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7



SURVEY of CURRENT BUSINESS



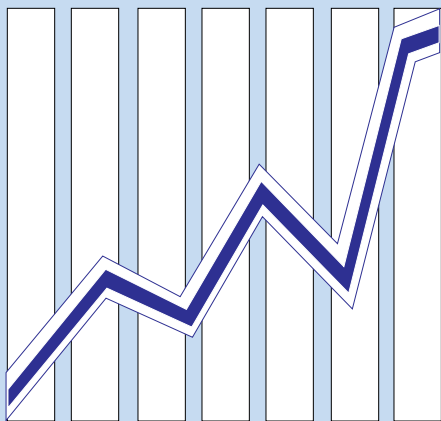
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The Measurement of Depreciation in the NIPA's

*U.S. International Transactions,
Revised Estimates for 1974-96*

U.S. DEPARTMENT OF COMMERCE ≈ ECONOMICS AND STATISTICS ADMINISTRATION

BUREAU OF ECONOMIC ANALYSIS



SURVEY *of* CURRENT BUSINESS

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THIS ISSUE of the SURVEY went to the printer on July 11, 1997.

It incorporates data from the following monthly BEA news releases:

U.S. International Trade in Goods and Services (June 19),
Gross Domestic Product (June 27), and
Personal Income and Outlays (June 30).

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As part of the recent comprehensive revision of the NIPA's, BEA introduced an improved methodology for calculating depreciation and capital stocks. This article by Barbara Fraumeni, a professor at Northeastern University and a consultant for BEA, reviews the empirical literature that supports BEA's use of geometric patterns of depreciation in the revised estimates.

43 U.S. International Transactions, Revised Estimates for 1974-96

This year's annual revision of the balance of payments accounts incorporates significant improvements in the investment income, capital, and services accounts. In the investment income accounts, the estimates of income receipts incorporate the results of the first benchmark survey of the stock of U.S. portfolio investment abroad in over 50 years. In the capital accounts, estimates of the international flows of U.S. currency appear for the first time. In the services accounts, preliminary results from the first annual surveys of financial services are incorporated. On the revised basis, the U.S. current-account deficit is \$148.2 billion in 1996, compared with \$165.1 billion on the previously published basis; the revision is more than accounted for by an upward revision to exports of goods, services, and income.

Regular features

1 Business Situation

Real GDP increased 5.9 percent in the first quarter of 1997. Real GNP increased 5.0 percent, and real GNP on a command basis increased 5.6 percent. Corporate profits jumped \$42.4 billion, as profits of both financial and nonfinancial domestic corporations rebounded strongly from fourth-quarter decreases.

24 The International Investment Position of the United States in 1996

The net international investment position of the United States became more negative in 1996: On a current-cost basis, it increased \$182.8 billion, to -\$870.5 billion; and on a market-value basis, it increased \$193.8 billion, to -\$831.3 billion. The change in the position in 1996 was attributable to large net capital inflows to the United States. However, for the direct investment component of the position, U.S. assets abroad continued to exceed foreign assets in the United States.

34 Direct Investment Positions for 1996: Country and Industry Detail

In 1996, the U.S. direct investment position abroad valued at historical cost increased 11 percent, reflecting large capital outflows that were mainly in the form of reinvested earnings. Nearly half of the increase in the position was accounted for by Europe, mostly by the United Kingdom. The foreign direct investment position in the United States valued at historical cost increased 12 percent, reflecting large capital inflows that were mainly in the form of equity capital—both from capital contributions to existing U.S. affiliates and from acquisitions of U.S. business by foreigners. Most of the increase in the position was accounted for by Europe.

56 U.S. International Transactions, First Quarter 1997

The U.S. current-account deficit increased \$4.1 billion, to \$41.0 billion, in the first quarter of 1997. A shift to a deficit on investment income and an increase in the deficit on goods and services were partly offset by a decrease in net unilateral transfers. In the capital account, net recorded inflows were \$59.1 billion in the first quarter, \$19.0 billion higher than in the fourth.

Reports and statistical presentations

5 Real Inventories, Sales, and Inventory-Sales Ratios for Manufacturing and Trade

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LOOKING AHEAD

- ✿ *Annual Revision of the National Income and Product Accounts.* An article presenting revised NIPA estimates and discussing major sources of the revisions will appear in the August SURVEY. Selected data will be made available on July 31 as part of the release of the advanced GDP estimates for the second quarter of 1997. For more information on the annual NIPA revision, see [the box](#) on page 4.
 - ✿ *Comprehensive Revision of Local Area Personal Income.* An article presenting the results of a comprehensive revision of the estimates of county and metropolitan area personal income for 1969–95 will appear in the September SURVEY. The revision will incorporate the recent comprehensive revisions of the NIPA's and of State personal income, as well as several improvements in the methodology for the estimates of county personal income.
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B U S I N E S S S I T U A T I O N

Larry R. Moran prepared the first section of this article, and Daniel Larkins prepared the section on corporate profits.

THE "FINAL" estimate of growth in real gross domestic product (GDP) for the first quarter of 1997 is 5.9 percent, 0.1 percentage point higher than the "preliminary" estimate reported in the June "Business Situation" (table 1 and chart 1); for 1981-96, the average revision from the pre-

liminary to the final estimate, without regard to sign, was 0.3 percentage point.¹

The general picture of the economy that is indicated by the final estimates of the national income and product accounts (NIPA's) is little changed from that shown by the preliminary estimates. GDP increased more in the first quarter than in the fourth quarter of 1996, and the larger increase was more than accounted for by an upturn in the change in business inventories, by an acceleration in consumer spending, and by an upturn in business investment in equipment. In addition, small upturns in residential investment and in government spending also contributed to the step-up in GDP. In contrast, exports and business investment in structures increased less in the first quarter than in the fourth, and imports increased more.

Table 1.—Revisions to Real Gross Domestic Product and Prices, First Quarter 1997

[Seasonally adjusted at annual rates]

	Percent change from preceding quarter		Final estimate minus preliminary estimate	
	Preliminary estimate	Final estimate	Percentage points	Billions of chained (1992) dollars
Gross domestic product	5.8	5.9	0.1	2.3
<i>Less:</i> Exports of goods and services	11.2	10.8	-.4	-7
Goods	12.8	14.4	1.6	2.3
Services	6.6	1.2	-5.4	-2.9
<i>Plus:</i> Imports of goods and services	23.2	19.9	-3.3	-6.9
Goods	24.9	19.1	-5.8	-10.4
Services	14.4	24.7	10.3	3.3
Equals: Gross domestic purchases	7.3	7.1	-.2	-3.6
Personal consumption expenditures	5.7	5.6	-.1	-.7
Durable goods	19.3	18.8	-.5	-7
Nondurable goods	4.9	4.6	-.3	-1.1
Services	3.3	3.4	.1	1.0
Fixed investment	10.0	9.8	-.2	-.3
Nonresidential	11.5	11.0	-.5	-8
Structures	6.5	6.6	.1	.1
Producers' durable equipment	13.4	12.7	-.7	-9
Residential	6.0	6.7	.7	5
Change in business inventories .....	.....	.....	.....	-2.8
Nonfarm .....	.....	.....	.....	-2.8
Farm .....	.....	.....	.....	.1
Government consumption expenditures and gross investment .....	.1	.1	0	.2
Federal	-3.1	-3.2	-.1	-1
National defense	-10.0	-10.1	-.1	-1
Nondefense	11.7	11.3	-.4	-2
State and local	2.0	2.1	.1	.4
Addenda:				
Final sales of domestic product	3.8	4.1	.3	5.0
Gross domestic purchases price index (chain-type weights) ¹	2.2	2.2	0	.....
GDP price index (chain-type weights) ¹	2.8	2.7	-.1	.....

1. Based on chained (1992) weights.

NOTE.—The final estimates for the first quarter of 1997 incorporate the following revised or additional major source data that were not available when the preliminary estimates were prepared.

Personal consumption expenditures: Revised retail sales for March.

Nonresidential fixed investment: Revised construction put in place for February and March and revised manufacturers' shipments of machinery and equipment for March.

Residential fixed investment: Revised construction put in place for February and March.

Change in business inventories: Revised manufacturing and trade inventories for February and March.

Exports and imports of goods and services: Revised exports and imports for October 1996 through March; revised balance of payments data on exports and imports of services for the first quarter; and revised seasonal factors.

Government consumption expenditures and gross investment: Revised State and local construction put in place for February and March and revised State and local government employment for January, February, and March.

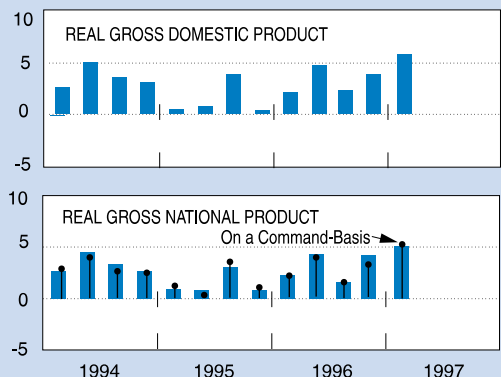
Wages and salaries: Revised employment, average hourly earnings, and average weekly hours for October 1996 through March and revised seasonal factors.

GDP prices: Revised values and quantities of petroleum imports for March and revised prices of single-family homes under construction for the first quarter.

CHART 1

Selected Product Measures: Change From Preceding Quarter

Percent



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

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

Revisions to the components of GDP were small. A downward revision to imports, which are subtracted from final expenditures in the calculation of GDP, more than offset a downward revision to the change in business inventories. The revision to imports was to goods and primarily reflected the incorporation of the annual revisions of Census Bureau and BEA data for U.S. international trade in goods and services, and the revision to the change in business inventories primarily reflected the incorporation of revised Census Bureau data for manufacturing and trade inventories for March.²

Real final sales of domestic product increased 4.1 percent in the first quarter, 0.3 percentage point more than the preliminary estimate. Real gross domestic purchases increased 7.1 percent, 0.2 percentage point less than the preliminary estimate.

The price index for gross domestic purchases increased 2.2 percent, the same as the preliminary estimate, and the price index for GDP increased 2.7 percent, 0.1 percentage point less than the preliminary estimate.

Real disposable personal income increased 4.0 percent, 0.2 percentage point less than the pre-

liminary estimate. The personal saving rate was 4.7 percent, 0.1 percentage point less than the preliminary estimate.

Gross national product (GNP).—Real GNP increased 5.0 percent in the first quarter, 0.9 percentage point less than the increase in real GDP (chart 1 and table 2).³ Receipts of factor income from the rest of the world decreased, and payments of factor income increased sharply; corporate profits more than accounted for the decrease in receipts, and interest income accounted for a little more of the increase in payments than did profits.

Real GNP on a command basis increased more than real GNP in the first quarter—5.6 percent, compared with 5.0 percent—reflecting an improvement in the terms of trade.⁴ In the fourth quarter, command-basis GNP increased less than real GNP—3.7 percent, compared with 4.2 percent—reflecting a deterioration in the terms of trade.

Corporate Profits

Profits from current production jumped \$42.4 billion in the first quarter after decreasing \$7.2 billion in the fourth (table 3).⁵

Profits of domestic industries increased \$52.5 billion after decreasing \$20.5 billion. Profits of both financial and nonfinancial corporations rebounded strongly. For nonfinancial corporations, the first-quarter increase in profits reflected increases in both real output and in unit profits. Profits from the rest of the world decreased

2. For additional information on the annual revisions to the U.S. international trade in goods and services estimates, see "U.S. International Transactions, Revised Estimates for 1974-96" in this issue.

Table 2.—Relation of Real Gross Domestic Product, Real Gross National Product, and Real Command-Basis Gross National Product

[Seasonally adjusted at annual rates]

	Billions of chained (1992) dollars			Percent change from preceding quarter	
	Level		Change from preceding quarter		
	1997	1996	1997	1996	1997
	I	IV	I	IV	I
Gross domestic product	7,094.4	65.2	101.1	3.8	5.9
<i>Plus:</i> Receipts of factor income from the rest of the world	219.7	14.0	-1.3	30.0	-2.4
<i>Less:</i> Payments of factor income to the rest of the world	243.2	7.6	14.2	14.5	27.3
<i>Equals:</i> Gross national product	7,070.4	71.7	85.4	4.2	5.0
<i>Less:</i> Exports of goods and services and receipts of factor income from the rest of the world	1,105.8	61.0	20.8	26.0	7.9
<i>Plus:</i> Command-basis exports of goods and services and receipts of factor income	1,126.8	53.1	30.6	22.0	11.6
<i>Equals:</i> Command-basis gross national product	7,091.4	63.7	95.2	3.7	5.6
Addendum:					
Terms of trade ¹	101.9	-9	.9	-3.5	3.6

1. Ratio of the implicit price deflator for the sum of 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.—Levels of these series are found in NIPA tables 1.10 and 1.11.

3. GNP—goods and services produced by labor and property supplied by U.S. residents—equals GDP plus receipts of factor income from the rest of the world less payments of factor income to the rest of the world.

4. In the estimation of command-basis GNP—a measure of the goods and services produced by the U.S. economy in terms of their purchasing power—the current-dollar value of the sum of exports of goods and services and of receipts of factor income is deflated by the implicit price deflator for the sum of imports of goods and services and of payments of factor income.

The terms of trade is a measure of the relationship between the prices that are received by U.S. producers for exports of goods and services and the prices that are paid by U.S. purchasers for imports of goods and services. It is measured by the following ratio, with the decimal point shifted two places to the right: In the numerator, the implicit price deflator for the sum of exports of goods and services and of receipts of factor income; in the denominator, the implicit price deflator for the sum of imports of goods and services and of payments of factor income. Changes in the terms of trade reflect the interaction of several factors, including movements in exchange rates, changes in the composition of the traded goods and services, adjustment lags, and changes in producers' profit margins. For example, if the U.S. dollar depreciates against a foreign currency, a foreign manufacturer may choose to absorb this cost by reducing the profit margin on the product it sells to the United States, or it may choose to raise the price of the product and risk a loss in market share.

5. Profits from current production is estimated as the sum of profits before tax, the inventory valuation adjustment, and the capital consumption adjustment; it is shown in NIPA tables 1.9, 1.14, 1.16, and 6.16c as "corporate profits with inventory valuation and capital consumption adjustments."

\$10.2 billion after increasing \$13.3 billion; receipts turned down, and payments picked up.⁶

Cash flow from current production, a profits-related measure of internally generated funds available for investment, increased \$24.9 billion

6. Profits from the rest of the world is calculated as (1) receipts by U.S. residents of earnings from their foreign affiliates plus dividends received by U.S. residents from unaffiliated foreign corporations minus (2) payments by U.S. affiliates of earnings to their foreign parents plus dividends paid by U.S. corporations to unaffiliated foreign residents.

Table 3.—Corporate Profits
[Seasonally adjusted at annual rates]


	Level	Change from preceding quarter	
		1996	1997
	1997:I	IV	I
Billions of dollars			
Profits from current production	712.5	-7.2	42.4
Domestic industries	632.7	-20.5	52.5
Financial	123.7	-14.4	28.0
Nonfinancial	509.0	-6.1	24.5
Rest of the world	79.7	13.3	-10.2
Receipts (inflows)	134.3	14.1	-2.7
Payments (outflows)	54.5	.8	7.4
IVA	-4	-11.2	8.8
CCAadj	44.4	2.5	2.2
Profits before tax	668.5	1.5	31.4
Profits tax liability	246.2	-4.5	17.3
Profits after tax	422.3	6.0	14.1
Cash flow from current production	683.5	-1.1	24.9
Profits by industry:			
Corporate profits with IVA	668.0	-9.7	40.1
Domestic industries	588.3	-23.0	50.3
Financial	149.9	-13.7	28.6
Nonfinancial	438.4	-9.4	21.7
Manufacturing	168.1	-1.2	-1.3
Transportation and public utilities	102.2	-9.3	9.0
Wholesale trade	44.8	7.0	3.3
Retail trade	45.7	-7.8	9.0
Other	77.6	2.0	1.7
Rest of the world	79.7	13.3	-10.2
Dollars			
Unit price, costs, and profits of nonfinancial corporations:			
Unit price	1.069	0	0.003
Unit labor cost .....	.709	.002	.001
Unit nonlabor cost .....	.234	0	0
Unit profits from current production .....	.127	-.003	.004

NOTE.—Levels of these and other profits series are found in NIPA tables 1.14, 1.16, 6.16C, and 7.15.
IVA Inventory valuation adjustment
CCAadj Capital consumption adjustment

after decreasing \$1.1 billion. The ratio of cash flow to nonresidential fixed investment, an indicator of the share of the current level of investment that could be financed by internally generated funds, increased to 82.3 percent from 80.9 percent. These levels are near the low end of the range in which the ratio has fluctuated during most of this decade, but they are substantially higher than its average level, 73.5 percent, in the 1980's.

Industry profits.—Industry profits increased \$40.1 billion after decreasing \$9.7 billion.⁷ For domestic financial corporations, a sharp first-quarter increase followed a fourth-quarter decrease that had reflected a special assessment on thrift institutions to recapitalize the Savings Association Insurance Fund. For domestic nonfinancial corporations, an upturn in profits reflected upturns in the transportation and public utilities group and in retail trade; in contrast, profits in manufacturing and in “other” nonfinancial corporations posted relatively small changes, as they had in the fourth quarter, and profits in wholesale trade increased less than in the fourth quarter.

Related measures.—Profits before tax (PBT) increased \$31.4 billion after increasing \$1.5 billion. The difference between the \$29.9 billion step-up in PBT and the \$49.6 billion upturn in profits from current production was accounted for by inventory profits, which decreased after increasing.⁸

A box on the upcoming annual revision of the NIPA's follows. 

7. Industry profits, which are estimated as the sum of corporate profits before tax and the inventory valuation adjustment, are shown in NIPA table 6.16c. Estimates of the capital consumption adjustment do not exist at a detailed industry level; they are available only for total financial and total nonfinancial industries.

8. In periods of changing prices, companies that value inventory withdrawals at original acquisition (historical) costs may realize inventory profits or losses. Inventory profits, a capital-gains-like element in profits, results from an increase in inventory prices, and inventory losses, a capital-loss-like element in profits, results from a decrease in inventory prices. Inventory profits or losses are recorded in the national income and product accounts as the inventory valuation adjustment with the sign reversed.

Annual Revision of the NIPA's

On July 31, 1997, BEA will release summary results from an annual revision of the national income and product accounts (NIPA's). This year's revision, which covers the estimates beginning with the first quarter of 1993, consists of the usual incorporation of better source data and improved methodology, including an improvement in the calculation of real output and prices for recent periods (see below).

Publication of the revised NIPA estimates

The August SURVEY OF CURRENT BUSINESS will feature an article that presents the revised NIPA estimates and discusses the major sources of the revisions. The issue will contain the summary accounts of the NIPA's for 1996; the summary historical NIPA tables; a complete list of the NIPA tables; and most of the full set of NIPA tables. Tables 7.5, 7.7, 7.8, 7.12, and 7.13 (detailed components of the annual estimates of personal consumption expenditures, private purchases of structures and producers' durable equipment, national defense spending, and government investment), which currently show only price indexes, will be expanded to include quantity indexes and reorganized into separate panels for the quantity indexes and the price indexes. Tables 7.4, 7.6, 7.9, 7.10, 7.11B, and 7.14 (quarterly quantity and price indexes for the major components of gross domestic product) will also be reorganized into this easier-to-use format. In addition, the following quantity-index tables will be added: 7.17 (GDP by type of product), 7.18 (auto output), 7.19 (truck output), and 7.20 (gross and net investment).

The September SURVEY will include an article that describes the major methodologies and source data used to prepare the NIPA estimates and that features the two tables that summarize the methodology for preparing the estimates of GDP (these tables were last presented beginning on page 84 of the August 1996 SURVEY). The September SURVEY will also contain the new and revised

estimates of fixed reproducible tangible wealth in the United States (tables 1-15) that are consistent with the revised NIPA estimates.

The October SURVEY will contain the NIPA tables that were not published in the August issue—the government expenditures by type and function tables and the government reconciliation tables (3.15-3.20) and the seasonally unadjusted tables (9.1-9.6).

In the November SURVEY, revised estimates of gross product originating by industry for 1993-96 will be presented.

The estimates associated with the annual revision will be made available from STAT-USA on the Economic Bulletin Board and on their Internet site (<http://www.stat-usa.gov>). (For more information, call STAT-USA at (202) 482-1986.) Selected estimates will also be posted on the BEA Internet site (<http://www.bea.doc.gov>). In addition, the published estimates will be available on computer diskettes; to order, write to the Bureau of Economic Analysis, BEA Order Desk (BE-53), Washington, DC 20230 or call 1-800-704-0415.

Improved estimates of real output and prices

As indicated in the May 1997 SURVEY, this year's annual revision will introduce an improvement in the calculation of real output and prices for recent periods when prices and quantities for the 2 adjacent years are not yet available. BEA's current procedure would have used the prices and quantities from the most recently completed year (1996) as fixed weights in the calculation of the estimates beginning with the third quarter of 1996; instead, BEA will introduce a new procedure that uses the prices and quantities from the two adjacent quarters as weights to calculate Fisher chain-type measures for these estimates.

Real Inventories, Sales, and Inventory-Sales Ratios for Manufacturing and Trade

Tables 1, 2, and 3 show quarterly and monthly estimates of real inventories, sales, and inventory-sales ratios, respectively. Real manufacturing inventories by stage of fabrication are shown in table 4. Real estimates are in chained (1992) dollars.

Data availability

Quarterly estimates for 1977–95 of real manufacturing and trade inventories, sales, and inventory-sales ratios and of real manufacturing inventories by stage of fabrication were published in the May 1996 SURVEY OF CURRENT BUSINESS.

Estimates for 1967 forward are available electronically to subscribers to STAT-USA's Economic Bulletin

Board or Internet services. For information, call (202) 482–1986.

The estimates for 1967–95 are also available on printouts and diskette. To order, write to the National Income and Wealth Division, BE-54, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230. Specify "Real Manufacturing and Trade Inventories, Sales, and Ratios" (Accession Nos. BEA 54–91–20–014 for printouts, BEA 54–91–40–409 for diskette), and include a check or money order for \$55.00 for printouts or \$20.00 for diskette, payable to the Bureau of Economic Analysis. To order by telephone, call (202) 606–9700; MasterCard and VISA are accepted.

Table 1.—Real Manufacturing and Trade Inventories, Seasonally Adjusted, End of Period
[Billions of chained (1992) dollars]

	1996		1996		1997			
	IV	I	Nov.	Dec.	Jan. ^r	Feb. ^r	Mar. ^r	Apr. ^p
Manufacturing and trade	936.0	944.8	937.0	936.0	939.8	944.4	944.8	948.3
Manufacturing	406.5	411.0	407.9	406.5	407.8	409.9	411.0	414.1
Durable goods	261.8	264.8	263.3	261.8	263.3	264.4	264.8	267.4
Primary metal industries	22.7	22.3	22.5	22.7	22.3	22.2	22.3	22.1
Fabricated metal products	23.4	23.8	23.4	23.4	23.5	23.7	23.8	23.9
Industrial machinery and equipment	57.4	58.0	58.4	57.4	57.7	58.0	58.0	58.8
Electronic and other electric equipment	44.4	44.1	44.7	44.4	44.2	44.2	44.1	44.6
Transportation equipment	58.6	61.0	58.9	58.6	60.1	60.9	61.0	62.2
Motor vehicles and equipment	13.4	13.7	13.3	13.4	13.5	13.7	13.7	13.9
Other transportation equipment	45.2	47.3	45.6	45.2	46.7	47.2	47.3	48.3
Other durable goods ¹	55.9	0	56.1	55.9	56.2	0	0	0
Nondurable goods	144.9	146.5	144.9	144.8	144.8	145.7	146.5	147.0
Food and kindred products	31.4	31.3	31.4	31.4	31.3	31.5	31.3	31.2
Paper and allied products	15.0	14.9	15.0	15.0	14.9	14.8	14.9	14.9
Chemicals and allied products	35.6	35.8	35.4	35.6	35.5	35.6	35.8	36.1
Petroleum and coal products	9.3	10.6	9.4	9.3	9.6	9.9	10.6	10.6
Rubber and miscellaneous plastic products	14.0	14.2	13.9	14.0	14.1	14.1	14.2	14.2
Other nondurable goods ²	39.3	0	39.5	39.3	38.7	0	0	0
Merchant wholesalers	247.1	251.0	246.5	247.1	249.4	249.8	251.0	249.3
Durable goods	157.5	160.0	157.5	157.5	158.6	159.0	160.0	159.9
Nondurable goods	89.8	91.2	89.2	89.8	90.8	91.2	91.2	89.6
Groceries and farm products	27.5	0	27.6	27.5	27.7	0	0	0
Other nondurable goods	62.5	0	61.8	62.5	63.8	0	0	0
Retail trade	281.9	282.2	282.0	281.9	282.0	284.2	282.2	284.3
Durable goods	148.3	148.5	148.9	148.3	148.1	150.0	148.5	149.7
Motor vehicle dealers ³	67.9	67.0	68.0	67.9	67.6	68.5	67.0	67.8
Other durable goods ³	80.8	0	81.3	80.8	80.0	0	0	0
Nondurable goods	133.4	133.5	132.9	133.4	133.8	134.0	133.5	134.5
Food stores	27.4	27.6	27.2	27.4	27.5	27.5	27.6	27.5
Other nondurable goods	106.2	0	105.8	106.2	106.3	0	0	0

^p Preliminary.

1. Includes lumber and wood products; furniture and fixtures; stone, clay, and glass products; instruments and related products; and miscellaneous manufacturing industries.

2. Includes tobacco manufacturers; textile mill products; apparel products; printing and publishing; and leather and leather products.

3. Prior to 1981, inventories and sales of auto and home supply stores are included in motor vehicle dealers. Beginning with 1981, these inventories are included in "other durable goods".

NOTES.—Manufacturing inventories are classified by the type of product produced by the establishment holding the inventory. Trade inventories are classified by the type of product sold by the establishment holding the inventory. Chained (1992) dollar inventory series are calculated as the product of the chain-type quantity index and the average of the end-of-year fixed-weighted inventories for 1991 and 1992, divided by 100. Because the formula for the chain-type quantity indexes uses weights of more than one period, the corresponding chained-dollar estimates are usually not additive.

The residual line is the difference between the first line and the sum of the most detailed lines for inventories.

Table 2.—Real Manufacturing and Trade Sales, Seasonally Adjusted at Monthly Rate
[Billions of chained (1992) dollars]

	1996		1996		1997			
	IV	I	Nov.	Dec.	Jan. ^r	Feb. ^r	Mar. ^r	Apr. ^p
Manufacturing and trade	695.8	711.4	697.4	696.4	704.5	715.4	714.4	718.2
Manufacturing	303.0	308.8	304.4	302.6	306.3	309.6	310.5	314.4
Durable goods	167.7	172.1	168.5	167.5	169.2	172.7	174.5	176.4
Primary metal industries	13.9	14.2	14.0	13.9	14.2	14.3	14.2	14.4
Fabricated metal products	16.3	16.5	16.4	16.2	16.4	16.6	16.5	16.9
Industrial machinery and equipment	36.7	37.8	36.3	37.6	37.3	37.6	38.7	39.3
Electronic and other electric equipment	29.5	30.2	30.0	29.4	28.6	30.4	31.5	30.3
Transportation equipment	37.3	38.4	37.6	36.8	38.3	38.3	38.4	39.7
Motor vehicles and equipment	24.8	25.5	25.0	24.0	26.1	25.5	25.1	26.0
Other transportation equipment	11.1	11.4	11.2	11.4	10.8	11.4	11.9	12.2
Other durable goods ¹	41.1	0	41.3	40.7	41.6	0	0	0
Nondurable goods	134.7	136.3	135.4	134.4	136.6	136.5	135.7	137.8
Food and kindred products	36.3	36.8	36.7	35.9	36.7	36.7	36.6	36.9
Paper and allied products	12.0	12.1	11.9	12.0	12.0	12.1	12.1	12.5
Chemicals and allied products	28.5	29.0	28.5	28.6	29.1	29.1	28.8	29.5
Petroleum and coal products	14.3	14.1	14.4	14.3	14.2	14.0	14.2	14.1
Rubber and miscellaneous plastic products	11.4	11.7	11.5	11.4	11.7	11.8	11.7	12.0
Other nondurable goods ²	32.8	0	33.1	33.1	33.3	0	0	0
Merchant wholesalers	189.1	194.1	189.7	189.8	191.1	196.3	194.8	195.9
Durable goods	100.8	103.0	101.1	101.1	101.4	104.5	103.0	104.8
Nondurable goods	88.3	91.1	88.5	88.7	89.7	91.8	91.7	91.1
Groceries and farm products	32.6	0	32.9	32.8	32.7	0	0	0
Other nondurable goods	52.1	0	52.3	52.4	53.0	0	0	0
Retail trade	203.6	208.5	203.2	203.9	207.0	209.5	209.0	207.8
Durable goods	82.4	85.5	82.2	82.7	84.3	86.5	85.6	85.1
Motor vehicle dealers ³	43.7	45.4	43.5	43.9	44.8	46.1	45.3	44.7
Other durable goods ³	38.8	0	38.8	38.8	39.2	0	0	0
Nondurable goods	121.0	122.8	120.8	121.1	122.5	122.7	123.1	122.4
Food stores	33.1	33.2	33.0	33.1	33.2	33.1	33.4	33.2
Other nondurable goods	87.9	0	87.8	88.0	89.5	0	0	0

^p Preliminary.

1. Includes lumber and wood products; furniture and fixtures; stone, clay, and glass products; instruments and related products; and miscellaneous manufacturing industries.

2. Includes tobacco manufacturers; textile mill products; apparel products; printing and publishing; and leather and leather products.

3. Prior to 1981, inventories and sales of auto and home supply stores are included in motor vehicle dealers. Beginning with 1981, these inventories are included in "other durable goods".

NOTES.—Manufacturing inventories are classified by the type of product produced by the establishment holding the inventory. Trade inventories are classified by the type of product sold by the establishment holding the inventory. Chained (1992) dollar series are calculated as the product of the chain-type quantity index and the 1992 current-dollar value of the corresponding series, divided by 100. Because the formula for the chain-type quantity indexes uses weights of more than one period, the corresponding chained-dollar estimates are usually not additive.

The residual line is the difference between the first line and the sum of the most detailed lines for inventories.

**Table 3.—Real Inventory-Sales Ratios for Manufacturing and Trade,
Seasonally Adjusted**

[Ratio, based on chained (1992) dollars]

	1996	1997	1996		1997			
	IV	I	Nov.	Dec.	Jan. ^r	Feb. ^r	Mar. ^r	Apr. ^p
Manufacturing and trade	1.35	1.33	1.34	1.34	1.33	1.32	1.32	1.32
Manufacturing	1.34	1.33	1.34	1.34	1.33	1.32	1.32	1.32
Durable goods	1.56	1.54	1.56	1.56	1.56	1.53	1.52	1.52
Primary metal industries	1.63	1.57	1.61	1.63	1.57	1.55	1.57	1.53
Fabricated metal products	1.44	1.44	1.42	1.45	1.44	1.42	1.44	1.41
Industrial machinery and equipment	1.56	1.53	1.61	1.53	1.55	1.54	1.50	1.50
Electronic and other electric equipment	1.51	1.46	1.49	1.51	1.54	1.45	1.40	1.47
Transportation equipment	1.57	1.59	1.57	1.59	1.57	1.59	1.59	1.57
Motor vehicles and equipment .....	.54	.54	.53	.56	.52	.54	.55	.54
Other transportation equipment	4.09	4.15	4.07	3.96	4.31	4.15	3.97	3.96
Other durable goods ¹	1.36	1.33	1.36	1.37	1.35	1.31	1.32	1.30
Nondurable goods	1.08	1.08	1.07	1.08	1.06	1.07	1.08	1.07
Food and kindred products .....	.87	.85	.86	.88	.85	.86	.86	.85
Paper and allied products	1.25	1.24	1.26	1.25	1.24	1.22	1.24	1.19
Chemicals and allied products	1.25	1.23	1.24	1.25	1.22	1.23	1.24	1.22
Petroleum and coal products .....	.65	.75	.65	.66	.67	.70	.75	.75
Rubber and miscellaneous plastic products	1.23	1.21	1.21	1.23	1.20	1.20	1.21	1.18
Other nondurable goods ²	1.20	1.20	1.20	1.19	1.18	1.19	1.21	1.21
Merchant wholesalers	1.31	1.29	1.30	1.30	1.31	1.27	1.29	1.27
Durable goods	1.56	1.55	1.56	1.56	1.56	1.52	1.55	1.53
Nondurable goods	1.02	1.00	1.01	1.01	1.01	.99	.99	.98
Groceries and farm products .....	.84	.84	.84	.84	.85	.84	.86	.83
Other nondurable goods	1.20	1.19	1.18	1.19	1.20	1.17	1.18	1.17
Retail trade	1.38	1.35	1.39	1.38	1.36	1.36	1.35	1.37
Durable goods	1.80	1.74	1.81	1.79	1.76	1.74	1.73	1.76
Motor vehicle dealers ³	1.55	1.48	1.57	1.55	1.51	1.49	1.48	1.52
Other durable goods ³	2.08	2.04	2.10	2.08	2.05	2.03	2.02	2.03
Nondurable goods	1.10	1.09	1.10	1.10	1.09	1.09	1.08	1.10
Food stores .....	.83	.82	.83	.83	.83	.83	.82	.83
Other nondurable goods	1.21	1.18	1.21	1.21	1.19	1.19	1.18	1.20

^p Preliminary.

1. Includes lumber and wood products; furniture and fixtures; stone, clay, and glass products; instruments and related products; and miscellaneous manufacturing industries.

2. Includes tobacco manufacturers; textile mill products; apparel products; printing and publishing; and leather and leather products.

3. Prior to 1981, inventories and sales of auto and home supply stores are included in motor vehicle dealers. Beginning with 1981, these inventories are included in "other durable goods".

NOTE.—Manufacturing inventories are classified by the type of product produced by the establishment holding the inventory. Trade inventories are classified by the type of product sold by the establishment holding the inventory.

**Table 4.—Real Manufacturing Inventories by Stage of Fabrication,
Seasonally Adjusted, End of Period**

[Billions of chained (1992) dollars]

	1996	1997	1996		1997			
	IV	I	Nov.	Dec.	Jan. ^r	Feb. ^r	Mar. ^r	Apr. ^p
Materials and supplies								
Manufacturing	133.0	134.4	133.6	133.0	133.0	133.6	134.4	134.6
Durable goods	79.7	80.5	80.2	79.7	79.8	79.7	80.5	80.5
Primary metal industries	7.5	7.5	7.6	7.5	7.5	7.5	7.5	7.5
Fabricated metal products	8.6	8.8	8.7	8.6	8.7	8.7	8.8	8.8
Industrial machinery and equipment	17.1	17.5	17.4	17.1	17.1	17.2	17.5	17.2
Electronic and other electric equipment	15.5	15.5	15.6	15.5	15.2	15.2	15.5	15.7
Motor vehicles and equipment	6.3	6.5	6.2	6.3	6.5	6.5	6.5	6.5
Other transportation equipment	5.4	5.3	5.6	5.4	5.5	5.4	5.3	5.4
Other durable goods ¹	19.4	19.5	19.4	19.4	19.4	19.4	19.5	19.6
Nondurable goods	53.3	54.0	53.4	53.3	53.3	53.9	54.0	54.1
Food and kindred products	10.3	10.2	10.3	10.3	10.3	10.4	10.2	10.0
Paper and allied products	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Chemicals and allied products	11.4	11.5	11.4	11.4	11.4	11.5	11.5	11.6
Petroleum and coal products	3.1	3.6	3.2	3.1	3.3	3.4	3.6	3.6
Rubber and miscellaneous plastic products	5.3	5.3	5.3	5.3	5.4	5.3	5.3	5.3
Other nondurable goods ²	16.1	16.4	16.2	16.1	16.0	16.3	16.4	16.6
Work-in-process								
Manufacturing	134.8	136.8	135.4	134.8	135.5	136.3	136.8	138.2
Durable goods	111.6	113.2	112.1	111.6	112.2	112.8	113.2	114.3
Primary metal industries	8.2	8.0	8.1	8.2	8.0	8.0	8.0	7.9
Fabricated metal products	6.5	6.7	6.6	6.5	6.6	6.7	6.7	6.8
Industrial machinery and equipment	22.0	22.1	22.1	22.0	21.9	21.8	22.1	22.5
Electronic and other electric equipment	16.1	15.8	16.4	16.1	15.9	15.9	15.8	15.8
Motor vehicles and equipment	4.1	4.0	4.1	4.1	3.7	3.7	4.0	4.0
Other transportation equipment	37.8	39.9	38.2	37.8	39.1	39.8	39.9	40.6
Other durable goods ¹	17.0	17.0	17.0	17.0	17.1	17.1	17.0	16.9
Nondurable goods	23.3	23.8	23.3	23.3	23.3	23.6	23.8	24.0
Food and kindred products	4.3	4.3	4.5	4.3	4.4	4.4	4.3	4.4
Paper and allied products	1.7	1.7	1.6	1.7	1.6	1.6	1.7	1.6
Chemicals and allied products	5.7	5.9	5.5	5.7	5.7	5.7	5.9	6.0
Petroleum and coal products	1.9	2.2	2.0	1.9	2.0	2.1	2.2	2.2
Rubber and miscellaneous plastic products	1.9	2.0	1.9	1.9	2.0	2.0	2.0	2.0
Other nondurable goods ²	7.7	7.6	7.8	7.7	7.6	7.7	7.6	7.7
Finished goods								
Manufacturing	138.8	139.9	139.1	138.8	139.4	140.1	139.9	141.5
Durable goods	70.5	71.1	70.9	70.5	71.2	71.9	71.1	72.6
Primary metal industries	6.9	6.8	6.9	6.9	6.8	6.7	6.8	6.7
Fabricated metal products	8.2	8.4	8.2	8.2	8.2	8.3	8.4	8.4
Industrial machinery and equipment	18.3	18.4	19.0	18.3	18.7	19.0	18.4	19.1
Electronic and other electric equipment	12.8	12.8	12.7	12.8	13.1	13.2	12.8	13.2
Motor vehicles and equipment	3.0	3.3	3.1	3.0	3.3	3.4	3.3	3.4
Other transportation equipment	2.1	2.0	1.9	2.1	2.0	2.1	2.0	2.3
Other durable goods ¹	19.6	19.7	19.6	19.6	19.6	19.7	19.7	19.9
Nondurable goods	68.4	68.8	68.2	68.4	68.3	68.3	68.8	69.0
Food and kindred products	16.7	16.8	16.6	16.7	16.6	16.6	16.8	16.7
Paper and allied products	6.4	6.3	6.4	6.4	6.3	6.2	6.3	6.3
Chemicals and allied products	18.6	18.4	18.5	18.6	18.4	18.4	18.4	18.5
Petroleum and coal products	4.3	4.8	4.2	4.3	4.3	4.4	4.8	4.8
Rubber and miscellaneous plastic products	6.8	6.9	6.7	6.8	6.8	6.9	6.9	7.0
Other nondurable goods ²	15.5	15.5	15.6	15.5	15.7	15.6	15.5	15.6

^p Preliminary.

1. Includes lumber and wood products; furniture and fixtures; stone, clay, and glass products; instruments and related products; and miscellaneous manufacturing industries.

2. Includes tobacco manufacturers; textile mill products; apparel products; printing and publishing; and leather and leather products.

NOTES.—Manufacturing inventories are classified by the type of product produced by the establishment holding the inventory. Trade inventories are classified by the type of product sold by the establishment holding the inventory.

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The residual line is the difference between the first line and the sum of the most detailed lines for inventories.

The Measurement of Depreciation in the U.S. National Income and Product Accounts

By Barbara M. Fraumeni

As part of the recent comprehensive revision of the NIPA's, BEA introduced an improved methodology for calculating depreciation. The improved methodology uses empirical evidence on the prices of used equipment and structures in resale markets, which has shown that depreciation for most types of assets approximates a geometric pattern. Previously, the depreciation estimates were derived using straight-line depreciation and assumed patterns of retirements.

This article describes the theoretical and empirical literature that supports the new BEA methodology. The author, a professor of economics at Northeastern University, Boston, Massachusetts, drafted the article while she was serving as a consultant to BEA for this project. The views expressed are the author's and do not necessarily represent those of BEA.

THIS ARTICLE describes the basis for the new depreciation methodology used by the Bureau of Economic Analysis (BEA).¹ The new BEA methodology reflects the results of empirical studies on the prices of used equipment and structures in resale markets, which have shown that depreciation for most kinds of equipment and structures does not follow a straight-line pattern. For most assets, empirical studies on specific assets conclude a geometric pattern of depreciation is appropriate.² The new BEA methodology also uses a geometric pattern of depreciation as the default option when information on specific assets is unavailable.³ In either case, the geometric (constant) rate of depreciation is determined from empirical studies of used assets. For some assets (autos, computers, missiles, and nuclear fuel), empirical studies, BEA data, or technological factors justify the use of a nongeometric pattern of depreciation by BEA. This article reviews the empirical research on depreciation, the basis for the improvement in BEA methodology.

Previous BEA estimates of depreciation were based on a straight-line pattern for depreciation; the switch is to a geometric pattern for depre-

ciation for most assets. A straight-line pattern assumes equal dollar depreciation over the life of the asset. For example, with straight-line depreciation, depreciation in the first year is equal to depreciation in the second year, which is equal to depreciation in the third year, and so on. A geometric pattern is a specific type of accelerated pattern. An accelerated pattern assumes higher dollar depreciation in the early years of an asset's service life than in the later years. For example, with accelerated depreciation, depreciation in the first year is greater than that in the second year, which is in turn greater than that in the third year, and so on. In BEA calculations, in the absence of investment, geometric depreciation is calculated as a constant fraction of detailed constant-dollar net stocks.

In most cases, the rates of geometric depreciation are based on the Hulten-Wyckoff estimates (Hulten and Wyckoff 1981b). For some assets (computer equipment and autos), nongeometric depreciation rates estimated in empirical studies or from BEA data are used. For a few assets (missiles and nuclear fuel rods), BEA has retained its prior methodology of deriving estimates of depreciation using straight-line depreciation and Winfrey retirement patterns.⁴ The original Hulten-Wyckoff rates are modified to reflect service lives currently used by BEA.

The first section of this article briefly describes the relevant depreciation concepts. The second section discusses previous BEA methodology and Hulten-Wyckoff methodology in the context of these depreciation concepts. The empirical research on depreciation is summarized in the third section. In the fourth section, the new BEA depreciation rates for all assets except autos, computers, missiles, and nuclear fuel are listed and their derivation documented. The fifth section consists of a brief conclusion.

1. The improved methodology was summarized in Parker and Triplett (1995). The new estimates of capital stock were described in Katz and Herman (1997).

2. These assets are listed as type A and B assets in table 3.

3. These assets are listed as type C assets in table 3.

4. Retirement patterns refer to the patterns of assets withdrawn from service.

Depreciation Concepts ⁵

Definitions

The value of an asset changes as the result of depreciation and revaluation.⁶ Depreciation is the change in value associated with the aging of an asset. As an asset ages, its price changes because it declines in efficiency, or yields fewer productive services, in the current period and in all future periods. Depreciation reflects the present value of all such current and future changes in productive services.

Revaluation is the change in value or price per unit that is associated with everything other than aging. Revaluation includes pure inflation, obsolescence, and any other impact on the price of an asset not associated with aging.

The decomposition of the change in the value of an asset is illustrated in table 1 for an asset with price per unit. The price of an asset, $P_{time,age}$, in time 0 and the price of an asset in time 1 is observed. There are two possible sources of the price change: The first being a change in the price of an asset because it has aged and the second

being a change in the price of an asset because it is a different time period. The decomposition can be illustrated in the simplest case by reference to the well-known used-car price book. Prices for 1-year-old cars of the same make and model in the 1997 book and their prices when new provide an estimate of depreciation because everything but age is held constant. Prices for 1-year-old cars of the same make and model in the 1996 and 1997 price books provide an estimate of revaluation, because age is held constant while everything else changes.

Obsolescence is a decrease in the value of an asset because a new asset is more productive, efficient, or suitable for production. A new asset might be more suited for production because it economizes on an input that has become relatively more expensive. Obsolescence has played a big part in the debate about the impact of the oil embargo on productivity.⁷ Other impacts on the price of an asset include the price effect of any changes in taxes or interest rates facing business not anticipated when the asset was new. If depreciation and retirement patterns did not change over time, revaluation could be estimated from a used-asset-price book, as described above.

5. The sources for this section include papers by Triplett (1992a, 1992b, 1996), by Jorgenson (1989, 1996), by Young and Musgrave (1980), and by BEA (1993).

6. BEA and the author of this article differ in their definition of depreciation in national accounts. This will be discussed briefly in the section "BEA definition."

BEA definition

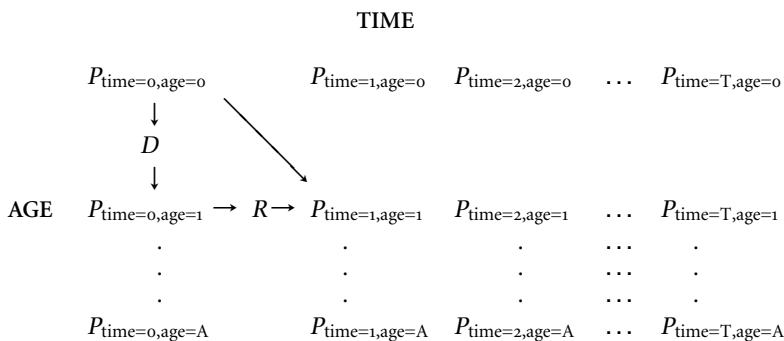
BEA defines depreciation as "the decline in value due to wear and tear, obsolescence, accidental damage, and aging" (Katz and Herman 1997, 70), which includes retirements, or discards as they are frequently called.⁸ BEA includes the destruction of privately owned fixed assets that is associated with natural disasters in depreciation.⁹ BEA focuses on depreciation as the consumption of fixed capital or as a cost of production. Depreciation is viewed as a cost incurred in the production of gross domestic product (GDP), as a deduction in the calculation of business income,

Table 1.—Depreciation Versus Revaluation

Represent the price of an asset by ($P_{time,age}$).

A change in the price of an asset at time = 1, ($P_{time=1,age=1} - P_{time=0,age=0}$), is equal to
 depreciation, ($P_{time=0,age=1} - P_{time=0,age=0}$),
 or age effects, holding time constant
 plus
 revaluation, ($P_{time=1,age=1} - P_{time=0,age=1}$),
 or time effects, holding age constant.

Schematically, representing the decomposition of the observed price change ($P_{time=1,age=1} - P_{time=0,age=0}$), in bold and with arrows, and the matrix of price changes over time = 0, 1, ... T and age = 0, 1, ... A, where D is depreciation and R is revaluation:



7. Martin N. Baily (1981) argues that the rapid increase in energy prices during the oil embargo rendered certain types of assets obsolete, leading to a decline in the rate of productivity change. A rebuttal to this argument is contained in Hulten, Robertson, and Wykoff (1989).

8. Retirements or discards are assets withdrawn from service.

9. The current BEA treatment of natural disasters in part reflects the absence from the national income and product accounts of an integrated balance sheet and raises another set of issues that will not be discussed here.

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and as a partial measure of the value of services of government fixed assets. BEA's conceptualization of depreciation as such is generally consistent with the work of Fabricant (1938, 12–14) and Denison (1957) and the definition of depreciation in the System of National Accounts (SNA).¹⁰ It is also consistent with the concept of the consumption of fixed capital in the context of estimates of sustainable product, or income, where depreciation is subtracted from GDP to derive net domestic product and net domestic income—a rough measure of that level of income or consumption that can be maintained while leaving capital intact.

The essential difference between BEA's depreciation definition and the definition in this article is the treatment of obsolescence. Obsolescence shows up in the national income and product accounts (NIPA's) in at least two ways. One, BEA depreciation estimates include obsolescence through a service-life effect and through the use of depreciation rates estimated from used-asset prices unadjusted for the effects of obsolescence. Assets may be retired early, when they are still productive, because of obsolescence; this is reflected in BEA's depreciation estimates, as service lives affect the estimate of the geometric rates of depreciation used for most assets.¹¹ Two, obsolescence is reflected in the constant-quality prices that are part of the NIPA's.¹² In addition to the theoretical usefulness of separating the effects of obsolescence from those associated with the physical deterioration of an asset, BEA's use of hedonic and other quality-adjusted price indexes suggests an empirical reason why greater attention may have to be paid to the effects of obsolescence. In its future work, BEA plans to conduct studies focusing on quality change and obsolescence.¹³

Specifics of BEA Methodology and Hulten-Wyckoff Methodology

*Specifics of BEA methodology*¹⁴

As noted, BEA has used a straight-line pattern of depreciation since the 1950's. Depreciation is an equal dollar amount per period over the lifetime of the asset.

Retirements for a group of assets depended on the group's average service life and on the pattern of retirements (the distribution of retirements around the mean service life).

Once retirements have begun, the combined effects of straight-line depreciation and retirements result in a depreciation pattern that is more accelerated than a straight-line depreciation pattern. An accelerated depreciation pattern assumes higher dollar depreciation in the early years of an asset's service life than in the later years.

Mean service lives are estimated from a wide variety of sources, both government and private. In general, information is not available to provide different mean service lives by industry. Production-type manufacturing equipment is a notable exception. Similarly, in general, information is not available on changes in mean service lives over time, if they do occur; aircraft is one exception to this general rule. When a mean service life is changed, the new mean service life is applied only to new assets. There is no effect on depreciation of existing assets.

A modified S-3 Winfrey curve was used for most assets to estimate the pattern of actual retirements around the mean; a L-2 Winfrey curve was used for consumer durables (Winfrey 1967; Russo and Cowles 1980). The S-3 curve is a bell-shaped distribution centered on the mean service life of the asset. It was used for private nonresidential equipment (except autos) and structures, private residential equipment, and government residential equipment and structures. The L-2 curve is an asymmetrical distribution with heavier discards before the mean service life. Both sets of Winfrey curves were modified to reflect different assumptions about when retirements begin and end as a percentage of the mean service life of the asset.

Expected obsolescence implicitly enters into BEA estimates of depreciation through shorter asset lifetimes and through the retirement pattern previously used. The mean service life of a class of assets could be shorter because obsolescence

10. The SNA defines depreciation as "the decline, during the course of the accounting period, in the current value of the stock of fixed assets owned and used by a producer as a result of physical deterioration, normal obsolescence, or normal accidental damage" (SNA 1993, 147, 6.179).

11. See the next section and "BEA default geometric-depreciation rates."

12. See Oliner (1993, 55) for a discussion of constant-quality prices and depreciation in the context of a study of mainframe computers. BEA is using Oliner's partial depreciation measure, which is consistent with BEA's hedonic price index for computers.

13. The author of this article and BEA both agree that further work needs to be done to quantify obsolescence and to identify the impact of obsolescence and quality change on national income accounting measures. Further consideration of the major issues surrounding the definitional differences described above could be one component of future work on obsolescence and quality change.

14. See BEA (1993).

has occurred consistently over the historical period or is reflected in the occasional revision of mean service lives. In addition, as obsolescence can result in early retirement, the modified Winfrey patterns may have been picking up some of the obsolescence effects.¹⁵

BEA adjusts depreciation estimates to capture the effect of natural disasters that destroy large amounts of fixed capital.

*Specifics of Hulten-Wyckoff methodology*¹⁶

Initially, Hulten and Wyckoff made no assumption about what form depreciation patterns take. Instead, they estimated used-asset age-price profiles for eight producers' durable equipment or non-residential equipment assets, which they called type A assets, with a Box-Cox model (Box and Cox 1964).¹⁷ They tested to see whether the resulting depreciation patterns most nearly resembled patterns arising from one-hoss-shay, straight-line, or geometric efficiency patterns.¹⁸

There is a direct correspondence between efficiency patterns and depreciation patterns. Present and future declines in efficiency result in depreciation or declines in the value of an asset as it ages. A one-hoss-shay efficiency pattern assumes that no loss in efficiency occurs until the asset is retired. The corresponding depreciation pattern is less accelerated than a straight-line pattern of depreciation with lower dollar depreciation in the early years of an asset's service life than in the later years. A straight-line efficiency pattern assumes equal declines in efficiency in each period over the life of the asset. The corresponding depreciation pattern, which has higher dollar depreciation in the early years of an asset's service life than in the later years, is accelerated relative to a straight-line pattern of depreciation. A geometric efficiency pattern also gives rise to an accelerated depreciation pattern. The geometric pattern is a special case because the efficiency pattern and the depreciation pattern have the same form, with declines in efficiency and depreciation occurring at the same rate.

Hulten and Wyckoff concluded that depreciation patterns for eight assets are accelerated. In addition, although all three patterns were

rejected statistically, they concluded that the depreciation pattern was approximately geometric in all cases. In 1977, the eight producers' durable equipment or nonresidential equipment assets—tractors, construction machinery, metalworking machinery, general industrial equipment, trucks, autos, industrial buildings, and commercial buildings—amounted to 55 percent of investment expenditures on producers' durable equipment and 42 percent of spending on non-residential structures. They assumed that the depreciation pattern for the remaining 24 out of 32 producers' durable equipment and nonresidential structures NIPA classes contemporary to their study was geometric. These were categorized as type B or type C assets.

Since used-asset prices reflect only surviving assets (a censored-sample problem), Hulten and Wyckoff weighted used-asset prices by the probability of survival before estimating the depreciation patterns.¹⁹ Weighted used-asset prices reflect surviving and retired assets. The probability of survival, the weight, depends upon the mean service lives of assets and on the deviation of retirements around the mean service life. Mean service lives were assumed to be 100 percent of *Bulletin F*. An L_0 Winfrey curve was used to estimate the pattern of actual retirements about the mean for structures. The L_0 curve is an asymmetrical distribution that allows for some assets to survive to very old ages relative to the mean service lives. An S-3 curve, described above, was used for metalworking machinery and general industrial machinery.²⁰ Finally, an assumption was needed about the net value of an asset (scrappage value less demolition costs) to complete the transformation of a surviving-asset sample to an estimated sample of both surviving and retired assets. Hulten and Wyckoff assumed that the net value of an asset retired from service was on average zero. The used-asset prices inputted to the Box-Cox model were thus weighted and net value adjusted. As a result, the depreciation estimates from the Box-Cox model reflected both efficiency declines and retirements.

15. Young and Musgrave maintain that expected obsolescence should be charged when the asset is retired (Young and Musgrave 1980, 34, figure 1.1). BEA's methodology does not do this.

16. The information on Hulten-Wyckoff methodology is taken from three sources: Hulten and Wyckoff (1981a and 1981b) and Wyckoff and Hulten (1979).

17. Age-price profiles map ages of assets with their prices.

18. An efficiency pattern is a pattern describing the productive services from an asset as it ages. The efficiency of a new asset is typically normalized to 1.0. As an asset declines in efficiency, its efficiency has a value of less than one.

19. The censored-sample problem can be illustrated by the following example. Suppose that two cars are bought new in 1980. By 1990, one is still in service and one has been junked. The one that is still in service is sold as a used car, say for \$1,000. If we take the used-car sales price to be representative of all cars bought new in 1980, we would assume that the 1990 value of all cars bought new in 1980 is \$2,000. In fact, the 1990 value of the cars is \$1,000 or on average \$500 per car. Hulten and Wyckoff, by weighting used-asset prices by the probability of survival, are calculating the used-asset price equivalent of an average 1990 value of \$500 per car bought new in 1980. Their procedure assumes that the used-asset price of nonsurvivors is zero.

20. BEA at the time typically assumed mean service lives were 85 percent of *Bulletin F* and used a modified S-3 Winfrey curve for most assets except consumer durables.

The used-asset prices were adjusted for the effects of inflation on these prices by the inclusion of a time variable in the Box-Cox estimation procedure.

With a geometric pattern, the rate of depreciation, δ , depends only on the declining-balance rate and the asset's service life:

$$\delta_G = \frac{R}{T}$$

where T is the average asset service life from *Bulletin F*, and R is the estimated declining-balance rate.²¹ δ_G is constant over the lifetime of the asset, and depreciation is higher in the early years of an asset's service life. With a geometric pattern, depreciation, $d_{i,G}$, for 1 dollar of investment

$$d_{i,G} = \delta_G(1 - \delta_G)^{i-1},$$

$$i = 1, 2, 3, \dots$$

where i is the age of the asset. The higher the declining-balance rate, R , the higher the geometric rate of depreciation, δ_G , and the higher depreciation is in the early years of an asset's service life. This contrasts with a straight-line depreciation pattern. With a straight-line pattern:

$$d_{i,SL} = 1/n,$$

$$i = 1, 2, 3, \dots, n$$

where i is the age of the asset, and n is the retirement age of the asset, which can be distributed about the average service life of the asset, T . δ for a straight-line pattern:

$$\delta_{i,SL} = \frac{1}{n - (i - 1)}$$

$$i = 1, 2, 3, \dots, n$$

where i and n are, as before, increases with the age of the asset.

For some assets, called type B assets, empirical research by others and the judgement of Hulten and Wykoff were used to estimate δ . For the remaining assets, called type C assets, an average declining-balance rate R was estimated from the 8 assets and combined with information on the lifetime of the 24 assets still remaining to produce an asset-specific δ . Hulten and Wykoff determined that, on average, the declining-balance

rate for producers' durable equipment was 1.65, and for private nonresidential structures, 0.91.²² In both cases, the declining-balance rate was estimated on average to be significantly less than a double-declining-balance rate ($R = 2$).²³

Summary of Empirical Research

Empirical research on depreciation has been conducted on most asset categories included in the U.S. national income and wealth accounts. These studies can be broadly classified into studies that looked at market-based used-asset prices to estimate depreciation and those that did not.²⁴

Research based on used-asset prices

A large number of studies have employed price data from individual market transactions, dealers' price lists, insurance records, or rental prices to estimate actual depreciation. Table 2 lists these studies. Two studies cover a large number of asset classes or industries: Hulten-Wykoff covering U.S. assets and Koumanakos-Hwang covering Canadian assets. Of the 29 studies listed, half deal

22. With truncation, 0.9 was frequently used in the actual calculations.
 23. At the time of Hulten and Wykoff's research, researchers commonly assumed that the appropriate declining-balance rate was double declining.
 24. This section draws heavily on three previous surveys of empirical research on depreciation. They are Hulten and Wykoff (1981b), Jorgenson (1996), and Brazell, Dworin, and Walsh (1989).

Table 2.—Studies of Depreciation Based on Used-Asset Prices

Assets	Studies ¹
32 classes of assets	Hulten and Wykoff 1981b
27 classes of assets or 43 industries	Koumanakos and Hwang 1988
Automobiles	Ackerman 1973; Cagan 1971 Chow 1957, 1960 Ohta and Griliches 1975 Ramm 1970 Office of Tax Analysis 1991a Wykoff 1970, 1989
Trucks	Hall 1971 Office of Tax Analysis 1991b
Farm tractors	Griliches 1960 Penson, Hughes, and Nelson 1977 Penson, Romain, and Hughes 1981 Perry and Glycer 1988
Ships:	
Oil tankers	Cockburn and Frank 1992
Fishing boats	Lee 1978
Residential housing	Chinloy 1977 Malpezzi, Ozanne, and Thibodeau 1987
Office buildings	Taubman and Rasche 1969
Computers	Jorgenson and Stiroh 1994
Computer peripheral equipment	Oliner 1992
Mainframe computers	Oliner 1993
Machine tools	Beidelman 1976; Oliner 1996
Industrial machinery and equipment	Shriver 1988
Scientific instruments	Office of Tax Analysis 1990

1. See the list of references at the end of this article.

21. The rate of declining-balance depreciation is the multiple of the comparable straight-line rate used to calculate the geometric rate of depreciation. For example, a 1.65 declining-balance depreciation rate refers to a geometric rate of depreciation of 1.65/L, where L is the service life of the asset in years and 1/L is the straight-line rate.

with mechanized vehicles (automobiles, trucks, or farm tractors). Data on used prices are readily available for these assets. Three studies each investigate depreciation for computers and real estate. Two studies each cover ships (fishing boats and oil tankers) and machine tools. One study, by Shriver, deals with industrial machinery and equipment. The remaining study is a study of scientific instruments by the Office of Tax Analysis. A variety of methodological approaches were used. They include hedonics, an analysis of variance, and Box-Cox or polynomial forms for the estimated equation.²⁵

General issues affecting used-asset-price studies

All used-asset-price studies are potentially biased, because the asset sample may not be representative of the population as a whole or because economic conditions affect prices.²⁶ First, asset samples normally represent only surviving assets. Second, surviving-asset samples or their sale prices may not represent the population of surviving assets. Third, changes in economic conditions, including taxes and interest rates, may affect used-asset prices. Finally, a used-asset price may be affected by the value of an associated input.

If asset samples represent only surviving assets, then age-price profiles of used-asset samples underestimate depreciation for the population as a whole because retirements are not included.²⁷ Hulten and Wykoff estimated for commercial and industrial buildings that such an error would reduce depreciation estimates by more than one-half. There are two possible solutions to this problem. One, retirements can be added to depreciation, similar to the way BEA modifies its straight-line depreciation pattern to allow for the pattern of retirements. Two, a censored-sample adjustment can be made to the used-asset prices before the depreciation pattern is estimated, in a manner similar to Hulten and Wykoff. It is important for the researcher and user to know whether the depreciation pattern includes retirements (as in Hulten-Wykoff) or excludes retirements (as in the BEA accounts). A straight-line pattern excluding retirements will no longer be a straight-line pattern once retirements are

included, and a geometric pattern excluding retirements will no longer be a geometric pattern once retirements are included.

Surviving-asset samples or their prices may not represent the population of surviving assets. Business may put up for sale their superior or inferior assets. Assets may be worth more or less to the buyers than to the sellers. Finally, buyers may not be able to accurately perceive the value of the assets for sale.

It is not clear what is the extent or direction of a possible surviving-asset-sample bias. Whether or not businesses put up for sale their superior or inferior assets depends on whether they are trying to maximize the proceeds from such sales or to sell off less desirable or obsolete assets. Differences in buyer-versus-seller asset value may bias used-asset prices in either direction as well. A declining business may be selling off an asset that represents idle capacity and that another business in the same industry could fully utilize or an asset that has limited use to businesses in other industries. Assets may be configured to meet the needs of a particular business so that they are more valuable to their seller than to their buyer. Finally, buyers may underestimate or overestimate the value of used assets for sale.

The lemons hypothesis maintains that the value of assets for sale will underestimate the value of all assets in the stock (Akerlof 1970). It argues that a disproportionate number of assets sold will be lemons, particularly if inspection by buyers does not reveal which assets are lemons. Under the lemons hypothesis, buyers will assume that assets for sale are lemons; therefore, they will offer lower prices for all used assets. Sellers have an incentive to offer lemons, since they will be paid lemons prices for both lemons and more desirable assets. Therefore, buyers' assumptions are validated. If sellers have superior assets for sale, the incentive will be to sell these privately to obtain a reasonable price for the asset. Used-asset prices will be less than the average price of the stock of assets because of the disproportionate number of lemons for sale and because buyers will assume all used assets are lemons. The existence of asymmetric information between buyer and seller is crucial in this hypothesis. Depreciation would be overestimated if inferred from used-asset prices because the average price for assets in the stock would be underestimated.

Hulten and Wykoff argue that most assets are sold in markets with professional buyers who frequently buy and sell assets. Furthermore, these buyers, who have the knowledge and expertise

25. Triplett (1989, 128) defines a hedonic function as a relation between prices of varieties or models of heterogeneous goods—or services—and the quantities of characteristics contained in them. A Box-Cox model is a model that transforms the form of the variables in the model (Box and Cox 1964).

26. The authors who have addressed the question of sample bias in used-asset-price studies include Triplett (1996), DeLeeuw (1981), Hulten and Wykoff (1981b) and Boskin, Robinson, and Roberts (1989).

27. An example illustrating this point is given in footnote 19.

to identify lemons, are not affected by asymmetric information. Hulten and Wykoff tested for the existence of a lemons bias by comparing the depreciation profiles of assets that might have a lemons bias to an asset that arguably would not (heavy construction equipment). Heavy construction equipment is commonly sold at the end of a construction project and repurchased at the beginning of the next construction project. They found that the depreciation profiles for assets possibly with and without a lemons bias were both approximately geometric; therefore, they concluded that the lemons bias is unimportant in depreciation estimates.

Changes in tax laws, interest rates, and other economic conditions might affect the value of secondhand assets independently of any sample bias problems. For example, changes in allowable tax depreciation taken for corporate income tax purposes may change the prices that businesses are willing to pay for used assets. Changes in interest rates may affect the cost of borrowing to finance asset acquisition. Finally, demand conditions determine whether businesses are expanding or contracting, affecting both the demand for and supply of used assets. Obsolescence can also affect used-asset prices, as, for example, discussed above in the context of the energy crisis.²⁸

If changes in tax laws, interest rates, and other economic conditions significantly affect the value of secondhand assets, age-price profile or retirement patterns would change over time unless these changes are counterbalanced by offsetting effects. The question of whether the age-price profile or retirement patterns change over time has been discussed in the context of several empirical studies. Hulten and Wykoff (1981a, 1981b) tested the stability of the age-price profiles for office buildings, one of their largest samples. In almost all cases, estimates of the rate of depreciation were stable over time. Hulten, Robertson, Wykoff, and Shriver reached similar conclusions. Hulten, Robertson, and Wykoff (1989) looked at the effect of the energy crisis on used-asset prices for four types of used machine tools and five types of construction equipment. Shriver (1986b) looked at the rates of economic depreciation for industrial machinery and equipment in 3 different years with different demand characteristics. Cockburn and Frank (1992) found in a study of oil tankers that economic depreciation or decay was largely unaffected by economic conditions, but that retirements are quite sen-

sitive to economic conditions. Powers (1988), using book values, found that retirements for two-digit Standard Industrial Classification manufacturing industries exhibit a cyclical pattern. Taubman and Rasche (1971) and Feldstein and Rothschild (1974) discuss in general the impact of variables that change over time on age-price profiles. Taubman and Rasche (1969) in their study of office buildings found that changes in rents and tax laws had little effect on depreciation rates. In most cases, studies have not been done on different vintages of assets to determine whether age-price profiles do significantly change over time. Therefore, there is no definitive answer to the question of whether age-price profiles shift over time.

In addition, used-asset prices can reflect the fact that it may be difficult for buyers to separate the value of an asset such as a building from the value of the land on which it sits (the shopping-mall effect). The building may be incorrectly valued because of the value of the site or the land on which it sits.

Summary of research based on used-asset prices

Most of the used-asset studies do not directly deal with possible biases arising from samples, such as those discussed in the previous section (see table 2). In any case, the extent and the net direction of the possible biases are unclear. Four studies—Hulten-Wykoff, Koumanakos-Hwang, Oliner (1996), and Perry-Glyer—did adjust used-asset prices downward to reflect zero valuation of retired assets in the original cohort. In addition, the Cockburn-Frank paper illustrates how misleading it can be to estimate patterns of depreciation without accounting for retirements.

Of the two studies covering a large number of asset classes or industries, Hulten and Wykoff's has already been discussed. The Koumanakos-Hwang study of Canadian assets, the other study, bears a number of similarities to the Hulten-Wykoff study. It used a modified Box-Cox model to estimate depreciation for up to 27 different asset classes for manufacturing and nonmanufacturing separately. Depreciation for building construction and machinery and equipment for up to 43 different industries were calculated from a weighted average of the depreciation functions of individual assets. Some depreciation estimates were done for engineering construction as well. Koumanakos and Hwang conclude that depreciation patterns for individual assets are approximately geometric for both the manufacturing

28. For example, see footnote 7.

and nonmanufacturing sectors, with the degree of convexity more pronounced in the manufacturing sectors.²⁹ At the industry level, they conclude that the geometric pattern is preferred because it is the simplest pattern that gives a best approximation of the actual data.

The 15 papers on motorized vehicles (automobiles, pickup trucks, or farm tractors) can be distinguished by whether a depreciation pattern was assumed, whether the validity of such assumptions were tested econometrically, and whether any general statements were made about the pattern of the used asset-price profile observed or estimated.

Ackerman (1973) and Cagan (1971) for automobiles and Griliches (1960) for farm tractors assumed a geometric rate of depreciation, and in the case of Ackerman and Cagan, the assumption allowed for the separate identification of quality. None of these models were tested to see if the assumption of a geometric rate was appropriate.

Seven studies—one for trucks (Hall 1971), three for automobiles (Ohta and Griliches 1975; Wykoff 1970, 1989), and three for farm tractors (Penson, Hughes, and Nelson 1977; Penson, Romain, and Hughes 1981; Perry and Glycer 1988)—tested the appropriateness of a geometric assumption. With the exception of the two studies by Penson and others and one by Perry-Glycer, these studies concluded that although the assumption of a geometric rate was not proven, that a geometric rate, in the words of Hall (1971, 258), “is probably a reasonable approximation for most purposes.” Perry and Glycer found in their econometric model, which excluded tractor care and usage, that depreciation rates were constant over time. However, they found that depreciation rates were not constant when these variables were omitted. In their two studies, Penson and others estimated from engineering data that the pattern of productive-capacity depreciation for farm tractors lies in between straight-line and one-hoss-shay. However, if productive-capacity depreciation is one-hoss-shay, depreciation as defined in this article follows a concave, or bowed-away-from-the-origin, pattern.³⁰ Some researchers found that the first-year decline in asset prices was significantly greater than the de-

cline suggested by a geometric rate (Wykoff 1970; Ackerman 1973), but question whether listed prices accurately represent transactions prices. Ohta and Griliches (1975, 362), though concluding that a geometric assumption is “not too bad an assumption ‘on the average,’” conclude without empirically testing that actual depreciation occurs at a faster rate with age. There is evidence among the other studies that geometric rates may change over time (Ackerman 1973; Perry and Glycer 1988; Wykoff 1970), but there is no conclusive econometric evidence or consensus about the direction of the change. None of the motorized-vehicle studies performed econometric tests for the existence of other than a geometric depreciation pattern.

Three studies—one for trucks (OTA 1991b) and two for automobiles (OTA 1991a; Ramm 1970)—calculated or econometrically estimated used-asset age-price profiles, but did not report any attempts to determine the general shape of the depreciation pattern. However in each study, in general the age-price profile initially declined more rapidly than it would under a straight-line pattern of depreciation.

Lee (1978) and Cockburn and Frank (1992) studied ships. The Lee study looked at data on the insured value of Japanese fishing boats as a proxy for new- and used-asset prices. The estimated depreciation pattern was geometric in some cases (in general for steel boats) and not in others (in general for wooden boats). Cockburn and Frank concluded that a geometric pattern is an appropriate pattern for surviving-asset age-price profiles, but with proper accounting for retirements as a component of economic depreciation, the pattern of economic depreciation is clearly not geometric. Neither study considered or tested for other commonly used depreciation patterns, such as patterns arising from straight-line or one-hoss-shay efficiency patterns.

Beidleman (1976) and Oliner (1996) estimated depreciation for machine tools or assets sold by machine-tool builders. Beidleman’s study of sales by machine-tool builders, which are primarily machine tools, concluded that a negative exponential function was best able to explain asset-value variation in the majority of cases.³¹ This supports the assumption of a geometric depreciation pattern. Beidleman tested linear, exponential, reciprocal, polynomial, and parabolic functions as possible alternatives. Oliner concluded that when used-machine-tool prices are adjusted

29. A convex depreciation pattern is bowed towards the origin in a graph of price versus age.

30. Productive-capacity depreciation is measured by the additions to productive capacity required to maintain productive capacity at a constant level. If an asset does not decline in efficiency or productive services yielded over its lifetime until it is retired, (the lightbulb example), depreciation as defined in this article still occurs because as the asset ages, it is getting closer to its retirement (or light-going-out) date. The present value of future declines in efficiency increases or depreciation occurs even if there is no current decline in efficiency.

31. A negative exponential function estimates a geometric rate of depreciation.

for retirements, the pattern of depreciation is not geometric. However, based on the evidence from machine tools, actual depreciation for metalworking machinery is more rapid during the early years and the pattern more accelerated than BEA formerly had assumed.

Two studies—Chinloy (1977) and Malpezzi, Ozanne, and Thibodeau (1987)—looked at residential real estate and one study—Taubman and Rasche (1969)—looked at commercial real estate. The Chinloy study of sale prices for residential real estate concluded that the hypothesis of a geometric rate of depreciation could not be rejected. The Malpezzi-Ozanne-Thibodeau study on the other hand concluded that the decline in the value of owner-occupied housing with age occurs at an increasing, not a constant, rate but that rents for residential real estate decline with age of the property at a nearly constant or geometric rate. The Taubman-Rasche study of office buildings, in contrast to most other studies of depreciation, concluded that depreciation occurs at a rate slower than straight-line and, in fact, that a depreciation pattern arising from a one-hoss-shay efficiency pattern is a more appropriate pattern. This result may be due to the existence of relatively long-term, fixed-price leases for office buildings.³²

Three studies measure depreciation of computers or computer peripheral equipment—two by Oliner (1992, 1993) and one by Jorgenson and Stiroh (1994). All three studies assume that the efficiency of assets in this category is constant over time or best described by a one-hoss-shay pattern, but Oliner includes a measure of partial depreciation. Oliner defines partial depreciation as the effect of age on price that is not captured by a hedonic equation and that is unmeasured, because researchers are unable to identify all relevant characteristics. The pattern of partial depreciation appears to be approximately geometric for all the computer peripheral equipment studied, except for disk drives. The pattern of partial depreciation for mainframe computers was decidedly not geometric, because the values of mainframes did not always consistently decline with age. The issue of the appropriate measure of depreciation for computers will be discussed in the section “[The New BEA Depreciation Estimates.](#)”

Shriver's study of machinery and equipment (1988) concluded that used-asset values decline

at a rate that is faster than straight-line depreciation but slower than double-declining-balance depreciation.

The Office of Tax Analysis study of scientific instruments (1990) did not report any attempts to determine the general shape of the depreciation pattern. However, the age-value profile appears to approximate a geometric pattern, even after adjusting for retirements.

Other research

The major approaches used in nonprice-based research on depreciation include a retirement approach, an investment approach, a polynomial benchmark approach, and a factor-demand, or production-model, approach. In addition, there are a number of studies whose primary emphasis is on the estimation of retirement patterns or useful lives.

With a retirement approach, retirements are estimated. These retirements are then applied to an assumed depreciation pattern to derive an estimate of actual depreciation. Former BEA methodology is an example of such an approach, modified with adjustments to reflect natural disasters. Retirements depended upon service lives and the assumed Winfrey distribution of retirements around the mean retirement age. The pattern of depreciation was assumed to be straight-line.

With an investment approach, an investment model is used to estimate depreciation or the pattern of depreciation. Robert Coen (1975, 1980) used a neoclassical investment model to determine which of 4 possible loss-of-efficiency patterns—one-hoss-shay, straight-line, geometric, or sum-of-the-years'-digits—best explained investment flows into 21 manufacturing industries. A one-hoss-shay loss-of-efficiency pattern translates into a depreciation pattern that is less accelerated than straight-line; the other three patterns translate into depreciation patterns that are convex, or bowed towards the origin. For equipment, the best results obtained were from the following patterns: A geometric pattern in 11 industries, a straight-line pattern in 7 cases, and a sum-of-years'-digits in 3 cases. For structures, the best results obtained were from the following patterns: A geometric pattern in 11 industries, a straight-line pattern in 5 industries, a sum-of-years'-digits in 3 industries, and a one-hoss-shay pattern in 2 industries. Coen (1980, 125) concludes “that something approximating geometric decay rather than straight-line loss of efficiency is typical of capital used in manufacturing.”

³² Leases are payments for office building services, most likely reflecting productive capacity (see footnote 30), not the present value of future (post-lease) declines in efficiency.

The polynomial benchmark approach begins with the perpetual inventory method of estimating capital stock:

$$K_t = I_t + (1 - \delta)K_{t-1},$$

where K_t is capital stock, I_t is gross investment, and δ is the constant rate of depreciation under a geometric assumption. By repetitively substituting this expression for prior periods' capital stock, an expression is derived that depends only on gross investment, δ , and the initial or benchmark capital stock and the final capital stock, K_t . A parametric estimate for δ can then be determined with an econometric model of investment and capital stock. These studies routinely assume that the pattern of depreciation is geometric. They do not address the question of an appropriate pattern for depreciation, only the appropriate geometric rate.

The factor-demand, or production-model, approach estimates a rate of depreciation affecting capital entering into the demand for factors or the production function directly. Nadiri and Prucha (1996) looked at the demands for labor and materials in the manufacturing sector that depend on the level of output and the capital stock of research and development (R&D) and other types of capital. These two factor-demand equations plus the perpetual inventory equations for R&D and other types of capital are used in a system of equations to estimate the geometric rate of depreciation for R&D and other types of capital. Doms (1996) substituted an investment stream into a value-added production function for a group of steel plants to estimate the efficiency pattern of assets. He estimated three different efficiency schedules—one assuming a geometric pattern, one using a Box-Cox model, and one using a polynomial model. Even though the Box-Cox and polynomial models can exhibit other than a geometric pattern of depreciation, in both cases the best model fits were obtained from geometric-like patterns.

There were a number of studies related to depreciation undertaken by the Treasury Department.³³ Forty-six studies of survival probabilities were undertaken by the Office of Industrial Economics over the 1971 to 1981 period. Of these studies, 27 provide information on useful lives. These studies provide estimates of the actual retention periods for the assets covered. It is possible that more information from these studies could be incorporated into other depreciation

studies. Later, under the auspices of the Office of Tax Analysis, a used-asset-price approach was employed. These studies, listed in table 2, are discussed in the previous section.

The New BEA Depreciation Estimates

Empirical basis for the new BEA methodology: A summary

The largest and most complete studies of depreciation are those of Hulten and Wykoff and Koumanakos and Hwang, followed by that of Coen. Hulten and Wykoff (1981a, 1981b) and Koumanakos and Hwang (1988) concluded that the pattern of geometric depreciation is approximately geometric. Coen (1975) concluded that a geometric pattern provided the best fit in the majority of manufacturing industries studied. In addition, he concluded that a convex pattern (geometric being a special case) provided the best fit for all manufacturing industries for equipment and all but two manufacturing industries for structures.

The results of the other depreciation studies based on used-asset prices in table 2 in general support an accelerated pattern of depreciation. Most conclude that a geometric pattern is preferred, none determine that overall a straight-line pattern is the best choice, and with the exception of computers, only a few maintain that some other pattern is the appropriate pattern.

The Bureau of Labor Statistics (BLS) uses a hyperbolic efficiency function that is concave, or bowed away from the origin, rather than a geometric efficiency function that is convex, or bowed towards the origin (Harper 1982; Gullickson and Harper 1987; BLS 1983, n.d.).³⁴ BLS tested their hyperbolic efficiency function with the Hulten-Wykoff Box-Cox estimated age-price functions by constructing the age-price function corresponding to their hyperbolic efficiency function. BLS found there was no statistically significant difference between the geometric and their hyperbolic form.³⁵ However, the maintained hypothesis of a hyperbolic age-price function that

34. The hyperbolic function is a general function whose special cases include the one-hoss-shay and straight-line cases. A hyperbolic function can also approximate a geometric function. The particular form of the hyperbolic function used by BLS is concave, being intermediate between one-hoss-shay and straight-line.

35. Because both the geometric and the hyperbolic efficiency functions have an age-price counterpart that is convex, or bowed towards the origin, the likelihood of there being no statistical difference between the age-price functions is increased. Note that under a geometric assumption, the efficiency function and the age-price function are identical and bowed towards the origin.

33. See Brazell, Dworin, and Walsh (1989) for a summary of 27 of these studies.

corresponds to a concave hyperbolic efficiency function was rejected.³⁶

One disadvantage of the hyperbolic function is that age-price functions estimated from a hyperbolic function (or alternatively, hyperbolic functions estimated from an age-price function) require an assumption to be made about a real discount rate. The geometric function does not require such an assumption.

Geometric depreciation as the default

There are several arguments for the adoption of a geometric pattern for depreciation as the default.³⁷ First, the empirical evidence is that a geometric depreciation pattern is a better approximation to reality than a straight-line pattern and is at least as good as any other pattern. Second, estimates of an appropriate default geometric rate of depreciation are readily available from Hulten and Wykoff (1981a, 1981b). Third, the geometric pattern is a simple default rule. Finally, the geometric pattern is one that can readily be used if and when a balance sheet or a production account is implemented by BEA, thereby minimizing future potential revisions.³⁸

BEA default geometric-depreciation rates

The new BEA rates of economic depreciation are listed in table 3. All assets except for computers and computer peripherals, nuclear fuel, autos, and missiles are depreciated at a geometric rate.

These rates are derived from the Hulten-Wykoff estimates. If new estimates of service lives have become available since the original Hulten-Wykoff research (Hulten and Wykoff 1981b; Wykoff and Hulten 1979), the geometric rate, δ , is recalculated from the earlier formula by substituting in the new service life:

$$\delta_{\text{new}} = \frac{R_{\text{old}}}{T_{\text{new}}},$$

36. As noted earlier in "Specifics of Hulten-Wykoff methodology," Hulten and Wykoff tested three age-price functions—one-hoss-shay, straight-line, and geometric. In each case, the maintained hypothesis was rejected.

37. As previously noted, a geometric pattern of depreciation will be used for all assets except for computers and computer peripherals, missiles, nuclear fuel, and autos.

38. This article contains only a brief explanation of this theoretical point. The most complete explanation is presented in Triplett (1997), but the reader should also refer to Jorgenson (1974, 1996). Triplett (1997, 31) discusses "the distinctions between the capital data needed for production analysis and the capital data needed for income and wealth accounting," concluding that "the crucial distinctions are between the wealth capital stock and the productive capital stock and between two related yet different declines in a cohort of capital goods as the cohort is employed in production—deterioration, the decline in productiveness or efficiency of the cohort, and depreciation, the decline in the cohort's value." Replacement is the term used by Jorgenson to describe the investment necessary to offset the effects of what Triplett calls deterioration. In general, only when depreciation is geometric is the value of replacements equal to depreciation. This is because under a geometric assumption, the efficiency function and the age-price function are identical.

or equivalently,

$$\delta_{\text{new}} = (T_{\text{old}}/T_{\text{new}})\delta_{\text{old}}.$$

Similarly, whenever BEA uses different service lives for different time periods, the geometric rate of depreciation, δ , varies and is recalculated with the above formula.

The formula above presumes that the declining-balance rate R is not changing. Recall the question previously discussed of whether age-price profiles or retirement patterns have been changing over time. In addition, since T 's or service lives were used to center the retirement distribution when the Hulten-Wykoff used-asset prices were adjusted to correct for censored-sample bias, it presumes that a "re-centering" on the new service life would not significantly affect the estimate of R .³⁹

Table 3 documents how the geometric rates of depreciation were calculated on the basis of the declining-balance rate and the service life of the asset as well as indicating the Hulten-Wykoff asset type. Hulten and Wykoff classified assets into one of three types—A, B or C (Hulten and Wykoff 1981b; Wykoff and Hulten 1979). Hulten and Wykoff had extensive data on type A assets. These data were used to estimate geometric rates of depreciation. For type B assets, there were some existing studies on depreciation, or some data existed. Hulten and Wykoff concluded that defensible estimates of the rate of geometric depreciation could not be generated based solely on the data. They used the results of empirical research by others—the treatment of depreciation by BEA, Dale Jorgenson, BLS, and Jack Faucett Associates (1973)—and their own judgement to determine the geometric rate of depreciation for type B assets on a case by case basis. For type C assets, Hulten and Wykoff had no data whatsoever. The average best-guess-assumption rates of declining-balance and service lives were used to calculate the geometric rate of depreciation as described in "Specifics of Hulten-Wykoff methodology" (Wykoff and Hulten 1979, 30–38).

Computers and computer peripherals, nuclear fuel, autos, and missiles

An alternative approach to estimating depreciation is used when detailed data are currently available or when a geometric pattern seems inappropriate.

For computers and computer peripherals, Oliner's studies provide a solid base for

39. This is one of the issues discussed in Hulten and Wykoff (1996).

Table 3.—BEA Rates of Depreciation, Service Lives, Declining-Balance Rates, and Hulten-Wyckoff Categories

Type of asset	Rate of depreciation	Service life (years)	Declining-balance rate	Hulten-Wyckoff category ¹	Type of asset	Rate of depreciation	Service life (years)	Declining-balance rate	Hulten-Wyckoff category ¹
Private nonresidential equipment					Other structures ²⁰ .....	.0227	40	.9100	A
Office, computing, and accounting machinery ² :					Equipment ²³ .....	.1500	11	1.6500	C
Before 1978	0.2729	8	2.1832	B	Durable goods owned by consumers²⁴				
1978 and later .....	.3119	7	2.1832	B	Furniture, including mattresses and bedsprings .....	.1179	14	1.6500	B
Communications equipment:					Kitchen and other household appliances .....	.1500	11	1.6500	C
Business services ³ .....	.1500	11	1.6500	C	China, glassware, tableware, and utensils ²⁵ .....	.1650	10	1.6500	C
Other industries ³ .....	.1100	15	1.6500	C	Other durable house furnishings ²⁵ .....	.1650	10	1.6500	C
Instruments ⁴ .....	.1350	12	1.6203	C	Video and audio products, computers and peripheral equipment, and musical instruments ²⁶ .....	.1833	9	1.6500	B
Photocopy and related equipment ⁵ .....	.1800	9	1.6203	C	Jewelry and watches ²⁵ .....	.1500	11	1.6500	C
Nuclear fuel ⁶		4			Ophthalmic products and orthopedic appliances ²⁵ .....	.2750	6	1.6500	C
Other fabricated metal products ⁷ .....	.0917	18	1.6500	C	Books and maps ²⁵ .....	.1650	10	1.6500	C
Steam engines and turbines ⁸ .....	.0516	32	1.6500	C	Wheel goods, sports and photographic equipment, boats, and pleasure aircraft ²⁷ .....	.1650	10	1.6500	C
Internal combustion engines ⁸ .....	.2063	8	1.6500	C	Autos ¹¹				
Metalworking machines ⁹ .....	.1225	16	1.9600	A	Other motor vehicles ²⁸ .....	.2316	8	1.8530	A
Special industrial machinery, n.e.c. .....	.1031	16	1.6500	C	Tires, tubes, accessories, and other parts ²⁸ .....	.6177	3	1.8530	A
General industrial, including materials handling equipment .....	.1072	16	1.7150	A	Government nonresidential equipment²⁹				
Electrical transmission, distribution, and industrial apparatus .....	.0500	33	1.6500	C	Federal:				
Trucks, buses, and truck trailers:					National defense:				
Local and interurban passenger transit ¹⁰ .....	.1232	14	1.7252	A	Aircraft:				
Trucking and warehousing; and auto repair, services, and parking ¹⁰ .....	.1725	10	1.7252	A	Airframes:				
Other industries .....	.1917	9	1.7252	A	Bombers .....	.0660	25	1.6500	C
Autos ¹¹					F-14 type .....	.0868	19	1.6500	C
Aircraft:					Attack, F-15 and F-16 types .....	.0825	20	1.6500	C
Transportation by air, depository institutions, and business services:					F-18 type .....	.1100	15	1.6500	C
Before 1960 .....	.1031	16	1.6500	C	Electronic warfare .....	.0717	23	1.6500	C
1960 and later .....	.0825	20	1.6500	C	Cargo and trainers .....	.0660	25	1.6500	C
Other industries:					Helicopters .....	.0825	20	1.6500	C
Before 1960 .....	.1375	12	1.6500	C	Engines .....	.2750	6	1.6500	C
1960 and later .....	.1100	15	1.6500	C	Other:				
Ships and boats .....	.0611	27	1.6500	B	Before 1982 .....	.1179	14	1.6500	C
Railroad equipment .....	.0589	28	1.6500	C	1982 and later .....	.1650	10	1.6500	C
Household furniture and fixtures ¹² .....	.1375	12	1.6500	C	Missiles: ³⁰				
Other furniture ¹² .....	.1179	14	1.6500	C	Strategic		20		
Farm tractors ¹³ .....	.1452	9	1.3064	A	Tactical		15		
Construction tractors ¹³ .....	.1633	8	1.064	A	Torpedoes		15		
Agricultural machinery, except tractors .....	.1179	14	1.6500	C	Fire control equipment		10		
Construction machinery, except tractors .....	.1550	10	1.5498	A	Space programs		20		
Mining and oil field machinery .....	.1500	11	1.6500	C	Ships:				
Service industry machinery:					Surface ships .....	.0550	30	1.6500	C
Wholesale and retail trade ¹⁴ .....	.1650	10	1.6500	C	Submarines .....	.0660	25	1.6500	C
Other industries ¹⁴ .....	.1500	11	1.6500	C	Government furnished equipment:				
Household appliances ¹⁵ .....	.1650	10	1.6500	C	Electrical .....	.1834	9	1.6500	C
Other electrical equipment ¹⁶ .....	.1834	9	1.6500	C	Propulsion .....	.0825	20	1.6500	C
Other ⁴ .....	.1473	11	1.6230	C	Hull, mechanical .....	.0660	25	1.6500	C
Private nonresidential structures					Ordnance .....	.1650	10	1.6500	C
Industrial buildings .....	.0314	31	.9747	A	Other .....	.1650	10	1.6500	C
Mobile offices ¹⁷ .....	.0556	16	.8892	A	Vehicles:				
Office buildings ¹⁷ .....	.0247	36	.8892	A	Tanks, armored personnel carriers, and other combat vehicles .....	.0825	20	1.6500	C
Commercial warehouses ¹⁷ .....	.0222	40	.8892	A	Noncombat vehicles:				
Other commercial buildings ¹⁷ .....	.0262	34	.8892	A	Trucks .....	.2875	6	1.7252	C
Religious buildings .....	.0188	48	.9024	C	Autos ³¹				
Educational buildings .....	.0188	48	.9024	C	Other .....	.2465	7	1.7252	C
Hospital and institutional buildings .....	.0188	48	.9024	B	Electronic equipment:				
Hotels and motels ¹⁸ .....	.0281	32	.8990	B	Computers and peripheral equipment ³²				
Amusement and recreational buildings ¹⁸ .....	.0300	30	.8990	B	Electronic countermeasures .....	.2357	7	1.6500	C
All other nonfarm buildings ¹⁸ .....	.0249	38	.8990	B	Other .....	.1650	10	1.6500	C
Railroad replacement track ¹⁹ .....	.0275	38	.9480	C	Other equipment:				
Other railroad structures ¹⁹ .....	.0166	54	.9480	C	Medical .....	.1834	9	1.6500	C
Telecommunications ¹⁹ .....	.0237	40	.9480	C	Construction .....	.1550	10	1.5498	C
Electric light and power ¹⁹ :					Industrial .....	.0917	18	1.6500	C
Before 1946 .....	.0237	40	.9480	C	Ammunition plant .....	.0868	19	1.6500	C
1946 and later .....	.0211	45	.9480	C	Atomic energy .....	.1375	12	1.6500	C
Gas ¹⁹ .....	.0237	40	.9480	C	Weapons and fire control .....	.1375	12	1.6500	C
Petroleum pipelines ¹⁹ .....	.0237	40	.9480	C	General .....	.1650	10	1.6500	C
Farm ²⁰ .....	.0239	38	.9100	C	Other .....	.1375	12	1.6500	C
Mining exploration, shafts, and wells:					Nondefense:				
Petroleum and natural gas ²¹ :					General government:				
Before 1973 .....	.0563	16	.9008	C	Computers and peripheral equipment ³²				
1973 and later .....	.0751	12	.9008	C	Aerospace equipment .....	.1100	15	1.6500	C
Other ²¹ .....	.0450	20	.9008	C	Vehicles .....	.4533	5	2.2664	C
Local transit ²² .....	.0237	38	.8990	C	Other .....	.1650	10	1.6500	C
Other ²² .....	.0225	40	.8990	C	Enterprises:				
Residential capital (private and government)					U.S. Postal Service:				
1-to-4-unit structures-new ²⁰ .....	.0114	80	.9100	A	Computers and peripheral equipment ³²				
1-to-4-unit structures-additions and alterations ²⁰ .....	.0227	40	.9100	A	Vehicles .....	.3238	7	2.2664	C
1-to-4-unit structures-major replacements ²⁰ .....	.0364	25	.9100	A	Other .....	.1100	15	1.6500	C
5-or-more-unit structures-new ²⁰ .....	.0140	65	.9100	A	Tennessee Valley Power Authority .....	.0500	33	1.6500	C
5-or-more-unit structures-additions and alterations ²⁰ .....	.0284	32	.9100	A	Bonnevill Power Authority .....	.0500	33	1.6500	C
5-or-more-unit structures-major replacements ²⁰ .....	.0455	20	.9100	A	Other .....	.0660	25	1.6500	C
Mobile homes ²⁰ .....	.0455	20	.9100	A	State and local:				
					Power tools, lawn and garden equipment .....	.1650	10	1.6500	C

estimating depreciation. His depreciation estimates are therefore used. For personal computers, a category of computers for which there are no studies of depreciation, the depreciation-rate estimate is proxied from a computer category he did study (Oliner 1992, 1993).

BEA has information on automobiles from which it has determined depreciation figures for both private nonresidential equipment and consumer durable autos.

For nuclear fuel, a geometric pattern does not seem appropriate. Nuclear fuel is assumed to depreciate at a straight-line rate, not a geometric rate, to reflect the pattern of rotation and replacement of nuclear fuel in the core. A Winfrey S-3 pattern is used to determine retirements.⁴⁰

BEA has decided to continue to use a straight-line pattern of depreciation and Winfrey retire-

ment patterns for missiles, because of the special characteristics of this category of assets.

Conclusion

The improvement in the methodology used in figuring depreciation is justified on empirical and theoretical grounds. The recent article “Improved Estimates of Fixed Reproducible Tangible Wealth, 1929–95” in the SURVEY OF CURRENT BUSINESS (Katz and Herman 1997) presents and discusses the new capital stock estimates. Results of current and future research can be used to refine and modify the rates listed in table 3, to further question the specific form of the depreciation profile, to adjust for quality differences across vintages, and to update service lives.

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Table 3.—BEA Rates of Depreciation, Service Lives, Declining-Balance Rates, and Hulten-Wyckoff Categories—Continued

Type of asset	Rate of depreciation	Service life (years)	Declining-balance rate	Hulten-Wyckoff category ¹	Type of asset	Rate of depreciation	Service life (years)	Declining-balance rate	Hulten-Wyckoff category ¹
Miscellaneous metal products .....	.0917	18	1.6500	C	Aircraft .....	.1100	15	1.6500	C
Agricultural machinery and equipment .....	.1833	9	1.6500	C	Railroad equipment .....	.0590	28	1.6500	C
Construction machinery and equipment ....	.1650	10	1.6500	C	Sporting and athletic goods .....	.1650	10	1.6500	C
Metalworking machinery and equipment ...	.1031	16	1.6500	C	Photographic and photocopying equipment .....	.1650	10	1.6500	C
General purpose machinery and equipment .....	.1500	11	1.6500	C	Mobile classrooms, mobile offices, etc .....	.1650	10	1.6500	C
Special industry machinery and equipment .....	.1500	11	1.6500	C	Musical instruments .....	.1834	9	1.6500	C
Integrating and measuring instruments .....	.1375	12	1.6500	C	Other equipment .....	.1375	12	1.6500	C
Motors, generators, motor generator sets .....	.0516	32	1.6500	C	Government nonresidential structures ³³				
Switchgear and switchboard equipment ....	.0500	33	1.6500	C	Federal, State and local:				
Electronic components and accessories ....	.1833	9	1.6500	C	National defense:				
Miscellaneous electrical machinery .....	.1375	12	1.6500	C	Buildings:				
Calculating and accounting machines .....	.2357	7	1.6500	C	Industrial .....	.0285	32	.9100	C
Typewriters .....	.2357	7	1.6500	C	Educational .....	.0182	50	.9100	C
Computers and peripheral equipment					Hospital .....	.0182	50	.9100	C
Machine shop products .....	.2063	8	1.6500	C	Other .....	.0182	50	.9100	C
Wood commercial furniture .....	.1179	14	1.6500	C	Nonbuildings:				
Metal commercial furniture .....	.1179	14	1.6500	C	Highways and streets .....	.0152	60	.9100	C
Household appliances .....	.1500	11	1.6500	C	Conservation and development .....	.0152	60	.9100	C
Home electronic equipment .....	.1500	11	1.6500	C	Sewer systems .....	.0152	60	.9100	C
Motor vehicles .....	.1650	10	1.6500	C	Water systems .....	.0152	60	.9100	C
Motorcycles .....	.1650	10	1.6500	C	Other .....	.0152	60	.9100	C

1. This column refers to Hulten-Wyckoff categories (Hulten and Wyckoff 1981b; Wyckoff and Hulten 1979). Type A assets are types of assets for which Hulten and Wyckoff specifically estimated age-price profiles. Type B assets are those for which they used empirical research by others and their judgement to estimate the depreciation rate. Type C assets are assets for which they estimated an average declining-balance rate from data for all type A and B assets.
 2. The depreciation rate for this type of asset is not used for computers and peripheral equipment. Depreciation rates for these assets are taken from Oliner as described in the text.
 3. The declining-balance rate is from the Hulten-Wyckoff communications equipment aggregate.
 4. Instruments and other private nonresidential equipment, called producer durable equipment by Hulten-Wyckoff, are classified by them as type C but appear to be type B as they were given a declining-balance rate of 1.6203.
 5. The declining-balance rate is from the Hulten-Wyckoff other producer durable equipment aggregate.
 6. The depreciation rates for nuclear fuel are based on a straight-line rate pattern and a Winfrey retirement pattern.
 7. The declining-balance rate is from the Hulten-Wyckoff fabricated metal products aggregate.
 8. The declining-balance rate is from the Hulten-Wyckoff engines and turbines aggregate.
 9. The depreciation rate and service life listed apply to nonmanufacturing industries; the service lives and depreciation rates used for manufacturing industries differ by industry. The Hulten-Wyckoff type of asset listed applies to all industries.
 10. The declining-balance rate is from the Hulten-Wyckoff trucks, buses, and truck trailer aggregate.
 11. Depreciation rates for autos are derived from data on new- and used-auto prices.
 12. The declining-balance rate is from the Hulten-Wyckoff furniture and fixtures aggregate.
 13. The declining-balance rate is from the Hulten-Wyckoff tractors aggregate.
 14. The declining-balance rate is from the Hulten-Wyckoff service industry machinery aggregate.
 15. The declining-balance rate is set to the Hulten-Wyckoff producer durable equipment default.
 16. The declining-balance rate is from the Hulten-Wyckoff electrical equipment (not elsewhere classified) aggregate.
 17. The declining-balance rate is from the Hulten-Wyckoff commercial aggregate.
 18. The declining-balance rate is from the Hulten-Wyckoff other private nonresidential structures aggregate, which

consists of buildings used primarily for social and recreational activities and buildings not elsewhere classified.
 19. The declining-balance rate is from the Hulten-Wyckoff public utilities aggregate.
 20. The declining-balance rate is set to the Hulten-Wyckoff private nonresidential structures default.
 21. The declining-balance rate is from the Hulten-Wyckoff mining exploration, shafts, and wells aggregate.
 22. The declining-balance rate is from the Hulten-Wyckoff other private nonresidential structures aggregate, which consists of streets, dams and reservoirs, and sewer and water facilities.
 23. The declining-balance rate is set to the Hulten-Wyckoff producer durable equipment default.
 24. For all consumer durables except for motor vehicles and parts and computing equipment, the declining-balance rate is set to the Hulten-Wyckoff producer durable equipment default.
 25. The corresponding Hulten-Wyckoff consumer durables category is other.
 26. Depreciation rates for computers and peripheral equipment are taken from Oliner as described in the text of the article. The information listed applies to video and audio products and musical instruments. The corresponding Hulten-Wyckoff aggregate is radio and television receivers, recorders, and musical instruments. Radio and television receivers, recorders, and musical instruments are classified by Hulten-Wyckoff as type B but are indistinguishable from type C as their declining-balance rate is 1.65.
 27. The corresponding Hulten-Wyckoff consumer durables category is wheel goods, durable toys, sports equipment.
 28. The declining-balance rate is from the Hulten-Wyckoff motor vehicles and parts aggregate. The declining-balance rate for this category is calculated under the assumption that the service life for consumer durables motor vehicles and parts is equal to the service life for producer durable equipment autos previously used by BEA.
 29. For most government nonresidential equipment, the declining-balance rate is set to the Hulten-Wyckoff producer durable equipment default. Where possible, the rate is set equal to the rate used for comparable equipment in the private sector.
 30. Missiles are depreciated using straight-line patterns of depreciation and a Winfrey retirement pattern.
 31. Depreciation rates for government-owned autos are derived from data on autos that are privately owned.
 32. Depreciation rates for these assets are taken from Oliner as described in the text of the article.
 33. For all government nonresidential structures, the declining-balance rate is set to the Hulten-Wyckoff private nonresidential structures default.

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The International Investment Position of the United States in 1996

By Russell B. Scholl

Harlan W. King directed the preparation of the estimates; Christopher A. Gohrband prepared several of the accounts with the assistance of Dena A. Holland; Douglas B. Weinberg prepared the direct investment accounts at current cost.

THE NET international investment position of the United States at yearend 1996 was $-\$870.5$ billion with direct investment valued at the current cost of tangible assets, and it was $-\$831.3$ billion with direct investment valued at the current stock-market value of owners' equity (table A, chart 1). For both measures, the value of foreign assets in the United States continued to exceed the value of U.S. assets abroad. However, for the direct investment component of the position valued on either basis, U.S. assets abroad continue to exceed foreign assets in the United States.

The net position on both bases became more negative as a result of large net capital inflows to the United States in 1996; valuation changes nearly offset each other (table B). A negative adjustment for net exchange rate changes mainly represented translation losses in U.S. assets denominated in Western European currencies and the Japanese yen, as these currencies declined against the U.S. dollar. A positive price change reflected a larger price appreciation in U.S. portfolio and direct investments in foreign stocks

than in corresponding foreign investments in U.S. stocks. Stock prices in all the major world markets except Japan's advanced strongly.

In 1996, U.S. assets abroad increased strongly, as large private capital outflows were augmented by substantial price appreciation in foreign

Table A.—Summary Components of the U.S. Net Position

[Billions of dollars]

	1995	1996
Net position:		
At current cost	-687.7	-870.5
At market value	-637.5	-831.3
U.S. Government and foreign official assets	-420.5	-561.8
Direct investment:		
At current cost	229.8	241.7
At market value	280.0	281.0
U.S. and foreign securities and U.S. currency	-526.8	-692.3
Bank- and nonbank-reported claims and liabilities	29.8	141.8

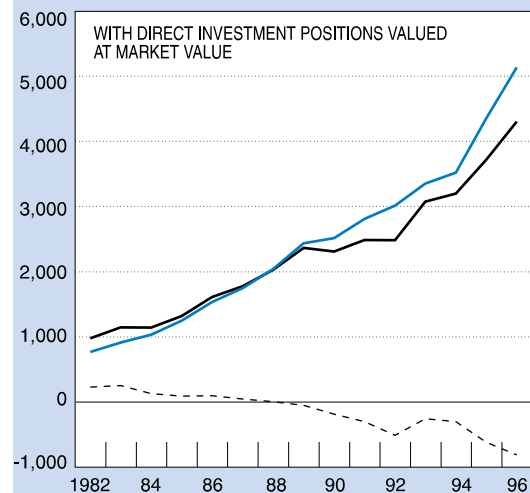
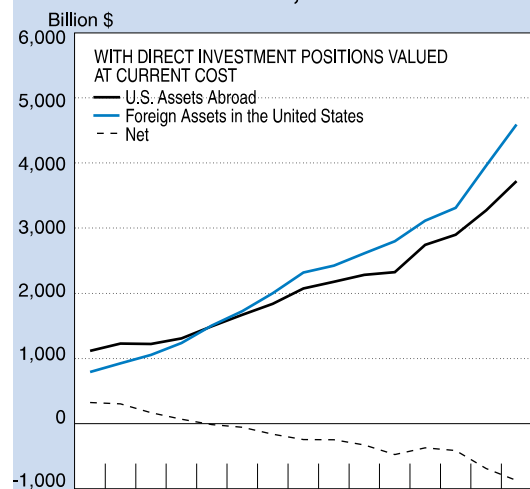
Table B.—Changes in the Net International Investment Position, 1996

[Billions of dollars]

	At current cost	At market value
Total change	-182.8	-193.8
Capital flows	-195.1	-195.1
Price changes	32.0	39.1
Exchange rate changes	-22.2	-46.3
Other valuation changes	2.4	8.6

CHART 1

Net International Investment Position of the United States, 1982-96



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

stocks. U.S. banks and nonbanking concerns lent heavily to overseas banks and international bond mutual funds, especially during a surge in overseas demand for dollar loans in the second half of the year. U.S. direct investment abroad on a current-cost basis was boosted by record capital outflows, including record reinvested earnings from widespread growth in overseas affiliates' earnings. On a market-value basis, the direct-investment increase was augmented by a large increase in owners' equity as a result of widespread advances in overseas stock prices; partly offsetting were currency translation losses, primarily in European affiliates. The market value of U.S. portfolio holdings of foreign securities rose not only because of the advance in stock prices overseas, but also because of strong U.S. net purchases of foreign stocks and bonds.

Foreign assets in the United States increased mainly as a result of record capital inflows that included large net foreign purchases of U.S. Treasury, corporate, and federally-sponsored agency bonds, a large increase in foreign direct investment, and a large increase in foreign official assets. Foreign demand for U.S. bonds accelerated through the year; demand

was buoyed by a substantial widening in the differential between U.S. and foreign long-term interest rates, a second-half recovery in U.S. bond prices, and widespread strength of the U.S. dollar in exchange markets throughout the year. The foreign direct investment buildup reflected continued growth in foreign acquisitions of U.S. businesses and record reinvested earnings, as the sustained U.S. economic growth further strengthened affiliates' earnings. On a market-value basis, the direct-investment buildup also reflected the strong rise in U.S. stock prices. Foreign portfolio holdings of U.S. stocks also benefited from the rising U.S. stock market. These substantial increases in foreign private assets in the United States were augmented for the second straight year by a record buildup of foreign official assets, largely of U.S. Treasury securities.

This article presents the major changes in U.S. assets abroad and in foreign assets in the United States, including direct investment valued both at current cost and at market value. Tables 1, 2, and 3 at the end of the article present detailed estimates of the yearend position, showing a breakdown of the changes by account from 1995

Data Improvements

As is customary each July, the estimates of the U.S. international investment position incorporate new source data and methodological improvements that relate to the changes incorporated in the annual revision of the U.S. international transactions accounts. This year, the following changes are introduced:

- The estimates of U.S. holdings of foreign bonds and stocks are revised to incorporate the results of the U.S. Treasury Department's new benchmark survey of U.S. portfolio investment abroad as of March 1994. This survey is the first such survey in more than 50 years, and its completion represents a major milestone in the multi-year program for statistical improvement developed jointly by BEA, the Treasury Department, and the Federal Reserve Board.

Based on the survey results, BEA's previous estimates of holdings of foreign securities at yearend 1993 are raised by \$302.9 billion, to \$853.6 billion. Holdings of foreign stocks are raised by \$241.1 billion, to \$543.9 billion: The understatement was widespread and was especially large for British stocks; the only overstatement was in Asian stocks other than Japanese stocks. Holdings of foreign bonds increased \$62.0 billion, to \$309.7 billion: The understatement was widespread; the only overstatement was in Canadian bonds.

- Estimates of foreign holdings of U.S. currency appear for the first time in the international position accounts of the United States. With this addition, BEA closes what had grown into a sizable gap in coverage in the international investment position and international transactions accounts. Currency flows do not appear in the international accounts of most countries because of the difficulties of accurate measurement. The estimates were developed by the Federal Reserve Board.

The new estimates added \$209.6 billion to foreign assets in the United States. These holdings of U.S. currency are classified as unallocated in the area breakdown in table 2, in as much as no country detail is available.

- Estimates of the foreign direct investment position in the United States for 1992 (on both the current-cost and market-value bases) have been revised to incorporate data collected in BEA's 1992 benchmark survey of foreign direct investment in the United States. For years after 1992, the estimates have been revised by extrapolating the 1992 universe data on the basis of data collected in BEA's quarterly sample surveys for 1993-96 and by incorporating new or adjusted data from those surveys.

For yearend 1992, the incorporation of the data from the benchmark survey increased the position \$1.1 billion on the current-cost basis and \$2.0 billion on the market-value basis. No area breakdown for either basis is available; however, for the position at historical cost, small upward revisions were made to investments by Latin America and the Middle East, and small downward revisions were made to investments by the United Kingdom and Japan.

- Currency translation gains and losses have been removed from certain banking transactions in the international transactions accounts to provide a more accurate measure of U.S. banks' international activity; they are now classified more appropriately as valuation adjustments in the investment position accounts.

For a further explanation of these changes, see "U.S. International Transactions, Revised Estimates for 1974-96" in this issue.

to 1996, aggregate estimates by area for 1995–96, and historical estimates for 1982–96, respectively.

This issue also contains a companion article, “Direct Investment Positions for 1996: Country and Industry Detail.” The detailed estimates presented in that article are available only on a historical-cost basis.

Changes in U.S. Assets Abroad

Bank claims

U.S. banks’ claims increased \$96.0 billion, to \$864.1 billion, in 1996 (table C). The increase in claims was especially strong in the second half of the year, reflecting a surge in demand for dollar credits in the overseas interbank market and the step-up in foreign demand for U.S. securities. Most of the increase was accounted for by claims payable in dollars, which were augmented by a large increase in U.S. banks’ customers’ claims.

U.S. banks’ own claims payable in dollars increased \$68.3 billion, to \$600.7 billion, mostly reflecting an increase in claims on their own foreign offices and unaffiliated banks. Interbank lending was particularly strong to banks in Europe, where in the second half of the year, general credit demands were swelled by financing demands for mergers and acquisitions and for purchases of U.S. securities. Lending to banks in Canada and in Asia excluding Japan occurred mostly in the first half of the year. Stepped-up bank lending to Latin America reflected the improved credit standing of several countries. A substantial increase in claims on the Caribbean reflected increased lending to international bond mutual funds by U.S. securities dealers during the bond rally in the fourth quarter. Claims on Japan, though large, changed little, as moderate economic activity and the continued financial difficulties of Japanese banks limited demand.

U.S. banks’ customers’ claims payable in dollars increased \$26.8 billion, to \$182.3 billion, as the customers’ deposits at foreign banks increased to accommodate the rising overseas demand for dollar loans. In addition, customers continued

Table C.—U.S. Claims Reported by U.S. Banks at Yearend

	[Billions of dollars]	
	1995	1996
Total bank-reported claims	768.1	864.1
Bank own claims, payable in dollars	532.4	600.7
On unaffiliated foreign banks	101.6	113.5
On own foreign offices	307.4	342.5
On other foreigners	123.4	144.7
Bank customer claims, payable in dollars	155.5	182.3
Total claims payable in foreign currencies	80.2	81.1

to invest strongly in foreign commercial paper placed in the U.S. market.

U.S. banks’ foreign currency claims declined until the fourth quarter, when lending resumed and brought yearend total outstandings to \$81.1 billion, marginally higher than at the end of 1995.

Foreign securities

Between yearend 1995 and yearend 1996, U.S. holdings of foreign securities increased \$219.1 billion, to \$1,273.4 billion, as a result of strong net purchases and of large, widespread price appreciation in foreign stocks (table D). Partly offsetting these increases were exchange rate losses, mostly in securities denominated in Continental European currencies and the Japanese yen. These estimates incorporate the results of the new U.S. Treasury Department’s Benchmark Survey of U.S. Ownership of Foreign Long-term Securities as of March 31, 1994.¹ Based on this survey, a ranking by country of issue of U.S. foreign portfolio holdings is presented in table E.

In 1996, U.S. holdings of foreign stocks increased \$176.4 billion, to \$875.5 billion, as

1. For more information, see “U.S. International Transactions, Revised Estimates for 1974–96,” page 46.

Table D.—Changes in U.S. Holdings of Foreign Securities, 1996

[Billions of dollars]	
Total change	219.1
Net U.S. purchases	108.2
Price changes	118.6
Exchange rate changes	-7.7

Table E.—U.S. Holdings of Foreign Securities Ranked by Largest Holdings, as of March 31, 1994

[Billions of dollars]	
Investments in Foreign Stocks	
Total holdings	566.7
1 United Kingdom	99.7
2 Japan	99.4
3 Canada	39.7
4 Netherlands	38.1
5 Mexico	34.7
6 France	25.6
7 Germany	25.6
8 Switzerland	21.0
9 Hong Kong	17.5
10 Australia	16.9
Investments in Foreign Bonds	
Total holdings	303.6
1 Canada	68.5
2 Japan	31.8
3 Germany	22.1
4 United Kingdom	19.8
5 Italy	17.8
6 Mexico	16.8
7 France	16.7
8 Spain	10.7
9 Sweden	10.2
10 Australia	9.7

Source: The Treasury Department’s Benchmark Survey of U.S. Ownership of Foreign Long-Term Securities.

near-record U.S. net purchases of \$58.8 billion were augmented by \$117.8 billion in price appreciation (table F). During the year, stock prices in most foreign markets rose strongly in response to widespread economic growth and to declining short-term interest rates. Additional factors contributing to the increase in the U.S. position in foreign stocks were U.S. investor participation in the privatization issues of several countries, the recovery of stock prices in emerging countries, and the efforts of U.S. institutional investors to further diversify their portfolio investments. Investments, mostly in Japanese stocks, slowed in the second half of the year.

- Holdings of European stocks increased 30 percent, primarily as a result of U.S. net purchases of \$31.2 billion and price appreciation of \$75.5 billion. Exchange rate changes were offsetting: Substantial appreciation in holdings of British stocks due to the rise of the pound over the U.S. dollar was offset by the effects of depreciation in the holdings of Continental European stocks as a result of the depreciation of these currencies against the dollar. U.S. purchases of stocks were strongest from Britain, Germany, France, Switzerland, and Italy, where market prices advanced 6 to 26 percent (according to Morgan Stanley's international stock market indexes). U.S. purchases were spurred by merger and acquisition activity, the prospects of the European monetary union, and strong corporate profits.
- Holdings of Japanese stocks, which account for 14 percent of total U.S. holdings of foreign stocks, declined \$2.1 billion mostly as a result of the depreciation of the Japanese yen against the U.S. dollar. Net purchases of \$9.6 billion, mostly in the first half of the year

when Japanese stock prices rose, partly offset the exchange rate depreciation. In the second half, stock prices and U.S. purchases fell, reflecting growing concerns about the strength and sustainability of Japan's economic recovery and the continuing problems in its finance industry.

- Holdings of Canadian stocks increased \$19.7 billion, or 42 percent. The increase consisted of \$14.5 billion in price appreciation, \$3.5 billion in net purchases, and \$1.7 billion in exchange rate appreciation. Market prices in Canada rose 30 percent.
- Holdings of other countries' stocks, mostly emerging countries' stocks, increased as stock prices and investor confidence recovered from concerns arising from the Mexican financial crisis in 1994. Holdings of Latin American stocks increased \$8.7 billion, reflecting \$2.0 billion in price appreciation, \$3.6 billion in net purchases, and \$3.1 billion in exchange rate appreciation. U.S. investments were boosted by privatization sales in Brazil. All other stock holdings increased \$26.4 billion in price appreciation, \$5.4 billion in exchange rate appreciation, and \$10.9 billion in net purchases. Most of these increases occurred in the stocks of Asian emerging countries, particularly those of Hong Kong where prices advanced 30 percent.

U.S. holdings of foreign bonds increased \$42.7 billion, to \$398.0 billion, reflecting \$49.4 billion in net purchases that was partly offset by \$7.5 billion in exchange rate depreciation of European and Japanese bonds (table G). U.S. institutional investors in search of high-yielding assets absorbed a large volume of newly issued foreign dollar bonds in the U.S. market, including many noninvestment grade foreign issues. Foreign

Table F.—U.S. Holdings of Foreign Stocks by Major Area at Yearend

[Billions of dollars]

	1994	1995	1996
Total holdings	586.6	699.1	875.5
Western Europe	288.2	362.0	469.5
Of which: United Kingdom	108.8	137.6	185.4
France	26.7	31.3	42.8
Germany	27.3	31.7	40.4
Netherlands	41.8	52.9	64.8
Spain	13.0	17.7	22.8
Sweden	15.6	23.6	34.2
Switzerland	20.7	30.4	33.9
Canada	40.6	46.9	66.5
Japan	108.1	128.5	126.4
Latin America	37.9	32.0	40.7
Of which: Mexico	23.7	18.8	22.0
Other countries	111.8	129.7	172.4
Of which: Australia	19.3	21.8	26.1
Hong Kong	18.6	24.3	37.3

Table G.—U.S. Holdings of Foreign Bonds by Major Area at Yearend

[Billions of dollars]

	1994	1995	1996
Total holdings	303.1	355.3	398.0
Western Europe	127.4	155.8	167.1
Of which: United Kingdom	21.8	28.6	29.6
France	22.3	27.4	28.0
Germany	17.1	20.9	24.5
Italy	17.1	17.2	17.1
Netherlands	11.1	13.5	15.1
Spain	11.6	14.2	15.0
Sweden	10.0	12.3	13.1
Canada	65.0	73.8	79.2
Japan	28.0	32.7	34.0
Latin America	41.5	44.2	40.7
Of which: Mexico	16.4	17.7	20.3
Other countries	41.2	48.8	77.0
Of which: Australia	9.2	11.1	12.6

new issues, at \$52.4 billion, approached the 1993 record. Emerging countries in Latin America and Asia accounted for over 60 percent of the new issues, more than double their new issues in 1995. Europeans and Canadians continued as large borrowers, though not as large as in 1995, as long-term interest-rate differentials against borrowing dollars increased in most of these countries. Net U.S. trading in other foreign bonds amounted to net sales of \$3.0 billion. The widening interest-rate differential in favor of U.S. bonds slowed U.S. diversification into most foreign bonds, with the notable exception of British gilt-edged bonds. Net U.S. purchases from the United Kingdom became large in the second half of the year, when U.S. interest rates fell more than British rates.

U.S. direct investment abroad and other private assets

U.S. direct investment abroad at current cost increased \$86.5 billion, to \$970.8 billion; at market value, it increased \$222.6 billion, to \$1,534.6 billion (table H). Net capital outflows exceeded the strong outflows of 1995. By account, reinvested earnings increased to a record high, reflecting record profits of foreign affiliates and a continued high rate of reinvestment; net equity outflows slowed but remained strong due to numerous mergers and acquisitions; and net intercompany debt shifted to an outflow, as U.S.-parent firms cut back borrowing from their finance affiliates overseas. The strong outflows reflected widespread economic growth, especially in Europe and emerging Asian countries, and economic recovery in several Latin American countries.

At current cost, the direct investment position increased mostly as a result of capital outflows; valuation adjustments were small and offsetting. At market value, the increase in the position due to capital outflows was augmented by a substantial increase in U.S. owners' equity as a result of the worldwide rise in stock prices. In Europe, where 50 percent of U.S. investments are located, the rise in stock prices averaged 20 per-

cent, ranging from 6 percent in Italy to 40 percent in Sweden (according to Morgan Stanley's international indexes); in several of the emerging countries, stock prices recovered substantially. These increases were partly offset by negative exchange rate changes, mostly in Continental Europe.

U.S. claims on unaffiliated foreigners reported by U.S. nonbanking concerns increased \$61.1 billion, to \$369.1 billion, as these U.S. firms sharply accelerated their overseas deposits in the second half of the year. The acceleration, mostly in dollar deposits in European and Caribbean banks, represented funding to meet the surge in overseas demand for bank credit.

U.S. official reserve assets and other U.S. Government assets

U.S. official reserve assets declined \$15.3 billion, to \$160.7 billion. Foreign-currency holdings decreased \$10.8 billion; holdings of pesos declined as Mexico repaid \$8.3 billion in short-term and medium-term swap arrangements with U.S. authorities, and holdings of Japanese yen and German marks decreased as these currencies depreciated against the dollar.

Other U.S. Government assets increased \$0.7 billion, to \$82.6 billion; long-term credits extended exceeded repayments.

Changes in Foreign Assets in the United States

Foreign official assets

Foreign official assets in the United States increased \$126.7 billion, to \$805.1 billion; record capital inflows accounted for most of the increase. These inflows represented acquisitions of dollars through exchange market intervention and investment of the unused proceeds of funds borrowed by governments in the international markets during the year. Dollar placements were mainly in U.S. Treasury securities: Industrial countries accounted for \$65.5 billion, and developing countries, mainly in Latin America and Asia, for \$56.9 billion.

Bank liabilities

U.S. banks' liabilities to private foreigners and international financial institutions increased \$6.5 billion, to \$819.9 billion, reflecting a further reduction in U.S. banks' use of foreign funds

Table H.—Changes in U.S. Direct Investment Abroad, 1996
[Billions of dollars]

	At current cost	At market value
Total change	86.5	222.6
Capital outflows	87.8	87.8
Equity capital	21.6	21.6
Intercompany debt	8.3	8.3
Reinvested earnings	57.9	57.9
Price changes	7.4	153.9
Exchange rate changes	-4.7	-28.4
Other valuation changes	-4.0	9.4

(table I). U.S. banks borrowed little from overseas until a surge in domestic and foreign demand for bank credit late in the year. Through much of the year, the growth in domestic deposits provided banks with ample funding and enabled banks to pay down their liability positions with their own foreign offices. Late in the year, banks in the United States, especially foreign-owned banks, financed strong growth in loans by supplementing domestic funds with large-scale borrowing from their overseas offices. Japanese-owned banks in the United States, which made large loan repayments, were the exception.

Foreign-owned banks in the United States, which accounted for much of the increase in interbank liabilities, borrowed heavily from their home offices in Europe and Canada and affiliated offices in the Caribbean, particularly in the fourth quarter, to fund their heavy domestic and foreign lending. This borrowing was partly offset by Japanese banks' large net repayments to their offices abroad throughout much of the year. U.S.-owned banks also borrowed in the fourth quarter, mostly from their own foreign offices in the United Kingdom and the Caribbean; however, this borrowing was not enough to keep net repayments to those offices earlier in the year from resulting in a decline in their interbank liabilities.

Liabilities to nonbank foreigners increased \$14.5 billion, to \$116.5 billion, reflecting a widening of the short-term interest-rate differentials that favored dollar deposits and the strong exchange value of the dollar in the second half of the year. Large inflows came from the United Kingdom, Canada, Japan, and international financial institutions.

U.S. banks' foreign-currency liabilities declined \$5.9 billion, to \$103.8 billion, mostly because of repayments to Western Europe and Japan. This cutback in funding coincided with a sharp reduction in foreign-currency lending by U.S. banks.

Custody liabilities reported by U.S. banks increased \$2.7 billion, to \$36.6 billion. Repayments by U.S. nonbank customers early in the year were

more than offset by a surge in their borrowing in the second half, mainly from banks in the Caribbean and the United Kingdom.

U.S. Treasury securities

Foreign holdings of U.S. Treasury securities by both private foreigners and international financial institutions increased \$141.2 billion, to \$530.6 billion (table J). Net purchases of U.S. Treasury bonds reached a record that was two-thirds higher than the previous record in 1995. A negative price adjustment reflected a drop in bond prices in the first half of the year that was not fully offset by a recovery in prices in the second half. Foreign purchases of Treasury bonds accelerated throughout the year, as the U.S. interest-rate differential in favor of Treasury bonds widened substantially and as the dollar remained strong. The U.S.-Japanese long-term interest-rate differential reached a 7-year high of over 400 basis points, which induced heavy demand from Japan and other countries in Asia. Purchases from the United Kingdom and international bond funds in the Caribbean were especially strong during the second half, when U.S. bond prices rallied.

By country, Japan and the United Kingdom are the largest investors in foreign official and private holdings of U.S. Treasury securities (table K).

U.S. currency

Foreign holdings of U.S. currency increased \$17.3 billion, to \$209.6 billion, or 53 percent of U.S. currency outstanding at yearend 1996. These newly introduced estimates of foreign holdings indicate that overseas demand for U.S. currency has strengthened considerably in the 1990's,

Table I.—U.S. Liabilities Reported by U.S. Banks at Yearend

	[Billions of dollars]	
	1995	1996
Total liabilities	813.4	819.9
Bank own liabilities, payable in dollars	669.8	679.5
To unaffiliated foreign banks	171.5	161.5
To own foreign offices	396.3	401.5
To other foreigners	102.0	116.5
Bank custody liabilities	33.9	36.6
Total liabilities payable in foreign currencies	109.7	103.8

Table J.—Changes in Foreign Holdings of U.S. Treasury Securities, 1996

[Billions of dollars]	
Total change	141.2
Net foreign purchases	155.6
Price changes	-14.4
Exchange rate changes	0

Table K.—Foreign Official and Private Holdings of U.S. Treasury Securities by Country, as of December 31, 1996

[Billions of dollars]	
Total holdings	1,109.5
1 Japan	276.0
2 United Kingdom	188.5
3 Germany	72.1
4 Netherlands Antilles	63.2
5 Peoples Republic of China	46.6
6 Spain	45.5
7 Singapore	38.5
8 Hong Kong	33.2
9 Taiwan	31.7
10 Middle Eastern oil-exporters	31.5

mostly as a result of economic and political upheavals in several areas. No country detail of these currency holdings is available.²

Other U.S. securities

Foreign holdings of U.S. securities, other than U.S. Treasury securities, increased \$226.0 billion, to \$1,225.5 billion. The increase reflected the record net purchases of U.S. corporate and agency bonds and the large price appreciation of U.S. stocks (table L). Despite the swing in U.S. long-term interest rates—rising steeply early in the year and falling in the second half—the change in the differential against most major foreign bond markets increased in favor of U.S. investments. This yield advantage was augmented by the dollars’ strength against most major currencies during the year.

Foreign holdings of U.S. bonds increased \$120.0 billion, to \$654.1 billion, as foreign buying outpaced the record buying in 1995 by 50 percent. In response to this strong foreign demand, U.S. corporations issued a near-record \$53.4 billion in new bonds overseas; issues of fixed-rate bonds slowed, but issues of floating-rate bonds and of asset-backed bonds accelerated. Foreigners accelerated investments in U.S. federally-sponsored agency bonds to a record \$44.6 billion; some of these bonds were newly issued abroad by U.S. corporations that have sought to diversify their sources of funds in the past 2 years. Foreign investments in other outstanding U.S. corporate bonds also accelerated to \$23.2 billion, following small net sales in the past 2 years.

Foreign holdings of U.S. stocks increased \$105.9 billion, to \$571.3 billion, reflecting \$93.3 billion in price appreciation and \$12.6 billion in net foreign purchases. Foreign purchases in the last 2 years have been moderate in comparison with the very strong rises in U.S. stock market prices—34 percent in 1995 and 20 percent in 1996 (according to Standard and Poor’s combined index of 500

2. For more information about the new estimates, see “U.S. International Transactions, Revised Estimates for 1974–96,” page 48.

Table L.—Changes in Foreign Holdings of Other U.S. Securities, 1996
[Billions of dollars]


Total change	226.0
Net foreign purchases	133.8
Price changes	94.0
Exchange rate changes	-1.9

stocks). Notwithstanding the moderate pace of foreigners’ purchases in those 2 years, the gains in foreign holdings were considerable, adding over 60 percent to the value of their investments. Western Europeans, who accounted for half of the 1996 net purchases, slowed their purchases from those in 1995. Net purchases by financial centers in the Caribbean and in Asia excluding Japan also slowed.

Foreign direct investment in the United States and other liabilities

Foreign direct investment in the United States at current cost increased \$74.6 billion, to \$729.1 billion; at market value, it increased \$221.7 billion, to \$1,253.6 billion (table M). At current cost, net capital inflows more than accounted for the total change. At market value, capital inflows were augmented by substantial price appreciation in owners’ equity as a result of the steep rise in U.S. stock prices. These estimates incorporate the results of BEA’s 1992 benchmark survey of foreign direct investment in the United States.³ In 1996, net capital inflows reached a record high. By account, net equity inflows approached their 1990 peak, reflecting continued growth in acquisitions of U.S. businesses, and record reinvested earnings reflected the favorable effect on U.S. affiliates’ earnings of the sustained economic growth in the United States; in contrast, net intercompany debt inflows were slightly lower than in 1995.

Liabilities to unaffiliated foreigners reported by U.S. nonbanking concerns increased \$38.6 billion, to \$271.5 billion, principally reflecting U.S. corporations’ borrowing from banks in the Caribbean and the United Kingdom after midyear.

Tables 1 through 3 follow. 

3. For more information, see “U.S. International Transactions, Revised Estimates for 1974–96,” page 50.

Table M.—Changes in Foreign Direct Investment in the United States, 1996

[Billions of dollars]

	At current cost	At market value
Total change	74.6	221.7
Capital inflows	77.0	77.0
Equity capital	53.0	53.0
Intercompany debt	11.8	11.8
Reinvested earnings	12.2	12.2
Price changes	5.4	144.8
Exchange rate changes	-4	0
Other valuation changes	-7.4	-1

Table 1.—International Investment Position of the United States at Yearend, 1995 and 1996

[Millions of dollars]

Line	Type of investment	Position 1995 ^r	Changes in position in 1996 (decrease (-))				Total (a+b+c+d)	Position 1996 ^r
			Attributable to:					
			Capital flows (a)	Valuation adjustments				
				Price changes (b)	Exchange rate changes ¹ (c)	Other changes ² (d)		
Net international investment position of the United States:								
1	With direct investment positions at current cost (line 3 less line 24) ...	-687,702	-195,111	32,038	-22,195	2,446	-182,822	-870,524
2	With direct investment positions at market value (line 4 less line 25)	-637,480	-195,111	39,063	-46,339	8,564	-193,823	-831,303
U.S. assets abroad:								
3	With direct investment positions at current cost (lines 5+10+15)	3,272,731	352,444	121,367	-21,849	-3,964	447,998	3,720,729
4	With direct investment positions at market value (lines 5+10+16)	3,700,432	352,444	267,858	-45,567	9,373	584,108	4,284,540
5	U.S. official reserve assets	176,061	-6,668	-4,581	-4,073		-15,322	160,739
6	Gold	101,279		³ -4,581		-4,581	96,698	
7	Special drawing rights	11,037	-370		-355		-725	10,312
8	Reserve position in the International Monetary Fund	14,649	1,280		-494		786	15,435
9	Foreign currencies	49,096	-7,578		-3,224		-10,802	38,294
10	U.S. Government assets, other than official reserve assets	81,897	690		-34	1	657	82,554
11	U.S. credits and other long-term assets ⁴	79,958	796		-1	1	796	80,754
12	Repayable in dollars	79,178	846			-12	834	80,012
13	Other ⁵	780	-50		-1	13	-38	742
14	U.S. foreign currency holdings and U.S. short-term assets	1,939	-106		-33		-139	1,800
U.S. private assets:								
15	With direct investment at current cost (lines 17+19+22+23)	3,014,773	358,422	125,948	-17,742	-3,965	462,663	3,477,436
16	With direct investment at market value (lines 18+19+22+23)	3,442,474	358,422	272,439	-41,460	9,372	598,773	4,041,247
Direct investment abroad:								
17	At current cost	884,290	87,813	7,375	-4,726	-3,954	86,508	970,798
18	At market value	1,311,991	87,813	153,866	-28,444	9,383	222,618	1,534,609
19	Foreign securities	1,054,352	108,189	118,573	-7,675		219,087	1,273,439
20	Bonds	355,284	49,403	806	-7,521		42,688	397,972
21	Corporate stocks	699,068	58,786	117,767	-154		176,399	875,467
22	U.S. claims on unaffiliated foreigners reported by U.S. nonbanking concerns.	307,982	64,234		-3,161		61,073	369,055
23	U.S. claims reported by U.S. banks, not included elsewhere	768,149	98,186		-2,180	-11	95,995	864,144
Foreign assets in the United States:								
24	With direct investment at current cost (lines 26+33)	3,960,433	547,555	89,329	346	-6,410	630,820	4,591,253
25	With direct investment at market value (lines 26+34)	4,337,912	547,555	228,795	772	809	777,931	5,115,843
26	Foreign official assets in the United States	678,451	122,354	4,345		-1	126,698	805,149
27	U.S. Government securities	498,906	115,634	-4,333			111,301	610,207
28	U.S. Treasury securities	471,508	111,253	-3,802			107,451	578,959
29	Other	27,398	4,381	-531			3,850	31,248
30	Other U.S. Government liabilities ⁷	25,225	720			-1	719	25,944
31	U.S. liabilities reported by U.S. banks, not included elsewhere	107,394	4,722				4,722	112,116
32	Other foreign official assets	46,926	1,278	6,678			9,956	56,882
Other foreign assets:								
33	With direct investment at current cost (lines 35+37+38+39+42+43)	3,281,982	425,201	84,984	346	-6,409	504,122	3,786,104
34	With direct investment at market value (lines 36+37+38+39+42+43)	3,659,461	425,201	224,450	772	810	651,233	4,310,694
Direct investment in the United States:								
35	At current cost	654,502	76,955	5,356	-426	-7,335	74,550	729,052
36	At market value	1,031,981	76,955	144,822		-116	221,661	1,253,642
37	U.S. Treasury securities	389,383	155,578	-14,411			141,167	530,550
38	U.S. currency	192,300	17,300				17,300	209,600
39	U.S. securities other than U.S. Treasury securities	999,537	133,798	94,039	-1,887		225,950	1,225,487
40	Corporate and other bonds	534,116	121,194	721	-1,887		120,028	654,144
41	Corporate stocks	465,421	12,604	93,318			105,922	571,343
42	U.S. liabilities to unaffiliated foreigners reported by U.S. nonbanking concerns.	232,891	31,786		5,932	926	38,644	271,535
43	U.S. liabilities reported by U.S. banks, not included elsewhere	813,369	9,784		-3,273		6,511	819,880

^r Preliminary.

^r Revised.

1. Represents gains or losses on foreign-currency-denominated assets due to their revaluation at current exchange rates.

2. Includes changes in coverage, statistical discrepancies, and other adjustments to the value of assets.

3. Reflects changes in the value of the official gold stock due to fluctuations in the market price of gold.

4. Also includes paid-in capital subscriptions to international financial institutions and outstanding amounts of miscellaneous claims that have been settled through international agreements to be payable to the U.S. Government over periods in excess of 1 year. Excludes World War I debts that are not being serviced.

5. Includes indebtedness that the borrower may contractually, or at its option, repay with its currency, with a third country's currency, or by delivery of materials or transfer of services.

6. Primarily U.S. Government liabilities associated with military sales contracts and other transactions arranged with or through foreign official agencies.

Table 2.—U.S. Assets Abroad and Foreign Assets in the United States by Area

[Millions of dollars]

Line	Type of investment	Amounts outstanding, by area									
		Western Europe		Canada		Japan		Latin America and Other Western Hemisphere		Other countries, international organizations, and unallocated ¹	
		1995 ^r	1996 ^p	1995 ^r	1996 ^p	1995 ^r	1996 ^p	1995 ^r	1996 ^p	1995 ^r	1996 ^p
U.S. assets abroad:											
1	U.S. official reserve assets	21,089	20,261			16,207	14,533	11,800	3,500	126,965	122,445
2	Gold									101,279	96,698
3	Special drawing rights									11,037	10,312
4	Reserve position in the International Monetary Fund									14,649	15,435
5	Foreign currencies	21,089	20,261			16,207	14,533	11,800	3,500		
6	U.S. Government assets, other than official reserve assets	7,186	6,859	6	-1	76	38	16,212	15,811	58,417	59,847
7	U.S. credits and other long-term assets ²	7,261	6,892					16,169	15,728	56,528	58,134
8	Repayable in dollars	7,216	6,858					16,034	15,612	55,928	57,542
9	Other ³	45	34					135	116	600	592
10	U.S. foreign currency holdings and U.S. short-term assets	-75	-33	6	-1	76	38	43	83	1,889	1,713
U.S. private assets:											
11	Direct investment abroad	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
12	Foreign securities	517,842	636,599	120,665	145,696	161,139	160,391	114,180	144,764	140,526	185,989
13	Bonds	155,826	167,094	73,793	79,235	32,683	34,004	55,490	69,095	37,492	48,544
14	Corporate stocks	362,016	469,505	46,872	66,461	128,456	126,387	58,690	75,669	103,034	137,445
15	U.S. claims on unaffiliated foreigners reported by U.S. nonbanking concerns	116,905	144,006	11,711	13,015	2,741	3,100	159,313	190,243	17,312	18,691
16	U.S. claims reported by U.S. banks, not included elsewhere	241,812	282,417	41,251	52,292	100,584	95,102	297,369	326,204	87,133	108,129
Foreign assets in the United States:											
17	Foreign official assets in the United States	208,174	236,847	23,078	26,224	(5)	(5)	67,425	82,151	(5)	(5)
18	U.S. Government securities	(6)	(6)	(6)	(6)	(5)	(5)	(6)	(6)	(5)	(5)
19	U.S. Treasury securities	(6)	(6)	(6)	(6)	(5)	(5)	(6)	(6)	(5)	(5)
20	Other	(6)	(6)	(6)	(6)	(5)	(5)	(6)	(6)	(5)	(5)
21	Other U.S. Government liabilities ⁷	5,159	5,845	238	197	2,500	2,573	570	460	16,758	16,869
22	U.S. liabilities reported by U.S. banks, not included elsewhere	(6)	(6)	(6)	(6)	(5)	(5)	(6)	(6)	(5)	(5)
23	Other foreign official assets	(6)	(6)	(6)	(6)	(5)	(5)	(6)	(6)	(5)	(5)
Other foreign assets in the United States:											
24	Direct investment in the United States	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
25	U.S. Treasury securities	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)
26	U.S. currency									192,300	209,600
27	U.S. securities other than U.S. Treasury securities	602,293	734,381	92,461	112,977	111,398	132,280	110,946	148,030	82,439	97,819
28	Corporate and other bonds	346,870	421,429	20,023	23,947	67,909	80,634	59,538	80,540	39,776	47,594
29	Corporate stocks	255,423	312,952	72,438	89,030	43,489	51,646	51,408	67,490	42,663	50,225
30	U.S. liabilities to unaffiliated foreigners reported by U.S. nonbanking concerns	47,789	82,140	2,119	2,770	8,905	10,539	148,469	148,490	25,609	27,596
31	U.S. liabilities reported by U.S. banks, not included elsewhere	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)
Addenda:											
1	U.S. Treasury securities, foreign official plus private holdings (lines 19 + 25, above)	309,497	413,923	25,220	25,813	223,750	276,044	91,574	123,521	210,850	270,208
2	U.S. liabilities reported by U.S. banks, foreign official plus private (lines 22 + 31, above)	335,480	350,312	28,370	38,074	86,840	59,164	346,252	363,544	123,821	120,902

^p Preliminary.^r Revised.

1. Includes U.S. gold stock valued at market price.

2. Also includes paid-in capital subscription to international financial institutions and outstanding amounts of miscellaneous claims that have been settled through international agreements to be payable to the U.S. Government over periods in excess of 1 year. Excludes World War I debts that are not being serviced.

3. Includes indebtedness that the borrower may contractually, or at its option, repay with its currency, with a third country's currency, or by delivery of materials or transfer of services.

4. Positions at current costs or market value are not available by area; country detail are available only at historical costs in the article "Direct Investment Positions on a Historical Cost Basis, 1996; Country and Industry Detail," elsewhere in this issue of the SURVEY.

5. Details are not shown separately.

6. Details not shown separately are included in totals in line 17.

7. Primarily U.S. Government liabilities associated with military sales contracts and other transactions arranged with or through foreign official agencies.

Direct Investment Positions for 1996

Country and Industry Detail

By Sylvia E. Bargas

THE DETAILED estimates by country and industry of the direct investment positions of the United States, which are presented in this article, are prepared only on the basis of historical cost; thus, these estimates reflect prices at the time of investment rather than prices of the current period.¹ In contrast, the estimates of the direct investment positions presented elsewhere in this issue are on a current-cost and a market-value basis; those estimates are conceptually and analytically superior to the historical-cost estimates, but they are available only at an aggregate level.² For perspective, table 1 shows the aggregate direct investment positions on all three valuation bases.

On a historical-cost basis, the position for U.S. direct investment abroad (USDIA) grew 11 percent in 1996, and the position for foreign direct investment in the United States (FDIUS) grew 12 percent. The strong growth in both measures was largely attributable to favorable economic con-

ditions in the United States and in a number of foreign countries. Robust earnings by affiliates generated readily available financing in the form of reinvested earnings, and strong earnings by parents reduced the need to draw funds from affiliates and—particularly for FDIUS—provided a source of funds for mergers and acquisitions. In addition, USDIA was spurred by new investment opportunities abroad resulting from privatizations of government-owned enterprises.

As in previous years, the largest component of capital outflows for USDIA was reinvested earnings, which tend to be used mainly to finance the ongoing operations of foreign affiliates.³ The largest component of capital inflows for FDIUS continued to be equity capital, which includes capital contributions to existing U.S. affiliates and funds used to acquire and establish new U.S. affiliates.⁴ To some extent, this difference in composition reflects the greater average maturity of foreign affiliates relative to U.S. affiliates and the relatively greater role of acquisitions in recent growth in FDIUS. Many foreign affiliates of U.S. companies were acquired or established decades ago and can now be sustained largely through

1. Historical cost is the basis used for valuation in company accounting records in the United States, and it is the only basis on which companies can report data in the direct investment surveys conducted by BEA. For consistency, the estimates of earnings and reinvested earnings used in analyzing changes in the historical-cost positions are also on this basis and are not adjusted to current cost; country and industry detail for these items, like the positions, is not available with such an adjustment.

2. See "The International Investment Position of the United States in 1996" in this issue.

3. A foreign affiliate is a foreign business enterprise in which a single U.S. investor owns at least 10 percent of the voting securities, or the equivalent.

4. A U.S. affiliate is a U.S. business enterprise in which a single foreign investor owns at least 10 percent of the voting securities, or the equivalent.

Table 1.—Alternative Direct Investment Position Estimates, 1995 and 1996

[Millions of dollars]

Valuation method	Position at year-end 1995 ^r	Changes in 1996			Position at year-end 1996 ^p
		Total	Capital flows	Valuation adjustments	
U.S. direct investment abroad:					
Historical cost	717,554	78,940	85,561	-6,620	796,494
Current cost	884,290	86,508	87,812	-1,304	970,798
Market value	1,311,991	222,617	87,812	134,805	1,534,609
Foreign direct investment in the United States:					
Historical cost	560,850	69,195	78,828	-9,633	630,045
Current cost	654,502	74,550	76,955	-2,405	729,052
Market value	1,031,981	221,661	76,955	144,706	1,253,642

^p Preliminary.
^r Revised.

Acknowledgments

The survey from which the data for the U.S. direct investment position abroad were drawn was conducted under the supervision of Mark W. New, assisted by Laura A. Downey, Javier J. Hodge, Marie K. Laddomada, Sherry Lee, Leila C. Morrison, Gary M. Solamon, Dwayne Torney, and Wendy P. Warcholik. Smith W. Allnutt III programmed the tables.

The survey from which the data for the foreign direct investment position in the United States were drawn was conducted under the supervision of Gregory G. Fouch, assisted by Peter J. Fox, Nancy F. Halvorson, Tracy K. Leigh, Beverly E. Palmer, and Linden L. Webber. Karen E. Poffel programmed the tables.

the retention of their own earnings. In contrast, U.S. affiliates of foreign companies tend to be of more recent vintage and to rely more heavily on contributions of equity capital from their foreign parents to build their operations.

Benchmark revision of FDIUS estimates.—The estimates of the FDIUS position for 1992 have been revised to incorporate data collected in BEA’s 1992 benchmark survey of foreign direct investment in the United States, which covered the universe of FDIUS. For years after 1992, the estimates have been revised by extrapolating the 1992 universe data on the basis of data collected in BEA’s quarterly sample survey and by incorporating new or adjusted data from that survey. The revisions for all of these years were small—1 percent or less for all countries and industries combined. Previously, the estimates for 1992 forward were extrapolated from the 1987 benchmark survey of FDIUS.⁵

U.S. Direct Investment Abroad

The U.S. direct investment position abroad valued at historical cost—the book value of U.S. direct investors’ equity in, and net outstanding loans to, their foreign affiliates—was \$796.5 billion at yearend 1996 (table 2 and chart 1). The largest positions by far remained those in the United Kingdom (\$142.6 billion, or 18 percent of the total) and in Canada (\$91.6 billion, or 11 percent of the total) (table 3 and chart 2).

5. For additional information, see “U.S. International Transactions, Revised Estimates for 1974–96” in this issue. A more complete explanation of these revisions will accompany the presentation of the detailed estimates of the FDIUS position scheduled to be published in the September 1997 SURVEY OF CURRENT BUSINESS.

In 1996, the USDIA position increased \$78.9 billion, or 11 percent, compared with an increase of 12 percent in 1995 and an average increase of 10 percent in 1982–94. The following table shows the change in position in 1996 by the type of capital flow and valuation adjustment:⁶

[Billions of dollars]

Total	78.9
Capital outflows	85.6
Equity capital	21.6
Intercompany debt.....	8.3
Reinvested earnings.....	55.6
Valuation adjustments	-6.6
Currency translation	-4.9
Other	-1.7
of which:	
Capital gains and losses	4.1

6. Valuation adjustments to the historical-cost position are made to reflect differences between changes in the position, measured at book value, and capital flows, measured at transactions value. Unlike the positions on a current-cost and market-value basis, no adjustment is made to reflect changes in the replacement cost of the tangible assets of affiliates or in the market value of parent companies’ equity in affiliates. (However, as explained below, adjustments are made for realized capital gains and losses of affiliates, such as gains or losses on partial sales of affiliate assets.)

Currency-translation adjustments to the position are made to reflect changes in the exchange rates that are used to translate affiliates’ foreign-currency-denominated assets and liabilities into U.S. dollars. The precise effects of currency fluctuations on translation adjustments depend on the value and currency composition of affiliates’ assets and liabilities. Depreciation of foreign currencies against the dollar usually results in negative translation adjustments, because it tends to lower the dollar value of foreign-currency-denominated net assets. Similarly, appreciation of foreign currencies usually results in positive adjustments, because it tends to raise the dollar value of foreign-currency-denominated net assets.

“Other” valuation adjustments includes adjustments for differences between the proceeds from the sale or liquidation of affiliates by U.S. parents and the book values of the affiliates that are sold or liquidated, for differences between the purchase prices and the book values of affiliates that are acquired by U.S. parents, for writeoffs resulting from uncompensated expropriations of affiliates, and for capital gains and losses. Capital gains and losses represent the revaluation of the assets of ongoing affiliates for reasons other than exchange-rate changes, such as the partial sale of those assets for an amount different from their historical cost.

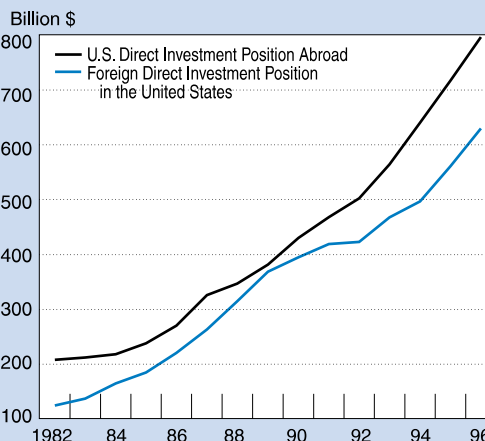
Table 2.—U.S. Direct Investment Position Abroad and Foreign Direct Investment Position in the United States on a Historical-Cost Basis, 1982–96

Yearend	Millions of dollars		Percent change from preceding year	
	U.S. direct investment position abroad	Foreign direct investment position in the United States	U.S. direct investment position abroad	Foreign direct investment position in the United States
1982	207,752	124,677	.....	.....
1983	212,150	137,061	2.1	9.9
1984	218,093	164,583	2.8	20.1
1985	238,369	184,615	9.3	12.2
1986	270,472	220,414	13.5	19.4
1987	326,253	263,394	20.6	19.5
1988	347,179	314,754	6.4	19.5
1989	381,781	368,924	10.0	17.2
1990	430,521	394,911	12.8	7.0
1991	467,844	419,108	8.7	6.1
1992	502,063	423,130	7.3	1.0
1993	564,283	467,412	12.4	10.5
1994	640,320	496,539	13.5	6.2
1995	717,554	560,850	12.1	13.0
1996	796,494	630,045	11.0	12.3

^p Preliminary.
^r Revised.

CHART 1

Direct Investment Positions on a Historical-Cost Basis, 1982–96



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

Most—nearly two-thirds—of capital outflows in 1996 were accounted for by reinvested earnings, which were up \$3.2 billion from 1995. The remainder were accounted for by net equity capital outflows, which were down \$15.0 billion from 1995, and intercompany debt flows, which shifted \$12.2 billion, to outflows.

Reinvested earnings reflected record affiliate profits and a continued high rate of reinvestment. Affiliate profits in many countries were boosted by the large capital flows that have expanded the earnings base in recent years. In 1996, 60 percent of total earnings were reinvested, slightly below the 61-percent share of 1995 but well above the 36-percent average of 1982–94. If past relationships between growth in capital spending by affiliates and growth in earnings held in 1996, it seems likely that much of the reinvested earnings were used to finance capacity expansion by existing foreign affiliates.

The decrease in equity capital outflows was primarily due to a sharp drop in equity capital increases, as a number of multibillion-dollar mergers and acquisitions in 1995—mainly in pharmaceuticals, but also in utilities and telecommunications—were not matched by similar-sized transactions in 1996. Also contributing to the decrease in outflows was a rise in equity capital decreases (which are recorded as U.S. capital inflows); these decreases, which were concentrated in finance (except banking), insurance, and real estate (“FIRE”) and in petro-

leum, largely resulted from sales of affiliates by U.S. direct investors.

Merger and acquisition activity by U.S. direct investors, though lower than in 1995, occurred in a number of industries, particularly “other industries,” metals, and FIRE. As in 1995, several of the transactions in “other industries” and in FIRE involved acquisitions of energy providers and telephone companies. These acquisitions—in the United Kingdom, Australia, Belgium, and Brazil—were made in response to opportunities created by recent privatizations.

The shift to outflows in intercompany debt primarily reflected reduced borrowing by parents from their affiliates in FIRE, particularly from affiliates in the United Kingdom, Bermuda, and Japan.

Changes by country

The \$78.9 billion increase in the U.S. direct investment position abroad was spread among all major geographic areas. The largest increase by far was in Europe.

The following table shows major changes in the positions in 1996 by area and by country:

[Billions of dollars]

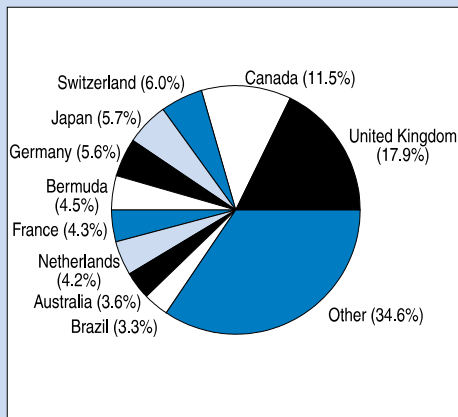
All countries	78.9
Europe	36.6
<i>of which:</i>	
United Kingdom	19.8
Netherlands	5.3
Ireland	3.3
Latin America and Other Western Hemisphere	16.0
<i>of which:</i>	
Bermuda	3.8
Mexico	2.8
Brazil	2.5
Panama	2.0
Asia and Pacific	14.6
<i>of which:</i>	
Australia	3.8
Hong Kong	1.8
Singapore	1.5
Canada	6.1

The position in Europe increased 11 percent and accounted for nearly one-half of the overall increase in the position worldwide. The increase resulted from capital outflows of \$45.3 billion that were partly offset by negative valuation adjustments of \$6.6 billion. Within Europe, more than one-half of the increase in the position was in the United Kingdom. Outside the United Kingdom, increases were largest in the Netherlands and Ireland.

In the United Kingdom, nearly one-half of the increase was in FIRE, where the increase was about evenly split among reinvested earnings, intercompany debt outflows, and equity capital

CHART 2

U.S. Direct Investment Position Abroad, 1996: Host-Country Shares



outflows. Equity capital outflows in FIRE funded the establishment of holding companies for the purpose of acquiring electric utility companies. Also contributing to the increase in position were reinvested earnings of manufacturing affiliates (particularly in industrial machinery and chemicals), loans to affiliates in petroleum and chemicals, and positive currency-translation adjustments (due to the dollar's depreciation against the British pound).

In the Netherlands, most of the increase was in FIRE and mainly reflected the reinvested earnings of holding companies (generated largely by operating affiliates located in other countries) that were partly offset by negative currency-translation adjustments.

The position in Ireland increased 40 percent—by far the fastest pace among the European countries. The increase reflected very strong earnings—85 percent of which were reinvested—by affiliates that mainly serve markets in other foreign countries. Reinvested earnings were largest in manufacturing—particularly in chemicals and electronic equipment—and in FIRE.

The position in Latin America and Other Western Hemisphere increased 12 percent as a result of capital outflows of \$14.3 billion and positive valuation adjustments of \$1.7 billion. Within the area, the largest increases were in Bermuda, Mexico, Brazil, and Panama. In Bermuda, the increase was mainly due to reinvested earnings and capital gains by affiliates in FIRE. Most of the increase in Mexico was in manufacturing; it reflected lending to affiliates in food and reinvested earnings by affiliates in chemicals. In Brazil, the increase reflected reinvested earnings of manufacturing affiliates and acquisitions of electric utilities in “other industries.” In Panama, the increase reflected capital gains and reinvested earnings among affiliates in FIRE.

The position in Asia and Pacific increased 12 percent as a result of capital outflows of \$14.8 billion. Within Asia and Pacific, the largest increase was in Australia and reflected valuation adjustments in banking and acquisitions of electric utility companies in “other industries.” Increases were also large in Hong Kong and Singapore. In Hong Kong, the increase was mainly due to reinvested earnings by affiliates in FIRE, wholesale trade, and electronic equipment. In Singapore, almost all of the increase resulted from reinvested earnings—particularly in electronic equipment, FIRE, industrial machinery, and petroleum.

The increase in the position in Canada was the second-largest dollar increase of any country, despite a relatively low growth rate of 7 percent. The increase was more than accounted for by reinvested earnings, which were largest in transportation equipment, FIRE, petroleum, and “other manufacturing.” Also contributing to the increase were large acquisitions of mining and waste management businesses in “other industries.”

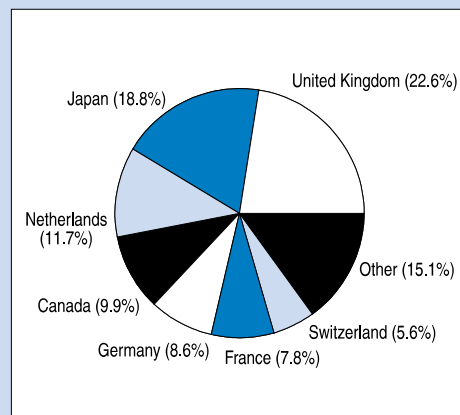
Foreign Direct Investment in the United States

The foreign direct investment position in the United States valued at historical cost—the book value of foreign direct investors' equity in, and net outstanding loans to, their U.S. affiliates—was \$630.0 billion at the end of 1996 (table 2 and chart 1). More than one-half of the position was accounted for by three countries—the United Kingdom, Japan, and the Netherlands. The United Kingdom's position remained the largest (\$142.6 billion, or 23 percent of the total). Japan's position was the second largest (\$118.1 billion, or 19 percent), and the Netherlands position was the third largest (\$73.8 billion, or 12 percent) (table 4 and chart 3).

In 1996, the FDIUS position increased \$69.2 billion, or 12 percent, following an increase of 13 percent in 1995 and an average increase of 12 percent in 1982–94. The increase in the position in 1996 was mainly due to the continued strength

CHART 3

Foreign Direct Investment Position in the United States, 1996: Parent-Country Shares



pronounced effect on foreign investors' total outlays to acquire or establish U.S. businesses than on the position: In 1996, these outlays, including those financed by capital inflows from foreign parents, rose 41 percent, following a 25-percent increase in 1995.⁷

The following table shows the change in position in 1996 by type of capital flow and valuation adjustment:

[Billions of dollars]	
Total	69.2
Capital inflows	78.8
Equity capital	53.0
Intercompany debt	11.7
Reinvested earnings	14.1
Valuation adjustments	-9.6
Currency translation	-4
Other	-9.2
<i>of which:</i>	
Capital gains and losses	-2.0

Capital inflows for foreign direct investment in the United States were at a record \$78.8 billion in 1996, up from \$69.4 billion in 1995. More than two-thirds of the 1996 total was accounted for by equity capital inflows, which were \$8.0 billion higher than in 1995. These inflows were at their highest level since the peak year of 1990. The high level of equity capital inflows reflected both capital contributions to existing U.S. affiliates and continued growth in acquisitions of U.S. businesses by foreigners.

For the third consecutive year, the position was boosted by reinvested earnings; in contrast, in 1989-93, growth in the position was reduced by negative reinvested earnings (negative reinvested earnings occur when affiliates incur losses or distribute earnings to their foreign parents in excess of their current earnings). Reinvested earnings were at a record \$14.1 billion in 1996, \$2.3 billion higher than the previous record in 1995. All industries except real estate, services, and banking had positive reinvested earnings. The high level of reinvested earnings reflected a \$2.1 billion

7. See "Foreign Direct Investment in the United States: New Investment in 1996 and Affiliate Operations in 1995," SURVEY 77 (June 1997): 42-69. Preliminary data from BEA's survey of new foreign direct investments, summarized in that article, indicate that total outlays to acquire or establish U.S. businesses were \$80.5 billion in 1996, up from \$57.2 billion in 1995. Unlike the changes in the foreign direct investment position presented in this article, these figures cover only transactions involving U.S. businesses newly acquired or established by foreign direct investors and include financing other than that from the foreign parent, such as local borrowing by existing U.S. affiliates. In contrast, changes in the position reflect transactions of both new and existing U.S. affiliates—but only transactions with the foreign parent or other members of the foreign parent group—and valuation adjustments.

Notwithstanding these differences, the two types of data are related. Any outlays to acquire or establish U.S. businesses that are funded by foreign parents (or other members of the foreign parent group) are part of capital inflows, a component of the change in the position. Data from the new investments survey indicate that foreign parent groups funded \$58.4 billion, or 73 percent, of outlays to acquire or establish new U.S. affiliates in 1996, compared with \$30.8 billion, or 54 percent, in 1995.

increase in earnings and a reinvestment rate of 54 percent, up from 49 percent in 1995. By industry, the increase in earnings was more than accounted for by "other manufacturing," petroleum, and insurance; however, it was partly offset by a large decrease in the earnings of banking affiliates. The two industries that continued to show losses—albeit small ones—were real estate and services.

Intercompany debt inflows were \$11.7 billion, down from \$12.6 billion.

Changes by country

The \$69.2 billion increase in the foreign direct investment position in the United States in 1996 was concentrated among parents located in Europe. Outside Europe, the largest increases were by parents in Japan and Canada.

The following table shows the major changes in the positions in 1996 by area and by country:

[Billions of dollars]	
All countries	69.2
Europe	53.2
<i>of which:</i>	
United Kingdom	16.4
Germany	13.0
France	10.8
Netherlands	8.0
Japan	10.2
Canada	5.6

The position of European investors increased 15 percent—a faster pace than that for any other major area—and accounted for more than three-quarters of the overall increase in 1996. The increase resulted from capital inflows of \$59.8 billion that were partly offset by negative valuation adjustments of \$6.6 billion. Within Europe, parents in the United Kingdom had by far the largest dollar increase, followed by parents in Germany, France, the Netherlands, Luxembourg, and Ireland.

The largest increase in the position of British parents was in "finance, except depository institutions" ("finance") and resulted from lending by foreign parents. Acquisitions in other manufacturing, services, and wholesale trade also contributed to the increase.

The increase in the position of German parents was more than accounted for by equity capital inflows, which were the largest from any country. The largest equity capital inflows were in services, insurance, petroleum, and "other industries." In insurance and services, the equity capital inflows reflected acquisitions; in petroleum and "other


industries," they reflected capital contributions to existing affiliates.

The largest increases in the position of French parents were in finance, metals, and "other industries." In finance, the increase reflected loans to affiliates; in metals, it reflected acquisitions and loans to affiliates; and in "other industries," it reflected capital contributions to existing affiliates.

The largest increases in the position of Netherlands parents were in finance, manufacturing—particularly in chemicals and "other manufacturing"—and petroleum. The increase in finance reflected parents' loans to their affiliates and valuation adjustments. The increases in chemicals and in petroleum mostly resulted from reinvested

earnings. The increase in "other manufacturing" reflected lending by parents.

The increase in the position of Japanese parents was more than accounted for by equity capital inflows, almost all of which were capital contributions to existing affiliates. By industry, the largest increases in the position were in services and "other manufacturing."

The largest increases in the position of Canadian parents were in manufacturing—particularly chemicals and "other manufacturing"—and insurance. In chemicals, the increase reflected borrowing from parents; in "other manufacturing," it reflected equity capital inflows and reinvested earnings. The increase in insurance reflected repayment by parents of loans from affiliates. 

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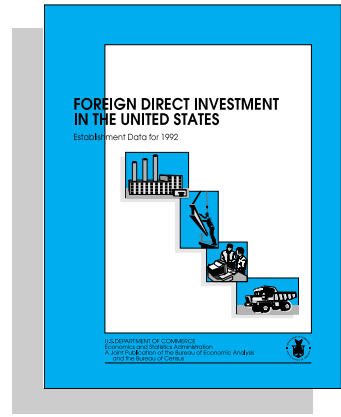
This publication presents the results of a project that links the enterprise, or company, data on the U.S. affiliates of foreign companies from the Bureau of Economic Analysis with the establishment data for all U.S. companies from the Bureau of the Census.

It presents the following detailed information on foreign-owned U.S. establishments for more than 800 industries at the Standard Industrial Classification (SIC) four-digit level and by State and by country of owner:

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- Payroll
- Shipments or sales

Additional information that includes the following items is presented for manufacturing establishments:

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U.S. International Transactions, Revised Estimates for 1974–96

By Christopher L. Bach

As is customary each June, the estimates of U.S. international transactions have been revised to incorporate methodological and statistical revisions. This year, like last year, a number of improvements have been implemented as part of a multiyear effort by the Bureau of Economic Analysis (BEA) to address gaps in coverage of transactions. These gaps and plans to fill them were outlined by BEA in its Mid-Decade Strategic Plan for improving BEA's economic accounts (see the [February](#) and [April 1995](#) and [June 1996](#) issues of the SURVEY OF CURRENT BUSINESS). The improvements also address various gaps noted by the International Monetary Fund, the National Academy of Sciences, and the General Accounting Office.¹ In large part, the gaps have arisen because of the dynamic nature of the international markets. The major improvements this

year respond to rapid changes in both the capital markets and the services markets.

- In the investment income accounts, greatly improved estimates of income receipts are introduced based on results of a new benchmark survey of the stock of U.S. portfolio investment abroad as of March 1994. Conducted by the Treasury Department, this survey is the first such survey in more than 50 years, and its completion represents a major milestone in the multiyear program for statistical improvements developed jointly by BEA, the Treasury Department, and the Federal Reserve Board. The new position data enable BEA to develop improved estimates of bond interest and dividend income receipts. The new position data also permit BEA to greatly improve its estimates of U.S. bond and stock holdings that are included in the U.S. international investment position.
- In the capital accounts, estimates of international flows of U.S. currency appear for the first time. With this addition, BEA closes what had grown into a sizable gap

1. *Report on the World Current Account Discrepancy* (Washington, DC: International Monetary Fund, September 1987).

Report on the Measurement of International Capital Flows (Washington, DC: International Monetary Fund, September 1992).

Behind the Numbers: U.S. Trade in the World Economy (Washington, DC: National Research Council, 1992).

Following the Money: U.S. Finance in the World Economy (Washington, DC: National Research Council, 1994).

Measuring U.S.-Canada Trade: Shifting Trade Winds May Threaten Recent Progress (Washington, DC: General Accounting Office, January 1994).

Economic Statistics: Status Report on the Initiative to Improve Economic Statistics (Washington, DC: General Accounting Office, July 1995).

Acknowledgments

The revised estimates were prepared under the general direction of Anthony DiLullo, with the assistance of Cynthia McPherson and staff in the Balance of Payments Division. Russell Scholl, Harlan King, Christopher Gohrband, Jane Newstedt, and Dena Holland prepared the benchmark estimates of U.S. portfolio investment abroad and related income flows; Michael Mann, Chris Emond, Shirley Davis, John Sondheimer, and Robert Becker, the benchmark estimates on nonfinancial services transactions; Russell Scholl and Jane Newstedt, the estimates of financial services transactions; Steven Baldwin, the estimates of earnings and expenditures of temporary workers; Ed Dozier, the estimates of truck transportation and ocean port services receipts; Russell Scholl and Barbara Berman, the estimates of U.S. currency flows and currency translation gains and losses; Harlan King, the preliminary estimates of nonbank

claims and liabilities; and Kwok Lee, the estimates of goods.

The revised estimates of the direct investment accounts were prepared under the general direction of David Belli. Gregory Fouch, with the assistance of Karen Poffel and other staff in the International Investment Division, prepared the revised estimates of foreign direct investment in the United States.

Special assistance was provided this year by Richard Porter and Ruth Judson of the Federal Reserve Board, who developed the estimates of U.S. currency flows; by Milton Pappas and William Griever of the U.S. Treasury Department, who conducted the benchmark survey of U.S. portfolio investment abroad and by Diane Oberg and staff of the Bureau of the Census' Foreign Trade Division, who conducted the study of "residual" seasonality for goods.

in coverage in the international transactions and investment position accounts. The gap had developed in recent decades, as strong foreign demand developed for U.S. currency, particularly in the form of Federal Reserve notes. Because of difficulty in accurate measurement, currency flows do not appear in the international accounts of most countries. The new estimates were developed by the Federal Reserve Board.

- In the services accounts, "other" private service receipts and "other" private service payments are revised to include preliminary results of BEA's annual surveys of financial services for 1995 and 1996. These are BEA's first annual surveys of financial services, and they update the results of BEA's first benchmark survey of financial services with unaffiliated foreigners, covering 1994. These new surveys enable BEA to better capture the diversity of transactions in financial services and more accurately portray the key role of U.S. institutions in cross-border trade in financial services.
- Also in the services accounts, estimates have been revised to incorporate preliminary results from BEA's 1996 benchmark survey of

selected services (largely business, professional, and technical services), to incorporate revised and more accurate estimates of "other" transportation, and to include new estimates of earnings and expenditures of temporary workers in the United States.

- In addition, results of BEA's 1992 benchmark survey of foreign direct investment in the United States are incorporated into the capital, investment income, and services accounts. The survey covers the universe of direct investment and is part of BEA's ongoing program of regular quinquennial benchmark surveys.
- Finally, unrealized currency translation gains and losses have been removed from certain banking transactions to provide a more accurate measure of U.S. banks' international activity.

In addition to these improvements, revisions are made to all accounts to incorporate revised and updated source data. Among the accounts most affected by this type of change were travel receipts for 1995 and 1996, which incorporated updated source data from the Immigration and Naturalization Service. Revisions were also made to the inward and outward direct investment ac-

Table 1.—Revisions to the Current-Account Estimates

(Millions of dollars; quarterly data are seasonally adjusted)

	Exports of goods, services, and income			Imports of goods, services, and income			Unilateral transfers			Balance on current account		
	Previously published	Revised	Revision	Previously published	Revised	Revision	Previously published	Revised	Revision	Previously published	Revised	Revision
1985	382,747	382,749	2	-484,037	-484,037	.....	-22,954	-22,700	254	-124,243	-123,987	256
1986	401,258	400,842	-416	-528,513	-529,356	-843	-24,833	-24,679	154	-152,088	-153,193	-1,105
1987	449,292	449,272	-20	-592,745	-593,416	-671	-23,939	-23,909	30	-167,392	-168,053	-661
1988	560,233	560,620	387	-662,403	-662,876	-473	-26,266	-25,988	278	-128,436	-128,245	191
1989	641,659	642,921	1,262	-719,539	-720,189	-650	-27,696	-26,963	733	-105,575	-104,231	1,344
1990	697,083	700,455	3,372	-756,522	-757,758	-1,236	-35,219	-34,588	631	-94,657	-91,892	2,765
1991	717,726	722,557	4,831	-731,753	-733,335	-1,582	4,510	5,122	612	-9,518	-5,657	3,861
1992	736,704	743,358	6,654	-763,773	-764,549	-776	-35,514	-35,192	322	-62,583	-56,383	6,200
1993	762,851	773,387	10,536	-825,147	-826,020	-873	-37,640	-38,137	-497	-99,936	-90,771	9,165
1994	840,006	854,156	14,150	-948,544	-948,849	-305	-39,866	-38,845	1,021	-148,405	-133,538	14,867
1995	969,189	991,490	22,301	-1,082,268	-1,086,539	-4,271	-35,075	-34,046	1,029	-148,154	-129,095	19,059
1996	1,032,478	1,055,233	22,755	-1,155,101	-1,163,450	-8,349	-42,472	-39,968	2,504	-165,095	-148,184	16,911
1992:I	183,103	184,610	1,507	-183,077	-183,097	-20	-7,680	-7,625	55	-7,654	-6,112	1,542
II	184,312	185,967	1,655	-191,127	-191,301	-174	-8,580	-8,462	118	-15,395	-13,796	1,599
III	183,063	184,924	1,861	-192,693	-193,033	-340	-7,871	-7,867	4	-17,501	-15,976	1,525
IV	186,226	187,856	1,630	-196,875	-197,118	-243	-11,383	-11,237	146	-22,032	-20,499	1,533
1993:I	187,026	189,422	2,396	-196,816	-197,041	-225	-8,380	-8,502	-122	-18,170	-16,121	2,049
II	190,582	192,533	1,951	-206,269	-206,335	-66	-8,533	-8,501	32	-24,220	-22,303	1,917
III	188,218	191,354	3,136	-206,420	-206,720	-300	-9,215	-9,347	-132	-27,417	-24,713	2,704
IV	197,027	200,077	3,050	-215,643	-215,928	-285	-11,513	-11,787	-274	-30,129	-27,638	2,491
1994:I	197,420	200,670	3,250	-218,959	-218,852	107	-8,169	-7,971	198	-29,708	-26,153	3,555
II	204,809	208,713	3,904	-231,327	-231,438	-111	-9,507	-9,275	232	-36,025	-32,000	4,025
III	214,287	217,714	3,427	-244,323	-244,405	-82	-9,975	-9,671	304	-40,011	-36,362	3,649
IV	223,494	227,062	3,568	-253,934	-254,154	-220	-12,215	-11,928	287	-42,655	-39,202	3,635
1995:I	233,086	237,587	4,501	-263,501	-263,845	-344	-8,639	-8,451	188	-39,054	-34,709	4,345
II	241,497	246,787	5,290	-274,183	-274,363	-180	-8,290	-8,128	162	-40,976	-35,704	5,272
III	244,479	250,734	6,255	-273,175	-275,019	-1,844	-8,992	-8,847	145	-37,688	-33,132	4,556
IV	250,128	256,382	6,254	-271,409	-273,316	-1,907	-9,154	-8,620	534	-30,435	-25,554	4,881
1996:I	252,656	256,382	3,726	-276,975	-278,860	-1,885	-10,955	-10,406	549	-35,274	-32,884	2,390
II	257,035	262,335	5,300	-288,208	-289,231	-1,023	-9,420	-8,689	731	-40,593	-35,585	5,008
III	254,405	261,979	7,574	-292,782	-295,865	-3,083	-9,476	-8,947	529	-47,853	-42,833	5,020
IV	268,380	274,545	6,165	-297,139	-299,493	-2,354	-12,621	-11,926	695	-41,380	-36,874	4,506

counts as a result of updated or revised annual survey results.

Table 1 presents a summary of revisions from all sources. Table 2 presents detail on the revisions due to new source data and methodologies. For 1996, \$22.8 billion is added to exports of goods, services, and income, and \$8.4 billion is added to imports of goods, services, and income. The largest single source of addition to exports was the upward revision to income receipts of \$8.4 billion in 1996. Many of the revisions to the services accounts were about offsetting for exports and imports, but the upward revision to travel receipts far exceeded the upward re-

vision to travel payments. In total, the U.S. current-account deficit was reduced \$16.9 billion.

The remainder of this article discusses the major revisions and the years directly affected as follows:

- Benchmark survey of U.S. portfolio investment abroad (1985–96)
- U.S. currency flows (1974–96)
- Financial services (1995–96)
- Benchmark survey of foreign direct investment in the United States (1992–96)
- Benchmark survey of selected services (1996)
- Transportation estimates (1995–96)

Table 2.—Major Sources of Revisions, 1985–1996

[Millions of dollars]

(Credits +; debits -) ¹	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
International transactions:												
Other transportation receipts (line 7):												
Revised								22,616	23,050	24,941	27,412	27,216
Changes due to truck freight charges											246	228
Changes due to ocean port services								-1,075	-858	-961	-1,391	-2,299
Revisions due to updated source data									14	41	494	172
Previously published								23,691	23,894	25,861	28,063	29,115
Royalties and license fees receipts (line 8):												
Revised								19,656	20,304	22,661	27,383	29,974
Changes due to 1992 foreign direct investment benchmark								-59	-19	(²)	(²)	(²)
Revisions due to updated source data										389	430	1,145
Previously published								19,715	20,323	22,272	26,953	28,829
Other private services receipts (line 9):												
Revised		27,303	28,701	30,709	36,204	39,540	47,024	50,294	54,517	61,093	66,850	73,569
Changes due to financial services											920	488
Changes due to expenditures of temporary workers		438	338	222	322	626	799	983	1,070	1,241	1,303	1,302
Changes due to 1996 benchmark of selected services												424
Changes due to 1992 foreign direct investment benchmark								243	74	(²)	(²)	(²)
Revisions due to updated source data		-64	-103	-131	-202	-279	-373	-223	-63	781	2,903	4,087
Previously published		26,929	28,466	30,618	36,084	39,193	46,598	49,291	53,436	59,071	61,724	67,268
Other private income receipts (line 13):												
Revised	57,633	52,806	55,592	70,571	92,638	94,072	81,186	66,826	63,495	79,498	101,836	102,866
Changes due to dividend income	119	328	770	1,204	1,823	3,070	2,946	4,327	4,076	6,012	7,995	8,947
Changes due to bond interest income	-117	-1,118	-1,026	-908	-681	-46	1,459	2,479	6,087	3,846	3,400	-471
Revisions due to updated source data										694	1,377	312
Previously published	57,631	53,596	55,848	70,275	91,496	91,048	76,781	60,020	53,332	68,946	89,064	94,078
Other transportation payments (line 21):												
Revised								-24,894	-25,746	-27,255	-28,249	-28,453
Changes due to truck freight charges											233	256
Revisions due to updated source data								565	582	728	723	391
Previously published								-25,459	-26,328	-27,983	-29,205	-29,100
Royalties and license fees payments (line 22):												
Revised								-5,089	-4,819	-5,560	-6,503	-7,322
Changes due to 1992 foreign direct investment benchmark								-15	-23	(²)	(²)	(²)
Revisions due to updated source data									-31	-42	-191	-286
Previously published								-5,074	-4,765	-5,518	-6,312	-7,036
Other private services payments (line 23):												
Revised		-14,785	-17,999	-19,028	-20,548	-24,387	-28,098	-25,066	-29,356	-33,138	-39,285	-42,796
Changes due to financial services											-765	-1,182
Changes due to earnings of temporary workers		-844	-671	-474	-675	-1,232	-1,579	-1,886	-2,059	-2,377	-2,499	-2,506
Changes due to 1996 benchmark of selected services												-231
Changes due to 1992 foreign direct investment benchmark								51	-59	(²)	(²)	(²)
Revisions due to updated source data					25	-5	-3	456	659	219	-2,051	-1,251
Previously published		-13,941	-17,328	-18,554	-19,898	-23,150	-26,516	-23,687	-27,897	-30,980	-33,970	-37,626
Direct investment income payments (line 26):												
Revised								-302	-5,574	-20,154	-30,345	-32,132
Changes due to 1992 foreign direct investment benchmark								15	-18	(²)	(²)	(²)
Revisions due to updated source data										1,076	1,073	1,685
Previously published								-317	-5,556	-21,230	-31,418	-33,817

- Earnings and expenditures of temporary workers (1986–96)
- Currency translation gains and losses (1992–96)
- Nonbank claims and liabilities (1997)
- Goods (1994–96)
- Nonresident taxes (1985–96)

Benchmark survey of U.S. portfolio investment abroad

The U.S. Department of the Treasury recently completed a benchmark survey of U.S. portfolio

investment in foreign long-term securities. This was the first such survey of U.S. ownership of foreign securities since a war-time survey conducted in May 1943. The survey collected data on the aggregate market value and composition of foreign long-term securities owned by U.S. persons as of March 31, 1994. Long-term securities are bonds with original maturities of more than 1 year and all equities. The survey was conducted in close consultation with the Bureau of Economic Analysis, the Federal Reserve Board, the Federal Reserve Bank of New York, the Securities and

Table 2.—Major Sources of Revisions, 1985–1996—Continued

(Millions of dollars)

(Credits +; debits -) ¹	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Private remittances and other transfers (line 32):												
Revised	-9,295	-10,424	-11,192	-12,742	-13,308	-13,972	-15,309	-15,348	-17,235	-18,630	-19,530	-20,704
Changes due to tax payments	254	113	-23	204	668	547	529	370	-27	1,149	1,390	2,540
Revisions due to updated source data	41	53	74	65	83	82	-22	-472	-273	-224	361	
Previously published	-9,549	-10,578	-11,222	-13,020	-14,041	-14,602	-15,920	-15,696	-16,736	-19,506	-20,696	-23,605
U.S. claims reported by U.S. banks (line 47):												
Revised								21,175	30,615	-4,200	-75,108	-98,186
Changes due to removal of unrealized gains and losses								280	668	2,760	87	-2,181
Revisions due to updated source data										1,201	-6,049	-7,786
Previously published								20,895	29,947	-8,161	-69,146	-88,219
Direct investment in the United States, net capital flows (line 57):												
Revised								17,936	48,993	45,679	67,526	76,955
Changes due to 1992 foreign direct investment benchmark								336	5,971	(²)	(²)	(²)
Revisions due to updated source data										-4,081	7,290	-6,995
Previously published								17,600	43,022	49,760	60,236	83,950
U.S. Treasury securities and U.S. currency flows (line 58):												
Revised	25,633	7,909	-2,243	26,039	35,518	16,266	34,226	50,531	43,281	57,674	111,848	172,878
Changes due to new estimates of U.S. currency flows	5,200	4,100	5,400	5,800	5,900	18,800	15,400	13,400	18,900	23,400	12,300	17,300
Revisions due to updated source data										49	208	1,794
Previously published	20,433	3,809	-7,643	20,239	29,618	-2,534	18,826	37,131	24,381	34,225	99,340	153,784
U.S. liabilities reported by U.S. banks (line 61):												
Revised								16,216	25,063	104,338	30,176	9,784
Changes due to removal of unrealized gains and losses								755	621	-3,440	58	3,272
Revisions due to updated source data									3,583	-4,064	4,835	8,070
Previously published								15,461	20,859	111,842	25,283	-1,558
International investment position (at yearend):												
Foreign securities (line 19):												
Revised	119,403	158,123	188,589	232,849	314,294	342,313	455,750	515,083	853,528	889,706	1,054,352	1,273,439
Changes due to 1994 U.S. Treasury benchmark	5,115	14,692	34,637	56,873	96,682	113,620	153,325	178,537	302,895	333,465	332,603	(³)
Revisions due to updated source data												(³)
Previously published	114,288	143,431	153,952	175,976	217,612	228,693	302,425	336,546	550,633	556,241	721,749	(³)
Direct investment in the United States (lines 35 and 36):												
Revised:												
At current cost								500,542	550,862	584,970	654,502	729,052
At market value								696,177	768,389	773,726	1,031,981	1,253,642
Changes due to 1992 benchmark:												
At current cost								1,148	11,711	(²)	(²)	(³)
At market value								1,965	7,539	(²)	(²)	(³)
Revisions due to updated source data:												
At current cost										5,144	15,983	(³)
At market value										1,872	12,778	(³)
Previously published:												
At current cost								499,394	539,151	579,826	638,519	(³)
At market value								694,212	760,859	771,854	1,019,203	(³)
U.S. currency (line 38):												
Revised	68,900	73,000	78,400	84,200	90,100	108,900	124,300	137,700	156,600	180,000	192,300	209,600
Previously published												

1. Credits +: An increase in U.S. receipts and U.S. liabilities, or a decrease in U.S. payments and U.S. claims. Debits -: An increase in U.S. payments and U.S. claims, or a decrease in U.S. receipts and U.S. liabilities.

2. Revisions due to the 1992 benchmark are not separately identifiable after 1993.

3. Estimates for 1996 were not published previously.

NOTE.—For international transactions, line references are to table 1 of "U.S. International Transactions, First Quarter 1997," in this issue of the SURVEY OF CURRENT BUSINESS. For the international investment position, line references are to table 1 of "The International Investment Position of the United States in 1996" in this issue of the SURVEY.

Exchange Commission, other U.S. Government agencies, and the financial community.

Both custodians and fund managers, including qualified investors, were surveyed to ensure comprehensiveness. Custodians were identified as entities located in the United States who managed the safe-keeping of \$20 million or more in foreign long-term securities for themselves or on behalf of other U.S. persons; most foreign securities are held by custodians or sub-custodians. Fund managers and investors were identified as entities located in the United States who owned or managed investment in foreign long-term securities of \$5 million or more on behalf of institutional or private investors.

Detailed data collected from fund managers was compared with summary level data collected from custodians, both to check on the completeness of coverage and to eliminate duplication of coverage. In all, 3,344 fund managers and custodians participated in the survey. Survey data was collected on an individual security basis by international security identification or CUSIP number and then aggregated by industry, by country, by type of security, by type of instrument, and by currency.²

The results of the survey, as expected, show large U.S. holdings. The total value of foreign bond and stock holdings as of March 31, 1994, was \$870.3 billion. The survey results now replace estimates based on transactions contained in the Treasury Department's International Capital Reporting system and BEA estimates.

The survey results are \$302.6 billion higher than the BEA estimated position of \$550.6 billion at yearend 1993, which was published in the article on the net U.S. international investment position in the July 1996 SURVEY OF CURRENT BUSINESS.

The differences between the two estimates can be attributed both to incomplete coverage of these transactions in the Treasury source data upon which BEA's position estimates are based and to inexact valuation of price and exchange rate adjustments applied to BEA's estimated positions. However, it is not possible to determine the amount of underestimation attributable to each part of the estimation process.

Foreign bonds.—The benchmark survey estimate of U.S. holdings of foreign bonds is \$309.7 billion at yearend 1993, compared with BEA's previous estimate of \$247.8 billion.

BEA's estimation procedures for bonds are divided between dollar-denominated and foreign-currency-denominated bonds. This division reflects the conventions used by BEA for estimating both positions and income. BEA's estimates of U.S. holdings of dollar-denominated bonds were overstated because of underestimation of the amount of redemptions and because of purchases by foreigners at the time bonds were originally sold (issued) in the United States. BEA's estimates of U.S. holdings of foreign-currency-denominated bonds were understated because of incomplete coverage and the lack of any geographic information on the nationality and currency of issuer, which is required in order to apply appropriate price and exchange rate valuations. The Treasury survey provides a one-time measure of the geographic distribution by nationality and currency of issuer; BEA has used this opportunity to revise its measures of valuation changes by applying appropriate prices, exchange rates, and yields to the updated geographic distribution of holdings.

The increase in reported bond holdings in the Treasury survey has resulted in a re-estimation of associated interest receipts. Receipts are estimated by applying market yields to revised portfolio holdings. Interest income receipts on bonds are revised upward \$6.1 billion, to \$23.3 billion, for 1993 as a result of the improved coverage of transactions. The benchmark survey also permits improved geographic attribution of bond interest income. The updated geography is used to attribute income to the country of ownership of the securities rather than to the country where transactions occur, which is the basis for BEA's estimates for the years between benchmark surveys. This distinction is important because allocations by country of transaction overstate income receipts from countries with well-developed financial markets—such as the United Kingdom, Switzerland, the Netherlands, and Hong Kong—and correspondingly understate income receipts from other countries.

Foreign stocks.—The benchmark survey estimate of U.S. holdings of foreign stocks is \$543.9 billion at yearend 1993, compared with BEA's previous estimate of \$302.8 billion. As with foreign bonds, the primary reasons for underestimation are incomplete coverage and inexact valuation. Acquisitions omitted from the position estimates in the past would not have been included in the accumulated appreciation of stock values that has occurred over the past several decades. Continued undercoverage over the years would have

2. For more detail on the methodology and survey results, see Milton Pappas, "United States Long-Term Portfolio Investment Abroad," *Treasury Bulletin* (Summer 1997).

compounded this understatement. In addition, necessary geographic detail to which to apply appropriate stock prices and exchange rate indexes was lacking. BEA has used this opportunity to revise its measures of valuation changes by applying appropriate prices, exchange rates, and dividend yields to the updated geographic distribution of holdings.

The increase in reported stock holdings in the Treasury survey has resulted in a re-estimation of the associated dividend receipts. Receipts are estimated by applying market rates to revised portfolio holdings. Dividend income receipts on stocks are revised up \$4.1 billion, to \$10.9 billion, for 1993 as a result of improved coverage of transactions. As with interest income on bonds, the much more accurate picture of U.S. stock holdings abroad by country of ownership has enabled BEA to improve its geographic allocation of dividend receipts.

Historical revisions.—To avoid a major break in series, the position estimates for bonds and stocks were carried backward from yearend 1993 to yearend 1984. The adjustment is based on the cumulative volume of trading over the entire timespan, which is apportioned to each year by the annual percentage of the cumulative volume that occurred in that year. The 1984 starting point was chosen because that was when the explosive growth in gross trading volume of foreign bonds and foreign stocks began (chart 1). Adjustment of the position estimates for the years prior to 1984 would have had only a marginal effect on estimated positions.

U.S. currency flows

U.S. currency—particularly Federal Reserve notes—is widely held by foreigners. The currency is used for many of the same reasons as in the United States. It serves as a unit of account, a medium of exchange, and a store of value, especially when the purchasing power of the domestic currency is uncertain. As a safe asset in an unpredictable world, dollars flow into a country during periods of economic and political upheaval and sometimes remain there well after the crisis has subsided. In other situations, the dollar co-circulates with the domestic currency for extended time periods.

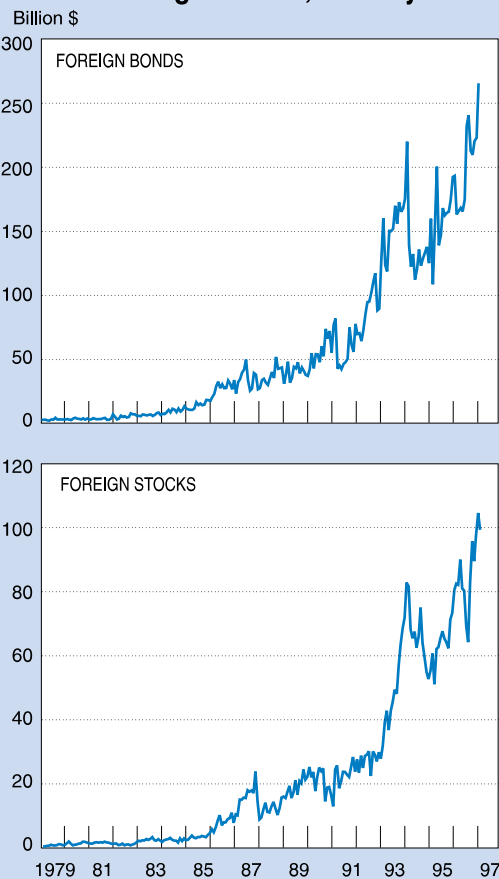
Although the amount of U.S. currency outstanding is known, the shares in domestic and in foreign circulation are notoriously difficult to measure accurately. Notwithstanding the growing importance of cross-border U.S. currency

flows in the past two decades, estimates of U.S. currency flows have not been included in the international transactions accounts or international investment position accounts because of this difficulty. This difficulty is not surprising, given the diversity of channels through which currency may flow abroad, the destinations of the currency, and its varied uses.

Recently, however, the Federal Reserve Board's research staff completed a multiyear research project to measure such flows. The research uses pioneering approaches to the measurement of U.S. currency flows abroad by direct and indirect methods of estimation that are based on numerous statistical measurement techniques and multiple data sources. Major conclusions from the study were the following: The amount of U.S. currency going into domestic circulation each year has not varied much over the past two decades, while the amount of currency going abroad has risen strongly, particularly in the 1990's; consequently, the share of U.S. currency

CHART 1

Gross Trading Volumes, Monthly



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

going into domestic circulation each year has dropped over the past two decades, while the share going abroad has risen strongly; these same broad conclusions emerge regardless of which measurement technique or set of source data was used; and all measurement techniques identified the same periods of major accelerations and decelerations in net outflows of currency.³

After a review of all the methods of measurement, a modification of one of the direct methods of measurement was developed in close consultation with the Federal Reserve Board's research staff. It is this modification that is used for the new estimates.

The exact amount of currency flowing abroad is not known. As a proxy, the new estimates use total net disbursements of \$100 notes from the New York City and Los Angeles cash offices of the Federal Reserve district banks.

Several institutional characteristics of the circulation of U.S. currency support this approach to measurement and indicate that most of these notes flow to and from foreigners. First, mostly lower denomination notes (\$5's, \$10's, \$20's, and \$50's) circulate in the U.S. economy, whereas mostly \$100 notes circulate abroad. A 1995 survey of U.S. households found that they could account at most for a little more than 3 percent of total holdings of \$100 notes. Second, the shipment of \$100 notes from the New York City cash office is very large relative to the size of its district as measured by several economic variables, including its regional share of vault cash, population, income, and deposits. Third, the inclusion of the Los Angeles cash office is based on information that suggests that \$100 notes returned to the United States from abroad (largely from Asian countries) are shipped primarily to Los Angeles. From 1990 to 1996, the New York City and Los Angeles cash offices have placed on net almost 84 percent of the \$142.7 billion increase in \$100 notes in circulation.

The proxy is known to be deficient in that it (1) excludes very small shipments of lower denomination notes sent abroad by these offices; (2) excludes very small shipments of \$100 notes sent abroad by other Federal Reserve cash offices; and (3) includes the very small amount of \$100 notes that are distributed into the U.S. economy. However, none of these deficiencies is thought

to introduce major shortcomings to the proxy chosen.

The broad geographic areas to which U.S. currency has flowed in recent years are known. From 1988 to 1991, U.S. currency flowed first to Latin America, primarily to Argentina, and then to the rest of the world in response to the uncertainties created by the Persian Gulf War. In 1993 and 1994, the deteriorating situation in Russia and other parts of the former Soviet Union led to large outflows to those areas. Net U.S. currency flows to Russia alone accounted for more than half of total net flows of U.S. currency from 1994 to 1996. Additional flows have been to the Middle East and Far East. Although net currency flows tended to drop back after each of these surges, the general upward path of net currency flows abroad is unmistakable (table 3).

Quarterly estimates of net currency flows abroad are introduced into the U.S. international transactions accounts for 1974–96, and the amounts held by foreigners, into the annual estimates of the U.S. international investment position accounts for 1973–96. At yearend 1973, U.S. currency held abroad was \$30.5 billion, or 49 percent of U.S. currency in circulation and held outside of the U.S. Treasury, Federal Reserve banks, and vaults of depository institutions. By yearend 1996, U.S. currency held abroad had grown to \$209.6 billion, or 53 percent of the \$398.0 billion of U.S. currency in circulation (table 3).

The new measure of net currency flows is believed to represent nearly all the currency

Table 3.—U.S. Currency, 1973–1996

[Millions of dollars]

	Net flows to foreigners	Foreign holdings at yearend	Currency in circulation at yearend ¹
1973	n.a.	30,500	61,929
1974	1,100	31,600	68,188
1975	1,500	33,100	74,138
1976	1,500	34,600	80,967
1977	1,900	36,500	89,043
1978	3,000	39,500	97,963
1979	3,000	42,500	106,882
1980	4,500	47,000	117,379
1981	3,200	50,200	124,641
1982	4,000	54,200	134,805
1983	5,400	59,600	148,604
1984	4,100	63,700	158,444
1985	5,200	68,900	170,187
1986	4,100	73,000	183,050
1987	5,400	78,400	199,272
1988	5,800	84,200	214,816
1989	5,900	90,100	225,333
1990	18,800	108,900	249,491
1991	15,400	124,300	269,916
1992	13,400	137,700	294,965
1993	18,900	156,600	324,848
1994	23,400	180,000	357,460
1995	12,300	192,300	376,187
1996	17,300	209,600	397,945

1. Measured as a component of U.S. money stock.
n.a. Not available

3. Richard D. Porter and Ruth A. Judson, "The Location of U.S. Currency: How Much Is Abroad?" *Federal Reserve Bulletin* (October 1996): 883–903. Similar empirical research and approaches to measurement were also applied to Germany; see Franz Seitz, *The Circulation of Deutsche Mark Abroad*, Economic Research Group of the Deutsche Bundesbank (May 1995). See also Douglas B. Weinberg, "U.S. International Transactions, Second Quarter 1996," *SURVEY 76* (October 1996): 99–100.

transactions that occur through wholesale banking channels. Currency that flows abroad through other channels—through tourists, through business persons, through personal remittances, and through U.S. military personnel stationed overseas—is not covered in this estimate. Currency smuggled and other illegal activities involving cash, such as drug trafficking, are also not covered in this estimate.

Partial estimates of U.S. currency held by foreigners and changes in those holdings were included in the international accounts and the international investment position of the United States from 1946 to 1962 (see Samuel Pizer and Frederick Cutler, "U.S. International Investments," *SURVEY* 43 (August 1963)). The estimates were discontinued when they were discovered to be unreliable and inaccurate. Currency flows at that time were based on a Federal Reserve survey of currency shipments through banks, a Census Bureau report of exports and imports of silver coins, periodic information on the U.S. Treasury's currency shipments, and estimates of U.S. currency spent abroad by U.S. troops. Growing uncertainty over the coverage and quality of measurement led to the series' termination, partly because evolving geographic statistical patterns appeared to be seriously out of line with actual developments.

Financial services

Estimates of financial services are further improved from last year's introduction of the comprehensive benchmark survey for 1994 by this year's introduction of preliminary results from the 1995 and 1996 Annual Survey of Financial Services Transactions Between U.S. Financial Services Providers and Unaffiliated Foreign Persons.

The new annual surveys provide coverage comparable to that of the benchmark survey (which included nearly a dozen types of financial services), but in consideration of statistical reporting burden, the exemption level in the annual survey is raised to \$5.0 million from \$1.0 million in the benchmark survey. The loss in coverage due to the higher exemption level is recovered by statistical estimation of the exempt companies' transactions in nonbenchmark years. In addition, because the follow-on annual surveys, like the benchmark survey, cover only explicit fees paid and received, BEA continues to estimate fees paid and received on bond trading, which are not

separately identifiable and consequently can not be reported.⁴

The largest revisions for 1995 and 1996 to both receipts and payments were to underwriting and private placement fees and, to a lesser extent, to financial management fees and financial advisory fees. The revisions resulted largely from a substantial step-up in financial activity in both 1995 and 1996 from levels of the 1992–94 period upon which extrapolations were based. In contrast, preliminary estimates for brokerage commission receipts and payments were close to the revised estimates.

Despite the underestimation, the basic approach of extrapolation from the benchmark year using activity and fee-rate variables to produce current estimates until annual survey results can replace them still appears sound. In the future, the approach will be maintained, but the availability of annual surveys will permit the estimates for each type of financial service to be adjusted more promptly.

The annual surveys confirm the benchmark survey findings that much financial service activity takes place outside affiliated channels and that at least for the United States, it is necessary to survey transactions with unaffiliated foreigners in order to obtain complete coverage of financial services.

Estimates of receipts were revised up \$0.9 billion, to \$7.0 billion, for 1995 and up \$0.4 billion, to \$8.0 billion, for 1996. Estimates of payments were revised up \$0.8 billion, to \$2.5 billion, for 1995 and up \$1.2 billion, to \$3.2 billion, for 1996.

Benchmark survey of foreign direct investment in the United States

Results of BEA's 1992 benchmark survey of foreign direct investment in the United States are introduced for 1992. For years after 1992, the estimates are revised by extrapolating forward the 1992 universe data and by incorporating new or adjusted data from BEA's quarterly sample surveys for 1993–96. Previously, the estimates for 1992 forward were extrapolated from the 1987 benchmark survey and sample surveys for 1993–96.

The 1992 benchmark survey covers the universe of U.S. affiliates of foreign direct investors. In nonbenchmark years, universe estimates of the direct investment position and related capital, investment income, and services flows are derived from data reported quarterly by a sample of affiliates and from estimates for affiliates not in the

4. See Christopher L. Bach, "U.S. International Transactions, Revised Estimates for 1986–95," *SURVEY* 76 (July 1996).

sample. The estimates for affiliates not in the sample are derived by extrapolating data from the benchmark survey using a matched sample of data from reporting affiliates.

Direct investment capital.—Net capital inflows for foreign direct investment in the United States are revised for 1992–96 to incorporate the results of the 1992 benchmark survey and new or adjusted data from the sample surveys for 1993–96. In addition, a recalculation of permanent invested capital in unincorporated bank affiliates, using more detailed source data, resulted in revisions for 1992 and 1993. The revisions for 1993–96 also reflect revised estimates of depreciation, depletion, and expensed exploration and development costs, which are used to adjust the reinvested earnings component of capital to a current-cost basis. Net capital inflows are revised up \$0.3 billion for 1992, up \$6.0 billion for 1993, down \$4.1 billion for 1994, up \$7.3 billion for 1995, and down \$7.0 billion for 1996.

A more complete explanation of the revisions will accompany the presentation of the detailed estimates of foreign direct investment in the United States in the September 1997 SURVEY.

Direct investment income.—Net payments of income by U.S. affiliates to their foreign parents are revised for 1992–96 to incorporate the results of the 1992 benchmark survey and new or adjusted data from the sample surveys for 1993–96. The revisions for 1993–96 also reflect revised estimates of depreciation, depletion, and expensed exploration and development costs, which are used to adjust the earnings component of direct investment income to a current-cost basis, and revisions to related withholding taxes. Net income payments are essentially unrevised for 1992 and 1993 and were revised down \$1.1 billion for 1994, down \$1.1 billion for 1995, and down \$1.7 billion for 1996.

Royalties and license fees payments and receipts, affiliated.—Payments and receipts of royalties and license fees between U.S. affiliates and their foreign parents (and foreign affiliates of their foreign parents) are revised for 1992–96 to incorporate the results of the 1992 benchmark survey and new or adjusted data from the sample surveys for 1993–96. For 1992, U.S. affiliates' payments and U.S. affiliates' receipts were essentially unrevised.

Other private service payments and receipts, affiliated.—Payments and receipts for other private services between U.S. affiliates and their foreign parents (and foreign affiliates of their foreign

parents) are revised for 1992–96 to incorporate the results of the 1992 benchmark survey and new or adjusted data from the sample surveys for 1993–96. For 1992, U.S. affiliates' payments are revised down \$0.1 billion, and U.S. affiliates' receipts are revised up \$0.2 billion.

Benchmark survey of selected services

The estimates for 1996 incorporate the preliminary results of BEA's 1996 Benchmark Survey of Selected Services Transactions with Unaffiliated Foreign Persons. The survey covered a number of business, professional, and technical services and is one of many quinquennial benchmark surveys that are a regular part of BEA's ongoing benchmark survey program. Services covered were primarily advertising, computer and data processing, database and other information services, and management, legal, and construction and engineering services. In addition, to fill data gaps in new, growing, and volatile services categories, this benchmark survey covered a number of other services for the first time: Financial services by firms that are not financial services providers (purchases only); selling agent services; and "other" private services, such as satellite photography, security services, actuarial services, salvage services, oilspill and toxic waste cleanup services, language translation services, and account collection services. (These services had previously been covered in annual surveys but not in a benchmark survey). The survey was required from each U.S. person who had transactions (either sales or purchases of any of the covered services) in excess of \$500,000 with unaffiliated foreign persons.

For 1996, \$0.4 billion in receipts and \$0.2 billion in payments are added to the accounts.

Transportation estimates

Truck freight receipts and payments.—Estimates of freight charges for the transportation of U.S. goods exports by truck between the United States and Canada are revised for 1995 and 1996, based on newly available source data.

Beginning in April 1995, the Bureau of the Census began collecting and providing to the Department of Transportation survey data on freight charges for the transportation of U.S. goods exports by truck between the United States and Canada. The survey data now replace BEA projections that were previously used to estimate truck freight receipts and payments. (Survey data for freight charges on U.S. goods imports from

Canada were available at the time the estimates were introduced in 1995.)

For 1995, the revision raised truck freight receipts by \$0.2 billion and reduced truck freight payments by \$0.2 billion. For 1996, the revision raised truck freight receipts by \$0.2 billion and reduced truck freight payments by \$0.3 billion.

Ocean port receipts.—Estimates of foreign-operated ocean carriers' expenses in U.S. ports are revised for 1992–96 to incorporate details now available from BEA's survey of ocean transportation. The new details identify the types of primary expenses incurred in U.S. ports by foreign ocean carriers.

Primary expenses include port call expenses (pilotage, towing, and tugboat), cargo expenses (stevedoring, container and barge rentals, and warehouse), vessel expenses (stores and supplies, vessel repairs, and officer and crew wages), and other expenses (agents' and brokers' fees and expenses relating to maintaining U.S. offices). The estimates of these nonfuel expenses are based on the annual BEA survey "Foreign Ocean Carriers' Expenses in the United States." From the annual reports, a per ton expenditure "rate" is calculated for each type of nonfuel expense and for each type of carrier (liner, tanker, and tramp). These implied per ton expenditure "rates" are used in conjunction with Bureau of the Census data on import and export tonnage of foreign-operated ocean carriers to calculate total expenses.

Previously, no detail by type of primary expense was available; consequently, estimates were developed only at the aggregate level. Estimates based on type of primary expense yield substantially lower estimates of foreign-operated ocean carriers' expenses in U.S. ports than estimates based on aggregate port expenses.

Separate enumeration of different types of port expenses also permits a more direct method of estimation of fuel expenses. Estimates of fuel expenses are now based on the Bureau of the Census quarterly report "Bunker Fuel Laden on Vessels Cleared for Foreign Countries." Previously, the estimates of fuel expenses were based on indirect methods of estimation because they could not be separated from other expenses reported on BEA's survey.

Estimates of primary expenses and of fuel for each type of service are summed to total ocean port services receipts. Downward revisions to ocean port services receipts range from \$1.1 billion for 1992 to \$2.3 billion for 1996.

Earnings and expenditures of temporary workers

Migratory workers.—Earnings and expenditures of foreign residents employed temporarily in the United States are revised for 1986–96 to include the earnings of "undocumented" migrant agricultural workers, mostly from Mexico. These migrant workers are employed in the United States 23 weeks a year, on average, to assist in the growing and harvesting of crops. Until now, no estimates of earnings and expenditures of "undocumented" migrant agricultural workers have been included in the accounts.

Only the earnings and expenditures of "undocumented" migrant agricultural workers are included in the new estimates. Earnings and expenditures of nonagricultural Mexican and Canadian residents who commute to work and are employed in the border areas of the United States are already included in the "other" private services accounts. Resident immigrants, who also earn income and make expenditures, are considered residents of the United States; the share of their earnings that is sent abroad is included in personal remittances.

The estimation methodology for "undocumented" migrant agricultural workers uses biennial data from the U.S. Department of Labor's National Agricultural Workers Survey (NAWS) and data from the U.S. Department of Agriculture's Quarterly Agricultural Labor Survey (QALS). The NAWS survey, which is based on interviews with agricultural workers for the years 1989–95, covers crop workers (nursery, cash grains, field crops, and fruits and vegetables) and excludes livestock, poultry, and animal fodder workers. The QALS is a telephone survey of farm employers taken four times a year.

Several steps are necessary to combine the information from the two data sources. First, an estimate of total crop workers is calculated by extrapolating the number of total crop workers in 1991 from the NAWS by the total QALS employment of farm labor and agricultural service workers. Second, "undocumented" migrant workers are calculated by multiplying the NAWS percentage of crop workers who are migrants and the NAWS percentage of migrants who are "undocumented" times the total number of crop workers. Third, the number of "undocumented" migrant workers is multiplied by the average hours worked per quarter from the NAWS and the average hourly earnings, less withholding, from the QALS, to calculate earnings. It is assumed that 55 percent of earnings are spent in the United States.

Revisions are made for 1986–96. For 1996, \$2.0 billion is added to earnings, and \$1.1 billion is added to expenditures. For 1986, \$0.7 billion is added to earnings, and \$0.4 billion is added to expenditures.

Professional workers.—Earnings and expenditures of foreign residents employed temporarily in the United States are revised to include the earnings of self-employed foreign professionals—such as artists, athletes, consultants, and teachers. Estimates of their earnings are based on data from the Internal Revenue Service. It is assumed that 40 percent of professionals' earnings are spent in the United States. (Earnings and expenditures of professionals working in the United States for foreign corporations are included in the direct investment services accounts.)

Revisions are made for 1986–96. For 1996, \$0.5 billion is added to earnings, and \$0.2 billion is added to expenditures. For 1986, \$0.1 billion is added to earnings, and the amount added to expenditures is very small.

Currency translation gains and losses

Improved measures of U.S. banks' own claims and liabilities denominated in foreign currencies are introduced for 1992–96. An adjustment is made that improves the quality of the estimates by removing unrealized currency translation gains and losses from U.S. banks' capital flows. These gains and losses occur because foreign-currency-denominated assets and liabilities are reported in dollar equivalents, thereby giving rise to apparent transactions any time that exchange rates at the end of 1 month differ from those at the end of the next month. Because foreign-currency-denominated positions have increased in size in recent years, fluctuations in the positions attributable to exchange rate movements have become large enough to significantly distort the measure of capital transactions. Therefore, the dollar-equivalent amounts will now be adjusted to remove unrealized gains or losses, which should more appropriately be considered as valuation adjustments in the net U.S. international investment position. Bona fide capital transactions, as well as foreign exchange gains and losses that are realized, will then constitute capital flows in the balance of payments accounts. The adjustment is made on the basis of banking data collected by the Bank for International Settlements (BIS).

The improved flow estimates for U.S. banks' own foreign-currency-denominated claims and

liabilities are derived by applying the distribution of foreign currencies in the BIS banking data to the positions reported in the Treasury International Capital (TIC) reporting system at the beginning and end of quarters in order to compute the dollar amount of TIC outstandings held in each of nine key currencies—the British pound, Japanese yen, German mark, Swiss franc, French franc, Italian lire, Canadian dollar, the European Currency Unit (ECU), and the Special Drawing Right (SDR) (for less developed countries that transact largely in nondomestic currencies).

The TIC dollar-reported outstandings for each of the nine currencies are then converted into domestic currency units using end-of-period exchange rates. The difference between the beginning- and end-of-period positions constitutes the estimated capital flow for each currency in domestic units. The flow for each of the nine currencies is then converted back into dollars using quarterly average exchange rates, and the nine values are summed to compute global capital flows excluding exchange rate gains and losses.

The global flow without exchange gains and losses is then subtracted from the global TIC capital flow with gains and losses; the difference equals the exchange rate gains and losses incurred during the period. Representatives in the banking industry suggest that about 25 percent of the computed gains and losses are realized in a typical quarter and are thus appropriately included in capital flows; therefore, only the 75 percent that represent the unrealized exchange gains and losses are removed from the TIC-reported capital flow.

Unrealized gains and losses are removed from U.S. banks' foreign-currency-denominated flows for 1992–96. The adjustments for foreign currency claims ranged in size from –\$3.1 billion in the third quarter of 1995 to \$3.3 billion in the first quarter of 1995; the revisions were negative when the dollar appreciated and positive when the dollar depreciated. The adjustments for foreign currency liabilities ranged in size from –\$4.3 billion in the first quarter of 1995 to \$4.1 billion in the third quarter of 1995; the revisions were positive when the dollar appreciated and negative when the dollar depreciated. In many quarters, the changes were considerably smaller.

The improved estimates do not cover U.S. banks' customers' claims denominated in foreign currencies, because the currency composition of these asset holdings is not available.

Nonbank claims and liabilities

Beginning with estimates for the first quarter of 1997, BEA is including estimates of capital flows for U.S. nonbank claims on and liabilities to unaffiliated foreigners in its preliminary estimates for the current quarter. The last time these capital flows had been included in the preliminary estimates was the fourth quarter of 1978.

Revisions to the Treasury Department's reporting forms at yearend 1978 extended the reporters' filing date, which made data unavailable to BEA for the preliminary estimates. From the first quarter of 1979 onward, BEA has published an "n.a." (not available) for these capital flows in the current quarter because it had no basis on which to make a reliable and accurate estimate.

In recent years, financing activity and capital flows in these accounts, particularly with Caribbean finance centers, have become large and significant. Consequently, BEA began exploring data sources that would provide the basis for a timely estimate of these capital flows. The Federal Reserve Board has made available to BEA preliminary data from its reports of offshore banks' asset and liability positions with U.S. banks and nonbanks.

BEA's estimates are based on changes in the Caribbean banks' asset and liability positions with U.S. nonbanks. Although U.S. nonbank flows with banks in the Caribbean are a major part of total U.S. nonbank flows, a substantial part of U.S. nonbank flows remains uncovered. There are no acceptable source data upon which to base reliable preliminary estimates of transactions with other areas of the world.

Because of this difficulty, it is expected that there will be large revisions between preliminary and revised estimates. However, these revisions should be smaller than those under the old procedure, which implicitly assumed that nonbank flows were zero for the preliminary estimates.

The new procedure is used only for the preliminary estimates. For the revised estimates published 90 days later, normal estimation procedures based on complete survey results from several data sources will continue to be used.

Goods

BEA and the Bureau of the Census seasonally adjust the goods export and goods import estimates at the five-digit end-use commodity category levels, which is the most detailed level of end-use classification available. This level of detail is chosen because of the need to track specific trade

patterns and to relate those patterns to categories of final demand included in the national income and product accounts. Nearly 150 commodity categories are tested annually for seasonal variation. Almost 80 percent of total export value and almost 90 percent of total import value exhibit stable seasonality.

An aggregate series that is derived as the sum of individually seasonally adjusted series may in some instances exhibit "residual" seasonality. The amount of "residual" seasonality is usually small, and no adjustments are made to the aggregate series, because of a strong preference to have as accurate as possible measures for each of the individual series and to have individual series that sum to the aggregate series. However, in recent years, the amount of "residual" seasonality for exports has increased. Consequently, a concerted effort was made this year to reduce the "residual" seasonality for goods exports. Little "residual" seasonality exists for good imports.


For exports, "residual" seasonality is traceable mostly to the commodity categories of civilian aircraft and parts and of industrial, service, and agricultural-type machinery. The component series of civilian aircraft and parts contain large amounts of irregular and nonsystematic variation, which make it difficult to detect whether a pattern of stable seasonality exists. Given the difficulty in determining reliable seasonality in this series, this problem seems rather intractable, and civilian aircraft and parts can be expected to continue as a contributor to "residual" seasonality in total exports. However, some progress has been made with the machinery category. By combining several of the individual machinery series into a single category and by developing seasonal factors based on that single category, rather than on each component series separately, it was possible to reduce significantly "residual" seasonality in total exports. This combination of individual machinery categories will be reevaluated at the time of next year's annual revision. Staff at the Bureau of the Census' Foreign Trade Division conducted this research.

A number of additional series are adjusted for seasonal or for trading-day variations for the first time this year, which also helps reduce the "residual" seasonality of total exports.

BEA and the Census Bureau seasonally adjusted end-use series continue to sum to seasonally adjusted total exports and total imports.

Nonresident taxes

Net tax payments to foreigners are revised for 1985–95 to reflect a higher level of income from abroad and to reflect a change in assumed foreign withholding tax rates. Taxes on dividends were raised \$1.3 billion for 1996, reflecting the higher level of income receipts that re-

sulted from upward revisions to U.S. holdings of foreign stocks. Taxes on bond interest were lowered \$3.8 billion for 1996, as higher taxes resulting from upward revisions to U.S. holdings of foreign bonds were more than offset by the effect of a reduction in the assumed foreign withholding tax rate on bond interest income. 

U.S. International Transactions, First Quarter 1997

By Christopher L. Bach

The international transactions accounts have undergone substantial revision as a result of major improvements in estimating methodologies and in the development of new source data. For a discussion of these changes, see "U.S. International Transactions, Revised Estimates for 1974-96" in this issue.

THE U.S. current-account deficit increased to \$41.0 billion in the first quarter of 1997 from \$36.9 billion (revised) in the fourth quarter of 1996 (table A, chart 1).¹ A shift to a deficit on investment income and an increase in the deficit on goods and services were partly offset by a decrease in net unilateral transfers.

In the capital account, net recorded capital inflows were \$59.1 billion in the first quarter, compared with \$40.1 billion in the fourth. Increases in U.S. assets abroad and increases in foreign assets in the United States both slowed,

but the slowdown was more pronounced for U.S. assets abroad. Although somewhat reduced, both increases remained large by historical standards.

The statistical discrepancy—errors and omissions in recorded transactions—was an outflow of \$18.1 billion in the first quarter, compared with an outflow of \$3.3 billion in the fourth.

The following are highlights for the first quarter of 1997:

- The balance on investment income shifted to a deficit from a surplus, and the deficit on goods and services increased.
- Capital outflows for U.S. assets abroad slowed; outflows for claims reported by U.S. banks slowed moderately, while outflows for net U.S. purchases of foreign securities slowed sharply.
- Capital inflows for foreign assets in the United States also slowed, particularly for liabilities reported by U.S. banks and for net foreign purchases of U.S. Treasury securities.

1. Quarterly estimates of U.S. current- and capital-account components are seasonally adjusted when statistically significant seasonal patterns are present. The accompanying tables present both adjusted and unadjusted estimates.

Table A.—Summary of U.S. International Transactions

[Millions of dollars, seasonally adjusted]

Line	Lines in tables 1 and 10 in which transactions are included are indicated in ()	1995	1996	1995				1996				1997	Change: 1996 IV-1997 I
				I	II	III	IV	I	II	III	IV		
1	Exports of goods, services, and income (1)	991,490	1,055,233	237,587	246,787	250,734	256,382	256,382	262,335	261,979	274,545	279,468	4,923
2	Goods, adjusted, excluding military (2)	575,871	612,069	138,389	143,181	145,360	148,941	150,048	153,411	150,764	157,846	162,527	4,681
3	Services (3)	218,739	236,764	51,980	53,303	56,244	57,211	57,057	58,736	59,322	61,656	61,991	335
4	Income receipts on investments (11)	196,880	206,400	47,218	50,303	49,130	50,230	49,277	50,188	51,893	55,043	54,950	-93
5	Imports of goods, services, and income (15)	-1,086,539	-1,163,450	-263,845	-274,363	-275,019	-273,316	-278,860	-289,231	-295,865	-299,493	-311,725	-12,232
6	Goods, adjusted, excluding military (16)	-749,431	-803,239	-182,790	-190,739	-188,180	-187,722	-192,973	-200,973	-203,257	-206,036	-212,314	-6,278
7	Services (17)	-147,036	-156,634	-35,884	-36,544	-37,308	-37,304	-38,671	-38,953	-39,345	-39,664	-41,321	-1,657
8	Income payments on investments (25)	-190,072	-203,577	-45,171	-47,080	-49,531	-48,290	-49,216	-49,305	-53,263	-53,793	-58,090	-4,297
9	Unilateral transfers (29)	-34,046	-39,968	-8,451	-8,128	-8,847	-8,620	-10,406	-8,689	-8,947	-11,926	-8,709	3,217
10	U.S. assets abroad, net (increase/capital outflow (-)) (33)	-307,207	-352,444	-59,625	-110,548	-40,679	-96,356	-70,768	-49,698	-77,542	-154,436	-99,787	54,649
11	U.S. official reserve assets, net (34)	-9,742	6,668	-5,318	-2,722	-1,893	191	17	-523	7,489	-315	4,480	4,795
12	U.S. Government assets, other than official reserve assets, net (39)	-549	-690	-158	-184	266	-473	-210	-358	162	-284	31	315
13	U.S. private assets, net (43)	-296,916	-358,422	-54,149	-107,642	-39,052	-96,074	-70,575	-48,817	-85,193	-153,837	-104,298	49,539
14	Foreign assets in the United States, net (increase/ capital inflow (+)) (48)	451,234	547,555	97,652	122,714	125,839	105,029	88,233	106,114	158,629	194,579	158,867	-35,712
15	Foreign official assets, net (49)	110,729	122,354	22,098	37,138	39,585	11,908	52,014	13,154	24,089	33,097	28,337	-4,760
16	Other foreign assets, net (56)	340,505	425,201	75,554	85,576	86,254	93,121	36,219	92,960	134,540	161,482	130,530	-30,952
17	Allocations of special drawing rights (62)												
18	Statistical discrepancy (63)	-14,931	-46,927	-3,318	23,538	-52,028	16,881	15,419	-20,831	-38,254	-3,269	-17,957	-14,688
19	Memorandum: Balance on current account (70)	-129,095	-148,184	-34,709	-35,704	-33,132	-25,554	-32,884	-35,585	-42,833	-36,874	-40,966	-4,092

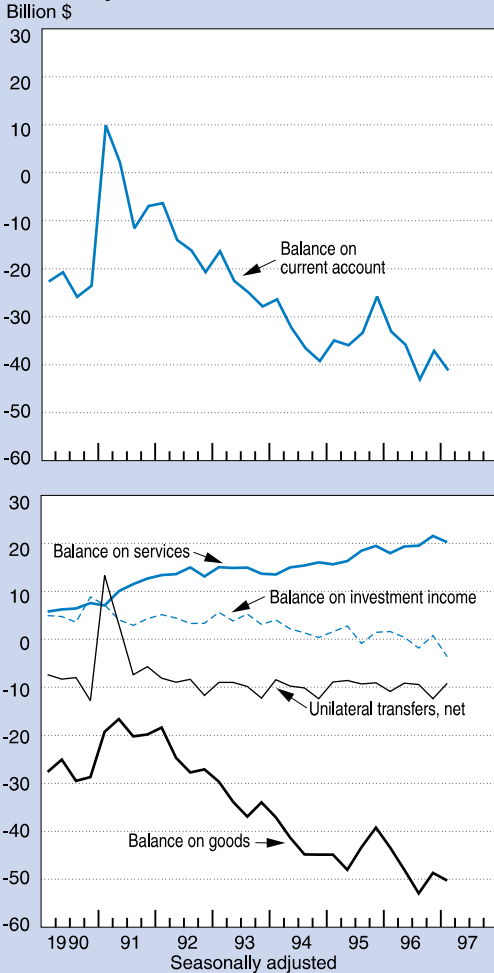
- The U.S. dollar appreciated 7 percent on a trade-weighted quarterly average basis for the quarter.

U.S. dollar in exchange markets

In the first quarter, the dollar appreciated 7 percent on a trade-weighted quarterly average basis against the currencies of 10 industrial countries (table B, chart 2). The dollar appreciated 8 percent against the German mark, 7 percent against the Japanese yen, and 1 percent against the Canadian dollar. The dollar was unchanged against the British pound.

CHART 1

U.S. Current-Account Balance and Its Components

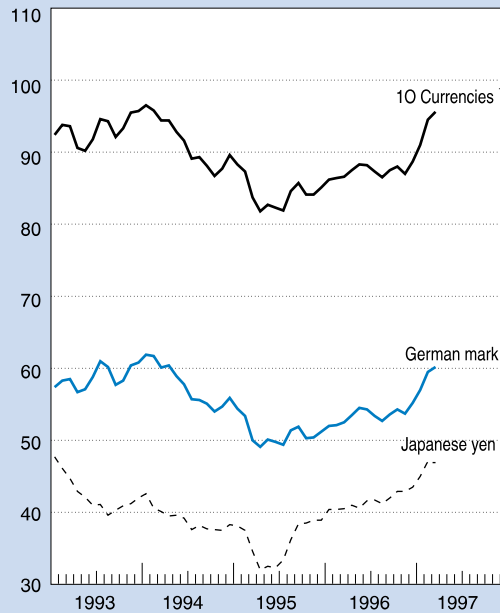


U.S. Department of Commerce, Bureau of Economic Analysis

CHART 2

Indexes of Foreign Currency Price of the U.S. Dollar

March 1973=100



1. Currencies of Belgium, Canada, France, Germany, Italy, Japan, Netherlands, Sweden, Switzerland, and United Kingdom.

Monthly average rates. Indexes rebased by BEA. Data: Federal Reserve Board

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

Table B.—Indexes of Foreign Currency Price of the U.S. Dollar

[March 1973=100]

	1996				1997	1996												1997		
	I	II	III	IV	I	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.		
Trade-weighted average against 10 currencies ¹	86.4	88.0	87.1	87.9	93.7	86.6	87.5	88.3	88.2	87.3	86.5	87.5	88.0	87.0	88.7	91.0	94.5	95.6		
Selected currencies: ²																				
Canada	137.4	136.9	137.5	135.5	136.4	137.0	136.4	137.4	137.0	137.4	137.7	137.4	135.5	134.3	136.7	135.4	136.0	137.7		
European currencies:																				
Belgium	76.7	79.4	78.3	80.1	86.8	77.1	78.4	80.0	79.8	78.5	77.5	78.8	79.9	79.1	81.2	84.0	87.7	88.7		
France	111.6	114.2	112.8	114.6	123.9	112.0	113.0	114.8	114.7	112.7	112.1	113.6	114.4	113.3	116.1	119.9	125.2	126.6		
Germany	52.2	54.1	53.2	54.4	58.9	52.5	53.5	54.5	54.3	53.4	52.7	53.6	54.3	53.7	55.2	57.0	59.5	60.2		
Italy	276.7	273.6	267.7	267.9	288.3	275.0	275.5	274.0	271.4	268.7	266.9	267.6	268.2	266.4	269.0	276.0	291.3	297.7		
Netherlands	57.3	59.3	58.5	59.8	64.9	57.6	58.6	59.7	59.6	58.7	57.9	58.9	59.7	59.1	60.7	62.8	65.5	66.4		
Switzerland	37.0	38.7	38.0	40.0	44.6	37.2	37.9	39.0	39.1	38.3	37.4	38.4	39.1	39.6	41.3	43.2	45.2	45.5		
United Kingdom	161.5	162.2	159.1	151.0	151.6	161.9	163.1	163.1	160.4	159.2	159.5	158.5	155.8	148.7	148.6	149.1	152.1	153.6		
Japan	40.4	41.1	41.6	43.1	46.3	40.5	41.0	40.6	41.6	41.7	41.2	42.0	42.9	42.9	43.5	45.0	47.0	46.9		

1. Currencies of Belgium, Canada, France, Germany, Italy, Japan, Netherlands, Sweden, Switzerland, and United Kingdom. Data: Federal Reserve Board. Monthly and quarterly average rates. Index rebased by BEA.

2. Data: Federal Reserve Board. Monthly and quarterly average rates. Indexes prepared by BEA.

The dollar's sharp advance during the quarter was encouraged by a further increase in both short- and long-term interest-rate differentials in favor of U.S. dollar assets. U.S. interest rates were pushed higher, partly by a strengthening rather than a moderation in U.S. economic activity and partly by expectations that U.S. monetary policy might be tightened. In late March, the Federal Reserve raised the target federal funds rate by 25 basis points to 5.5 percent. Abroad, Germany's economic growth gained momentum but remained below that in the United States, and market participants remained concerned about the economic health of Japanese financial institutions. Uncertainties concerning the start of the European Monetary Union may have temporarily strengthened the mark against the dollar late in the quarter.

The dollar's strong appreciation over the past 2 years has returned its level against the mark to close to that in late 1993 and early 1994, while its level against the yen is now well above that in the same time period (chart 2).

Current Account

Goods and services

The deficit on goods and services increased to \$29.1 billion in the first quarter from \$26.2 billion in the fourth. The deficit on goods increased to \$49.8 billion from \$48.2 billion, and the surplus on services decreased to \$20.7 billion from \$22.0 billion.

Goods.—The deficit on goods increased to \$49.8 billion in the first quarter from \$48.2 billion in the fourth, as imports increased more than exports.

Exports.—Exports increased \$4.7 billion, or 3 percent, to \$162.6 billion in the first quarter.

Quantity, measured in chained (1992) dollars, increased 4 percent (table C).

Nonagricultural exports increased \$5.8 billion, or 4 percent, to \$148.2 billion. Quantity increased 5 percent, and prices decreased 1 percent. In value, capital goods accounted for nearly one-half of the increase. Among capital goods, one-third of the increase was attributable to surges in industrial engines, pumps, and compressors and in other industrial, agricultural, and service industry machinery. Another one-third was attributable to computers, peripherals, and parts and to semiconductors; these shipments are just above the levels reached at the end of 1995 before oversupply conditions limited shipments for much of 1996. The remaining one-third was attributable to civilian aircraft, engines, and parts, which remain exceptionally strong. Nonagricultural industrial supplies and materials increased as a result of higher shipments of chemicals and nonmonetary gold. Shipments of passenger cars and parts were sharply higher, particularly shipments to Canada, which rebounded from a strike-depressed fourth quarter.

Agricultural exports decreased \$1.1 billion, or 7 percent, to \$14.3 billion. Quantity decreased 7 percent. Prices of most major agricultural commodities fell sharply in the last two quarters of 1996 but changed little in the first quarter of 1997. Previously, prices had risen strongly from the fourth quarter of 1994 through the second quarter of 1996.

Soybeans decreased \$0.5 billion, or 23 percent, mostly to China, Europe, and Brazil. In contrast to most major commodities, the price of soybeans increased 12 percent in the first quarter, following a 13-percent decline in the fourth quarter. Soybean prices are now only 3 percent below last year's high in the third quarter.

Corn decreased \$0.4 billion, or 20 percent, mainly to Korea and Mexico. The price of corn

Table C.—U.S. Trade in Goods, Current and Chained (1992) Dollars

[Balance of payments basis, millions of dollars, quarters seasonally adjusted]

	Current dollars								Chained (1992) dollars ¹						
	1995	1996	1996				1997	1995	1996	1996				1997	
			I	II	III	IV				I ^p	I	II	III		IV	I^{p}
Exports	575,871	612,069	150,048	153,411	150,764	157,846	162,527	560,426	606,009	146,818	150,995	149,716	158,480	164,668	
Agricultural products	57,229	61,488	15,863	15,080	15,093	15,452	14,322	49,574	48,674	12,660	11,398	11,718	12,898	11,955	
Nonagricultural products	518,642	550,581	134,185	138,331	135,671	142,394	148,205	510,885	558,093	134,319	139,870	138,158	145,746	153,104	
Imports	749,431	803,239	192,973	200,973	203,257	206,036	212,314	737,232	797,115	190,873	198,786	202,649	204,807	214,893	
Petroleum and products	56,155	72,744	14,619	18,514	19,052	20,559	19,170	60,332	63,530	14,417	16,384	16,816	15,913	15,535	
Nonpetroleum products	693,276	730,495	178,354	182,459	184,205	185,477	193,144	675,689	731,397	176,065	182,095	185,317	187,920	198,300	

^p Preliminary.

1. Because chain indexes use weights of more than one period, the corresponding chained dollar estimates are usually not additive.

increased 1 percent, following decreases of 31 percent in the fourth quarter and 11 percent in the third. The price of corn is now 37 percent below its high in the second quarter of 1996.

Wheat decreased \$0.3 billion, or 25 percent, mostly to Egypt. The price of wheat decreased 2 percent and is now 27 percent below its high in the second quarter of 1996.

Imports.—Imports increased \$6.3 billion, or 3 percent, to \$212.3 billion in the first quarter. Quantity, measured in chained (1992) dollars, increased 5 percent (table C).

Nonpetroleum imports increased \$7.7 billion, or 4 percent, to \$193.1 billion. Quantity increased 6 percent, and prices decreased 1 percent. In value, \$2.5 billion of the increase was attributable to unusually large shipments of completed autos from Canada. Increases also occurred in nonpetroleum industrial supplies and materials, mainly in nonmonetary gold and chemicals. Among capital goods, computers, peripherals, and parts increased; quarterly imports now exceed the levels reached in late 1995 before oversupply conditions limited imports for much of 1996. Semiconductors, which were subject to the same oversupply conditions, have not yet returned to their late-1995 quarterly level.

Petroleum imports decreased \$1.4 billion, or 7 percent, to \$19.2 billion. The average number of barrels imported daily decreased to 9.85 million from 10.13 million. The average price per barrel decreased to \$21.31 from \$22.22. Domestic consumption, production, and inventories all decreased.

Balances by area.—As noted earlier, the deficit on goods increased to \$49.8 billion in the first quarter from \$48.2 billion in the fourth. The deficit with industrial countries increased to \$23.5 billion from \$23.0 billion; an increase in the deficit with Japan was partly offset by a decrease in the deficit with Western Europe. The deficit with non-OPEC developing countries increased to \$20.1 billion from \$18.4 billion; the rise was mostly accounted for by Asian countries. The deficit with OPEC members decreased to \$6.2 billion from \$6.7 billion.

Services.—The surplus on services decreased to \$20.7 billion in the first quarter from \$22.0 billion in the fourth, as payments increased more than receipts.

Foreign visitors to the United States spent \$18.6 billion, up from \$18.2 billion. Receipts from overseas, Mexican, and Canadian visitors all in-

creased. U.S. travelers abroad spent \$13.1 billion, up from \$12.2 billion. Expenditures overseas accounted for most of the increase; expenditures in Mexico and Canada also increased.

Passenger fare receipts were unchanged at \$5.3 billion, and passenger fare payments were \$4.3 billion, up from \$4.1 billion, as a result of an increase in overseas travelers.

“Other” transportation receipts were unchanged at \$7.1 billion. “Other” transportation payments increased to \$7.3 billion from \$7.2 billion, as a result of an increase in freight payments.

Royalties and license fee receipts were unchanged at \$7.7 billion, and payments increased to \$1.9 billion from \$1.8 billion.

“Other” private services receipts increased to \$19.7 billion from \$19.1 billion, as most services increased by small amounts. “Other” private services payments increased to \$11.3 billion from \$11.0 billion.

Transfers under U.S. military sales contracts dropped to \$3.3 billion from \$4.0 billion in the fourth quarter, when there were shipments of unusually large amounts of major equipment. Direct defense expenditures abroad were up slightly to \$2.8 billion.

Investment income

The balance on investment income shifted to a deficit of \$3.1 billion in the first quarter from a surplus of \$1.3 billion in the fourth.

Direct investment income.—Receipts of income on U.S. direct investment abroad were \$25.7 billion in the first quarter, down from \$26.9 billion in the fourth, but still the second-highest quarter on record. Earnings remained strong in Western Europe. Payments of income on foreign direct investment in the United States were \$9.5 billion, up from \$7.8 billion, and only slightly below the record \$9.6 billion in the third quarter. Continued expansion in the U.S. economy, fewer drastic cost-reduction efforts with their high initial costs, and an expanded base of foreign-owned businesses have all contributed to the strong increase in earnings over the past several years.

Portfolio investment income.—Receipts of income on “other” private investment were \$28.4 billion in the first quarter, up from \$27.2 billion in the fourth, mostly as a result of higher claims. Payments of income on “other” private investment were \$27.5 billion, up from \$26.1 billion, mostly as a result of higher liabilities.

Receipts of income on U.S. Government assets were \$0.8 billion, down slightly from \$0.9 billion. Payments of income on U.S. Government liabilities were \$21.1 billion, up from \$19.9 billion, as a result of substantial accumulations of U.S. Treasury securities by foreigners in recent quarters.

Unilateral transfers

Net unilateral transfers were \$8.7 billion in the first quarter, down from \$11.9 billion in the fourth; fourth-quarter transactions had been boosted by special grants to Israel to finance military and economic purchases.

Capital Account

Net recorded capital inflows—that is, net changes in U.S. assets abroad less net changes in foreign assets in the United States—were \$59.1 billion in the first quarter, compared with \$40.1 billion in the fourth. Increases in U.S. assets abroad slowed more than increases in foreign assets in the United States. Although somewhat reduced, both increases remained large by historical standards.

U.S. assets abroad

U.S. assets abroad increased \$99.8 billion in the first quarter, compared with an increase of \$154.4 billion in the fourth.

U.S. official reserve assets.—U.S. official reserve assets decreased \$4.5 billion in the first quarter, following an increase of \$0.3 billion in the fourth. The decrease in the first quarter resulted from Mexico's final repayment of \$3.5 billion on its drawings under medium-term swap arrangements with the U.S. Treasury. With this repayment, the medium-term swap arrangements were terminated.

Claims reported by banks.—U.S. claims on foreigners reported by U.S. banks increased \$56.6 billion in the first quarter, compared with an increase of \$66.7 billion in the fourth. The increase in interbank claims payable in dollars slowed sharply from an exceptionally large increase in the fourth quarter; the increase in claims on other private foreigners, largely on international bond mutual funds in the Caribbean, also slowed sharply.

Interbank claims of U.S.-owned banks shifted by a large amount to a sizable decrease. This shift was partly offset by an increase in interbank

claims of foreign-owned banks, whose claims increased by an even larger amount in the first quarter than in the fourth. The funding to support the increases in claims of foreign-owned banks over the past two quarters came both from domestic deposit growth and from foreign sources.

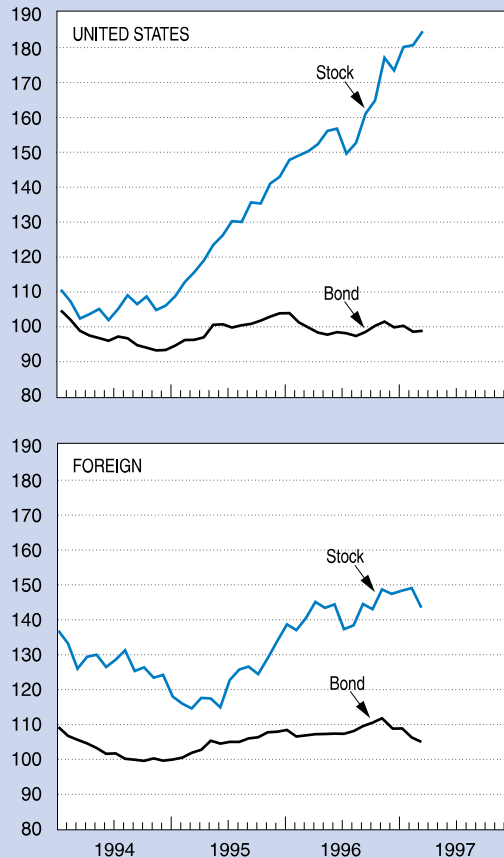
As in the fourth quarter, some interbank lending supported large net purchases of U.S. Treasury and corporate securities, the gradual strengthening of economic activity in Europe, and the large numbers of acquisitions and mergers. Most interbank lending was to banks in Europe, both in the United Kingdom and in continental Europe. Interbank demand for dollar credits in Canada and Southeast Asian countries strengthened.

The increase in claims on other private foreigners slowed sharply, largely as international bond

CHART 3

Stock and Bond Price Indexes

December 1992=100



Sources:

Stock indexes — Morgan Stanley Capital International: U.S. index, and world index excluding United States, in local currencies.

Bond indexes — Salomon Brothers Inc: Treasury/government sponsored/corporate index, and non-U.S. world government bond index, in local currencies.

Indexes rebased by BEA.

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

mutual funds in Caribbean financial centers sold U.S. Treasury securities in the first quarter after borrowing heavily to finance exceptionally large net purchases in the fourth.

Banks' domestic customers' claims increased \$13.2 billion, compared with an increase of \$11.5 billion. An increase in customers' deposits in European and Caribbean banks was especially large and more than accounted for the increase in the first quarter.

Banks' own claims payable in foreign currencies increased \$7.7 billion; the increases were widespread, including increases on banks' own offices in the United Kingdom, Japan, and Canada. These claims now exclude, for the first time, the effect of unrealized currency translation gains and losses.²

Foreign securities.—Net U.S. purchases of foreign securities were \$14.5 billion in the first quarter, down from \$30.2 billion in the fourth. The decline was more than accounted for by a drop in net U.S. purchases of foreign bonds to \$2.8 billion from \$19.6 billion. Net U.S. purchases of foreign stocks increased to \$11.8 billion from \$10.6 billion (chart 3).

Transactions in outstanding bonds shifted to net sales of \$8.6 billion, in contrast to net purchases of \$7.0 billion. Net sales occurred in all major markets, including Western Europe, Canada, Latin America, and Asia excluding Japan. Foreign new bond issues in the United States remained strong at \$15.0 billion but were down from \$17.4 billion.

Net U.S. purchases of foreign stocks were \$11.8 billion, up \$1.2 billion but still less than one-half the record set in the first quarter of 1996. The increase in the first quarter of 1997 was largely from the Caribbean and Japan; net purchases from Europe slowed.

Direct investment.—Net capital outflows for U.S. direct investment abroad were \$24.6 billion in the first quarter, down from \$30.9 billion in the fourth. However, net equity capital outflows more than doubled. The pickup was mostly in Europe, where major acquisitions in soft drinks, health products, pharmaceuticals, and financial services boosted first-quarter outflows. Merger and acquisition activity in Europe, as well as the United States, remains near an all-time high. In contrast to the merger boom of the late 1980's, when a large share of mergers were across industries, mergers in the mid-1990's have been

highly focused, featuring consolidations within industries and within major product lines. Intercompany debt transactions shifted by a very large amount to net inflows. As has been the case for the past several years, large quarter-to-quarter swings in intercompany debt have resulted from sizable swings in transactions between finance affiliates and parents in the securities industry. Reinvested earnings decreased but remained strong.

Foreign assets in the United States

Foreign assets in the United States increased \$158.9 billion in the first quarter, compared with an increase of \$194.6 billion in the fourth.

Foreign official assets.—Foreign official assets in the United States increased \$28.3 billion in the first quarter, compared with an increase of \$33.1 billion in the fourth. Assets of industrial countries increased much more strongly in the first quarter than in the fourth, while assets of developing countries increased much less strongly than in the fourth (table D).

Liabilities reported by banks.—U.S. liabilities reported by U.S. banks increased \$18.9 billion in the first quarter, compared with a \$39.0 billion increase in the fourth. Interbank borrowing of dollars by both U.S.-owned and foreign-owned banks slowed sharply from an exceptionally large increase in the fourth quarter. Although U.S.-owned banks had little need for foreign funds to support lending activity abroad in the first quarter, foreign-owned banks continued to use funds borrowed from abroad, in addition to U.S. deposit growth, to support their lending activity abroad.

Liabilities payable in foreign currencies increased \$8.5 billion, in contrast to a \$6.4 billion decrease in the fourth quarter. Borrowing in the first quarter was from all major geographic areas. These liabilities now exclude, for the first time, unrealized currency translation gains and losses.²

U.S. Treasury securities.—Net foreign purchases of U.S. Treasury securities were strong at \$42.9 billion in the first quarter, but were down from an exceptional \$67.5 billion in the fourth.

Most of the drop was attributable to international bond mutual funds in the Caribbean, reflecting large net sales in February and March that were perhaps generated by the large price declines associated with the 40-basis-point rise in U.S. interest rates over the quarter; net purchases by mutual funds had been especially strong in

2. For more information, see "U.S. International Transactions, Revised Estimates for 1974-96," page 53.

November and December. Net purchases from other areas remained strong, especially from the United Kingdom, where much foreign trading activity is centered, and from Japan and other Asian countries. Interest yields on U.S. Government bonds relative to mark and yen bonds were large at the beginning of the quarter and increased further by the end of the quarter. These differentials are now at levels last reached in 1989 (chart 4).

U.S. currency.—Net U.S. currency flows to foreigners were \$3.5 billion, down from \$7.8 billion. This is the first time these flows have been included in the accounts.³ The flows are recorded “net,” that is, net of flows to and from foreigners. The data were developed by the Federal Reserve Board.

Other U.S. securities.—Net foreign purchases of U.S. securities other than U.S. Treasury securities were a record \$38.7 billion in the first quarter, up from \$32.4 billion in the fourth. Net foreign purchases of foreign stocks were sharply higher at \$10.3 billion, up from \$1.3 billion; net foreign purchases of bonds were \$28.4 billion, down from \$31.1 billion (chart 3).

Net foreign purchases of U.S. stocks jumped sharply, mostly as a result of net purchases by Western Europe. Accelerating U.S. stock prices, strong dollar appreciation, and continued growth of the U.S. economy with stable inflation were contributing factors. Net sales by Japan accelerated.

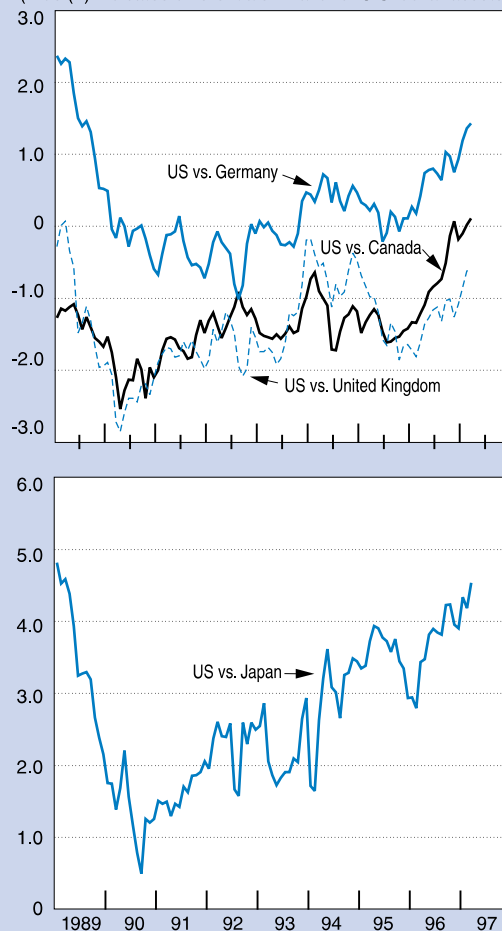
New bond issues sold abroad by U.S. corporations were a record \$20.7 billion, up sharply from \$14.6 billion in the fourth quarter; the previous

3. For more information, see “U.S. International Transactions, Revised Estimates for 1974–96,” page 48.

CHART 4

Long-term Government Bond Yield Differentials¹

(Plus (+) indicates differentials in favor of U.S. dollar assets)



1. Ten-year Government bond yields. Monthly Averages. Data OECD.
U.S. Department of Commerce, Bureau of Economic Analysis

Table D.—Selected Transactions with Official Agencies

[Millions of dollars]

	1995	1996	1995				1996				1997	Change: 1996 IV– 1997 I
			I	II	III	IV	I	II	III	IV		
Changes in foreign official assets in the United States, net (decrease –) (table 1, line 49)	110,729	122,354	22,098	37,138	39,585	11,908	52,014	13,154	24,089	33,097	28,337	–4,760
Industrial countries ¹	22,546	65,498	13,749	6,906	5,833	–3,942	39,787	9,434	11,367	4,910	18,313	13,403
Members of OPEC ²	4,239	12,278	–91	–29	5,933	–1,574	–1,539	5,239	5,263	3,315	6,717	3,402
Other countries	83,944	44,578	8,440	30,261	27,819	17,424	13,766	–1,519	7,459	24,872	3,307	–21,565
Changes in U.S. official reserve assets, net (increase –) (table 1, line 34)	–9,742	6,668	–5,318	–2,722	–1,893	191	17	–523	7,489	–315	4,480	4,795
Activity under U.S. official reciprocal currency arrangements with foreign monetary authorities: ³												
Foreign drawings, or repayments (–), net	11,800	–8,300	5,000	5,000	2,500	–700	–1,300	.....	–7,000	.....	–3,500	–3,500
Drawings	18,800	.....	6,000	7,000	4,500	1,300	.....	.....	.....	.....	.....	.....
Repayments	–7,000	–8,300	–1,000	–2,000	–2,000	–2,000	–1,300	.....	–7,000	.....	–3,500	–3,500

¹ Preliminary.

1. Western Europe, Canada, Japan, Australia, New Zealand, and South Africa.

2. Based on data for Ecuador, Venezuela, Indonesia, and other Asian and African oil-exporting countries. Beginning in January 1993, excludes Ecuador.

3. Consists of transactions of the Federal Reserve System and the U.S. Treasury Department's Exchange Stabilization Fund.

record was \$16.5 billion in the first quarter of 1995. The upward trend in U.S. long-term interest rates and continued strong demand for dollar-denominated debt instruments led to record placements by U.S. corporations in the Eurobond markets, mostly as fixed-rate issues. Net foreign purchases of federally-sponsored agency bonds were \$8.0 billion, down from \$12.3 billion.

Direct investment.—Net capital inflows for foreign direct investment in the United States were \$21.7 billion in the first quarter, up from \$17.7 bil-

lion in the fourth. Equity capital inflows, though down somewhat from the fourth quarter when acquisitions in the insurance and securities industries were especially large, remained strong in the first quarter, when acquisitions in the chemicals and securities industries were large. Intercompany debt inflows strengthened, also reflecting the recent surge in foreign-affiliated funding of new foreign investment in the United States. Reinvested earnings were higher, partly reflecting improved earnings of affiliates.


Tables 1 through 10A follow. 

Table 1.—U.S. International
[Millions]

Line	(Credits +; debits -) ¹	Not seasonally adjusted							
		1985				1986			
		I	II	III	IV	I	II	III	IV
1	Exports of goods, services, and income	96,755	97,180	91,716	97,097	98,802	101,519	98,358	102,163
2	Goods, adjusted, excluding military ²	55,338	55,553	50,701	54,323	54,037	58,017	53,730	57,560
3	Services ³	17,865	17,945	18,901	18,445	20,370	20,517	23,116	22,309
4	Transfers under U.S. military agency sales contracts ⁴	2,609	2,268	1,954	1,887	1,908	1,955	2,120	2,566
5	Travel	3,909	4,731	5,198	3,923	4,432	4,925	6,272	4,755
6	Passenger fares	843	1,114	1,366	1,089	1,135	1,267	1,856	1,325
7	Other transportation	3,515	3,568	3,707	3,885	¹⁶ 3,823	3,912	4,061	3,987
8	Royalties and license fees ⁵	1,454	1,545	1,513	2,166	1,754	1,952	1,967	2,441
9	Other private services ⁵	5,316	4,488	4,889	5,342	¹⁶ 7,158	6,355	6,712	7,079
10	U.S. Government miscellaneous services	218	231	275	154	161	151	129	155
11	Income receipts on U.S. assets abroad	23,553	23,683	22,114	24,330	24,394	22,985	21,513	22,294
12	Direct investment receipts	7,336	7,993	6,350	8,868	8,609	8,401	6,751	8,207
13	Other private receipts	14,930	14,550	14,090	14,063	14,202	13,286	12,625	12,693
14	U.S. Government receipts	1,287	1,140	1,674	1,398	1,583	1,298	2,137	1,394
15	Imports of goods, services, and income	-112,563	-123,109	-122,570	-125,795	-124,864	-133,533	-135,119	-135,841
16	Goods, adjusted, excluding military ²	-78,579	-85,585	-83,734	-90,190	-87,114	-92,674	-92,524	-96,113
17	Services ³	-15,817	-19,200	-20,514	-17,332	-18,233	-20,324	-23,509	-19,769
18	Direct defense expenditures	-3,246	-3,170	-3,053	-3,640	-3,434	-3,510	-3,320	-3,467
19	Travel	-4,681	-7,169	-8,182	-4,526	-5,045	-6,445	-8,879	-5,544
20	Passenger fares	-1,253	-1,800	-2,044	-1,346	-1,409	-1,595	-2,031	-1,469
21	Other transportation	-3,563	-3,984	-3,922	-4,175	¹⁶ -4,173	-4,377	-4,709	-4,558
22	Royalties and license fees ⁵	-277	-272	-310	-312	-319	-357	-360	-365
23	Other private services ⁵	-2,364	-2,375	-2,537	-2,928	¹⁶ -3,407	-3,653	-3,735	-3,991
24	U.S. Government miscellaneous services	-433	-431	-466	-406	-446	-389	-476	-376
25	Income payments on foreign assets in the United States	-18,168	-18,324	-18,322	-18,273	-19,516	-20,534	-19,085	-19,960
26	Direct investment payments	-1,896	-1,945	-1,952	-1,420	-1,487	-2,640	-1,440	-1,491
27	Other private payments	-10,522	-10,651	-10,554	-11,018	-11,907	-11,837	-11,450	-12,218
28	U.S. Government payments	-5,750	-5,728	-5,816	-5,835	-6,122	-6,057	-6,195	-6,251
29	Unilateral transfers, net	-5,225	-5,174	-5,882	-6,419	-5,369	-6,185	-6,483	-6,642
30	U.S. Government grants ⁴	-2,236	-2,591	-3,093	-3,348	-2,106	-3,277	-3,485	-3,015
31	U.S. Government pensions and other transfers	-484	-416	-459	-779	-497	-553	-482	-839
32	Private remittances and other transfers ⁶	-2,505	-2,167	-2,330	-2,293	-2,766	-2,355	-2,515	-2,788
33	U.S. assets abroad, net (increase/capital outflow (-))	-5,269	-1,972	-4,843	-27,805	-17,057	-25,266	-32,248	-32,182
34	U.S. official reserve assets, net ⁷	-233	-356	-121	-3,148	-115	16	280	132
35	Gold	-264	-180	-264	-189	-274	-104	163	-31
36	Special drawing rights	281	72	388	168	344	366	508	283
37	Reserve position in the International Monetary Fund	-250	-248	-245	-3,126	-185	-246	-391	-120
38	Foreign currencies	-920	-1,002	-437	-462	-381	-158	-1,576	93
39	U.S. Government assets, other than official reserve assets, net	-1,790	-2,553	-1,733	-1,581	-1,826	-1,637	-4,265	-1,356
40	U.S. credits and other long-term assets	940	1,285	1,278	1,217	1,423	1,436	1,736	1,494
41	Repayments on U.S. credits and other long-term assets ⁸	-70	266	18	-98	22	43	953	-44
42	U.S. foreign currency holdings and U.S. short-term assets, net	-4,116	-614	-4,285	-24,195	-16,561	-25,124	-30,952	-32,407
43	Direct investment	-2,402	-4,058	-3,782	-3,824	-9,317	-7,691	-4,586	2,569
44	Foreign securities	-2,474	-2,219	-1,572	-1,217	-5,930	-1,051	181	2,529
45	U.S. claims on unaffiliated foreigners reported by U.S. nonbanking concerns	475	2,337	-2,779	-10,375	-6,230	-2,722	-7,638	-5,183
46	U.S. claims reported by U.S. banks, not included elsewhere	284	3,325	3,847	-8,779	4,916	-13,660	-18,909	-32,322
47									
48	Foreign assets in the United States, net (increase/capital inflow (+))	18,321	29,668	38,418	59,976	41,478	54,113	71,058	63,561
49	Foreign official assets in the United States, net	-10,962	8,502	2,506	-1,165	2,712	15,918	15,789	1,229
50	U.S. Government securities	-7,499	8,886	-358	-2,168	3,061	13,896	11,895	4,298
51	U.S. Treasury securities ⁹	-7,177	8,750	-414	-1,997	3,238	14,540	12,171	4,415
52	Other ¹⁰	-322	136	56	-171	-177	-644	-276	-117
53	Other U.S. Government liabilities ¹¹	-343	560	320	307	423	1,081	1,153	-462
54	U.S. liabilities reported by U.S. banks, not included elsewhere	-3,007	-120	2,927	845	-1,131	1,472	3,043	-2,197
55	Other foreign official assets ¹²	-113	-824	-383	-149	359	-531	-302	-410
56	Other foreign assets in the United States, net	29,284	21,166	35,911	61,140	38,766	38,195	55,270	62,332
57	Direct investment	4,893	4,710	4,993	5,414	3,420	5,923	8,929	17,351
58	U.S. Treasury securities and U.S. currency flows	3,390	6,888	9,136	6,219	6,420	4,620	-854	-2,277
59	U.S. securities other than U.S. Treasury securities	9,615	7,194	11,669	22,844	18,730	22,752	17,107	12,380
60	U.S. liabilities to unaffiliated foreigners reported by U.S. nonbanking concerns	-720	1,724	2,801	6,046	696	1,635	1,947	-953
61	U.S. liabilities reported by U.S. banks, not included elsewhere	12,106	650	7,312	20,977	9,500	3,265	28,141	35,831
62	Allocations of special drawing rights								
63	Statistical discrepancy (sum of above items with sign reversed)	7,980	3,407	3,161	2,946	7,010	9,351	4,432	8,942
Memoranda:									
64	Balance on goods (lines 2 and 16)	-23,241	-30,032	-33,033	-35,867	-33,077	-34,657	-38,794	-38,553
65	Balance on services (lines 3 and 17)	2,048	-1,255	-1,612	1,113	2,137	193	-394	2,540
66	Balance on goods and services (lines 64 and 65)	-21,193	-31,287	-34,645	-34,754	-30,940	-34,464	-39,188	-36,013
67	Balance on investment income (lines 11 and 25)	5,385	5,358	3,792	6,057	4,878	2,451	2,428	2,335
68	Balance on goods, services, and income (lines 1 and 15 or lines 66 and 67) ¹³	-15,808	-25,929	-30,854	-28,697	-26,062	-32,014	-36,760	-33,678
69	Unilateral transfers, net (line 29)	-5,225	-5,174	-5,882	-6,419	-5,369	-6,185	-6,483	-6,642
70	Balance on current account (lines 1, 15, and 29 or lines 68 and 69) ¹³	-21,032	-31,103	-36,736	-35,117	-31,431	-38,199	-43,243	-40,321

See footnotes on page 85.

Table 1.—U.S. International

[Millions]

Line	(Credits +; debits -) ¹	Seasonally adjusted							
		1985				1986			
		I	II	III	IV	I	II	III	IV
1	Exports of goods, services, and income	96,595	96,229	93,549	96,378	98,821	100,666	99,708	101,649
2	Goods, adjusted, excluding military ²	54,866	54,154	52,836	54,059	53,536	56,828	55,645	57,335
3	Services ³	18,227	18,214	17,961	18,756	20,935	20,804	21,879	22,697
4	Transfers under U.S. military agency sales contracts ⁴	2,609	2,268	1,954	1,886	1,908	1,955	2,120	2,566
5	Travel	4,363	4,604	4,391	4,406	5,004	4,820	5,250	5,313
6	Passenger fares	991	1,065	1,128	1,227	1,349	1,222	1,511	1,503
7	Other transportation	3,595	3,572	3,642	3,865	¹⁶ 3,882	3,890	3,994	4,016
8	Royalties and license fees ⁵	1,550	1,592	1,589	1,947	1,873	2,005	2,060	2,174
9	Other private services ⁵	4,889	4,880	5,013	5,254	¹⁶ 6,730	6,779	6,817	6,978
10	U.S. Government miscellaneous services	230	233	244	171	189	133	127	147
11	Income receipts on U.S. assets abroad	23,502	23,861	22,752	23,563	24,350	23,034	22,184	21,617
12	Direct investment receipts	7,307	8,025	7,112	8,103	8,570	8,301	7,583	7,513
13	Other private receipts	14,930	14,550	14,090	14,063	14,202	13,286	12,625	12,693
14	U.S. Government receipts	1,265	1,286	1,550	1,397	1,578	1,447	1,976	1,411
15	Imports of goods, services, and income	-116,271	-120,924	-120,349	-126,499	-129,152	-131,516	-132,680	-136,010
16	Goods, adjusted, excluding military ²	-80,319	-84,565	-83,909	-89,295	-89,220	-91,743	-92,801	-94,661
17	Services ³	-17,707	-18,276	-18,151	-18,732	-20,298	-19,492	-20,847	-21,200
18	Direct defense expenditures	-3,246	-3,170	-3,053	-3,640	-3,434	-3,510	-3,320	-3,467
19	Travel	-6,105	-6,374	-6,273	-5,807	-6,566	-6,730	-6,732	-6,884
20	Passenger fares	-1,486	-1,742	-1,660	-1,556	-1,657	-1,528	-1,636	-1,683
21	Other transportation	-3,750	-3,883	-3,826	-4,184	¹⁶ -4,391	-4,279	-4,594	-4,553
22	Royalties and license fees ⁵	-283	-280	-314	-295	-327	-363	-363	-348
23	Other private services ⁵	-2,387	-2,395	-2,589	-2,833	¹⁶ -3,460	-3,686	-3,758	-3,882
24	U.S. Government miscellaneous services	-450	-432	-436	-417	-463	-396	-444	-383
25	Income payments on foreign assets in the United States	-18,245	-18,083	-18,289	-18,472	-19,634	-20,281	-19,032	-20,149
26	Direct investment payments	-1,973	-1,704	-1,919	-1,619	-1,605	-2,387	-1,387	-1,680
27	Other private payments	-10,522	-10,651	-10,554	-11,018	-11,907	-11,837	-11,450	-12,218
28	U.S. Government payments	-5,750	-5,728	-5,816	-5,835	-6,122	-6,057	-6,195	-6,251
29	Unilateral transfers, net	-5,170	-5,398	-6,007	-6,125	-5,318	-6,341	-6,610	-6,409
30	U.S. Government grants ⁴	-2,236	-2,591	-3,093	-3,347	-2,106	-3,277	-3,485	-3,015
31	U.S. Government pensions and other transfers	-542	-522	-531	-544	-558	-563	-536	-714
32	Private remittances and other transfers ⁶	-2,392	-2,285	-2,383	-2,234	-2,654	-2,501	-2,589	-2,680
33	U.S. assets abroad, net (increase/capital outflow (-))	-4,291	-1,131	-4,555	-29,912	-16,231	-23,736	-31,355	-35,427
34	U.S. official reserve assets, net ⁷	-233	-356	-121	-3,148	-115	16	280	132
35	Gold	-264	-180	-264	-189	-274	-104	163	-31
36	Special drawing rights	281	72	388	168	344	366	508	283
37	Reserve position in the International Monetary Fund	-250	-248	-245	-3,126	-185	-246	-391	-120
38	Foreign currencies	-760	-1,053	-453	-555	-266	-230	-1,554	29
39	U.S. Government assets, other than official reserve assets, net	-1,790	-2,553	-1,733	-1,581	-1,826	-1,637	-4,265	-1,356
40	U.S. credits and other long-term assets	1,100	1,234	1,262	1,124	1,538	1,364	1,758	1,429
41	Repayments on U.S. credits and other long-term assets ⁸	-70	266	18	-98	22	43	953	-44
42	U.S. foreign currency holdings and U.S. short-term assets, net	-3,298	278	-3,981	-26,210	-15,850	-23,522	-30,081	-35,588
43	Direct investment	-1,583	-3,165	-3,477	-5,839	-6,806	-6,089	-3,715	-612
44	Foreign securities	-2,474	-2,219	-1,572	-1,217	-5,930	-1,051	181	2,529
45	U.S. claims on unaffiliated foreigners reported by U.S. nonbanking concerns	475	2,337	-2,779	-10,375	-6,230	-2,722	-7,638	-5,183
46	U.S. claims reported by U.S. banks, not included elsewhere	284	3,325	3,847	-8,779	4,916	-13,660	-18,909	-32,322
47	Foreign assets in the United States, net (increase/capital inflow (+))	18,365	29,370	38,339	60,311	41,557	53,797	70,935	63,923
48	Foreign official assets in the United States, net	-10,962	8,502	2,506	-1,165	2,712	15,918	15,789	1,229
49	U.S. Government securities	-7,499	8,886	-358	-2,168	3,061	13,896	11,895	4,298
50	U.S. Treasury securities ⁹	-7,177	8,750	-414	-1,997	3,238	14,540	12,171	4,415
51	Other ¹⁰	-322	136	56	-171	-177	-644	-276	-117
52	Other U.S. Government liabilities ¹¹	-343	560	320	307	423	1,081	1,153	-462
53	U.S. liabilities reported by U.S. banks, not included elsewhere	-3,007	-120	2,927	845	-1,131	1,472	3,043	-2,197
54	Other foreign official assets ¹²	-113	-824	-383	-149	359	-531	-302	-410
55	Other foreign assets in the United States, net	29,327	20,868	35,833	61,476	38,845	37,879	55,146	62,694
56	Direct investment	4,936	4,412	4,915	5,750	3,499	5,607	8,805	17,713
57	U.S. Treasury securities and U.S. currency flows	3,390	6,888	9,136	6,219	6,420	4,620	-854	-2,277
58	U.S. securities other than U.S. Treasury securities	9,615	7,194	11,669	22,844	18,730	22,752	17,107	12,380
59	U.S. liabilities to unaffiliated foreigners reported by U.S. nonbanking concerns	-720	1,724	2,801	6,046	696	1,635	1,947	-953
60	U.S. liabilities reported by U.S. banks, not included elsewhere	12,106	650	7,312	20,977	9,500	3,265	28,141	35,831
61	Allocations of special drawing rights								
62	Statistical discrepancy (sum of above items with sign reversed)	10,772	1,854	-977	5,847	10,323	7,130	2	12,274
63	Of which seasonal adjustment discrepancy	2,792	-1,553	-4,138	2,901	3,313	-2,221	-4,430	3,332
63a	Memoranda:								
64	Balance on goods (lines 2 and 16)	-25,453	-30,411	-31,073	-35,236	-35,684	-34,915	-37,156	-37,326
65	Balance on services (lines 3 and 17)	520	-62	-190	24	637	1,312	1,032	1,497
66	Balance on goods and services (lines 64 and 65)	-24,933	-30,473	-31,263	-35,212	-35,047	-33,603	-36,124	-35,829
67	Balance on investment income (lines 11 and 25)	5,257	5,778	4,463	5,091	4,716	2,753	3,152	1,468
68	Balance on goods, services, and income (lines 1 and 15 or lines 66 and 67) ¹³	-19,676	-24,695	-26,800	-30,121	-30,331	-30,850	-32,972	-34,361
69	Unilateral transfers, net (line 29)	-5,170	-5,398	-6,007	-6,125	-5,318	-6,341	-6,610	-6,409
70	Balance on current account (lines 1, 15, and 29 or lines 68 and 69) ¹³	-24,846	-30,093	-32,807	-36,246	-35,649	-37,191	-39,582	-40,770

See footnotes on page 85.

Table 2.—U.S. Trade

[Millions]

Line	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
A	Balance of payments adjustments to Census trade data:														
	EXPORTS														
1	Exports of goods, Census basis¹ including reexports and including military grant shipments	201,708	218,743	212,621	226,471	253,904	323,335	363,836	392,924	421,764	448,161	465,090	512,626	584,742	625,075
	Adjustments:														
2	Private gift parcel remittances	166	169	194	174	257	253	683	890	1,046	1,224	1,181	848	809	816
3	Gold exports, nonmonetary	350	330	406	457	718	593	544	741	225	398		88	38	264
4	Inland U.S. freight to Canada ²	1,164	1,373	1,345	1,298	1,607	1,845	1,980							
5	U.S.-Canadian reconciliation adjustments, n.e.c., net ³	5,014	5,164	6,812											
6	Exports transferred under U.S. military agency sales contracts identified in Census documents ⁴	-6,546	-5,719	-5,461	-4,549	-5,686	-5,221	-4,667	-5,162	-4,970	-7,767	-8,166	-9,370	-8,641	-12,427
7	Other adjustments, net ⁵	-57	-134	-2	-507	-592	-575	-256	-86	-1,152	-1,664	-1,273	-1,794	-1,077	-1,659
8	Equals: Exports of goods, adjusted to balance of payments basis excluding "military" (table 1, line 2)	201,799	219,926	215,915	223,344	250,208	320,230	362,120	389,307	416,913	440,352	456,832	502,398	575,871	612,069
	IMPORTS														
9	Imports of goods, Census basis¹ (general imports)	261,723	330,510	336,383	365,672	406,283	441,926	473,647	495,980	488,452	532,663	580,658	663,256	743,543	795,289
	Adjustments:														
10	Electric energy	999	1,067	1,021	872	986	826	82	87	88	85	84	89	73	73
11	Gold imports, nonmonetary	290	474	559	2,163	3,577	2,134	1,348	948	1,887	6,775	2,752	3,066	4,948	4,948
12	Inland freight in Canada ²	1,325	1,504	1,376	1,643	1,930	2,120	2,120	2,264	2,525	2,809	2,768	3,129	3,350	3,595
13	U.S.-Canadian reconciliation adjustment, n.e.c., net ³	1,292	-841	-859	-645										
14	Imports of U.S. military agencies identified in Census documents ⁴	-446	-774	-1,005	-1,199	-1,330	-1,686	-1,086	-1,050	-936	-871	-676	-546	-471	-504
15	Other adjustments, net ^{5,7}	3,718	478	613	-81	-137	426	468	-292	-96	-115	-168	-90	-130	-162
16	Equals: Imports of goods, adjusted to balance of payments basis, excluding "military" (table 1, line 16)	268,901	332,418	338,088	368,425	409,765	447,189	477,365	498,337	490,981	536,458	589,441	668,590	749,431	803,239
B	Trade in goods, by area and country, adjusted to balance of payments basis, excluding military:⁸														
	EXPORTS														
1	Total, all countries (A-8)	201,799	219,926	215,915	223,344	250,208	320,230	362,120	389,307	416,913	440,352	456,832	502,398	575,871	612,069
2	Western Europe	55,404	56,907	56,006	60,367	68,582	86,409	98,423	111,381	116,812	114,454	111,256	115,349	132,431	137,194
3	European Union	47,746	49,944	48,418	51,841	59,504	74,464	84,536	96,282	101,289	100,623	94,992	105,375	121,469	124,786
4	Belgium and Luxembourg	5,055	5,202	4,803	5,456	6,143	7,385	8,445	10,371	10,697	9,956	9,352	11,080	12,838	12,685
5	France	6,019	6,055	6,086	7,119	7,947	9,913	11,584	13,682	15,338	14,589	13,228	13,610	14,255	14,454
6	Germany ⁹	8,642	8,773	8,956	10,461	11,525	14,252	16,393	18,299	20,763	20,349	18,437	18,745	21,879	22,970
7	Italy	3,941	4,315	4,556	4,748	5,465	6,670	7,089	7,853	8,450	8,594	6,305	6,999	8,681	8,621
8	Netherlands	7,273	7,503	7,250	7,190	8,026	9,714	11,272	12,769	13,260	13,429	12,639	13,319	16,226	16,501
9	United Kingdom	10,567	12,202	11,088	11,152	13,749	18,064	20,346	22,929	21,515	22,398	25,658	25,972	28,024	30,246
10	Other	6,249	5,894	5,679	5,715	6,649	8,466	9,407	10,379	11,266	11,308	9,373	15,650	19,566	19,309
11	Western Europe, excluding EU	7,658	6,963	7,588	8,526	9,078	11,945	13,887	15,099	15,523	13,831	16,284	9,974	10,962	12,408
12	Canada ³	44,521	53,035	55,425	56,495	62,009	74,290	81,090	83,464	85,891	91,361	101,156	114,830	127,585	134,609
13	Japan	21,792	23,230	22,148	26,352	27,630	37,185	43,864	47,806	47,213	46,874	46,683	51,813	63,108	65,954
14	Australia, New Zealand, and South Africa ¹⁰	6,604	7,849	6,966											
15	Australia	3,885	4,858	5,060	5,073	5,289	6,809	8,101	8,303	8,261	8,697	8,109	9,582	10,495	11,705
16	Eastern Europe	2,984	4,301	3,249	2,070	2,259	3,805	5,522	4,338	4,839	5,630	6,183	5,346	5,723	7,359
17	Latin America and Other Western Hemisphere	25,640	29,765	30,796	30,762	34,949	43,659	48,817	54,295	63,251	75,379	78,204	92,012	95,830	108,964
18	Brazil	2,556	2,746	3,310	3,878	4,084	4,244	4,863	5,042	6,137	5,742	5,930	7,916	11,153	12,347
19	Mexico	9,093	12,020	13,386	12,310	14,551	20,583	24,678	28,109	33,138	40,494	41,478	50,743	46,189	56,735
20	Venezuela	2,707	3,387	3,063	3,095	3,530	4,532	2,964	3,052	4,600	5,316	4,475	3,954	4,602	4,665
21	Other	11,284	11,612	11,037	11,479	12,784	14,300	16,312	18,092	19,376	23,827	26,321	29,399	33,886	35,117
22	Other countries in Asia and Africa ^{8,10}	44,776	44,806	41,147	42,225	49,490	68,021	76,129	79,162	90,257	97,869	105,017	113,377	140,699	146,382
23	Asia ^{8,10}	38,649	39,028	35,297	36,329	43,685	60,514	68,030	70,904	81,217	88,229	95,623	104,028	130,436	135,380
24	Members of OPEC	10,218	8,412	6,215	5,780	5,780	7,399	8,362	8,030	11,194	12,597	12,277	11,344	12,286	13,856
25	China	2,227	3,016	3,860	3,065	3,507	5,100	5,774	4,791	6,261	7,399	8,732	9,242	11,754	11,938
26	Hong Kong	2,572	3,120	2,753	2,981	3,975	5,665	6,281	6,783	8,099	9,020	9,844	11,417	14,201	13,873
27	Korea, Republic of	5,732	5,887	5,728	5,863	7,647	10,637	13,116	13,893	14,875	13,840	14,071	16,989	24,204	25,653
28	Singapore	3,715	3,686	3,444	3,344	4,048	5,757	7,315	8,002	8,728	9,511	10,827	12,168	14,904	16,253
29	Taiwan	4,291	4,766	4,568	5,115	7,097	12,066	10,982	11,079	12,684	14,509	15,337	16,116	18,527	17,540
30	Africa ^{8,10}	5,873	5,541	5,600	5,639	5,596	7,183	7,973	7,973	8,661	9,144	8,983	8,956	9,970	10,636
31	Members of OPEC	1,733	1,326	1,534	908	763	1,170	1,342	1,630	1,703	1,813	1,940	1,815	1,496	1,804
32	International organizations and unallocated	78	33	178			52	174	558	389	88	224	89		2
	Memoranda:														
33	Industrial countries ⁸	128,321	141,021	140,545	150,302	165,613	207,317	234,247	253,812	261,288	265,116	270,621	295,221	338,096	354,301
34	Members of OPEC ⁸	15,257	13,775	11,397	10,386	10,714	13,777	12,669	12,712	18,446	19,726	18,692	17,113	18,384	20,325
35	Other countries ⁸	58,143	65,097	63,795	62,656	73,881	99,084	115,030	122,225	136,790	155,422	167,295	189,975	219,391	237,441

See footnotes on page 85.

in Goods
of dollars]

Not seasonally adjusted									Seasonally adjusted									Line
1995				1996				1997	1995				1996				1997	
I	II	III	IV	I	II	III	IV	I ^a	I	II	III	IV	I	II	III	IV	I ^a	
141,211	147,055	143,085	153,391	153,832	157,053	149,771	164,419	165,022	140,474	145,427	147,490	151,351	152,439	156,266	154,865	161,505	164,737	1
194	205	196	214	213	209	187	207	217	194	205	196	214	213	209	187	207	217	2
	13	25			247	8	9			13	25			247	8	9		3
																		4
																		5
-2,038	-2,239	-2,087	-2,277	-2,160	-2,943	-3,859	-3,465	-1,929	-2,038	-2,239	-2,087	-2,277	-2,160	-2,943	-3,859	-3,465	-1,929	6
-241	-224	-265	-347	-443	-368	-437	-411	-498	-241	-224	-265	-347	-443	-368	-437	-411	-498	7
139,126	144,810	140,954	150,981	151,442	154,198	145,670	160,759	162,812	138,389	143,181	145,360	148,941	150,048	153,411	150,764	157,846	162,527	8
176,094	187,080	189,723	190,646	185,853	195,717	204,016	209,703	202,744	181,448	187,799	187,506	186,790	191,097	197,240	201,755	205,197	210,182	9
18	18	18	19	18	18	18	19	18	18	18	18	19	18	18	18	19	18	10
625	2,205		236	1,056	2,973	794	125	1,352	625	2,205		236	1,056	2,973	794	125	1,352	11
829	853	811	857	935	913	862	885	917	829	853	811	857	935	913	862	885	917	12
																		13
-111	-113	-120	-127	-98	-136	-131	-139	-119	-111	-113	-120	-127	-98	-136	-131	-139	-119	14
-18	-23	-36	-53	-35	-35	-41	-51	-36	-18	-23	-36	-53	-35	-35	-41	-51	-36	15
177,437	190,020	190,396	191,578	187,729	199,450	205,518	210,542	204,876	182,790	190,739	188,180	187,722	192,973	200,973	203,257	206,036	212,314	16
139,126	144,810	140,954	150,981	151,442	154,198	145,670	160,759	162,812	138,389	143,181	145,360	148,941	150,048	153,411	150,764	157,846	162,527	1
31,878	33,903	31,194	35,456	34,930	36,075	30,568	35,621	38,645	31,721	33,510	32,136	35,064	34,668	35,853	31,614	35,059	38,553	2
29,231	30,625	28,915	32,898	31,663	32,501	27,890	32,732	35,089	29,107	30,267	29,768	32,327	31,457	32,294	28,815	32,220	35,040	3
3,049	3,213	3,254	3,322	3,148	3,126	3,056	3,355	3,429	3,042	3,174	3,339	3,383	3,133	3,101	3,148	3,303	3,435	4
3,707	3,665	3,235	3,646	3,742	3,560	3,175	3,977	3,842	3,712	3,613	3,320	3,610	3,729	3,532	3,269	3,924	3,848	5
5,248	5,406	5,247	5,978	5,853	5,805	5,295	6,017	6,136	5,242	5,334	5,395	5,908	5,815	5,761	5,468	5,926	6,133	6
2,087	2,260	1,962	2,372	2,406	2,312	1,780	2,123	2,229	2,082	2,235	2,021	2,343	2,391	2,300	1,844	2,086	2,222	7
3,790	4,210	3,753	4,473	4,129	3,917	3,523	4,932	4,755	4,172	4,272	3,882	4,416	4,083	3,920	3,653	4,845	4,738	8
6,573	7,224	6,833	7,394	7,275	9,025	6,954	6,982	9,554	6,540	7,138	7,021	7,325	7,243	8,946	7,167	6,890	9,547	9
4,777	4,647	4,631	5,511	5,110	4,756	4,107	5,336	5,144	4,733	4,601	4,790	5,442	5,063	4,734	4,266	5,246	5,117	10
2,647	3,278	2,279	2,758	3,267	3,574	2,678	2,889	3,556	2,614	3,243	2,368	2,737	3,211	3,559	2,799	2,839	3,513	11
32,055	33,045	30,146	32,339	33,204	34,378	32,353	34,674	36,823	32,040	32,645	30,922	31,978	33,027	34,124	33,323	34,135	36,921	12
14,786	15,576	16,229	16,517	17,166	16,476	16,131	16,181	16,448	14,610	15,451	16,825	16,222	16,910	16,474	16,768	15,802	16,336	13
																		14
2,587	2,662	2,606	2,640	2,985	2,910	2,895	2,915	2,823	2,584	2,622	2,676	2,613	2,973	2,879	2,980	2,873	2,827	15
1,172	1,463	1,391	1,697	1,933	1,634	1,788	2,004	1,811	1,155	1,455	1,454	1,659	1,896	1,646	1,873	1,944	1,782	16
23,413	23,505	23,997	24,915	24,686	26,460	27,718	30,000	29,516	23,349	23,207	24,703	24,571	24,475	26,305	28,642	29,442	29,524	17
2,785	2,957	2,519	2,892	2,557	2,918	3,373	3,499	3,377	2,775	2,921	2,591	2,866	2,540	2,889	3,476	3,442	3,379	18
11,568	10,849	11,694	12,078	12,965	13,647	14,343	15,780	15,665	11,568	10,702	12,017	11,902	12,861	13,574	14,813	15,487	15,696	19
1,055	1,193	1,281	1,073	1,063	1,216	1,181	1,205	1,298	1,177	1,321	1,056	1,052	1,210	1,220	1,183	1,294	1,290	20
8,005	8,506	8,503	8,872	8,101	8,679	8,821	9,516	9,176	7,958	8,407	8,774	8,747	8,022	8,632	9,133	9,330	9,155	21
33,235	34,656	35,391	37,417	36,536	36,265	34,217	39,364	36,746	32,930	34,291	36,644	36,834	36,097	36,130	35,564	38,591	36,584	22
30,878	32,209	32,715	34,634	33,787	33,548	31,452	36,593	34,380	30,618	31,852	33,831	34,135	33,410	33,402	32,656	35,912	34,242	23
3,180	3,013	2,766	3,327	3,254	3,507	3,272	3,823	3,275	3,179	2,968	2,869	3,270	3,202	3,484	3,421	3,749	3,250	24
2,906	2,681	2,815	3,352	3,150	2,486	2,514	3,788	2,857	2,854	2,664	2,931	3,305	3,112	2,486	2,624	3,716	2,844	25
3,284	3,752	3,565	3,600	3,157	3,575	3,300	3,841	3,486	2,266	3,705	3,684	3,546	3,126	3,560	3,417	3,770	3,472	26
5,729	6,031	6,137	6,307	6,303	6,354	6,264	6,732	6,337	5,645	5,977	6,369	6,213	6,211	6,345	6,502	6,595	6,296	27
3,345	3,415	3,881	4,263	4,310	4,104	3,909	3,930	4,336	3,339	3,363	3,980	4,222	4,278	4,064	4,029	3,882	4,348	28
4,607	4,961	4,592	4,367	4,359	4,573	3,995	4,613	4,542	4,571	4,909	4,748	4,299	4,304	4,559	4,162	4,515	4,515	29
2,296	2,369	2,600	2,705	2,679	2,608	2,685	2,664	2,281	2,255	2,359	2,717	2,639	2,619	2,608	2,814	2,595	2,259	30
374	392	373	357	396	602	381	425	310	367	393	390	346	385	604	400	415	306	31
				2									2					32
82,311	86,341	81,390	88,054	89,483	91,044	83,222	90,552	95,852	81,954	85,372	83,806	86,964	88,766	90,525	86,001	89,009	95,750	33
4,609	4,598	4,420	4,757	4,713	5,325	4,834	5,453	4,883	4,594	4,538	4,580	4,672	4,639	5,298	5,041	5,347	4,850	34
52,206	53,871	55,144	58,170	57,244	57,829	57,614	64,754	62,077	51,841	53,271	56,974	57,305	56,641	57,588	59,722	63,490	61,927	35

Table 3.—Private

[Millions]

Line		1994	1995	1996	Not seasonally adjusted			
					1995			
					I	II	III	IV
1	Exports of private services	184,195	204,165	221,224	47,124	48,196	56,157	52,688
2	Travel (table 1, line 5)	58,417	63,395	69,908	13,157	14,887	19,475	15,876
3	Passenger fares (table 1, line 6)	17,083	19,125	20,557	4,279	4,406	5,713	4,727
4	Other transportation (table 1, line 7)	24,941	27,412	27,216	6,489	6,894	6,913	7,116
5	Freight	9,697	11,420	11,161	2,594	2,883	2,865	3,078
6	Port services	14,180	14,810	14,691	3,606	3,710	3,751	3,743
7	Other	1,065	1,184	1,364	289	302	297	296
8	Royalties and license fees (table 1, line 8)	22,661	27,383	29,974	6,213	6,575	6,991	7,604
9	Affiliated	17,793	21,670	23,760	4,858	5,162	5,534	6,117
10	U.S. parents' receipts	16,768	20,210	21,916	4,495	4,868	5,158	5,689
11	U.S. affiliates' receipts	1,025	1,460	1,844	363	294	376	428
12	Unaffiliated	4,869	5,713	6,214	1,355	1,413	1,457	1,488
13	Industrial processes ¹	3,026	3,583	3,979	846	884	914	939
14	Other ²	1,843	2,131	2,235	509	530	543	549
15	Other private services (table 1, line 9)	61,093	66,850	73,569	16,986	15,434	17,065	17,365
16	Affiliated services,	18,651	20,272	22,810	4,628	4,899	5,155	5,590
17	U.S. parents' receipts	12,138	12,795	13,763	2,938	3,148	3,202	3,506
18	U.S. affiliates' receipts	6,513	7,477	9,047	1,690	1,751	1,953	2,084
19	Unaffiliated services	42,442	46,578	50,759	12,358	10,535	11,910	11,775
20	Education	7,175	7,512	7,807	3,028	965	1,976	1,543
21	Financial services	5,763	7,029	8,034	1,678	1,798	1,796	1,977
22	Insurance, net	1,676	1,390	2,121	353	327	335	376
23	Premiums received	4,921	5,524	6,179	1,331	1,361	1,396	1,436
24	Losses paid	3,245	4,133	4,058	978	1,034	1,061	1,060
25	Telecommunications	2,865	3,183	3,405	765	787	807	824
26	Business, professional, and technical services	15,893	17,765	19,247	4,310	4,394	4,503	4,558
27	Other unaffiliated services ³	9,070	9,699	10,145	2,323	2,383	2,494	2,498
28	Imports of private services	122,620	134,523	143,086	30,008	34,508	37,144	32,864
29	Travel (table 1, line 19)	43,782	46,053	48,739	9,405	12,563	13,820	10,265
30	Passenger fares (table 1, line 20)	12,885	14,433	15,776	3,072	3,818	4,163	3,380
31	Other transportation (table 1, line 21)	27,255	28,249	28,453	6,931	7,051	7,311	6,956
32	Freight	16,324	16,759	16,879	4,277	4,150	4,312	4,020
33	Port services	10,013	10,579	10,792	2,424	2,674	2,765	2,716
34	Other	919	911	783	231	226	234	220
35	Royalties and license fees (table 1, line 22)	5,560	6,503	7,322	1,483	1,490	1,697	1,833
36	Affiliated	3,776	5,128	5,301	1,143	1,156	1,346	1,486
37	U.S. parents' payments	261	448	553	99	102	122	126
38	U.S. affiliates' payments	3,515	4,680	4,748	1,044	1,054	1,224	1,360
39	Unaffiliated	1,784	1,373	2,021	341	334	352	347
40	Industrial processes ¹	1,034	962	1,126	239	235	239	249
41	Other ²	750	411	895	102	99	113	98
42	Other private services (table 1, line 23)	33,138	39,285	42,796	9,117	9,586	10,153	10,430
43	Affiliated services,	11,860	13,597	16,026	3,071	3,242	3,451	3,833
44	U.S. parents' payments	5,948	6,820	7,505	1,459	1,637	1,705	2,019
45	U.S. affiliates' payments	5,912	6,777	8,521	1,612	1,605	1,746	1,814
46	Unaffiliated services	21,278	25,689	26,770	6,046	6,344	6,702	6,597
47	Education	816	949	1,041	193	232	286	238
48	Financial services	1,654	2,472	3,184	597	570	649	656
49	Insurance, net	4,034	5,383	4,387	1,342	1,422	1,424	1,195
50	Premiums paid	14,075	15,187	15,473	3,749	3,793	3,819	3,826
51	Losses recovered	10,041	9,804	11,086	2,407	2,371	2,395	2,631
52	Telecommunications	6,928	7,773	8,385	1,862	1,932	1,965	2,015
53	Business, professional, and technical services	3,628	4,691	5,253	1,076	1,150	1,210	1,255
54	Other unaffiliated services ³	4,217	4,420	4,520	976	1,037	1,169	1,239
Memoranda:								
55	Balance on goods (table 1, line 64)	-166,192	-173,560	-191,170	-38,311	-45,210	-49,442	-40,597
56	Balance on private services (line 1 minus line 28)	61,575	69,642	78,138	17,116	13,688	19,013	19,824
57	Balance on goods and private services (lines 55 and 56)	-104,617	-103,918	-113,032	-21,195	-31,522	-30,429	-20,773

See footnotes on page 85.

FOOTNOTES TO U.S. INTERNATIONAL TRANSACTIONS TABLES 1-10A

General notes for all tables: P Preliminary. *Less than \$500,000 (±)

D Suppressed to avoid disclosure of data of individual companies.

- Table 1:**
1. Credits, +: Exports of goods, services, and income; unilateral transfers to United States; capital inflows (increase in foreign assets (U.S. liabilities) or decrease in U.S. assets); decrease in U.S. official reserve assets; increase in foreign official assets in the United States.
Debits, -: Imports of goods, services, and income; unilateral transfers to foreigners; capital outflows (decrease in foreign assets (U.S. liabilities) or increase in U.S. assets); increase in U.S. official reserve assets; decrease in foreign official assets in the United States.
 2. Excludes exports of goods under U.S. military agency sales contracts identified in Census export documents, excludes imports of goods under direct defense expenditures identified in Census import documents, and reflects various other adjustments (for valuation, coverage, and timing) of Census statistics to balance of payments basis; see table 2.
 3. Includes some goods: Mainly military equipment in line 4; major equipment, other materials, supplies, and petroleum products purchased abroad by U.S. military agencies in line 18; and fuels purchased by airline and steamship operators in lines 7 and 21.
 4. Includes transfers of goods and services under U.S. military grant programs.
 5. Beginning in 1982, these lines are presented on a gross basis. The definition of exports is revised to exclude U.S. parents' payments to foreign affiliates and to include U.S. affiliates' receipts from foreign parents. The definition of imports is revised to include U.S. parents' payments to foreign affiliates and to exclude U.S. affiliates' receipts from foreign parents.
 6. Beginning in 1982, the "other transfers" component includes taxes paid by U.S. private residents to foreign governments and taxes paid by private nonresidents to the U.S. Government.
 7. For all areas, amounts outstanding March 31, 1997, were as follows in millions of dollars: Line 34, 67,222; line 35, 11,050; line 36, 9,879; line 37, 13,846; line 38, 32,447. Data are preliminary.
 8. Includes sales of foreign obligations to foreigners.
 9. Consists of bills, certificates, marketable bonds and notes, and nonmarketable convertible and nonconvertible bonds and notes.
 10. Consists of U.S. Treasury and Export-Import Bank obligations, not included elsewhere, and of debt securities of U.S. Government corporations and agencies.
 11. Includes, primarily, U.S. Government liabilities associated with military agency sales contracts and other transactions arranged with or through foreign official agencies; see table 4.
 12. Consists of investments in U.S. corporate stocks and in debt securities of private corporations and State and local governments.
 13. Conceptually the sum of lines 70 and 62 is equal to "net foreign investment" in the national income and product accounts (NIPA's). However, the foreign transactions account in the NIPA's (a) includes adjustments to the international transactions accounts for the treatment of gold, (b) includes adjustments for the different geographical treatment of transactions with U.S. territories and Puerto Rico, and (c) includes services furnished without payment by financial pension plans except life insurance carriers and private noninsured pension plans. A reconciliation of the balance on goods and services from the international accounts and the NIPA net exports appears in the "Reconciliation and Other Special Tables" section in this issue of the SURVEY OF CURRENT BUSINESS. A reconciliation of the other foreign transactions in the two sets of accounts appears in table 4.5 of the full set of NIPA tables (published annually in the July issue of the SURVEY).
Additional footnotes for historical data in June issues of the SURVEY:
14. For 1974, includes extraordinary U.S. Government transactions with India. See "Special U.S. Government Transactions," June 1974 SURVEY, p. 27.
15. For 1978-83, includes foreign currency-denominated notes sold to private residents abroad.
16. Break in series. See Technical Notes in the June 1989, June 1990, June 1992, June 1993, June 1995, July 1996, and July 1997 issues of the SURVEY.

- Table 2:**
1. Exports, Census basis, represent transactions values, f.a.s. U.S. port of exportation, for all years; imports, Census basis, represent Customs values (see Technical Notes in the June 1982 SURVEY), except for 1974-81, when they represent transactions values, f.a.s. foreign port of exportation (see June issues of the SURVEY for historical data).
From 1983 forward, both unadjusted and seasonally adjusted data have been prepared by BEA from "actual" and "revised statistical" month data supplied by the Census Bureau (see Technical Notes in the December 1985 SURVEY).
Seasonally adjusted data reflect the application of seasonal factors developed jointly by Census and BEA. The seasonally adjusted data are the sum of seasonally adjusted five-digit end-use categories (see Technical Notes in the June 1980 SURVEY, in the June 1988 SURVEY, and in the June 1991 SURVEY). Prior to 1983, annual data are as published by the Census Bureau, except that for 1975-80 published Census data are adjusted to include trade between the U.S. Virgin Islands and foreign countries.
 2. Beginning in 1990, the Census Bureau replaced its compiled export statistics with counterpart Canadian import statistics. Similarly, Statistics Canada replaced its compiled export statistics with counterpart U.S. import statistics. This exchange of data has eliminated the need for the inland freight adjustment on U.S. exports, but not on U.S. imports.
 3. Adjustments in lines A5 and A13, B12, B47, and B82 reflect the Census Bureau's reconciliation of discrepancies between the goods statistics published by the United States and the counterpart statistics published in Canada. These adjustments are distributed to the affected end-use categories in section C. Beginning in 1986, estimates for undocumented exports to Canada, the largest item in the U.S.-Canadian reconciliation, are included in Census basis data shown in line A1.
 4. Exports of military equipment under U.S. military agency sales contracts with foreign governments (line A6), and direct imports by the Department of Defense and the Coast Guard (line A14), to the extent such trade is identifiable from Customs declarations. The exports are included in tables 1 and 10, line 4 (transfers under U.S. military agency sales contracts); the imports are included in tables 1 and 10, line 18 (direct defense expenditures).
 5. Addition of electrical energy; deduction of exposed motion picture film for rental rather than sale; net change in stock of U.S.-owned grains in storage in Canada; coverage adjustments for special situations in which shipments were omitted from Census data; deduction of the value of repairs and alterations to foreign-owned equipment shipped to the United States for repair; and the inclusion of fish exported outside of U.S. customs area. Also includes deduction of exports to the Panama Canal Zone before October 1, 1979, and for 1975-82, net timing adjustments for goods recorded in Census data in one period but found to have been shipped in another (see June issues of the SURVEY for historical data).
 6. Deduction of foreign charges for repair of U.S. vessels abroad, which are included in tables 1 and 10, line 21 (other transportation); coverage adjustments for special situations in which shipments were omitted from Census data; and the deduction of the value of repairs and alterations to U.S.-owned equipment shipped abroad for repair. Also includes addition of understatement of inland freight in f.a.s. values of U.S. imports of goods from Canada in 1974-81; deduction of imports from the Panama Canal Zone before October 1, 1979; and for 1975-82, net timing adjustments for goods recorded in Census data in one period but found to have been shipped in another (see June issues of the SURVEY for historical data).
 7. For 1988-89, correction for the understatement of crude petroleum imports from Canada.
 8. Annual and unadjusted quarterly data shown in this table correspond to country and area data in table 10, lines 2 and 16. Trade with international organizations includes purchases of nonmonetary gold from the International Monetary Fund, transfers of tin to the International Tin Council (ITC), and sales of satellites to Intelsat. The memoranda are defined as follows: *Industrial countries:* Western Europe, Canada, Japan, Australia, New Zealand, and South Africa; *Members of OPEC:* Venezuela, Ecuador, Iraq, Iran, Kuwait, Saudi Arabia, Qatar, United Arab Emirates, Indonesia, Algeria, Libya, Nigeria, and Gabon (beginning in January 1993, excludes Ecuador); *Other countries:* Eastern Europe, Latin America and Other Western Hemisphere, and other countries in Asia and Africa, less OPEC. Before 1984, complete geographic area detail was not available for some balance of payments adjustments. Therefore, the detail shown does not always sum to the values shown for the area aggregates. For all years, "Asia" and "Africa" exclude certain Pacific Islands and unidentified countries included in "Other countries in Asia and Africa."
 9. Includes the former German Democratic Republic (East Germany) beginning in fourth quarter of 1990. In earlier periods, the German Democratic Republic was included in Eastern Europe.
 10. Beginning in 1986, New Zealand and South Africa are included in "Other countries in Asia and Africa," with New Zealand included as part of "Asia" and South Africa as part of "Africa."
 11. Includes nuclear fuel materials and fuels.

- Table 3:**
1. Patented techniques, processes, and formulas and other intangible property rights that are used in goods production.
 2. Copyrights, trademarks, franchises, rights to broadcast live events, and other intangible property rights.
 3. Other unaffiliated services receipts (exports) include mainly expenditures of foreign governments and international organizations in the United States. Payments (imports) include mainly wages of foreign residents temporarily employed in the United States and Canadian and Mexican commuters in U.S. border areas.

- Table 4:**
1. Expenditures to release foreign governments from their contractual liabilities to pay for military goods and services purchased through military sales contracts—first authorized (for Israel) under Public Law 93-199, section 4, and subsequently authorized (for many recipients) under similar legislation—are included in line A3. Deliveries against these military

- sales contracts are included in line C10; see footnote 2. Of the line A3 items, part of these military expenditures is applied in lines A40 and A43 to reduce short-term assets previously recorded in lines A38 and C8; this application of funds is excluded from lines C3 and C4. A second part of line A3 expenditures finances future deliveries under military sales contracts for the recipient countries and is applied directly to lines A39 and C9. A third part of line A3, disbursed directly to finance purchases by recipient countries from commercial suppliers in the United States, is included in line A34. A fourth part of line A3, representing dollars paid to the recipient countries to finance purchases from countries other than the United States, is included in line A45.
2. Transactions under military sales contracts are those in which the Department of Defense sells and transfers military goods and services to a foreign purchaser, on a cash or credit basis. Purchases by foreigners directly from commercial suppliers are not included as transactions under military sales contracts. The entries for the several categories of transactions related to military sales contracts in this and other tables are partly estimated from incomplete data.
3. The identification of transactions involving direct dollar outflows from the United States is made in reports by each operating agency.
4. Line A35 includes foreign currency collected as interest and line A40 includes foreign currency collected as principal, as recorded in lines A13 and A14, respectively.
5. Includes (a) advance payments to the Department of Defense (on military sales contracts) financed by loans extended to foreigners by U.S. Government agencies and (b) the contraentry for the part of line C10 that was delivered without prepayment by the foreign purchaser. Also includes expenditures of appropriations available to release foreign purchasers from liability to make repayment.
6. Includes purchases of loans from U.S. banks and exporters and payments by the U.S. Government under commercial export credit and investment guarantee programs.
7. Excludes liabilities associated with military sales contracts financed by U.S. Government grants and credits and included in line C2.

- Table 5:**
1. Beginning with 1991, payments and receipts of interest related to interest rate and foreign currency swaps between affiliates and parents are netted and are shown as either net payments or net receipts. Receipts and payments of other types of interest are shown on a gross basis.
 2. Petroleum includes, and manufacturing and "other" industries exclude, the exploration, development, and production of crude oil and gas, and the transportation, refining, and marketing of petroleum products, exclusive of petrochemicals. "Other" industries includes wholesale trade; banking; finance (except banking), insurance, and real estate; services; and other industries—agriculture, forestry, and fishing; mining; construction; transportation, communication, and public utilities; and retail trade.
 3. Acquisition of equity holdings in existing and newly established companies, capital contributions, capitalization of intercompany debt, and other equity contributions.
 4. Sales (total and partial), liquidations, returns of capital contributions, and other dispositions of equity holdings.

- Table 6:**
1. Primarily provincial, regional, and municipal.
 2. Largely transactions by International Bank for Reconstruction and Development (IBRD), International Development Association (IDA), International Finance Corporation (IFC), Asian Development Bank (ADB), and Inter-American Development Bank (IDB).
 3. Estimate for scheduled redemptions and identifiable early retirements. Includes estimates based on Canadian statistics for redemptions of Canadian issues held in the United States. Unidentified and nonscheduled retirements appear in line A30.
- Table 7:**
1. Estimates of transactions other than those with U.S. banks' Caribbean branches are not available.
 2. Deposits (line A5) include other financial claims (line A6) for some countries due to the commingling of these categories in foreign source data.
 3. Primarily mortgages, loans, and bills and notes drawn on foreigners.
 4. Western Europe, Canada, Japan, Australia, New Zealand, and South Africa.
 5. Bahamas, British West Indies (Cayman Islands), Netherlands Antilles, and Panama.
 6. Based on data for Ecuador, Venezuela, Indonesia, and other Asian and African oil-exporting countries. Beginning in January 1993, excludes Ecuador.

- Table 8:**
1. Includes central governments and their agencies and corporations; state, provincial, and local governments and their agencies and corporations; and international and regional organizations.
 2. U.S.-owned banks are mainly U.S.-chartered banks and Edge Act subsidiaries. U.S. brokers' and dealers' accounts may be commingled in some categories. Foreign-owned banks include U.S. branches and agencies of foreign banks and majority-owned bank subsidiaries in the United States.
 3. Commercial paper issued in the U.S. market by foreign incorporated entities; excludes commercial paper issued through foreign direct investment affiliates in the United States.
 4. Negotiable and readily transferable instruments other than commercial paper, payable in dollars; consists largely of negotiable certificates of deposit.
 5. Western Europe, Canada, Japan, Australia, New Zealand, and South Africa.
 6. Bahamas, British West Indies (Cayman Islands), Netherlands Antilles, and Panama.
 7. Based on data for Ecuador, Venezuela, Indonesia, and other Asian and African oil-exporting countries. Beginning in January 1993, excludes Ecuador.
 8. Includes Eastern Europe and international and regional organizations.

- Table 9:**
1. Negotiable certificates of deposit issued by banks in the United States are included in banks' custody liabilities and are separately identified in memorandum line 8. Nonnegotiable certificates of deposit are included in time deposits.
 2. Includes borrowing under Federal funds or repurchase arrangements, deferred credits, and liabilities other than deposits.
 3. Mainly negotiable and readily transferable instruments, excluding U.S. Treasury securities.
 4. Mainly International Bank for Reconstruction and Development (IBRD), International Development Association (IDA), International Finance Corporation (IFC), Asian Development Bank (ADB), Inter-American Development Bank (IDB), and the Trust Fund of the International Monetary Fund.
 5. U.S.-owned banks are mainly U.S.-chartered banks and Edge Act subsidiaries. U.S. brokers' and dealers' liabilities may be commingled in some categories. Foreign-owned banks are U.S. branches and agencies of foreign banks and majority-owned bank subsidiaries in the United States.
 6. U.S. currency flows are not included, because no geographic data are available.
 7. Western Europe, Canada, Japan, Australia, New Zealand, and South Africa.
 8. Bahamas, British West Indies (Cayman Islands), Netherlands Antilles, and Panama.
 9. Based on data for Ecuador, Venezuela, Indonesia, and other Asian and African oil-exporting countries. Beginning in January 1993, excludes Ecuador.
 10. Includes Eastern Europe and international and regional organizations.

- Table 10:** For footnotes 1-13, see table 1.
14. The "European Union" includes the "European Union (6)," United Kingdom, Denmark, Ireland, Greece, Spain, and Portugal. Beginning with the first quarter of 1995, the "European Union" also includes Austria, Finland, and Sweden.
 15. The "European Union (6)" includes Belgium, France, Germany (includes the former German Democratic Republic (East Germany) beginning in the fourth quarter of 1990), Italy, Luxembourg, Netherlands, European Atomic Energy Community, European Coal and Steel Community, and European Investment Bank.
 16. Includes, as part of international and unallocated, the estimated direct investment in foreign affiliates engaged in international shipping, in operating oil and gas drilling equipment internationally, and in petroleum trading. Also includes taxes withheld; current-cost adjustments associated with U.S. and foreign direct investment; small transactions in business services that are not reported by country; and net U.S. currency flows, for which geographic source data are not available.
 17. Details not shown separately; see totals in lines 49 and 56.
 18. Details not shown separately are included in line 61.

- Table 10a:** For footnotes 1-13, see table 1.
14. Details not shown separately are included in line 61.
- Note.—Country data are based on information available from U.S. reporting sources. In some instances the statistics may not necessarily reflect the ultimate foreign transfactor. For instance: U.S. export statistics reflect country of reported destination; in many cases the exports may be transhipped to third countries (especially true for the Netherlands and Germany). The geographic breakdown of security transactions reflects country with which transaction occurred but may not necessarily reflect the ultimate sources of foreign funds or ultimate destination of U.S. funds. Data for individual countries within the European Union (6) may not add to the published totals for the European Union (6), because in several instances estimates for the group are not available for each country. In addition, country data may not add to the European Union (6) totals because of rounding.

Table 5.—Direct Investment: Income, Capital, Royalties and

[Millions]

Line	(Credits +; debits -)	1994	1995	1996	Not seasonally adjusted			
					1995			
					I	II	III	IV
U.S. direct investment abroad:								
1	Income with current-cost adjustment, before deduction of withholding taxes (table 1, line 12)	70,911	90,349	98,890	21,583	23,900	21,594	23,272
2	Earnings	68,402	86,998	95,514	20,755	22,995	20,714	22,534
3	Distributed earnings	38,265	32,991	37,629	6,989	7,306	6,581	12,116
4	Reinvested earnings	30,138	54,007	57,885	13,767	15,689	14,134	10,418
5	Interest ¹	2,509	3,350	3,377	827	905	879	738
6	U.S. parents' receipts	5,074	7,041	6,737	1,599	1,856	1,795	1,791
7	U.S. parents' payments	-2,565	-3,691	-3,360	-772	-951	-915	-1,053
8	Less: Current-cost adjustment	990	1,622	2,252	343	385	427	467
9	Less: Withholding taxes	1,324	1,278	1,572	344	273	289	373
10	Equals: Income without current-cost adjustment, after deduction of withholding taxes ²	68,597	87,449	95,067	20,896	23,243	20,878	22,432
11	Petroleum	7,177	9,730	11,960	2,504	2,526	2,190	2,510
12	Manufacturing	26,699	35,065	34,975	8,518	9,739	8,228	8,581
13	Other	34,721	42,654	48,132	9,874	10,978	10,460	11,342
14	Capital with current-cost adjustment (table 1, line 44)	-69,262	-86,737	-87,813	-16,048	-14,975	-15,363	-40,352
15	Equity capital	-20,491	-36,611	-21,605	-5,450	1,430	-7,904	-24,687
16	Increases in equity capital ³	-35,331	-47,957	-38,895	-7,234	-3,790	-10,207	-26,727
17	Decreases in equity capital ⁴	14,840	11,346	17,290	1,784	5,219	2,303	2,039
18	Reinvested earnings	-30,138	-54,007	-57,885	-13,767	-15,689	-14,134	-10,418
19	Intercompany debt	-18,633	3,881	-8,323	3,169	-716	6,675	-5,247
20	U.S. parents' receivables	-21,763	-21,642	-8,563	-7,851	-4,163	5,573	-15,201
21	U.S. parents' payables	3,130	25,522	241	11,020	3,448	1,101	9,954
22	Less: Current-cost adjustment (line 8 with sign reversed)	-990	-1,622	-2,252	-343	-385	-427	-467
23	Equals: Capital without current-cost adjustment ²	-68,272	-85,115	-85,561	-15,705	-14,590	-14,936	-39,885
24	Equity capital (line 15)	-20,491	-36,611	-21,605	-5,450	1,430	-7,904	-24,687
25	Petroleum	-553	1,449	352	-31	2,322	-401	-441
26	Manufacturing	-3,269	-17,292	-9,024	-488	-394	-802	-12,619
27	Other	-16,670	-20,767	-12,933	-1,940	-499	-6,701	-11,627
28	Reinvested earnings without current-cost adjustment (line 18 less line 22)	-29,148	-52,385	-55,633	-13,424	-15,304	-13,707	-9,951
29	Petroleum	19	-3,400	-5,533	-1,408	-571	-648	-773
30	Manufacturing	-14,667	-23,990	-21,248	-5,388	-7,459	-5,927	-5,216
31	Other	-14,500	-24,985	-28,852	-6,629	-7,273	-7,131	-3,962
32	Intercompany debt (line 19)	-18,633	3,881	-8,323	3,169	-716	6,675	-5,247
33	Petroleum	-1,156	-486	-963	212	-2,004	455	951
34	Manufacturing	-6,018	-1,248	-1,743	-448	1,128	-1,224	-704
35	Other	-11,459	5,615	-9,102	3,405	161	7,443	-5,393
36	Royalties and license fees, before deduction of withholding taxes, net	16,506	19,762	21,363	4,397	4,766	5,036	5,563
37	U.S. parents' receipts (table 1, part of line 8)	16,768	20,210	21,916	4,495	4,868	5,158	5,689
38	U.S. parents' payments (table 1, part of line 22)	-261	-448	-554	-99	-102	-122	-126
39	Other private services, before deduction of withholding taxes, net	6,190	5,975	6,259	1,479	1,512	1,497	1,487
40	U.S. parents' receipts (table 1, part of line 9)	12,138	12,795	13,763	2,938	3,148	3,202	3,506
41	U.S. parents' payments (table 1, part of line 23)	-5,948	-6,820	-7,505	-1,459	-1,637	-1,705	-2,019
Foreign direct investment in the United States:								
42	Income with current-cost adjustment, before deduction of withholding taxes (table 1, line 26)	-20,154	-30,345	-32,132	-6,699	-7,673	-9,182	-6,791
43	Earnings	-12,812	-22,080	-24,211	-4,747	-5,588	-7,065	-4,680
44	Distributed earnings	-10,271	-12,254	-12,024	-2,355	-2,680	-3,927	-3,293
45	Reinvested earnings	-2,541	-9,826	-12,187	-2,393	-2,908	-3,138	-1,387
46	Interest ¹	-7,342	-8,265	-7,921	-1,952	-2,085	-2,117	-2,112
47	U.S. affiliates' payments	-10,097	-12,546	-13,220	-2,989	-2,988	-3,198	-3,371
48	U.S. affiliates' receipts	2,755	4,281	5,299	1,038	902	1,081	1,260
49	Less: Current-cost adjustment	1,316	1,888	1,873	432	467	490	499
50	Less: Withholding taxes	-184	-204	-245	-49	-38	-71	-46
51	Equals: Income without current-cost adjustment, after deduction of withholding taxes ²	-21,286	-32,029	-33,759	-7,082	-8,102	-9,601	-7,245
52	Petroleum	-1,902	-2,970	-4,190	-375	-729	-966	-900
53	Manufacturing	-10,788	-15,886	-17,262	-3,289	-4,016	-4,933	-3,649
54	Other	-8,596	-13,173	-12,308	-3,418	-3,357	-3,702	-2,696
55	Capital with current-cost adjustment (table 1, line 57)	45,679	67,526	76,955	12,640	10,630	25,108	19,149
56	Equity capital	37,210	45,057	53,030	10,889	6,833	12,310	15,026
57	Increases in equity capital ³	43,387	51,696	62,739	12,302	8,616	13,074	17,704
58	Decreases in equity capital ⁴	-6,176	-6,639	-9,709	-1,413	-1,784	-764	-2,679
59	Reinvested earnings	2,541	9,826	12,187	2,393	2,908	3,138	1,387
60	Intercompany debt	5,927	12,643	11,739	-642	889	9,660	2,736
61	U.S. affiliates' payables	3,673	19,451	24,102	230	2,463	9,921	6,837
62	U.S. affiliates' receivables	2,254	-6,808	-12,363	-872	-1,574	-261	-4,101
63	Less: Current-cost adjustment (line 49 with sign reversed)	-1,316	-1,888	-1,873	-432	-467	-490	-499
64	Equals: Capital without current-cost adjustment ²	46,995	69,414	78,828	13,072	11,097	25,598	19,648
65	Equity capital (line 56)	37,210	45,057	53,030	10,889	6,833	12,310	15,026
66	Petroleum	1,159	2,748	4,608	-316	373	2,091	600
67	Manufacturing	13,377	18,488	14,764	4,981	2,193	5,811	5,504
68	Other	22,674	23,821	33,659	6,224	4,267	4,408	8,923
69	Reinvested earnings without current-cost adjustment (line 59 less line 63)	3,857	11,714	14,060	2,825	3,375	3,628	1,886
70	Petroleum	327	1,447	2,320	49	418	677	303
71	Manufacturing	4,531	7,113	9,574	1,915	2,324	1,615	1,260
72	Other	-1,000	3,153	2,166	861	633	1,336	323
73	Intercompany debt (line 60)	5,927	12,643	11,739	-642	889	9,660	2,736
74	Petroleum	179	-1,044	1,186	283	545	-2,148	276
75	Manufacturing	1,765	2,248	4,774	725	-256	1,128	650
76	Other	3,984	11,439	5,779	-1,649	599	10,679	1,810
77	Royalties and license fees, before deduction of withholding taxes, net	-2,490	-3,221	-2,905	-681	-760	-848	-932
78	U.S. affiliates' payments (table 1, part of line 23)	-3,515	-4,680	-4,748	-1,044	-1,054	-1,224	-1,360
79	U.S. affiliates' receipts (table 1, part of line 8)	1,025	1,460	1,844	363	294	376	428
80	Other private services, before deduction of withholding taxes, net	600	701	526	78	146	207	270
81	U.S. affiliates' payments (table 1, part of line 23)	-5,912	-6,777	-8,521	-1,612	-1,605	-1,746	-1,814
82	U.S. affiliates' receipts (table 1, part of line 9)	6,513	7,477	9,047	1,690	1,751	1,953	2,084

Table 7.—Claims on and Liabilities to Unaffiliated Foreigners Reported by U.S. Nonbanking Concerns

[Millions of dollars]

Line	(Credits +; increase in U.S. liabilities or decrease in U.S. assets. Debits -; decrease in U.S. liabilities or increase in U.S. assets.)	1994	1995	1996	Not seasonally adjusted										Amounts out- standing Mar. 31, 1997
					1995				1996				1997		
					I	II	III	IV	I	II	III	IV	I ¹		
A1	Claims, total (table 1, line 46)	-31,739	-34,997	-64,234	-4,044	-23,147	6,988	-14,794	-15,778	-5,047	-17,294	-26,115	-8,600	377,655	
2	Financial claims	-29,144	-33,885	-61,568	-5,425	-22,284	7,042	-13,218	-16,257	-4,832	-17,774	-22,705	-8,600	349,815	
3	<i>Denominated in U.S. dollars</i>	-26,065	-25,477	-41,661	-5,296	-23,041	11,819	-8,959	-4,470	-4,891	-8,639	-23,661	-8,600	272,041	
4	<i>Denominated in foreign currencies</i>	-3,079	-8,408	-19,907	-129	757	-4,777	-4,259	-11,787	59	-9,135	956		77,774	
5	By type: Deposits ²	-29,048	-33,832	-60,856	-5,916	-22,227	7,450	-13,139	-16,147	-4,672	-17,563	-22,474	-8,600	344,981	
6	Other claims ^{2,3}	-96	-53	-712	491	-57	-408	-79	-110	-160	-211	-231		4,834	
7	By area: Industrial countries ⁴	-1,660	-24,294	-29,780	-175	-6,127	-11,521	-6,471	-14,987	6,319	-8,112	-13,000		146,444	
8	Of which United Kingdom	2,318	-11,286	-18,167	-1,102	-1,071	-2,547	-6,546	-10,672	3,180	-4,072	-6,603		67,007	
9	Canada	-6,518	274	-1,061	1,724	-1,846	754	-358	-141	55	3,126	-4,101		10,813	
10	Caribbean banking centers ⁵	-23,388	-9,809	-30,719	-5,856	-16,022	18,804	-6,735	-1,234	-10,854	-9,399	-9,232	-8,600	191,094	
11	Other	-4,096	218	-1,069	606	-135	-241	-12	-36	-297	-263	-473		12,277	
12	Commercial claims	-2,595	-1,112	-2,666	1,381	-863	-54	-1,576	479	-215	480	-3,410		27,840	
13	<i>Denominated in U.S. dollars</i>	-2,348	-1,600	-2,657	783	-723	-195	-1,465	410	-166	432	-3,333		25,801	
14	<i>Denominated in foreign currencies</i>	-247	488	-9	598	-140	141	-111	69	-49	48	-77		2,039	
15	By type: Trade receivables	-2,733	-1,840	-2,227	743	-911	-83	-1,589	875	-153	266	-3,215		25,225	
16	Advance payments and other claims	138	728	-439	638	48	29	13	-396	-62	214	-195		2,615	
17	By area: Industrial countries ⁴	-1,056	353	-1,161	1,323	-470	345	-845	-231	-72	645	-1,503		15,468	
18	Members of OPEC ⁶	-87	-171	-278	118	-20	-94	-175	-100	120	-91	-207		1,279	
19	Other	-1,452	-1,294	-1,227	-60	-373	-305	-556	810	-263	-74	-1,700		11,093	
B1	Liabilities, total (table 1, line 60)	-7,710	34,588	31,786	9,075	7,286	6,968	11,259	6,800	7,288	20,610	-2,912	4,800	276,335	
2	Financial liabilities	-7,483	34,715	26,194	8,938	9,169	6,124	10,484	5,774	7,108	18,375	-5,063	4,800	243,867	
3	<i>Denominated in U.S. dollars</i>	-15,217	32,203	12,420	6,281	9,871	6,395	9,656	3,574	3,100	11,156	-5,410	4,800	206,996	
4	<i>Denominated in foreign currencies</i>	7,734	2,512	13,774	2,657	-702	-271	828	2,200	4,008	7,219	347		36,871	
5	By area: Industrial countries ⁴	6,631	7,649	27,031	3,008	-2,022	3,575	3,088	10,054	6,530	10,247	200		77,291	
6	Of which United Kingdom	3,735	10,203	25,140	1,342	-351	4,711	4,501	7,757	7,738	9,176	469		63,820	
7	Caribbean banking centers ⁵	-14,342	26,899	-657	6,096	11,190	2,508	7,105	-4,105	900	7,897	-5,349	4,800	150,300	
8	Other	228	167	-180	-166	1	41	291	-175	-322	231	86		16,276	
9	Commercial liabilities	-227	-127	5,592	137	-1,883	844	775	1,026	180	2,235	2,151		32,468	
10	<i>Denominated in U.S. dollars</i>	-914	541	5,919	799	-2,108	882	968	1,338	102	2,356	2,123		31,588	
11	<i>Denominated in foreign currencies</i>	687	-668	-327	-662	225	-38	-193	-312	78	-121	28		880	
12	By type: Trade payables	1,203	1,008	1,506	-161	683	-466	952	-198	266	524	914		12,519	
13	Advance receipts and other liabilities	-1,430	-1,135	4,086	298	-2,566	1,310	-177	1,224	-86	1,711	1,237		19,949	
14	By area: Industrial countries ⁴	275	-57	3,967	579	-1,912	990	286	1,371	-143	1,217	1,522		19,331	
15	Members of OPEC ⁶	151	440	632	205	-19	-138	392	-225	304	260	293		3,273	
16	Other	-653	-510	993	-647	48	-8	97	-120	19	758	336		9,864	

See footnotes on page 85.

Table 8.—Claims on Foreigners Reported by U.S. Banks

[Millions of dollars]

Line	(Credits +; decrease in U.S. assets. Debits -; increase in U.S. assets.)	1994	1995	1996	Not seasonally adjusted										Amounts out- standing Mar. 31, 1997
					1995				1996				1997		
					I	II	III	IV	I	II	III	IV		I ^P	
1	Total, net (table 1, line 47)	-4,200	-75,108	-98,186	-28,348	-47,520	4,489	-3,729	1,868	192	-33,589	-66,657	-56,560	917,421	
2	By type:														
3	Banks' own claims	8,858	-60,394	-62,878	-19,633	-38,566	7,846	-10,041	5,304	-1,932	-11,136	-55,114	-43,407	709,024	
4	Payable in dollars	4,792	-47,175	-68,258	-10,966	-34,624	3,472	-5,057	1,257	-4,736	-8,734	-56,045	-35,663	636,355	
5	By borrower:														
6	Claims on:														
7	own foreign offices	2,495	-24,412	-35,084	-9,355	-12,781	2,582	-4,858	9,811	-9,802	-4,170	-30,923	-17,615	360,126	
8	unaffiliated foreign banks	-8,703	8,814	-11,929	2,334	-8,797	2,985	12,292	-2,107	-1,814	-4,033	-3,975	-4,832	118,355	
9	foreign public borrowers ¹	5,786	838	294	-443	331	1,025	-75	-5,338	4,775	153	704	-6,715	28,935	
10	other private foreigners	5,214	-32,415	-21,539	-3,502	-13,377	-3,120	-12,416	-1,109	2,105	-684	-21,851	-6,501	128,939	
11	By bank ownership: ²														
12	U.S.-owned banks' claims on:														
13	own foreign offices	-8,416	9,679	-17,794	-5,968	8,748	8,419	-1,520	-1,317	582	-5,814	-11,245	7,062	135,979	
14	unaffiliated foreign banks	2,961	-4,198	-11,568	-801	-2,854	-3,118	2,575	3,727	-6,760	-4,784	-3,751	1,605	49,024	
15	other foreigners	736	-28,658	-11,389	-851	-14,392	-2,616	-10,799	-4,213	7,364	3,991	-18,531	-1,824	94,175	
16	Foreign-owned banks' claims on:														
17	own foreign offices	10,911	-34,091	-17,290	-3,387	-21,529	-5,837	-3,338	11,128	-10,384	1,644	-19,678	-24,677	224,147	
18	unaffiliated foreign banks	-11,664	13,012	-361	3,135	-5,943	6,103	9,717	-5,834	4,946	751	-224	-6,437	69,331	
19	other foreigners	10,264	-2,919	-9,856	-3,094	1,346	521	-1,692	-2,234	-484	-4,522	-2,616	-11,592	63,699	
20	Payable in foreign currencies	4,066	-13,219	5,380	-8,667	-3,942	4,374	-4,984	4,047	2,804	-2,402	931	-7,744	72,669	
21	Banks' domestic customers' claims	-13,058	-14,714	-35,308	-8,715	-8,954	-3,357	6,312	-3,436	2,124	-22,453	-11,543	-13,153	208,397	
22	Payable in dollars	-15,034	-19,447	-26,840	-10,714	-7,589	-6,977	5,833	-3,197	3,294	-22,617	-4,320	-18,851	199,282	
23	Deposits	-23,095	6,310	-19,131	-2,323	-2,462	2,779	8,316	-10,431	-1,453	-10,292	3,045	-17,497	95,147	
24	Foreign commercial paper ³	9,848	-13,330	-10,668	-6,859	910	-6,860	-521	3,577	-2,142	-10,163	-1,940	861	65,429	
25	Other negotiable and readily transferable instruments ⁴	-746	-7,782	-1,993	81	-3,297	-4104	-462	1,387	5,377	-2,060	-6,697	-43	21,599	
26	Outstanding collections and other	-1,041	-4,645	4,952	-1,613	-2,740	1,208	-1,500	2,270	1,512	-102	1,272	-2,172	17,307	
27	Payable in foreign currencies	1,976	4,733	-8,468	1,999	-1,365	3,620	479	-239	-1,170	164	-7,223	5,698	8,915	
28	By area:														
29	Industrial countries ⁵	-456	-44,402	-52,753	-27,718	-17,031	8,620	-8,273	12,303	-8,637	-33,987	-22,432	-60,665	504,350	
30	Western Europe	-1,597	-32,230	-40,870	-17,673	-3,963	7,437	-18,031	-700	-7,479	-24,806	-7,885	-50,677	337,047	
31	Of which United Kingdom	-6,852	-13,842	-17,842	-6,651	335	8,986	-16,512	-4,309	1,857	-16,076	686	-20,754	159,471	
32	Canada	850	-3,870	-10,760	-8,420	-48	1,202	3,396	2,487	-4,189	-6,129	-2,929	-12,722	65,296	
33	Japan	-1,276	-10,033	2,305	-3,254	-11,687	1,171	3,737	10,724	2,416	-210	-10,625	2,348	89,735	
34	Other	1,567	1,731	-3,428	1,629	-1,333	-1,190	2,625	-208	615	-2,842	-993	386	12,272	
35	Caribbean banking centers ⁶	-10,912	-25,311	-17,366	6,561	-20,460	-10,396	-1,016	-2,497	14,461	-3,663	-25,667	9,541	233,209	
36	Other areas	7,168	-5,395	-28,067	-7,191	-10,029	6,265	5,560	-7,938	-5,632	4,061	-18,558	-5,436	179,862	
37	Of which Members of OPEC, included below ⁷	3,113	4,123	-589	1,138	-773	-243	4,001	2,609	-733	-1,862	-603	131	16,282	
38	Latin America	2,110	-2,517	-10,505	-1,098	-2,149	2,177	-1,447	677	-675	-1,449	-9,058	-861	80,911	
39	Asia	6,456	-6,407	-15,430	-7,927	-9,556	4,723	6,353	-4,914	-7,494	4,729	-7,751	-2,731	86,307	
40	Africa	530	383	128	461	-112	-247	281	-78	30	213	23	-75	2,805	
41	Other ⁸	-1,928	3,146	-2,260	1,373	1,788	-388	373	-3,623	2,567	568	-1,772	-1,769	9,839	
42	Memoranda:														
43	International banking facilities ⁹ (IBF's) own claims, payable in dollars (lines 1-13 above)	-17,468	9,685	-17,199	5,405	-4,397	4,884	3,793	3,223	1,012	2,326	-23,760	-10,277	229,887	
44	By borrower:														
45	Claims on:														
46	own foreign offices	-8,798	-7,496	-15,723	-411	673	-3,235	-4,523	6,264	-3,304	2,744	-21,427	-4,107	135,056	
47	unaffiliated foreign banks	-12,775	18,593	563	5,380	-4,455	8,776	8,892	-3,870	4,443	-525	515	-3,798	59,497	
48	foreign public borrowers	4,481	1,127	1,495	846	290	590	-599	859	963	145	-472	302	6,277	
49	all other foreigners	-376	-2,539	-3,534	-410	-905	-1,247	23	-30	-1,090	-38	-2,376	-2,674	29,057	
50	By bank ownership: ²														
51	U.S.-owned IBF's	-10,210	4,174	4,872	235	6,059	676	-2,796	-278	-141	3,309	1,982	-1,340	54,860	
52	Foreign-owned IBF's	-7,258	5,511	-22,071	5,170	-10,456	4,208	6,589	3,501	1,153	-983	-25,742	-8,937	175,027	
53	Banks' dollar acceptances payable by foreigners	-507	17	-1,214	-12	-353	26	356	-622	-303	-61	-228	-1,623	11,247	

See footnotes on page 85.

Table 10.—U.S. International
[Millions]

Line	(Credits +; debits -) ¹	Australia							
		1994	1995	1996	1996				1997
					I	II	III	IV		I^{2}
1	Exports of goods, services, and income	17,906	20,521	21,726	5,149	5,366	5,643	5,568	5,214
2	Goods, adjusted, excluding military ²	9,582	10,495	11,705	2,985	2,910	2,895	2,915	2,823
3	Services ³	4,159	4,534	4,792	1,049	1,183	1,334	1,226	1,116
4	Transfers under U.S. military agency sales contracts ⁴	425	253	204	41	66	56	41	35
5	Travel	1,431	1,639	1,819	349	446	572	452	392
6	Passenger fares	427	429	461	95	117	137	112	100
7	Other transportation	219	280	297	65	72	80	80	72
8	Royalties and license fees ⁵	513	529	575	131	138	146	160	136
9	Other private services ⁵	1,139	1,396	1,423	358	344	341	379	379
10	U.S. Government miscellaneous services	5	8	13	9		2	2	2
11	Income receipts on U.S. assets abroad	4,165	5,492	5,229	1,116	1,272	1,413	1,428	1,276
12	Direct investment receipts	2,392	3,402	2,979	581	720	849	829	678
13	Other private receipts	1,773	2,090	2,250	535	552	564	599	598
14	U.S. Government receipts								
15	Imports of goods, services, and income	-5,264	-6,187	-6,820	-1,556	-1,468	-1,704	-2,092	-2,129
16	Goods, adjusted, excluding military ²	-3,203	-3,401	-3,869	-827	-882	-992	-1,168	-1,159
17	Services ³	-2,009	-2,245	-2,501	-700	-521	-565	-715	-758
18	Direct defense expenditures	-53	-68	-53	-15	-12	-9	-17	-15
19	Travel	-784	-831	-943	-315	-162	-183	-283	-325
20	Passenger fares	-422	-452	-503	-142	-108	-121	-132	-157
21	Other transportation	-243	-289	-326	-76	-81	-80	-89	-87
22	Royalties and license fees ⁵	-20	-19	-32	-6	-7	-8	-12	-9
23	Other private services ⁵	-444	-548	-599	-134	-141	-153	-171	-152
24	U.S. Government miscellaneous services	-43	-38	-45	-13	-10	-11	-11	-12
25	Income payments on foreign assets in the United States	-52	-540	-450	-29	-66	-147	-209	-213
26	Direct investment payments	268	-112	31	82	55	-15	-92	-108
27	Other private payments	-241	-319	-333	-72	-85	-94	-82	-86
28	U.S. Government payments	-79	-109	-148	-39	-36	-38	-35	-19
29	Unilateral transfers, net	-83	-85	-92	-27	-19	-25	-21	-23
30	U.S. Government grants ⁴								
31	U.S. Government pensions and other transfers	-32	-32	-34	-8	-8	-9	-9	-8
32	Private remittances and other transfers ⁶	-51	-53	-58	-19	-11	-16	-12	-15
33	U.S. assets abroad, net (increase/capital outflow (-))	-884	-5,063	-11,507	-3,585	129	-3,164	-4,887	-595
34	U.S. official reserve assets, net ⁷								
35	Gold								
36	Special drawing rights								
37	Reserve position in the International Monetary Fund								
38	Foreign currencies								
39	U.S. Government assets, other than official reserve assets, net	6	2	15	1		2	12	
40	U.S. credits and other long-term assets								
41	Repayments on U.S. credits and other long-term assets ⁸	2			1				
42	U.S. foreign currency holdings and U.S. short-term assets, net	4	2	15	1		2	12	
43	U.S. private assets, net	-890	-5,065	-11,522	-3,586	129	-3,166	-4,899	-595
44	Direct investment	-32	-6,450	-3,789	-1,364	-635	-1,162	-628	-605
45	Foreign securities	-2,339	-4	-4,470	-2,010	-240	566	-2,786	-1,092
46	U.S. claims on unaffiliated foreigners reported by U.S. nonbanking concerns	-273	-92	-222	90	-123	-141	-48	
47	U.S. claims reported by U.S. banks, not included elsewhere	1,754	1,481	-3,041	-302	1,127	-2,429	-1,437	1,102
48	Foreign assets in the United States, net (increase/capital inflow (+))	3,919	1,571	4,280	1,582	2,376	-1,269	1,592	-1,155
49	Foreign official assets in the United States, net	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)
50	U.S. Government securities	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)
51	U.S. Treasury securities ⁹	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)
52	Other ¹⁰	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)
53	Other U.S. Government liabilities ¹¹	-186	-28	-53	7	-36	-13	-9	23
54	U.S. liabilities reported by U.S. banks, not included elsewhere	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)
55	Other foreign official assets ¹²	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)
56	Other foreign assets in the United States, net	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)
57	Direct investment	1,101	504	2,129	1,617	-344	80	777	326
58	U.S. Treasury securities and U.S. currency flows	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)
59	U.S. securities other than U.S. Treasury securities	680	652	-614	-232	-388	212	-206	271
60	U.S. liabilities to unaffiliated foreigners reported by U.S. nonbanking concerns	166	266	427	154	155	-127	245	
61	U.S. liabilities reported by U.S. banks, not included elsewhere	18 2,178	18 177	18 2,391	18 36	18 2,991	18 -1,421	18 785	18 -1,775
62	Allocations of special drawing rights								
63	Statistical discrepancy, and transfers of funds between foreign areas, net (sum of above items with sign reversed)	-15,593	-10,758	-7,587	-1,563	-6,383	519	-160	-1,312
64	Memoranda:								
65	Balance on goods (lines 2 and 16)	6,379	7,094	7,836	2,158	2,028	1,903	1,747	1,664
66	Balance on services (lines 3 and 17)	2,150	2,289	2,291	348	663	769	511	358
67	Balance on goods and services (lines 64 and 65)	8,529	9,383	10,127	2,506	2,691	2,672	2,258	2,022
68	Balance on investment income (lines 11 and 25)	4,113	4,952	4,779	1,087	1,207	1,266	1,219	1,063
69	Balance on goods, services, and income (lines 1 and 15 or lines 66 and 67) ¹³	12,642	14,335	14,906	3,593	3,898	3,939	3,477	3,085
70	Unilateral transfers, net (line 29)	-83	-85	-92	-27	-19	-25	-21	-23
71	Balance on current account (lines 1, 15, and 29 or lines 68 and 69) ¹³	12,559	14,250	14,814	3,566	3,879	3,914	3,456	3,062

Table 10a.—U.S. International Transactions,

[Millions]

Line	(Credits +; debits -) ¹	Belgium-Luxembourg			France			Germany		
		1994	1995	1996 ^P	1994	1995	1996 ^P	1994	1995	1996 ^P
1	Exports of goods, services, and income	17,284	20,074	19,495	24,782	29,157	30,813	38,518	45,457	46,694
2	Goods, adjusted, excluding military ²	11,080	12,838	12,685	13,610	14,255	14,454	18,745	21,879	22,970
3	Services ³	2,568	2,830	2,890	6,630	8,051	8,831	11,637	13,213	14,227
4	Transfers under U.S. military agency sales contracts ⁴	50	110	89	116	44	63	192	250	389
5	Travel	442	486	539	1,639	2,063	2,255	3,577	4,212	4,573
6	Passenger fares	218	272	320	823	972	991	1,296	1,584	1,757
7	Other transportation	348	361	323	428	439	418	1,177	1,172	840
8	Royalties and license fees ⁵	676	744	723	1,587	1,991	2,257	2,337	2,748	2,653
9	Other private services ⁵	833	856	895	2,031	2,526	2,828	3,018	3,203	3,967
10	U.S. Government miscellaneous services	1	1	1	6	16	19	40	44	48
11	Income receipts on U.S. assets abroad	3,636	4,406	3,920	4,542	6,851	7,528	8,136	10,365	9,497
12	Direct investment receipts	2,676	3,103	2,634	1,296	2,728	3,322	3,107	4,783	4,286
13	Other private receipts	960	1,303	1,286	3,246	4,123	4,206	3,876	4,615	4,548
14	U.S. Government receipts .....	(*)	(*)	.....	(*)	(*)	(*)	1,153	967	663
15	Imports of goods, services, and income	-12,208	-13,703	-14,956	-25,362	-28,779	-31,356	-51,491	-57,139	-60,726
16	Goods, adjusted, excluding military ²	-8,464	-8,756	-9,499	-16,674	-17,175	-18,630	-31,678	-36,764	-38,831
17	Services ³	-1,395	-1,712	-1,795	-5,904	-6,466	-6,609	-12,157	-12,284	-12,935
18	Direct defense expenditures	-86	-118	-104	-47	-66	-51	-4,585	-4,082	-4,010
19	Travel	-295	-345	-312	-2,511	-2,801	-2,865	-2,458	-2,407	-2,455
20	Passenger fares	-98	-107	-132	-460	-539	-591	-763	-849	-949
21	Other transportation	-408	-439	-455	-675	-645	-713	-1,449	-1,519	-1,567
22	Royalties and license fees ⁵	-86	-114	-132	-250	-296	-351	-609	-652	-719
23	Other private services ⁵	-361	-517	-580	-1,775	-1,894	-1,789	-2,015	-2,468	-2,896
24	U.S. Government miscellaneous services	-61	-72	-80	-186	-225	-249	-278	-307	-339
25	Income payments on foreign assets in the United States	-2,349	-3,235	-3,662	-2,784	-5,138	-6,117	-7,656	-8,091	-8,960
26	Direct investment payments	-264	-517	-900	63	-1,722	-2,654	-2,256	-1,908	-2,097
27	Other private payments	-1,018	-1,360	-1,280	-2,345	-2,764	-2,825	-2,192	-2,677	-2,765
28	U.S. Government payments	-1,067	-1,358	-1,482	-502	-652	-638	-3,208	-3,506	-4,098
29	Unilateral transfers, net	-41	-49	-56	-155	-133	-142	1,190	1,425	1,325
30	U.S. Government grants ⁴ .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
31	U.S. Government pensions and other transfers	-17	-16	-17	-60	-61	-68	-281	-291	-288
32	Private remittances and other transfers	-24	-33	-39	-95	-72	-74	1,471	1,716	1,613
33	U.S. assets abroad, net (increase/capital outflow (-))	-5,321	-7,040	-1,721	-4,155	-10,506	-20,751	-3,664	-13,332	-21,156
34	U.S. official reserve assets, net ⁷ .....	.....	.....	.....	.....	.....	.....	3,198	2,648	-609
35	Gold .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
36	Special drawing rights .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
37	Reserve position in the International Monetary Fund .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
38	Foreign currencies .....	.....	.....	.....	.....	.....	.....	3,198	2,648	-609
39	U.S. Government assets, other than official reserve assets, net	5	6	-5	.....	-3	1	-7	-13	-44
40	U.S. credits and other long-term assets .....	.....	.....	.....	1	.....	.....	.....	.....	.....
41	Repayments on U.S. credits and other long-term assets ⁸ .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
42	U.S. foreign currency holdings and U.S. short-term assets, net	5	6	-5	-1	-3	1	-7	-13	-44
43	U.S. private assets, net	-5,326	-7,046	-1,716	-4,155	-10,503	-20,752	-6,855	-15,967	-20,503
44	Direct investment	-2,397	-2,080	-1,190	-2,586	-5,726	-5,221	-2,217	-4,373	-955
45	Foreign securities	-1,392	-1,952	1,577	-595	-420	-5,379	-1,248	-898	-7,805
46	U.S. claims on unaffiliated foreigners reported by U.S. nonbanking concerns	-130	-1,241	-2,963	241	-1,672	-48	-952	-8,982	-7,498
47	U.S. claims reported by U.S. banks, not included elsewhere	-1,407	-1,773	860	-1,215	-2,685	-10,104	-2,438	-1,714	-4,245
48	Foreign assets in the United States, net (increase/capital inflow (+))	-4,883	8,147	8,648	6,864	811	9,616	15,320	26,381	39,485
49	Foreign official assets in the United States, net	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(14)
50	U.S. Government securities	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(14)
51	U.S. Treasury securities ⁹	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(14)
52	Other ¹⁰	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(14)
53	Other U.S. Government liabilities ¹¹	27	-23	8	-26	46	78	-24	-39	-201
54	U.S. liabilities reported by U.S. banks, not included elsewhere	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(14)
55	Other foreign official assets ¹²	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(14)
56	Other foreign assets in the United States, net	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(14)
57	Direct investment	1,452	3,282	4,675	3,881	4,500	10,928	7,144	10,229	16,283
58	U.S. Treasury securities and U.S. currency flows	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(14)
59	U.S. securities other than U.S. Treasury securities	-2,876	-501	2,765	-156	-20	2,745	2,735	4,095	6,470
60	U.S. liabilities to unaffiliated foreigners reported by U.S. nonbanking concerns	311	-36	400	-449	-594	631	810	220	30
61	U.S. liabilities reported by U.S. banks, not included elsewhere	14-3,797	14-5,425	14-800	14-3,614	14-3,121	14-4,766	14-4,655	14-11,876	14-16,903
62	Allocations of special drawing rights .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
63	Statistical discrepancy, and transfers of funds between foreign areas, net (sum of above item with sign reversed)	5,169	-7,429	-11,410	-1,974	9,450	11,820	127	-2,792	-5,622
64	Memoranda:	.....	.....	.....	.....	.....	.....	.....	.....	.....
65	Balance on goods (lines 2 and 16)	2,616	4,082	3,186	-3,064	-2,920	-4,176	-12,933	-14,885	-15,861
66	Balance on services (lines 3 and 17)	1,173	1,118	1,095	726	1,585	2,222	-520	929	1,292
67	Balance on goods and services (lines 64 and 65)	3,789	5,200	4,281	-2,338	-1,335	-1,954	-13,453	-13,956	-14,569
68	Balance on investment income (lines 11 and 25)	1,287	1,171	258	1,758	1,713	1,411	480	2,274	537
69	Balance on goods, services, and income (lines 1 and 15 or lines 66 and 67) ¹³	5,076	6,371	4,539	-580	378	-543	-12,973	-11,682	-14,032
70	Unilateral transfers, net (line 29)	-41	-49	-56	-155	-133	-142	1,190	1,425	1,325
71	Balance on current account (lines 1, 15, and 29 or lines 68 and 69) ¹³	5,035	6,322	4,483	-735	245	-685	-11,783	-10,257	-12,707

See footnotes on page 85.

BEA CURRENT AND HISTORICAL DATA

National, International, and Regional Estimates

This section presents an extensive selection of economic statistics prepared by the Bureau of Economic Analysis and a much briefer selection of collateral statistics prepared by other Government agencies and private organizations. 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.

BEA's data are available at three web sites: The Federal Statistical Briefing Room (FSBR) on the White House web site (<http://www.whitehouse.gov/fsbr>) provides summary statistics for GDP and other major aggregates on its output, income, and international statistics pages; BEA's web site (<http://www.bea.doc.gov>) provides summary tables and charts on BEA's national, international, and regional data; and the Commerce Department's STAT-USA (<http://www.stat-usa.gov>) provides detailed BEA databases and news releases by subscription. Information about STAT-USA's Economic Bulletin Board (EBB) and Internet services may be obtained at the web site or by calling (202) 482-1986 (voice).

The tables listed below present annual, quarterly, and monthly estimates, indicated as follows: [A] Annual estimates only; [Q] quarterly estimates only; [QA] quarterly and annual estimates; [MA] monthly and annual estimates.

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* These sections are not included in this issue because of the annual revision of the international transactions accounts (see the note on page D-57).

National Data

A. Selected NIPA Tables

The tables in this section include the most recent estimates of gross domestic product and its components; these estimates were released on June 27, 1997 and include the "final" estimates for the first quarter of 1997.

The selected set of NIPA tables shown in this section presents quarterly estimates, which are updated monthly. In most tables, the annual estimates are also shown. For a guide to which issues of the SURVEY OF CURRENT BUSINESS contain the "annual only" NIPA tables, see the headnote to "Revised and Newly Available NIPA Estimates, 1991-95" in the May SURVEY.

The selected NIPA tables are available electronically on the day of the gross domestic product (GDP) news release by subscription from STAT-USA's Economic Bulletin Board and Internet services; for information, call (202) 482-1986. The tables are also available on printouts or diskettes; for subscription information, write to the National Income and Wealth Division (BE-54), Bureau of Economic Analysis, Washington, DC 20230 or call (202) 606-9700.

NOTE.—The 1997 annual revision of the NIPA's will be presented in the August SURVEY; see the box on page 4 for more information.

1. National Product and Income

Table 1.1.—Gross Domestic Product

[Billions of dollars]

	1995	1996	Seasonally adjusted at annual rates					
			1995	1996				1997
			IV	I	II	III	IV	I
Gross domestic product	7,253.8	7,576.1	7,350.6	7,426.8	7,545.1	7,616.3	7,716.1	7,871.0
Personal consumption expenditures	4,924.9	5,151.4	4,990.5	5,060.5	5,139.4	5,165.4	5,240.3	5,336.0
Durable goods	606.4	632.1	612.8	625.2	637.6	630.5	635.2	658.9
Nondurable goods	1,485.9	1,545.1	1,494.2	1,522.1	1,544.7	1,546.5	1,566.8	1,593.7
Services	2,832.6	2,974.3	2,883.5	2,913.2	2,957.1	2,988.5	3,038.3	3,083.4
Gross private domestic investment	1,065.3	1,117.0	1,064.0	1,068.9	1,096.0	1,156.2	1,146.6	1,204.3
Fixed investment	1,028.2	1,101.5	1,046.2	1,070.7	1,088.0	1,119.6	1,127.8	1,149.8
Nonresidential	738.5	791.1	749.7	769.0	773.8	807.0	814.5	830.8
Structures	199.7	214.3	204.0	208.4	207.4	213.5	227.8	232.5
Producers' durable equipment	538.8	576.8	545.7	560.6	566.3	593.5	586.7	598.3
Residential	289.8	310.5	296.5	301.7	314.2	312.6	313.3	319.0
Change in business inventories	37.0	15.4	17.8	-1.7	8.0	36.6	18.8	54.5
Net exports of goods and services	-94.7	-98.7	-67.2	-86.3	-99.2	-120.2	-89.1	-99.5
Exports	807.4	855.2	837.0	839.5	850.0	844.3	887.0	904.5
Goods	581.4	614.9	604.5	603.6	610.4	605.4	640.2	655.9
Services	225.9	240.3	232.5	235.9	239.7	239.0	246.8	248.6
Imports	902.0	953.9	904.2	925.8	949.2	964.5	976.0	1,004.0
Goods	757.0	802.2	759.0	776.7	798.2	812.1	821.6	842.9
Services	145.1	151.7	145.2	149.2	151.0	152.5	154.4	161.1
Government consumption expenditures and gross investment	1,358.3	1,406.4	1,363.4	1,383.7	1,408.8	1,414.8	1,418.3	1,430.3
Federal	516.6	523.1	507.7	518.6	529.6	525.5	518.5	520.4
National defense	345.5	347.1	337.1	343.9	353.7	348.8	341.9	336.5
Nondefense	171.0	176.0	170.6	174.7	175.8	176.7	176.7	183.9
State and local	841.7	883.3	855.7	865.1	879.2	889.3	899.8	909.9

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

Table 1.2.—Real Gross Domestic Product

[Billions of chained (1992) dollars]

	1995	1996	Seasonally adjusted at annual rates					
			1995	1996				1997
			IV	I	II	III	IV	I
Gross domestic product	6,742.2	6,906.8	6,780.2	6,813.8	6,892.1	6,928.1	6,993.3	7,094.4
Personal consumption expenditures	4,577.8	4,690.7	4,609.4	4,649.1	4,687.6	4,693.5	4,732.5	4,798.0
Durable goods	579.8	611.4	587.5	599.2	615.6	611.6	619.1	646.4
Nondurable goods	1,421.9	1,442.0	1,423.2	1,436.1	1,440.9	1,442.2	1,448.6	1,464.9
Services	2,577.0	2,638.3	2,599.3	2,614.7	2,632.3	2,640.6	2,665.6	2,688.2
Gross private domestic investment	1,009.4	1,056.6	1,004.3	1,011.4	1,038.1	1,093.1	1,083.9	1,141.0
Fixed investment	975.9	1,042.1	988.5	1,013.3	1,031.1	1,057.5	1,066.6	1,091.9
Nonresidential	714.3	766.8	723.3	743.5	750.5	781.4	792.0	813.0
Structures	181.1	190.0	183.2	186.6	184.9	188.6	199.8	203.0
Producers' durable equipment	534.5	578.6	541.4	558.3	567.5	595.0	593.7	611.7
Residential	262.8	276.7	266.3	271.1	281.5	277.8	276.6	281.1
Change in business inventories	32.7	13.6	13.7	-3.5	6.7	34.1	17.1	48.6
Net exports of goods and services	-107.6	-113.6	-84.9	-104.0	-114.7	-137.4	-98.4	-120.7
Exports	775.4	825.9	803.1	806.7	817.9	816.1	862.9	885.3
Goods	565.9	608.8	588.8	590.9	600.6	601.1	642.6	664.6
Services	210.4	218.2	215.3	216.7	218.3	216.1	221.7	222.4
Imports	883.0	939.5	888.0	910.7	932.6	953.5	961.3	1,006.0
Goods	744.7	796.3	750.0	768.4	789.9	810.0	817.0	853.4
Services	138.8	143.8	138.5	142.8	143.2	144.1	145.0	153.2
Government consumption expenditures and gross investment	1,260.2	1,270.6	1,249.6	1,254.7	1,278.2	1,276.1	1,273.4	1,273.8
Federal	472.3	467.1	456.2	462.9	473.4	469.3	462.9	459.2
National defense	319.6	313.9	308.8	311.9	319.4	314.9	309.4	301.2
Nondefense	152.3	152.8	147.0	150.6	153.7	153.9	153.1	157.2
State and local	788.6	804.3	794.4	792.6	805.5	807.7	811.4	815.7
Residual	-9	-1.7	-2	-2	-1.7	-1.4	-3.4	-4.0

NOTE.—Chained (1992) dollar series are calculated as the product of the chain-type quantity index and the 1992 current-dollar value of the corresponding series, divided by 100. Because the formula for the chain-type quantity indexes uses weights of more than one period, the corresponding chained-dollar estimates are usually not additive. The residual line is the difference between the first line and the sum of the most detailed lines.

Percent changes from preceding period for selected items in this table are shown in table 8.1; contributions to the percent change in real gross domestic product are shown in table 8.2.

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

[Billions of dollars]

	1995	1996	Seasonally adjusted at annual rates					
			1995	1996				1997
			IV	I	II	III	IV	I
Gross domestic product	7,253.8	7,576.1	7,350.6	7,426.8	7,545.1	7,616.3	7,716.1	7,871.0
Plus: Receipts of factor income from the rest of the world	208.3	228.4	213.4	220.4	223.9	226.4	242.9	242.3
Less: Payments of factor income to the rest of the world	215.3	237.3	219.7	220.6	231.4	243.8	253.5	270.3
Equals: Gross national product	7,246.7	7,567.1	7,344.3	7,426.6	7,537.5	7,598.9	7,705.6	7,843.0
Less: Consumption of fixed capital	811.1	845.5	833.1	831.4	839.8	851.0	859.8	868.4
Private	664.4	696.4	685.0	683.1	691.2	701.6	709.8	717.1
Capital consumption allowances	660.9	699.1	676.9	683.6	693.8	704.3	714.8	725.3
Less: Capital consumption adjustment	-3.5	2.7	-8.1	.5	2.6	2.7	5.0	8.2
Government	146.7	149.1	148.2	148.4	148.6	149.4	150.0	151.3
General government	125.3	126.8	126.4	126.4	126.4	126.9	127.2	128.3
Government enterprises	21.3	22.4	21.8	22.0	22.2	22.5	22.8	23.0
Equals: Net national product	6,435.7	6,721.6	6,511.1	6,595.2	6,697.7	6,747.9	6,845.7	6,974.6
Less: Indirect business tax and nontax liability	595.5	617.9	604.1	604.1	608.7	614.6	644.0	628.6
Business transfer payments	30.8	32.2	31.2	31.5	32.4	32.2	32.6	32.6
Statistical discrepancy	-1.5	-75.1	-47.0	-50.6	-58.1	-98.7	-93.2	-95.4
Plus: Subsidies less current surplus of government enterprises	18.2	17.5	16.8	17.3	17.6	16.8	18.3	17.7
Equals: National income	5,828.9	6,164.2	5,939.7	6,027.5	6,132.2	6,216.6	6,280.6	6,426.5
Less: Corporate profits with inventory valuation and capital consumption adjustments	604.8	670.2	628.3	661.2	672.1	677.3	670.1	712.5
Net interest	403.6	403.3	401.9	399.5	402.3	405.6	405.7	412.0
Contributions for social insurance	660.0	689.7	668.6	676.0	686.2	694.4	702.2	717.6
Wage accruals less disbursements	2.7	0	.9	1.9	0	0	-1.9	1.9
Plus: Personal interest income	717.1	738.2	727.2	726.1	733.1	742.9	750.5	755.6
Personal dividend income	214.8	230.6	221.7	226.6	229.3	231.5	234.8	240.0
Government transfer payments to persons	1,000.0	1,056.7	1,018.7	1,040.1	1,052.6	1,062.1	1,071.9	1,096.7
Business transfer payments to persons	22.6	23.0	22.7	22.9	23.0	23.1	23.2	23.3
Equals: Personal income	6,112.4	6,449.5	6,230.2	6,304.5	6,409.6	6,498.9	6,584.9	6,698.1
Addenda:								
Gross domestic income	7,255.2	7,651.2	7,397.6	7,477.4	7,603.2	7,715.0	7,809.3	7,966.5
Gross national income	7,248.2	7,642.3	7,391.3	7,477.2	7,595.6	7,697.6	7,798.7	7,938.5
Net domestic product	6,442.7	6,730.6	6,517.5	6,595.4	6,705.3	6,765.3	6,856.3	7,002.6

Table 1.10.—Relation of Real Gross Domestic Product, Real Gross National Product, and Real Net National Product

[Billions of chained (1992) dollars]

	1995	1996	Seasonally adjusted at annual rates					
			1995	1996				1997
			IV	I	II	III	IV	I
Gross domestic product	6,742.2	6,906.8	6,780.2	6,813.8	6,892.1	6,928.1	6,993.3	7,094.4
Plus: Receipts of factor income from the rest of the world	194.2	209.2	197.6	203.2	205.4	207.0	221.0	219.7
Less: Payments of factor income to the rest of the world	199.7	215.9	202.4	202.3	211.1	221.4	229.0	243.2
Equals: Gross national product	6,736.4	6,899.7	6,775.0	6,814.4	6,886.1	6,913.3	6,985.0	7,070.4
Less: Consumption of fixed capital	757.0	783.7	772.9	772.2	779.5	787.5	795.8	805.9
Private	623.4	648.9	638.7	637.6	645.0	652.7	660.5	670.1
Government	133.6	134.7	134.1	134.5	134.3	134.7	135.1	135.6
General government	113.9	114.3	114.1	114.4	114.1	114.3	114.6	114.9
Government enterprises	19.7	20.3	20.0	20.1	20.3	20.4	20.6	20.7
Equals: Net national product	5,979.4	6,115.2	6,001.3	6,041.5	6,106.0	6,125.0	6,188.3	6,263.6
Addenda:								
Gross domestic income ¹	6,743.4	6,975.3	6,823.5	6,860.2	6,945.2	7,017.9	7,077.8	7,180.4
Gross national income ²	6,737.6	6,968.1	6,818.4	6,860.8	6,939.1	7,003.2	7,069.4	7,156.5
Net domestic product	5,985.1	6,122.3	6,006.4	6,040.9	6,112.0	6,139.7	6,196.7	6,287.7

1. Gross domestic income deflated by the implicit price deflator for gross domestic product.
2. Gross national income deflated by the implicit price deflator for gross national product.
NOTE.—Except as noted in footnotes 1 and 2, chained (1992) dollar series are calculated as the product of the chain-type quantity index and the 1992 current-dollar value of the corresponding series, divided by 100. Because the formula for the chain-type quantity indexes uses weights of more than one period, the corresponding chained-dollar estimates are usually not additive.

Table 1.11.—Command-Basis Real Gross National Product

[Billions of chained (1992) dollars]

Gross national product	6,736.4	6,899.7	6,775.0	6,814.4	6,886.1	6,913.3	6,985.0	7,070.4
Less: Exports of goods and services and receipts of factor income from the rest of the world	970.4	1,036.0	1,001.4	1,010.8	1,024.1	1,024.0	1,085.0	1,105.8
Plus: Command-basis exports of goods and services and receipts of factor income ¹	985.9	1,053.0	1,020.9	1,030.6	1,042.1	1,043.1	1,096.2	1,126.8
Equals: Command-basis gross national product	6,751.8	6,916.7	6,794.5	6,834.2	6,904.0	6,932.5	6,996.2	7,091.4
Addendum:								
Terms of trade ²	101.6	101.6	101.9	102.0	101.8	101.9	101.0	101.9

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.—Chained (1992) dollar series are calculated as the product of the chain-type quantity index and the 1992 current-dollar value of the corresponding series, divided by 100. Because the formula for the chain-type quantity indexes uses weights of more than one period, the corresponding chained-dollar estimates are usually not additive. Percent changes from preceding period for selected items in this table are shown in table 8.1.

3. Government Receipts, Current Expenditures, and Gross Investment

Table 3.1.—Government Receipts and Current Expenditures

[Billions of dollars]

	1995	1996	Seasonally adjusted at annual rates					
			1995	1996				1997
			IV	I	II	III	IV	I
Receipts	2,268.4	2,404.4	2,298.6	2,338.5	2,402.0	2,414.9	2,462.3	2,511.0
Personal tax and nontax receipts	794.3	863.8	807.2	824.9	870.6	872.5	887.2	918.6
Corporate profits tax accruals	218.7	233.0	218.7	233.4	236.4	233.4	228.9	246.2
Indirect business tax and nontax accruals	595.5	617.9	604.1	604.1	608.7	614.6	644.0	628.6
Contributions for social insurance	660.0	689.7	668.6	676.0	686.2	694.4	702.2	717.6
Current expenditures	2,335.1	2,438.5	2,365.0	2,402.7	2,427.6	2,446.5	2,477.3	2,498.0
Consumption expenditures	1,136.4	1,173.1	1,143.3	1,154.9	1,173.7	1,180.6	1,183.0	1,195.7
Transfer payments (net)	1,011.5	1,073.1	1,030.3	1,059.1	1,064.5	1,073.8	1,095.1	1,107.1
To persons	1,000.0	1,056.7	1,018.7	1,040.1	1,052.6	1,062.1	1,071.9	1,096.7
To the rest of the world (net)	11.5	16.4	11.6	19.0	11.8	11.7	23.3	10.5
Net interest paid	181.7	188.5	187.5	184.8	185.6	189.1	194.7	191.6
Interest paid	318.0	321.8	322.8	319.8	319.7	322.3	325.5	321.3
To persons and business	256.7	250.5	258.1	255.2	252.3	248.3	246.1	236.8
To the rest of the world	61.3	71.3	64.7	64.7	67.3	74.0	79.4	84.6
Less: Interest received by government	136.3	133.3	135.3	135.0	134.0	133.2	130.9	129.7
Less: Dividends received by government	12.6	13.7	13.0	13.3	13.7	13.7	13.9	14.2
Subsidies less current surplus of government enterprises	18.2	17.5	16.8	17.3	17.6	16.8	18.3	17.7
Subsidies	33.4	32.1	31.7	31.7	31.8	32.0	32.8	32.9
Less: Current surplus of government enterprises	15.3	14.6	14.8	14.4	14.2	15.2	14.4	15.3
Less: Wage accruals less disbursements	0	0	0	0	0	0	0	0
Current surplus or deficit (-), national income and product accounts	-66.7	-34.1	-66.4	-64.3	-25.7	-31.6	-15.0	13.0
Social insurance funds	117.7	112.8	118.3	109.9	111.7	114.5	115.2	113.5
Other	-184.4	-146.9	-184.7	-174.1	-137.4	-146.1	-130.2	-100.5

Table 3.2.—Federal Government Receipts and Current Expenditures

[Billions of dollars]

	1995	1996	Seasonally adjusted at annual rates					
			1995	1996				1997
			IV	I	II	III	IV	I
Receipts	1,478.4	1,575.0	1,494.7	1,523.1	1,575.6	1,581.9	1,619.3	1,653.6
Personal tax and nontax receipts	614.9	673.1	623.3	639.6	681.4	680.2	691.1	718.8
Income taxes	598.1	653.7	605.5	622.2	661.3	659.6	671.5	698.3
Estate and gift taxes	14.8	17.3	15.7	15.2	18.0	18.5	17.4	18.4
Nontaxes	2.0	2.2	2.2	2.2	2.2	2.2	2.2	2.1
Corporate profits tax accruals	184.3	196.2	184.3	196.4	199.0	196.5	192.8	207.3
Federal Reserve banks	23.1	22.9	22.9	22.7	23.0	22.8	23.2	24.0
Other	161.1	173.2	161.3	173.7	176.0	173.7	169.6	183.4
Indirect business tax and nontax accruals	91.2	90.5	91.3	84.4	83.2	85.7	108.7	86.2
Excise taxes	56.5	52.2	57.7	51.1	50.2	51.4	56.0	53.0
Customs duties	19.5	20.3	19.6	20.1	19.4	20.7	20.9	20.5
Nontaxes	15.2	18.1	13.9	13.3	13.5	13.6	31.8	12.6
Contributions for social insurance	588.0	615.2	595.9	602.6	612.0	619.4	626.7	641.3
Current expenditures	1,640.1	1,702.1	1,649.3	1,678.3	1,702.3	1,702.6	1,725.2	1,735.9
Consumption expenditures	453.8	459.0	451.4	453.6	463.5	461.3	457.7	462.8
Transfer payments (net)	719.9	764.2	730.9	756.2	757.9	762.9	779.8	786.8
To persons	708.4	747.7	719.3	737.2	746.0	751.2	756.6	776.4
To the rest of the world (net)	11.5	16.4	11.6	19.0	11.8	11.7	23.3	10.5
Grants-in-aid to State and local governments	206.1	214.6	203.3	207.6	219.3	214.5	216.8	219.4
Net interest paid	229.1	233.4	233.9	230.5	230.8	233.7	238.8	235.3
Interest paid	254.0	258.0	258.9	255.9	255.8	258.5	261.8	257.6
To persons and business	192.7	186.7	194.2	191.3	188.5	184.5	182.4	173.1
To the rest of the world	61.3	71.3	64.7	64.7	67.3	74.0	79.4	84.6
Less: Interest received by government	24.9	24.6	25.0	25.4	25.0	24.8	23.0	22.3
Subsidies less current surplus of government enterprises	31.3	30.9	29.9	30.4	30.8	30.3	32.0	31.6
Subsidies	33.1	31.7	31.3	31.3	31.4	31.7	32.4	32.6
Less: Current surplus of government enterprises	1.8	.8	1.4	.9	.6	1.4	.4	1.0
Less: Wage accruals less disbursements	0	0	0	0	0	0	0	0
Current surplus or deficit (-), national income and product accounts	-161.7	-127.1	-154.5	-155.2	-126.7	-120.8	-105.9	-82.3
Social insurance funds	59.5	57.2	60.7	53.0	55.2	59.1	61.2	60.7
Other	-221.2	-184.3	-215.2	-208.3	-181.9	-179.9	-167.1	-143.0

Table 3.3.—State and Local Government Receipts and Current Expenditures

[Billions of dollars]

	1995	1996	Seasonally adjusted at annual rates					
			1995	1996				1997
			IV	I	II	III	IV	I
Receipts	996.1	1,044.0	1,007.1	1,023.0	1,045.7	1,047.6	1,059.8	1,076.8
Personal tax and nontax receipts	179.4	190.8	183.8	185.3	189.2	192.3	196.2	199.8
Income taxes	133.5	142.9	137.3	138.1	141.7	144.2	147.3	150.4
Nontaxes	23.9	24.7	24.1	24.4	24.5	24.8	25.2	25.4
Other	22.0	23.2	22.4	22.8	23.0	23.3	23.7	24.0
Corporate profits tax accruals	34.4	36.8	34.4	36.9	37.4	36.9	36.1	38.9
Indirect business tax and nontax accruals	504.3	527.3	512.8	519.7	525.5	528.9	535.2	542.4
Sales taxes	238.3	249.3	241.8	245.9	248.8	249.5	252.9	257.6
Property taxes	216.3	225.5	220.2	222.2	224.6	226.5	228.8	230.6
Other	49.7	52.5	50.8	51.6	52.2	52.9	53.6	54.1
Contributions for social insurance	71.9	74.5	72.8	73.4	74.2	74.9	75.5	76.3
Federal grants-in-aid	206.1	214.6	203.3	207.6	219.3	214.5	216.8	219.4
Current expenditures	901.1	951.0	919.0	932.0	944.7	958.4	968.9	981.5
Consumption expenditures	682.6	714.0	691.9	701.3	710.2	719.3	725.3	732.9
Transfer payments to persons ...	291.6	308.9	299.4	302.9	306.6	310.9	315.3	320.3
Net interest paid	-47.4	-44.9	-46.4	-45.7	-45.1	-44.6	-44.1	-43.7
Interest paid	64.0	63.8	63.9	63.9	63.8	63.8	63.7	63.7
Less: Interest received by government	111.4	108.7	110.3	109.6	109.0	108.4	107.9	107.4
Less: Dividends received by government	12.6	13.7	13.0	13.3	13.7	13.7	13.9	14.2
Subsidies less current surplus of government enterprises	-13.1	-13.4	-13.0	-13.1	-13.3	-13.4	-13.7	-13.9
Subsidies .....	.4	.4	.4	.4	.4	.4	.4	.4
Less: Current surplus of government enterprises	13.5	13.7	13.4	13.5	13.6	13.8	14.1	14.3
Less: Wage accruals less disbursements	0	0	0	0	0	0	0	0
Current surplus or deficit (-), national income and product accounts	95.0	93.0	88.1	91.0	101.0	89.2	90.9	95.3
Social insurance funds	58.2	55.6	57.6	56.8	56.4	55.3	54.0	52.9
Other	36.8	37.4	30.5	34.1	44.6	33.8	36.9	42.5

Table 3.10.—National Defense Consumption Expenditures and Gross Investment

[Billions of dollars]

	1995	1996	Seasonally adjusted at annual rates					
			1995		1996			1997
			IV	I	II	III	IV	I
National defense consumption expenditures and gross investment¹	345.5	347.1	337.1	343.9	353.7	348.8	341.9	336.5
Consumption expenditures	302.3	303.9	300.1	298.7	307.4	304.7	304.7	302.5
Durable goods²	20.8	20.7	18.9	19.1	22.1	22.9	18.8	19.8
Aircraft	8.6	8.9	8.0	8.0	9.5	9.8	8.3	9.0
Missiles	3.2	3.1	2.8	2.9	3.2	3.6	2.7	2.7
Ships	1.2	.8	.8	.7	.9	1.3	.5	1.0
Vehicles	1.1	.9	.8	1.0	1.0	1.0	.8	.8
Electronics	2.5	2.6	2.2	2.3	2.9	2.9	2.3	2.5
Other durable goods	4.4	4.3	4.1	4.2	4.7	4.3	4.1	3.8
Nondurable goods	6.2	7.9	5.7	7.7	8.3	8.5	7.2	7.6
Petroleum products	2.7	3.4	2.4	3.2	3.5	4.1	3.0	3.1
Ammunition	1.2	1.1	.9	1.2	1.5	1.1	.7	1.5
Other nondurable goods	2.4	3.4	2.4	3.3	3.4	3.3	3.6	3.0
Services	275.2	275.2	275.5	271.9	276.9	273.4	278.7	275.1
Compensation of general government employees, except force-account construction ³	130.6	129.4	129.2	130.8	129.9	129.3	127.9	130.1
Military	80.1	78.4	78.3	79.1	78.4	78.1	77.8	79.3
Civilian	50.5	51.1	51.0	51.7	51.5	51.1	50.1	50.8
Consumption of general government fixed capital ⁴	60.5	58.9	60.3	59.6	59.1	58.7	58.2	58.4
Other services	84.1	86.9	86.0	81.5	87.9	85.4	92.7	86.6
Research and development	22.9	26.9	25.6	25.9	28.1	26.4	27.0	25.3
Installation support	26.8	25.9	26.3	24.2	26.4	25.5	27.5	26.4
Weapons support	8.4	7.7	7.9	7.3	7.7	7.3	8.4	7.6
Personnel support	19.4	19.4	19.3	18.0	19.0	19.1	21.5	20.4
Transportation of material	4.2	4.8	4.6	4.9	5.0	4.7	4.8	4.5
Travel of persons	5.3	4.6	5.0	4.2	4.9	4.7	4.8	4.4
Other	-2.7	-2.4	-2.7	-3.0	-3.1	-2.3	-1.4	-2.0
Gross investment	43.3	43.2	37.0	45.2	46.3	44.1	37.2	34.1
Structures	5.3	5.0	5.3	5.0	5.1	5.1	4.9	4.6
Equipment	37.9	38.1	31.7	40.1	41.2	39.0	32.2	29.5
Aircraft	8.2	10.2	4.9	12.7	12.4	11.2	4.5	4.1
Missiles	4.8	3.8	3.6	4.0	3.8	3.9	3.6	3.3
Ships	8.0	6.8	7.2	7.0	7.2	6.5	6.3	5.8
Vehicles .....	.9	.8	.8	.9	.9	.8	.6	.9
Electronics	3.5	3.7	3.3	3.1	3.8	4.3	3.7	3.6
Other equipment	12.5	12.9	12.1	12.5	13.1	12.4	13.5	11.7
Addendum:								
Compensation of general government employees ³	130.6	129.5	129.2	130.8	129.9	129.3	127.9	130.1

1. Gross government investment consists of general government and government enterprise expenditures for fixed assets; inventory investment is included in government consumption expenditures.

2. Consumption expenditures for durable goods excludes expenditures classified as investment, except for goods transferred to foreign countries.

3. Compensation of government employees engaged in new force-account construction and related expenditures for goods and services are classified as investment in structures. The compensation of all general government employees is shown in the addendum.

4. Consumption of fixed capital, or depreciation, is included in government consumption expenditures as a partial measure of the value of the services of general government fixed assets; use of depreciation assumes a zero net return on these assets.

Table 3.11.—Real National Defense Consumption Expenditures and Real Gross Investment

[Billions of chained (1992) dollars]

	1995	1996	Seasonally adjusted at annual rates					
			1995		1996			1997
			IV	I	II	III	IV	I
National defense consumption expenditures and gross investment¹	319.6	313.9	308.8	311.9	319.4	314.9	309.4	301.2
Consumption expenditures	280.1	275.7	275.1	271.6	279.6	276.5	275.3	270.1
Durable goods²	20.5	20.2	18.6	18.7	21.5	22.3	18.4	19.3
Aircraft	8.3	8.6	7.8	7.7	9.1	9.5	8.0	8.7
Missiles	3.4	3.3	3.2	3.1	3.5	3.9	2.9	2.8
Ships	1.1	.8	.8	.6	.8	1.2	.5	.9
Vehicles	1.0	.9	.8	1.0	.9	.9	.7	.7
Electronics	2.5	2.7	2.2	2.3	2.9	3.0	2.4	2.6
Other durable goods	4.2	4.0	3.9	3.9	4.3	3.9	3.8	3.5
Nondurable goods	6.2	7.3	5.5	7.3	7.7	7.7	6.4	6.8
Petroleum products	3.0	3.1	2.5	3.2	3.3	3.7	2.4	2.6
Ammunition	1.1	1.0	.8	1.1	1.2	1.0	.6	1.3
Other nondurable goods	2.2	3.2	2.2	3.1	3.3	3.2	3.4	2.8
Services	253.1	248.0	250.5	245.4	250.2	246.4	250.2	243.8
Compensation of general government employees, except force-account construction ³	120.9	115.7	117.5	116.6	116.5	115.8	113.9	113.0
Military	78.3	75.4	76.8	76.1	75.4	75.2	74.6	74.1
Civilian	42.6	40.4	40.8	40.5	41.1	40.6	39.4	39.0
Consumption of general government fixed capital ⁴	52.2	51.0	51.8	51.6	51.0	50.8	50.7	50.6
Other services	79.9	81.4	81.2	77.1	82.8	79.8	85.8	80.3
Research and development	22.5	26.6	25.3	25.6	27.9	26.2	26.8	25.1
Installation support	24.6	23.5	24.0	22.2	24.1	23.1	24.7	23.9
Weapons support	7.9	7.0	7.4	6.8	7.1	6.6	7.6	6.7
Personnel support	18.1	17.4	17.8	16.6	17.2	17.0	18.8	17.9
Transportation of material	4.2	4.8	4.6	4.9	5.0	4.7	4.8	4.5
Travel of persons	5.0	4.3	4.7	3.9	4.5	4.4	4.3	3.8
Other	-2.5	-2.1	-2.5	-2.7	-2.7	-2.0	-1.2	-1.6
Gross investment	39.6	38.2	33.8	40.3	39.9	38.5	34.2	31.3
Structures	4.6	4.2	4.5	4.3	4.3	4.2	4.1	3.8
Equipment	35.0	34.0	29.2	36.0	35.6	34.3	30.1	27.4
Aircraft	6.6	7.2	4.0	9.4	8.0	7.4	3.9	3.4
Missiles	4.8	4.0	3.5	4.1	4.0	4.2	3.8	3.3
Ships	7.1	6.0	6.3	6.2	6.4	5.8	5.6	5.2
Vehicles .....	.8	.7	.7	.8	.7	.7	.6	.8
Electronics	3.9	4.4	3.7	3.5	4.4	5.2	4.6	4.7
Other equipment	11.9	11.8	11.4	11.6	12.0	11.2	12.3	10.6
Residual .....	.2	-.3	-.2	.5	-.3	-.7	-.7	-.5
Addendum:								
Compensation of general government employees ³	120.9	115.7	117.5	116.6	116.5	115.8	113.9	113.0

NOTE.—Chained (1992) dollar series are calculated as the product of the chain-type quantity index and the 1992 current-dollar value of the corresponding series, divided by 100. Because the formula for the chain-type quantity indexes uses weights of more than one period, the corresponding chained-dollar estimates are usually not additive. The residual line is the difference between the first line and the sum of the most detailed lines, excluding the line in the addendum.

See footnotes to table 3.10.

4. Foreign Transactions

Table 4.1.—Foreign Transactions in the National Income and Product Accounts

[Billions of dollars]

	1995	1996	Seasonally adjusted at annual rates						
			1995		1996				1997
			IV	I	II	III	IV	I	
Receipts from the rest of the world	1,015.6	1,083.6	1,050.3	1,059.9	1,073.9	1,070.7	1,129.8	1,146.8	
Exports of goods and services ...	807.4	855.2	837.0	839.5	850.0	844.3	887.0	904.5	
Goods ¹	581.4	614.9	604.5	603.6	610.4	605.4	640.2	655.9	
Durable	393.0	419.5	409.8	408.3	417.3	413.6	438.9	455.9	
Nondurable	188.5	195.4	194.7	195.3	193.1	191.8	201.3	200.0	
Services ¹	225.9	240.3	232.5	235.9	239.7	239.0	246.8	248.6	
Receipts of factor income	208.3	228.4	213.4	220.4	223.9	226.4	242.9	242.3	
Capital grants received by the United States (net)	0	0	0	0	0	0	0	0	
Payments to the rest of the world	1,015.6	1,083.6	1,050.3	1,059.9	1,073.9	1,070.7	1,129.8	1,146.8	
Imports of goods and services ...	902.0	953.9	904.2	925.8	949.2	964.5	976.0	1,004.0	
Goods ¹	757.0	802.2	759.0	776.7	798.2	812.1	821.6	842.9	
Durable	510.9	533.0	514.8	524.8	529.4	539.4	538.5	560.6	
Nondurable	246.0	269.1	244.2	251.9	268.8	272.7	283.1	282.3	
Services ¹	145.1	151.7	145.2	149.2	151.0	152.5	154.4	161.1	
Payments of factor income	215.3	237.3	219.7	220.6	231.4	243.8	253.5	270.3	
Transfer payments (net)	34.6	41.9	36.6	43.3	37.4	36.9	49.8	37.2	
From persons (net)	14.9	16.3	16.5	15.7	16.2	16.2	17.1	17.4	
From government (net)	11.5	16.4	11.6	19.0	11.8	11.7	23.3	10.5	
From business	8.2	9.2	8.5	8.6	9.4	9.1	9.5	9.4	
Net foreign investment	-136.3	-149.5	-110.2	-129.9	-144.2	-174.6	-149.4	-164.7	

1. Exports and imports of certain goods, primarily military equipment purchased and sold by the Federal Government, are included in services. Beginning with 1986, repairs and alterations of equipment were reclassified from goods to services.

Table 4.2.—Real Exports and Imports of Goods and Services and Receipts and Payments of Factor Income

[Billions of chained (1992) dollars]

	1995	1996	Seasonally adjusted at annual rates						
			1995		1996				1997
			IV	I	II	III	IV	I	
Exports of goods and services	775.4	825.9	803.1	806.7	817.9	816.1	862.9	885.3	
Goods ¹	565.9	608.8	588.8	590.9	600.6	601.1	642.6	664.6	
Durable	403.2	442.4	422.3	424.0	437.9	439.0	468.8	492.5	
Nondurable	163.7	168.8	167.9	168.4	165.3	164.8	176.6	176.2	
Services ¹	210.4	218.2	215.3	216.7	218.3	216.1	221.7	222.4	
Receipts of factor income	194.2	209.2	197.6	203.2	205.4	207.0	221.0	219.7	
Imports of goods and services	883.0	939.5	888.0	910.7	932.6	953.5	961.3	1,006.0	
Goods ¹	744.7	796.3	750.0	768.4	789.9	810.0	817.0	853.4	
Durable	507.1	547.7	514.0	529.7	542.1	556.9	561.9	595.3	
Nondurable	237.2	248.5	235.8	238.5	247.7	253.0	255.0	258.2	
Services ¹	138.8	143.8	138.5	142.8	143.2	144.1	145.0	153.2	
Payments of factor income	199.7	215.9	202.4	202.3	211.1	221.4	229.0	243.2	

1. Exports and imports of certain goods, primarily military equipment purchased and sold by the Federal Government, are included in services. Beginning with 1986, repairs and alterations of equipment are reclassified from goods to services.

NOTE.—Chained (1992) dollar series are calculated as the product of the chain-type quantity index and the 1992 current-dollar value of the corresponding series, divided by 100. Because the formula for the chain-type quantity indexes uses weights of more than one period, the corresponding chained-dollar estimates are usually not additive.

5. Saving and Investment

Table 5.1.—Gross Saving and Investment

[Billions of dollars]

	1995	1996	Seasonally adjusted at annual rates					
			1995		1996			1997
			IV	I	II	III	IV	I
Gross saving	1,152.3	1,275.9	1,220.9	1,218.4	1,245.0	1,314.6	1,325.7	1,369.6
Gross private saving	1,072.3	1,161.0	1,139.1	1,134.3	1,122.1	1,196.7	1,190.6	1,205.3
Personal saving	246.6	271.6	278.4	261.5	238.3	296.6	290.2	274.1
Undistributed corporate profits with inventory valuation and capital consumption adjustments	158.7	192.9	174.9	187.9	192.6	198.6	192.5	212.1
Undistributed profits	152.8	162.6	150.8	168.9	165.1	156.9	159.5	168.1
Inventory valuation adjustment	-28.1	-8.9	-8.8	-17.4	-11.0	2.0	-9.2	-4
Capital consumption adjustment	34.0	39.2	32.9	36.4	38.6	39.7	42.2	44.4
Corporate consumption of fixed capital	435.9	457.9	447.1	449.6	454.7	461.1	466.1	471.4
Noncorporate consumption of fixed capital	228.5	238.6	237.9	233.5	236.5	240.5	243.7	245.8
Wage accruals less disbursements	2.7	0	.9	1.9	0	0	-1.9	1.9
Gross government saving	80.0	115.0	81.7	84.1	122.9	117.8	135.0	164.3
Federal	-87.8	-54.6	-80.7	-82.0	-54.1	-48.4	-34.0	-10.1
Consumption of fixed capital	73.8	72.5	73.8	73.2	72.6	72.3	71.9	72.2
Current surplus or deficit (-), national income and product accounts	-161.7	-127.1	-154.5	-155.2	-126.7	-120.8	-105.9	-82.3
State and local	167.9	169.6	162.4	166.1	177.0	166.3	169.0	174.4
Consumption of fixed capital	72.9	76.6	74.3	75.1	76.0	77.1	78.1	79.0
Current surplus or deficit (-), national income and product accounts	95.0	93.0	88.1	91.0	101.0	89.2	90.9	95.3
Capital grants received by the United States (net)	0	0	0	0	0	0	0	0
Gross investment	1,150.9	1,200.8	1,173.9	1,167.9	1,187.0	1,215.9	1,232.5	1,274.1
Gross private domestic investment	1,065.3	1,117.0	1,064.0	1,068.9	1,096.0	1,156.2	1,146.6	1,204.3
Gross government investment	221.9	233.3	220.1	228.8	235.1	234.2	235.3	234.6
Net foreign investment	-136.3	-149.5	-110.2	-129.9	-144.2	-174.6	-149.4	-164.7
Statistical discrepancy	-1.5	-75.1	-47.0	-50.6	-58.1	-98.7	-93.2	-95.4
Addendum:								
Gross saving as a percentage of gross national product	15.9	16.9	16.6	16.4	16.5	17.3	17.2	17.5

Table 5.4.—Private Fixed Investment by Type

[Billions of dollars]

	1995	1996	Seasonally adjusted at annual rates					
			1995		1996			1997
			IV	I	II	III	IV	I
Private fixed investment	1,028.2	1,101.5	1,046.2	1,070.7	1,088.0	1,119.6	1,127.8	1,149.8
Nonresidential	738.5	791.1	749.7	769.0	773.8	807.0	814.5	830.8
Structures	199.7	214.3	204.0	208.4	207.4	213.5	227.8	232.5
Nonresidential buildings, including farm	142.0	152.0	145.8	147.3	146.2	151.1	163.5	168.0
Utilities	38.5	41.6	40.2	40.9	41.5	41.3	42.9	41.8
Mining exploration, shafts, and wells	12.0	14.3	11.4	13.9	14.1	15.0	14.4	15.2
Other structures	7.1	6.3	6.6	6.4	5.7	6.1	7.1	7.5
Producers' durable equipment	538.8	576.8	545.7	560.6	566.3	593.5	586.7	598.3
Information processing and related equipment	183.2	206.0	191.8	198.2	200.8	212.2	212.6	217.0
Computers and peripheral equipment ¹	63.6	76.9	69.7	73.7	74.2	79.3	80.6	80.8
Other	119.6	129.0	122.0	124.5	126.6	132.9	132.0	136.2
Industrial equipment	124.5	128.9	124.9	127.9	131.2	128.7	128.0	128.9
Transportation and related equipment	124.9	129.5	123.0	125.3	123.7	137.7	131.5	133.4
Other	106.2	112.4	106.1	109.2	110.7	114.9	114.7	119.0
Residential	289.8	310.5	296.5	301.7	314.2	312.6	313.3	319.0
Structures	282.5	303.0	289.2	294.4	306.7	305.1	305.7	311.1
Single family	144.5	155.2	147.0	150.6	156.8	157.2	156.1	157.8
Multifamily	18.6	20.6	19.6	20.3	22.3	19.1	20.6	22.6
Other structures	119.4	127.2	122.6	123.5	127.7	128.8	128.9	130.8
Producers' durable equipment	7.2	7.5	7.3	7.3	7.5	7.5	7.6	7.9

1. Includes new computers and peripheral equipment only.

Table 5.5.—Real Private Fixed Investment by Type

[Billions of chained (1992) dollars]

	1995	1996	Seasonally adjusted at annual rates					
			1995		1996			1997
			IV	I	II	III	IV	I
Private fixed investment	975.9	1,042.1	988.5	1,013.3	1,031.1	1,057.5	1,066.6	1,091.9
Nonresidential	714.3	766.8	723.3	743.5	750.5	781.4	792.0	813.0
Structures	181.1	190.0	183.2	186.6	184.9	188.6	199.8	203.0
Nonresidential buildings, including farm	127.9	134.2	130.3	131.4	129.7	133.0	142.8	146.4
Utilities	35.1	36.7	36.0	36.4	36.8	36.4	37.4	36.2
Mining exploration, shafts, and wells	11.2	13.0	10.5	12.8	12.9	13.5	12.9	13.4
Other structures	6.8	5.8	6.2	5.9	5.3	5.6	6.4	6.8
Producers' durable equipment	534.5	578.6	541.4	558.3	567.5	595.0	593.7	611.7
Information processing and related equipment	201.1	241.9	214.4	225.5	234.1	250.5	257.4	269.5
Computers and peripheral equipment ¹	91.5	132.8	105.6	117.2	126.3	138.9	148.9	159.2
Other	114.2	122.0	116.2	118.1	119.7	125.5	124.9	128.6
Industrial equipment	116.2	118.4	115.4	117.8	120.6	118.0	117.1	118.0
Transportation and related equipment	118.1	120.0	115.4	117.5	114.9	126.5	121.1	122.7
Other	100.8	103.6	99.4	101.5	102.6	105.7	104.8	109.0
Residential	262.8	276.7	266.3	271.1	281.5	277.8	276.6	281.1
Structures	255.8	269.6	259.3	264.1	274.3	270.6	269.4	273.7
Single family	127.7	135.4	129.1	132.5	137.6	136.7	134.7	136.3
Multifamily	17.6	19.3	18.5	19.2	21.0	17.9	19.1	20.9
Other structures	110.9	115.5	112.4	113.0	116.3	116.6	116.2	117.0
Producers' durable equipment	7.0	7.1	7.0	7.0	7.2	7.2	7.2	7.4
Residual	-9.1	-21.7	-13.5	-17.0	-19.8	-24.0	-26.9	-30.0

1. Includes new computers and peripheral equipment only.

NOTE.—Chained (1992) dollar series are calculated as the product of the chain-type quantity index and the 1992 current-dollar value of the corresponding series, divided by 100. Because the formula for the chain-type quantity indexes uses weights of more than one period, the corresponding chained-dollar estimates are usually not additive. The residual line is the difference between the first line and the sum of the most detailed lines.

Table 5.10.—Change in Business Inventories by Industry

[Billions of dollars]

	1995	1996	Seasonally adjusted at annual rates					
			1995		1996			1997
			IV	I	II	III	IV	I
Change in business inventories	37.0	15.4	17.8	-1.7	8.0	36.6	18.8	54.5
Farm	-2.6	-1.9	-2.1	-4.4	-3.3	1.2	-9	.6
Nonfarm	39.6	17.3	19.9	2.7	11.3	35.4	19.7	53.9
Change in book value	69.7	25.6	28.6	19.6	21.7	32.0	28.9	46.7
Inventory valuation adjustment	-30.1	-8.3	-8.7	-16.9	-10.4	3.4	-9.2	7.2
Manufacturing	12.7	6.0	11.9	12.6	-4.6	12.2	3.9	20.6
Durable goods	11.8	6.8	12.5	14.6	.5	12.0	0	12.7
Nondurable goods .....	.9	-7	-6	-2.0	-5.1	.2	3.9	7.9
Wholesale trade	15.2	4.6	4.5	6.7	7.3	-5.1	9.4	20.2
Durable goods	13.3	3.7	12.7	9.5	3.0	6.1	-3.9	12.5
Nondurable goods	1.9	.9	-8.2	-2.8	4.3	-11.3	13.3	7.8
Merchant wholesalers	13.6	4.2	3.4	4.0	6.6	-5.2	11.4	16.6
Durable goods	12.1	2.7	11.7	6.2	1.6	4.8	-2.1	10.5
Nondurable goods	1.5	1.5	-8.3	-2.2	4.9	-10.1	13.5	6.0
Nonmerchant wholesalers	1.5	.4	1.0	2.7	.8	.1	-2.0	3.7
Durable goods	1.2	1.0	.9	3.3	1.4	1.3	-1.8	1.9
Nondurable goods .....	.3	-7	.1	-6	-6	-1.2	-2	1.7
Retail trade	3.6	2.5	-7.8	-22.9	5.4	24.3	3.3	1.3
Durable goods	3.7	1.0	-4.1	-19.4	7.5	18.0	-2.0	.8
Motor vehicle dealers .....	.9	-3.6	.4	-26.1	2.2	11.5	-2.2	-4.0
Other	2.9	4.7	-4.5	6.7	5.3	6.5	.3	4.8
Nondurable goods	-1	1.5	-3.7	-3.5	-2.1	6.3	5.3	.6
Other	8.1	4.1	11.4	6.3	3.2	4.0	3.1	11.7
Durable goods	6.0	1.2	6.2	7.6	-1.1	-1.5	-2	0
Nondurable goods	2.1	2.9	5.2	-1.3	4.2	5.5	3.3	11.7

NOTE.—Estimates for nonfarm industries other than manufacturing and trade for 1986 and earlier periods are based on the 1972 Standard Industrial Classification (SIC). Manufacture estimates for 1981 and earlier periods and trade estimates and earlier periods are based on the 1972 SIC; later estimates for these industries are based on the 1987 SIC. The resulting discontinuities are small.

Table 5.11.—Real Change in Business Inventories by Industry

[Billions of chained (1992) dollars]

	1995	1996	Seasonally adjusted at annual rates					
			1995		1996			1997
			IV	I	II	III	IV	I
Change in business inventories	32.7	13.6	13.7	-3.5	6.7	34.1	17.1	48.6
Farm	-5.2	-4.0	-5.0	-7.0	-5.6	-8	-2.6	-1.1
Nonfarm	37.2	17.1	19.0	2.9	11.7	34.6	19.3	49.2
Manufacturing	11.8	6.0	11.2	12.0	-3.9	11.9	4.2	18.2
Durable goods	11.2	6.5	12.0	14.0	.5	11.5	.1	11.8
Nondurable goods .....	.8	-3	-6	-1.6	-4.2	.6	4.0	6.4
Wholesale trade	14.3	4.8	4.4	6.4	7.3	-3.6	9.1	18.8
Durable goods	12.7	3.5	12.1	9.0	2.8	6.0	-3.6	11.9
Nondurable goods	1.7	1.3	-7.4	-2.3	4.4	-9.0	12.2	6.9
Merchant wholesalers	12.8	4.4	3.5	3.8	6.5	-3.8	10.9	15.6
Durable goods	11.5	2.6	11.2	5.9	1.5	4.7	-1.9	10.0
Nondurable goods	1.4	1.8	-7.4	-1.8	4.8	-8.0	12.2	5.6
Nonmerchant wholesalers	1.4	.4	.9	2.6	.7	.2	-1.9	3.3
Durable goods	1.2	1.0	.9	3.1	1.3	1.3	-1.7	1.9
Nondurable goods .....	.3	-5	.1	-5	-5	-1.0	-1	1.4
Retail trade	3.5	2.3	-7.1	-21.7	5.2	22.7	2.9	1.2
Durable goods	3.5	1.0	-3.7	-17.9	6.9	16.9	-1.9	.9
Motor vehicle dealers .....	.9	-3.3	.4	-23.6	2.0	10.6	-2.1	-3.5
Other	2.7	4.4	-4.2	6.3	5.0	6.2	.2	4.6
Nondurable goods	0	1.3	-3.4	-3.7	-1.8	5.8	4.8	.3
Other	7.6	4.0	10.6	6.1	3.1	3.6	3.1	10.8
Durable goods	5.3	1.1	5.5	6.7	-9	-1.3	-1	0
Nondurable goods	2.0	2.9	4.9	-1.0	4.1	5.1	3.3	11.1
Residual .....	.6	.1	-7	-3	.5	-6	1.0	.1

NOTE.—Chained (1992) dollar series for real change in business inventories are calculated as the period-to-period change in chained-dollar end-of-period inventories. Quarterly changes in end-of-period inventories are stated at annual rates. Because the formula for the chain-type quantity indexes uses weights of more than one period, the corresponding chained-dollar estimates are usually not additive. The residual line is the difference between the first line and the sum of the most detailed lines.

See note to table 5.10.

Table 5.12.—Inventories and Domestic Final Sales of Business by Industry

[Billions of dollars]

	Seasonally adjusted quarterly totals					
	1995	1996				1997
	IV	I	II	III	IV	I
Inventories ¹	1,260.4	1,262.9	1,270.7	1,278.7	1,284.7	1,295.2
Farm	100.2	97.6	101.6	102.7	97.4	100.6
Nonfarm	1,160.2	1,165.3	1,169.0	1,176.0	1,187.3	1,194.6
Durable goods	660.9	662.7	665.4	673.3	673.8	684.9
Nondurable goods	499.3	502.6	503.6	502.7	513.5	509.7
Manufacturing	430.4	432.7	430.9	433.7	437.8	440.7
Durable goods	269.2	271.8	272.0	274.1	276.5	279.6
Nondurable goods	161.3	160.9	158.9	159.5	161.3	161.2
Wholesale trade	304.0	307.3	309.8	306.2	307.3	312.5
Durable goods	187.9	189.7	190.3	191.6	190.2	193.8
Nondurable goods	116.1	117.6	119.5	114.6	117.1	118.8
Merchant wholesalers	263.0	265.2	267.9	264.0	265.5	270.3
Durable goods	163.6	164.7	165.0	166.0	165.1	168.2
Nondurable goods	99.4	100.5	102.9	98.0	100.3	102.1
Nonmerchant wholesalers	41.0	42.0	41.9	42.2	41.8	42.2
Durable goods	24.3	25.0	25.3	25.6	25.1	25.6
Nondurable goods	16.7	17.0	16.6	16.6	16.8	16.6
Retail trade	299.1	294.5	296.0	302.7	303.5	304.3
Durable goods	158.4	153.8	155.3	159.7	159.4	163.3
Motor vehicle dealers	78.1	72.0	72.0	74.4	74.2	77.2
Other	80.3	81.7	83.3	85.3	85.2	86.1
Nondurable goods	140.8	140.7	140.7	143.0	144.2	141.0
Other	126.7	130.8	132.3	133.4	138.6	137.0
Durable goods	45.5	47.4	47.9	47.8	47.7	48.3
Nondurable goods	81.2	83.4	84.5	85.6	90.9	88.8
Final sales of domestic business ²	512.0	519.0	527.2	529.8	539.0	547.5
Final sales of goods and structures of domestic business ²	278.4	283.4	287.5	288.1	292.8	298.6
Ratio of inventories to final sales of domestic business						
Inventories to final sales	2.46	2.43	2.41	2.41	2.38	2.37
Nonfarm inventories to final sales	2.27	2.25	2.22	2.22	2.20	2.18
Nonfarm inventories to final sales of goods and structures	4.17	4.11	4.07	4.08	4.05	4.00

1. Inventories are as of the end of the quarter. The quarter-to-quarter change in inventories calculated from current-dollar inventories in this table is not the current-dollar change in business inventories (CBI) component of GDP. The former is the difference between two inventory stocks, each valued at their respective end-of-quarter prices. The latter is the change in the physical volume of inventories valued at average prices of the quarter. In addition, changes calculated from this table are at quarterly rates; whereas, CBI is stated at annual rates.

2. Quarterly totals at monthly rates. Final sales of domestic business equals final sales of domestic product less gross product of households and institutions and of general government and includes a small amount of final sales by farm.

Table 5.13.—Real Inventories and Real Domestic Final Sales of Business by Industry

[Billions of chained (1992) dollars]

	Seasonally adjusted quarterly totals					
	1995	1996				1997
	IV	I	II	III	IV	I
Inventories ¹	1,184.5	1,183.7	1,185.3	1,193.9	1,198.1	1,210.3
Farm	104.5	102.8	101.4	101.2	100.5	100.2
Nonfarm	1,079.6	1,080.4	1,083.3	1,091.9	1,096.7	1,109.0
Durable goods	621.4	624.4	626.7	634.9	633.6	639.7
Nondurable goods	458.1	456.0	456.6	457.1	463.2	469.3
Manufacturing	400.4	403.4	402.4	405.4	406.5	411.0
Durable goods	255.3	258.8	258.9	261.8	261.8	264.8
Nondurable goods	145.2	144.8	143.8	143.9	144.9	146.5
Wholesale trade	281.5	283.1	284.9	284.0	286.3	291.0
Durable goods	178.2	180.5	181.2	182.7	181.8	184.8
Nondurable goods	103.4	102.8	103.9	101.6	104.7	106.4
Merchant wholesalers	242.7	243.7	245.3	244.4	247.1	251.0
Durable goods	154.9	156.4	156.7	157.9	157.5	160.0
Nondurable goods	88.0	87.5	88.7	86.7	89.8	91.2
Nonmerchant wholesalers	38.7	39.3	39.5	39.6	39.1	39.9
Durable goods	23.3	24.1	24.5	24.8	24.3	24.8
Nondurable goods	15.3	15.2	15.1	14.8	14.8	15.2
Retail trade	279.6	274.2	275.5	281.1	281.9	282.2
Durable goods	147.3	142.8	144.5	148.7	148.3	148.5
Motor vehicle dealers	71.1	65.2	65.7	68.4	67.9	67.0
Other	76.4	78.0	79.2	80.8	80.8	81.9
Nondurable goods	132.1	131.2	130.8	132.2	133.4	133.5
Other	117.9	119.5	120.2	121.1	121.9	124.6
Durable goods	40.4	42.1	41.8	41.5	41.5	41.5
Nondurable goods	77.5	77.2	78.3	79.5	80.4	83.1
Residual .....	.5	.4	.4	.4	.5	.6
Final sales of domestic business ²	474.1	478.5	483.3	483.8	490.8	496.4
Final sales of goods and structures of domestic business ²	263.4	267.0	269.9	270.3	274.8	279.5
Ratio of inventories to final sales of domestic business						
Inventories to final sales	2.50	2.47	2.45	2.47	2.44	2.44
Nonfarm inventories to final sales	2.28	2.26	2.24	2.26	2.23	2.23
Nonfarm inventories to final sales of goods and structures	4.10	4.05	4.01	4.04	3.99	3.97

1. Inventories are as of the end of the quarter. Quarter-to-quarter changes calculated from this table are at quarterly rates, whereas, the change in the business inventories component of GDP is stated at annual rates.

2. Quarterly totals at monthly rates. Final sales of domestic business equals final sales of domestic product less gross product of households and institutions and of general government and includes a small amount of final sales by farm.

NOTE.—Chained (1992) dollar inventory series are calculated as the product of the chain-type quantity index and the average of the end-of-year fixed-weighted inventories for 1991 and 1992, divided by 100. Chained (1992) dollar final sales series are calculated as the product of the chain-type index and the 1992 current-dollar value of the corresponding series, divided by 100. Because the formula for the chain-type quantity indexes uses weights of more than one period, the corresponding chained-dollar estimates are usually not additive. The residual line is the difference between the first line and the sum of the most detailed lines for inventories.

6. Income and Employment by Industry

Table 6.1C.—National Income Without Capital Consumption Adjustment by Industry

[Billions of dollars]

	1995	1996	Seasonally adjusted at annual rates					
			1996					
			1995	1996	1996	1996	1997	
		IV	I	II	III	IV	I	
National income without capital consumption adjustment	5,824.5	6,153.6	5,939.7	6,019.0	6,121.6	6,206.0	6,267.7	6,410.5
Domestic industries	5,831.5	6,162.5	5,946.0	6,019.2	6,129.2	6,223.4	6,278.3	6,438.4
Private industries	5,011.3	5,319.4	5,120.3	5,184.3	5,288.7	5,376.5	5,428.2	5,578.4
Agriculture, forestry, and fishing	93.2	114.1	96.7	103.9	113.6	120.3	118.6	117.2
Mining	43.6	44.4	44.6	43.6	44.7	45.2	44.2	46.4
Construction	263.6	281.5	267.4	274.3	278.9	284.0	288.8	294.8
Manufacturing	1,026.3	1,069.1	1,044.5	1,041.2	1,065.9	1,081.4	1,087.9	1,100.0
Durable goods	597.1	628.6	606.6	608.7	628.4	637.0	640.3	644.7
Nondurable goods	429.3	440.5	437.8	432.5	437.5	444.4	447.7	455.3
Transportation and public utilities	451.0	471.4	459.4	462.5	474.9	477.6	470.6	486.1
Transportation	189.4	196.5	193.3	193.4	195.4	199.2	198.0	202.6
Communications	136.6	148.5	138.9	143.5	149.3	151.9	149.1	152.5
Electric, gas, and sanitary services	125.0	126.5	127.1	125.6	130.2	126.5	123.5	131.0
Wholesale trade	327.0	351.2	335.0	345.2	344.5	351.4	363.7	374.5
Retail trade	478.6	506.6	487.8	495.4	506.3	510.7	514.1	532.3
Finance, insurance, and real estate	992.0	1,037.0	1,007.6	1,018.6	1,032.4	1,047.6	1,049.5	1,100.1
Services	1,335.9	1,444.1	1,377.3	1,399.5	1,427.5	1,458.3	1,490.9	1,526.9
Government	820.3	843.1	825.7	834.9	840.5	846.8	850.1	860.0
Rest of the world	-7.0	-8.9	-6.3	-2	-7.6	-17.4	-10.6	-28.0

Table 6.16C.—Corporate Profits by Industry

[Billions of dollars]

	1995	1996	Seasonally adjusted at annual rates					
			1996					
			1995	1996	1996	1996	1996	1997
		IV	I	II	III	IV	I	
Corporate profits with inventory valuation and capital consumption adjustments	604.8	670.2	628.3	661.2	672.1	677.3	670.1	712.5
Domestic industries	528.1	588.2	546.6	578.0	593.7	600.7	580.2	632.7
Financial	97.4	107.5	96.6	111.6	112.7	110.1	95.7	123.7
Nonfinancial	430.7	480.6	450.0	466.4	481.0	490.6	484.5	509.0
Rest of the world	76.7	82.0	81.7	83.2	78.4	76.6	89.9	79.7
Receipts from the rest of the world	111.1	126.2	113.9	122.2	122.6	122.9	137.0	134.3
Less: Payments to the rest of the world	34.5	44.1	32.3	39.0	44.2	46.3	47.1	54.5
Corporate profits with inventory valuation adjustment	570.8	631.0	595.3	624.8	633.5	637.6	627.9	668.0
Domestic industries	494.1	548.9	513.7	541.6	555.1	561.0	538.0	588.3
Financial	119.1	131.9	119.3	134.9	136.6	135.0	121.3	149.9
Federal Reserve banks	21.9	21.7	21.7	21.5	21.7	21.6	22.0	22.6
Other	97.3	110.2	97.6	113.4	114.9	113.4	99.3	127.3
Nonfinancial	375.0	417.0	394.4	406.7	418.5	426.1	416.7	438.4
Manufacturing	145.7	166.5	157.3	161.3	164.7	170.6	169.4	168.1
Durable goods	77.2	92.7	80.8	89.5	92.4	94.6	94.5	89.8
Primary metal industries	3.0	2.0	2.7	2.3	1.4	3.2	1.1	-1
Fabricated metal products	11.1	15.1	12.2	13.9	14.4	16.0	15.9	13.9
Industrial machinery and equipment	12.1	13.3	11.1	14.3	13.6	13.0	12.4	12.2
Electronic and other electric equipment	25.6	29.0	29.5	27.1	27.4	29.2	32.2	32.1
Motor vehicles and equipment	4.4	8.8	3.6	8.1	10.6	10.2	6.4	10.7
Other	20.9	24.6	21.7	23.8	25.0	23.0	26.5	21.0
Nondurable goods	68.5	73.8	76.5	71.8	72.3	76.1	74.9	78.3
Food and kindred products	17.7	17.6	17.5	15.7	13.2	18.3	23.0	17.2
Chemicals and allied products	20.9	21.1	22.1	20.7	21.9	23.0	18.7	21.3
Petroleum and coal products	8	-1.2	3	-4.5	1.3	-1.2	-5	4.1
Other	29.1	36.4	39.9	35.9	35.9	33.7	35.7	
Transportation and public utilities	94.8	99.0	95.8	95.6	104.5	102.5	93.2	102.2
Transportation	14.4	13.9	15.4	13.1	14.0	15.2	13.2	15.3
Communications	41.0	45.4	40.1	43.3	46.5	47.6	44.4	44.7
Electric, gas, and sanitary services	39.4	39.7	40.3	39.3	44.1	39.7	35.7	42.2
Wholesale trade	29.6	36.6	31.2	37.5	32.8	34.5	41.5	44.8
Retail trade	38.7	41.8	39.6	41.7	44.3	44.5	36.7	45.7
Other	66.2	73.1	70.5	70.6	72.2	73.9	75.9	77.6
Rest of the world	76.7	82.0	81.7	83.2	78.4	76.6	89.9	79.7

NOTE.— Estimates in this table are based on the 1987 Standard Industrial Classification.

Table 7.14.—Chain-Type Quantity and Price Indexes for Gross Domestic Product by Sector

[Index numbers, 1992=100]

	1995	1996	Seasonally adjusted					
			1995		1996			1997
			IV	I	II	III	IV	I
Gross domestic product:								
Quantity index	107.97	110.61	108.58	109.12	110.37	110.95	111.99	113.61
Price index	107.57	109.88	108.42	109.03	109.62	110.17	110.69	111.43
Business¹:								
Quantity index	109.23	112.34	110.04	110.74	112.01	112.66	113.95	115.83
Price index	107.31	109.43	108.01	108.48	109.26	109.75	110.24	110.89
Nonfarm¹:								
Quantity index	109.47	112.48	110.31	110.94	112.16	112.75	114.06	115.94
Price index	107.39	109.37	108.02	108.47	109.20	109.67	110.14	110.86
Nonfarm less housing:								
Quantity index	109.93	113.12	110.72	111.50	112.84	113.38	114.77	116.81
Price index	107.22	109.08	107.78	108.19	108.93	109.37	109.81	110.53
Housing:								
Quantity index	105.63	107.12	106.90	106.31	106.51	107.46	108.18	108.67
Price index	108.85	111.92	110.11	110.90	111.57	112.26	112.96	113.70
Farm:								
Quantity index	93.43	103.51	92.73	97.55	102.26	107.66	106.56	109.04
Price index	102.08	115.77	107.75	110.61	115.43	117.94	119.10	114.83
Households and institutions:								
Quantity index	108.39	110.78	109.29	109.48	110.51	111.13	111.99	112.94
Price index	106.78	110.26	108.07	109.15	109.70	110.67	111.50	112.57
Private households:								
Quantity index	100.54	102.40	101.13	101.68	102.51	102.44	102.95	103.99
Price index	109.67	113.64	111.20	112.04	112.65	114.38	115.49	115.98
Nonprofit institutions:								
Quantity index	108.68	111.10	109.60	109.78	110.82	111.46	112.34	113.28
Price index	106.67	110.13	107.95	109.04	109.59	110.53	111.36	112.45
General government²:								
Quantity index	99.56	99.18	98.70	98.34	99.58	99.62	99.19	99.32
Price index	109.65	112.87	111.44	112.90	112.10	112.90	113.60	114.89
Federal:								
Quantity index	89.79	86.94	86.94	86.99	87.61	87.10	86.05	85.82
Price index	112.93	115.98	116.00	116.89	115.39	115.56	116.09	118.54
State and local:								
Quantity index	104.94	105.97	105.21	104.62	106.21	106.57	106.49	106.82
Price index	108.03	111.33	109.23	110.94	110.47	111.56	112.34	113.09

NOTE.—See footnotes to table 1.7.

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

[Dollars]

Current-dollar cost and profit per unit of real gross domestic product¹	1.053	1.065	1.057	1.062	1.065	1.066	1.066	1.069
Consumption of fixed capital .....	.102	.102	.103	.103	.103	.102	.102	.101
Net domestic product .....	.950	.962	.954	.959	.963	.963	.964	.968
Indirect business tax and nontax liability plus business transfer payments less subsidies .....	.109	.106	.108	.107	.105	.105	.105	.106
Domestic income .....	.842	.857	.846	.851	.858	.859	.858	.862
Compensation of employees .....	.698	.705	.699	.702	.706	.706	.708	.709
Corporate profits with inventory valuation and capital consumption adjustments .....	.117	.125	.120	.123	.126	.126	.123	.127
Profits tax liability .....	.038	.038	.037	.039	.039	.038	.038	.038
Profits after tax with inventory valuation and capital consumption adjustments .....	.079	.086	.082	.084	.087	.088	.085	.089
Net interest .....	.027	.027	.027	.026	.026	.027	.027	.027

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

Table 7.16.—Implicit Price Deflators for Inventories of Business by Industry

[Index numbers, 1992=100]

	Seasonally adjusted					
	1995		1996			1997
	IV	I	II	III	IV	I
Inventories¹	106.41	106.70	107.20	107.11	107.22	107.01
Farm	95.87	95.02	100.28	101.56	96.93	100.36
Nonfarm	107.47	107.86	107.92	107.70	108.25	107.71
Durable goods	106.35	106.14	106.18	106.04	106.35	107.07
Nondurable goods	108.99	110.22	110.29	109.99	110.85	108.59
Manufacturing	107.50	107.27	107.07	106.97	107.71	107.23
Durable goods	105.43	105.03	105.05	104.72	105.61	105.59
Nondurable goods	111.04	111.12	110.53	110.85	111.33	110.01
Wholesale	108.01	108.56	108.76	107.81	107.35	107.40
Durable goods	105.41	105.10	105.02	104.87	104.64	104.87
Nondurable goods	112.34	114.39	115.07	112.77	111.89	111.62
Merchant wholesalers	108.35	108.84	109.20	108.01	107.42	107.68
Durable goods	105.61	105.32	105.26	105.11	104.88	105.13
Nondurable goods	112.99	114.86	115.97	112.97	111.73	112.00
Nonmerchant wholesalers	105.92	106.86	106.08	106.61	106.98	105.75
Durable goods	104.09	103.66	103.52	103.33	103.06	103.21
Nondurable goods	108.77	111.87	110.12	111.87	113.26	109.77
Retail trade	107.00	107.43	107.45	107.68	107.68	107.84
Durable goods	107.54	107.70	107.45	107.38	107.48	109.98
Motor vehicle dealers	109.73	110.46	109.51	108.80	109.30	115.23
Other	105.17	104.86	105.19	105.67	105.42	105.09
Nondurable goods	106.53	107.25	107.59	108.16	108.04	105.61
Other	107.40	109.46	110.05	110.15	113.71	109.96
Durable goods	112.65	112.75	114.45	115.25	115.15	116.40
Nondurable goods	104.81	107.94	107.92	107.65	113.10	106.78

1. Implicit price deflators are as of the end of the quarter and are consistent with the inventory stocks shown in tables 5.12 and 5.13.

Table 8.2.—Contributions to Percent Change in Real Gross Domestic Product

	1995	1996	Seasonally adjusted at annual rates					
			1995	1996				1997
			IV	I	II	III	IV	I
Percent change at annual rate:								
Gross domestic product	2.0	2.4	0.3	2.0	4.7	2.1	3.8	5.9
Percentage points at annual rates:								
Personal consumption expenditures	1.6	1.7	.7	2.4	2.3	.3	2.3	3.8
Durable goods .....	.3	.5	-.1	.7	.9	-.2	.4	1.5
Nondurable goods .....	.5	.3	-.1	.7	.3	.1	.4	.9
Services .....	.9	.9	.8	.9	1.1	.5	1.5	1.3
Gross private domestic investment ...	.4	.7	-.5	.4	1.5	3.2	-.5	3.2
Fixed investment .....	.8	1.0	.5	1.4	1.0	1.5	.5	1.4
Nonresidential .....	.9	.8	.2	1.1	.4	1.7	.6	1.2
Structures .....	.2	.1	0	.2	-.1	.2	.7	.2
Producers' durable equipment .....	.7	.6	.2	.9	.5	1.5	-.1	1.0
Residential	-.1	.2	.2	.3	.6	-.2	-.1	.3
Change in business inventories	-.4	-.3	-1.0	-1.0	.5	1.6	-1.0	1.8
Net exports of goods and services ...	0	-.1	.9	-.1	-.6	-.1	2.2	-.1
Exports .....	.9	.7	1.1	.2	.6	-.1	2.6	1.2
Goods .....	.8	.6	1.1	.1	.5	0	2.3	1.2
Services .....	.1	.1	0	.1	.1	-.1	.3	0
Imports	-.9	-.8	-.2	-1.3	-1.2	-1.2	-.4	-2.4
Goods	-.9	-.7	-.2	-1.0	-1.2	-1.1	-.4	-2.0
Services	-.1	-.1	0	-.2	0	-.1	0	-.5
Government consumption expenditures and gross investment	0	.2	-.8	.3	1.4	-.1	-.2	0
Federal	-.3	-.1	-.9	.4	.6	-.2	-.4	-.2
National defense	-.3	-.1	-.6	.2	.4	-.3	-.3	-.5
Nondefense	0	0	-.3	.2	.2	0	0	.2
State and local .....	.3	.2	.2	-.1	.8	.1	.2	.2

Table 8.3.—Selected Per Capita Product and Income Series in Current and Chained Dollars

	[Dollars]							
	1995	1996	Seasonally adjusted at annual rates				1997	
			1995	1996				
IV			I	II	III	IV		I
Current dollars:								
Gross domestic product	27,571	28,537	27,840	28,072	28,455	28,653	28,964	29,490
Gross national product	27,545	28,503	27,816	28,071	28,427	28,588	28,924	29,386
Personal income	23,233	24,294	23,597	23,830	24,173	24,450	24,718	25,096
Disposable personal income	20,214	21,040	20,539	20,712	20,890	21,167	21,387	21,654
Personal consumption expenditures	18,719	19,404	18,901	19,128	19,383	19,433	19,670	19,992
Durable goods	2,305	2,381	2,321	2,363	2,405	2,372	2,384	2,469
Nondurable goods	5,648	5,820	5,659	5,753	5,826	5,818	5,881	5,971
Services	10,767	11,203	10,921	11,011	11,152	11,243	11,405	11,552
Chained (1992) dollars:								
Gross domestic product	25,627	26,016	25,679	25,755	25,993	26,064	26,251	26,581
Gross national product	25,605	25,989	25,660	25,757	25,970	26,009	26,219	26,491
Disposable personal income	18,789	19,158	18,971	19,028	19,053	19,233	19,315	19,471
Personal consumption expenditures	17,400	17,669	17,458	17,573	17,679	17,657	17,764	17,977
Durable goods	2,204	2,303	2,225	2,265	2,322	2,301	2,324	2,422
Nondurable goods	5,404	5,431	5,390	5,428	5,434	5,426	5,438	5,489
Services	9,795	9,938	9,845	9,883	9,927	9,934	10,006	10,072
Population (mid-period, thousands)	263,090	265,482	264,032	264,563	265,155	265,806	266,405	266,901

Table 8.4.—Auto Output

[Billions of dollars]

	1995	1996	Seasonally adjusted at annual rates					
			1995		1996			1997
			IV	I	II	III	IV	I
Auto output	134.8	128.3	132.6	112.9	136.2	139.0	124.8	127.8
Final sales	133.8	131.1	133.7	132.1	134.0	132.0	126.4	129.3
Personal consumption expenditures	137.3	136.3	134.8	137.4	140.9	134.6	132.2	141.2
New autos	84.6	81.4	87.2	85.1	82.5	76.7	81.1	84.6
Net purchases of used autos	52.7	54.9	47.6	52.3	58.4	57.9	51.1	56.6
Producers' durable equipment	42.2	42.3	39.9	40.0	42.7	46.6	40.0	44.0
New autos	72.4	74.0	68.0	70.2	75.8	82.4	67.8	76.5
Net purchases of used autos	-30.2	-31.7	-28.1	-30.2	-33.1	-35.8	-27.8	-32.4
Net exports	-48.1	-49.8	-43.9	-47.9	-51.5	-51.1	-48.8	-58.4
Exports	16.7	17.2	16.7	17.3	15.7	18.6	17.1	16.9
Imports	64.8	67.0	60.6	65.2	67.2	69.7	65.9	75.2
Gross government investment	2.4	2.4	3.0	2.6	1.9	1.9	3.1	2.4
Change in business inventories of new and used autos	1.0	-2.9	-1.2	-19.1	2.3	7.0	-1.6	-1.4
New	0	-3.3	-2.7	-21.4	3.3	6.1	-1.0	-7
Used	1.0	.4	3.5	2.3	-1.0	.9	-6	-8
Addenda:								
Domestic output of new autos ¹	118.9	116.7	113.3	102.5	123.2	129.4	111.6	114.5
Sales of imported new autos ²	56.3	55.8	57.8	58.3	53.8	54.9	56.1	64.1

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 gross government investment.

Table 8.5.—Real Auto Output

[Billions of chained (1992) dollars]

	1995	1996	Seasonally adjusted at annual rates					
			1995		1996			1997
			IV	I	II	III	IV	I
Auto output	120.5	112.6	117.0	100.1	119.6	121.3	109.4	111.1
Final sales	120.2	115.2	119.8	117.0	118.2	115.4	110.4	112.8
Personal consumption expenditures	118.1	115.9	115.8	116.7	120.0	114.6	112.3	119.8
New autos	78.3	73.9	80.2	77.9	75.2	69.3	73.3	76.5
Net purchases of used autos	39.3	40.9	35.8	38.4	43.5	43.5	38.3	42.2
Producers' durable equipment	43.2	41.8	40.2	40.6	42.5	45.3	38.8	42.9
New autos	66.9	67.3	62.5	64.3	69.1	74.4	61.3	69.2
Net purchases of used autos	-23.8	-25.2	-22.4	-23.6	-26.2	-28.7	-22.4	-26.0
Net exports	-43.0	-44.3	-38.9	-42.6	-46.0	-45.4	-43.4	-52.0
Exports	16.0	16.2	15.7	16.3	14.8	17.5	16.1	15.9
Imports	59.1	60.5	54.6	58.9	60.8	62.9	59.5	67.8
Gross government investment	2.2	2.2	2.8	2.4	1.7	1.7	2.8	2.1
Change in business inventories of new and used autos .....	.2	-2.7	-2.8	-16.8	1.4	5.8	-1.0	-1.7
New	-6	-2.9	-5.0	-19.3	2.6	5.5	-3	-8
Used .....	.6	.1	1.8	1.6	-1.0	.5	-6	-8
Residual .....	.7	.6	.2	1.0	.7	.5	.4	.6
Addenda:								
Domestic output of new autos ¹	110.2	106.6	103.3	94.6	112.4	117.7	101.8	104.0
Sales of imported new autos ²	52.1	50.7	53.1	53.5	49.1	49.7	50.7	58.0

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 gross government investment.

NOTE.—Chained (1992) dollar series are calculated as the product of the chain-type quantity index and the 1992 current-dollar value of the corresponding series, divided by 100. Because the formula for the chain-type quantity indexes uses weights of more than one period, the corresponding chained-dollar estimates are usually not additive. The residual line is the difference between the first line and the sum of the most detailed lines, excluding the lines in the addenda.

Table 8.6.—Truck Output

[Billions of dollars]

	1995	1996	1997	1998	1999	2000	2001	2002
Truck output ¹	127.6	132.2	130.5	129.7	134.4	130.7	134.1	139.7
Final sales	125.5	133.0	130.1	134.8	129.4	129.5	138.1	137.6
Personal consumption expenditures	56.9	58.4	58.7	59.6	58.0	56.8	59.1	58.7
Producers' durable equipment	66.3	71.0	67.1	68.4	69.1	71.6	75.0	76.5
Net exports	-5.1	-4.7	-4.9	-4.2	-5.2	-6.4	-3.1	-5.3
Exports	7.7	9.0	7.8	8.3	9.0	8.6	10.0	10.1
Imports	12.8	13.7	12.7	12.5	14.2	15.0	13.2	15.4
Gross government investment	7.5	8.3	9.2	11.1	7.5	7.5	7.1	7.8
Change in business inventories	2.1	-8	.4	-5.1	4.9	1.2	-4.0	2.1

1. Includes new trucks only.

Table 8.7.—Real Truck Output

[Billions of chained (1992) dollars]

	1995	1996	1997	1998	1999	2000	2001	2002
Truck output ¹	114.5	116.6	116.4	115.2	118.5	114.8	117.8	122.1
Final sales	112.6	117.2	116.0	119.7	114.1	113.8	121.4	120.2
Personal consumption expenditures	50.9	50.9	51.9	52.5	50.7	49.4	51.0	50.4
Producers' durable equipment	59.3	62.9	60.0	60.8	61.1	63.1	66.4	67.4
Net exports	-4.3	-3.8	-4.0	-3.4	-4.2	-5.3	-2.2	-4.3
Exports	7.5	8.7	7.5	8.0	8.7	8.3	9.7	9.6
Imports	11.8	12.4	11.5	11.4	12.9	13.6	11.9	13.9
Gross government investment	6.7	7.3	8.2	9.8	6.6	6.6	6.3	6.8
Change in business inventories	1.9	-7	.4	-4.5	4.3	1.1	-3.6	1.8
Residual	0	-1	-1	0	0	-1	-1	0

1. Includes new trucks only.

NOTE.—Chained (1992) dollar series are calculated as the product of the chain-type quantity index and the 1992 current-dollar value of the corresponding series, divided by 100. Because the formula for the chain-type quantity indexes uses weights of more than one period, the corresponding chained-dollar estimates are usually not additive. The residual line is the difference between the first line and the sum of the most detailed lines.

Table B.5.—Private Purchases of Structures by Type

	Billions of dollars			Billions of chained (1992) dollars		
	1993	1994	1995	1993	1994	1995
Private purchases of structures	417.1	460.9	482.2	402.6	431.0	436.9
Nonresidential	171.8	180.2	199.7	166.3	168.8	181.1
New	172.0	180.2	199.4	166.5	168.8	180.9
Nonresidential buildings, excluding farm	113.3	122.9	138.8	109.6	114.7	125.1
Industrial	27.4	29.6	34.2	26.5	27.6	30.8
Commercial	52.6	59.7	67.9	50.8	55.7	61.2
Office buildings ¹	21.1	23.4	26.5	20.4	21.8	23.9
Other ²	31.5	36.4	41.4	30.4	33.9	37.3
Religious	3.6	3.7	3.9	3.5	3.4	3.5
Educational	4.9	5.4	6.4	4.8	5.1	5.8
Hospital and institutional	13.9	13.1	12.4	13.5	12.2	11.1
Other ³	10.8	11.5	14.0	10.5	10.7	12.6
Utilities	32.0	33.7	38.5	31.1	31.7	35.1
Railroads	3.1	3.9	3.8	2.9	3.5	3.4
Telecommunications	9.6	10.7	10.9	9.5	10.4	10.5
Electric light and power	12.8	12.3	15.1	12.4	11.4	13.6
Gas	5.6	5.8	7.6	5.4	5.4	6.5
Petroleum pipelines	1.0	1.0	1.2	1.0	.9	1.1
Farm	3.3	3.2	3.2	3.2	3.0	2.9
Mining exploration, shafts, and wells	15.6	13.5	12.0	14.8	12.6	11.2
Petroleum and natural gas	14.1	11.7	10.1	13.3	11.0	9.4
Other	1.5	1.7	1.9	1.5	1.6	1.7
Other ⁴	7.8	6.9	6.9	7.7	6.8	6.6
Brokers' commissions on sale of structures	1.3	1.4	1.6	1.3	1.4	1.5
Net purchases of used structures	-1.6	-1.5	-1.4	-1.5	-1.4	-1.3
Residential	245.3	280.7	282.5	236.3	262.1	255.8
New	217.9	248.5	249.0	209.1	230.6	224.0
New housing units	151.1	177.3	175.0	144.1	162.3	155.1
Permanent site	144.1	167.9	163.1	137.5	154.0	145.1
Single-family structures	133.3	153.8	144.5	127.1	140.5	127.7
Multifamily structures	10.8	14.1	18.6	10.4	13.5	17.6
Mobile homes	7.0	9.3	11.9	6.7	8.3	10.0
Improvements	66.4	71.0	73.9	64.5	68.0	68.8
Other ⁵ .....	.5	.3	.1	.4	.3	.1
Brokers' commissions on sale of structures	29.2	33.5	34.6	28.9	32.7	32.8
Net purchases of used structures	-1.8	-1.3	-1.1	-1.7	-1.2	-1.0
Residual				0	.2	-.1

1. Consists of office buildings, except those constructed at industrial sites and those constructed by utilities for their own use.

2. Consists of stores, restaurants, garages, service stations, warehouses, mobile structures, and other buildings used for commercial purposes.

3. Consists of hotels and motels, buildings used primarily for social and recreational activities, and buildings not elsewhere classified, such as passenger terminals, greenhouses, and animal hospitals.

4. Consists primarily of streets, dams and reservoirs, sewer and water facilities, parks, and airfields.

5. Consists primarily of dormitories, fraternity and sorority houses, and nurses' homes.

NOTE.—Chained (1992) dollar series are calculated as the product of the chain-type quantity index and the 1992 current-dollar value of the corresponding series, divided by 100. Because the formula for the chain-type quantity indexes uses weights of more than one period, the corresponding chained-dollar estimates are usually not additive. The residual line is the difference between the first line and the sum of the most detailed lines.

Table B.6.—Private Purchases of Producers' Durable Equipment by Type

	Billions of dollars			Billions of chained (1992) dollars		
	1993	1994	1995	1993	1994	1995
Private purchases of producers' durable equipment	433.4	494.0	546.1	434.0	490.9	541.4
Nonresidential equipment	427.0	487.0	538.8	427.6	484.1	534.5
Information processing and related equipment	141.8	160.4	183.2	147.1	170.4	201.1
Office, computing, and accounting machinery	56.5	63.3	73.9	63.7	77.6	100.5
Computers and peripheral equipment ¹	48.7	54.5	63.6	56.2	69.3	91.5
Other	7.8	8.8	10.3	7.7	8.6	9.9
Communication equipment	47.1	56.1	66.1	46.4	54.5	63.4
Instruments	22.0	23.3	25.6	21.5	22.4	24.2
Photocopy and related equipment	16.1	17.7	17.6	15.8	17.1	16.7
Industrial equipment	97.6	109.7	124.5	96.3	105.9	116.2
Fabricated metal products	9.2	9.8	10.0	9.2	9.6	9.5
Engines and turbines	4.4	5.1	4.7	4.4	5.0	4.4
Metalworking machinery	20.4	23.9	28.5	20.0	22.9	26.3
Special industry machinery, n.e.c.	25.2	29.1	34.8	24.7	27.9	32.3
General industrial, including materials handling, equipment	21.1	22.6	25.4	20.7	21.7	23.6
Electrical transmission, distribution, and industrial apparatus	17.2	19.2	21.1	17.1	18.8	20.0
Transportation and related equipment	99.2	117.1	124.9	97.5	111.7	118.1
Trucks, buses, and truck trailers	42.5	55.4	62.7	40.7	50.9	56.1
Autos	37.7	47.0	42.2	38.2	46.6	43.2
Aircraft	12.9	7.9	12.5	12.6	7.5	11.4
Ships and boats	2.1	1.6	1.1	2.0	1.5	1.0
Railroad equipment	4.0	5.3	6.4	3.9	5.1	5.8
Other equipment	92.2	104.6	112.5	90.6	100.5	105.4
Furniture and fixtures	23.6	26.2	28.6	23.3	25.0	26.6
Tractors	8.9	10.8	11.4	8.8	10.3	10.8
Agricultural machinery, except tractors	8.3	10.0	10.4	8.0	9.5	9.6
Construction machinery, except tractors	10.2	11.9	14.0	9.9	11.3	12.9
Mining and oilfield machinery	1.6	2.1	2.6	1.6	2.1	2.4
Service industry machinery	11.9	14.4	15.4	11.7	13.9	14.5
Electrical equipment, n.e.c.	11.4	10.6	10.8	11.2	10.4	10.4
Other	16.3	18.6	19.2	16.0	17.9	18.0
Less: Sale of equipment scrap, excluding autos	3.9	4.9	6.2	3.9	4.3	4.7
Residential equipment	6.4	7.0	7.2	6.4	6.8	7.0
Residual				-.1	-1.4	-5.4
Addenda:						
Private purchases of producers' durable equipment	433.4	494.0	546.1			
Less: Dealers' margin on used equipment	5.0	4.9	5.5			
Net purchases of used equipment from government .....	.9	1.2	1.3			
Plus: Net sales of used equipment	29.8	33.4	36.5			
Net exports of used equipment	1.0	1.7	1.4			
Sale of equipment scrap	3.9	5.5	6.3			
Equals: Private purchases of new equipment	462.3	528.5	583.4			

1. Includes new computers and peripheral equipment only.

NOTE.—Chained (1992) dollar series are calculated as the product of the chain-type quantity index and the 1992 current-dollar value of the corresponding series, divided by 100. Because the formula for the chain-type quantity indexes uses weights of more than one period, the corresponding chained-dollar estimates are usually not additive. The residual line is the difference between the first line and the sum of the most detailed lines.

n.e.c. Not elsewhere classified.

Table B.8.—Employment by Industry

[Thousands]

	Full-time and part-time employees			Persons engaged in production ¹			Full-time and part-time employees			Persons engaged in production ¹		
	1993	1994	1995	1993	1994	1995	1993	1994	1995	1993	1994	1995
Total	119,137	122,092	.....	115,722	119,424	.....					
Domestic industries	119,241	122,204	.....	115,826	119,536	.....					
Private industries	97,390	100,282	.....	97,483	101,112	.....					
Agriculture, forestry, and fishing	1,886	1,943	.....	2,985	3,309	.....					
Farms	857	842	.....	1,714	1,978	.....					
Agricultural services, forestry, and fishing	1,029	1,101	.....	1,271	1,331	.....					
Mining	612	605	.....	616	610	.....					
Metal mining	50	49	.....	50	49	.....					
Coal mining	113	113	.....	111	111	.....					
Oil and gas extraction	345	338	.....	350	346	.....					
Nonmetallic minerals, except fuels	104	105	.....	105	104	.....					
Construction	4,854	5,198	.....	6,126	6,504	.....					
Manufacturing	18,173	18,429	.....	18,106	18,441	.....					
Durable goods	10,284	10,503	.....	10,336	10,576	.....					
Lumber and wood products	731	775	.....			.....		
Furniture and fixtures	490	505	.....	498	515	.....					
Stone, clay, and glass products	521	535	.....	522	542	.....					
Primary metal industries	681	698	.....	675	694	.....					
Fabricated metal products	1,343	1,394	.....	1,334	1,388	.....					
Industrial machinery and equipment	1,938	1,998	.....	1,935	1,994	.....					
Electronic and other electric equipment	1,530	1,576	.....	1,515	1,567	.....					
Motor vehicles and equipment	838	899	.....	834	894	.....					
Other transportation equipment	920	852	.....	920	850	.....					
Instruments and related products	897	866	.....	887	859	.....					
Miscellaneous manufacturing industries	395	405	.....	428	441	.....					
Nondurable goods	7,889	7,926	.....	7,770	7,865	.....					
Food and kindred products	1,678	1,684	.....	1,635	1,655	.....					
Tobacco products	45	42	.....	44	42	.....					
Textile mill products	680	681	.....	671	676	.....					
Apparel and other textile products	996	982	.....	980	997	.....					
Paper and allied products	693	694	.....	686	687	.....					
Printing and publishing	1,539	1,565	.....	1,519	1,550	.....					
Chemicals and allied products	1,077	1,060	.....	1,064	1,043	.....					
Petroleum and coal products	150	148	.....	149	146	.....					
Rubber and miscellaneous plastics products	911	954	.....	902	951	.....					
Leather and leather products	120	116	.....	120	118	.....					
Transportation and public utilities	5,870	6,053	.....	5,833	6,163	.....					
Transportation	3,657	3,838	.....	3,719	3,974	.....					
Railroad transportation	238	235	.....	223	225	.....					
Local and interurban passenger transit	386	408	.....	414	445	.....					
Trucking and warehousing	1,731	1,845	.....	1,833	2,000	.....					
Water transportation	174	179	.....	169	177	.....					
Transportation by air	734	749	.....	685	712	.....					
Pipelines, except natural gas	19	17	.....	19	18	.....					
Public utilities .....			.....			.....
Government .....			.....			.....
Federal .....			.....			.....
General government .....			.....			.....
Civilian .....			.....			.....
Military ³ .....			.....			.....
Government enterprises .....			.....			.....
State and local .....			.....			.....
General government .....			.....			.....
Education .....			.....			.....
Other .....			.....			.....
Government enterprises .....			.....			.....
Rest of the world .....			.....			.....
								

1. Equals the number of full-time equivalent employees plus the number of self-employed persons. Unpaid family workers are not included.

2. Consists of museums, botanical, zoological gardens; engineering and management services; and services, not elsewhere classified.

3. Includes Coast Guard.

NOTE.—Estimates in this table are based on the 1987 Standard Industrial Classification (SIC).

Table B.10.—Farm Sector Output, Gross Product, and National Income

	Billions of dollars			Billions of chained (1992) dollars		
	1993	1994	1995	1993	1994	1995
Farm output	186.0	201.6	.....	181.9	197.8	.....
Cash receipts from farm marketings	181.3	179.2	.....	177.6	176.7	.....
Crops	91.2	91.1	.....	90.5	87.1	.....
Livestock	90.0	88.1	.....	87.1	89.7	.....
Farm housing	5.5	5.7	.....	5.1	4.9	.....
Farm products consumed on farms .....	.5	.5	.....	.5	.5	.....
Other farm income	4.8	4.7	.....	4.8	4.3	.....
Change in farm inventories	-6.2	11.5	-2.6	-7.3	12.3	-5.2
Crops	-7.3	10.1	.....	-7.7	9.5	.....
Livestock	1.1	1.4	.....	1.0	1.5	.....
Less: Intermediate goods and services purchased	113.9	119.3	.....	111.2	114.3	.....
Intermediate goods and services, other than rent	100.9	105.5	.....	98.6	100.6	.....
Rent paid to nonoperator landlords	12.9	13.8	.....	12.6	13.7	.....
Equals: Gross farm product	72.1	82.3	78.6	70.7	83.7	75.3
Less: Consumption of fixed capital	23.4	23.9	23.7	.....	.....	.....
Equals: Net farm product	48.7	58.4	54.9	.....	.....	.....
Less: Indirect business tax nontax liability	4.6	5.0	.....	.....	.....	.....
Plus: Subsidies to operators	11.3	6.6	.....	.....	.....	.....
Equals: Farm national income	55.4	60.0	.....	.....	.....	.....
Compensation of employees	14.3	14.6	.....	.....	.....	.....
Wage and salary accruals	12.0	12.3	.....	.....	.....	.....
Supplements to wages and salaries	2.3	2.2	.....	.....	.....	.....
Proprietors' income and corporate profits with IVA and CCAj	32.7	36.4	27.9	.....	.....	.....
Proprietors' income	31.1	34.3	27.9	.....	.....	.....
Corporate profits	1.7	2.1	.....	.....	.....	.....
Net interest	8.3	9.1	.....	.....	.....	.....

Note.—Chained (1992) dollar series are calculated as the product of the chain-type quantity index and the 1992 current-dollar value of the corresponding series, divided by 100. Because the formula for the chain-type quantity indexes uses weights of more than one period, the corresponding chained-dollar estimates are usually not additive.
 CCAj Capital consumption adjustment
 IVA Inventory valuation adjustment

Table B.11.—Housing Sector Output, Gross Product, and National Income

	Billions of dollars			Billions of chained (1992) dollars		
	1993	1994	1995	1993	1994	1995
Housing output ¹	649.0	680.7	716.0	631.5	644.0	656.8
Nonfarm housing	643.4	675.0	710.1	626.4	639.1	652.1
Owner-occupied	481.1	502.6	528.5	468.2	475.4	483.7
Tenant-occupied	162.3	172.5	181.6	158.3	163.7	168.3
Farm housing	5.5	5.7	5.8	5.1	4.9	4.8
Less: Intermediate goods and services consumed	86.8	83.1	86.7	84.8	78.8	79.3
Equals: Gross housing product	562.1	597.6	629.3	546.8	565.1	577.5
Nonfarm housing	557.6	593.1	624.6	542.6	561.3	573.8
Owner-occupied	415.2	438.5	460.8	403.7	414.7	422.2
Tenant-occupied	142.4	154.6	163.8	138.9	146.6	151.6
Farm housing	4.5	4.5	4.7	4.2	3.9	3.8
Less: Consumption of fixed capital	104.0	112.4	106.6	.....	.....	.....
Capital consumption allowances	52.9	60.3	.....	.....	.....	.....
Less: CCAj	-51.1	-52.1	.....	.....	.....	.....
Equals: Net housing product	458.1	485.2	522.7	.....	.....	.....
Less: Indirect business tax and nontax liability plus business transfer payments	114.0	120.6	.....	.....	.....	.....
Plus: Subsidies less current surplus of government enterprises	18.8	20.6	.....	.....	.....	.....
Equals: Housing national income	362.9	385.2	.....	.....	.....	.....
Compensation of employees	7.3	7.7	.....	.....	.....	.....
Proprietors' income with IVA and CCAj	18.3	20.8	.....	.....	.....	.....
Rental income of persons with CCAj	74.7	89.4	.....	.....	.....	.....
Corporate profits with IVA and CCAj	3.5	3.9	.....	.....	.....	.....
Net interest	259.0	263.4	.....	.....	.....	.....

1. Equals personal consumption expenditures for housing less expenditures for other housing as shown in table B.4.
 CCAj Capital consumption adjustment
 IVA Inventory valuation adjustment

Table C.1.—Historical Measures of Real Gross Domestic Product, Real Gross National Product, and Real Gross Domestic Purchases—Continued
 [Quarterly data are seasonally adjusted at annual rates]

Year and quarter	Billions of chained (1992) dollars			Percent change from preceding period		Chain-type price indexes		Implicit price deflators		Percent change from preceding period			
	Gross domestic product	Final sales of domestic product	Gross national product	Gross domestic product	Final sales of domestic product	Gross domestic product	Gross domestic purchases	Gross domestic product	Gross national product	Chain-type price index		Implicit price deflators	
										Gross domestic product	Gross domestic purchases	Gross domestic product	Gross national product
1989: I	6,011.0	5,970.0	6,023.1	4.0	2.2	88.44	88.47	88.45	88.48	4.5	4.8	4.7	4.7
II	6,055.6	6,010.9	6,065.5	3.0	2.8	89.40	89.52	89.39	89.42	4.4	4.8	4.3	4.3
III	6,088.0	6,063.1	6,101.8	2.2	3.5	90.13	90.14	90.13	90.16	3.3	2.8	3.3	3.3
IV	6,093.5	6,070.8	6,112.3	.4	.5	90.91	90.98	90.88	90.91	3.5	3.8	3.4	3.4
1990: I	6,152.6	6,144.6	6,172.8	3.9	5.0	92.01	92.17	92.00	92.04	4.9	5.4	5.0	5.1
II	6,171.6	6,127.5	6,188.0	1.2	-1.1	93.20	93.14	93.18	93.21	5.2	4.2	5.2	5.2
III	6,142.1	6,126.6	6,155.7	-1.9	-1	94.19	94.32	94.14	94.17	4.3	5.2	4.2	4.2
IV	6,079.0	6,108.1	6,111.3	-4.0	-1.2	95.14	95.68	95.11	95.13	4.1	5.9	4.2	4.2
1991: I	6,047.5	6,065.4	6,074.3	-2.1	-2.8	96.26	96.42	96.27	96.29	4.8	3.1	5.0	4.9
II	6,074.7	6,095.9	6,086.4	1.8	2.0	97.02	96.95	97.00	97.01	3.2	2.2	3.1	3.1
III	6,090.1	6,085.4	6,099.2	1.0	-7	97.70	97.58	97.70	97.71	2.6	2.6	2.9	2.9
IV	6,105.3	6,083.8	6,119.5	1.0	-1	98.30	98.27	98.31	98.32	2.5	2.9	2.5	2.5
1992: I	6,175.7	6,175.8	6,192.0	4.7	6.2	99.14	99.04	99.13	99.13	3.4	3.2	3.4	3.4
II	6,214.2	6,203.8	6,225.2	2.5	1.8	99.81	99.76	99.79	99.79	2.8	2.9	2.7	2.7
III	6,260.7	6,249.5	6,270.3	3.0	3.0	100.17	100.28	100.17	100.17	1.4	2.1	1.5	1.5
IV	6,327.1	6,320.7	6,334.6	4.3	4.6	100.88	100.92	100.88	100.88	2.8	2.6	2.9	2.9
1993: I	6,326.2	6,307.1	6,342.3	-1	-9	101.83	101.70	101.84	101.83	3.8	3.1	3.8	3.8
II	6,356.3	6,334.5	6,366.7	1.9	1.7	102.39	102.29	102.36	102.35	2.2	2.4	2.1	2.1
III	6,393.2	6,371.3	6,406.0	2.3	2.3	102.83	102.63	102.83	102.83	1.8	1.3	1.9	1.9
IV	6,468.7	6,449.2	6,472.2	4.8	5.0	103.42	103.20	103.40	103.39	2.3	2.2	2.2	2.2
1994: I	6,508.5	6,467.7	6,514.0	2.5	1.2	104.15	103.80	104.11	104.10	2.9	2.4	2.8	2.8
II	6,587.4	6,514.9	6,586.1	4.9	3.0	104.63	104.38	104.60	104.59	1.9	2.3	1.9	1.9
III	6,644.8	6,582.1	6,640.0	3.5	4.2	105.25	105.15	105.24	105.23	2.4	3.0	2.5	2.5
IV	6,692.9	6,638.1	6,682.5	2.9	3.5	105.80	105.67	105.83	105.82	2.1	2.0	2.3	2.3
1995: I	6,700.2	6,647.4	6,698.2	.4	.6	106.68	106.41	106.71	106.70	3.3	2.8	3.4	3.4
II	6,712.7	6,682.4	6,711.0	.7	2.1	107.31	107.15	107.33	107.32	2.4	2.8	2.4	2.4
III	6,775.8	6,741.4	6,761.3	3.8	3.6	107.86	107.59	107.88	107.87	2.1	1.6	2.1	2.1
IV	6,780.2	6,764.2	6,775.0	.3	1.4	108.42	108.10	108.41	108.40	2.1	1.9	2.0	2.0
1996: I	6,813.8	6,815.2	6,814.4	2.0	3.0	109.03	108.71	109.00	108.98	2.3	2.3	2.2	2.2
II	6,892.1	6,884.7	6,886.1	4.7	4.1	109.62	109.27	109.47	109.46	2.2	2.1	1.8	1.8
III	6,928.1	6,892.7	6,913.3	2.1	.5	110.17	109.80	109.93	109.92	2.0	1.9	1.7	1.7
IV	6,993.3	6,975.9	6,985.0	3.8	4.9	110.69	110.50	110.34	110.32	1.9	2.6	1.5	1.5
1997: I	7,094.4	7,045.8	7,070.4	5.9	4.1	111.43	111.09	110.95	110.93	2.7	2.2	2.2	2.2

Table C.5.—Chain-Type Price Index for Gross Domestic Purchases
[Average annual percent change]

Table with 26 columns (Terminal year, Initial year 1970-1995) and 26 rows (1996-1971). Data represents average annual percent change for gross domestic purchases.

Table C.6.—Real Final Sales of Domestic Product
[Average annual percent change, based on chained (1992) dollar estimates]

Table with 26 columns (Terminal year, Initial year 1970-1995) and 26 rows (1996-1971). Data represents average annual percent change for real final sales of domestic product.

Table C.7.—Chain-Type Price Index for Final Sales of Domestic Product
[Average annual percent change]

Table with 26 columns (Terminal year, Initial year 1970-1995) and 26 rows (1996-1971). Data represents average annual percent change for final sales of domestic product.

Table D.1.—Domestic Perspectives—Continued

	1995	1996	1996									1997				
			Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Construction (seasonally adjusted at annual rates) ⁴																
Total new private construction put in place (billions of dollars)	410.2	427.4	424.2	418.1	423.1	419.3	426.7	428.4	437.0	446.1	445.4	446.6	455.6	453.7	450.2	.....
Residential	236.6	246.5	248.0	247.5	246.9	244.9	246.0	246.4	246.9	249.2	250.3	250.1	255.4	257.8	258.2	.....
Nonresidential	133.9	140.7	135.5	130.9	137.7	136.2	140.7	142.2	150.2	154.4	149.8	154.3	157.2	154.9	150.9	.....
Housing starts (thousands of units):																
Total	1,354	1,477	1,522	1,476	1,488	1,492	1,515	1,470	1,407	1,486	1,353	1,375	1,554	1,479	1,468	1397
1-unit structures	1,076	1,161	1,215	1,142	1,214	1,164	1,222	1,148	1,104	1,133	1,024	1,125	1,237	1,142	1,116	1088
New 1-family houses sold (thousands of units)	667	757	741	732	732	782	814	768	706	788	794	822	820	836	772	.....
Manufacturing and trade, inventories and sales (millions of dollars, seasonally adjusted) ⁴																
Sales:																
Total manufacturing and trade	8,185,445	8,586,876	711,826	717,345	712,919	721,396	718,782	724,103	727,725	730,646	728,760	737,464	747,790	745,460	747,510	.....
Manufacturing	3,588,367	3,733,710	309,477	313,247	310,052	313,851	313,854	315,971	316,461	319,296	316,306	319,725	322,967	322,923	326,883	.....
Merchant wholesalers	2,270,542	2,413,337	199,853	200,038	200,078	204,254	201,892	203,419	204,987	205,561	205,560	207,506	211,801	210,195	210,187	.....
Retail trade	2,326,536	2,439,829	202,496	204,060	202,789	203,291	203,036	204,713	206,277	205,789	206,894	210,233	213,022	212,342	210,440	.....
Inventories:																
Total manufacturing and trade	985,905	1,004,425	993,660	992,113	992,218	996,796	999,357	1,000,431	1,004,990	1,004,540	1,004,425	1,007,618	1,011,899	1,013,376	1,016,522	.....
Manufacturing	429,089	434,434	431,352	430,298	429,802	430,543	431,647	432,674	434,038	435,200	434,434	435,743	437,873	438,560	441,124	.....
Merchant wholesalers	253,066	255,808	257,612	256,601	256,739	256,467	256,598	254,788	255,671	255,850	255,808	257,895	258,088	259,389	257,639	.....
Retail trade	303,750	314,183	304,696	305,214	305,677	309,786	311,112	312,969	315,281	313,490	314,183	313,980	315,938	315,427	317,759	.....
Industrial production indexes and capacity utilization rates (seasonally adjusted) ²																
Industrial production indexes, 1992=100:																
Total	112.1	115.2	114.3	114.8	115.5	115.5	115.8	116.0	116.2	117.2	117.7	117.8	118.4	118.8	119.2	119.7
By industry:																
Durable manufactures	119.7	125.7	124.6	125.3	126.3	126.9	127.5	127.2	127.1	128.4	128.8	129.5	130.8	131.7	132.4	133.4
Nondurable manufactures	106.2	106.3	105.2	105.5	105.9	106.4	106.2	106.9	107.4	107.9	108.8	108.5	108.6	108.7	108.5	108.8
By market category:																
Consumer goods	108.9	110.4	109.8	110.0	110.8	110.7	110.1	110.5	110.8	112.3	112.7	111.7	111.6	112.2	111.7	111.6
Capacity utilization rates (percent):																
Total industry	83.8	83.1	83.1	83.2	83.5	83.2	83.2	83.1	83.0	83.4	83.5	83.3	83.5	83.6	83.6	83.7
Manufacturing	83.1	82.1	82.0	82.0	82.3	82.4	82.3	82.1	82.0	82.4	82.5	82.4	82.6	82.7	82.6	82.7
Credit market borrowing (billions of dollars, seasonally adjusted at annual rates) ²																
All sectors, by instrument:																
Total	1,236.3	1,350.3	.....	1,440.8	.....	.....	1,315.9	.....	.....	1,378.2	.....	.....	1,124.7	.....	.....	.....
Open market paper	74.3	102.6	.....	126.3	.....	.....	107.6	.....	.....	136.8	.....	.....	203.4	.....	.....	.....
U.S. government securities	348.5	376.1	.....	358.4	.....	.....	401.7	.....	.....	366.5	.....	.....	206.2	.....	.....	.....
Municipal securities	-44.2	1.5	.....	37.7	.....	.....	-76.2	.....	.....	63.5	.....	.....	26.8	.....	.....	.....
Corporate and foreign bonds	307.2	273.6	.....	287.4	.....	.....	248.2	.....	.....	302.4	.....	.....	142.4	.....	.....	.....
Bank loans, n.e.c.	113.5	93.8	.....	113.6	.....	.....	143.1	.....	.....	43.8	.....	.....	135.4	.....	.....	.....
Other loans and advances	61.6	66.7	.....	76.1	.....	.....	116.5	.....	.....	45.8	.....	.....	17.9	.....	.....	.....
Mortgages	233.8	342.8	.....	350.1	.....	.....	280.9	.....	.....	354.5	.....	.....	312.4	.....	.....	.....
Consumer credit	141.6	93.2	.....	91.2	.....	.....	94.2	.....	.....	65.0	.....	.....	80.2	.....	.....	.....

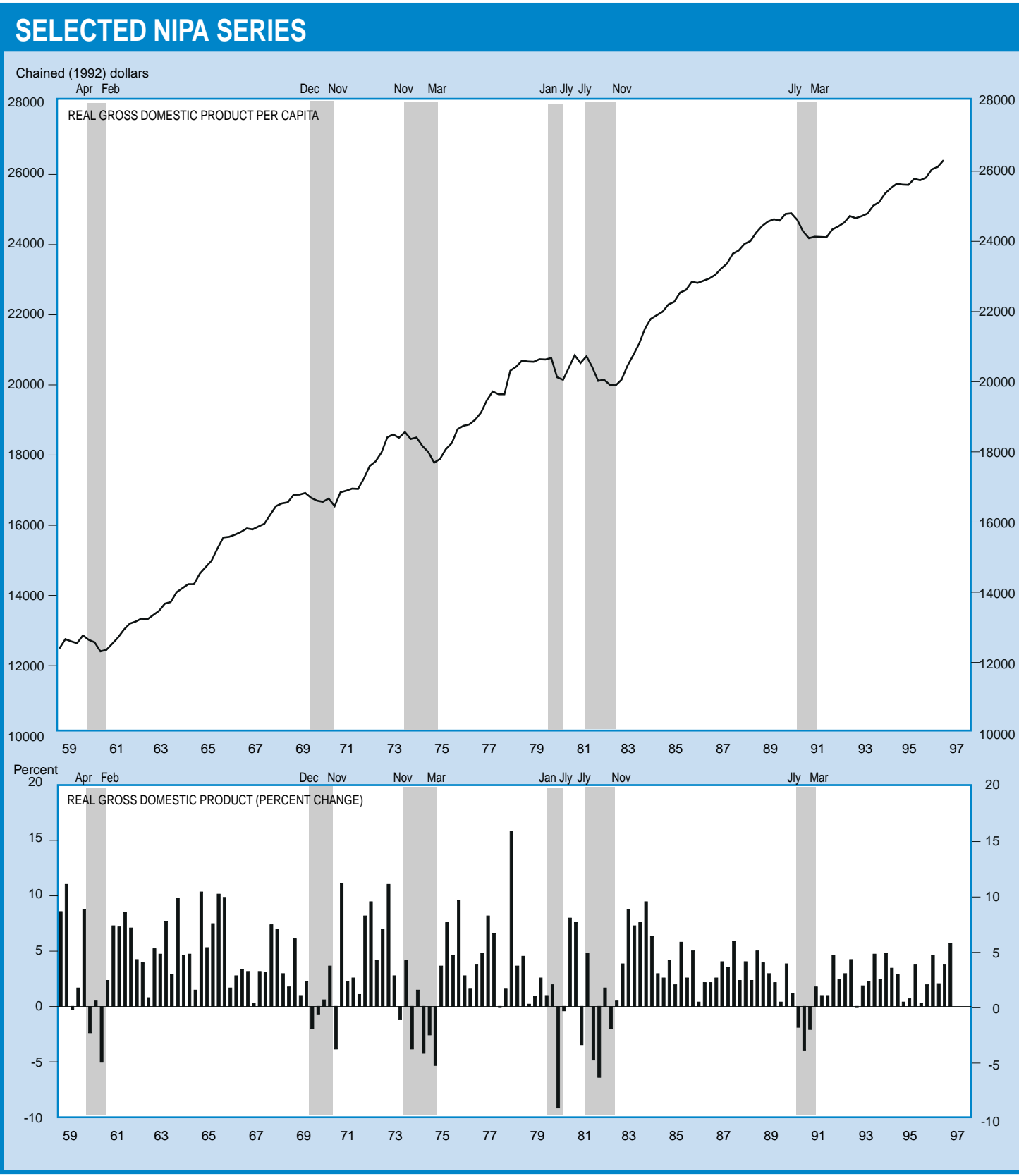
Sources:

1. Bureau of Labor Statistics.
2. Federal Reserve Board.

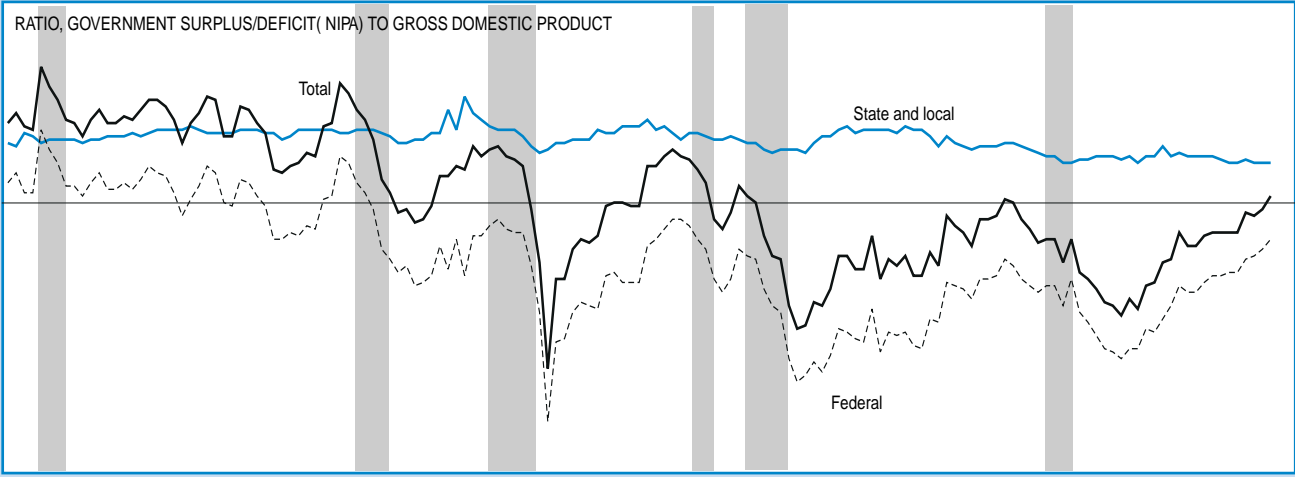
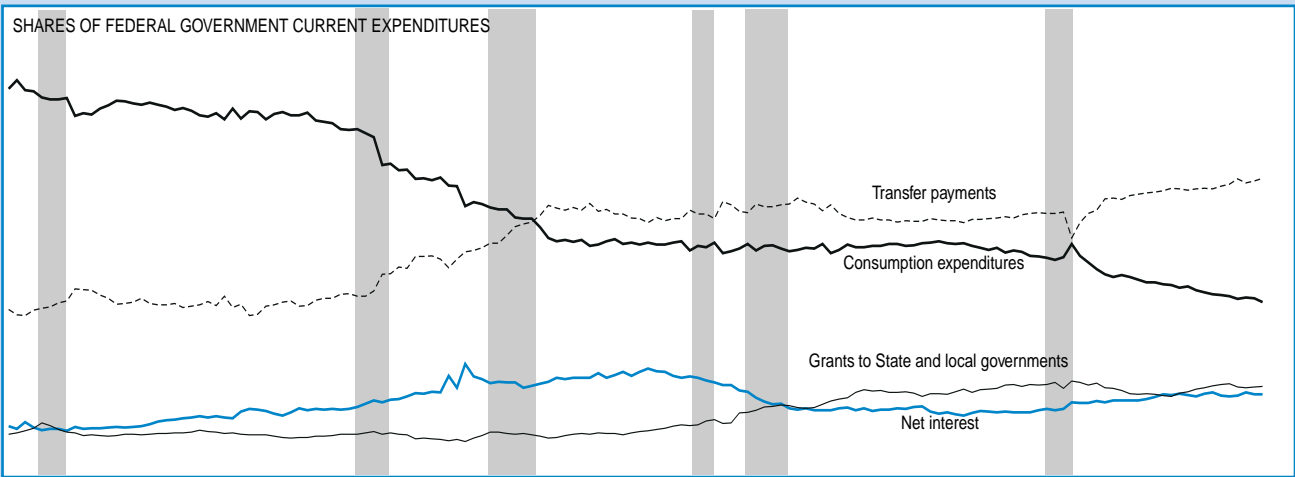
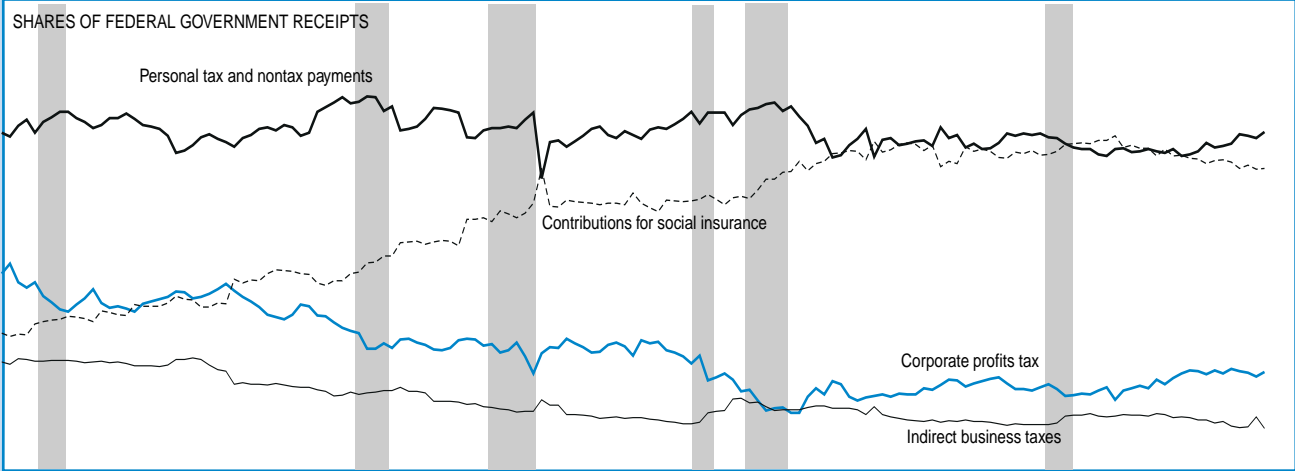
3. Standard and Poor's, Inc.
4. Bureau of the Census.
n.e.c. Not elsewhere classified.

E. Charts

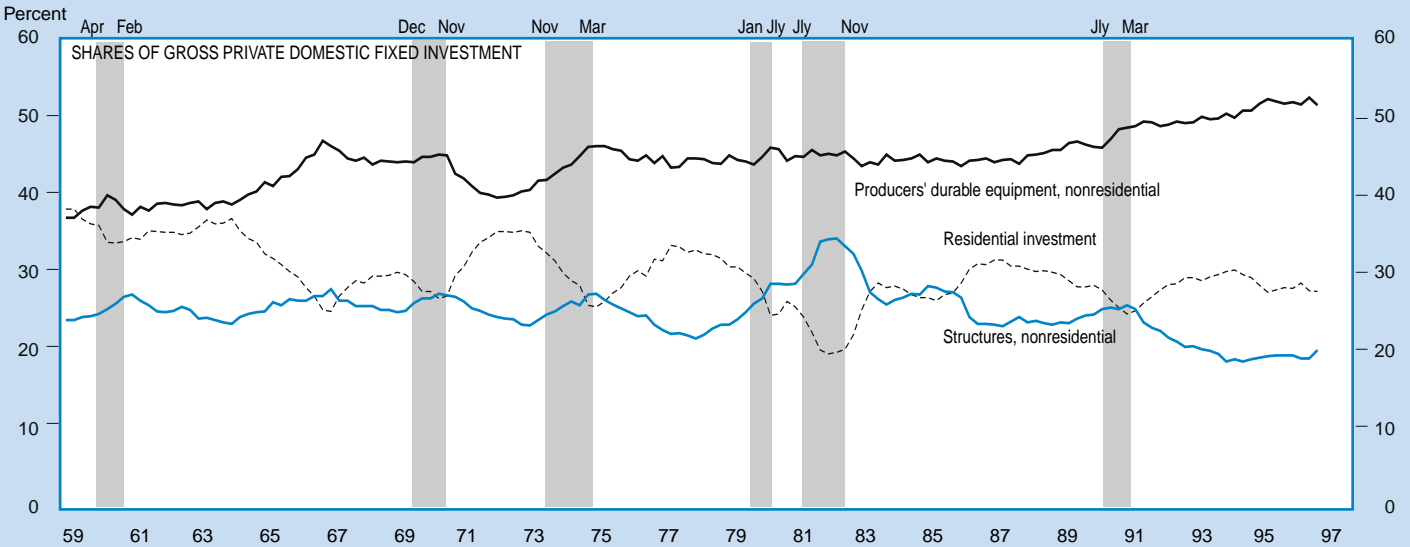
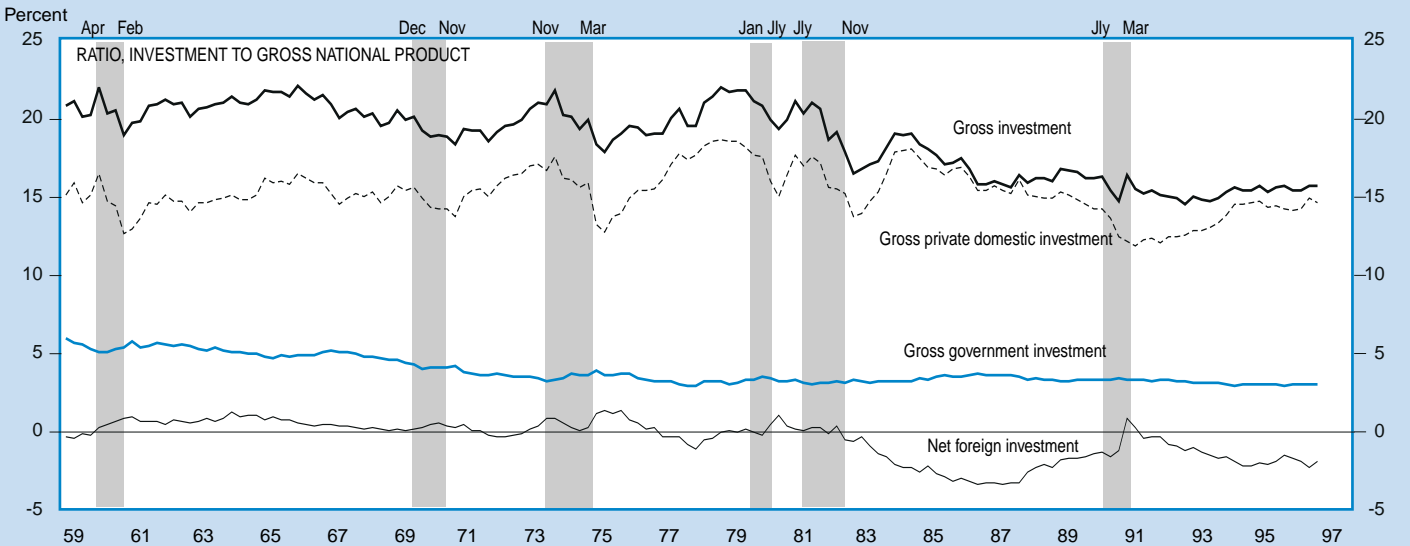
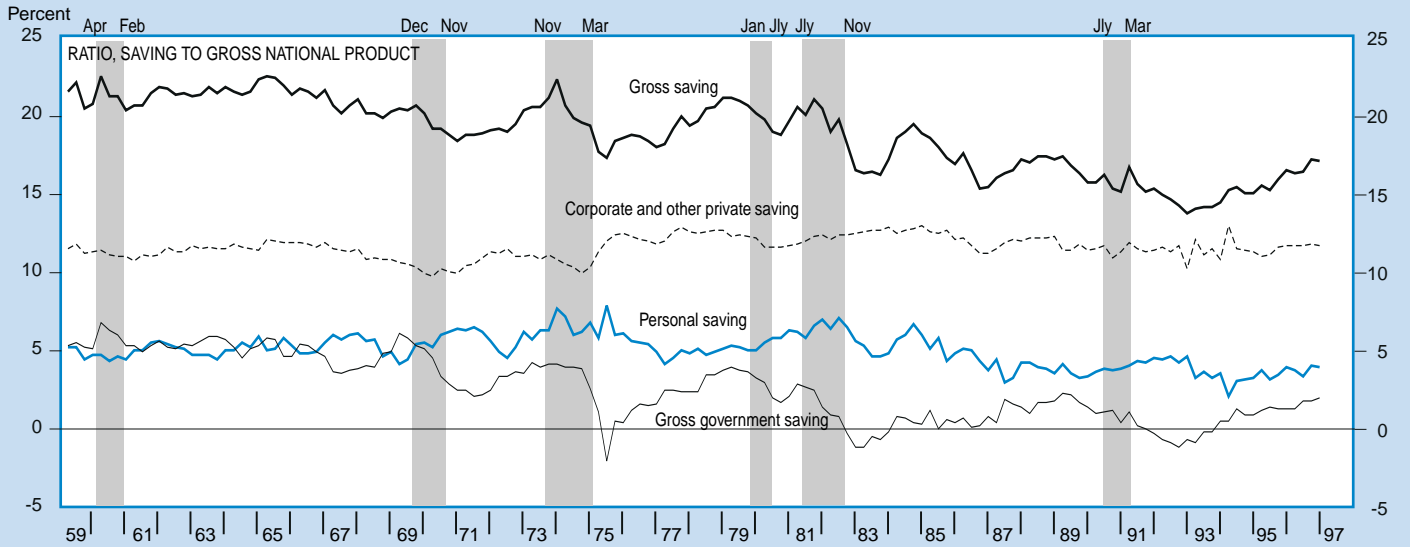
Percent changes shown in this section are based on quarter-to-quarter changes and are expressed at seasonally adjusted annual rates; likewise, levels of series are expressed at seasonally adjusted annual rates as appropriate.



SELECTED NIPA SERIES

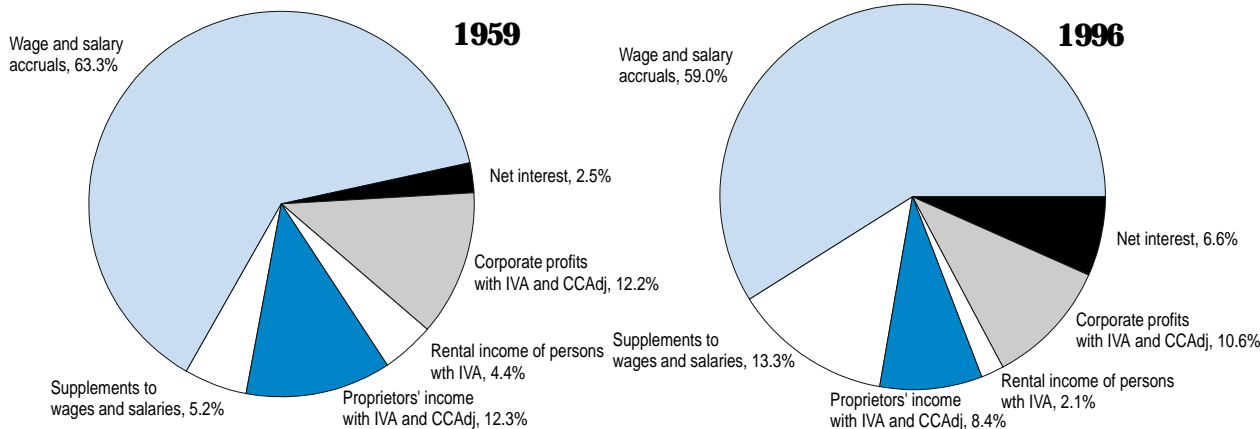


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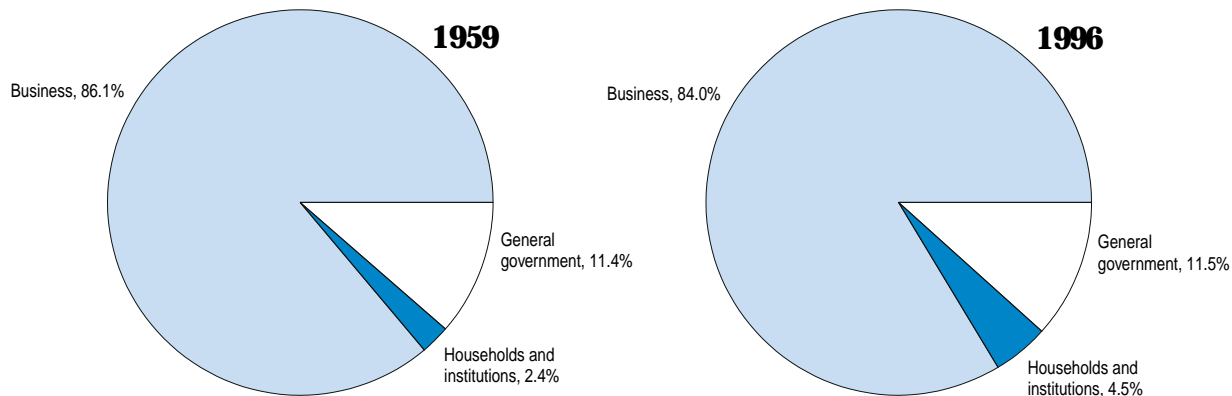


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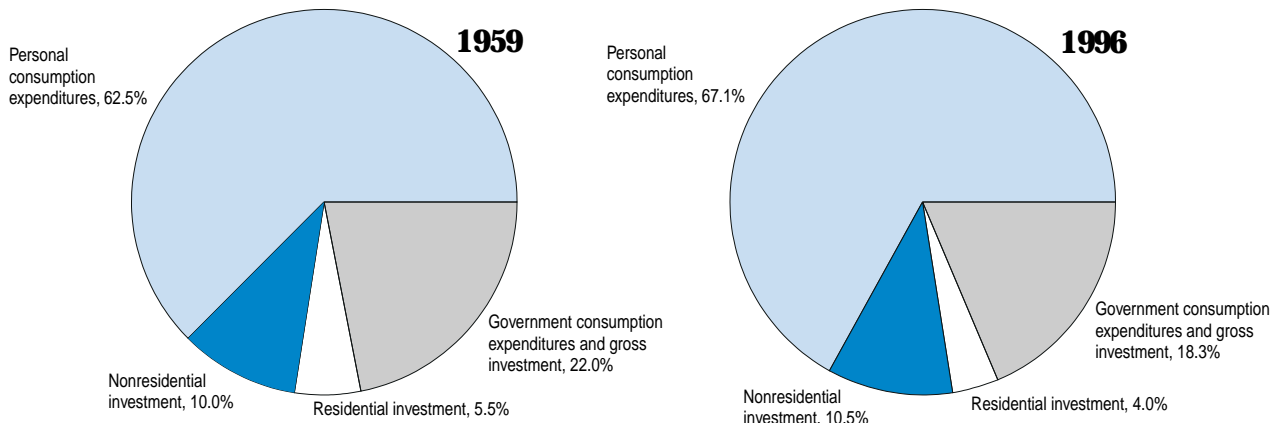
SHARES OF NATIONAL INCOME



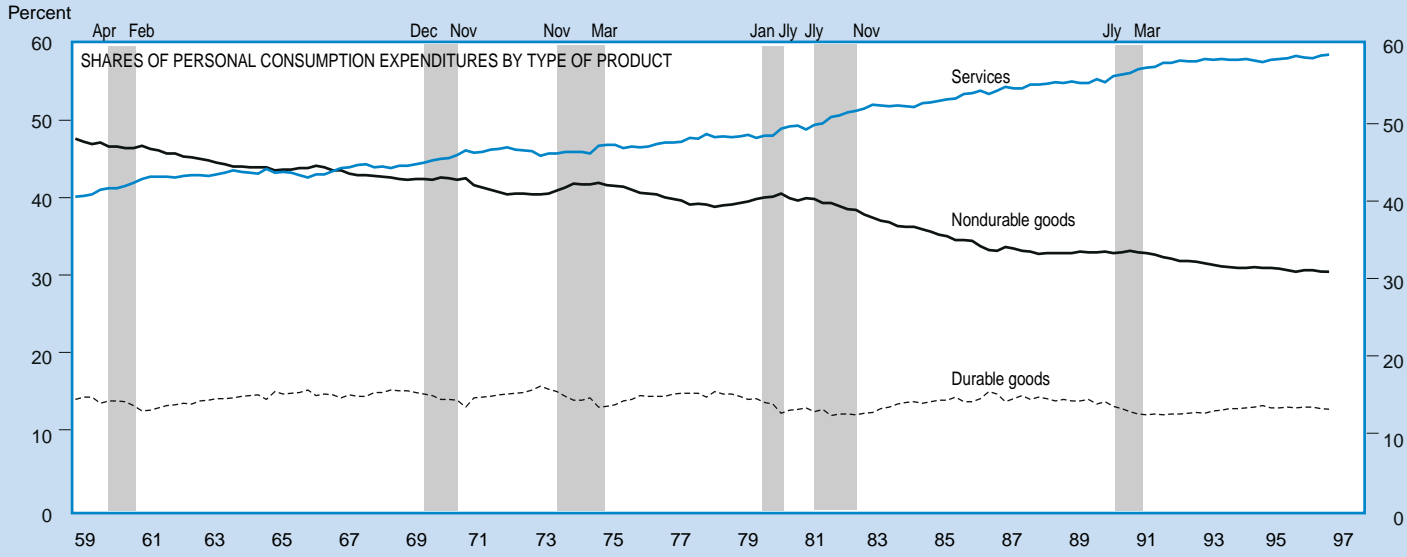
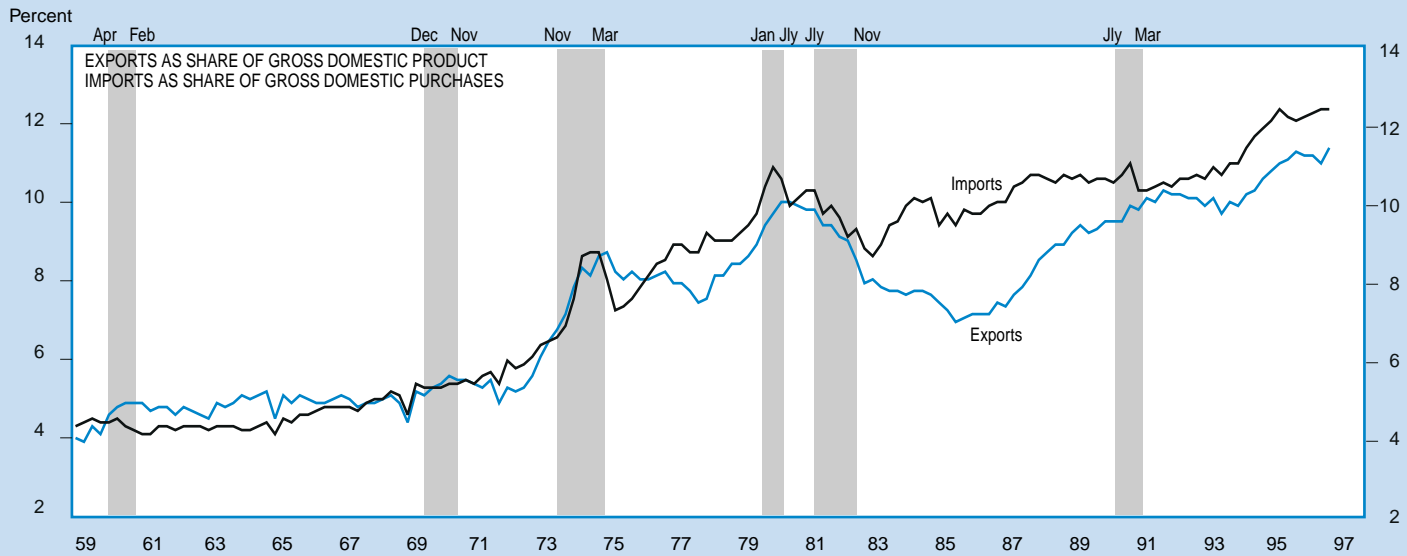
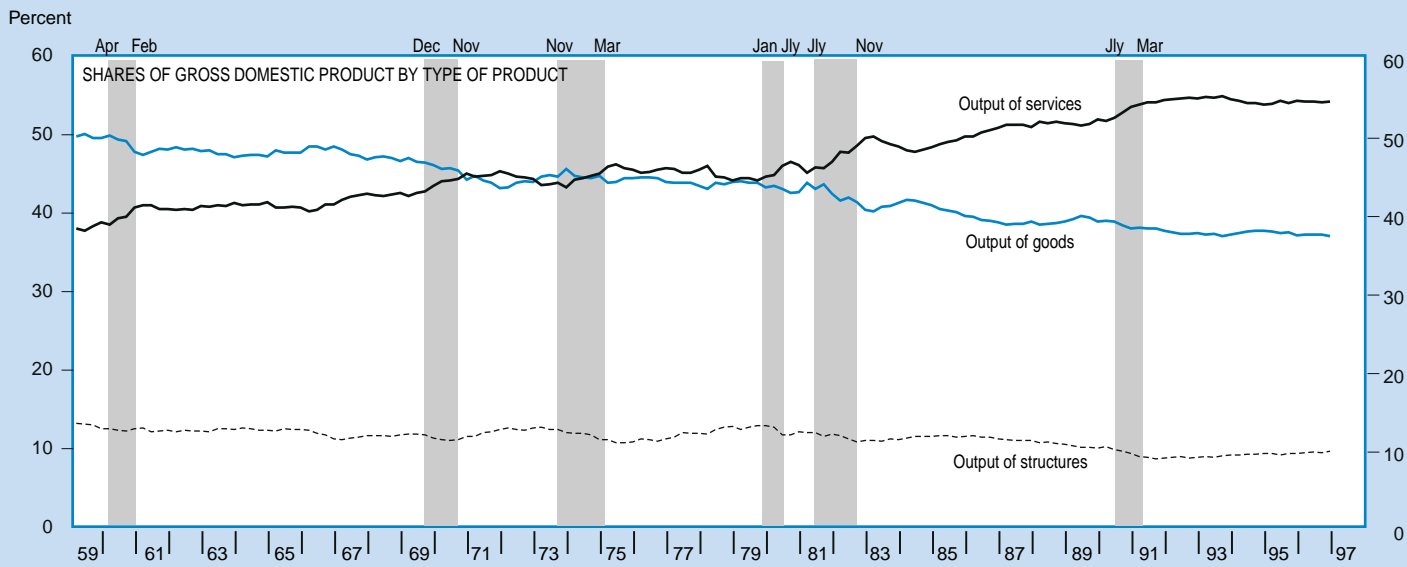
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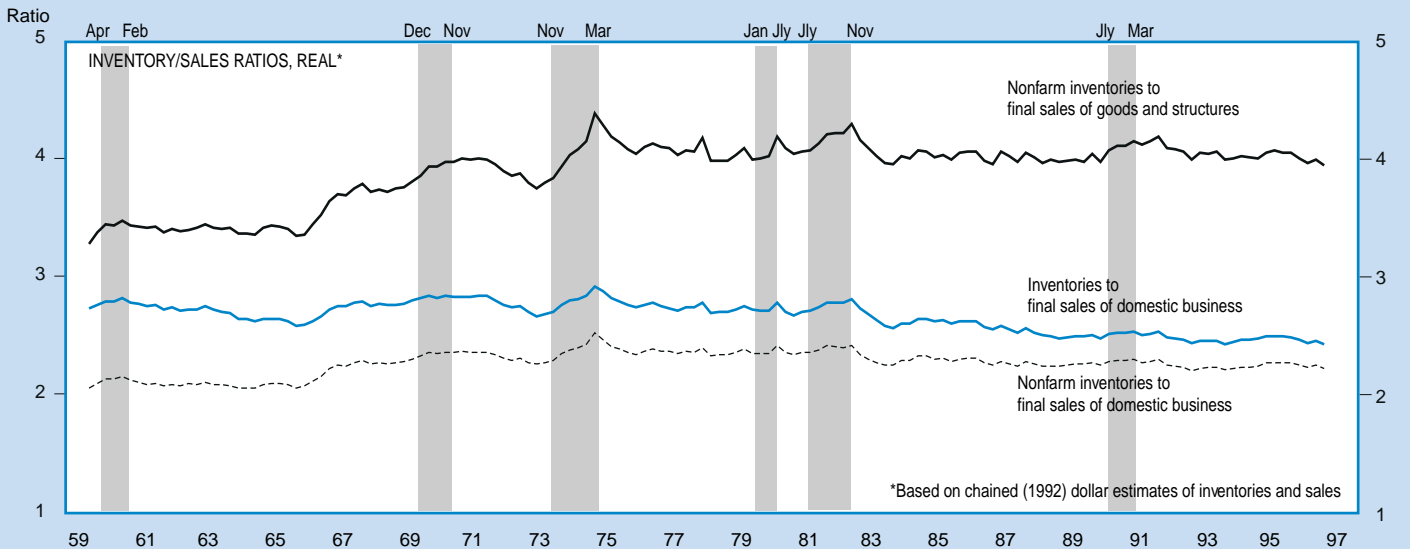
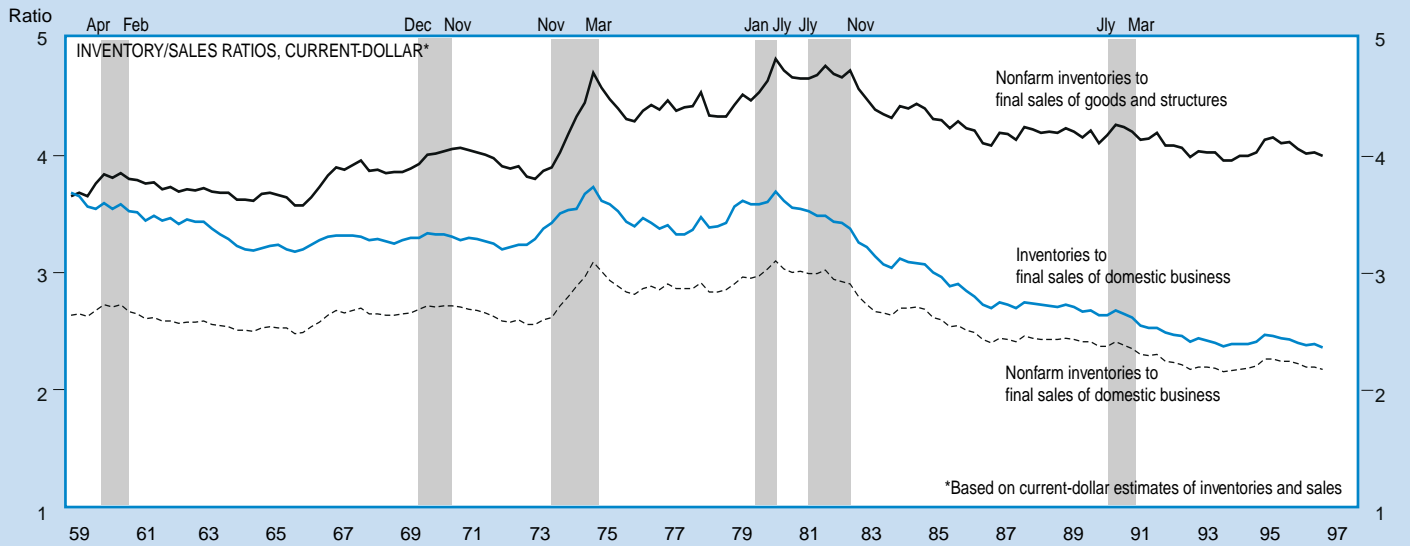
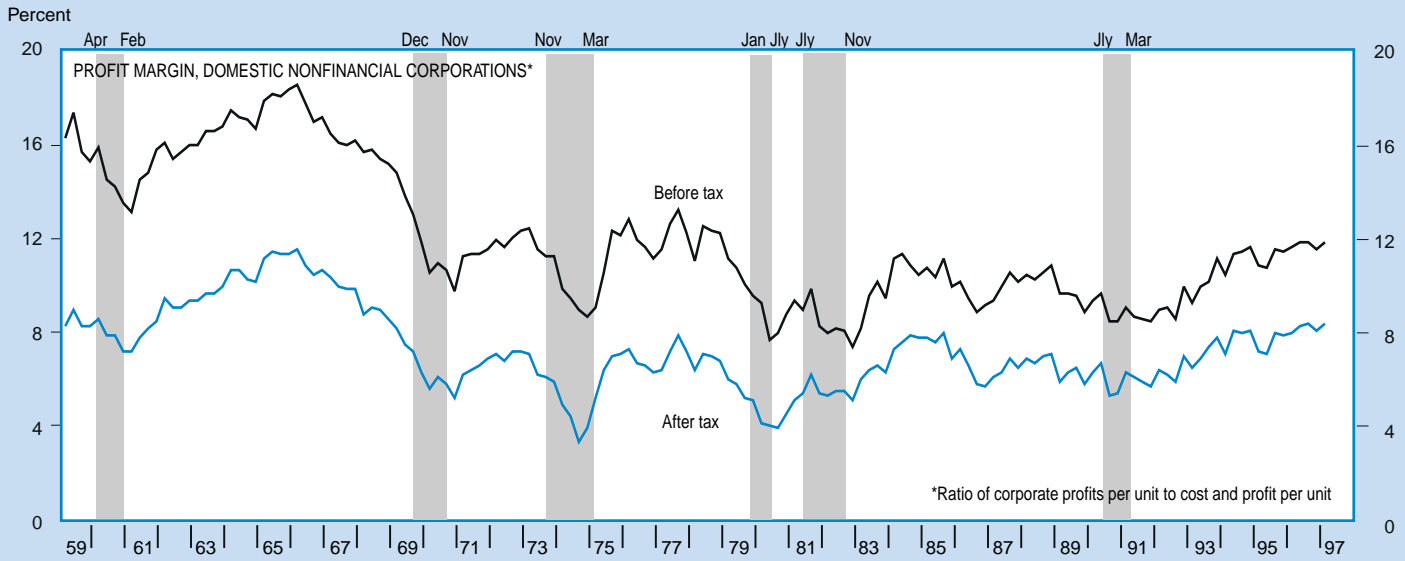
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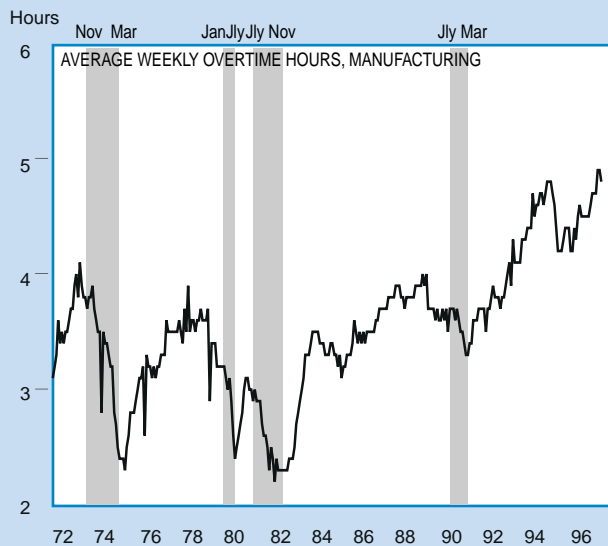
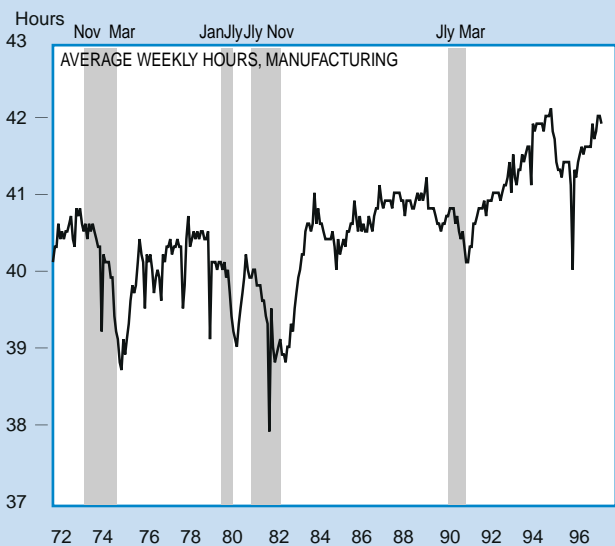
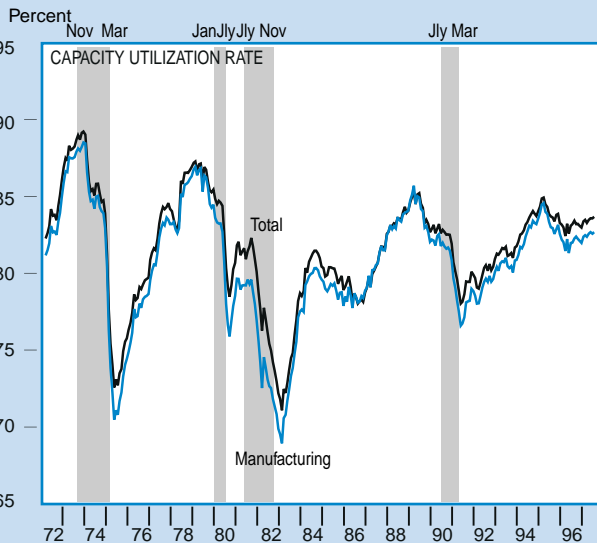
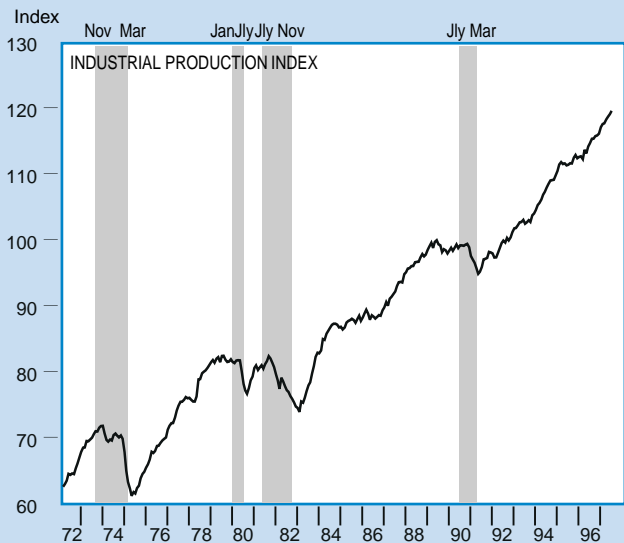
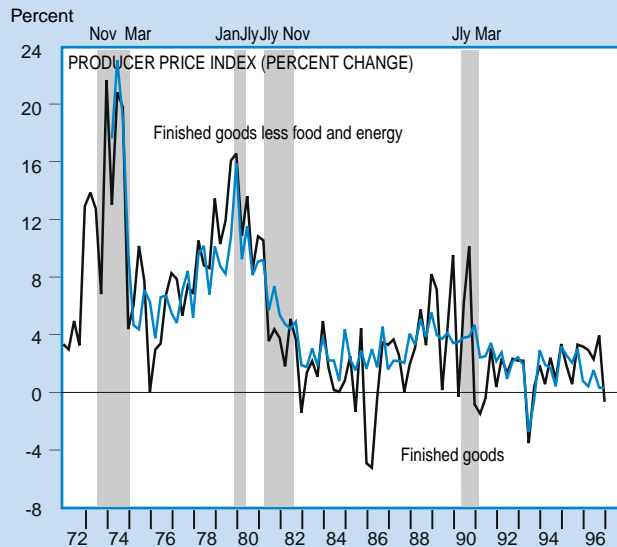
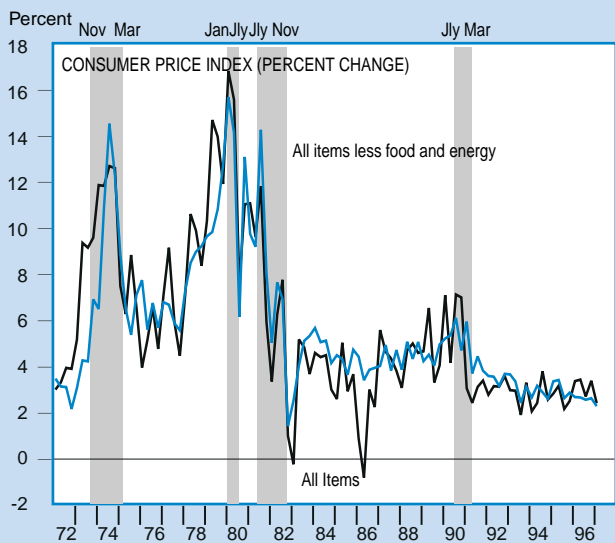
SELECTED NIPA SERIES



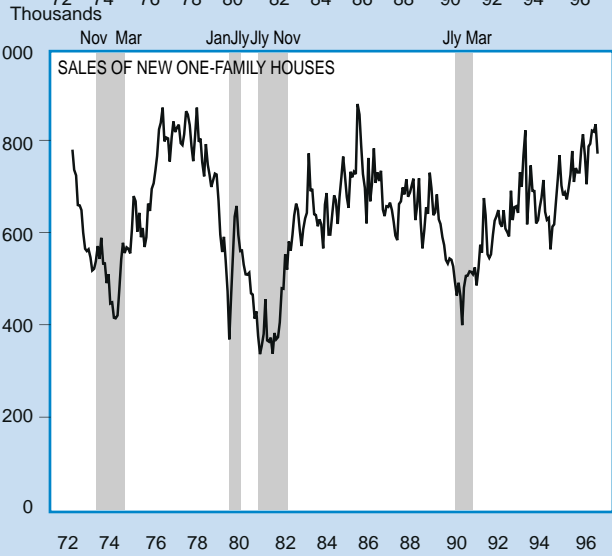
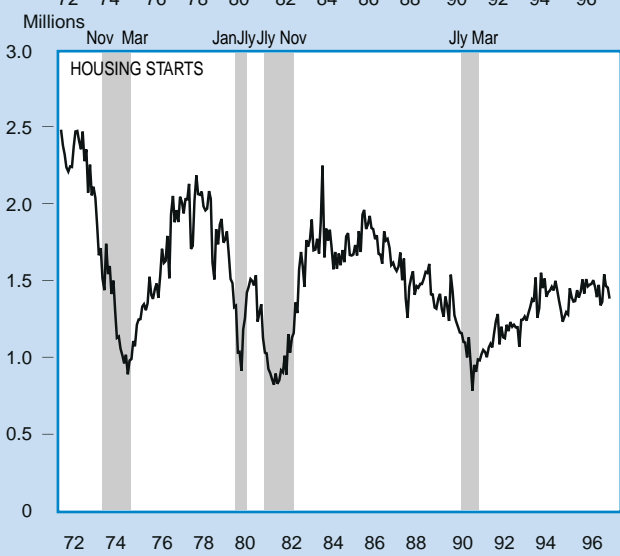
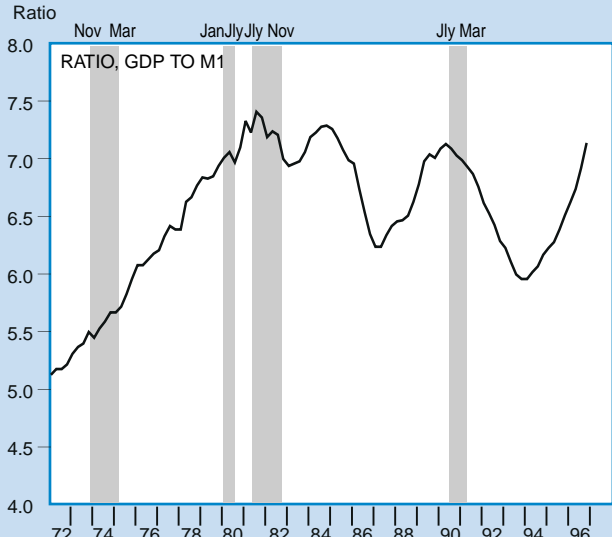
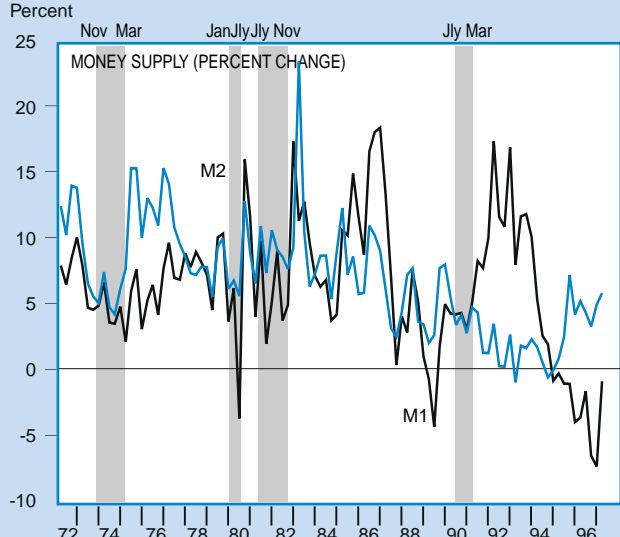
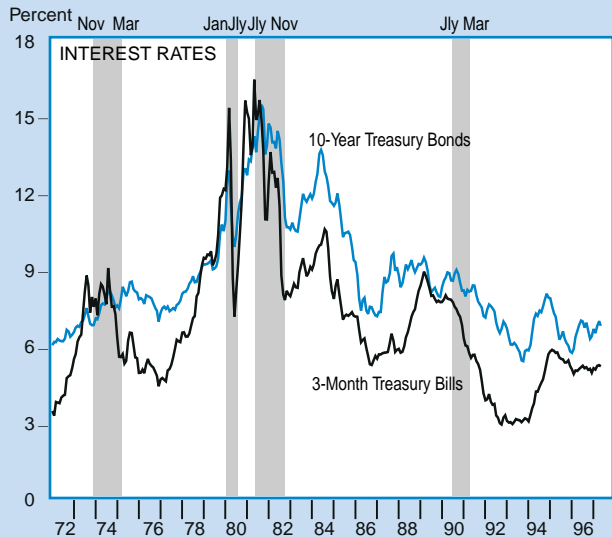
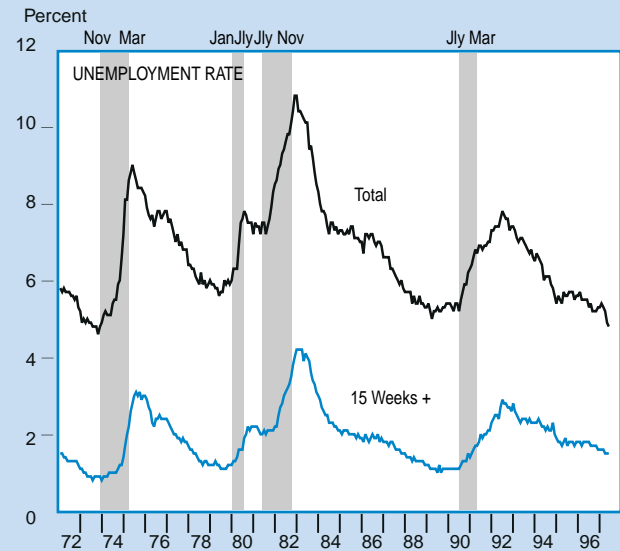
SELECTED NIPA SERIES



OTHER INDICATORS OF THE DOMESTIC ECONOMY



OTHER INDICATORS OF THE DOMESTIC ECONOMY



International Data

F. Transactions Tables

To accommodate the presentation of the annual revision of the international transactions accounts, tables F.1–F.4 and the charts in section I are not shown this month. A description of the annual revision appears in “U.S. International Transactions, Revised Estimates for 1974–96” in this issue. The data usually shown in tables F.2–F.4 are presented in greater detail in tables 1, 3, and 10 at the end of “U.S. International Transactions, First Quarter 1997” in this issue.

G. Investment Tables

Table G.1.—International Investment Position of the United States at Yearend, 1995 and 1996

[Millions of dollars]

Line	Type of investment	Position 1995 ^r	Changes in position in 1996 (decrease (-))					Position 1996 ^r
			Attributable to:				Total (a+b+c+d)	
			Capital flows	Valuation adjustments				
				Price changes	Exchange rate changes ¹	Other changes ²		
		(a)	(b)	(c)	(d)			
1	Net international investment position of the United States:							
2	With direct investment positions at current cost (line 3 less line 24) ...	-687,702	-195,111	32,038	-22,195	2,446	-182,822	-870,524
	With direct investment positions at market value (line 4 less line 25) ...	-637,480	-195,111	39,063	-46,339	8,564	-193,823	-831,303
	U.S. assets abroad:							
3	With direct investment positions at current cost (lines 5+10+15)	3,272,731	352,444	121,367	-21,849	-3,964	447,998	3,720,729
4	With direct investment positions at market value (lines 5+10+16)	3,700,432	352,444	267,858	-45,567	9,373	584,108	4,284,540
5	U.S. official reserve assets	176,061	-6,668	-4,581	-4,073		-15,322	160,739
6	Gold	101,279		³ -4,581		-4,581	96,698	
7	Special drawing rights	11,037	-370		-355		-725	10,312
8	Reserve position in the International Monetary Fund	14,649	1,280		-494		786	15,435
9	Foreign currencies	49,096	-7,578		-3,224		-10,802	38,294
10	U.S. Government assets, other than official reserve assets	81,897	690		-34	1	657	82,554
11	U.S. credits and other long-term assets ⁴	79,958	796		-1	1	796	80,754
12	Repayable in dollars	79,178	846			-12	834	80,012
13	Other ⁵	780	-50		-1	13	-38	742
14	U.S. foreign currency holdings and U.S. short-term assets	1,939	-106		-33		-139	1,800
	U.S. private assets:							
15	With direct investment at current cost (lines 17+19+22+23)	3,014,773	358,422	125,948	-17,742	-3,965	462,663	3,477,436
16	With direct investment at market value (lines 18+19+22+23)	3,442,474	358,422	272,439	-41,460	9,372	598,773	4,041,247
	Direct investment abroad:							
17	At current cost	884,290	87,813	7,375	-4,726	-3,954	86,508	970,798
18	At market value	1,311,991	87,813	153,866	-28,444	9,383	222,618	1,534,609
19	Foreign securities	1,054,352	108,189	118,573	-7,675		219,087	1,273,439
20	Bonds	355,284	49,403	806	-7,521		42,688	397,972
21	Corporate stocks	699,068	58,786	117,767	-154		176,399	875,467
22	U.S. claims on unaffiliated foreigners reported by U.S. nonbanking concerns	307,982	64,234		-3,161		61,073	369,055
23	U.S. claims reported by U.S. banks, not included elsewhere	768,149	98,186		-2,180	-11	95,995	864,144
	Foreign assets in the United States:							
24	With direct investment at current cost (lines 26+33)	3,960,433	547,555	89,329	346	-6,410	630,820	4,591,253
25	With direct investment at market value (lines 26+34)	4,337,912	547,555	228,795	772	809	777,931	5,115,843
26	Foreign official assets in the United States	678,451	122,354	4,345		-1	126,698	805,149
27	U.S. Government securities	498,906	115,634	-4,333			111,301	610,207
28	U.S. Treasury securities	471,508	111,253	-3,802			107,451	578,959
29	Other	27,398	4,381	-531			3,850	31,248
30	Other U.S. Government liabilities ⁷	25,225	720			-1	719	25,944
31	U.S. liabilities reported by U.S. banks, not included elsewhere	107,394	4,722				4,722	112,116
32	Other foreign official assets	46,926	1,278	8,678			9,956	56,882
	Other foreign assets:							
33	With direct investment at current cost (lines 35+37+38+39+42+43)	3,281,982	425,201	84,984	346	-6,409	504,122	3,786,104
34	With direct investment at market value (lines 36+37+38+39+42+43)	3,659,461	425,201	224,450	772	810	651,233	4,310,694
	Direct investment in the United States:							
35	At current cost	654,502	76,955	5,356	-426	-7,335	74,550	729,052
36	At market value	1,031,981	76,955	144,822		-116	221,661	1,253,642
37	U.S. Treasury securities	389,383	155,578	-14,411			141,167	530,550
38	U.S. currency	192,300	17,300				17,300	209,600
39	U.S. securities other than U.S. Treasury securities	999,537	133,798	94,039	-1,887		225,950	1,225,487
40	Corporate and other bonds	534,116	121,194	721	-1,887		120,028	654,144
41	Corporate stocks	465,421	12,604	93,318			105,922	571,343
42	U.S. liabilities to unaffiliated foreigners reported by U.S. nonbanking concerns	232,891	31,786		5,932	926	38,644	271,535
43	U.S. liabilities reported by U.S. banks, not included elsewhere	813,369	9,784		-3,273		6,511	819,880

^r Preliminary.^r Revised.

1. Represents gains or losses on foreign-currency-denominated assets due to their revaluation at current exchange rates.

2. Includes changes in coverage, statistical discrepancies, and other adjustments to the value of assets.

3. Reflects changes in the value of the official gold stock due to fluctuations in the market price of gold.

4. Also includes paid-in capital subscriptions to international financial institutions and outstanding

amounts of miscellaneous claims that have been settled through international agreements to be payable to the U.S. Government over periods in excess of 1 year. Excludes World War I debts that are not being serviced.

5. Includes indebtedness that the borrower may contractually, or at its option, repay with its currency, with a third country's currency, or by delivery of materials or transfer of services.

6. Primarily U.S. Government liabilities associated with military sales contracts and other transactions arranged with or through foreign official agencies.

NOTE.—The data in this table are from table 1 in "International Investment Position of the United States in 1996" in this issue of the SURVEY OF CURRENT BUSINESS.

Table G.2.—U.S. Direct Investment Abroad: Selected Items, by Country and by Industry of Foreign Affiliate, 1993–95

[Millions of dollars]

	Direct investment position on a historical-cost basis			Capital outflows (inflows (-))			Income		
	1993	1994	1995	1993	1994	1995	1993	1994	1995
All countries, all industries	564,283	621,044	711,621	77,247	53,078	93,406	59,381	65,994	85,538
By country									
Canada	69,922	74,987	81,387	3,584	6,287	7,767	3,959	5,550	8,386
Europe	285,735	310,031	363,527	45,914	20,050	52,828	26,660	29,220	40,910
France	24,312	27,860	32,645	-495	2,770	5,954	1,319	1,639	2,910
Germany	36,811	39,622	43,001	4,263	1,846	2,481	3,064	3,679	4,833
Netherlands	20,911	25,127	37,421	1,398	3,212	7,134	2,389	2,410	6,075
United Kingdom	109,208	111,255	119,938	25,355	1,920	11,624	9,680	8,761	10,585
Latin America and Other Western Hemisphere	100,482	112,226	122,765	16,895	14,797	14,614	14,275	15,562	14,840
Africa	5,469	5,530	6,516	837	173	970	1,226	1,413	1,866
Middle East	6,571	6,794	7,982	775	598	1,164	875	967	1,436
Asia and Pacific	92,671	108,075	125,968	8,895	11,143	16,001	12,117	13,120	17,886
Australia	19,047	19,900	24,713	1,981	721	5,711	2,271	2,384	2,759
Japan	31,095	36,677	39,198	1,625	2,522	1,583	1,801	2,843	4,504
International	3,433	3,401	3,476	348	30	62	269	163	214
By industry									
Petroleum	64,175	66,272	69,653	5,539	2,090	2,667	8,582	7,544	9,338
Manufacturing	192,244	217,416	257,589	18,522	25,533	43,520	21,699	27,868	35,775
Food and kindred products	25,858	28,931	31,079	6,088	3,661	2,487	4,110	4,256	4,547
Chemicals and allied products	45,623	50,385	68,082	4,247	5,681	18,215	6,103	7,343	9,426
Primary and fabricated metals	9,937	10,811	13,026	752	743	2,314	632	1,004	1,447
Industrial machinery and equipment	26,927	29,000	33,551	755	1,970	6,537	1,227	2,427	4,337
Electronic and other electric equipment	16,842	20,414	25,579	1,052	3,615	5,050	1,808	3,104	4,009
Transportation equipment	22,957	29,159	32,353	1,734	5,365	3,373	3,123	3,847	4,052
Other manufacturing	44,100	48,716	53,920	3,894	4,498	5,544	4,696	5,887	7,958
Wholesale trade	57,534	67,272	71,354	5,700	8,969	8,339	6,700	8,184	9,752
Banking	27,074	29,224	30,441	1,673	1,277	587	3,725	3,252	2,742
Finance (except banking), insurance, and real estate	174,684	186,558	212,089	41,358	6,712	18,815	15,643	15,073	21,839
Services	19,489	22,352	27,826	1,959	2,952	6,832	1,809	1,677	3,091
Other industries	29,083	31,950	42,668	2,497	5,545	12,646	1,223	2,397	3,001

NOTES.—In this table, unlike in the international transactions accounts, income and capital outflows are shown without a current-cost adjustment, and income is shown net of withholding taxes. In addition, unlike in the international investment position, the direct investment position is valued at historical cost.

The data in this table are from tables 17 and 18 in "U.S. Direct Investment Abroad: Detail

for Historical-Cost Position and Related Capital and Income Flows, 1995" in the September 1996 SURVEY OF CURRENT BUSINESS.

Table G.3.—Selected Financial and Operating Data for Nonbank Foreign Affiliates of U.S. Companies, by Country and by Industry of Affiliate, 1994

	Number of affiliates	Millions of dollars			Number of employees (thousands)
		Total assets	Sales	Net income	
All countries, all industries	21,300	2,359,964	1,754,852	94,031	6,957.7
By country					
Canada	2,064	218,783	210,892	7,341	886.7
Europe	10,468	1,288,830	897,439	45,769	2,844.3
France	1,227	100,722	106,478	1,997	390.5
Germany	1,361	179,272	196,851	4,248	581.7
Italy	756	47,454	58,648	1,904	177.9
Netherlands	1,008	121,297	89,034	8,046	148.9
Switzerland	519	102,896	52,039	6,764	50.7
United Kingdom	2,430	542,862	226,857	11,761	869.6
Latin America and Other Western Hemisphere	3,252	271,881	182,453	19,484	1,492.2
Africa	495	19,830	17,450	1,451	115.0
Middle East	343	28,602	18,000	2,058	83.7
Asia and Pacific	4,574	517,250	421,230	17,460	1,511.1
Australia	838	67,537	59,789	2,516	251.0
Japan	986	260,817	196,724	3,045	419.6
International	104	14,788	7,389	467	24.7
By industry					
Petroleum	1,507	252,462	293,661	9,752	228.1
Manufacturing	8,105	681,082	845,487	40,835	4,116.2
Food and kindred products	800	92,563	104,910	6,614	559.6
Chemicals and allied products	1,935	146,983	151,358	11,465	578.5
Primary and fabricated metals	724	31,600	29,769	1,147	189.7
Industrial machinery and equipment	1,033	98,935	128,553	3,998	488.6
Electronic and other electric equipment	846	53,079	73,379	4,027	605.5
Transportation equipment	453	118,889	207,917	5,936	738.7
Other manufacturing	2,314	139,031	149,601	7,647	955.5
Wholesale trade	5,035	184,956	314,186	12,080	556.5
Finance (except depository institutions), insurance, and real estate	2,688	979,910	91,303	25,194	172.8
Services	2,504	100,164	82,041	1,728	746.7
Other industries	1,461	161,391	128,173	4,443	1,137.4

NOTE.—The data in this table are from tables II.A.1 and II.A.2 in *U.S. Direct Investment Abroad: 1994 Benchmark Survey, Preliminary Results*.

Table G.4.—Foreign Direct Investment in the United States: Selected Items, by Country of Foreign Parent and by Industry of Affiliate, 1993–95

[Millions of dollars]

	Direct investment position on a historical-cost basis			Capital inflows (outflows (-))			Income		
	1993	1994	1995	1993	1994	1995	1993	1994	1995
All countries, all industries	466,666	502,410	560,088	43,534	49,903	60,848	5,893	21,171	31,815
By country									
Canada	40,487	42,133	46,005	3,799	4,031	4,489	856	2,705	3,513
Europe	287,940	309,415	360,762	34,996	30,153	51,793	8,150	16,487	23,626
France	30,672	34,139	38,240	6,778	3,987	3,719	-142	-52	1,713
Germany	35,086	40,297	47,907	7,698	6,551	8,117	8	2,006	1,657
Netherlands	71,860	68,212	67,654	2,967	-2,272	-184	1,944	4,214	5,262
United Kingdom	103,270	111,058	132,273	13,232	11,123	22,081	5,593	7,491	12,029
Latin America and Other Western Hemisphere	19,716	25,042	22,716	3,225	4,472	-2,189	1	979	885
Africa	1,003	925	936	89	26	11	-58	-31	73
Middle East	5,220	5,565	5,053	410	276	-335	35	-71	94
Asia and Pacific	112,299	119,331	124,615	1,014	10,945	7,079	-3,092	1,102	3,623
Australia	7,040	7,928	7,788	214	1,090	473	-534	-168	159
Japan	100,272	104,529	108,582	1,058	7,654	5,252	-2,276	973	3,231
By industry									
Petroleum	32,057	33,103	35,636	-1,630	2,016	3,660	1,382	1,830	2,768
Manufacturing	164,995	185,293	210,312	13,311	22,725	26,246	3,841	10,604	16,447
Food and kindred products	23,105	20,869	26,054	68	-1,636	5,002	867	1,680	1,690
Chemicals and allied products	56,021	66,948	76,523	4,395	12,347	12,346	4,349	5,109	6,884
Primary and fabricated metals	12,422	14,351	15,255	946	1,833	608	-209	-193	1,368
Machinery	29,585	32,535	36,619	1,951	3,829	4,406	-1,757	728	2,252
Other manufacturing	43,861	50,590	55,861	5,951	6,352	3,883	592	3,281	4,254
Wholesale trade	60,817	67,271	71,652	3,333	6,807	5,011	550	2,739	4,025
Retail trade	12,720	13,429	13,434	1,428	1,939	866	39	504	557
Banking	33,464	35,624	41,843	3,290	4,026	5,844	389	2,672	4,453
Finance, except banking	35,303	38,762	47,941	20,048	2,736	10,135	235	1,559	1,047
Insurance	40,601	40,401	47,283	1,254	2,716	4,057	1,405	2,260	1,879
Real estate	29,099	28,452	26,518	-255	426	-1,199	-1,661	-1,243	-1,296
Services	35,886	36,251	37,930	-471	1,013	2,132	-587	-571	282
Other industries	21,725	23,825	27,539	3,226	5,500	4,096	301	818	1,653

NOTES.—In this table, unlike in the international transactions accounts, income and capital inflows are shown without a current-cost adjustment, and income is shown net of withholding taxes. In addition, unlike in the international investment position, the direct investment position is valued at historical cost.

The data in this table are from tables 16 and 17 in "Foreign Direct Investment in the United

States: Detail for Historical-Cost Position and Related Capital and Income Flows, 1995" in the September 1996 SURVEY OF CURRENT BUSINESS.

Table G.5.—Selected Financial and Operating Data of Nonbank U.S. Affiliates of Foreign Companies, by Country of Ultimate Beneficial Owner and by Industry of Affiliate, 1994

	Number of affiliates	Millions of dollars				Thousands of employees	Millions of dollars	
		Total assets	Sales	Net income	Gross product		U.S. merchandise exports shipped by affiliates	U.S. merchandise imports shipped to affiliates
All countries, all industries	12,523	2,208,329	1,447,628	13,377	320,060	4,866.6	113,774	219,172
By country								
Canada	1,304	262,334	145,221	3,214	43,256	682.4	7,368	12,636
Europe	5,381	1,166,048	769,034	7,742	191,972	2,989.4	48,846	77,816
France	661	210,783	111,139	-254	22,674	369.2	11,989	11,685
Germany	1,281	163,003	152,588	970	36,961	584.1	9,613	23,511
Netherlands	384	137,922	89,007	1,217	24,684	323.4	4,892	8,552
United Kingdom	1,240	362,587	243,692	4,997	68,893	1,013.9	9,353	13,160
Latin America and Other Western Hemisphere	1,076	49,324	44,819	970	11,635	138.0	5,202	8,542
Africa	68	(P)	6,557	124	1,515	16.1	602	985
Middle East	381	26,484	19,925	106	5,549	65.7	678	3,734
Asia and Pacific	4,229	608,807	445,586	-1,347	61,156	934.9	50,447	114,940
Australia	172	37,417	20,355	21	4,795	70.5	522	972
Japan	3,281	536,061	388,713	-768	50,992	756.5	45,103	101,425
United States	84	(P)	16,486	2,569	4,976	40.0	630	519
By industry								
Petroleum	244	99,416	109,210	390	28,146	110.2	3,973	16,815
Manufacturing	2,928	546,422	518,517	7,640	157,815	2,251.6	48,365	66,981
Food and kindred products	269	52,028	49,227	136	12,599	195.5	2,584	3,369
Chemicals and allied products	327	190,512	144,256	5,513	48,858	508.5	14,198	13,870
Primary and fabricated metals	404	57,286	64,255	584	17,054	264.0	4,023	7,597
Machinery	754	91,532	114,080	-490	31,465	517.4	16,130	25,563
Other manufacturing	1,174	155,064	146,699	1,897	47,839	766.3	11,430	16,581
Wholesale trade	2,247	219,325	452,615	3,785	40,672	485.6	57,108	131,290
Retail trade	352	46,588	94,183	1,164	23,396	764.6	1,468	3,154
Finance, except depository institutions	872	523,641	33,527	689	2,027	46.7	12	6
Insurance	172	443,147	78,250	3,007	8,795	151.6	0	0
Real estate	3,457	104,823	14,968	-2,555	5,732	30.4	13	2
Services	1,258	121,337	61,741	-844	24,892	595.5	698	387
Other industries	993	103,630	84,618	101	28,583	430.3	2,136	537

^P Suppressed to avoid disclosure of data of individual companies.

NOTE.—The data in this table are from tables A1 and A2 in *Foreign Direct Investment in the United States: Operations of U.S. Affiliates of Foreign Companies, Preliminary 1994 Estimates*.

H. International Perspectives

Table H.1.—International Perspectives

	1995	1996	1996										1997			
			Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Exchange rates (not seasonally adjusted)																
Canada (Can./US\$)	1.3725	1.3638	1.3656	1.3592	1.3693	1.3658	1.3697	1.3722	1.3694	1.3508	1.3381	1.3622	1.3494	1.3556	1.3725	1.3942
France (FFr/US\$)	4.9864	5.1158	5.0583	5.1049	5.1855	5.1787	5.0881	5.0636	5.1307	5.1652	5.1156	5.2427	5.4145	5.6536	5.7154	5.7672
Germany (DM/US\$)	1.4321	1.5049	1.4776	1.5048	1.5324	1.5282	1.5025	1.4826	1.5080	1.5277	1.5118	1.5525	1.6047	1.6747	1.6946	1.7119
Italy (L/US\$)	16.2945	15.4276	5.6243	15.6560	15.5671	15.4230	15.2682	15.1662	15.2048	15.2382	15.1366	15.2844	15.6791	16.5500	16.9121	16.9452
Japan (¥/US\$) .....	.9396	1.0878	1.0594	1.0720	1.0634	1.0896	1.0919	1.0787	1.0993	1.1241	1.1230	1.1398	1.1791	1.2296	1.2277	1.2564
Mexico (Peso/US\$)	6.4467	7.6004	7.5472	7.4694	7.4368	7.5648	7.6179	7.5143	7.5441	7.7345	7.9119	7.8769	7.8289	7.8023	7.9562	7.9059
United Kingdom (US\$/£)	1.5785	1.5607	1.5271	1.5160	1.5152	1.5416	1.5530	1.5499	1.5593	1.5863	1.6623	1.6639	1.6585	1.6285	1.6096	1.6293
Addendum: Exchange value of the U.S. dollar ¹ ..	84.25	87.34	86.57	87.46	88.28	88.16	87.25	86.54	87.46	87.99	86.98	88.71	91.01	94.52	95.60	96.39
Unemployment rates (percent, seasonally adjusted)																
Canada	9.6	9.7	9.4	9.5	9.4	10.0	9.9	9.5	10.0	10.0	10.0	9.7	9.7	9.7	9.3	9.6
France	11.6	12.4	12.3	12.3	12.4	12.4	12.4	12.5	12.6	12.6	12.7	12.7	12.7	12.8	12.8	12.8
Germany	9.4	10.4	10.3	10.2	10.2	10.3	10.3	10.4	10.5	10.6	10.8	10.9	11.3	11.3	11.2	11.2
Italy	12.0	12.1	.....	.....	12.2	.....	.....	12.1	.....	.....	12.0	.....	.....	12.2	.....	.....
Japan	3.1	3.4	3.2	3.4	3.5	3.5	3.4	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.3
Mexico	6.3	5.5	5.9	5.7	5.4	5.6	5.4	5.0	5.2	5.2	5.2	5.0	4.6	4.1	4.2	4.2
United Kingdom	8.2	7.5	7.8	7.8	7.7	7.7	7.6	7.5	7.4	7.2	6.9	6.7	6.5	6.2	6.1	5.9
Addendum: United States	5.6	5.4	5.5	5.5	5.5	5.3	5.4	5.2	5.2	5.2	5.3	5.3	5.4	5.3	5.2	4.9
Consumer prices (seasonally adjusted, 1990=100)																
Canada	111.8	113.5	112.9	113.3	113.6	113.5	113.5	113.6	113.8	114.0	114.5	114.5	114.8	114.9	115.2	115.2
France	111.6	113.8	113.8	114.0	114.2	114.1	113.9	113.6	114.0	114.3	114.2	114.4	114.7	114.9	115.0	115.0
Germany (1991=100)	114.8	116.5	116.2	116.3	116.5	116.6	117.0	116.9	116.8	116.8	116.7	117.0	117.6	118.1	117.9	117.9
Italy	127.7	132.7	131.8	132.4	132.9	133.2	132.9	133.0	133.2	133.4	133.9	133.9	134.3	134.6	134.8	.....
Japan	107.0	107.1	106.9	107.1	107.2	107.1	107.4	107.1	107.1	107.2	107.3	107.5	107.5	107.5	107.4	109.1
Mexico	224.5	301.7	282.8	290.8	296.1	300.9	305.2	309.3	314.2	318.2	323.0	333.3	341.9	347.6	352.0	355.8
United Kingdom	118.2	121.1	120.1	121.0	121.2	121.3	120.8	121.4	121.9	121.9	122.0	122.4	122.4	122.9	123.2	123.9
Addendum: United States	116.6	120.0	119.1	119.5	119.8	119.9	120.2	120.5	120.8	121.2	121.5	121.8	122.0	122.3	122.4	122.5
Real gross domestic product (percent change from preceding quarter, seasonally adjusted at annual rates)																
Canada	2.3	1.5	.....	.....	1.4	.....	.....	3.3	.....	.....	2.9	.....	.....	3.4	.....	.....
France	2.1	1.5	.....	.....	-9	.....	.....	3.1	.....	.....	.7	.....	.....	.....	.....	.....
Germany	2.0	1.4	.....	.....	6.1	.....	.....	3.0	.....	.....	.3	.....	.....	.....	.....	.....
Italy	3.0	.6	.....	.....	-1.4	.....	.....	2.3	.....	.....	-1.1	.....	.....	.....	.....	.....
Japan	1.4	3.6	.....	.....	-1.1	.....	.....	1.3	.....	.....	3.9	.....	.....	.....	.....	.....
Mexico	-6.2	5.1	.....	.....	3.6	.....	.....	7.4	.....	.....	6.0	.....	.....	3.3	.....	.....
United Kingdom	2.5	2.1	.....	.....	1.8	.....	.....	1.8	.....	.....	4.7	.....	.....	3.8	.....	.....
Addendum: United States	2.0	2.4	.....	.....	4.7	.....	.....	2.1	.....	.....	3.8	.....	.....	5.9	.....	.....

See footnotes at end of table.

Table H.1.—International Perspectives—Continued

	1995	1996	1996										1997			
			Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Short-term, 3-month, interest rates (percent, not seasonally adjusted)																
Canada	7.07	4.43	5.18	5.03	4.78	4.83	4.69	4.24	4.06	3.49	3.00	3.08	3.11	3.10	3.20	3.41
France	6.58	3.94	4.27	4.00	3.90	3.97	3.84	3.96	3.75	3.51	3.47	3.44	3.35	3.33	3.36	3.40
Germany	4.53	3.31	3.36	3.33	3.29	3.39	3.38	3.29	3.12	3.12	3.19	3.23	3.14	3.19	3.26	3.23
Italy	10.46	8.82	9.85	9.62	8.92	8.77	8.75	8.81	8.44	8.02	7.41	7.25	7.23	7.36	7.43	7.13
Japan	1.23	.59	.65	.62	.64	.57	.68	.64	.54	.52	.52	.52	.53	.55	.56	.56
Mexico	48.24	32.91	43.05	37.15	31.07	29.64	31.66	29.16	27.79	27.68	28.94	26.51	24.60	21.96	22.32	22.37
United Kingdom	6.68	6.02	6.04	6.00	6.01	5.84	5.73	5.75	5.76	5.94	6.29	6.34	6.32	6.19	6.20	6.37
Addendum:																
United States	5.51	5.02	4.96	4.99	5.02	5.11	5.19	5.09	5.15	5.01	5.03	4.87	5.05	5.00	5.14	5.17
Long-term interest rates, government bond yields (percent, not seasonally adjusted)																
Canada	8.36	7.54	7.93	8.03	7.99	8.04	7.92	7.57	7.64	7.00	6.48	6.81	6.99	6.74	6.92	7.09
France	7.66	6.51	6.92	6.76	6.71	6.84	6.59	6.62	6.20	6.11	5.79	5.82	5.69	5.39	5.80	5.93
Germany	6.80	6.10	6.30	6.20	6.30	6.40	6.40	6.20	6.10	5.90	5.80	5.70	5.70	5.40	5.60	5.70
Italy	11.79	8.85	10.09	9.82	9.12	8.94	8.82	8.92	8.62	7.78	7.15	6.95	6.76	6.93	7.55	7.37
Japan	3.21	2.98	3.11	3.38	3.16	3.17	3.32	2.96	2.81	2.51	2.44	2.57	2.38	2.40	2.27	2.36
Mexico																
United Kingdom	8.25	8.10	8.33	8.30	8.34	8.35	8.25	8.16	8.16	7.87	7.80	7.70	7.74	7.38	7.62	7.76
Addendum:																
United States	6.57	6.44	6.27	6.51	6.74	6.91	6.87	6.64	6.83	6.53	6.20	6.30	6.58	6.42	6.69	6.89
Share price indices (not seasonally adjusted, 1990=100)																
Canada	130.0	154.0	145.0	150.0	153.0	147.0	144.0	150.0	155.0	164.0	176.0	173.0	179.0	180.0	171.0	175.0
France	103.0	118.0	113.0	119.0	120.0	120.0	116.0	114.0	116.0	121.0	125.0	128.0	135.0	145.0	148.0	145.0
Germany	102.4	115.6	112.2	113.3	112.9	115.0	114.0	115.0	116.7	120.3	121.9	124.9	130.0	138.9	145.8	145.7
Italy	95.0	96.0	91.0	95.0	102.0	102.0	97.0	93.0	92.0	96.0	99.0	100.0	114.0	119.0	114.0	.....
Japan	63.0	74.0	72.0	77.0	77.0	78.0	75.0	73.0	72.0	73.0	72.0	69.0	63.0	64.0	63.0	63.0
Mexico	389.3	554.8	538.9	559.0	562.2	563.2	527.4	579.8	567.6	563.6	577.3	589.5	639.7	673.7	657.4	658.9
United Kingdom	147.0	167.0	163.0	169.0	168.0	167.0	163.0	167.0	170.0	173.0	170.0	171.0	176.0	179.0	182.0	179.0
Addendum:																
United States	159.0	195.0	189.0	189.0	193.0	195.0	188.0	193.0	197.0	204.0	212.0	213.0	220.0	228.0	227.0	219.0

1. Index of weighted average exchange value of U.S. dollar against currencies of other G-10 countries. March 1973=100. Weights are 1972-76 global trade of each of the 10 countries. Series revised as of August 1978. For description and back data, see: "Index of the weighted-average exchange value of the U.S. dollar: Revision" on page 700 of the August 1978 *Federal Reserve Bulletin*.

NOTE.—All exchange rate are from the Board of Governors of the Federal Reserve System. U.S. interest rates, unemployment rate, and GDP growth rate are from the Federal Reserve, the Bureau of Labor Statistics, and BEA, respectively. All other data (including U.S. consumer prices and U.S. share prices, both of which have been rebased to 1990 to facilitate comparison) are © OECD, June 1997, *OECD Main Economic Indicators* and are reproduced with permission of the OECD.

Table J.3.—Per Capita Personal Income and Per Capita Disposable Personal Income for States and Regions, 1994-96

State and region	Per capita personal income ¹				Per capita disposable personal income ¹			
	Dollars			Rank in U.S.	Dollars			Rank in U.S.
	1994	1995	1996	1996	1994	1995	1996	1996
United States	22,045	23,196	24,231	.....	19,239	20,178	20,979	.....
New England	25,823	27,403	28,633	.....	22,079	23,345	24,263	.....
Connecticut	30,074	31,814	33,189	1	25,313	26,718	27,706	1
Maine	19,146	20,150	20,826	37	16,884	17,733	18,219	38
Massachusetts	26,339	28,032	29,439	3	22,351	23,660	24,720	3
New Hampshire	24,125	25,587	26,520	8	21,450	22,626	23,329	6
Rhode Island	22,231	23,798	24,765	17	19,492	20,874	21,659	13
Vermont	20,206	21,231	22,124	30	17,770	18,685	19,381	31
Mideast	25,497	26,818	27,955	.....	21,931	23,008	23,882	.....
Delaware	24,836	26,279	27,622	5	21,481	22,605	23,654	5
District of Columbia	31,808	33,435	34,932	.....	27,141	28,406	29,567	.....
Maryland	25,329	26,352	27,221	6	21,757	22,526	23,158	7
New Jersey	28,393	29,833	31,053	2	24,401	25,674	26,570	2
New York	26,193	27,595	28,782	4	22,342	23,451	24,380	4
Pennsylvania	22,361	23,580	24,668	18	19,545	20,560	21,410	16
Great Lakes	22,203	23,426	24,470	.....	19,241	20,251	21,052	.....
Illinois	24,010	25,310	26,598	7	20,742	21,775	22,778	8
Indiana	20,489	21,457	22,440	29	17,821	18,719	19,433	30
Michigan	22,609	23,943	24,810	16	19,621	20,712	21,376	17
Ohio	21,323	22,547	23,537	21	18,555	19,581	20,340	21
Wisconsin	21,137	22,265	23,269	23	18,174	19,076	19,858	25
Plains	21,008	21,989	23,448	.....	18,325	19,100	20,298	.....
Iowa	20,150	20,911	22,560	28	17,675	18,293	19,723	26
Kansas	20,884	21,855	23,281	22	18,281	19,051	20,225	22
Minnesota	22,917	23,944	25,580	9	19,536	20,337	21,597	14
Missouri	20,654	21,836	22,864	25	18,150	19,090	19,906	24
Nebraska	20,526	21,450	23,047	24	18,090	18,832	19,820	23
North Dakota	18,166	18,621	20,710	38	16,142	16,452	18,351	36
South Dakota	18,921	19,564	21,516	34	17,103	17,597	19,381	32
Southeast	19,898	20,971	21,880	.....	17,614	18,498	19,218	.....
Alabama	18,271	19,212	20,055	39	16,316	17,089	17,785	40
Arkansas	17,167	18,093	18,928	47	15,359	16,086	16,783	44
Florida	21,777	23,030	24,104	20	19,295	20,351	21,185	20
Georgia	20,589	21,718	22,709	26	18,019	18,931	19,664	27
Kentucky	17,936	18,866	19,687	42	15,792	16,535	17,192	42
Louisiana	18,090	19,000	19,824	40	16,355	17,105	17,786	39
Mississippi	15,913	16,890	17,471	50	14,544	15,224	15,911	50
North Carolina	19,922	21,082	22,010	32	17,417	18,362	19,110	34
South Carolina	18,044	19,031	19,755	41	16,068	16,879	17,467	41
Tennessee	19,980	21,076	21,764	33	17,979	18,895	19,441	29
Virginia	22,948	23,985	24,925	14	19,882	20,712	21,434	15
West Virginia	16,906	17,714	18,444	49	15,183	15,877	16,494	48
Southwest	19,541	20,486	21,373	.....	17,448	18,240	18,936	.....
Arizona	19,310	20,074	20,989	36	16,981	17,606	18,308	37
New Mexico	17,079	18,158	18,770	48	15,235	16,184	16,674	46
Oklahoma	17,904	18,596	19,350	44	15,865	16,403	16,980	43
Texas	20,102	21,119	22,045	31	18,031	18,889	19,621	28
Rocky Mountain	20,044	21,082	22,025	.....	17,324	18,115	18,830	.....
Colorado	22,663	23,954	25,084	13	19,433	20,450	21,265	19
Idaho	18,091	18,860	19,539	43	15,679	16,168	16,722	45
Montana	17,698	18,443	19,047	46	15,553	16,202	16,656	47
Utah	17,250	18,167	19,156	45	14,976	15,626	16,436	49
Wyoming	19,986	20,727	21,245	35	17,630	18,234	18,614	35
Far West	22,697	23,884	24,928	.....	19,838	20,794	21,566	.....
Alaska	23,496	24,045	24,558	19	20,506	20,925	21,277	18
California	22,828	24,091	25,144	12	19,973	20,986	21,760	11
Hawaii	24,137	24,749	25,159	11	20,907	21,543	21,776	10
Nevada	23,300	24,336	25,451	10	20,253	21,019	21,805	9
Oregon	20,340	21,554	22,668	27	17,311	18,342	19,189	33
Washington	22,726	23,701	24,838	15	20,088	20,858	21,740	12

1. Per capita personal income and per capita disposable personal income were computed using midyear population estimates of the Bureau of the Census.

NOTE.—The personal income level shown for the United States is derived as the sum of the State estimates; it differs from the national income and product accounts (NIPA) estimate of per-

sonal income because, by definition, it omits the earnings of Federal civilian and military personnel stationed abroad and of U.S. residents employed abroad temporarily by private U.S. firms. It can also differ from the NIPA estimate because of different data sources and revision schedules.

Source: Tables 1 and 2 in "Personal Income and Per Capita Personal Income by State and Region" in the May 1997 issue of the SURVEY OF CURRENT BUSINESS.

K. Local Area Table

Annual estimates of local area personal income are shown for 1992-94; in August 1997, a comprehensive revision of the local area estimates for 1969-94 and new estimates for 1995 will be released.

Table K.1.—Total Personal Income and Per Capita Personal Income by Metropolitan Area, 1992-94

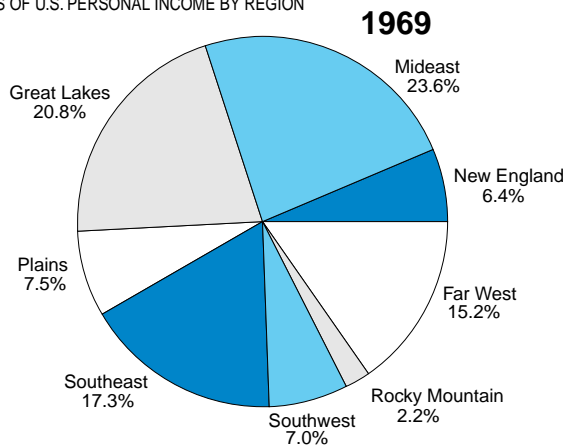
Table with columns for Area name, Total personal income (Millions of dollars, Percent change), Per capita personal income (Dollars, Rank in U.S.), and detailed data for various metropolitan areas from 1992 to 1994.

See footnotes at end of table.

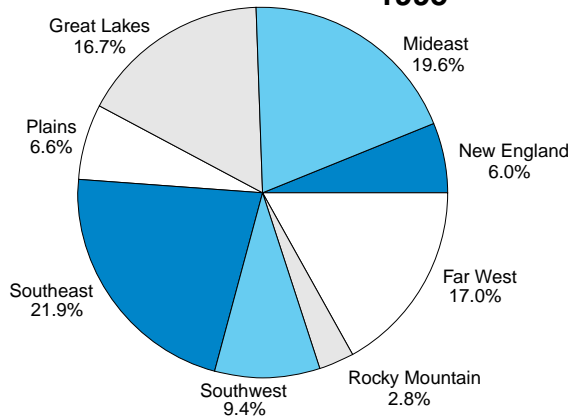
L. Charts

SELECTED REGIONAL ESTIMATES

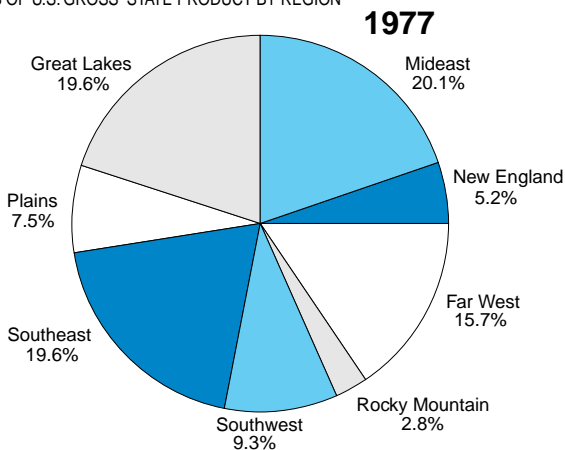
SHARES OF U.S. PERSONAL INCOME BY REGION



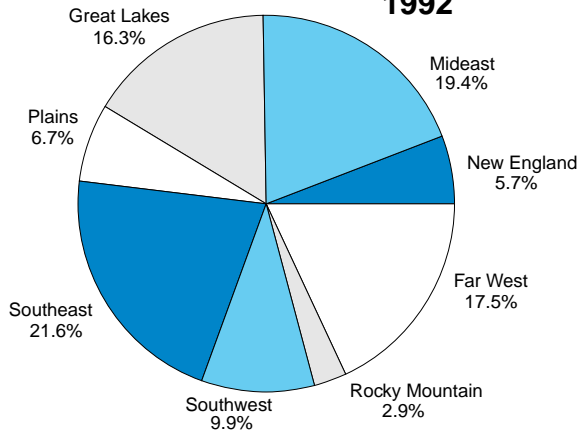
1995



SHARES OF U.S. GROSS STATE PRODUCT BY REGION



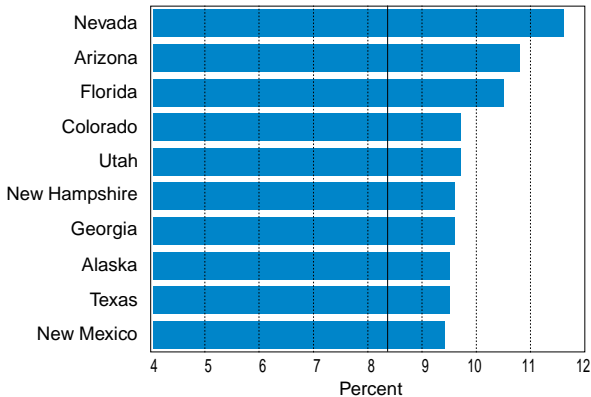
1992



AVERAGE ANNUAL GROWTH RATE OF PERSONAL INCOME, 1969-95

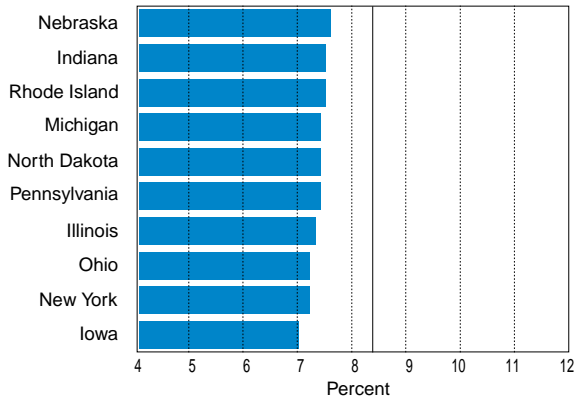
STATES WITH FASTEST GROWTH

U.S. average 8.3%



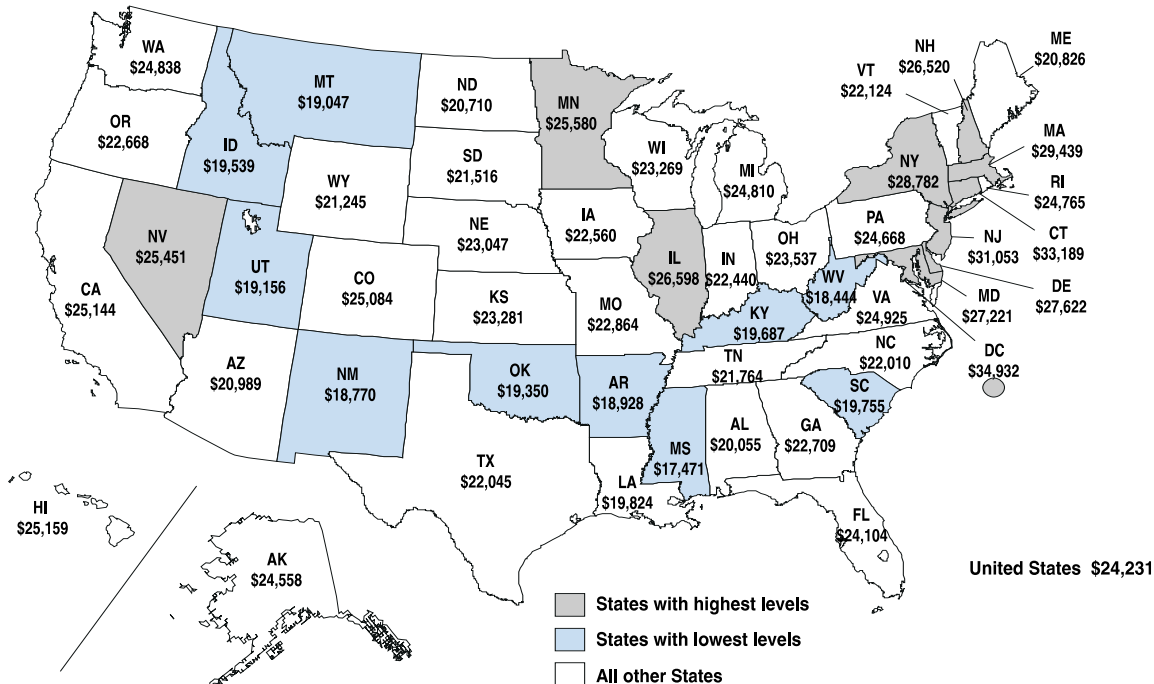
STATES WITH SLOWEST GROWTH

U.S. average 8.3%

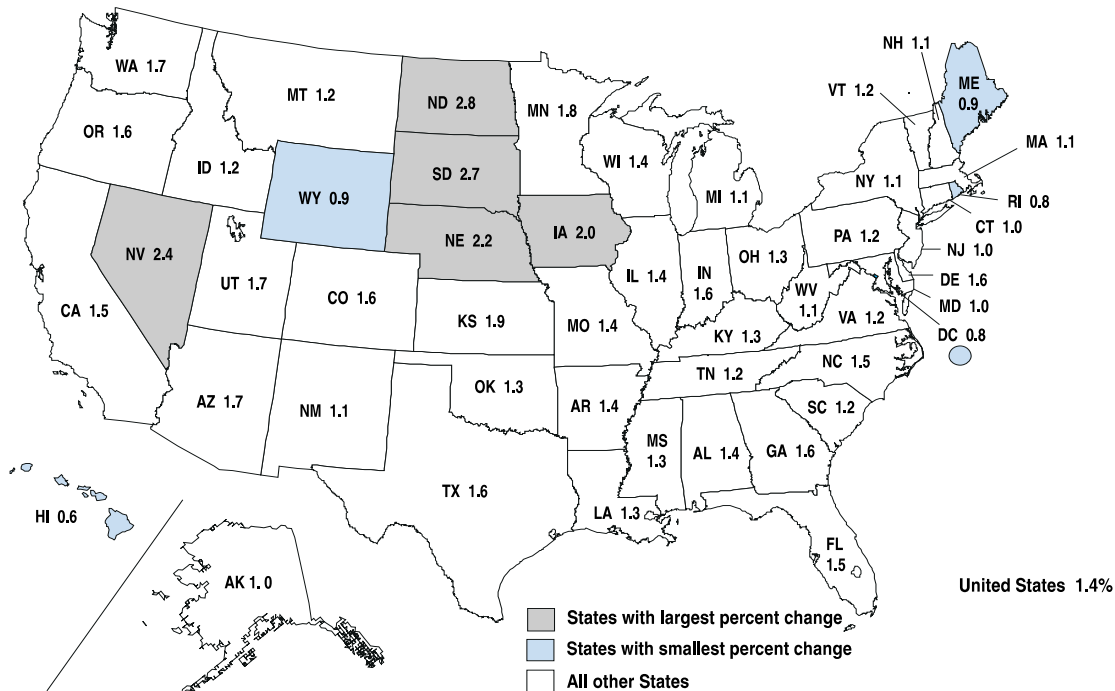


SELECTED REGIONAL ESTIMATES

PER CAPITA PERSONAL INCOME, 1996



PERSONAL INCOME GROWTH: AVERAGE QUARTERLY PERCENT CHANGE, 1995:IV-1996:IV



Appendix A

Additional Information About BEA's NIPA Estimates

Statistical Conventions

Changes in current-dollar GDP measure changes in the market value of goods and services produced in the economy in a particular period. For many purposes, it is necessary to decompose these changes into quantity and price components. To compute the quantity indexes, changes in the quantities of individual goods and services are weighted by their prices. (Quantity changes for GDP are often referred to as changes in "real GDP.") For the price indexes, changes in the prices for individual goods and services are weighted by quantities produced. (In practice, the current-dollar value and price indexes for most GDP components are determined largely using data from Federal Government surveys, and the real values of these components are calculated by deflation at the most detailed level for which all the required data are available.)

Except for the most recent period, the annual and quarterly changes in real GDP and prices are "chain-type" measures that are both based on the "Fisher Ideal" formula that incorporates weights from two adjacent years. For example, the 1992–93 percent change in real GDP uses prices for 1992 and 1993 as weights, and the 1992–93 percent change in price uses quantities for 1992 and 1993 as weights. Because the quantity and price index numbers calculated in this way are symmetric, the product of the annual change in real GDP and the annual change in prices equals the annual change in current-dollar GDP.

In the most recent period, a variant of the formula is used because only 1 year's information is available for computing the index number weights. Accordingly, BEA uses a single year's weights and, as a consequence, the product of the percentage changes in the price and quantity indexes does not equal the current-dollar change during this period. For this reason, another measure, known as the "implicit price deflator," is presented in the NIPA tables. The implicit price deflator is calculated as the ratio of current-dollar value to the corresponding chained-dollar value multiplied by 100.

In addition, BEA prepares measures of real GDP and its components in a dollar-denominated form, designated "*chained (1992) dollar estimates*." These estimates are computed by multiplying the 1992 current-dollar value of GDP, or of a GDP component, by the corresponding quantity index number. For example, if a current-dollar GDP component equaled \$100 in 1992 and if real output for this component increased by 10 percent in 1993, then the "chained (1992) dollar"

value of this component in 1993 would be \$110 ($\100×1.10). Note that percentage changes in the chained (1992) dollar estimates and the percentage changes calculated from the quantity indexes are identical, except for small differences due to rounding.

Because of the formula used for calculating real GDP, the chained (1992) dollar estimates for detailed GDP components *do not add* to the chained-dollar value of GDP or to any intermediate aggregates. A "*residual*" line is shown as the difference between GDP and the sum of the most detailed components shown in each table. The residual generally is small close to the base period but tends to become larger as one moves further from it. In cases where the residual is large, the table of contributions of the major components to the change in real GDP provides a better basis for determining the composition of GDP growth than the chained-dollar estimates.

For quarters and months, the estimates are presented at annual rates, which show the value that would be registered if the rate of activity measured for a quarter or a month were maintained for a full year. Annual rates are used so that time periods of different lengths—for example, quarters and years—may be compared easily. These annual rates are determined simply by multiplying the estimated rate of activity by 4 (for quarterly data) or 12 (for monthly data).

Percent changes in the estimates are also expressed at annual rates. Calculating these *changes* requires a variant of the compound interest formula:

$$r = \left[\left(\frac{X_t}{X_o} \right)^{m/n} - 1 \right] \times 100,$$

where r is the percent change at an annual rate;
 X_t is the level of activity in the later period;
 X_o is the level of activity in the earlier period;
 m is the yearly periodicity of the data (for example, 1 for annual data, 4 for quarterly, or 12 for monthly); and
 n is the number of periods between the earlier and later periods (that is, $t - o$).

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. After seasonal adjustment, cyclical and other short-term changes in the economy stand out more clearly.

Reconciliation Tables

Table 1.—Reconciliation of Changes in BEA-Derived Compensation Per Hour with BLS Average Hourly Earnings

[Percent change from preceding period]

	Seasonally adjusted at annual rates								
	1994	1995	1996	1996				1997	
				I	II	III	IV		
BEA-derived compensation per hour of all persons in the nonfarm business sector (less housing)	2.1	3.1	3.7	3.4	3.7	3.4	3.7	5.0	
Less: Contribution of supplements to wages and salaries per hour .....	.1	0	-.3	-.3	-.4	-.2	-.4	-.6
Plus: Contribution of wages and salaries per hour of persons in housing and in nonprofit institutions	0	-.3	-.1	.3	-.2	-.2	.1	.1	
Less: Contribution of wages and salaries per hour of persons in government enterprises, unpaid family workers, and self-employed	-.2	0	.1	.1	.1	.3	-.2	.3	
Equals: BEA-derived wages and salaries per hour of all employees in the private nonfarm sector	2.1	2.8	3.8	3.9	3.9	3.1	4.3	5.3	
Less: Contribution of wages and salaries per hour of nonproduction workers in manufacturing	0	.1	-.1	-.1	-.1	-.3	-.1	-.3	
Less: Other differences ¹	-.5	-.1	.6	1.3	0	-.2	.5	1.5	
Equals: BLS average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls	2.6	2.9	3.3	2.7	4.0	3.7	3.9	4.2	
Addendum:									
BLS estimates of compensation per hour in the nonfarm business sector ²	2.0	3.2	3.6	3.4	3.7	3.5	3.7	5.2	

1. Includes BEA use of non-BLS data and differences in detailed weighting. Annual estimates also include differences in BEA and BLS benchmark 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.

NOTE: This table incorporates BLS revisions to reflect the benchmarking of employment levels and the updating of seasonal adjustment factors.

BLS Bureau of Labor Statistics

Table 2.—Relation of Net Exports of Goods and Services and Net Receipts of Factor Income in the National Income and Product Accounts (NIPA's) to Balance on Goods, Services, and Income in the Balance of Payments Accounts (BPA's)

[Billions of dollars]

	Line	1995	1996	Seasonally adjusted at annual rates					
				1995	1996				1997
					IV	I	II	III	
Exports of goods, services, and income, BPA's	1	991.5	1,055.2	1,025.5	1,025.5	1,049.3	1,047.9	1,098.2	1,117.9
Less: Gold, BPA's	2	5.1	6.9	3.7	6.3	12.5	5.2	3.7	6.7
Statistical differences ¹	3	22.0	18.4	24.8	13.3	15.1	24.8	20.3	20.3
Other items	4	.9	1.1	.8	.8	1.0	1.5	1.1	1.0
Plus: Adjustment for grossing of parent/affiliate interest payments	5	8.0	8.7	9.3	10.1	7.3	8.4	8.9	8.3
Adjustment for U.S. territories and Puerto Rico	6	30.2	31.4	30.7	30.3	31.3	31.1	32.8	33.2
Services furnished without payment by financial intermediaries except life insurance carriers and private noninsured pension plans	7	14.0	14.8	14.2	14.4	14.6	15.0	15.2	15.4
Equals: Exports of goods and services and receipts of factor income, NIPA's	8	1,015.6	1,083.6	1,050.3	1,059.9	1,073.9	1,070.7	1,129.8	1,146.8
Imports of goods, services, and income, BPA's	9	1,086.5	1,163.4	1,093.3	1,115.4	1,156.9	1,183.5	1,198.0	1,246.9
Less: Gold, BPA's	10	5.3	7.7	3.4	6.8	14.6	6.2	3.4	8.7
Statistical differences ¹	11	4.0	5.6	7.3	4.5	1.4	9.7	6.9	6.9
Other items	12	0	0	0	0	0	0	0	0
Plus: Gold, NIPA's	13	-3.7	-3.6	-4.0	-3.4	-3.5	-3.8	-3.8	-3.1
Adjustment for grossing of parent/affiliate interest payments	14	8.0	8.7	9.3	10.1	7.3	8.4	8.9	8.3
Adjustment for U.S. territories and Puerto Rico	15	21.8	21.3	21.9	21.1	21.4	21.2	21.6	22.4
Imputed interest paid to rest of world	16	14.0	14.8	14.2	14.4	14.6	15.0	15.2	15.4
Equals: Imports of goods and services and payments of factor income, NIPA's.	17	1,117.3	1,191.2	1,123.9	1,146.5	1,180.6	1,208.4	1,229.5	1,274.3
Balance on goods, services, and income, BPA's (1-9)	18	-95.0	-108.2	-67.8	-89.9	-107.6	-135.6	-99.8	-129.0
Less: Gold (2-10+13)	19	-3.9	-4.4	-3.7	-3.9	-5.6	-4.8	-3.5	-5.1
Statistical differences (3-11) ¹	20	18.0	12.8	17.5	8.8	13.7	15.1	13.4	13.4
Other items (4-12)	21	.9	1.1	.8	.8	1.0	1.5	1.1	1.0
Plus: Adjustment for U.S. territories and Puerto Rico (6-15)	22	8.4	10.1	8.8	9.2	9.9	9.9	11.2	10.8
Equals: Net exports of goods and services and net receipts of factor income, NIPA's (8-17).	23	-101.7	-107.6	-73.6	-86.6	-106.7	-137.7	-99.7	-127.5

1. Consists of statistical revisions in the BPA's that have not yet been incorporated in the NIPA's.

Appendix B

Suggested Reading

Mid-Decade Strategic Plan

BEA has published the following articles in the SURVEY OF CURRENT BUSINESS on the development and implementation of its strategic plan for improving the accuracy, reliability, and relevance of the national, regional, and international accounts.

“Mid-Decade Strategic Review of BEA’s Economic Accounts: Maintaining and Improving Their Performance” (February 1995)*

“Mid-Decade Strategic Review of BEA’s Economic Accounts: An Update” (April 1995)*

“BEA’s Mid-Decade Strategic Plan: A Progress Report” (June 1996)*

Mid-Decade Strategic Review of BEA’s Economic Accounts: Background Papers (1995) presents seven background papers that evaluate the state of the U.S. economic accounts and that identify the problems and the prospects for improving the accounts.

Methodology

BEA has published a wealth of information about the methodology used to prepare its national, regional, and international estimates.

National

National income and product accounts (NIPA’s)

NIPA Methodology Papers: This series documents the conceptual framework of the NIPA’s and the methodology used to prepare the estimates.

An Introduction to National Economic Accounting (NIPA Methodology Paper No. 1, 1985) [Also appeared in the March 1985 issue of the SURVEY]

Corporate Profits: Profits Before Tax, Profits Tax Liability, and Dividends (NIPA Methodology Paper No. 2, 1985)

Foreign Transactions (NIPA Methodology Paper No. 3, 1987)

GNP: An Overview of Source Data and Estimating Methods (NIPA Methodology Paper No. 4, 1987) [Also appeared in the July 1987 issue of the SURVEY]

Government Transactions (NIPA Methodology Paper No. 5, 1988)

Personal Consumption Expenditures (NIPA Methodology Paper No. 6, 1990)

The methodologies described in these papers are subject to periodic improvements that are typically introduced as part of the annual and comprehensive revisions of the NIPA’s; these improvements are described in the SURVEY articles that cover these revisions.

“Annual Revision of the U.S. National Income and Product Accounts”: This series of SURVEY articles, the latest of which was published in the August 1996 issue,* describes the annual NIPA revisions and the improvements in methodology.

The most recent comprehensive revision of the NIPA’s is described in the following series of SURVEY articles.

“Preview of the Comprehensive Revision of the National Income and Product Accounts: BEA’s New Featured Measures of Output and Prices” (July 1995)*

“Preview of the Comprehensive Revision of the National Income and Product Accounts: Recognition of Government Investment and Incorporation of a New Methodology for Calculating Depreciation” (September 1995)*

“Preview of the Comprehensive Revision of the National Income and Product Accounts: New and Redesigned Tables” (October 1995)*

“Improved Estimates of the National Income and Product Accounts for 1959–95: Results of the Comprehensive Revision” (January/February 1996)*

“Completion of the Comprehensive Revision of the National Income and Product Accounts, 1929–96” (May 1997)*

“Updated Summary Methodologies” (August 1996 SURVEY)* identifies the principal source data and estimating methods that are used to prepare the estimates of gross domestic product (GDP).

Availability

For the availability of some of these publications, see the **inside back cover** of this issue. See also the *User’s Guide to BEA Information*: To request a copy, write to the Public Information Office, BE-53, Bureau of Economic Analysis, U.S. Department of Commerce, Washington DC 20230, call 202-606-9900, or visit BEA’s Internet site at <http://www.bea.doc.gov>.

* Items with an asterisk can be found on BEA’s Internet site at <http://www.bea.doc.gov>.

Information on the sources and methods used to prepare the national estimates of personal income, which provide the basis for the State estimates of personal income, can be found in *State Personal Income, 1929–93* (1995).*

“Gross Domestic Product as a Measure of U.S. Production” (August 1991 SURVEY) briefly explains the difference between GDP and gross national product.

The conceptual basis for the chain-type measures of real output and prices used in the NIPA’s is described in the following SURVEY articles.

“Alternative Measures of Change in Real Output and Prices” (April 1992)*

“Economic Theory and BEA’s Alternative Quantity and Price Indexes” (April 1992)*

“Alternative Measures of Change in Real Output and Prices, Quarterly Estimates for 1959–92” (March 1993)*

“Preview of the Comprehensive Revision of the National Income and Product Accounts: BEA’s New Featured Measures of Output and Prices” (July 1995)*

“BEA’s Chain Indexes, Time Series, and Measures of Long-Term Economic Growth” (May 1997)*

“Reliability and Accuracy of the Quarterly Estimates of GDP” (October 1993 SURVEY)* evaluates GDP estimates by examining the record of revisions in the quarterly estimates.

“A Look at How BEA Presents the NIPA’s” (May 1996 SURVEY)* explains how to locate the NIPA estimates and some of the conventions used in their presentation.

Wealth and related estimates

“Improved Estimates of Fixed Reproducible Tangible Wealth, 1929–95” (May 1997 SURVEY)* describes the most recent revision of the estimates of fixed reproducible tangible wealth.

Gross product by industry

“Improved Estimates of Gross Product by Industry, 1959–94” (August 1996 SURVEY)* describes the most recent comprehensive revision of the estimates of gross product by industry.

Input-output accounts

Benchmark Input-Output Accounts of the United States, 1987 (1994)* describes the concepts and methods used in the generation of the benchmark input-output tables for 1987.

International

Balance of payments accounts (BPA’s)

The Balance of Payments of the United States: Concepts, Data Sources, and Estimating Procedures (1990) describes the methodologies used in preparing the estimates in the BPA’s and of the international investment position of the United States. These methodologies are subject to periodic improvements that are typically introduced as part of the annual revisions of the BPA’s.

“U.S. International Transactions, Revised Estimates”: This series of SURVEY articles, the latest of which was published in the July 1996 issue,* describes the annual BPA revisions and the improvements in methodology.

Direct investment

The coverage, concepts, definitions, and classifications used in the benchmark surveys of U.S. direct investment abroad and of foreign direct investment in the United States are presented in the publications of the final results of the following benchmark surveys.

U.S. Direct Investment Abroad: 1989 Benchmark Survey, Final Results (1992)*

Foreign Direct Investment in the United States: 1992 Benchmark Survey, Final Results (1995)*

The types of data on direct investment that are collected and published by BEA and the clarifications of the differences between the data sets are presented in the following SURVEY articles.

“A Guide to BEA Statistics on U.S. Multinational Companies” (March 1995)*

“A Guide to BEA Statistics on Foreign Direct Investment in the United States” (February 1990)*


Regional

Personal income

State Personal Income, 1929–93 (1995)* includes a description of the methodology used to prepare the estimates of State personal income. [Also available on the State Personal Income 1969–95 CD-ROM]

Local Area Personal Income, 1969–92 (1994)* includes a description of the methodology used to prepare the estimates of local area personal income. [Also available on the Regional Economic Information System CD-ROM]

Gross state product

“Comprehensive Revision of Gross State Product by Industry, 1977–94” (June 1997 SURVEY)* summarizes the sources and methods for BEA’s estimates of gross state product. 

REGIONAL MULTIPLIERS:

A User Handbook for the Regional Input-Output Modeling System (RIMS II)

Third Edition

This handbook is a guide to the RIMS II multipliers that are widely used to analyze the economic and industrial impact of public and private projects and programs on State and local areas. RIMS II was developed by the Bureau of Economic Analysis to estimate regional multipliers for the nearly 500 industries in the national input-output table. The multipliers are available for any county or for any group of counties.

RIMS II multipliers have been used to estimate the total impact of a wide range of projects on output, earnings, and employment in an area. For example, the multipliers have been used to estimate the impact of

- The construction and operation of a sports arena
- The construction and operation of an airport
- The opening or closing of a manufacturing plant
- The closing and conversion of a military base to a factory

The third edition of this handbook presents detailed information on the data that the users must have in order to effectively use the five types of RIMS II multipliers. This handbook also details the uses of the multipliers, provides case studies of these uses, and describes the methodology used to prepare the multipliers.

RIMS II multipliers are only available on diskette. For ordering information, call the Regional Economic Analysis Division at (202) 606-5343, or send e-mail to RIMSREAD@BEA.DOC.GOV.

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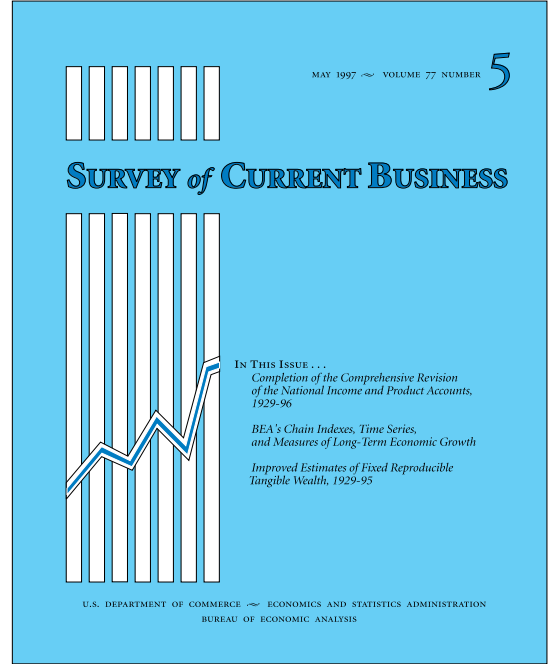
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Benchmark Input-Output Accounts of the United States, 1987. (1994) Presents summary and detailed make and use tables for industries and commodities; tables showing commodity- and industry-output-requirements per dollar of commodity demanded; and tables 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 pages) \$29.00, stock no. 003-010-00251-4.

Regional Multipliers: A User Handbook for the Regional Input-Output Modeling System (RIMS II), Third Edition. (1997) This handbook describes the five types of RIMS II multipliers that are available for nearly 500 industries and for any county or for any group of counties. It details the information that the users need in order to effectively use the RIMS II multipliers to analyze the economic and industrial impact of public and private projects and programs on State and local areas. The handbook also includes case studies that illustrate the uses of the RIMS II multipliers and a description of the methodology that the Bureau of Economic Analysis uses to estimate the multipliers. (63 pages) \$6.00, stock no. 003-010-00264-6.

State Personal Income, 1929-93. (1995) Presents detailed annual estimates for States and regions of personal income for 1929-93, including estimates of per capita personal income, personal income by major source, and earnings by industry. Also presents annual estimates of disposable personal income and per capita disposable personal income for 1948-93 and quarterly estimates of personal income for 1969-93. Provides information about the sources and methods used to prepare the estimates for 1987-93 and samples of all the detailed tables of personal income and employment that are available for regions, States, counties, and metropolitan areas. (444 pages) \$27.00, stock no. 003-010-00257-3.

Foreign Direct Investment in the United States: 1992 Benchmark Survey, Final Results. (1995) Presents detailed data on the financial structure and operations of U.S. affiliates of foreign direct investors, on the foreign direct investment position in the United States, and on the balance-of-payments transactions between U.S. affiliates and their foreign parent companies in 1992. Includes data for items, such as employment covered by collective bargaining agreements and merchandise trade by product and country of destination and origin, that are only collected in benchmark surveys. Benchmark surveys are conducted every 5 years and are BEA's most comprehensive surveys in terms of both the number of companies covered and the amount of information gathered. The data are classified by industry of affiliate and by country of ultimate beneficial owner, and selected data are classified by State. Provides information about the coverage, the concepts and definitions, and the

classifications used in the survey. (312 pages) \$20.00, stock no. 003-010-00259-0.

Foreign Direct Investment in the United States: Operations of U.S. Affiliates of Foreign Companies. (1996) Two publications: One presents the revised estimates for 1993, and the other, the preliminary estimates for 1994 from BEA's annual surveys of the financial structure and operations of nonbank U.S. affiliates of foreign direct investors. The estimates are presented by industry of the U.S. affiliate and by country of the ultimate beneficial owner (UBO) and for selected estimates, by industry of UBO and by State. **Preliminary 1994 Estimates** (108 pages) \$8.50, stock no. 003-010-00261-1; **Revised 1993 Estimates** (108 pages) \$8.50, stock no. 003-010-00260-3.

New!

Foreign Direct Investment in the United States: Establishment Data for 1992. (1997) This publication, which presents the results of a project by BEA and the Bureau of the Census, provides the most recently available data on the number, employment, payroll, and shipments or sales of foreign-owned U.S. establishments in more than 800 industries at the Standard Industrial Classification four-digit level and by State and by country of owner. Presents additional information—such as data on value added, employee benefits, hourly wage rates of production workers, and expenditures for plant and equipment—for manufacturing establishments. (364 pages) \$28.00, stock no. 003-010-00265-4.

Foreign Direct Investment in the United States: Establishment Data for Manufacturing, 1991. (1994) A joint effort by BEA and the Bureau of the Census. Presents the most recently available data for foreign-owned U.S. manufacturing establishments (plants) by detailed industry (up to 459 industries), by State, and by country of investor. Includes data on the number of plants, value added, shipments, employment, total employee compensation, employee benefits, the hourly wage rates of production workers, the cost of materials and energy used, inventories by stage of fabrication, and expenditures for new plant and equipment. (220 pages) \$14.00, stock no. 003-010-00250-6.

U.S. Direct Investment Abroad: 1994 Benchmark Survey, Preliminary Results. (1997) Presents preliminary results from the latest benchmark survey of the worldwide operations of U.S. multinational companies. Contains detailed 1994 data on the operations of U.S. parent companies and their foreign affiliates in 103 tables organized by country and by industry. (140 pages) \$14.00, stock no. 003-010-00263-8.

U.S. Direct Investment Abroad: Operations of U.S. Parent Companies and Their Foreign Affiliates, Revised 1993 Estimates. (1996) Provides revised results for 1993 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. (120 pages) \$11.00, stock no. 003-010-00262-0.

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