pages C-2 and C-3.

CYCLICAL INDICATORS

Fixed Capital Investment—Continued



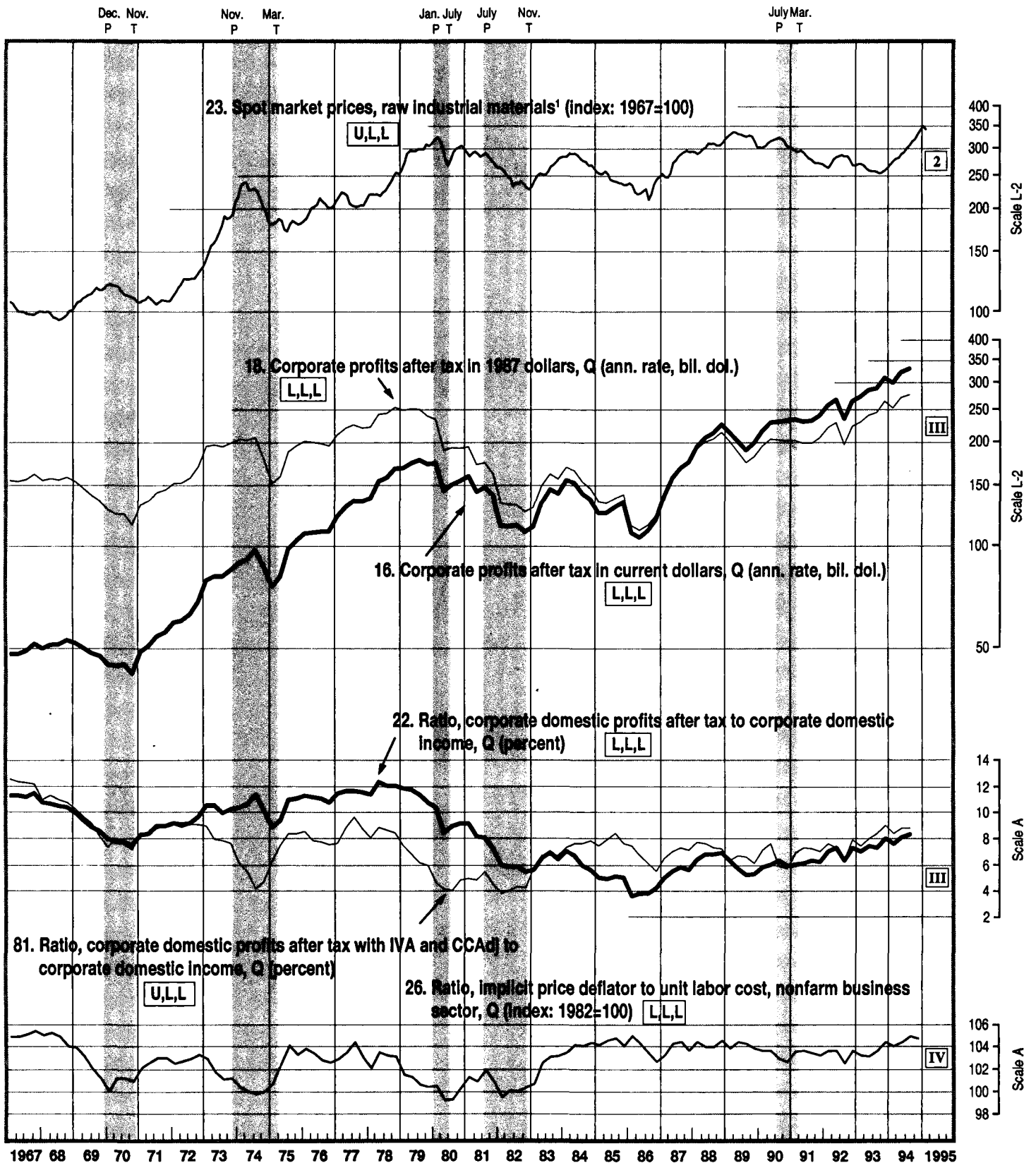
Inventories and Inventory Investment



NOTE.—Current data for these series are shown on page C-3.

CYCLICAL INDICATORS

Prices and Profits

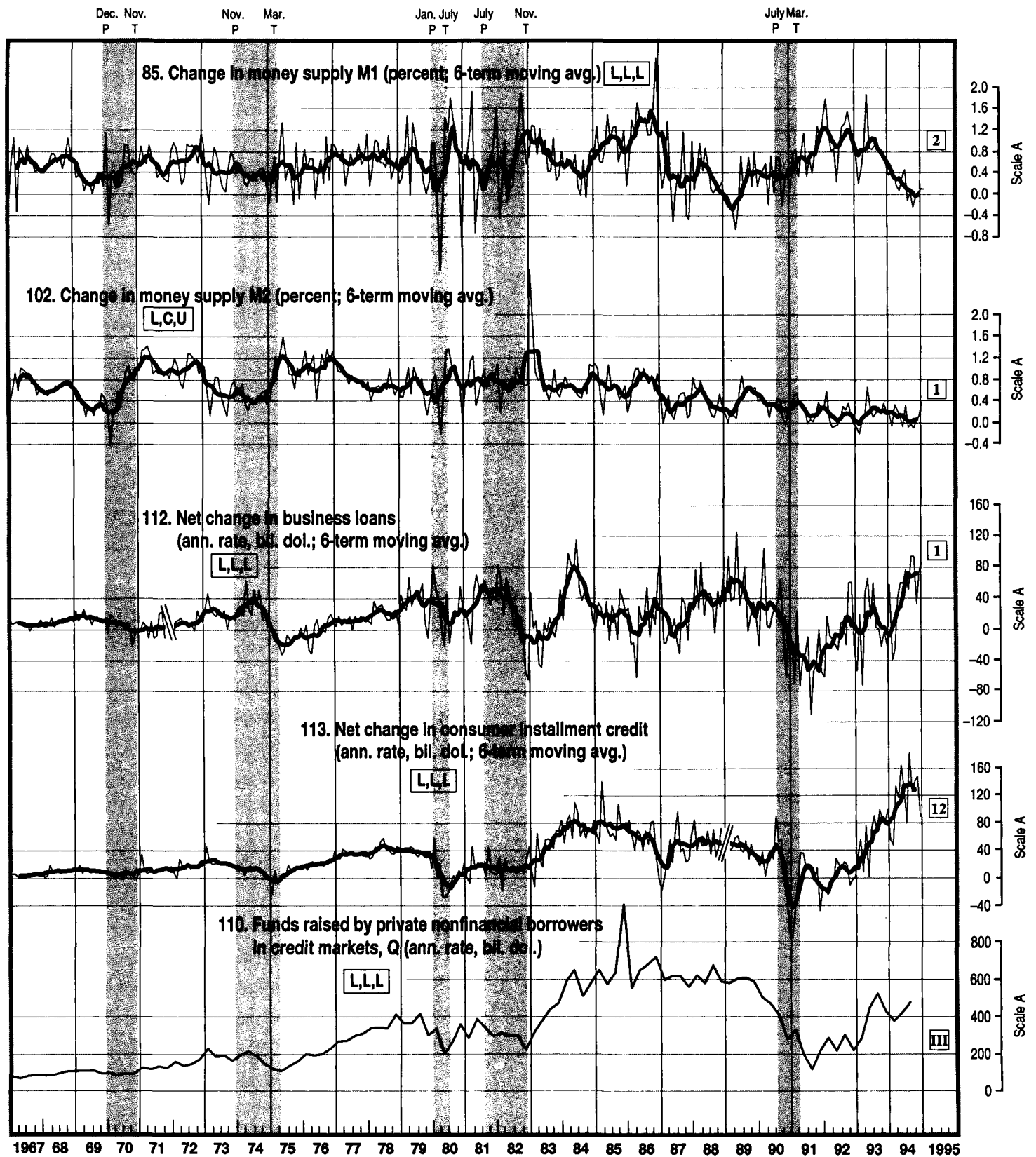


IVA Inventory valuation adjustment. CCAadj Capital consumption adjustment.
 NOTE.—Current data for these series are shown on pages C-3 and C-4.

1. From June 1981 forward, this is a copyrighted series used by permission; it may not be reproduced without written permission from Knight-Ridder Financial Publishing.

CYCLICAL INDICATORS

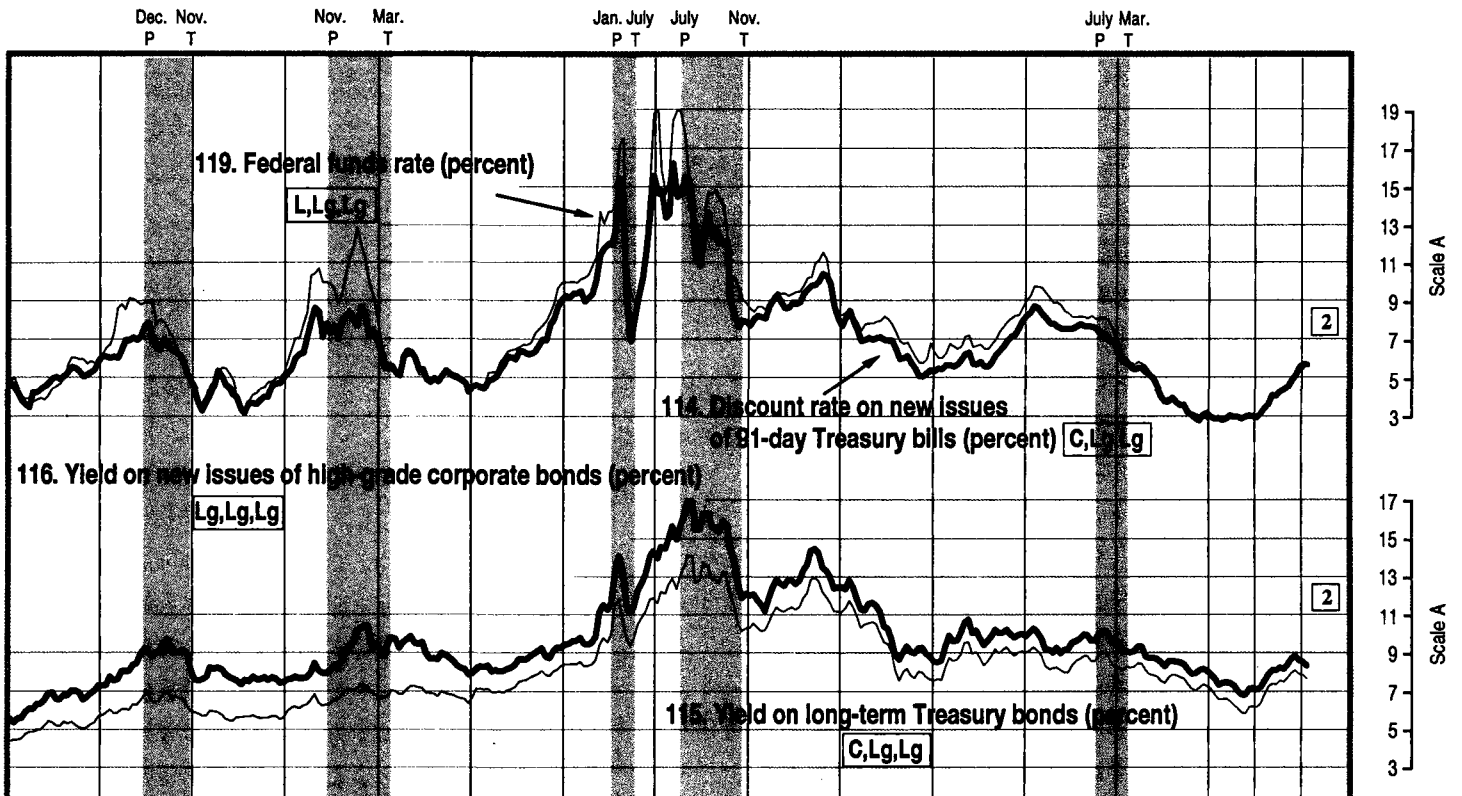
Money, Credit, and Interest Rates



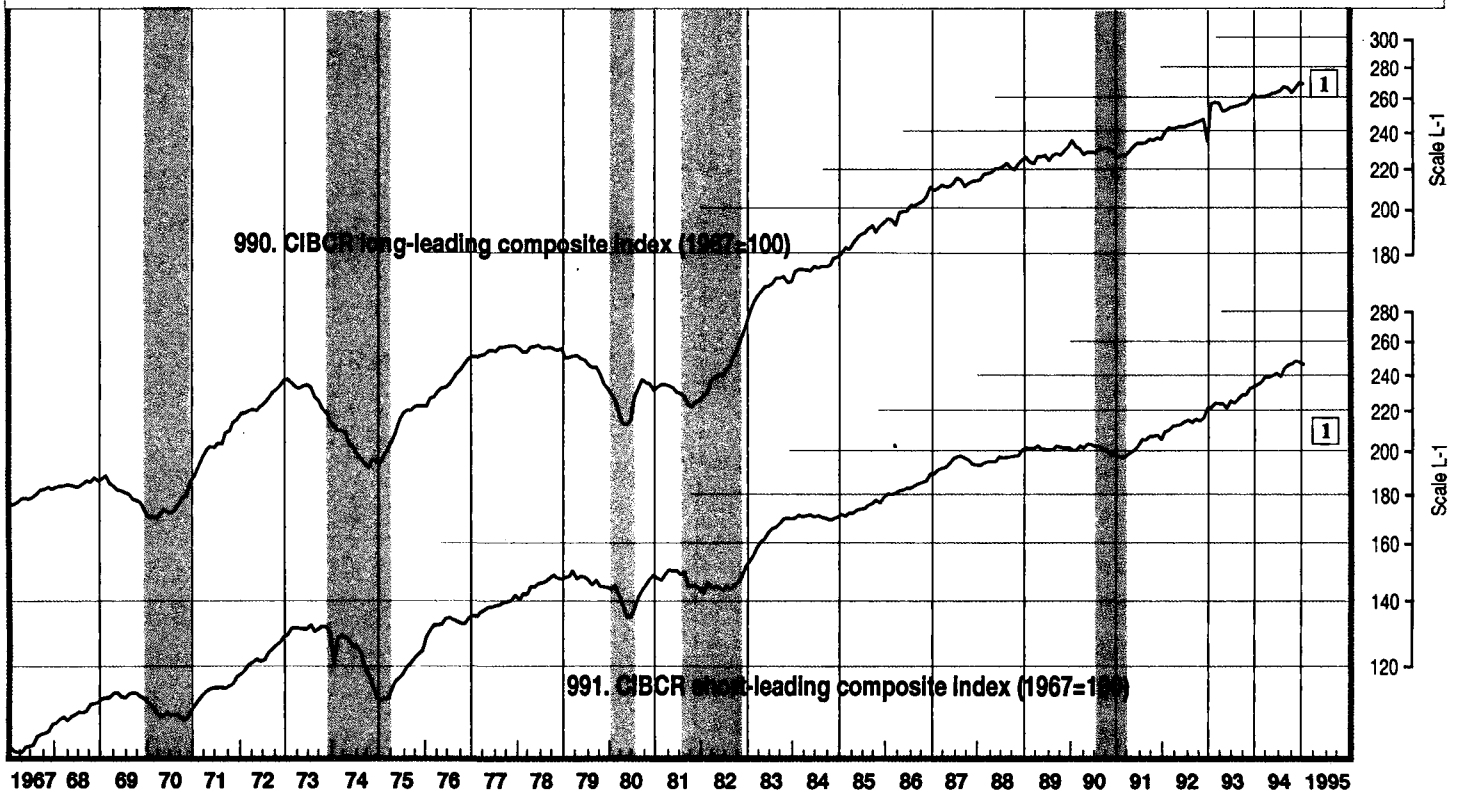
NOTE.—Current data for these series are shown on page C-4.

CYCLICAL INDICATORS

Money, Credit, and Interest Rates—Continued



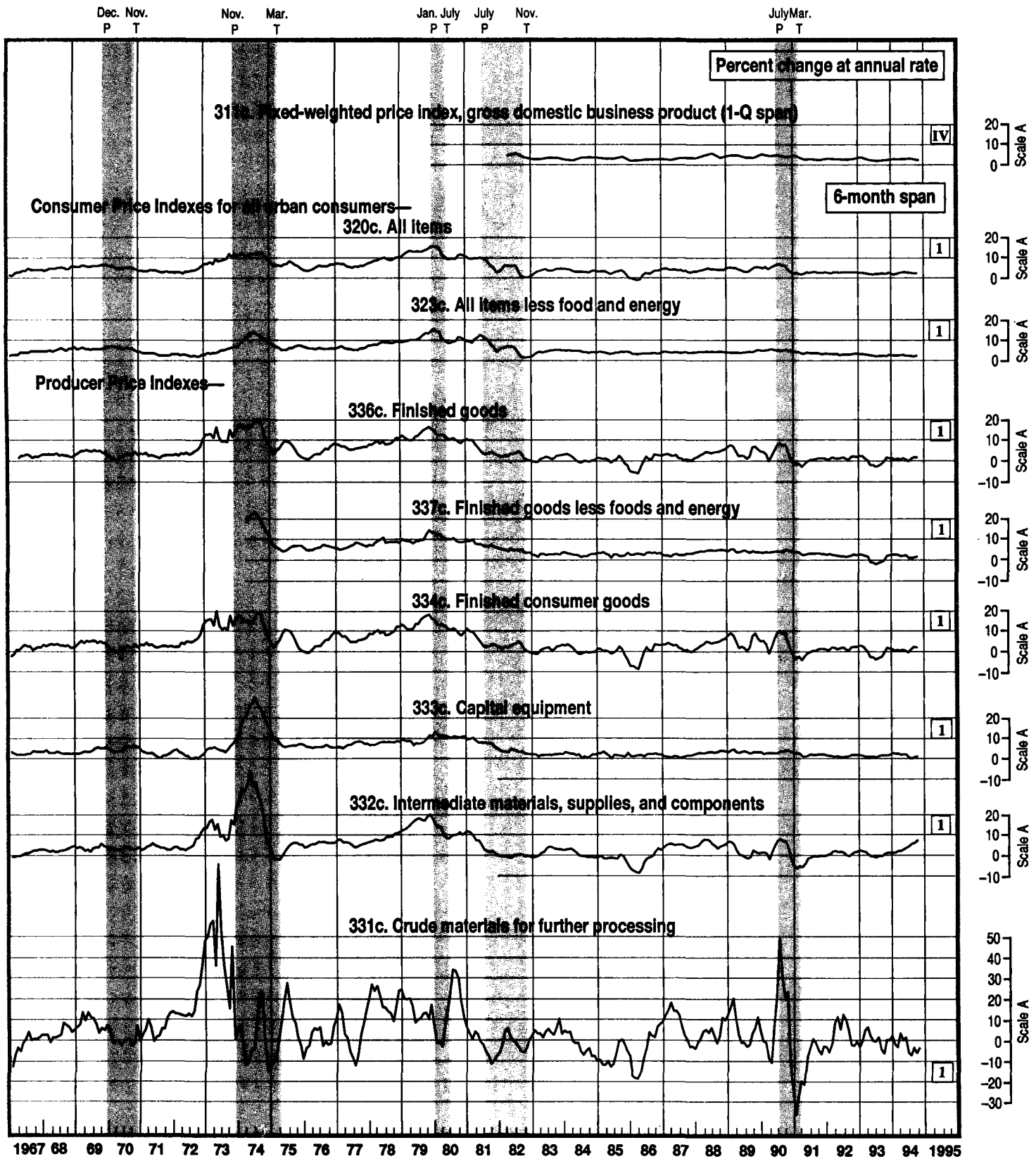
Alternative Composite Indexes



CIBCR Center for International Business Cycle Research (Columbia University).
 NOTE.—Current data for these series are shown on page C-5.

OTHER IMPORTANT ECONOMIC MEASURES

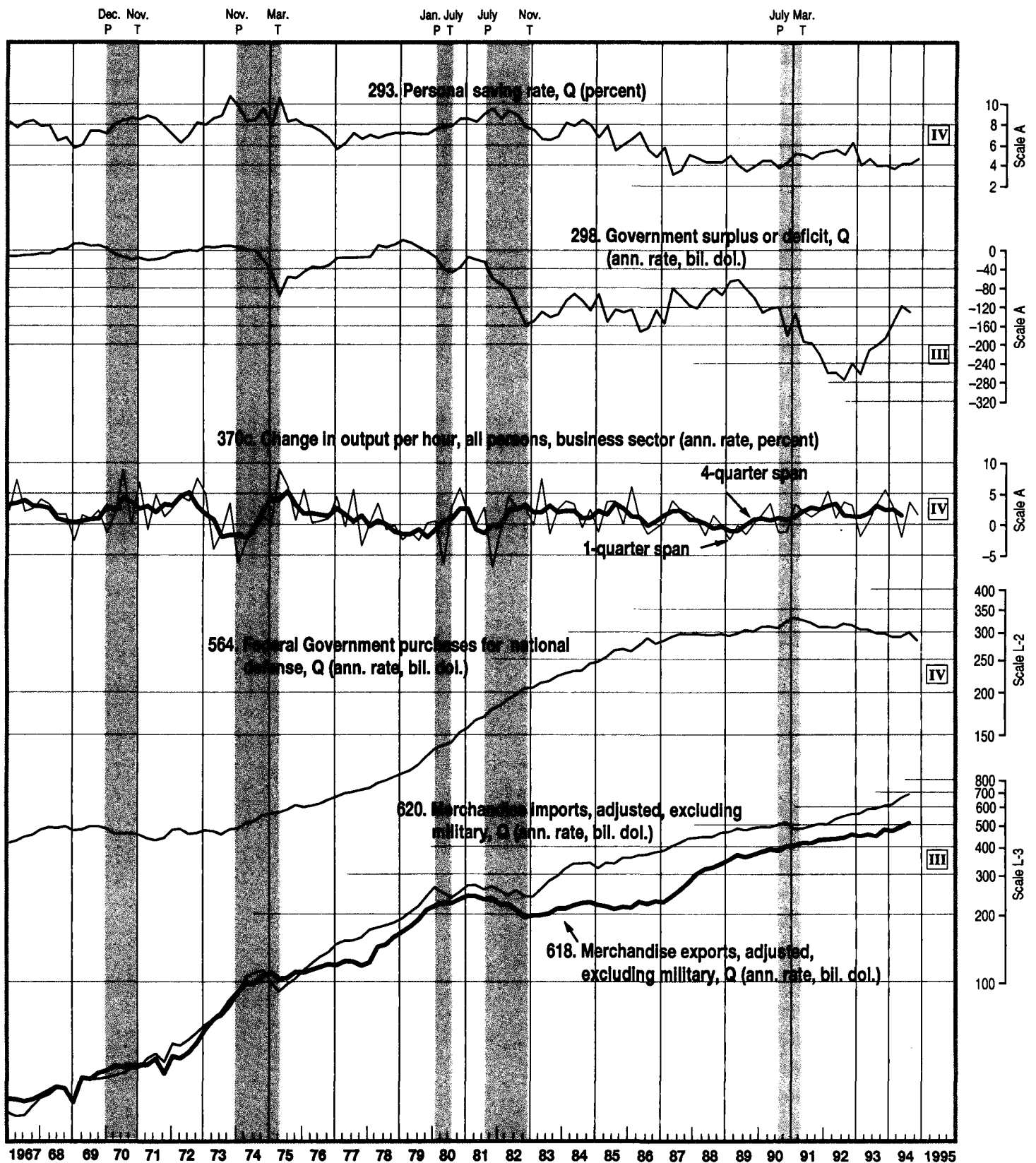
Prices



NOTE.—Current data for these series are shown on page C-3.

OTHER IMPORTANT ECONOMIC MEASURES

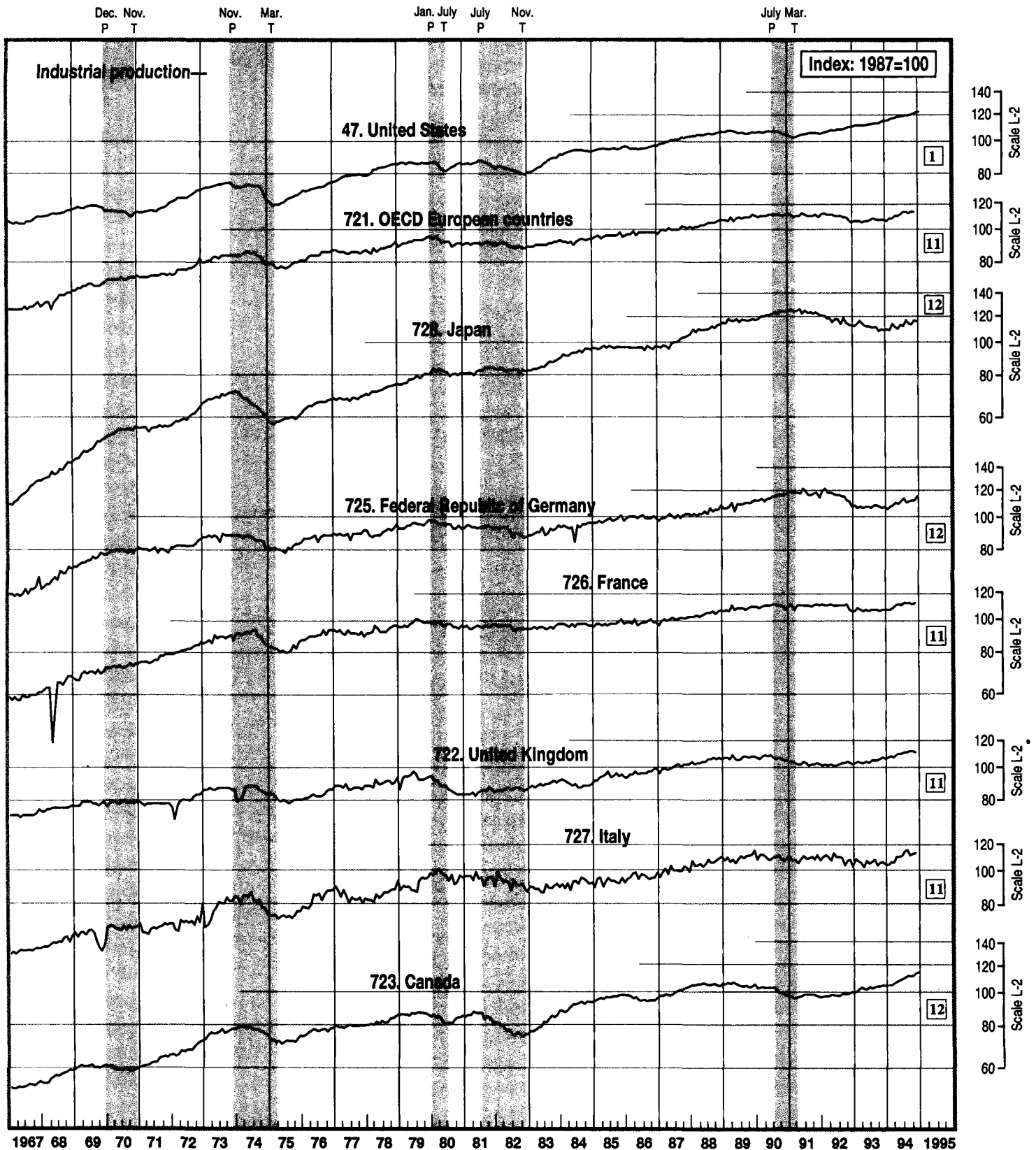
Other Measures



NOTE.—Current data for these series are shown on pages C-4 and C-5.

OTHER IMPORTANT ECONOMIC MEASURES

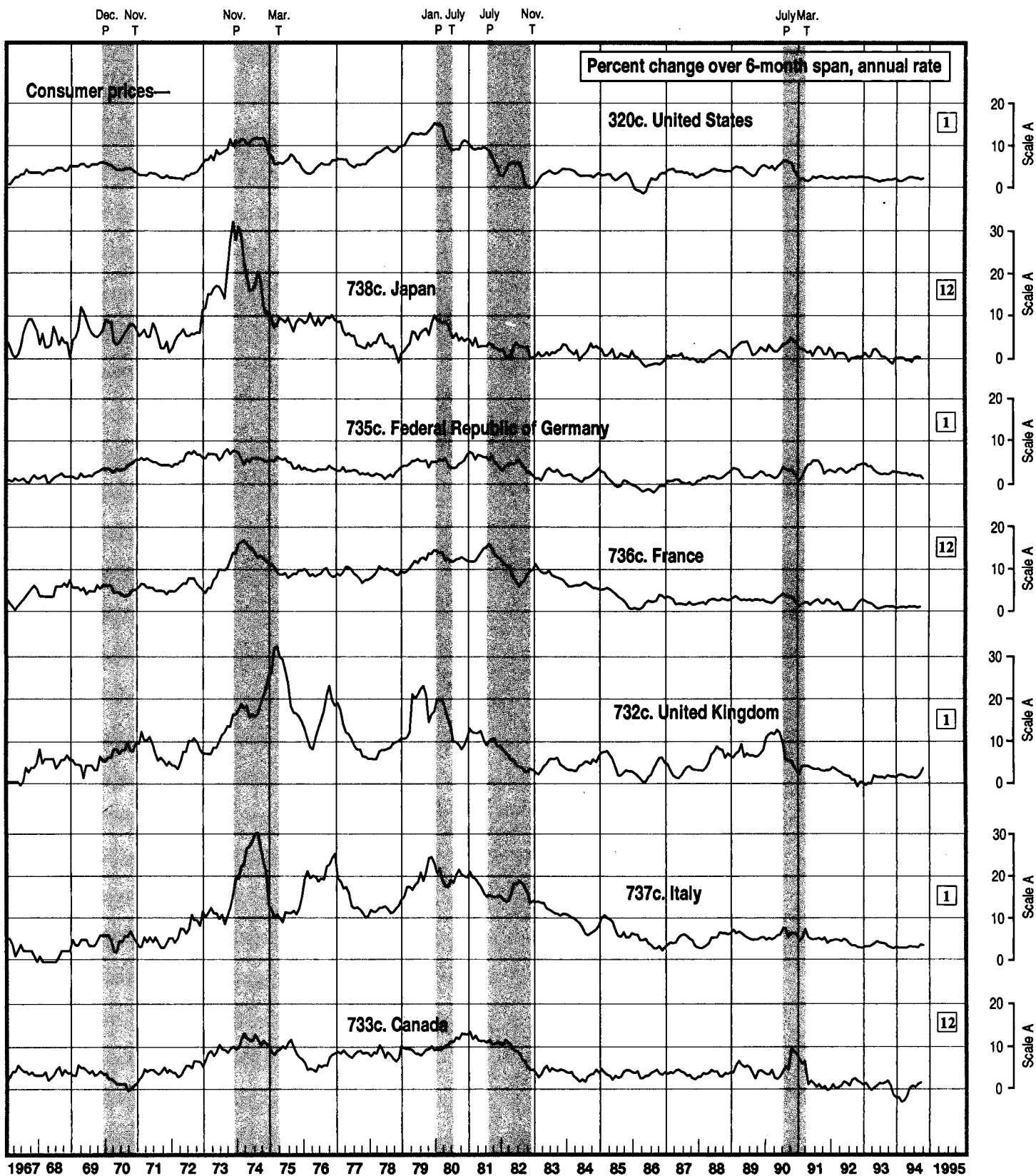
International Industrial Production



NOTE.—Current data for these series are shown on page C-5.

OTHER IMPORTANT ECONOMIC MEASURES

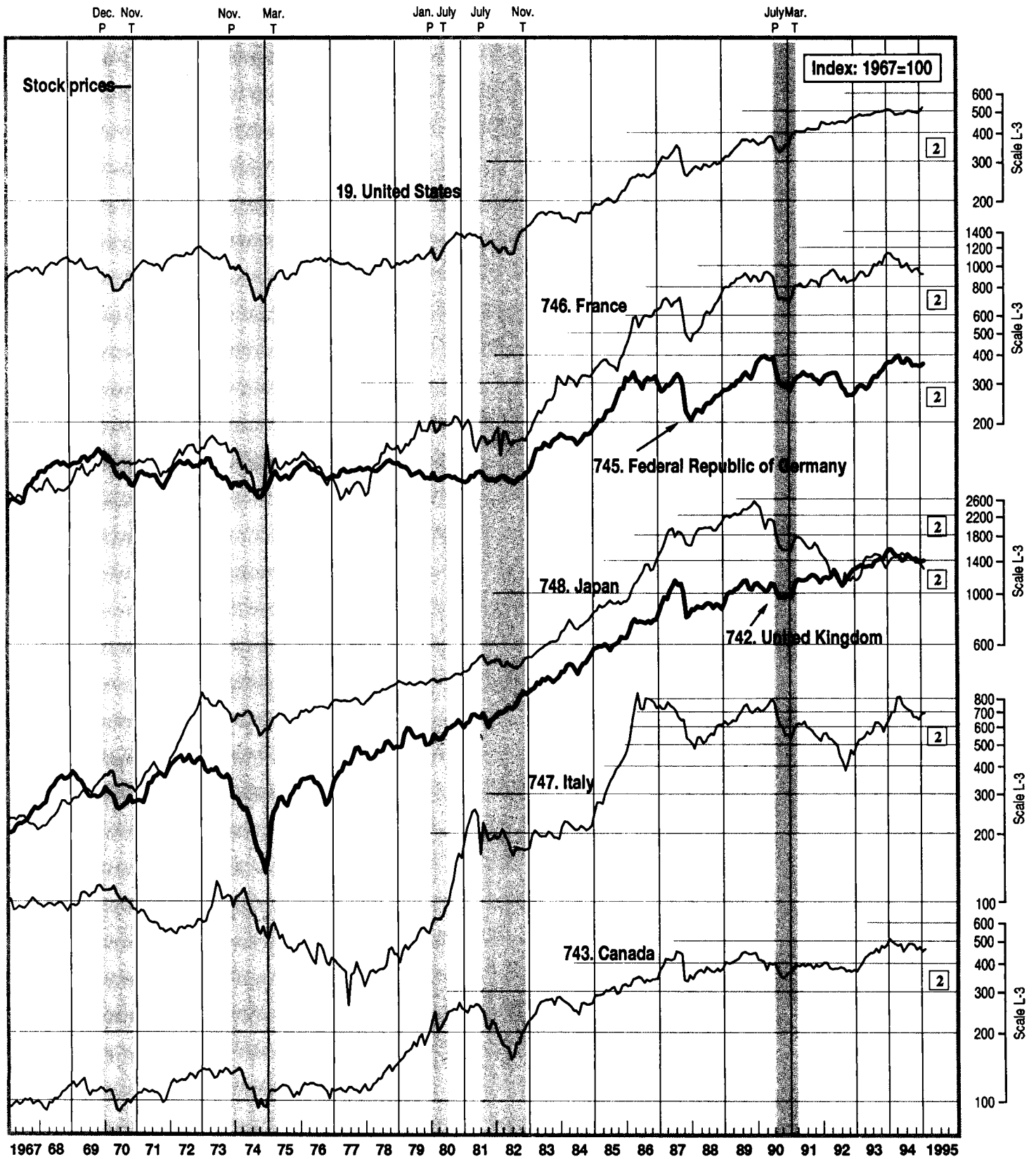
International Consumer Prices



NOTE.—Current data for these series are shown on page C-5.

OTHER IMPORTANT ECONOMIC MEASURES

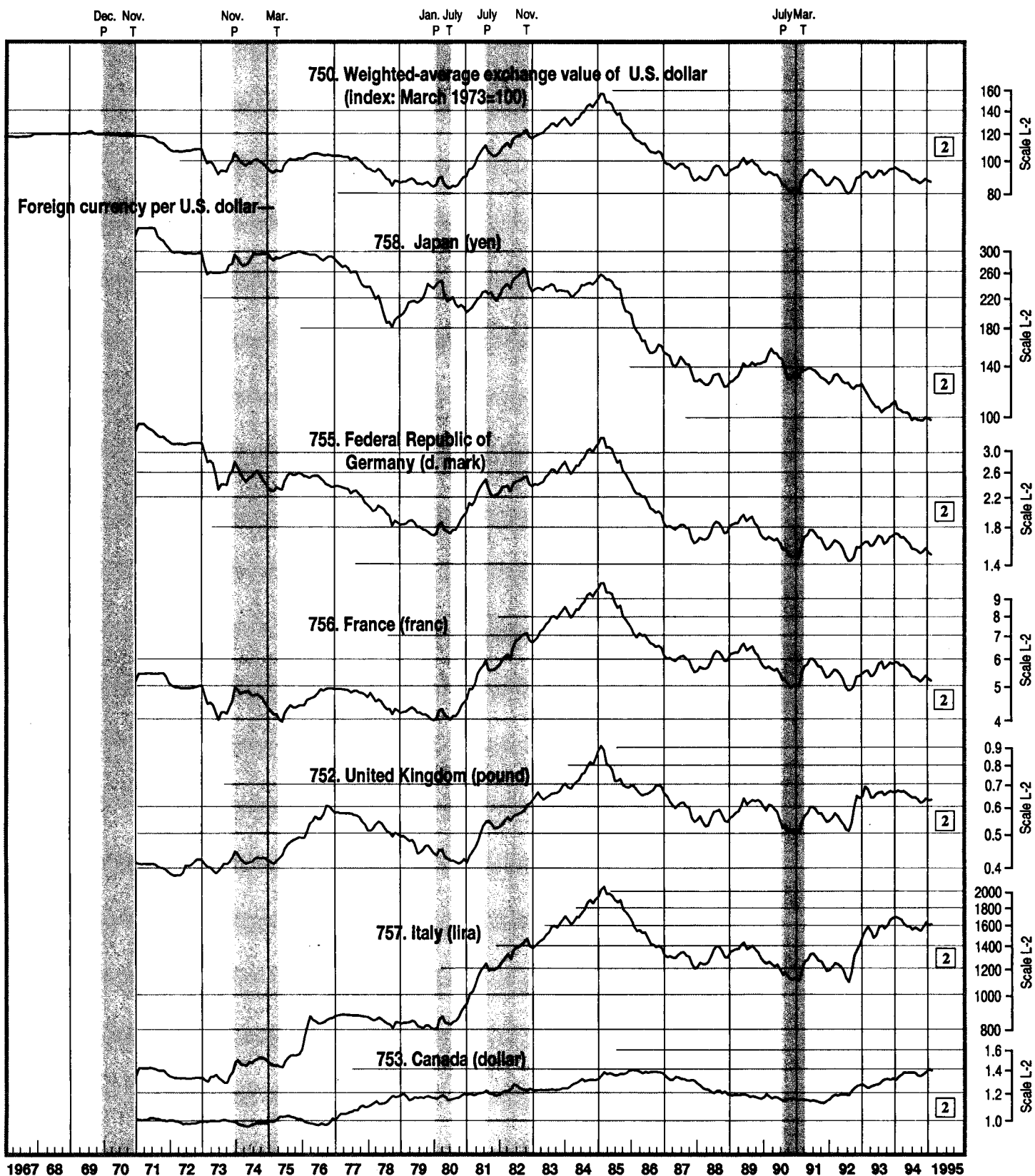
International Stock Prices



NOTE.—Current data for these series are shown on page C-5.

OTHER IMPORTANT ECONOMIC MEASURES

International Exchange Rates



NOTE.—Current data for these series are shown on page C-5.

Index to Historical Data for Selected Series

Some issues of the SURVEY provide historical data for selected Business Cycle Indicators series. The series for which historical data have been shown are listed below by subject, by series number, and by issue. Historical data for additional series will be shown, as space allows, in future issues.

Subject	Series number	Issue	Page	Subject	Series number	Issue	Page
Bank reserves:				Interest rates—Continued:			
Free reserves	93	1/95	C-34	Federal funds rate	119	11/94	C-42
Member bank borrowings from the Federal Reserve	94	1/95	C-34	Mortgage yield, secondary market	118	11/94	C-41
Business formation:				Municipal bond yield	117	11/94	C-41
Current liabilities of business failures	14	11/94	C-30	Treasury bill rate	114	11/94	C-39
Index of net business formation	12	11/94	C-29	Treasury bond yield	115	11/94	C-40
New business incorporations	13	11/94	C-29	International comparisons:			
Business loans:				Consumer price indexes:			
Commercial and industrial loans, current dollars	72	11/94	C-36	Canada (and changes)	733	1/95	C-39
Commercial and industrial loans, 1987 dollars	101	10/94	C-48	Federal Republic of Germany (and changes)	735	1/95	C-40
Net change in business loans	112	11/94	C-38	France (and changes)	736	1/95	C-41
Capacity utilization rates:				Italy (and changes)	737	1/95	C-42
Manufacturing	82	12/94	C-33	Japan (and changes)	738	1/95	C-43
Total industry	124	12/94	C-33	United Kingdom (and changes)	732	1/95	C-38
Capital investment:				Exchange rates:			
Contracts and orders for plant and equipment, 1987 dollars ...	20	10/94	C-38	Canada	753	12/94	C-42
Machinery and equipment sales and business construction expenditures	69	1/95	C-33	Federal Republic of Germany	755	12/94	C-43
Composite indexes:				France	756	12/94	C-43
Coincident indicators (and changes)	920	10/94	C-30-31	Italy	757	12/94	C-44
Lagging indicators (and changes)	930	10/94	C-33-34	Japan	758	12/94	C-44
Leading indicators (and changes)	910	10/94	C-28-29	United Kingdom	752	12/94	C-42
Ratio, coincident index to lagging index	940	10/94	C-35	Weighted-average exchange value of U.S. dollar	750	12/94	C-41
Consumer attitudes:				Industrial production indexes:			
Index of consumer confidence	122	11/94	C-42	Canada	723	12/94	C-35
Index of consumer expectations ¹	123	11/94	C-43	Federal Republic of Germany	725	12/94	C-36
Index of consumer expectations ²	83	10/94	C-43	France	726	12/94	C-36
Index of consumer sentiment	58	11/94	C-34	Italy	727	12/94	C-37
Consumer installment credit:				Japan	728	12/94	C-37
Delinquency rate	39	11/94	C-31	OECD, European countries	721	12/94	C-34
Net change	113	11/94	C-39	United Kingdom	722	12/94	C-35
Ratio, credit to personal income	95	10/94	C-46	Stock price indexes:			
Total outstanding	66	11/94	C-35	Canada	743	12/94	C-39
Diffusion indexes:				Federal Republic of Germany	745	12/94	C-39
Coincident indicator components	951	10/94	C-32	France	746	12/94	C-40
Lagging indicator components	952	10/94	C-34-35	Italy	747	12/94	C-40
Leading indicator components	950	10/94	C-29-30	Japan	748	12/94	C-41
Employment:				United Kingdom	742	12/94	C-38
Average weekly hours, manufacturing	1	10/94	C-36	United States (1967=100)	19	12/94	C-38
Average weekly overtime hours, manufacturing	21	1/95	C-29	Inventories:			
Civilian employment	442	1/95	C-36	Manufacturing and trade, change	31	1/95	C-29
Civilian labor force	441	1/95	C-35	Manufacturing and trade, 1987 dollars	70	11/94	C-35
Diffusion index of employees on private nonagricultural payrolls	963	1/95	C-44	Ratio, manufacturing and trade inventories to sales, 1987 dollars	77	10/94	C-43
Employee hours in nonagricultural establishments	48	1/95	C-32	Labor cost per unit of output, manufacturing, index (and changes)	62	12/94	C-29-30
Employees in goods-producing industries	40	1/95	C-30	Money supply:			
Employees on nonagricultural payrolls	41	10/94	C-39	Change in money supply M1	85	11/94	C-36
Index of help-wanted advertising	46	11/94	C-32	Change in money supply M2	102	11/94	C-37
Participation rate, both sexes 16-19 years of age	453	1/95	C-37	Money supply M1, 1987 dollars	105	11/94	C-38
Participation rate, females 20 years and over	452	1/95	C-37	Money supply M2, 1987 dollars	106	10/94	C-48
Participation rate, males 20 years and over	451	1/95	C-36	New orders, consumer goods and materials, 1987 dollars	8	10/94	C-37
Persons engaged in nonagricultural activities	42	1/95	C-31	Prices:			
Ratio, civilian employment to population	90	1/95	C-33	Consumer Price Index, all items (and changes)	320	11/94	C-43-44
Housing:				Consumer Price Index for services (and changes)	120	10/94	C-49-50
Index of new private housing units authorized by local building permits	29	10/94	C-38	Index of producer prices for sensitive crude and intermediate materials	98	11/94	C-37
New private housing units started	28	11/94	C-31	Index of sensitive materials prices (and changes)	99	10/94	C-46-47
Income:				Index of spot market prices, raw industrial materials	23	11/94	C-30
Personal income less transfer payments, 1987 dollars	51	10/94	C-40	Sales:			
Personal income, 1987 dollars	52	11/94	C-33	Manufacturing and trade, 1987 dollars	57	10/94	C-41
Ratio, personal income to money supply	108	1/95	C-35	Retail stores, 1987 dollars	59	11/94	C-34
Wages and salaries in mining, manufacturing, and construction, 1987 dollars	53	11/94	C-33	Stock price index, 500 common stocks	19	10/94	C-37
Industrial production indexes:				Unemployment:			
Business equipment	76	12/94	C-32	Average duration in weeks	91	10/94	C-44
Consumer goods	75	12/94	C-32	Average weekly initial claims for unemployment insurance	5	10/94	C-36
Defense and space equipment	557	12/94	C-34	Civilian unemployment rate	43	11/94	C-32
Durable manufactures	73	12/94	C-31	Number of persons unemployed	37	1/95	C-30
Nondurable manufactures	74	12/94	C-31	Ratio, help-wanted advertising to number unemployed	60	1/95	C-32
Total	47	12/94	C-29	Unemployment rate, 15 weeks and over	44	1/95	C-31
Interest rates:				Unfilled orders, durable goods, 1987 dollars (and changes)	92	10/94	C-44-45
Average prime rate charged by banks	109	10/94	C-49	Vendor performance, slower deliveries diffusion index	32	10/94	C-39
Corporate bond yield	116	11/94	C-40				

1. Source: The Conference Board.

2. Source: University of Michigan, Survey Research Center.

BEA INFORMATION

BEA's economic information is available in publications, on computer tapes, on diskettes, and through a variety of other products and services. Most of these are described in *A User's Guide to BEA Information*. For a copy, write to the Public Information Office, BE-53, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230, or call (202) 606-9900.

Recent Publications from GPO

ORDER FROM: Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Payment may be by check (made payable to Superintendent of Documents) or charged to a GPO deposit account number, VISA, or MasterCard. Phone (202) 512-1800 or fax (202) 512-2250.

National Income and Product Accounts of the United States. (1992-93) Two volumes. Presents the full set of national income and product accounts (NIPA) estimates for 1929-88 that resulted from the most recent comprehensive, or benchmark, revision. Text describes the statistical conventions used in the NIPA's and the definitions and classifications underlying the accounts.

Vol. 1: 1929-58. 264 pp. \$15.00 (GPO STOCK NO. 003-010-00236-1).

Vol. 2: 1959-88. 424 pp. \$25.00 (GPO STOCK NO. 003-010-00231-0).

Fixed Reproducible Tangible Wealth in the United States, 1925-89. (1993) Contains annual estimates of the stock of privately owned and government-owned durable equipment and structures and of durable goods owned by consumers in the United States for 1925-89. Estimates are for fixed nonresidential private capital by major industry group, for residential capital by tenure group, for government-owned fixed capital by type of government, and for 11 types of durable goods owned by consumers. 460 pp. \$25.00. (GPO STOCK NO. 003-010-00235-2).

New!

Benchmark Input-Output Accounts of the United States, 1987. (1994) Presents summary and detailed make and use tables for industries and commodities; tables showing commodity and industry output requirements per dollar of commodity demanded; and tables showing the input-output (I-O) commodity composition of personal consumption expenditures and producers' durable equipment expenditures in the national income and product accounts. Presents concepts and methods used in the 1987 benchmark accounts; concordance between I-O and 1987 Standard Industrial Classification codes; description of the components of the measures of output, intermediate inputs, and value added; and mathematical derivation of total requirements tables. 468 pp. \$29.00 (GPO STOCK NO. 003-010-00251-4).

Local Area Personal Income, 1969-92. (1994) Presents the estimates of personal income and per capita personal income for 1969-92 for the United States, regions, States, counties, and metropolitan areas. Also presents the Census Bureau's estimates of population that were used in the derivation of per capita personal income. Provides information about the sources and methods used to prepare the estimates for 1987-92 and samples of all the detailed tables of personal income and employment that are available for regions, States, counties, and metropolitan areas. 784 pp. \$41.00. (GPO STOCK NO. 003-010-00249-2).

Foreign Direct Investment in the United States: 1992 Benchmark Survey, Preliminary Results. (1994) Presents preliminary results of BEA's 1992 benchmark survey of foreign direct investment in the United States. Benchmark surveys, which are conducted every 5 years, are BEA's most comprehensive surveys in terms of both coverage of companies and subject matter. The publication presents information on the financial struc-

ture and operations of U.S. affiliates of foreign direct investors, including data for items—such as employment covered by collective bargaining agreements and merchandise trade by product and country of destination or origin—that are collected only in benchmark survey years. Data are classified by industry of U.S. affiliate, by country of ultimate beneficial owner, and, for selected data, by State. 124 pp. \$7.50 (GPO STOCK NO. 003-010-00248-4).

Foreign Direct Investment in the United States: Operations of U.S. Affiliates of Foreign Companies, Revised 1991 Estimates. (1994) Presents revised results for 1991 from BEA's annual survey covering the financial structure and operations of nonbank U.S. affiliates of foreign direct investors. Data are classified by industry of U.S. affiliate, by country and industry of ultimate beneficial owner, and, for selected data, by State. 92 pp. \$6.00 (GPO STOCK NO. 003-010-00246-8).

Foreign Direct Investment in the United States: Establishment Data for 1987. (1992) A joint effort by BEA and the Bureau of the Census, this publication provides new data on operations of U.S. affiliates of foreign direct investors in much greater industry detail than has been available in the past. Over 800 4-digit SIC industries are covered. Presents the number, employment, payroll, and shipments or sales of the establishments. Data are disaggregated by industry, by State, and by country of ultimate beneficial owner. 696 pp. \$36.00 (GPO STOCK NO. 003-010-00228-0).

Foreign Direct Investment in the United States: Establishment Data for Manufacturing, 1991. (1994) A joint effort by BEA and the Bureau of the Census, this is the latest in a series of publications that present new data for foreign-owned U.S. manufacturing establishments (plants), including data on their number, value added, shipments, employment, total employee compensation, employee benefits, hourly wage rates of production workers, cost of materials and energy used, inventories by stage of fabrication, and expenditures for new plant and equipment. The data are disaggregated by detailed industry (up to 459 industries), by State, and by country of investor. 220 pp. \$14.00 (GPO STOCK NO. 003-010-00250-6). *Also available in this series are publications presenting data for: 1990, 216 pp. \$14.00 (GPO STOCK NO. 003-010-00242-5); 1989, 204 pp. \$13.00 (GPO STOCK NO. 003-010-00243-3); and 1988, 204 pp. \$13.00 (GPO STOCK NO. 003-010-00244-1).*

U.S. Direct Investment Abroad: 1989 Benchmark Survey, Final Results. (1992) Presents final results of the latest benchmark survey of the worldwide operations of U.S. multinational companies. Contains detailed 1989 data on the financial structure and overall operations of U.S. parent companies and their foreign affiliates in 263 tables organized by industry of parent or by country and industry of affiliate. Also contains a complete methodology and copies of survey forms and instructions. 448 pp. \$25.00 (GPO STOCK NO. 003-010-00234-4).

U.S. Direct Investment Abroad: Operations of U.S. Parent Companies and Their Foreign Affiliates. (1994) Two publications containing results for 1991 and 1992 from BEA's annual survey of the worldwide operations of U.S. multinational companies. Contains information on the financial structure and operations of U.S. parent companies and their foreign affiliates. Data are classified by country and industry of affiliate and by industry of U.S. parent. 100 pp. \$6.50 each. *Preliminary 1992 Estimates:* GPO STOCK NO. 003-010-00245-0; *Revised 1991 Estimates:* GPO STOCK NO. 003-010-00247-6.

UNITED STATES
 GOVERNMENT PRINTING OFFICE
 SUPERINTENDENT OF DOCUMENTS
 WASHINGTON, DC 20402

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE, \$300



SECOND CLASS MAIL

POSTAGE AND FEES PAID
 U.S. GOVERNMENT PRINTING OFFICE

USPS PUB. No. 337-790

Schedule of Upcoming BEA News Releases

<i>Subject</i>	<i>Release Date</i>
U.S. International Trade in Goods and Services, January 1995.....	* Mar. 22
Gross Domestic Product, 4th quarter 1994 (final)	Mar. 31
Corporate Profits, 4th quarter 1994	Mar. 31
Personal Income and Outlays, February 1995.....	Apr. 3
Composite Indexes of Leading, Coincident, and Lagging Indicators, February 1995.....	Apr. 5
U.S. International Trade in Goods and Services, February 1995.....	* Apr. 19
State Personal Income, 4th quarter 1994 and Per Capita Personal Income, 1994 (preliminary).....	Apr. 27
Gross Domestic Product, 1st quarter 1995 (advance).....	Apr. 28
Personal Income and Outlays, March 1995.....	May 1
Composite Indexes of Leading, Coincident, and Lagging Indicators, March 1995.....	May 3
Metropolitan Area Personal Income, 1993.....	May 4
Gross State Product by Industry, 1992.....	May 10
U.S. International Trade in Goods and Services, March 1995.....	* May 18
Gross Domestic Product, 1st quarter 1995 (preliminary).....	May 31
Corporate Profits, 1st quarter 1995 (preliminary).....	May 31
Personal Income and Outlays, April 1995.....	June 1
Composite Indexes of Leading, Coincident, and Lagging Indicators, April 1995.....	June 2
U.S. International Transactions, 1st quarter 1995.....	June 13
U.S. International Trade in Goods and Services, April 1995.....	* June 21
Gross Domestic Product, 1st quarter 1995 (final).....	June 30
Corporate Profits, 1st quarter 1995 (revised).....	June 30

* Joint release by the Bureau of the Census and BEA.

For information, call (202) 606-9900, Bureau of Economic Analysis, U.S. Department of Commerce.