

Improved Estimates of the National Income and Product Accounts for 1929–2002

Results of the Comprehensive Revision

By Eugene P. Seskin and Daniel Larkins

ON December 10, 2003, the Bureau of Economic Analysis (BEA) released the initial results from the 12th comprehensive revision of the national income and product accounts (NIPAs), beginning with revised estimates for 1929; the results of the last comprehensive revision were released in October 1999.

In many important respects, the picture of the economy shown by the revised estimates is very similar to the picture shown by the previously published estimates.

- Long-run growth rates of current-dollar and real gross domestic product (GDP) are the same, or virtually the same, as in the previously published estimates (table 1).
- For the expansion of the 1990s, the high rate of growth previously estimated is not changed in the revised estimates.
- The most recent recession and the current expansion are both slightly milder than previously estimated; for both, the differences between the revised estimates and the previously published estimates are very small.¹
- Like the previously published estimates, the revised estimates show that GDP growth slowed in the second half of 2000. However, third-quarter GDP now shows a small decrease instead of a small increase, and fourth-quarter GDP now shows a larger increase.
- The downtrend in the personal saving rate since the early 1990s is similar to the downtrend in the previously published estimates. However, the level of the personal saving rate, like the level of the national saving rate, is lower than that previously published (table 2). The downward revision to the level reflects upward revisions to consumer spending, especially for services.

The revised estimates incorporate a number of major definitional and statistical improvements that are designed to better measure the ever-changing U.S. economy. These improvements were previewed last year in a series of articles in the SURVEY OF CURRENT BUSINESS.

1. From the fourth quarter of 2000 to the third quarter of 2001, real GDP is now estimated to have decreased 0.5 percent, not 0.6 percent; from the third quarter of 2001 to the second quarter of 2003, the growth rate is now 2.6 percent, not 2.7 percent.

Table 1. Real Gross Domestic Product

[Percent change from preceding year]

Year	Revised	Previously published	Revision
1930	-8.6	-8.6	0.0
1931	-6.4	-6.4	0.0
1932	-13.0	-13.0	0.0
1933	-1.3	-1.4	0.1
1934	10.8	10.8	0.0
1935	8.9	9.0	-0.1
1936	13.0	12.9	0.1
1937	5.1	5.3	-0.2
1938	-3.4	-3.5	0.1
1939	8.1	8.1	0.0
1940	8.8	8.5	0.3
1941	17.1	17.1	0.0
1942	18.5	18.4	0.1
1943	16.4	16.5	-0.1
1944	8.1	8.2	-0.1
1945	-1.1	-1.2	0.1
1946	-11.0	-11.1	0.1
1947	-0.9	-0.7	-0.2
1948	4.4	4.3	0.1
1949	-0.5	-0.6	0.1
1950	8.7	8.7	0.0
1951	7.7	7.6	0.1
1952	3.8	4.0	-0.2
1953	4.6	4.6	0.0
1954	-0.7	-0.7	0.0
1955	7.1	7.1	0.0
1956	1.9	2.0	-0.1
1957	2.0	2.0	0.0
1958	-1.0	-1.0	0.0
1959	7.1	7.2	-0.1
1960	2.5	2.5	0.0
1961	2.3	2.3	0.0
1962	6.1	6.0	0.1
1963	4.4	4.3	0.1
1964	5.8	5.8	0.0
1965	6.4	6.4	0.0
1966	6.5	6.6	-0.1
1967	2.5	2.5	0.0
1968	4.8	4.8	0.0
1969	3.1	3.0	0.1
1970	0.2	0.2	0.0
1971	3.4	3.3	0.1
1972	5.3	5.4	-0.1
1973	5.8	5.8	0.0
1974	-0.5	-0.6	0.1
1975	-0.2	-0.4	0.2
1976	5.3	5.6	-0.3
1977	4.6	4.6	0.0
1978	5.6	5.5	0.1
1979	3.2	3.2	0.0
1980	-0.2	-0.2	0.0
1981	2.5	2.5	0.0
1982	-1.9	-2.0	0.1
1983	4.5	4.3	0.2
1984	7.2	7.3	-0.1
1985	4.1	3.8	0.3
1986	3.5	3.4	0.1
1987	3.4	3.4	0.0
1988	4.1	4.2	-0.1
1989	3.5	3.5	0.0
1990	1.9	1.8	0.1
1991	-0.2	-0.5	0.3
1992	3.3	3.0	0.3
1993	2.7	2.7	0.0
1994	4.0	4.0	0.0
1995	2.5	2.7	-0.2
1996	3.7	3.6	0.1
1997	4.5	4.4	0.1
1998	4.2	4.3	-0.1
1999	4.5	4.1	0.4
2000	3.7	3.8	-0.1
2001	0.5	0.3	0.2
2002	2.2	2.4	-0.2

Changes in definitions and classifications, which were described in the June 2003 issue, include the following:

- A more complete and accurate measure of insurance services that results from estimating implicit services provided by property and casualty insurance companies,
- An improved measure of banking services that identifies services received by borrowers as well as by depositors,
- A new treatment of government that recognizes that governments produce services and that goods and services purchased by governments are intermediate inputs, and
- An expanded definition of national income that includes all net incomes earned in production—a definition more consistent with international guidelines.²

The statistical changes, which were described in the

September 2003 issue, include the following:

- The incorporation of information from the 1997 benchmark input-output accounts,
- For recent periods, a new adjustment to corporate profits estimates that makes use of additional information on the expenses associated with employee stock options,
- New BEA price indexes for the deflation of nonresidential structures and of photocopying equipment that account for changes in key characteristics of these products,
- New methodologies that provide better estimates of purchases of used motor vehicles and a better allocation of exports and imports of autos and trucks, and
- The use of more reliable source data for the estimation of state and local current taxes.³

The presentation of the NIPA estimates has been changed to reflect these improvements. These changes, which were described in an article in the August 2003 issue, include the following:

- Moving the reference year for chain-type quantity and price indexes and for chained-dollar estimates from 1996 to 2000 and showing industry estimates on the basis of the North American Industry Classification System, and
- A redesigned set of tables that provides more information in an easier-to-use format and that offers more flexibility for the addition of new tables in the future.⁴

This article discusses the major sources of the revisions that are attributable to the various definitional and statistical changes for each of the major NIPA aggregates and their components. Specifically, it discusses the revisions to the annual current-dollar estimates in detail. It then discusses the revisions to the annual estimates of real GDP and of prices. It concludes with a discussion of the revisions to the quarterly estimates of real GDP.

Annual Current-Dollar Estimates

Before 1959, the revisions to GDP are small, averaging 0.1 percent in absolute value; downward revisions are most common, but upward revisions are not unusual. For the quarter century that follows, the revisions remain small, but are generally negative (only two are positive). From the early 1980s to 2002, the revisions

3. Carol E. Moylan and Brooks B. Robinson, "Preview of the 2003 Comprehensive Revision of the National Income and Product Accounts: Statistical Changes," SURVEY, 83 (September 2003): 17–32.

4. Nicole Mayerhauser, Shelly Smith, and David F. Sullivan, "Preview of the 2003 Comprehensive Revision of the National Income and Product Accounts: New and Redesigned Tables," SURVEY, 83 (August 2003): 7–31.

2. Brent R. Moulton and Eugene P. Seskin, "Preview of the 2003 Comprehensive Revision of the National Income and Product Accounts: Changes in Definitions and Classifications," SURVEY OF CURRENT BUSINESS 83 (June 2003): 17–34; Baoline Chen and Dennis J. Fixler, "Measuring the Services of Property-Casualty Insurance in the NIPAs: Changes in Concepts and Methods," SURVEY 83 (October 2003): 10–26; and Dennis J. Fixler, Marshall B. Reinsdorf, and George M. Smith, "Measuring the Services of Commercial Banks in the NIPAs: Changes in Concepts and Methods," SURVEY 83 (September 2003): 33–44.

Table 2. Personal and National Saving Rates

[Percent]

Year	Personal saving rate ¹			National saving rate ²		
	Revised	Previously published	Revision	Revised	Previously published	Revision
1970	9.4	9.4	0.0	18.6	18.6	0.0
1971	10.1	10.0	0.1	18.6	18.6	0.0
1972	8.9	8.9	0.0	19.2	19.3	-0.1
1973	10.5	10.5	0.0	21.1	21.1	0.0
1974	10.6	10.7	-0.1	20.0	20.0	0.0
1975	10.6	10.6	0.0	18.2	18.1	0.1
1976	9.4	9.4	0.0	18.8	18.6	0.2
1977	8.7	8.7	0.0	19.6	19.4	0.2
1978	8.9	9.0	-0.1	20.9	20.8	0.1
1979	8.9	9.2	-0.3	21.1	21.0	0.1
1980	10.0	10.2	-0.2	19.7	19.6	0.1
1981	10.9	10.8	0.1	20.9	20.7	0.2
1982	11.2	10.9	0.3	19.1	19.0	0.1
1983	9.0	8.8	0.2	17.3	17.0	0.3
1984	10.8	10.6	0.2	19.6	19.4	0.2
1985	9.0	9.2	-0.2	18.1	18.2	-0.1
1986	8.2	8.2	0.0	16.5	16.5	0.0
1987	7.0	7.3	-0.3	16.8	17.0	-0.2
1988	7.3	7.8	-0.5	17.8	18.3	-0.5
1989	7.1	7.5	-0.4	17.3	17.6	-0.3
1990	7.0	7.8	-0.8	16.3	16.8	-0.5
1991	7.3	8.3	-1.0	16.2	16.9	-0.7
1992	7.7	8.7	-1.0	15.1	15.9	-0.8
1993	5.8	7.1	-1.3	14.7	15.6	-0.9
1994	4.8	6.1	-1.3	15.4	16.3	-0.9
1995	4.6	5.6	-1.0	16.2	16.9	-0.7
1996	4.0	4.8	-0.8	16.6	17.2	-0.6
1997	3.6	4.2	-0.6	17.7	18.0	-0.3
1998	4.3	4.7	-0.4	18.2	18.8	-0.6
1999	2.4	2.6	-0.2	17.9	18.3	-0.4
2000	2.3	2.8	-0.5	17.7	18.4	-0.7
2001	1.7	2.3	-0.6	16.2	16.5	-0.3
2002	2.3	3.7	-1.4	14.6	15.0	-0.4

1. Personal saving as a percentage of disposable personal income.

2. The previously published estimate is gross saving as a percentage of gross national product; the revised estimate is gross saving as a percentage of gross national income.

increase somewhat, averaging 0.2 percent, and they are about evenly divided between upward and downward revisions (table 3).

The downward revisions to GDP before 1980 generally reflect the statistical changes that are part of this comprehensive revision. After that time, the statistical changes tend to raise GDP, while the changes in definitions and classifications tend to lower GDP (chart 1 and appendix A).

From 1987, the reduction in GDP as a result of the changes in definitions and classifications primarily reflects the new treatment of banking services that is partly offset by the new treatment of insurance services. As a result of the reallocation of a portion of the implicit services of commercial banks from depositors to borrowers, relatively large reductions in GDP occur, beginning with 1987.⁵ In contrast, GDP is raised as a result of the recognition of the implicit services provided by the investment income of property and casualty insurance companies.

Excluding the changes in definitions and classifications, current-dollar GDP is revised down by small amounts for 1959–78 and for 1980; it is revised up

5. GDP is reduced because the consumption of these services by business borrowers is treated as intermediate purchases that are not part of GDP.

slightly for 1979. For 1981 forward, the upward and downward revisions tend to be larger; the largest is a 1-percent upward revision for 2002.

All the revisions to national income are upward, and they grow progressively larger; the largest revision is about 10 percent for 2002. The revisions mainly reflect the redefinition of national income to include all net incomes (net of consumption of fixed capital) earned in production, most notably taxes on production and imports; these taxes grew from \$6.8 billion for 1929 to \$760.1 billion for 2002.⁶ In addition, there are notable, sometimes offsetting, revisions to components of national income, such as compensation of employees, corporate profits, and net interest.

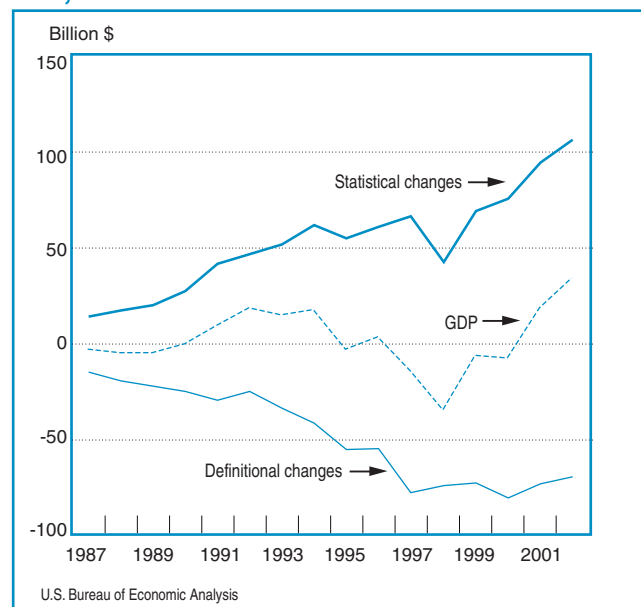
For 1929–81, the revisions to personal income are small. For 1982 forward, the revisions are more notable, and their pattern is mixed; personal interest income tends to be the main contributor to the upward revisions through 1986. For 1987 forward, other components also contribute (see the section “Personal income and its disposition”).

Additional detail on GDP, gross domestic income, and other NIPA aggregates and their major components is presented below. For 1959, 1987, 1992, and 1997–2002, the revisions are summarized in appendix B.

Table 3. Revisions to Gross Domestic Product, Gross Domestic Income, and Personal Income

	1959	1987	1992	1997	2000	2001	2002
Billions of dollars							
Gross domestic product	-0.8	-3.0	18.8	-14.1	-7.6	18.6	34.6
Definitional.....	-0.3	-16.0	-26.8	-79.6	-81.9	-74.6	-70.9
New treatment of banking services ...	-0.6	-23.4	-34.5	-84.6	-104.0	-92.0	-82.3
New treatment of insurance services	0.2	7.4	6.0	3.3	19.4	15.7	9.1
Other	0.0	0.0	1.8	1.7	2.7	1.7	2.3
Statistical	-0.5	13.0	45.6	65.5	74.3	93.2	105.5
Gross domestic income	-0.5	-21.3	-40.2	-54.9	-9.0	13.6	2.9
Definitional.....	-0.3	-16.0	-27.5	-80.4	-83.6	-75.9	-72.3
New treatment of banking services ...	-0.6	-23.4	-34.5	-84.6	-104.0	-92.0	-82.3
New treatment of insurance services	0.2	7.4	6.0	3.4	19.4	15.7	9.2
Other	0.0	0.0	1.0	0.7	1.0	0.4	0.8
Statistical	-0.2	-5.3	-12.7	25.5	74.6	89.5	75.2
Personal income	-1.2	-15.1	-28.4	-21.9	23.1	27.8	-11.9
Definitional.....	-1.0	-24.9	-30.1	-81.9	-82.6	-63.8	-64.6
New treatment of banking services ...	-1.2	-33.0	-39.7	-86.4	-105.4	-90.1	-80.7
New treatment of insurance services	0.2	8.1	8.7	4.2	22.4	26.6	16.1
Other	0.0	0.0	0.9	0.3	0.4	-0.3	0.0
Statistical	-0.2	9.8	1.7	60.0	105.7	91.6	52.7
Revision as a percentage of previously published							
Gross domestic product	-0.2	-0.1	0.3	-0.2	-0.1	0.2	0.3
Definitional.....	-0.1	-0.3	-0.4	-1.0	-0.8	-0.7	-0.7
New treatment of banking services ...	-0.1	-0.5	-0.5	-1.0	-1.1	-0.9	-0.8
New treatment of insurance services	0.0	0.2	0.1	0.0	0.2	0.2	0.1
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Statistical	-0.1	0.3	0.7	0.8	0.8	0.9	1.0
Gross domestic income	-0.1	-0.4	-0.6	-0.7	-0.1	0.1	0.0
Definitional.....	-0.1	-0.3	-0.4	-1.0	-0.8	-0.7	-0.7
New treatment of banking services ...	-0.1	-0.5	-0.5	-1.0	-1.0	-0.9	-0.8
New treatment of insurance services	0.0	0.2	0.1	0.0	0.2	0.2	0.1
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Statistical	0.0	-0.1	-0.2	0.3	0.7	0.9	0.7
Personal income	-0.3	-0.4	-0.5	-0.3	0.3	0.3	-0.1
Definitional.....	-0.3	-0.6	-0.6	-1.2	-1.0	-0.7	-0.7
New treatment of banking services ...	-0.3	-0.8	-0.7	-1.2	-1.3	-1.0	-0.9
New treatment of insurance services	0.1	0.2	0.2	0.1	0.3	0.3	0.2
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Statistical	-0.1	0.2	0.0	0.9	1.3	1.1	0.6

Chart 1. Sources of Revision to Current-Dollar GDP, 1987–2002



6. “Taxes on production and imports” includes the largest components of the discontinued series “indirect business tax and nontax liability” and consists of Federal excise taxes, custom duties, state and local sales taxes, property taxes, motor vehicle licenses, severance taxes, and other taxes and special assessments.

The remainder of this section on revisions to the annual current-dollar estimates is organized according to the new seven-account framework for the NIPAs that was introduced in the comprehensive revision and that

replaces the old five-account framework.⁷ (Because of the differences between the new and the old frame-

7. See, Mayerhauser, Smith, and Sullivan, 8–15.

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works, it is not possible to show revisions for every aggregate.) The discussion focuses on account 1, the domestic income and product account, which shows the consolidated production of all sectors of the economy as the sum of goods and services sold to final users and as the sum of incomes generated by the production of those goods and services. A new account 2, the private enterprise income account, is discussed next; this account provides additional information on the sources and uses of income by private enterprises. The discussions of accounts 3 and 4 follow; these accounts show the receipts and expenditures of the personal sector and the government sector, respectively. Account 5 (showing receipts and expenditures of the foreign sector) and account 7 (showing capital transactions with the rest of the world) are discussed in the section "Foreign transactions." A brief discussion of account 6, which shows the saving and investment of the domestic sectors of the economy, concludes this section of the article.

Domestic income and product

GDP. Before 1959, the revisions to GDP are small; through 1979, they remain below \$4.0 billion in absolute value. For 1980 forward, the revisions become larger. For 1929–2002, the average annual growth rate of GDP, at 6.5 percent, is unrevised from the previously published rate. As a percentage of the level of GDP, the revisions are downward for 1947–74 and are mixed thereafter: The revision is –0.2 percent for 1959, is 0.3 percent for 1992, and is 0.3 percent for 2002. The largest revision is –0.4 percent for 1998.

Gross domestic income (GDI) and the statistical discrepancy. Before 1959, the revisions to GDI are small. For 1959–77, the revisions to GDI are in the same direction as those to GDP and are of similar magnitude. As a result, there is little effect on the statistical discrepancy, which is the difference between GDP and GDI.⁸ For 1978–86, the revisions to GDP and to GDI continue to be in the same direction, but the magnitudes differ more; thus, for some of these years, the statistical discrepancy is revised up, and for others, it is revised down. The revised estimates (without regard to sign) of the statistical discrepancy average 1.0 percent of GDP, 0.2 percentage point more than in the previously published estimates.

For 1987 forward, the statistical discrepancy is revised up (becoming more positive or less negative): For

1987–90, GDI is revised down more than GDP; for 1991–94, GDI is revised down and GDP is revised up; for 1995 and 1997–2000, GDI is again revised down more than GDP (for 1996, GDI is revised down, and GDP is revised up); and for 2001 and 2002, GDI is revised up less than GDP. For 1994–2002, the revised estimates of the statistical discrepancy average 1.0 percent of GDP, 0.3 percentage point more than in the previously published estimates. In the revised estimates, current-dollar GDP increases at an average annual rate of 5.0 percent, 0.4 percentage point less than the increase in GDI. In the previously published estimates, this difference was 0.3 percentage point.

Product-side components

Personal consumption expenditures (PCE) for goods. PCE for goods is revised down for 1983 and 1984 and revised up for 1985–2002; until 1989, the revisions are less than \$5.0 billion in absolute value (table 4). Until 1994, upward revisions to PCE for goods

Table 4. Revisions to Personal Consumption Expenditures

[Billions of dollars]

	1959	1987	1992	1997	2000	2001	2002
Total revision	-0.5	-5.1	25.6	18.1	55.7	58.4	81.6
Definitional.....	-0.3	-15.8	-23.5	-67.1	-67.2	-51.5	-53.8
New treatment of banking services.....	-0.5	-23.9	-32.1	-71.3	-89.6	-78.1	-69.9
New treatment of insurance services.....	0.2	8.1	8.7	4.2	22.4	26.6	16.1
Statistical.....	-0.2	10.7	49.1	85.2	122.9	109.9	135.4
Source of revision by component							
Durable goods	0.0	2.0	12.8	50.2	59.4	46.0	39.4
Nondurable goods	0.0	0.0	7.6	-22.6	-25.7	-27.7	-29.0
Services	-0.5	-7.0	5.3	-9.4	21.9	39.9	71.2
Definitional.....	-0.3	-15.8	-23.5	-67.1	-67.2	-51.5	-53.8
New treatment of banking services...	-0.5	-23.9	-32.1	-71.3	-89.6	-78.1	-69.9
New treatment of insurance services	0.2	8.1	8.7	4.2	22.4	26.6	16.1
Statistical.....	-0.2	8.8	28.8	57.7	89.1	91.4	125.0

reflect upward revisions to both PCE for durable goods and PCE for nondurable goods; for 1994–2002, the revisions reflect upward revisions to PCE for durable goods that are partly offset by downward revisions to PCE for nondurable goods.

The revisions for all years reflect improved estimates of used motor vehicles. For 1988–97, the revisions also reflect the incorporation of the estimates from the 1997 benchmark input-output (I-O) accounts, and for 1998–2002, the revisions reflect the extrapolation of the 1997 I-O estimates, using retail sales data for 1998–2000, newly available sales data from the 2001 Annual Retail Trade Survey, and revised 2002 monthly retail sales data.⁹

For 1985–90, the upward revisions to PCE for dura-

8. In theory, GDP should equal GDI; in practice, GDP and GDI differ because their components are estimated using largely independent and less-than-perfect source data. See the box "The Statistical Discrepancy" in Robert P. Parker and Eugene P. Seskin, "Annual Revision of the National Income and Product Accounts," *SURVEY*, 77 (August 1997): 19.

9. The revised PCE estimates reflect the 1997 benchmark I-O accounts, except for the definitional and statistical changes that were implemented after the completion of the benchmark. See Ann M. Lawson, Kurt S. Bersani, Mahnaz Fahim-Nader, and Jiemin Guo, "Benchmark Input-Output Accounts of the United States, 1997," *SURVEY*, 82 (December 2002): 19–109.

ble goods are primarily due to motor vehicles and parts, reflecting the improved estimates of net transactions in used trucks that are based on valuing the change in unit stocks held by persons, a procedure similar to that used for estimating net transactions in used autos. The valuation of used trucks is based on average dealer used vehicle prices that are adjusted to wholesale values. For 1991–2002, data on auction prices are used to value used trucks and used autos. For 1993–2002, upward revisions to new trucks, to used auto and truck margins, and to furniture and household equipment also contribute to the revisions to PCE for durable goods, primarily reflecting the incorporation of results from the 1997 I-O estimates.

For 1988–92, the upward revisions to PCE for non-durable goods are to gasoline and oil. For 1993–2002, the downward revisions to PCE for nondurable goods reflect downward revisions to food and to clothing and shoes that are partly offset by upward revisions to gasoline and oil and to “other nondurable goods.” The revisions to gasoline and oil reflect improved estimates of consumption for rental vehicles, an improved methodology for incorporating average price data from the Energy Information Administration, and the incorporation of benchmark Federal Highway Administration data on motor vehicle fuel consumption.

PCE for services. For 1929–73, the revisions to PCE for services are less than \$1 billion in absolute value. For 1974 forward, the revisions generally become more notable; often sizable offsetting revisions occur among the subcategories of services. The largest revisions to services are the upward revisions for 2000–2002.

Revisions to housing services begin with 1968 and become larger over time. Through 1990, the upward revisions are primarily attributable to “other housing services,” reflecting improved estimates of hotel and motel services.¹⁰ Beginning with the estimates for 1991, the revisions to the imputed space rent for owner-occupied dwellings and to rental payments for tenant-occupied dwellings become increasingly important contributors. These revisions primarily reflect the incorporation of revised housing-units data from the 2000 decennial Census of Population and Housing. For 2000–2002, the revisions to the space-rent estimates reflect new units data from the 2001 American Housing Survey and from the 2002 Current Population Survey/Housing Vacancy Survey. For tenant-occu-

pled nonfarm space rent, the revisions also reflect the incorporation of newly available data on mean gross rent from the 2001 American Housing Survey.

The revisions to household operation services never exceed \$5 billion in absolute value. Revisions are generally downward from the mid-1970s to the early 1990s and upward thereafter. Through 1991, the revisions partly reflect the new treatment of insurance services as it pertains to household insurance; reupholstery and furniture repair services also contribute to the revisions, reflecting an improved estimate of the consumer share of these services made possible by the conversion to the North American Industrial Classification System (NAICS). After 1991, upward revisions primarily reflected the incorporation of results from the 1997 I-O estimates.

Upward revisions to transportation services become notable from the mid-1980s. Through 1996, the largest contributor to the revisions is user-operated transportation, reflecting the new treatment of insurance services as it pertains to motor vehicles. For 1997–2001, the revisions to “repair, greasing, washing, parking, storage, rental, and leasing” also contribute, reflecting the results from the incorporation of the 1997 benchmark I-O estimates and revised data for 2000 and 2001 from the Census Bureau Service Annual Survey (SAS). For 2002, the upward revision to transportation services is primarily accounted for by insurance for motor vehicles.

Medical services is revised up, and the upward revisions increase over time, becoming notable in the 1980s. Through 1989, the revisions are primarily attributable to insurance, reflecting the new treatment of insurance services (in particular, workers’ compensation), and to nursing homes, reflecting the improved allocations to PCE commodity categories that are made possible as a result of the conversion to NAICS. Beginning with the estimates for 1990, other categories of medical services become important contributors to the revisions. Upward revisions to “other professional services” reflect improved estimates of payments to medical laboratories based on newly incorporated SAS data for 1998; downward revisions to physicians’ services reflect improved allocations to PCE commodity categories due to the conversion to NAICS; and for 2000–2002, upward revisions to nonprofit hospitals reflect the use of newly available hospital expense data for 2000 and 2001 from the American Hospital Association and of preliminary SAS data for 2002.

Recreational services is revised up beginning with 1978, and the revisions generally increase over time. Through 1992, the revisions are primarily to clubs and

10. The revised estimates reflect a revised consumer share for household lodging expenditures, using newly incorporated source data on expenditures by U.S. residents, and the estimates now include spending by foreign visitors on lodging in the United States. For additional details, see Moylan and Robinson, 22.

fraternal organizations, reflecting the improved allocations to PCE commodity categories. For 1993–2002, the revisions are also attributable to revisions to commercial participant amusements, reflecting the incorporation of the 1997 benchmark I-O estimates, of revised SAS data for 2000 and 2001, and of preliminary SAS data for 2002.

“Other services” is revised down, and the revisions through 1977 are small. For 1978 forward, the revisions mostly reflect downward revisions to “services furnished without payment by financial intermediaries except life insurance carriers” as a result of the new treatment of banking services. “Religious and welfare activities” is also revised down, reflecting the improved allocations to PCE categories. Downward revisions to “expense of handling life insurance and pension plans” reflect improved estimates of accident and health insurance expenses excluded from life insurance company expenses, revised data on pension plan expenses and, for 2001 and 2002, new expense data on legal reserve life insurance companies. Beginning with the 1980s, the downward revisions to “other services” are moderated by upward revisions to personal care services, reflecting the incorporation of the 1997 benchmark I-O estimates, of revised SAS data for 2000 and 2001, and of preliminary SAS data for 2002.

Nonresidential structures. In private fixed investment, nonresidential structures is revised beginning with 1978; except for the revisions for 1997 and 1998, the revisions do not exceed \$3.0 billion in absolute value (table 5). The revisions primarily reflect the in-

Table 5. Revisions to Gross Private Domestic Investment

[Billions of dollars]

	1959	1987	1992	1997	2000	2001	2002
Total revision.....	0.0	3.5	-1.8	-0.7	-19.9	21.2	-4.0
Definitional.....	0.0	0.0	1.3	0.4	0.6	-0.6	-0.2
Inclusion of materials and supplies in farm inventories.....	0.0	0.0	1.3	0.4	0.6	-0.6	-0.2
Statistical.....	0.0	3.5	-3.1	-1.1	-20.5	21.8	-3.8
Source of revision by component							
Private fixed investment.....	0.0	3.5	-3.1	-9.9	-12.8	-2.9	-5.4
Nonresidential.....	0.0	-2.6	-14.0	-30.7	-33.7	-27.5	-37.2
Structures.....	0.0	2.1	0.4	-5.5	-1.0	-2.4	-3.0
Equipment and software.....	0.0	-4.8	-14.3	-25.3	-32.7	-25.1	-34.2
Residential.....	0.0	6.1	10.8	20.9	20.9	24.4	31.8
Change in private inventories.....	0.0	0.0	1.3	9.1	-7.1	24.2	1.5
Definitional.....	0.0	0.0	1.3	0.4	0.6	-0.6	-0.2
Statistical.....	0.0	0.0	0.0	8.7	-7.7	24.8	1.7

corporation of revised data from Census Bureau surveys of the value of construction put-in-place and the incorporation of the 1997 benchmark I-O estimates.¹¹

Equipment and software. In private fixed invest-

11. For 1997 forward, estimates of nonresidential structures reflect the new Census Bureau classification of a structure by its function instead of by its type; see Mayerhauser, Smith, and Sullivan, 22.

ment, downward revisions to equipment and software begin with 1978 and become increasingly large, but they do not exceed \$5 billion until 1988. For 1988–98, the revisions primarily reflect downward revisions to computer software and to transportation equipment.¹² The revisions to software mainly reflect the improvements in the measurement of computer software that were introduced in the 1997 benchmark I-O accounts.¹³ The revisions to transportation equipment mainly reflect improved estimates of net purchases of used light trucks.¹⁴ For 1999 forward, the downward revisions to equipment and software are moderated by upward revisions to computers and peripheral equipment that primarily reflect the recognition of selected services of systems integrators as capital investment.¹⁵

Residential fixed investment. Notable upward revisions to residential fixed investment begin with 1987. The major contributors to the revisions are “residential improvements” and single-family structures. The revisions to improvements primarily reflect the use of a new moving-average methodology that reduces the volatility of the estimates due to the erratic nature of the source data.¹⁶ The revisions to single-family structures reflect the incorporation of revised and newly available Census Bureau data on the value of construction put-in-place.

Change in private inventories. Change in private inventories is calculated by adjusting inventories reported by businesses on a book-value basis to a current-period, replacement-cost basis by removing inventory profits and losses. The inventory valuation adjustment (IVA), which is calculated as the change in private inventories less the change in book values, reflects inventory price changes for firms that value inventory withdrawals at acquisition (historical) cost.

The revisions to farm inventories begin with 1991 and do not exceed \$4.0 billion in absolute value. The revisions through 1995 reflect the definitional change that added farm materials and supplies to the change

12. The revisions to “other information processing equipment and software” that offset the revisions to “other equipment and software” result from the reclassification of electromedical equipment between these categories that was implemented in the 1997 benchmark I-O accounts.

13. The improvements include the capitalization of software originals used for reproduction, more direct calculation of the total costs of producing own-account software, improved estimates of intermediate consumption of software (embedded or bundled with other equipment), and the expansion of the coverage of international trade in software; see Lawson, et al., 26–28.

14. See Moylan and Robinson, 21–22.

15. Computer systems integrators plan and design computer systems that integrate computer hardware, software, and communication technologies for their customers. Most output of systems integrators was capitalized for the first time in the 1997 I-O accounts; see Lawson, et al., 28.

16. For further details, see Moylan and Robinson, 23.

in farm inventories.¹⁷ For 1996 forward, the revisions also reflect revised data on crop harvest and sales and on livestock inventory change from the U.S. Department of Agriculture (USDA).¹⁸

The revisions to private nonfarm inventories begin with 1997 and show both upward revisions and downward revisions. The revisions primarily reflect the incorporation of newly available and revised Census Bureau data on inventory book values, of new commodity weights from the 1997 benchmark I-O accounts, of newly available and revised Census Bureau data on the accounting methods used in inventory reporting, of revised BEA unit-labor-cost indexes, and of revised producer price indexes from the Bureau of Labor Statistics (BLS). The relatively large upward revision for 2001 is mostly to manufacturing and to retail trade inventories, primarily reflecting the incorporation of newly available annual Census Bureau data on inventory book values.

Net exports of goods and services. Through 1987, the revisions to net exports of goods and services are small, at first upward and then downward, and they do not exceed \$5.0 billion in absolute value (table 6). For

Table 6. Revisions to Net Exports of Goods and Services

[Billions of dollars]

	1959	1987	1992	1997	2000	2001	2002
Total revision	2.1	-2.9	-5.3	-12.3	-14.0	-17.6	-2.7
Definitional	2.1	-4.0	-5.9	-10.3	-15.4	-20.5	-16.3
Statistical	0.0	1.1	0.6	-2.0	1.4	2.9	13.6
Source of revision by component							
Exports	2.1	-1.7	-1.5	-11.1	-4.8	1.0	-8.1
Goods	0.0	0.0	-0.7	-1.2	-0.7	-2.0	-5.8
Services	2.1	-1.7	-0.7	-9.9	-4.2	3.0	-2.2
Definitional	2.1	-2.8	-2.1	-9.2	-9.7	-4.2	-6.8
New treatment of banking services	0.1	-3.3	-3.7	-9.6	-12.3	-8.9	-9.4
services.....	0.0	0.5	0.6	0.1	2.4	4.5	2.4
Reclassification of military grants	2.0	0.1	1.0	0.3	0.2	0.3	0.3
Statistical	0.0	1.1	1.4	-0.7	5.5	7.2	4.6
Imports	0.0	1.2	4.0	1.1	9.2	18.7	-5.4
Goods	0.0	0.0	0.0	0.2	0.4	0.8	-1.8
Services	0.0	1.2	3.8	0.8	8.8	17.8	-3.7
Definitional	0.0	1.2	3.8	1.0	5.7	16.3	9.6
New treatment of insurance	0.0	1.2	3.8	1.0	5.7	16.3	9.6
services.....	0.0	0.0	0.0	-0.2	3.1	1.5	-13.3
Statistical	0.0	0.0	0.0	-0.2	3.1	1.5	-13.3

1988–2001, the revisions are downward and tend to be larger; for 2002, the revision is small and downward. Through 1982, the revisions are only to exports of services and are mainly upward, reflecting the reclassification of military grants-in-kind and the new treatment

17. The stock of farm inventories includes materials and supplies beginning with the first quarter of 1991. For that quarter, the *change* in inventories is based on an unpublished estimate of the stock for the fourth quarter of 1990 that also includes materials and supplies. For the first quarter of 1991, therefore, the published change in farm inventories does not equal the difference between the published levels of the stocks. This definitional change is discussed in Moulton and Seskin, 27.

18. Farm inventories are measured on a current-market-price basis; therefore, the IVA is not needed.

of banking services.¹⁹ The revisions for 1983–86 are small. For 1987 forward, exports of services are generally revised down, primarily reflecting the new treatment of banking services, and imports of services are generally revised up, primarily reflecting the new treatment of insurance services. For some years, the statistical changes contribute to the upward revisions to the services estimates; for other years, they moderate the revisions. The statistical changes primarily reflect revised estimates from the international transactions accounts (ITAs) that were not previously incorporated into the NIPAs.²⁰

The revisions to exports and imports of goods begin with 1989, reflecting the incorporation of revised estimates from the ITAs. The revisions are relatively small; in absolute value, the largest revision is a downward revision of \$5.8 billion to exports of goods for 2002.

Government consumption expenditures and gross investment. The revisions to government consumption expenditures and gross investment (hereafter referred to as “government spending”) for 1929–59 are small (table 7). The revisions to government spending

Table 7. Revisions to Government Consumption Expenditures and Gross Investment

[Billions of dollars]

	1959	1987	1992	1997	2000	2001	2002
Total revision	-2.5	1.6	0.5	-19.2	-29.4	-43.3	-40.4
Definitional	-2.1	3.7	1.3	-2.5	0.0	-2.2	-0.5
New treatment of insurance services.....	0.0	-0.1	0.5	0.1	0.3	0.9	0.3
New treatment of banking services	-0.2	3.9	1.3	-3.6	-2.1	-5.1	-3.0
Reclassification of military grants	-2.0	-0.1	-1.0	-0.3	-0.2	-0.3	-0.3
Reclassification of Indian tribal	0.0	0.0	0.5	1.3	2.1	2.3	2.5
governments	0.0	0.0	0.5	1.3	2.1	2.3	2.5
Statistical	-0.4	-2.1	-0.8	-16.7	-29.4	-41.1	-39.9
Source of revision by component							
Federal	-2.0	-0.3	-0.6	-7.3	-10.4	-15.2	-14.2
National defense	-2.2	-1.2	-1.6	-3.0	-4.6	-6.9	-9.1
Consumption expenditures	-2.1	-1.2	-1.6	0.5	0.1	-1.7	-3.9
Definitional	-2.0	-0.1	-1.0	-0.3	-0.2	-0.3	-0.3
Military grants	-2.0	-0.1	-1.0	-0.3	-0.2	-0.3	-0.3
Statistical	-0.1	-1.1	-0.6	0.8	0.3	-1.4	-3.6
Investment	0.0	0.0	0.0	-3.5	-4.7	-5.3	-5.1
Nondefense	0.1	0.7	1.0	-4.3	-5.8	-8.3	-5.1
Consumption expenditures.....	0.1	0.7	1.0	0.3	5.9	4.8	8.2
Definitional	0.1	0.8	1.0	-0.4	0.7	-0.7	-0.3
New treatment of banking	0.1	0.8	1.0	-0.4	0.7	-0.7	-0.3
services	0.0	-0.1	0.0	0.7	5.2	5.5	8.5
Statistical	0.0	0.0	0.0	-4.6	-11.7	-13.2	-13.4
State and local	-0.4	1.9	1.0	-11.9	-19.0	-28.1	-26.1
Consumption expenditures	-0.4	1.9	1.1	-7.5	-20.1	-27.6	-29.9
Definitional	-0.2	3.0	1.3	-1.8	-0.5	-1.2	-0.1
New treatment of insurance	0.0	-0.1	0.5	0.1	0.3	0.9	0.3
services.....	-0.2	3.1	0.3	-3.2	-2.9	-4.4	-2.9
New treatment of banking services	0.0	0.0	0.5	1.3	2.1	2.3	2.5
Reclassification of Indian tribal	0.0	0.0	0.5	1.3	2.1	2.3	2.5
governments	0.0	0.0	0.5	1.3	2.1	2.3	2.5
Statistical	-0.2	-1.1	-0.2	-5.7	-19.6	-26.4	-29.8
Investment	0.0	0.0	0.0	-4.4	1.1	-0.4	3.7
Definitional	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Statistical	0.0	0.0	0.0	-4.4	1.1	-0.4	3.7

19. Military grants-in-kind are reclassified from Federal Government consumption expenditures and gross investment to exports of services; for a further discussion of this reclassification, see Moulton and Seskin, 30.

20. The annual revisions of the ITAs are usually published in the July issue of the SURVEY, most recently in Christopher L. Bach, “Annual Revision of the U.S. International Accounts, 1992–2002,” SURVEY, 83 (July 2003): 32–57.

for 1959 forward are downward (except for 1985–88 and 1992), and they do not exceed \$7 billion in absolute value until 1997. Through 1975, the revisions are primarily accounted for by Federal Government spending; for 1976–84, they are attributable to both Federal Government spending and state and local government spending. For 1985–88, upward revisions to state and local government spending more than offset downward revisions to Federal Government spending. For 1989–96, both Federal Government spending and state and local government spending contribute to the revisions, and for 1997 forward, state and local government spending is the larger contributor to the revisions.

For Federal Government spending, the downward revisions through 1972 are mainly to national defense spending and reflect the reclassification of military grants-in-kind, but the statistical changes (new source data and methodologies) also contribute. For 1973–86, the statistical changes are often the primary contributor to the downward revisions. Through 2002, the statistical changes mainly affect general government consumption of fixed capital and reflect improved estimates of prices for military equipment; for 1993–2002, the statistical changes also reflect revised estimates of software investment. The new treatment of banking services also contributes to the revisions to Federal Government spending; most notably, it raises spending for 1985–94 and 1999, and it reduces spending for 1995–98 and for 2000–2002.

For state and local government spending, the revisions through 1996 are generally small; the exception is a relatively large upward revision for 1986, primarily reflecting the new treatment of banking services.²¹ For 1997 and 1998, the large downward revisions are primarily to employee compensation and reflect the incorporation of newly available medical insurance data for government employees from the BLS survey on employer costs for employee compensation. For 1999–2002, the large downward revisions primarily reflect the incorporation of *Government Finances* data.

Income-side components

Compensation of employees, paid. This aggregate shows the income accruing to employees for their work for domestic production; it includes compensation

paid to the rest of the world and excludes compensation received from the rest of the world.²²

The revisions to compensation reflect revisions to wage and salary disbursements and to supplements to wages and salaries (table 8). (“Revisions” refers to the

Table 8. Revisions to Compensation of Employees, Paid

[Billions of dollars]

	1959	1987	1992	1997	2000	2001	2002
Total revision ¹	0.0	-5.3	-9.7	9.9	58.0	64.4	48.2
Definitional	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Statistical	0.0	-5.3	-9.7	9.9	58.0	64.3	48.1
Source of revision by component							
Wage and salary accruals	0.0	0.5	-2.6	-11.7	-8.4	-8.9	-23.1
Definitional	0.0	0.4	0.6	0.8	0.9	1.1	1.1
Reclassification of miscellaneous compensation	0.0	0.4	0.6	0.8	0.9	1.0	1.0
Mass transit benefits	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Statistical	0.0	0.1	-3.2	-12.5	-9.3	-10.0	-24.2
Supplements to wages and salaries	-0.1	-5.9	-7.0	21.7	66.3	73.3	71.4
Definitional	0.0	-0.4	-0.6	-0.8	-0.9	-1.0	-1.0
Statistical	-0.1	-5.5	-6.4	22.5	67.2	74.3	72.4
Employer contributions for employee pension and insurance funds ²	-0.1	-5.9	-7.0	22.1	65.7	72.2	69.8
Definitional	0.0	-0.4	-0.6	-0.8	-0.9	-1.0	-1.0
Reclassification of miscellaneous compensation	0.0	-0.4	-0.6	-0.8	-0.9	-1.0	-1.0
Statistical	-0.1	-5.5	-6.4	22.9	66.6	73.2	70.8
Employer contributions for government social insurance	0.0	0.0	0.0	-0.4	0.6	1.0	1.6

1. Revisions are calculated by comparing the new series “compensation of employees, paid” with the previously published estimates of “compensation of employees, domestic industries” (NIPA table 6.2, line 2).

2. Revisions are calculated by comparing this new series with the previously published estimates of “other labor income”.

differences between this new series and the previously published estimates of “compensation of employees, domestic industries” shown in NIPA table 6.2.) For 1929–88, the revisions to wages and salaries are upward and small, reflecting the reclassification of miscellaneous compensation from supplements to wages and salaries. For 1989 forward, the revisions are downward and become larger, but they remain less than \$5 billion in absolute value until 1995. The downward revisions generally reflect downward revisions to private wages and salaries, resulting from more fully incorporating the 1996 and 2000 nonfiler tabulations and improvements in the estimation of other misreported wages and salaries. These downward revisions to private wages and salaries also reflect the reclassification of the wages and salaries of employees of Indian tribal governments from the private sector to the government sector. The large downward revision for 2002 primarily reflects the more complete incorporation of BLS tabulations of wage and salary data for private-sector employees and state and local government employees who are covered by state unemployment

21. For 1990 forward, state and local government spending is also raised as a result of the reclassification of Indian tribal governments and enterprises from the private sector to the state and local government sector; see Moulton and Seskin, 28.

22. This measure of compensation differs from the measure that is a component of national income. The national income measure excludes compensation paid to the rest of the world and includes compensation received from the rest of the world.

insurance.²³

The revisions to supplements are downward and small through 1986; for 1987–95, they remain downward but are generally larger. For 1996 forward, the revisions are upward and are very large for 1997–2002. The revisions reflect the pattern of revisions to employer contributions for pension and insurance funds. The revisions to employer contributions for pensions begin with 1988 and reflect improvements in methodology and the use of more complete source data, especially pension data from the Department of Labor (DOL) for 1988–98. The relatively large revisions for 1995 forward reflect the incorporation of DOL tabulations of pension data for 1995–98 that became available subsequent to the 1999 NIPA comprehensive revision. Downward revisions to employer contributions for health insurance for 1987–95 reflect an improved methodology that makes the estimates for these years consistent with the estimates for 1996 forward, which incorporate data from the annual medical expenditure panel survey (MEPS) from the Department of Health and Human Services.²⁴ The downward revision for 1996 reflects the incorporation of MEPS data for that year. For 1997 forward, upward revisions reflect the in-

23. For the final GDP estimate each quarter, unemployment insurance (UI) data for the preceding quarter are incorporated; however, subsequent revisions to the wage and salary estimates occur during annual and comprehensive revisions for at least three reasons: (1) The UI data for the government sector and for the households and institutions sector are not incorporated until the annual and comprehensive revisions to avoid revising GDP for the preceding quarter, (2) the UI data may be revised, and (3) revised seasonal factors are incorporated.

24. The estimates of employer contributions for health insurance first incorporated the MEPS data on a “best-level” basis for 1997 forward during the 2000 annual revision of the NIPAs; see Eugene P. Seskin and David F. Sullivan, “Annual Revision of the National Income and Product Accounts,” SURVEY, 80 (August 2000):28.

corporation of more complete and newly available source data.

Taxes on production and imports. For all years, taxes on production and imports (formerly, indirect business taxes) are reduced by the reclassification of most nontaxes as transfers and of Federal Outer Continental Shelf royalties and state and local rents and royalties as income receipts on assets (table 9). Revisions reflecting this reclassification are generally larger (in absolute value) than those reflecting statistical changes. For 2000–2002, the statistical changes include upward revisions to state and local property taxes that reflect newly available *Government Finances* data. The revisions to property taxes are partly offset by downward revisions to Federal taxes that reflect data from the Alcohol and Tobacco Tax and Trade Bureau for fiscal years 2001 and 2002 and from the Internal Revenue Service (IRS) *Statistics of Income* for fiscal year 2001 and partial data for fiscal year 2002.

Subsidies. The revisions to subsidies, which is now presented separately from current surplus of government enterprises, are less than \$2.0 billion in absolute value for all years except 2002, when it is revised down \$8.0 billion. The revision for 2002 primarily reflects the incorporation of revised data on agricultural subsidies from the USDA.

Net operating surplus. This new component is a profits-like measure that shows business income after subtracting the costs of compensation of employees, taxes on production and imports (less subsidies), and consumption of fixed capital from gross product (or value added) but before subtracting financing costs (such as net interest) and business transfer payments. Net operating surplus consists of net operating surplus of private enterprises and the current surplus of government enterprises.²⁵

Current surplus of government enterprises. The revisions to the current surplus of government enterprises begin with 1988. Through 1999, the revisions remain less than \$2.0 billion in absolute value; relatively large downward revisions for 2000–2002 reflect the incorporation of newly available *Government Finances* data for state and local governments, of data from the Tennessee Valley Authority for 2000–2002, of data from the U.S. Postal Service for 2002, and of data from the fiscal year 2004 Budget on Federal crop insurance.

Consumption of fixed capital (CFC). CFC, which is the charge for the using up of private and government

Table 9. Revisions to Other Income Components

[Billions of dollars]

	1959	1987	1992	1997	2000	2001	2002
Taxes on production and imports ¹	-0.8	-21.4	-26.8	-34.2	-44.7	-45.0	-40.3
Definitional	0.0	0.0	0.0	0.0	-43.7	-47.3	-46.8
Reclassification of nontaxes as							
transfers	0.0	0.0	0.0	0.0	-43.7	-47.3	-46.8
Statistical	-0.8	-21.4	-26.8	-34.2	-1.0	2.3	6.5
Less: Subsidies	0.0	-1.1	0.0	-0.1	0.2	0.0	-8.0
Definitional	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Statistical	0.0	-1.1	0.0	-0.1	0.2	0.0	-8.0
Business current transfer payments	0.4	9.6	14.3	13.1	43.4	50.0	45.7
Definitional	-0.1	-4.3	-9.8	-16.6	43.9	47.1	40.3
Reclassification of nontaxes as							
transfers	0.0	0.0	0.0	0.0	43.7	47.3	46.8
New treatment of insurance services	0.0	-0.9	-4.3	-7.7	10.4	9.0	2.7
Reclassification of nonresident taxes							
paid by domestic corporations	-0.1	-3.4	-5.5	-8.9	-10.2	-9.2	-9.2
Statistical	0.5	13.9	24.1	29.7	-0.5	2.9	5.4
Current surplus of government enterprises	0.0	0.0	0.1	-1.3	-4.8	-6.8	-10.9
Definitional	0.0	0.0	0.1	0.4	0.6	0.7	0.8
Reclassification of Indian tribal governments	0.0	0.0	0.1	0.4	0.6	0.7	0.8
Statistical	0.0	0.0	0.0	-1.7	-5.4	-7.5	-11.7

1. Revisions are calculated by comparing the new series “taxes on production and imports” with the previously published series “indirect business tax and nontax liabilities.”

25. The net operating surplus of private enterprises is a new aggregate; therefore, revisions to the aggregate cannot be discussed. Revisions to its components are discussed in the section, “Private enterprise income.”

fixed capital, is revised down for most years (table 10). The revisions are less than \$5.0 billion in absolute value through 1980 and become larger thereafter. The revisions are mostly accounted for by downward revisions to the private component (comprising businesses, households and institutions, and nonprofit institutions serving households); these downward revisions reflect the incorporation of revised estimates of CFC for autos and software, revised estimates of investment for 1992 forward, and revised prices.²⁶

Capital consumption allowances (CCA)—that is, tax-return-based depreciation for corporations and nonfarm proprietorships and BEA estimates of historical-cost depreciation (using consistent service lives) for farm proprietorships, and rental income of persons—is revised down for all years. The revisions primarily reflect the reclassification of owner-occupied housing and of fixed assets owned and used by nonprofit institutions from the business sector to the households and institutions sector. For 2000–2002, the revisions to CCA for corporations and for nonfarm proprietorships also reflect revised IRS tabulations of tax returns of corporations for 2000, newly available tabulations for 2001, and newly available tabulations of tax returns of sole proprietorships and partnerships for 2001.

Private enterprise income

The private enterprise income account is a new summary account that presents the sources and uses of pri-

26. The estimates of investment and prices are direct inputs into the calculation of both private and government net capital stocks, which are used to calculate CFC.

Table 10. Revisions to Consumption of Fixed Capital

[Billions of dollars]

	1959	1987	1992	1997	2000	2001	2002
Total revision	-1.8	-24.2	-35.6	-38.9	-41.1	-62.4	-104.9
Definitional	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Statistical	-1.8	-24.2	-35.6	-38.9	-41.1	-62.4	-104.9
Source of revision by component							
Private	-1.6	-22.9	-34.9	-32.1	-27.2	-45.8	-86.1
Business.....	-8.1	-92.5	-131.8	-157.3	-181.9	-213.2	-261.4
Capital consumption allowances.....	-4.3	-40.5	-67.9	-88.0	-93.2	-137.3	-143.4
Definitional.....	-4.4	-35.9	-58.2	-75.7	-94.9	-102.5	-108.0
Reclassification of owner-occupied housing and nonprofit fixed assets ¹	-4.4	-35.9	-58.2	-75.7	-94.9	-102.5	-108.0
Statistical.....	0.1	-4.6	-9.7	-12.3	1.7	-34.8	-35.4
Less: Capital consumption adjustment.....	3.8	52.0	63.9	69.3	88.7	75.9	118.0
Definitional.....	2.0	33.6	38.6	49.4	59.9	64.9	67.2
Reclassification of owner-occupied housing and nonprofit fixed assets ¹	2.0	33.6	38.6	49.4	59.9	64.9	67.2
Statistical.....	1.8	18.4	25.3	19.9	28.8	11.0	50.8
Households and institutions.....	6.4	69.5	96.8	125.1	154.8	167.4	175.2
Definitional.....	6.4	69.5	96.8	125.1	154.8	167.4	175.2
Government	-0.1	-1.1	-0.7	-6.8	-13.9	16.5	-18.8
General government.....	-0.1	-1.1	-0.7	-6.4	-13.1	-15.3	-17.4
Government enterprises.....	0.0	0.0	0.0	-0.4	-0.9	-1.3	-1.4

1. Owner-occupied housing and fixed assets owned and used by nonprofit institutions have been reclassified from the business sector to the households and institutions sector.

vate enterprise income.²⁷ Because of the new account structure, the discussion of revisions will focus on the components shown in national income.

Proprietors' income with inventory valuation adjustment (IVA) and capital consumption adjustment (CCAdj).²⁸ For 1929–97, most of the revisions are downward, and they remain below \$5.0 billion in absolute value until 1991 (table 11). For 1998, the revision is upward and small, and for 1999, it is downward and slight; for 2000–2002, the revisions are upward and large. Through 1987, the revisions generally reflect downward revisions to both farm and nonfarm proprietors' income. For 1988 and 1989, the upward revisions reflect small upward revisions to both farm and nonfarm proprietors' income. For 1990 forward, the revisions primarily reflect the pattern of revisions to nonfarm proprietors' income.

Table 11. Revisions to Proprietors' Income with Inventory Valuation and Capital Consumption Adjustments

[Billions of dollars]

	1959	1987	1992	1997	2000	2001	2002
Total revision	-1.1	-1.7	-6.7	-5.2	13.6	42.7	41.2
Definitional.....	-1.4	-2.3	-3.4	-5.4	-5.6	-7.0	-6.3
Statistical.....	0.3	0.6	-3.3	0.2	19.2	49.7	47.5
Source of revision by component							
Farm	-0.9	-0.3	1.8	4.5	0.1	6.0	1.4
Definitional.....	-1.4	-2.3	-3.4	-5.4	-5.6	-7.0	-6.3
Inclusion of materials and supplies in farm inventories.....	0.0	0.0	0.9	0.3	0.4	-0.4	-0.1
Reclassification of farm housing.....	-1.4	-2.3	-4.3	-5.7	-6.0	-6.6	-6.2
Statistical.....	0.5	2.0	5.2	9.9	5.7	13.0	7.7
Nonfarm	-0.3	-1.3	-8.7	-9.7	13.5	36.8	39.7

sion is upward and small, and for 1999, it is downward and slight; for 2000–2002, the revisions are upward and large. Through 1987, the revisions generally reflect downward revisions to both farm and nonfarm proprietors' income. For 1988 and 1989, the upward revisions reflect small upward revisions to both farm and nonfarm proprietors' income. For 1990 forward, the revisions primarily reflect the pattern of revisions to nonfarm proprietors' income.

The revisions to farm proprietors' income reflect the reclassification of farm housing services from proprietors' income to rental income of persons.²⁹ For 1987 forward, the revisions also reflect newly incorporated data on farm output, intermediate purchases, subsidies, and factor incomes from the USDA.

For 1973–2000, the revisions to nonfarm proprietors' income (without IVA and CCAdj) primarily reflect a number of statistical improvements. The estimates for 1987 forward reflect an adjustment to remove the double-counting of partnership incomes and a new methodology to fully incorporate portfolio interest received from financial partnerships.³⁰ The large revisions for 2001 and 2002 also reflect the incorporation of newly available tabulations of tax returns of sole proprietorships and partnerships for 2001 from

27. Private enterprises consist of private businesses, owner-occupied housing, and (for purposes of estimating monetary and imputed interest payments and imputed interest receipts) nonprofit institutions serving households.

28. The CCAdj is the difference between depreciation based on tax return data and consumption of fixed capital (the NIPA estimate of depreciation).

29. For further details, see Moulton and Seskin, 28–29.

30. See Moylan and Robinson, 26.

the IRS.

Rental income of persons with CCAdj. Through 1977, the revisions to rental income of persons with CCAdj are upward and small. For 1978–1991, the pattern of revisions is mixed, and the sizes of the revisions remain below \$4.0 billion in absolute value (table 12).

Table 12. Revisions to Rental Income of Persons with Capital Consumption Adjustment
[Billions of dollars]

	1959	1987	1992	1997	2000	2001	2002
Total revision	1.0	-2.3	14.7	0.5	3.7	25.2	30.6
Definitional.....	1.4	2.3	4.3	5.7	6.0	6.6	6.2
Reclassification of farm housing.....	1.4	2.3	4.3	5.7	6.0	6.6	6.2
Statistical.....	-0.4	-4.6	10.4	-5.2	-2.3	18.6	24.4

For 1992 forward, the revisions are mostly upward; for 2001 and 2002, they are particularly large. For all years, the revisions reflect the reclassification of farm housing services to rental income. The revisions for 2001 and 2002 also reflect the incorporation of newly available source data from the Census Bureau's 2001 American Housing Survey and the 2002 Current Population Survey/Housing Vacancy Survey.

Corporate profits with IVA and CCAdj. Through 1980, the revisions to corporate profits with IVA and CCAdj are generally upward and below \$3.0 billion in absolute value. For 1981 forward, the revisions are all upward and become larger; the revision for 2002 is very large (table 13). Through 1999, the revisions largely reflect the pattern of revisions to the CCAdj.³¹ The revisions for 2000–2002 also reflect the incorporation of revised IRS tabulations of corporate tax returns for 2000 and newly available IRS tabulations for 2001.

Table 13. Revisions to Corporate Profits with Inventory Valuation Adjustment (IVA) and Capital Consumption Adjustment (CCAdj)
[Billions of dollars]

	1959	1987	1992	1997	2000	2001	2002
Total revision	2.0	22.2	26.2	34.7	29.8	38.8	116.8
Definitional.....	0.1	3.4	5.5	8.9	10.2	9.2	9.2
Reclassification of nonresident taxes paid by domestic corporations.....	0.1	3.4	5.5	8.9	10.2	9.2	9.2
Statistical.....	1.9	18.8	20.7	25.8	19.6	29.6	107.6
Source of revision by industry							
Domestic industries	2.0	22.3	21.9	34.5	27.5	28.1	82.7
Financial.....	0.2	10.8	11.5	16.7	1.7	39.8	49.4
Nonfinancial.....	1.8	11.4	10.4	17.8	25.7	-11.7	33.3
Rest of the world	0.0	0.0	4.4	0.2	2.4	10.7	34.1
Receipts from the rest of the world.....	0.0	-0.4	3.4	-0.6	-1.4	6.2	25.4
Less: Payments to the rest of the world.....	0.0	-0.4	-0.9	-0.8	-3.7	-4.5	-8.6
Source of revision by component							
Profits before tax (without IVA and CCAdj)	0.1	3.0	9.5	5.8	-8.9	26.6	79.8
Taxes on corporate income.....	0.1	3.4	5.5	8.9	5.8	1.8	-18.3
Definitional.....	0.1	3.4	5.5	8.9	10.2	9.2	9.2
Reclassification of nonresident taxes paid by domestic corporations.....	0.1	3.4	5.5	8.9	10.2	9.2	9.2
Statistical.....	0.0	0.0	0.0	0.0	-4.4	-7.4	-27.5
Profits after tax (without IVA and CCAdj).....	0.0	-0.4	3.9	-3.1	-14.7	24.8	98.0
Net dividends.....	0.0	0.1	2.4	-0.7	1.8	-36.4	-36.0
Undistributed profits (without IVA and CCAdj).....	0.0	-0.5	1.5	-2.4	-16.5	61.2	134.0
Inventory valuation adjustment	0.0	0.0	0.0	5.7	0.9	4.2	4.6
Capital consumption adjustment	1.9	19.3	16.8	23.3	37.8	8.0	32.4

In addition, the revision for 2002 reflects a new stock-options adjustment to the extrapolation of the tax return data for 2001 to reflect the anticipated change in exercised stock options that will be included in the tax return data for 2002 when the data become available. For 1982 forward, profits from the rest of the world are revised; the revisions are below \$5.0 billion in absolute value and generally upward through 2000; for 2001 and 2002, the revisions are upward and larger.

The CCAdj for all years except 1978 and 1979 is revised up. Through 1980, the revisions are less than \$3.0 billion, and then they become larger. They reflect the revisions to CCA and CFC discussed earlier.

For 1997 forward, the IVA is revised up. The revisions reflect the use of revised commodity weights from the 1997 benchmark I-O accounts and revised price data (see the section "Change in private inventories").

Net interest and miscellaneous payments. Through 1974, the revisions to "net interest and miscellaneous payments" (formerly, net interest) are less than \$1.0 billion in absolute value (table 14). For 1975–86, the pattern of revisions is mixed, and the sizes of the revisions are larger. For 1987–2002, the revisions are all downward and generally become even larger. The revisions to net interest and miscellaneous payments reflect mostly downward revisions that are attributable to the new treatment of banking services

31. For 1959 forward, the revisions also reflect the reclassification of non-resident taxes paid by domestic corporations. Nonresident taxes—that is, taxes paid by domestic corporations to foreign governments—are reclassified as part of profits tax liability and included in a new component that consists of tax payments to the rest of the world; see Moulton and Seskin, 31.

Table 14. Revisions to Net Interest and Miscellaneous Payments
[Billions of dollars]

	1959	1987	1992	1997	2000	2001	2002
Total revision	-0.4	-2.8	-18.3	-17.7	-63.3	-94.0	-112.2
Net interest	-0.4	-2.8	-18.3	-17.5	-63.9	-94.9	-113.8
Definitional.....	-0.4	-15.1	-24.2	-73.5	-95.1	-85.3	-75.9
New treatment of banking services.....	-0.6	-23.4	-34.5	-84.6	-104.0	-92.0	-82.3
New treatment of insurance services.....	0.2	8.3	10.3	11.1	9.0	6.7	6.4
Statistical.....	0.0	12.3	5.9	56.0	31.2	-9.6	-37.9
Miscellaneous payments	0.0	0.0	0.0	-0.2	0.6	0.9	1.6
Definitional.....	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Statistical.....	0.0	0.0	0.0	-0.2	0.6	0.9	1.6
Source of revision by component							
Net monetary interest	0.0	4.8	0.8	36.6	-8.9	-27.9	-33.6
Definitional.....	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Statistical.....	0.0	4.8	0.8	36.6	-8.9	-27.9	-33.6
Net imputed interest	-0.5	-7.6	-19.1	-54.1	-55.0	-67.0	-80.2
Definitional.....	-0.4	-15.1	-24.2	-73.5	-95.1	-85.3	-75.9
New treatment of banking services.....	-0.6	-23.4	-34.5	-84.6	-104.0	-92.0	-82.3
New treatment of insurance services.....	0.2	8.3	10.3	11.1	9.0	6.7	6.4
Statistical.....	-0.1	7.5	5.1	19.4	40.1	18.3	-4.3
Miscellaneous payments	0.0	0.0	0.0	-0.2	0.6	0.9	1.6
Definitional.....	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Statistical.....	0.0	0.0	0.0	-0.2	0.6	0.9	1.6

NOTE: The new aggregate "net interest and miscellaneous payments" combines the previously published series "net interest" and "rents and royalties." Revisions to miscellaneous payments are calculated in comparison with previously published estimates of "rents and royalties."

and that are partly offset by upward revisions that are attributable to the new treatment of insurance services. The revisions also reflect the incorporation of revised and newly available source data from the Federal Reserve Board on mortgage debt outstanding, revised estimates from the ITAs, and for 2000–2002, IRS tabulations of business tax returns.

Business current transfer payments (net). This component consists of “transfer payments to persons (net),” which has been redefined to include net insurance settlements, “business transfer payments to government (net),” and “business transfer payments to the rest of the world (net).” The revisions primarily reflect the inclusion of the net insurance settlements. “Business transfer payments to government (net)” is a new aggregate that consists of Federal deposit insurance premiums and Federal and state and local fines, fees, and other payments, as well as net insurance settlements paid to governments. “Business transfer payments to the rest of the world (net)” has been redefined to include net insurance settlements paid to the rest of the world and to exclude nonresident taxes paid by domestic corporations to foreign governments (these taxes have been reclassified as taxes on corporate income).

Personal income and its disposition

Personal income. Through 1977, the revisions to personal income are downward (except for 1975) and less than \$4.0 billion in absolute value; afterwards, the revisions are generally larger, and the pattern is mixed (table 15). The revisions partly reflect the revisions to the components of national income that are included in personal income (wage and salary disbursements, supplements to wages and salaries, proprietors’ income, and rental income of persons) and to the components of personal income (personal interest income and personal dividend income) that are derived from related components of national income. The revisions also reflect revisions to “personal current transfer receipts” (formerly, transfer payments to persons, which has been redefined to include net insurance settlements) and to “contributions for government social insurance.”

Compensation of employees, received. This component consists of wage and salary disbursements and supplements to wages and salaries received by U.S. residents, including wages and salaries received from the rest of the world. The major sources of revision to this aggregate are identical to those already discussed in the section “Compensation of employees, paid.” In the new presentation, employer contributions for government social insurance is included as a component of

compensation, but total contributions for government social insurance—which includes both employer contributions and employee and self-employed contributions—is deducted in the calculation of personal income, so this change in presentation does not affect

Table 15. Revisions to Personal Income and Its Disposition

[Billions of dollars]

	1959	1987	1992	1997	2000	2001	2002
Total revision	-1.2	-15.1	-28.4	-21.9	23.1	27.8	-11.9
Definitional.....	-1.0	-24.9	-30.1	-81.9	-82.6	-63.8	-64.6
New treatment of banking services.....	-1.2	-33.0	-39.7	-86.4	-105.4	-90.1	-90.7
New treatment of insurance services.....	0.2	8.1	8.7	4.2	22.4	26.6	16.1
Other.....	0.0	0.0	0.9	0.3	0.4	-0.3	0.0
Statistical.....	-0.2	9.8	1.7	60.0	105.7	91.6	52.7
Source of revision by component							
Compensation of employees, received ¹	7.8	160.9	219.1	300.3	402.2	419.4	412.1
Definitional.....	7.9	166.3	228.4	289.5	343.5	355.0	364.2
Reclassification of employer contributions for social insurance	7.9	166.3	228.4	289.5	343.5	354.9	364.1
Other.....	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Statistical.....	-0.1	-5.4	-9.3	10.8	58.7	64.4	47.9
Proprietors' income with inventory valuation and capital consumption adjustments	-1.1	-1.7	-6.7	-5.2	13.6	42.7	41.2
Definitional.....	-1.4	-2.3	-3.4	-5.4	-5.6	-7.0	-6.3
Statistical.....	0.3	0.6	-3.3	0.2	19.2	49.7	47.5
Rental income of persons with capital consumption adjustment	1.0	-2.3	14.7	0.5	3.7	25.2	30.6
Definitional.....	1.4	2.3	4.3	5.7	6.0	6.6	6.2
Statistical.....	-0.4	-4.6	10.4	-5.2	-2.3	18.6	24.4
Personal income receipts on assets	-1.0	-4.7	-24.6	-17.2	-65.6	-125.6	-133.7
Personal interest income.....	-1.0	-4.8	-26.7	-15.3	-66.0	-87.6	-96.1
Definitional.....	-1.0	-24.3	-28.1	-73.8	-92.4	-76.5	-66.9
New treatment of banking services	-1.2	-33.0	-39.7	-86.4	-105.4	-90.1	-90.7
New treatment of insurance services	0.2	8.7	11.6	12.6	13.0	13.6	13.8
Statistical.....	0.0	19.5	1.4	58.5	26.4	-11.1	-29.2
Personal dividend income.....	0.0	0.1	2.1	-1.9	0.4	-38.0	-37.6
Definitional.....	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Statistical.....	0.0	0.1	2.1	-1.9	0.4	-38.0	-37.6
Personal current transfer receipts	0.0	-1.0	-2.3	-11.0	13.7	22.2	4.2
Definitional.....	0.0	-0.6	-2.9	-8.4	9.4	13.0	2.3
New treatment of insurance services.....	0.0	-0.6	-2.9	-8.4	9.4	13.0	2.3
Statistical.....	0.0	-0.4	0.6	-2.6	4.3	9.2	1.9
Less: Contributions for government social insurance ²	7.8	166.3	228.4	289.3	344.3	356.2	366.3
Definitional.....	7.9	166.3	228.4	289.5	343.5	354.9	364.1
Reclassification of employer contributions for social insurance.....	7.9	166.3	228.4	289.5	343.5	354.9	364.1
Statistical.....	-0.1	0.0	0.0	-0.2	0.8	1.3	2.2
Less: Personal current taxes ³	-0.5	-13.9	-25.2	-42.5	-50.7	-48.4	-58.8
Definitional.....	-0.3	-13.2	-26.0	-38.2	-50.0	-54.6	-58.6
Reclassification of personal nontaxes as transfers.....	-0.3	-13.2	-26.0	-38.2	-50.0	-54.6	-58.6
Statistical.....	-0.2	-0.7	0.8	-4.3	-0.7	6.2	-0.2
Equals: Disposable personal income	-0.7	-1.2	-3.2	20.6	73.8	76.2	46.9
Definitional.....	-0.6	-11.7	-3.7	-43.6	-32.4	-9.5	-6.2
New treatment of banking services.....	-1.2	-33.0	-39.7	-86.4	-105.4	-90.1	-90.7
New treatment of insurance services.....	0.2	8.1	8.7	4.2	22.4	26.6	16.1
Reclassification of personal nontaxes as transfers.....	0.3	13.2	26.0	38.2	50.0	54.6	58.6
Other.....	0.0	0.0	1.3	0.4	0.6	-0.6	-0.2
Statistical.....	-0.1	10.5	0.5	64.2	106.2	85.7	53.1
Less: Personal outlays	-0.8	10.2	44.5	55.2	107.0	118.7	149.5
Personal consumption expenditures.....	-0.5	-5.1	25.6	18.1	55.7	58.4	81.6
Definitional.....	-0.3	-15.8	-23.5	-67.1	-67.2	-51.5	-53.9
Statistical.....	-0.2	10.7	49.1	85.2	122.9	109.9	135.5
Interest paid by persons.....	-0.6	2.1	-6.9	-0.9	-0.7	3.7	6.3
Definitional.....	-0.7	-9.1	-7.6	-15.0	15.7	-12.0	-10.7
New treatment of banking services.....	-0.7	-9.1	-7.6	-15.0	15.7	-12.0	-10.7
Statistical.....	0.1	11.2	0.7	14.1	-16.4	15.7	17.0
Personal current transfer payments ⁴	0.3	13.2	25.8	38.0	52.0	56.6	61.7
Definitional.....	0.3	13.2	26.0	38.2	50.0	54.6	58.6
Reclassification of personal nontaxes as transfers.....	0.3	13.2	26.0	38.2	50.0	54.6	58.6
Statistical.....	0.0	0.0	-0.2	-0.2	2.0	2.0	3.1
Equals: Personal saving	0.2	-11.4	-47.7	-34.6	-33.0	-42.5	-102.6
Definitional.....	0.0	0.0	0.9	0.3	0.4	-0.3	0.0
Statistical.....	0.2	-11.4	-48.6	-34.9	-33.4	-42.2	-102.6

1. “Compensation of employees, received” is a new NIPA category. Revisions are shown in comparison with the sum of previously published estimates of “wage and salary disbursements” and “other labor income.”

2. “Contributions for government social insurance” is a new category in personal income that includes both personal and employer contributions for government social insurance. Revisions are shown in comparison with the previously published series “personal contributions for social insurance.”

3. “Personal current taxes” is a new NIPA category. Revisions are shown in comparison with the previously published series “personal tax and nontax payments.”

4. “Personal current transfer payments” is a new NIPA category. Revisions are shown in comparison with the previously published series “personal transfer payments to the rest of the world (net).”

personal income. This component also differs from “compensation of employees, paid” by “wage accruals less disbursements” (WALD).³²

Personal income receipts on assets. This new aggregate consists of personal interest income and personal dividend income. Personal interest income consists of monetary and imputed interest received by persons from all sources, and it is calculated as net interest plus interest paid by persons and interest paid by government less interest received by government. Through 1977, the revisions are generally downward and less than \$3.0 billion in absolute value; afterwards, the revisions are larger, and the pattern is mixed. The revisions primarily reflect the revisions to net interest and the incorporation of data on consumer debt outstanding from the Federal Reserve Board.

The revisions to personal dividend income begin with 1982 and are less than \$4.0 billion in absolute value except for 1999, 2001, and 2002. The revisions through 2000 primarily reflect newly incorporated data on dividends from the rest of the world from the ITAs. For 2001 and 2002, large downward revisions primarily reflect the incorporation of newly available IRS tabulations of corporate tax return data for 2001 and data from company financial statements.

Personal current transfer receipts.³³ Through 1983, the revisions are generally upward; none exceeds \$2.5 billion in absolute value; afterwards, the revisions tend to be larger, and the pattern is mixed. The revisions mostly reflect the pattern of the revisions to “other current transfer receipts, from business (net)” and result from the new treatment of insurance services. For 2002, the revision also reflects an upward revision to “old-age, survivors, disability, and health insurance benefits” as a result of the incorporation of newly available data on Medicare benefits from the Centers for Medicare and Medicaid Services (CMS) and downward revisions to government unemployment insurance benefits as a result of the incorporation of data from the Office of Workforce Security in the Department of Labor and to state and local Medicaid benefits based on CMS data.

Contributions for government social insurance.

32. WALD is the difference between wages earned, or accrued, and wages paid, or disbursed. In the NIPAs, wages accrued is the appropriate measure for national income, and wages disbursed is the appropriate measure for personal income. To estimate WALD, BEA converts annual disbursements data based on BLS tabulations of wages and salaries to an accrual basis. WALD primarily consists of BEA estimates of bonus payments that are declared at the end of a year but that are actually paid the next year.

33. “Personal current transfer receipts” consists of income payments to persons for which no current services are performed and of net insurance settlements. It is the sum of “government social benefits” and “current transfer receipts from business (net).” Government social benefits—formerly, transfer payments to persons from government—includes benefits from government social insurance funds and from certain other programs.

This new category in the personal income and outlay account is deducted in the calculation of personal income; it includes both personal and employer contributions. The revisions, which are calculated in comparison with the previously published “personal contributions for social insurance,” begin with 1993 and are small. The largest is an upward revision for 2002 of \$3.8 billion.

Personal current taxes. This component consists of tax components that were included in the former “personal tax and nontax payments” (the nontax components have been reclassified as “personal current transfer payments to government”).³⁴ As a result of the reclassification, the pattern of this new series is similar to that of the previously published series, but the level of the series is somewhat lower.

Disposable personal income (DPI). The pattern of revisions to DPI (which is equal to personal income less personal current taxes) reflects the revisions to these two components. Through 1974, the revisions to DPI do not exceed \$1.5 billion in absolute value. For 1975 forward, the revisions tend to be larger, and the pattern is mixed.

Personal outlays. This series now consists of personal consumption expenditures (PCE), personal interest payments, and personal current transfer payments. The revisions to personal outlays primarily reflect the revisions to PCE. In addition, the revisions reflect the inclusion of personal current transfer payments to government, which was formerly classified as personal nontaxes.

Personal saving. Personal saving is the difference between DPI and personal outlays. Through 1977, the revisions do not exceed \$1.0 billion in absolute value. For 1978–86, the revisions are generally larger and show a mixed pattern. For 1987 forward, the revisions are downward and tend to be even larger. The downward revisions generally reflect the downward revisions to personal income and the upward revisions to PCE. The downward revisions to personal saving result in corresponding downward revisions to the personal saving rate—personal saving as a percentage of DPI—that range from 0.2 percentage point for 1999 to 1.4 percentage points for 2002. The revised estimates, like the previously published estimates, show a downtrend in the saving rate for 1992 forward.

Government current receipts and expenditures

In the new account structure, current receipts includes several components—specifically, taxes from the rest

34. See Moulton and Seskin, 32.

of the world, interest receipts, dividends, and current surplus of government enterprises—that were previously included as negative entries on the expenditures side.³⁵ The reclassification of components from current expenditures to current receipts does not affect “net government saving,” (formerly, “government current surplus or deficit (-), national income and product accounts”).

Federal Government. Federal Government current receipts is unrevised for 1929–58, is revised down slightly for 1959, is revised up for 1960–2001 by generally increasing amounts, and is revised down for 2002 (table 16). The upward revisions through 2001 primarily reflect the reclassification of interest receipts as a current receipt. Previously, interest receipts were netted against interest payments and included in Federal Government current expenditures. The downward revision to current receipts for 2002 primarily reflects a downward (statistical) revision to taxes on corporate income; this statistical revision begins with 2000.

Federal Government current expenditures shows small or no revisions before 1960, and it shows upward revisions for 1960–2002. These upward revisions primarily reflect the reclassification of interest receipts as a current receipt. Statistical revisions before 1999 are upward and small. For 1999–2002, the statistical revisions are upward and larger; they primarily reflect upward revisions to consumption expenditures that result from the reallocation of spending to consumption expenditures from investment. For 1999–2001, the revisions to government social benefits also contribute to the upward revisions, primarily reflecting revisions to the estimates of Medicare benefits, which incorporate a new methodology based on accrual rather than cash accounting.³⁶

For 1960–94, the upward revisions to current receipts are about the same as the upward revisions to current expenditures; as a result, Federal Government net saving is essentially unrevised. For 1995–2001, net Federal Government saving is revised down, reflecting larger upward revisions to current expenditures than to current receipts. For 2002, a downward revision to net saving reflects an upward revision to current expenditures and a downward revision to current receipts.

State and local government. State and local government current receipts is revised up for most years. For 1929–45, the upward revisions reflect the reclassification of the current surplus of state and local government enterprises as current receipts. For 1946–66, the

upward revisions reflect the reclassification of the current surplus of state and local government enterprises and the reclassification of interest receipts as a current receipt. Previously, interest receipts were netted against interest payments and included in state and local government current expenditures.

For 1935 forward, state and local government current expenditures is revised up. The revisions reflect the reclassification of the current surplus of state and local government enterprises and the reclassification of interest receipts as a current receipt.

Through 1987, the upward revisions to current receipts are about the same as the upward revisions to current expenditures; as a result, state and local government net saving is essentially unrevised. After 1987, state and local government net saving is revised up for all years except 1993 and 1995.

Statistical revisions to current receipts and current expenditures mainly reflect the incorporation of newly available data from *Government Finances*, including data on local governments for fiscal years 2000 and

Table 16. Revisions to Government Current Receipts and Expenditures
[Billions of dollars]

	1959	1987	1992	1997	2000	2001	2002
Federal							
Current receipts	-0.1	26.2	25.9	27.6	19.9	9.5	-12.7
Definitional	0.0	25.6	25.6	26.8	25.1	21.0	20.0
Reclassification of current surplus of government enterprises	-0.1	-2.0	-0.1	0.3	-2.3	-4.1	-3.1
Reclassification of interest receipts	0.0	25.6	23.1	21.4	20.1	17.9	15.9
New treatment of banking services	0.0	0.8	1.0	-0.4	0.7	-0.7	-0.3
Reclassification of taxes paid by the rest of the world	0.1	2.0	2.6	5.1	7.3	7.2	7.2
Statistical	-0.1	0.6	0.3	0.8	-5.2	-11.5	-32.7
Current expenditures	-0.2	23.3	25.7	30.1	37.3	30.9	25.2
Definitional	0.0	25.6	25.6	26.8	25.1	21.0	20.0
Reclassification of current surplus of government enterprises	-0.1	-2.0	-0.1	0.3	-2.3	-4.1	-3.1
Reclassification of interest receipts	0.0	25.6	23.1	21.4	20.1	17.9	15.9
Reclassification of taxes paid by the rest of the world	0.1	2.0	2.6	5.1	7.3	7.2	7.2
Statistical	-0.2	-2.3	0.1	3.3	12.2	9.9	5.2
Net Federal Government saving	0.1	2.9	0.1	-2.5	-17.4	-21.5	-37.9
Definitional	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Statistical	0.1	2.9	0.1	-2.5	-17.4	-21.5	-37.9
State and local							
Current receipts	1.8	54.6	73.4	86.1	105.3	121.4	120.2
Definitional	2.0	55.9	67.8	85.3	93.6	94.1	94.0
Reclassification of current surplus of government enterprises	1.1	3.1	7.7	12.3	7.7	5.4	5.9
Reclassification of Indian tribal governments	0.0	0.0	0.1	0.4	0.6	0.7	0.8
Reclassification of interest receipts	0.9	52.6	59.6	71.5	84.0	86.7	86.0
New treatment of banking services	-0.2	-2.6	-2.8	-5.5	-6.4	-4.6	-4.0
New treatment of insurance services	0.0	-0.1	0.5	0.1	0.3	0.9	0.3
Reclassification of dividend receipts	0.0	0.2	0.5	1.5	1.9	2.0	2.1
Statistical	-0.2	-1.3	5.6	0.8	11.7	27.3	26.2
Current expenditures	1.8	54.4	67.8	77.9	73.3	72.8	71.4
Definitional	2.0	55.9	68.2	86.2	95.1	95.7	95.7
Reclassification of current surplus of government enterprises	1.1	3.1	7.7	12.3	7.7	5.4	5.9
Reclassification of interest receipts	0.9	52.6	59.6	71.5	84.0	86.7	86.0
Reclassification of dividend receipts	0.0	0.2	0.5	1.5	1.9	2.0	2.1
Reclassification of Indian tribal governments	0.0	0.0	0.4	0.9	1.5	1.6	1.7
Statistical	-0.2	-1.6	0.0	-7.4	-20.3	-21.2	-22.7
Net state and local government saving	0.0	0.2	5.6	8.2	32.0	48.6	48.8
Definitional	0.0	0.0	-0.4	-0.9	-1.5	-1.6	-1.7
Statistical	0.0	0.2	6.0	9.1	33.5	50.2	50.5
Addenda:							
Net government saving	0.1	3.1	5.8	5.7	14.6	27.2	10.8
Definitional	0.0	0.0	-0.4	-0.9	-1.5	-1.6	-1.7
Statistical	0.1	3.1	6.2	6.6	16.0	28.8	12.6

35. The new presentation, with fewer receipts items netted against expenditures, is more consistent with international guidelines.

36. See Moylan and Robinson, 27.

2001, data on state governments for fiscal year 2001, and state tax data for fiscal year 2002.

For 2000–2002, upward revisions to receipts reflect large upward revisions to local property taxes, and downward revisions to expenditures reflect large downward revisions to purchased services. Together, these revisions result in large upward revisions to net state and local government saving.

Foreign transactions

Current receipts from the rest of the world. This aggregate consists of the exports of goods and services and income receipts from the rest of the world. The revisions to exports were discussed above. The revisions to income receipts begin with 1952, and they are downward through 1985, primarily reflecting the new treatment of banking services, which now includes imputed interest associated with borrower services that is received from the rest of the world (table 17). For 1986–99, 2001, and 2002, income receipts is revised up, primarily reflecting the new treatment of insurance services, which now includes insurance premium supplements. For 2000, income receipts is revised down slightly.

Current payments to the rest of the world (net). This aggregate consists of the imports of goods and services, income payments, and “current taxes and transfer payments to the rest of the world (net).” The revisions to imports were discussed above. The revisions to income payments for 1929–2002 are downward for most years, primarily reflecting the new treatment for estimating implicit bank services (im-

Table 17. Revisions to Foreign Transactions
[Billions of dollars]

	1959	1987	1992	1997	2000	2001	2002
Current receipts from the rest of the world	2.0	-1.4	0.2	-5.7	-5.6	3.0	13.1
Definitional.....	2.0	-2.2	-0.4	-7.5	-5.2	3.4	2.3
Statistical.....	0.0	0.8	0.6	1.8	-0.4	-0.4	10.8
Source of revision by component							
Exports of goods and services.....	2.1	-1.7	-1.5	-11.1	-4.8	1.0	-8.1
Income receipts.....	0.0	0.3	1.6	5.4	-0.7	2.1	21.1
Definitional.....	-0.1	0.6	1.7	1.7	4.5	7.6	9.1
New treatment of banking services.....	-0.1	-0.7	-0.5	-1.2	-1.8	-1.4	-1.2
New treatment of insurance services.....	0.0	1.2	2.2	2.9	6.2	9.0	10.3
Statistical.....	0.0	-0.3	-0.1	3.7	-5.2	-5.5	12.0
Current payments to the rest of the world and balance on current account	2.0	-1.4	0.2	-5.7	-5.6	3.0	13.1
Definitional.....	2.0	-2.2	-0.4	-7.5	-5.2	3.5	2.3
Statistical.....	0.0	0.8	0.6	1.8	-0.4	-0.5	10.8
Source of revision by component							
Imports of goods and services.....	0.0	1.2	4.0	1.1	9.2	18.7	-5.4
Income payments.....	0.0	-3.9	-4.6	-20.5	-16.3	-11.2	-10.0
Definitional.....	0.0	-3.5	-3.5	-9.6	-12.1	-8.3	-8.0
New treatment of banking services.....	0.0	-4.0	-4.2	-10.8	-14.1	-10.3	-10.7
New treatment of insurance services.....	0.0	0.5	0.7	1.2	2.0	1.9	2.7
Statistical.....	0.0	-0.4	-1.1	-10.9	-4.2	-2.9	-2.0
Current taxes and transfer payments to the rest of the world (net).....	1.9	0.1	-0.8	0.8	2.4	-2.8	3.6
Definitional.....	2.0	0.1	-0.7	1.1	1.2	-4.5	0.7
Statistical.....	0.0	0.0	-1.7	0.8	1.0	-4.7	0.4
Reclassification of military grants.....	2.0	0.1	1.0	0.3	0.2	0.3	0.3
Statistical.....	-0.1	0.0	-0.1	-0.3	1.2	1.7	2.9
Balance on current account, NIPAs.....	0.0	1.2	1.8	12.9	-0.8	-1.7	24.8
Definitional.....	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Statistical.....	0.0	1.2	1.8	12.9	-0.8	-1.7	24.8

puted interest paid to the rest of the world).

Balance on current account, national income and product accounts. This component (formerly, net foreign investment) is no longer included in payments to the rest of the world. It is derived as current receipts from the rest of the world less current payments to the rest of the world.

Saving and investment

Gross saving consists of net saving and consumption of fixed capital (CFC). Net saving consists of net private saving and net government saving. Through 1978, the revisions to gross saving are mostly downward and do not exceed \$5.0 billion in absolute value (table 18). For 1979–81 and 1985–2002, the revisions are downward and generally larger, especially after 1986. For 1979 and 1980, the revisions primarily reflect downward revisions to personal saving; for 1981, a downward revision to CFC is partly offset by an upward revision to undistributed corporate profits with IVA and CCAAdj. For 1982–84, the revisions are upward and less than \$4.0 billion, and they reflect upward revisions to personal saving and to undistributed corporate profits with IVA and CCAAdj that are partly offset by downward revisions to CFC. For most years after 1984, downward revisions to CFC and to personal saving are partly offset by upward revisions to undistributed cor-

Table 18. Revisions to Saving and Investment
[Billions of dollars]

	1959	1987	1992	1997	2000	2001	2002
Gross saving	0.4	-13.6	-59.2	-41.2	-37.4	-4.4	-25.7
Definitional.....	0.0	0.0	0.5	-0.6	-1.1	-1.9	-1.7
Statistical.....	0.4	-13.6	-59.7	-40.6	-36.3	-2.5	-24.0
Net saving ¹	2.2	10.5	-23.6	-2.4	3.7	58.0	79.2
Net private saving ¹	2.0	7.3	-29.4	-8.0	-10.8	30.8	68.3
Personal saving.....	0.2	-11.4	-47.7	-34.6	-33.0	-42.5	-102.6
Definitional.....	0.0	0.0	0.9	0.3	0.4	-0.3	0.0
Statistical.....	0.2	-11.4	-48.6	-34.9	-33.4	-42.2	-102.6
Undistributed corporate profits with IVA and CCAAdj.....	1.9	18.8	18.3	26.6	22.2	73.3	170.9
Wage accruals less disbursements.....	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net government saving.....	0.1	3.1	5.8	5.6	14.6	27.1	10.8
Definitional.....	0.0	0.0	-0.4	-0.9	-1.5	-1.6	-1.7
Statistical.....	0.1	3.1	6.2	6.6	16.0	28.8	12.6
Federal.....	0.1	2.9	0.1	-2.5	-17.4	-21.5	-37.9
State and local.....	0.0	0.2	5.6	8.1	32.0	48.6	48.8
Consumption of fixed capital	-1.8	-24.2	-35.6	-38.9	-41.1	-62.4	-104.9
Private.....	-1.6	-22.9	-34.9	-32.1	-27.2	-45.8	-86.1
Domestic business.....	-8.1	-92.5	-131.8	-157.3	-181.9	-213.2	-261.4
Households and institutions.....	6.4	69.5	96.8	125.1	154.8	167.4	175.2
Government.....	-0.1	-1.1	-0.7	-6.8	-13.9	-16.5	-18.8
Federal.....	-0.2	-1.1	-0.7	-4.3	-8.7	-10.5	-12.8
State and local.....	0.0	-0.1	0.0	-2.6	-5.2	-6.0	-6.0
Gross domestic investment, capital account transactions, and net lending, NIPAs	0.0	4.7	-0.1	-0.4	-36.1	0.7	6.0
Gross domestic investment.....	0.0	3.5	-1.8	-13.2	-35.2	2.4	-18.8
Gross private domestic investment.....	0.0	3.5	-1.8	-0.7	-19.9	21.2	-4.0
Definitional.....	0.0	0.0	0.9	0.3	0.4	-0.4	-0.1
Statistical.....	0.0	3.5	-2.7	-1.0	-20.3	21.6	-3.9
Gross government investment.....	0.0	0.0	0.0	-12.4	-15.3	-18.8	-14.8
Capital account transactions (net) ².....	.....	.....	.....	.....	.....	.....	.....
Net lending or net borrowing (-), NIPAs ².....	.....	.....	.....	.....	.....	.....	.....
Statistical discrepancy	-0.3	18.4	59.0	41.0	1.3	5.1	31.6
Addendum:							
Gross saving as a percentage of gross national income.....	0.1	-0.3	-0.9	-0.4	-0.4	-0.1	-0.2

1. "Net private saving" is a new series. Revisions are shown in comparison with previously published estimates of "gross private saving" less CFC and of "gross government saving" less CFC.

2. "Capital account transactions (net)" and "net lending or net borrowing (-), NIPAs" are new series. Their sum equals the balance on current accounts.

porate profits with IVA and CCAdj and to net government saving.

“Gross investment, capital account transactions, and net lending, NIPAs” is revised for 1996 forward, and the revisions for most years remain below \$5.0 billion in absolute value. For 1998–2000, the revisions are downward and relatively large, reflecting downward revisions to both gross private domestic investment and gross government investment. For 2001, the revision is upward and small. For 2002, the revision is upward and larger, reflecting an upward revision to “net lending or net borrowing (–), NIPAs” that is offset by downward revisions to gross government investment and to gross private domestic investment.

Annual Estimates of Real GDP and Real DPI

Real GDP

Revisions to year-to-year growth rates of real GDP are generally small: For 59 of the 73 years since 1929, the revision is between –0.1 percentage point and +0.1 percentage point (table 19 and chart 2).

Table 19. Distribution of Revisions to Percent Change in Real Gross Domestic Product

Size of revision (percentage point)	Number of revisions
–0.3	1
–0.2	5
–0.1	11
0	28
0.1	20
0.2	3
0.3	4
0.4	1

- The revisions to real GDP result from the following:
- Revisions to the current-dollar components of GDP for which chained-dollar estimates are prepared by deflation,
 - Revisions to the prices used to estimate components of real GDP by deflation, and
 - Revisions to the quantities used to estimate the components of real GDP by extrapolation or direct valuation.

In contrast, changing the reference year (from 1996 to 2000) does not affect the percent changes in real GDP. (Neither does it affect the percent changes in the price indexes.)

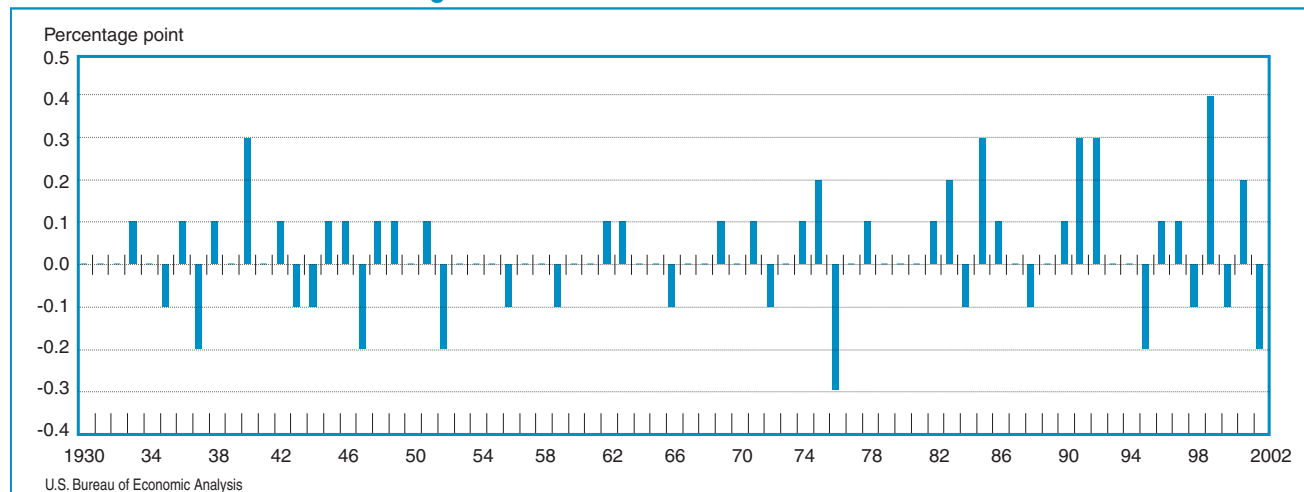
For 28 years, the rate of growth of real GDP is revised up. Eight of the revisions are larger than 0.1 percentage point; the largest revision, at 0.4 percentage point (from 4.1 percent to 4.5 percent), is for 1999. Upward revisions to current-dollar GDP play a role in seven of these eight revisions, and downward revisions to prices play a role in three of these revisions.

For 17 years, the rate of growth of real GDP is revised down. Six of the revisions are larger than 0.1 percentage point; the largest revision, at –0.3 percentage point (from 5.6 percent to 5.3 percent), is for 1976. Upward revisions to prices play a role in five of these six revisions, and downward revisions to current-dollar GDP play a role in three of these revisions.

For 28 years, the rate of growth of real GDP is unrevised.

The period 1929–2002 can be usefully divided into three subperiods: 1929–59, 1959–92, and 1992–2002. For the entire time span and for each subperiod, the average rate of growth of real GDP in the revised estimates is the same as in the previously published esti-

Chart 2. Revision to Percent Change in Real GDP



mates (table 20). Similarly, the average growth rates for three of the major components of real GDP are also unrevised: Gross private domestic investment, nonresidential fixed investment, and exports of goods. In contrast, the average growth rates of the other major components of real GDP are revised for at least some of the periods. For 1929–59 and 1959–92, the largest

revisions are to exports of services; the average growth rate for 1929–59 is revised up 1.3 percentage points, and for 1959–92, it is revised down 1.4 percentage points. For 1992–2002, most components are revised; the largest revision, at –0.6 percentage point, is to nonresidential structures.

Nonzero revisions are more common for the most

Table 20. Gross Domestic Product and Its Major Components
Revisions to Average Annual Rate of Change Over Selected Period
 [Percent]

	Current dollars			Chained dollars			Current dollars			Chained dollars		
	Revised	Previously published	Revision	Revised	Previously published	Revision	Revised	Previously published	Revision	Revised	Previously published	Revision
	1929–2002						1929–59					
Gross domestic product	6.5	6.5	0.0	3.4	3.4	0.0	5.4	5.4	0.0	3.5	3.5	0.0
Personal consumption expenditures	6.4	6.4	0.0	3.3	3.3	0.0	4.8	4.8	0.0	2.9	2.9	0.0
Durable goods.....	6.5	6.4	0.1	4.6	4.5	0.1	5.2	5.2	0.0	3.2	3.2	0.0
Nondurable goods.....	5.7	5.7	0.0	2.7	2.7	0.0	4.7	4.7	0.0	2.7	2.7	0.0
Services.....	7.0	7.0	0.0	3.5	3.5	0.0	4.9	4.9	0.0	3.1	3.1	0.0
Gross private domestic investment	6.5	6.5	0.0	4.0	4.0	0.0	5.3	5.3	0.0	3.6	3.6	0.0
Fixed investment.....	6.6	6.6	0.0	3.6	3.6	0.0	5.5	5.5	0.0	2.7	2.6	0.1
Nonresidential.....	6.5	6.5	0.0	3.8	3.8	0.0	4.9	4.9	0.0	2.1	2.1	0.0
Structures.....	5.5	5.5	0.0	1.5	1.5	0.0	4.1	4.1	0.0	1.0	0.9	0.1
Equipment and software.....	7.1	7.1	0.0	4.9	4.9	0.1	5.6	5.6	0.0	2.9	2.8	0.1
Residential.....	6.8	6.8	0.0	2.9	2.8	0.1	6.7	6.7	0.0	3.6	3.6	0.0
Change in private inventories.....												
Net exports of goods and services												
Exports.....	7.3	7.3	0.0	4.7	4.7	0.0	4.6	4.3	0.3	2.7	2.4	0.3
Goods.....	6.9	6.9	0.0	4.6	4.6	0.0	3.9	3.9	0.0	2.1	2.1	0.0
Services.....	8.9	8.9	0.0	5.4	5.5	–0.1	8.2	6.7	1.5	5.1	3.8	1.3
Imports.....	7.9	7.9	0.0	4.9	4.9	0.0	4.7	4.7	0.0	2.8	2.8	0.0
Goods.....	7.9	7.9	0.0	5.0	5.0	0.0	4.2	4.2	0.0	2.2	2.2	0.0
Services.....	7.7	7.7	0.0	4.5	4.5	0.0	6.4	6.4	0.0	4.6	4.6	0.0
Government consumption expenditures and gross investment	7.6	7.6	0.0	3.8	3.8	0.0	8.5	8.6	–0.1	6.1	6.2	–0.1
Federal.....	8.6	8.6	0.0	4.8	4.9	–0.1	12.9	13.1	–0.2	10.4	10.5	–0.1
National defense.....	8.8	8.9	–0.1	5.2	5.2	0.0	14.6	14.8	–0.2	12.1	12.2	–0.1
Nondefense.....	8.1	8.2	–0.1	4.4	4.5	–0.1	9.3	9.3	0.0	6.8	6.9	–0.1
State and local.....	7.2	7.3	–0.1	3.1	3.1	0.0	6.1	6.1	0.0	2.9	2.9	0.0
Addendum:												
Disposable personal income.....	6.4	6.4	0.0	3.3	3.3	0.0	4.9	4.9	0.0	3.0	3.0	0.0

	Current dollars			Chained dollars			Current dollars			Chained dollars		
	Revised	Previously published	Revision	Revised	Previously published	Revision	Revised	Previously published	Revision	Revised	Previously published	Revision
	1959–92						1992–2002					
Gross domestic product	8.0	7.9	0.1	3.4	3.4	0.0	5.2	5.2	0.0	3.2	3.2	0.0
Personal consumption expenditures	8.2	8.1	0.1	3.6	3.5	0.1	5.7	5.7	0.0	3.8	3.7	0.1
Durable goods.....	7.6	7.5	0.1	4.9	4.8	0.1	6.5	6.4	0.1	4.9	4.8	0.1
Nondurable goods.....	6.9	6.9	0.0	2.6	2.6	0.0	4.6	4.8	–0.2	3.1	3.3	–0.2
Services.....	9.4	9.3	0.1	4.0	4.0	0.0	6.1	6.0	0.1	3.3	3.0	0.3
Gross private domestic investment	7.5	7.5	0.0	3.7	3.7	0.0	6.3	6.3	0.0	5.9	5.9	0.0
Fixed investment.....	7.6	7.7	–0.1	3.7	3.7	0.0	6.4	6.4	0.0	6.0	5.9	0.1
Nonresidential.....	8.1	8.2	–0.1	4.6	4.6	0.0	5.8	6.0	–0.2	6.5	6.5	0.0
Structures.....	7.1	7.1	0.0	2.1	2.1	0.0	4.4	4.6	–0.2	0.8	1.4	–0.6
Equipment and software.....	8.7	8.8	–0.1	5.9	5.9	0.0	6.4	6.5	–0.1	8.6	8.3	0.3
Residential.....	6.7	6.5	0.2	1.8	1.7	0.1	7.9	7.7	0.2	4.3	4.2	0.1
Change in private inventories.....												
Net exports of goods and services												
Exports.....	10.6	11.0	–0.4	6.6	6.9	–0.3	4.7	4.8	–0.1	4.9	5.0	–0.1
Goods.....	10.5	10.5	0.0	6.8	6.8	0.0	4.5	4.6	–0.1	5.3	5.3	0.0
Services.....	10.8	12.2	–1.4	6.1	7.5	–1.4	5.1	5.2	–0.1	3.8	4.1	–0.3
Imports.....	10.9	10.8	0.1	5.8	5.7	0.1	7.9	8.0	–0.1	8.7	8.7	0.0
Goods.....	11.4	11.4	0.0	6.4	6.3	0.1	8.1	8.1	0.0	9.3	9.3	0.0
Services.....	9.1	9.0	0.1	4.1	4.0	0.1	7.0	7.5	–0.5	5.7	5.9	–0.2
Government consumption expenditures and gross investment	7.7	7.6	0.1	2.4	2.3	0.1	4.3	4.5	–0.2	1.7	2.0	–0.3
Federal.....	6.6	6.5	0.1	1.5	1.4	0.1	2.4	2.6	–0.2	0.3	0.3	–0.3
National defense.....	6.1	6.0	0.1	0.9	0.9	0.0	1.5	1.7	–0.2	–0.7	–0.4	–0.3
Nondefense.....	8.2	8.3	–0.1	3.2	3.1	0.1	4.4	4.7	–0.3	1.6	1.8	–0.2
State and local.....	8.9	8.8	0.1	3.3	3.3	0.0	5.5	5.7	–0.2	2.8	3.0	–0.2
Addendum:												
Disposable personal income.....	8.2	8.2	0.0	3.6	3.6	0.0	5.2	5.1	0.1	3.2	3.1	0.1

recent subperiod than for the two earlier ones (table 21). For 1992–2002, the revisions to almost 90 percent

Table 21. Summary of Revisions to Year-to-Year Growth Rates of Real Gross Domestic Product for Selected Periods

	1929–2002	1929–59	1959–92	1992–2002
In percentage points:				
Average revision.....	0.0	0.0	0.0	0.0
Average absolute revision ...	0.1	0.1	0.1	0.2
Largest negative revision	-0.3	-0.2	-0.3	-0.2
Largest positive revision.....	0.4	0.3	0.3	0.4
Number of:				
Upward revisions.....	28	10	14	5
Downward revisions.....	17	8	6	4
Zero revisions	28	12	14	2

of the year-to-year growth rates are nonzero; for 1929–59 and 1959–92, less than 60 percent of the revisions are nonzero. The revisions are not only more common for 1992–2002 than for the earlier subperiods, but they also tend to be somewhat larger. For 1929–59 and 1959–92, the contributions that the major components make to the percent change in real GDP differ little, on average, from the previously published estimates. In almost all the cases, the revisions to contributions fall between -0.01 percentage point and +0.01 percentage point (table 22).

For 1992–2002, revisions to the contributions are larger. On average, PCE contributes 0.11 percentage point more to GDP growth in the revised estimates than in the previously published estimates; upward revisions to services and to durable goods are partly offset by downward revisions to nondurable goods.

Government contributes 0.05 percentage point less in the revised estimates than in the previously published estimates; spending by the Federal Government and by state and local governments are both revised down. The revisions to the contributions of both residential and nonresidential fixed investment and of both exports and imports are smaller.

Real disposable personal income

For 1929–2002, real disposable personal income (DPI) increases at an average annual rate of 3.3 percent, the same as in the previously published estimates (table 20). The average rates of growth for 1929–59 (3.0 percent) and for 1959–92 (3.6 percent) are also the same as those previously published. For 1992–2002, the average rate of growth is revised from 3.1 percent to 3.2 percent.

The revisions to real DPI result from the following:

- Revisions to the current-dollar DPI, and
- Revisions to the implicit price deflator (IPD) for PCE, which is used to deflate DPI.

The revisions to real DPI growth exceed 0.1 percentage point (in absolute value) for 22 years (of the 73 years). For all but 2 of these 22 years (1932 and 1995), the revisions to current-dollar DPI play a role; the revisions to the IPD for PCE play a role for 9 of the 22 years.

1929–59. The growth of real DPI is revised up for 8 years, and it is revised down for 11 years. The average revision is zero, and the average of the absolute values

Table 22. Contributions to Percent Change in Real Gross Domestic Product, Averages for Selected Periods

	1929–2002			1929–59			1959–92			1992–2002		
	Revised	Previously published	Revision	Revised	Previously published	Revision	Revised	Previously published	Revision	Revised	Previously published	Revision
Percent change at annual rate:												
Gross domestic product.....	3.4	3.4	0.0	3.5	3.5	0.0	3.4	3.4	0.0	3.2	3.2	0.0
Percentage points at annual rates:												
Personal consumption expenditures	2.14	2.12	0.02	1.88	1.89	-0.01	2.29	2.26	0.03	2.51	2.40	0.11
Durable goods.....	0.38	0.37	0.01	0.26	0.26	0.00	0.43	0.43	0.00	0.62	0.58	0.04
Nondurable goods.....	0.77	0.78	-0.01	0.96	0.97	-0.01	0.67	0.66	0.01	0.60	0.65	-0.05
Services	0.99	0.96	0.03	0.66	0.67	-0.01	1.19	1.17	0.02	1.29	1.18	0.11
Gross private domestic investment	0.56	0.56	0.00	0.38	0.38	0.00	0.68	0.68	0.00	0.94	0.94	0.00
Fixed investment	0.50	0.50	0.00	0.28	0.28	0.00	0.62	0.62	0.00	0.89	0.90	-0.01
Nonresidential	0.37	0.37	0.00	0.12	0.12	0.00	0.50	0.50	0.00	0.68	0.70	-0.02
Structures.....	0.04	0.04	0.00	-0.01	-0.01	0.00	0.09	0.09	0.00	0.01	0.02	-0.01
Equipment and software	0.33	0.33	0.00	0.14	0.13	0.01	0.41	0.41	0.00	0.68	0.68	0.00
Residential	0.13	0.13	0.00	0.16	0.16	0.00	0.12	0.12	0.00	0.21	0.20	0.01
Change in private inventories.....	0.06	0.06	0.00	0.11	0.11	0.00	0.06	0.06	0.00	0.04	0.04	0.00
Net exports of goods and services	-0.06	-0.06	0.00	-0.01	-0.03	0.02	0.04	0.03	0.01	-0.48	-0.48	0.00
Exports.....	0.32	0.32	0.00	0.10	0.09	0.01	0.45	0.45	0.00	0.54	0.55	-0.01
Goods.....	0.23	0.24	-0.01	0.06	0.06	0.00	0.33	0.33	0.00	0.42	0.42	0.00
Services.....	0.08	0.08	0.00	0.04	0.03	0.01	0.12	0.12	0.00	0.12	0.13	-0.01
Imports.....	-0.38	-0.38	0.00	-0.11	-0.11	0.00	-0.42	-0.42	0.00	-1.03	-1.02	-0.01
Goods.....	-0.31	-0.31	0.00	-0.06	-0.06	0.00	-0.36	-0.35	-0.01	-0.92	-0.92	0.00
Services.....	-0.07	-0.07	0.00	-0.06	-0.06	0.00	-0.06	-0.06	0.00	-0.10	-0.10	0.00
Government consumption expenditures and gross investment.....	0.91	0.92	-0.01	1.56	1.56	0.00	0.52	0.52	0.00	0.28	0.33	-0.05
Federal.....	0.62	0.62	0.00	1.35	1.35	0.00	0.16	0.17	-0.01	-0.03	-0.01	-0.02
National defense.....	0.51	0.52	-0.01	1.19	1.20	-0.01	0.06	0.07	-0.01	-0.08	-0.06	-0.02
Nondefense.....	0.11	0.10	0.01	0.16	0.15	0.01	0.10	0.09	0.01	0.05	0.05	0.00
State and local	0.29	0.30	-0.01	0.21	0.21	0.00	0.35	0.35	0.00	0.31	0.34	-0.03

of the revisions is 0.1 percentage point. Only three of the revisions are larger than 0.1 percentage point in absolute value: The upward revisions for 1932 and 1943 are 0.2 percentage point, and the downward revision for 1946 is 0.4 percentage point.

1959–92. The growth of real DPI is revised up for 15 years, and it is revised down for 14 years. The average revision is zero, and the average of the absolute values of the revisions is 0.2 percentage point. The largest upward revision is 0.7 percentage point for 1982. The upward revisions for 1975, 1980, and 1981 (0.4 percentage point) and for 1983 and 1992 (0.3 percentage point) are relatively large. For 7 years, the growth rate of real DPI is unrevised. The largest downward revisions, at 0.4 percentage point, are for 1976, 1979, and 1987. The downward revisions for 1978 and 1990 are each 0.3 percentage point.

1992–2002. The growth of real DPI is revised up for 7 years, and it is revised down for 4 years. The average revision is 0.1 percentage point, and the average of the absolute values of the revisions is 0.3 percentage point. All but one of the upward revisions are larger than 0.1 percentage point; the largest revision, at 0.5 percentage point, is for 1996. The downward revisions for 1993 and 2002 are each 0.4 percentage point.

Annual Prices

The revisions to the chain-type price indexes result from the incorporation of revised and newly available

source data and of revised weights into the chain formula.

For 1929–2002 and for each of the subperiods, the revised estimates of the average annual increase in the price index for gross domestic purchases are the same as the previously published estimates; the same is true for GDP prices (table 23). For each period, the prices of equipment and software are revised down, and the prices of exports of services are revised up. The largest revisions to the prices of equipment and software are for 1992–2002 and primarily reflect the improved prices for photocopying equipment, for software, and for light trucks.

The revisions to the prices of the other components are as follows:

- For 1929–2002, the prices of residential fixed investment are revised up, and the prices of PCE are revised down.
- For 1929–59, the prices paid by government (at both the Federal level and at the state and local levels) are revised up.
- For 1959–92, the prices of PCE for services and of Federal nondefense spending are revised down.
- For 1992–2002, the revisions to component prices are more widespread than those for the earlier periods. In PCE, upward revisions to prices of durable goods and of nondurable goods are offset by downward revisions to prices of services. In nonresidential fixed investment, downward revisions to prices

Table 23. Prices of Gross Domestic Product and Its Major Components: Revisions to Average Annual Rates of Change Over Selected Periods
[Percent]

	Revised	Previously published	Revision	Revised	Previously published	Revision	Revised	Previously published	Revision	Revised	Previously published	Revision
	1929–2002			1929–59			1959–92			1992–2002		
Gross domestic product	3.0	3.0	0.0	1.9	1.9	0.0	4.4	4.4	0.0	1.9	1.9	0.0
Personal consumption expenditures	3.0	3.1	-0.1	1.9	1.9	0.0	4.4	4.5	-0.1	1.9	1.9	0.0
Durable goods.....	1.8	1.8	0.0	1.9	1.9	0.0	2.6	2.6	0.0	-1.1	-1.2	0.1
Nondurable goods.....	2.9	2.9	0.0	1.9	1.9	0.0	4.2	4.2	0.0	1.5	1.4	0.1
Services.....	3.4	3.4	0.0	1.7	1.7	0.0	5.1	5.2	-0.1	2.8	2.9	-0.1
Gross private domestic investment	2.4	2.4	0.0	1.7	1.7	0.0	3.7	3.7	0.0	0.4	0.4	0.0
Fixed investment.....	2.9	2.9	0.0	2.8	2.8	0.0	3.8	3.8	0.0	0.5	0.5	0.0
Nonresidential.....	2.6	2.6	0.0	2.8	2.8	0.0	3.4	3.4	0.0	-0.6	-0.5	-0.1
Structures.....	3.9	3.9	0.0	3.1	3.1	0.0	4.8	4.8	0.0	3.6	3.1	0.5
Equipment and software.....	2.0	2.1	-0.1	2.7	2.8	-0.1	2.6	2.7	-0.1	-2.1	-1.7	-0.4
Residential.....	3.9	3.8	0.1	3.0	3.0	0.0	4.7	4.7	0.0	3.4	3.3	0.1
Change in private inventories.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Net exports of goods and services.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Exports.....	2.4	2.4	0.0	1.8	1.8	0.0	3.8	3.8	0.0	-0.2	-0.2	0.0
Goods.....	2.2	2.2	0.0	1.7	1.7	0.0	3.5	3.5	0.0	-0.7	-0.7	0.0
Services.....	3.4	3.3	0.1	2.9	2.8	0.1	4.5	4.4	0.1	1.3	1.0	0.3
Imports.....	2.8	2.8	0.0	1.9	1.9	0.0	4.8	4.8	0.0	-0.7	-0.6	-0.1
Goods.....	2.8	2.8	0.0	2.0	2.0	0.0	4.8	4.8	0.0	-1.1	-1.0	-0.1
Services.....	3.0	3.0	0.0	1.7	1.7	0.0	4.8	4.8	0.0	1.2	1.5	-0.3
Government consumption expenditures and gross investment	3.6	3.6	0.0	2.3	2.2	0.1	5.2	5.2	0.0	2.6	2.5	0.1
Federal.....	3.5	3.5	0.0	2.3	2.1	0.2	5.0	5.0	0.0	2.4	2.3	0.1
National defense.....	3.5	3.5	0.0	2.2	2.2	0.0	5.1	5.1	0.0	2.3	2.1	0.2
Nondefense.....	3.5	3.5	0.0	2.3	2.1	0.2	4.9	5.0	-0.1	2.7	2.8	-0.1
State and local.....	4.0	4.0	0.0	3.1	3.0	0.1	5.4	5.4	0.0	2.6	2.6	0.0
Addendum:												
Gross domestic purchases.....	3.0	3.0	0.0	1.9	1.9	0.0	4.5	4.5	0.0	4.5	4.5	0.0

of equipment and software are largely offset by upward revisions to prices of structures. Prices of residential investment are also revised up. Import prices are revised down, reflecting downward revisions to both goods and services. Government prices are revised up, as upward revisions to Federal national defense spending more than offset downward revisions to Federal nondefense spending.

Quarterly Real GDP

The revisions to the quarterly (and monthly) NIPA estimates reflect the revisions to the annual estimates, the incorporation of new and revised monthly and quarterly source data (including the updating of seasonal factors), and the introduction of changes in methodology.

This section focuses on the effect of the revisions on business cycles that are measured by the turning points in quarterly real GDP (table 24) and on the quarters of the current expansion (table 25).³⁷

In general, the revisions have very little effect on business cycles. However, as a result of the revisions, the timing of one peak in real GDP is changed slightly. In the previously published estimates, the expansion that began in the third quarter of 1982 peaked in the second quarter of 1990, and real GDP decreased slightly in the third quarter of 1990. In the revised estimates, real GDP is virtually the same in the third quarter of 1990 as in the second quarter, so the third quarter is taken to be the peak.³⁸

There have been 10 business-cycle contractions since 1947. In the revised estimates, three of the first four contractions show slightly steeper declines than in the previously published estimates, while three of the last five show slightly less steep declines. The largest revision affects the contraction that began in 1973; in the revised estimates, the average annual rate of decrease of real GDP is 0.2 percentage point less than in the previously published estimates.

For the third quarter of 2000, the percent change in real GDP is revised from an increase of 0.6 percent to a

decrease of 0.5 percent. However, the fourth quarter of 2000 remains the cyclical peak for the expansion of the 1990s.

Of the nine complete expansions since 1947, the one that began in 1958 has a slightly weaker increase than in the previously published estimates. Three of the expansions have slightly stronger increases, and five are unchanged.

For the current expansion, real GDP growth is revised down for five quarters, and it is revised up for two. The average revision, without regard to sign, is 0.5 percentage point; all of the revisions are less than 1.0 percentage point.

Table 24. Revisions to Cyclical Fluctuations in Real Gross Domestic Product, 1948–2002

[Average annual rate of change, in percent]

	Revised	Previously published	Revision
Contractions			
1948:IV–1949:IV	-1.7	-1.6	-0.1
1953:II–1954:I	-3.5	-3.6	0.1
1957:III–1958:I	-7.4	-7.3	-0.1
1960:I–1960:IV	-2.2	-2.1	-0.1
1969:III–1970:IV	-0.5	-0.5	0.0
1973:IV–1975:I	-2.5	-2.7	0.2
1980:I–1980:III	-4.3	-4.3	0.0
1981:III–1982:I	-5.6	-5.6	0.0
1990:III–1991:I ¹	-2.5	-2.6	0.1
2000:IV–2001:III	-0.7	-0.8	0.1
Expansions			
1949:IV–1953:II	7.5	7.5	0.0
1954:I–1957:III	3.7	3.7	0.0
1958:I–1960:I	6.2	6.3	-0.1
1960:IV–1969:III	5.0	4.9	0.1
1970:IV–1973:IV	5.2	5.2	0.0
1975:I–1980:I	4.3	4.3	0.0
1980:III–1981:III	4.4	4.3	0.1
1982:I–1990:III ¹	3.8	3.7	0.1
1991:I–2000:IV	3.5	3.5	0.0
2001:III–2003:III ²	3.3	3.4	-0.1

1. In the previously published estimates, real GDP peaked in the second quarter of 1990. Real GDP is now estimated to have grown at an average rate of 4.2 percent from the preceding peak (1982:III) until 1990:II, 0.1 percentage point more than in the previously published estimates. Real GDP decreased at an annual rate of 1.7 percent from 1990:II until the subsequent business cycle trough (1991:I), compared with a 2.0-percent rate of decrease in the previously published data.

2. The current expansion is shown through the third quarter of 2003.

Table 25. Rates of Growth of Real Gross Domestic Product, 2001:IV–2003:II

	Revised	Previously published	Revision
2001:IV	2.0	2.7	-0.7
2002:I	4.7	5.1	-0.4
2002:II	1.9	1.2	0.7
2002:III	3.4	4.1	-0.7
2002:IV	1.3	1.4	-0.1
2003:I	2.0	1.5	0.5
2003:II	3.1	3.3	-0.2

37. Turning points in quarterly real GDP do not always coincide with the business-cycle turning points determined by the National Bureau of Economic Research.

38. Real GDP increased in the third quarter of 1990 but by less than 0.05 percent. In identifying turning points in “cases of equal values, the rule is to choose the last one as the cyclical turn” in Gerhard Bry and Charlotte Boschan, “Cyclical Analysis of Time Series: Selected Procedures and Computer Programs” (technical paper 20, New York: National Bureau of Economic Research, 1971): 12.

Appendixes A and B follow.

Appendix A. Gross Domestic Product, 1959–2002

[Billions of dollars unless otherwise noted]

Year	Revised	Previously published	Revision			Total revision as a percentage of previously published
			Total	Definitional changes	Statistical changes	
1959.....	506.6	507.4	-0.8	-0.3	-0.5	-0.2
1960.....	526.4	527.4	-1.0	-0.4	-0.6	-0.2
1961.....	544.7	545.7	-1.0	-0.3	-0.7	-0.2
1962.....	585.6	586.5	-0.9	-0.3	-0.6	-0.2
1963.....	617.7	618.7	-1.0	-0.2	-0.8	-0.2
1964.....	663.6	664.4	-0.8	0.0	-0.8	-0.1
1965.....	719.1	720.1	-1.0	-0.1	-0.9	-0.1
1966.....	787.8	789.3	-1.5	-0.6	-0.9	-0.2
1967.....	832.6	834.1	-1.5	-0.5	-1.0	-0.2
1968.....	910.0	911.5	-1.5	-0.3	-1.2	-0.2
1969.....	984.6	985.3	-0.7	0.5	-1.2	-0.1
1970.....	1,038.5	1,039.7	-1.2	0.2	-1.4	-0.1
1971.....	1,127.1	1,128.6	-1.5	0.1	-1.6	-0.1
1972.....	1,238.3	1,240.4	-2.1	0.4	-2.5	-0.2
1973.....	1,382.7	1,385.5	-2.8	0.0	-2.8	-0.2
1974.....	1,500.0	1,501.0	-1.0	1.4	-2.4	-0.1
1975.....	1,638.3	1,635.2	3.1	5.6	-2.5	0.2
1976.....	1,825.3	1,823.9	1.4	3.7	-2.3	0.1
1977.....	2,030.9	2,031.4	-0.5	1.8	-2.3	0.0
1978.....	2,294.7	2,295.9	-1.2	-0.7	-0.5	-0.1
1979.....	2,563.3	2,566.4	-3.1	-3.2	0.1	-0.1
1980.....	2,789.5	2,795.6	-6.1	-6.0	-0.1	-0.2
1981.....	3,128.4	3,131.3	-2.9	-4.2	1.3	-0.1
1982.....	3,255.0	3,259.2	-4.2	-5.2	1.0	-0.1
1983.....	3,536.7	3,534.9	1.8	1.2	0.6	0.1
1984.....	3,933.2	3,932.7	0.5	-1.0	1.5	0.0
1985.....	4,220.3	4,213.0	7.3	2.1	5.2	0.2
1986.....	4,462.8	4,452.9	9.9	2.9	7.0	0.2
1987.....	4,739.5	4,742.5	-3.0	-16.0	13.0	-0.1
1988.....	5,103.8	5,108.3	-4.5	-20.6	16.1	-0.1
1989.....	5,484.4	5,489.1	-4.7	-23.6	18.9	-0.1
1990.....	5,803.1	5,803.2	-0.1	-26.1	26.0	0.0
1991.....	5,995.9	5,986.2	9.7	-30.8	40.5	0.2
1992.....	6,337.7	6,318.9	18.8	-26.8	45.3	0.3
1993.....	6,657.4	6,642.3	15.1	-35.2	50.3	0.2
1994.....	7,072.2	7,054.3	17.9	-43.6	60.8	0.3
1995.....	7,397.7	7,400.5	-2.8	-57.8	53.9	0.0
1996.....	7,816.9	7,813.2	3.7	-56.8	59.7	0.0
1997.....	8,304.3	8,318.4	-14.1	-79.6	65.2	-0.2
1998.....	8,747.0	8,781.5	-34.5	-75.6	41.1	-0.4
1999.....	9,268.4	9,274.3	-5.9	-74.2	68.0	-0.1
2000.....	9,817.0	9,824.6	-7.6	-81.9	74.2	-0.1
2001.....	10,100.8	10,082.2	18.6	-74.6	93.1	0.2
2002.....	10,480.8	10,446.2	34.6	-70.9	105.4	0.3

Appendix Table B. Revisions to Current-Dollar Gross Domestic Product and Measures of Income

[Billions of dollars]

	1959	1987	1992	1997	1998	1999	2000	2001	2002
Gross domestic product (GDP)	-0.8	-3.0	18.8	-14.1	-34.5	-5.9	-7.6	18.6	34.6
Personal consumption expenditures	-0.5	-5.1	25.6	18.1	23.5	36.0	55.7	58.4	81.6
Durable goods	0.0	2.0	12.8	50.2	57.0	61.7	59.4	46.0	39.4
Nondurable goods	0.0	0.0	7.6	-22.6	-24.9	-25.3	-25.7	-27.7	-29.0
Services	-0.5	-7.0	5.3	-9.4	-8.6	-0.5	21.9	39.9	71.2
Gross private domestic investment	0.0	3.5	-1.8	-0.7	-29.6	-11.0	-19.9	21.2	-4.0
Fixed investment	0.0	3.5	-3.1	-9.9	-27.2	-18.4	-12.8	-2.9	-5.4
Nonresidential	0.0	-2.6	-14.0	-30.7	-48.6	-39.6	-33.7	-27.5	-37.2
Structures	0.0	2.1	0.4	-5.5	-7.2	-1.5	-1.0	-2.4	-3.0
Equipment and software	0.0	-4.8	-14.3	-25.3	-41.6	-38.1	-32.7	-25.1	-34.2
Residential	0.0	6.1	10.8	20.9	21.4	21.2	20.9	24.4	31.8
Change in private inventories	0.0	0.0	1.3	9.1	-2.3	7.4	-7.1	24.2	1.5
Net exports of goods and services	2.1	-2.9	-5.3	-12.3	-8.2	-10.6	-14.0	-17.6	-2.7
Exports	2.1	-1.7	-1.5	-11.1	-9.0	1.9	-4.8	1.0	-8.1
Goods	0.0	0.0	-0.7	-1.2	-0.4	-0.1	-0.7	-2.0	-5.8
Services	2.1	-1.7	-0.7	-9.9	-8.5	2.0	-4.2	3.0	-2.2
Imports	0.0	1.2	4.0	1.1	-0.8	12.5	9.2	18.7	-5.4
Goods	0.0	0.0	0.0	0.2	-1.0	0.2	0.4	0.8	-1.8
Services	0.0	1.2	3.8	0.8	0.2	12.4	8.8	17.8	-3.7
Government consumption expenditures and gross investment	-2.5	1.6	0.5	-19.2	-20.2	-20.2	-29.4	-43.3	-40.4
Federal	-2.0	-0.3	-0.6	-7.3	-8.8	-9.2	-10.4	-15.2	-14.2
National defense	-2.2	-1.2	-1.6	-3.0	-3.4	-3.7	-4.6	-6.9	-9.1
Nondefense	0.1	0.7	1.0	-4.3	-5.4	-5.5	-5.8	-8.3	-5.1
State and local	-0.4	1.9	1.0	-11.9	-11.4	-11.0	-19.0	-28.1	-26.1
Measures of income:									
Gross domestic income	-0.5	-21.3	-40.2	-54.9	-50.9	-9.0	-9.0	13.6	2.9
Personal income	-1.2	-15.1	-28.4	-21.9	-3.0	15.9	23.1	27.8	-11.9
Disposable personal income	-0.7	-1.2	-3.2	20.6	40.3	67.6	73.8	76.2	46.9
Personal outlays	-0.8	10.2	44.5	55.2	65.0	83.1	107.0	118.7	149.5
Personal saving	0.2	-11.4	-47.7	-34.6	-24.7	-15.4	-33.0	-42.5	-102.6
Personal saving as a percentage of disposable personal income	0.0	-0.3	-1.0	-0.6	-0.4	-0.2	-0.5	-0.6	-1.4
Selected personal income components:									
Wage and salary disbursements	0.0	0.5	-2.3	-11.3	-9.4	-4.1	-7.1	-7.7	-21.8
Employer contributions for employee pension and insurance funds	-0.1	-5.9	-7.0	22.1	39.1	52.2	65.7	72.2	69.8
Proprietors' income with inventory valuation and capital consumption adjustments	-1.1	-1.7	-6.7	-5.2	4.0	-0.1	13.6	42.7	41.2
Farm	-0.9	-0.3	1.8	4.5	3.8	0.9	0.1	6.0	1.4
Nonfarm	-0.3	-1.3	-8.7	-9.7	0.2	-1.0	13.5	36.8	39.7
Rental income of persons with capital consumption adjustment	1.0	-2.3	14.7	0.5	-1.1	-1.8	3.7	25.2	30.6
Personal interest income	-1.0	-4.8	-26.7	-15.3	-31.2	-40.6	-66.0	-87.6	-96.1
Personal dividend income	0.0	0.1	2.1	-1.9	1.6	7.6	0.4	-38.0	-37.6
Personal current transfer receipts	0.0	-1.0	-2.3	-11.0	-5.1	3.6	13.7	22.2	4.2
Selected national income components:									
Compensation of employees	0.0	-5.4	-9.4	10.4	29.8	48.3	59.3	65.5	49.6
Wage and salary accruals	0.0	0.5	-2.3	-11.3	-9.4	-4.2	-7.1	-7.7	-21.8
Supplements to wages and salaries	-0.1	-5.9	-7.0	21.7	39.2	52.5	66.3	73.3	71.4
Proprietors' income with inventory valuation and capital consumption adjustments	-1.1	-1.7	-6.7	-5.2	4.0	-0.1	13.6	42.7	41.2
Rental income of persons with capital consumption adjustment	1.0	-2.3	14.7	0.5	-1.1	-1.8	3.7	25.2	30.6
Corporate profits with inventory valuation and capital consumption adjustments	2.0	22.2	26.2	34.7	24.2	45.5	29.8	38.8	116.8
Net interest and miscellaneous payments	-0.4	2.8	-18.3	-17.7	-33.1	-39.6	-63.3	-94.0	-112.2