# Annual Revision of the National Income and Product Accounts

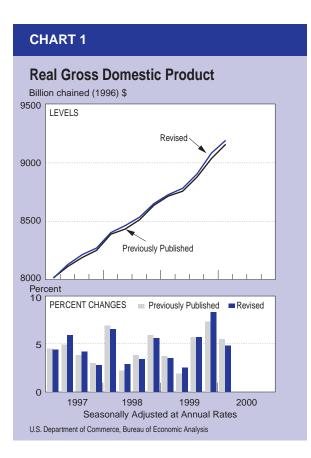
Annual Estimates, 1997–99 Quarterly Estimates, 1997:I–2000:I

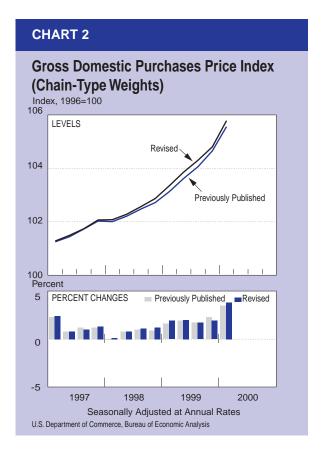
# By Eugene P. Seskin and David F. Sullivan

I N THIS issue of the SURVEY OF CURRENT BUSINESS, the Bureau of Economic Analysis (BEA) presents revised estimates of the national income and product accounts (NIPA's) for 1997–99 and the first quarter of 2000.<sup>1</sup> As is usual in annual NIPA revisions, these estimates incorporate source data that are more complete, more detailed, and otherwise more appropriate than those that were previously incorporated. In addition, several metho-

dological and presentational changes have been made.

The first section of this article discusses the impact of the revisions on key NIPA measures of economic activity, and the second section provides a summary of the revisions and the major source data underlying them. The third section describes the changes in the methodology used to prepare the estimates, and the fourth section discusses two changes in the presentation of the NIPA tables. Appendix A shows, in current dollars, the revised annual estimates and the revisions for the five summary accounts of the NIPA's. Tables presenting most of the revised monthly, quarterly, and annual NIPA estimates and the "advance" estimates for





<sup>1.</sup> For information on the structure, definitions, presentation, and methodologies that underlie the NIPA's, see "A Guide to the NIPA's," SURVEY OF CURRENT BUSINESS 78 (March 1998): 26–68. For definitional changes that were made in the 1999 comprehensive revision of the NIPA's, see Brent R. Moulton, Robert P. Parker, and Eugene P. Seskin, "A Preview of the 1999 Comprehensive Revision of the National Income and Product Accounts: Definitional and Classificational Changes," SURVEY 79 (August 1999): 7–20.

the second quarter of 2000 follow this article (a list of these tables is shown beginning on page 34). In addition, historical estimates beginning with 1929 for gross domestic product (GDP) and other major NIPA series are presented beginning on page 120.

## **Impact of the Revisions**

Overall, the picture of the U.S. economy presented in the revised estimates does not differ significantly from that shown in the previously published estimates. According to the revised estimates, the economy grew at a slightly faster rate: From the fourth quarter of 1996 to the first quarter of 2000, the growth rate (average annual rate of change) of real GDP was revised up 0.1 percentage point to 4.6 percent (chart 1 and table 1). The upward revision was more than accounted for by upward revisions to private investment in equipment and software, to nonresidential structures, to personal consumption expenditures (PCE) for goods, and to change in private inventories; these revisions were partly offset by downward revisions to PCE for services, to exports of services, and to residential investment. In the revised estimates, the major components contributing to growth were the same as those in the previous estimates: Increases in PCE, in private fixed investment, in exports of goods and services, and in State and local government consumption expenditures and gross investment more than offset an increase in imports of goods and services (which is subtracted in the calculation of GDP). Federal Government consumption expenditures and gross investment and change in private inventories changed little over the period.

The percent change from the preceding year for real GDP was revised up from 4.2 percent to 4.4 percent for 1997, was revised up from 4.3 percent to 4.4 percent for 1998, and was unrevised at 4.2 percent for 1999. On a fourth-quarter-to-fourthquarter basis, the increase during 1997 was revised up from 4.1 percent to 4.3 percent, the increase during 1998 was revised down from 4.7 percent to 4.6 percent, and the increase during 1999 was revised up from 4.6 percent to 5.0 percent.

Table 1.—Real GDP and Its Major Components: Change From 1996:IV to 2000:I [**Billions** 

of chained (1996) dollars,	seasonally adjusted	annual rates]
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		Prev	iously publi	shed		Revised		Revision in change		
	1996:IV		Chan 1996:IV	ge for '-2000:I		Change for 1996:IV-2000:I			Dercentage	
		2000:1	Dollar	Percent (annual rate)	2000:1	Dollar	Percent (annual rate)	Dollar	Percentage points	
Gross domestic product	7,931.3	9,158.2	1,226.9	4.5	9,191.8	1,260.5	4.6	33.6	0.1	
Personal consumption expenditures Durable goods Nondurable goods Services	<b>5,291.9</b> 625.7 1,593.9 3,072.2	<b>6,217.8</b> 894.1 1,837.9 3,501.2	<b>925.9</b> 268.4 244.0 429.0	<b>5.1</b> 11.6 4.5 4.1	<b>6,213.5</b> 898.2 1,844.8 3,487.2	<b>921.6</b> 272.5 250.9 415.0	<b>5.1</b> 11.8 4.6 4.0	- <b>4.3</b> 4.1 6.9 -14.0	<b>0</b> .2 .1 –.1	
Gross private domestic investment Fixed investment Nonresidential Structures Equipment and software Residential Change in private inventories	<b>1,283.7</b> 1,250.2 936.2 237.3 698.8 314.0 32.9	<b>1,725.6</b> 1,688.7 1,311.3 257.5 1,063.6 381.6 28.0	<b>441.9</b> 438.5 375.1 20.2 364.8 67.6 -4.9	<b>9.5</b> 9.7 10.9 2.5 13.8 6.2	<b>1,773.6</b> 1,730.9 1,365.3 274.0 1,100.4 371.4 36.6	<b>489.9</b> 480.7 429.1 36.7 401.6 57.4 3.7	<b>10.5</b> 10.5 12.3 4.5 15.0 5.3	<b>48.0</b> 42.2 54.0 16.5 36.8 -10.2 8.6	<b>1.0</b> .8 1.4 2.0 1.2 9	
Net exports of goods and services	- <b>74.6</b> 923.5 651.7 271.6 998.1 840.7 157.3	- <b>367.5</b> 1,094.6 795.2 300.4 1,462.1 1,249.8 213.9	- <b>292.9</b> 171.1 143.5 28.8 464.0 409.1 56.6	5.4 6.3 3.1 12.5 13.0 9.9	- <b>376.8</b> 1,084.8 798.1 288.5 1,461.7 1,255.3 208.4	- <b>302.2</b> 161.3 146.4 16.9 463.6 414.6 51.1	5.1 6.4 1.9 12.5 13.1 9.0	- <b>9.3</b> -9.8 2.9 -11.9 4 5.5 -5.5	3 .1 -1.2 0 .1 9	
Government consumption expenditures and gross investment Federal	<b>1,430.6</b> 527.6 353.3 174.4 903.0	<b>1,563.8</b> 535.7 340.2 195.3 1,027.6	<b>133.2</b> 8.1 –13.1 20.9 124.6	<b>2.8</b> .5 –1.2 3.5 4.1	<b>1,565.1</b> 537.1 341.5 195.4 1,027.4	<b>134.5</b> 9.5 –11.8 21.0 124.4	<b>2.8</b> .5 –1.0 3.6 4.1	<b>1.3</b> 1.4 1.3 .1 –.2	<b>0</b> 0 .2 .1 0	
Addenda: Final sales of domestic product Gross domestic purchases Gross national product Gross domestic income	7,897.6 8,006.5 7,947.9 7,909.2	9,120.1 9,500.6 9,132.4 9,279.2	1,222.5 1,494.1 1,184.5 1,370.0	4.5 5.4 4.4 5.0	9,148.0 9,543.6 9,187.7 9,265.0	1,250.4 1,537.1 1,239.8 1,355.8	4.6 5.6 4.6 5.0	27.9 43.1 55.3 –14.2	.1 .2 .2 0	

NOTE.—Chained (1996) dollar series are calculated as the product of the chain-type quantity index and the 1996 current-dollar value of the corresponding series, divided by 100. Because the formula for the chain-type quantity indexes uses the weights of more than one period, the cor-responding chained-dollar estimates are usually not additive.

Although there were some revisions to the annual growth rates of real GDP, the pace of the current economic expansion is the same as previously estimated. From the cyclical trough in the first quarter of 1991 to the first quarter of 2000, the average annual rate of change for real GDP was unrevised at 3.7 percent.

The revised estimates show about the same rate of increase in prices as that shown by the previously published estimates (chart 2). From the fourth quarter of 1996 to the first quarter of 2000, the average annual rate of increase in the price index for gross domestic purchases was unrevised at 1.5 percent; the rate of increase for the price index for GDP was revised up 0.1 percentage point to 1.7 percent (table 2). The percent change from the preceding year for the price index for gross domestic purchases was unrevised at 1.6 percent for 1997, was revised up from 0.7 percent to 0.8 percent for 1998, and was revised up from 1.5 percent to 1.6 percent for 1999. The revisions to the price index for GDP were similar.

#### Summary of the Revisions

The revisions reflect the incorporation of new and revised source data for the current-dollar estimates and for the prices and quantities used to prepare

Table 2.—Chain-Type Price	Indexes:	Change	From	1996:IV	to 2000:l
[Index numbers	(1996=100),	seasonally	adjusted	d]	

		Previously	published	Rev	ised	
	1996:IV	2000:1	Percent change for 1996:IV– 2000:I (annual rate)	2000:1	Percent change for 1996:IV– 2000:I (annual rate)	Revision in change (percent- age points)
Gross domestic product	100.63	105.95	1.6	106.17	1.7	0.1
Less: Exports of goods and service Plus: Imports of goods and service	98.85 99.43	96.89 94.83	6 -1.4	96.98 94.97	6 -1.4	0 0
Equals: Gross domestic purchases	100.68	105.56	1.5	105.78	1.5	0
Personal consumption expenditures Durable goods Nondurable goods Services	<b>100.87</b> 99.32 100.92 101.17	<b>106.34</b> 91.90 106.56 109.45	<b>1.6</b> 2.4 1.7 2.5	<b>106.58</b> 91.98 106.48 109.88	<b>1.7</b> -2.3 1.7 2.6	.1 .1 0 .1
Gross private domestic investment Fixed investment Nonresidential Structures Equipment and software Residential Change in private inventories	<b>100.02</b> 100.05 99.71 101.28 99.19 101.03	<b>99.12</b> 99.70 95.87 112.77 90.88 111.80	<b>3</b> 1 -1.2 3.4 -2.7 3.2	<b>99.32</b> 99.71 95.84 112.72 90.82 112.36	2 1 -1.2 3.3 -2.7 3.3	.1 0 1 0 .1
Government consumption expenditures and gross investment Federal National defense Nondefense State and local	<b>100.58</b> 100.35 100.49 100.06 100.72	<b>109.10</b> 108.23 107.22 110.11 109.61	<b>2.5</b> 2.4 2.0 3.0 2.6	<b>109.30</b> 108.01 107.35 109.26 110.03	<b>2.6</b> 2.3 2.1 2.7 2.8	.1 1 .1 3 .2
Addenda: Final sales of domestic product Gross national product	100.64 100.63	106.10 105.92	1.6 1.6	106.29 106.14	1.7 1.7	.1 .1

the real estimates; they also reflect the introduction of changes in methodology. This section describes the revisions to the annual current-dollar, price, and real estimates, and then it briefly describes the revisions to the quarterly estimates.

#### Annual current-dollar estimates

Table 3 summarizes the current-dollar revisions to major NIPA components. It provides a guide to the major revisions by identifying the subcomponent series for which revisions were \$2.0 billion or more (absolute value) for any of the years covered by this annual revision and by listing the major source data that underlie the revised estimates. Note that the incorporation of new and revised source data usually results in a revision to the level of an estimate not only for the year into which they are directly incorporated but also for subsequent years.

This annual revision incorporated data from the following primary Federal statistical sources: Bureau of the Census 1997 Economic Census and 1997 Census of Governments, annual surveys of State and local governments (for fiscal years 1998 and 1999), of manufactures, of merchant wholesale trade, of retail trade (for 1998), and of services (for 1998 and 1999); Census Bureau surveys of the value of construction put in place (for 1997–99); Federal Government budget data (for fiscal years 1998–2000); Internal Revenue Service (IRS) tabulations of income tax returns for corporations (for 1997 and 1998) and for sole proprietorships and partnerships (for 1998); Bureau of Labor Statistics (BLS) tabulations of wages and salaries of employees covered by State unemployment insurance (for 1999); U.S. Department of Agriculture farm statistics (for 1997-99): and BEA international transactions accounts (for 1997-99).

*Gross domestic product (GDP).*—The level of current-dollar GDP was revised up for all 3 years: \$17.6 billion, or 0.2 percent, for 1997; \$30.3 billion, or 0.3 percent, for 1998; and \$43.1 billion, or 0.5 percent, for 1999. These revisions are about average in comparison with recent annual NIPA revisions.

By major component, for 1997, upward revisions to equipment and software, to State and local government consumption expenditures and gross investment, and to personal consumption expenditures (PCE) for services more than offset a downward revision to change in private inventories. For 1998, upward revisions to nonresidential structures, to State and local government consumption expenditures and gross investment, to PCE for services, to equipment and software, and to change in private inventories more than offset downward revisions to PCE for goods and to residential investment. For 1999, upward revisions to equipment and software and to nonresidential structures, a downward revision to imports of goods and services, and upward revisions to State and local government consumption expenditures and gross investment, to PCE for services, and to PCE for goods more than offset downward revisions to exports of goods and services, to residential investment, and to Federal Government consumption expenditures and gross investment.

*PCE for goods.*—PCE for goods was revised down \$0.5 billion for 1997, was revised down \$5.6 billion for 1998, and was revised up \$5.1 billion for 1999. For 1997, a downward revision to "goods other than motor vehicles and parts" more than offset an upward revision to motor vehicles and parts. For

1998, the downward revision was primarily accounted for by "goods other than motor vehicles and parts." For 1999, the upward revision was primarily accounted for by motor vehicles and parts.

"Goods other than motor vehicles and parts" was revised down \$1.6 billion for 1997, was revised down \$5.2 billion for 1998, and was revised up \$0.5 billion for 1999. For 1997, a downward revision to food more than offset upward revisions to "other nondurable goods" and to gasoline and oil. For 1998, downward revisions to food and to furniture and household equipment more than offset upward revisions to "other nondurable goods" and to gasoline and oil. For 1999, upward revisions to gasoline and oil and to "other nondurable goods" more than offset downward revisions to food and to furniture and household equipment. Within "other nondurable goods," the revisions were more than accounted for by drug preparations and

Text continues on page 15.

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Eugene P. Seskin and David F. Sullivan wrote the article; John R. Kort wrote the box on implementation of NAICS. Duane G. Hackmann, Kali K. Kong, and Teresa L. Weadock prepared analyses and other review materials for both the article and the news release. Herb L. Cover assisted by Mary Carol Barron, Michael J. Boehm, John Sporing, Jr., and Mary D. Young—developed and operated the computer systems that were used to compile, check, analyze, and report the final estimates. David F. Sullivan coordinated the presentational improvements and table changes.

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# Table 3.—NIPA Revisions: Selected Component Detail and Major Source Data

		D:#!-	الم		
		Billions o	t dollars		-
NIPA component	Re	vision in le	vel	Revised 1999	Major source data incorporated <sup>1</sup>
	1997	1998	1999	level	
Gross domestic product	17.6	30.3	43.1	9,299.2	
Personal consumption expenditures	4.9	2.3	11.4	6,268.7	
Goods	5	-5.6	5.1	2,606.8	
Of which:	4.4	0.4	4.6		
Motor vehicles and parts Of which:	1.1	-0.4	4.6	320.7	
New autos	3	-2.8	-3.3	97.3	
					for model year 1999; new price data for model years 1997-99; new price data for domest autos for model year 2000.
Other motor vehicles	1.8	2.6	9.5	119.9	Trucks: Census Bureau economic census product shipments data for 1997; new Census Bu reau annual survey of manufactures product shipments data for 1998; revised BEA tabula tions of exports and imports for 1997-99; trade source unit sales, prices, and registrations sector for new trucks for 1999.
Goods other than motor vehicles and parts	-1.6	-5.2	.5	2,286.1	
Of which: Furniture and household equipment	-0.6	-2.6	-2.0	288.5	Revised Census Bureau economic census retail sales data for 1997; revised Census Bureau
					annual retail trade survey sales data for 1998; revised Census Bureau monthly sales data for 1999.
Food	-4.8	-7.6	-6.3	897.8	Revised Census Bureau economic census retail sales data for 1997; revised Census Bureau annual retail trade survey sales data for 1998; revised Census Bureau monthly sales data for 1999.
Gasoline and oil	1.9	2.3	4.5	128.3	
Other nondurable goods	2.4	4.5	4.0	498.0	
Services Of which:	5.4	7.8	6.3	3,661.9	
Housing	.7	2.3	3.7	906.2	
Of which: Other	.6	1.9	2.7	37.5	Census Bureau economic census data for 1997; revised service annual survey (SAS) data
					1998; new SAS data for 1999.
Household operation Of which:	.3	-1.3	-2.0	360.2	
Telephone and telegraph	1.1	1	2.0	121.7	Revised Federal Communications Commission (FCC) data on long distance service revenue 1997; new FCC data for 1998; new Census Bureau annual survey of communications services data on cellular telephone revenue for 1998; trade source data on cellular
Medical care	4.4	4.3	2.3	943.6	
Of which: Physicians	1.9	1.6	-2.4	232.3	Census Bureau economic census data for 1997; revised service annual survey (SAS) data 1 1998; new SAS data for 1999.
Hospitals Nonprofit	-2.3 .4	-2.0 2.5	2.5 4.2	375.0 245.5	FY 1998 trade source data on expenses for 1997 and 1998; trade source data on commun
Proprietary	-0.1	-0.7	2.5	46.0	hospital expenses for 1999. FY 1998 trade source data on expenses for 1997 and 1998; trade source data on commun
	0.7	2.0	4.0		hospital expenses for 1999.
Government	-2.7	-3.9	-4.2	83.5	Census Bureau census of governments tabulations for FY 1997; revised Census Bureau Go ernment Finances tabulations for FY 1998.
Nursing homes	2.6	2.3	2.3	76.8	Census Bureau economic census data for 1997; revised service annual survey (SAS) data 1 1998; new SAS data for 1999.
Health insurance	1.7	1.5	2.1	64.6	
Recreation	.9	-2.3	-9.1	237.1	tions for 1999. Census Bureau economic census data for 1997; revised service annual survey (SAS) data f
					1998; new SAS data for 1999.
Other services Of which:	9	5.5	10.0	958.4	
Personal business	.7	5.1	13.7	586.2	
Of which: Services furnished without payment by	.9	4.2	8.5	243.8	Revised IRS tabulations of corporate tax return data for 1997; new IRS tabulations for 1998
financial intermediaries except life insurance carriers.	.0	7.2	0.0	240.0	revised Federal Reserve Board flow-of-funds accounts sector assets data for 1997-99; Fe eral Deposit Insurance Corporation data, Credit Union National Association data, Office o Thrift Supervision data, trade source data on investment companies for 1999.
Expense of handling life insurance and pension plans.	.3	.9	4.4	98.0	Revised IRS tabulations of corporate tax return data for 1997; new IRS tabulations for 1998 trade source data on expenses for 1998; BLS tabulations of wages and salaries covered State unemployment insurance for 1999.
Religious and welfare activities	8	9	-2.7	170.2	
ross private domestic investment	6.8	18.7	27.4	1,650.1	
Fixed investment	12.3	12.9	28.8	1,606.8	
Nonresidential	13.3	16.2	36.4	1,203.1	
Structures	1.7	10.4	12.2	285.6	
Of which:					
Nonresidential buildings, excluding farm Of which: Industrial	1.8 1.7	4.9 4.2	8.5 5.2	204.0 31.5	Revised Census Bureau value of construction put in place data for 1997-99.
Utilities Of which:	4	5.3	5.5	45.0	
Gas	1	5.2	4.4	0.2	Revised Census Bureau value of construction put in place data for 1997-99.

# Table 3.--NIPA Revisions: Selected Component Detail and Major Source Data--Continued

	Billions of dollars							
NIPA component	Re	vision in le	vel	Revised	Major source data incorporated <sup>1</sup>			
	1997	1998	1999	level				
Mining exploration, shafts, and wells Of which:	.1	7	-2.8	24.3				
Petroleum and natural gas	.1	0	-2.1	22.8	Trade source data on drilling costs for 1998; revised trade source data on footage drilled for 1998 and 1999.			
Equipment and software	11.5	5.8	24.0	917.4	1996 and 1999.			
Of which: Information processing equipment and software	9.8	10.5	26.1	433.0				
Computers and peripheral equipment	2.9	-3.6	-3.5	94.3	survey of manufactures product shipments data for 1998; revised BEA tabulations of exports and imports for 1997-99.			
Software	9.9	20.7	36.6	180.1	Census Bureau economic census data for 1997; BLS employment data for 1997; new Census Bureau service annual survey data for 1998.			
Communication equipment	.7	-2.9	-3.1	99.1	Census Bureau economic census product shipments data for 1997; new Census Bureau annua survey of manufactures product shipments data for 1998; revised BEA tabulations of exports and imports for 1997-99.			
Other	-3.7	-3.7	-3.9	59.5				
Transportation equipment Of which:	.5	-7.8	-3.6	193.5				
Trucks, buses, and truck trailers	-1.3	.9	-4.5	113.5	Census Bureau economic census product shipments data for 1997; new Census Bureau annua survey of manufactures product shipments data for 1998; revised BEA tabulations of exports and imports for 1997-99; trade source unit sales, prices, and registrations by sector for new trucks for 1999.			
Autos	.7	.1	3.5	44.1				
Aircraft	.4	-8.0	-1.7	25.7	Census Bureau economic census product shipments data for 1997; new Census Bureau annua survey of manufactures product shipments data for 1998; revised BEA tabulations of exports and imports for 1997-99; Census Bureau current industrial reports data for complete civilian			
Other equipment	2.5	3.0	1.5	144.4	aircraft for 1999. Census Bureau economic census product shipments data for 1997; new Census Bureau annua survey of manufactures product shipments data for 1998; revised BEA tabulations of exports and imports for 1997-99.			
Residential	-1.0 9	-3.3 -3.3	-7.5 -7.5	403.8 394.9				
Of which:	-							
New Of which:	9	-3.4	-7.3	342.9				
Single-family structures	-1.2	-3.7	-6.7	207.2	Revised Census Bureau value of construction put in place data for 1997-99.			
Change in private inventories Of which:	-5.4	5.8	-1.3	43.3				
Farm Nonfarm	.1 -5.7	.3 5.5	-3.6 2.2	2 43.5	Revised USDA data for 1997 and 1998; new USDA data for 1999.			
Change in book value Of which:	-6.8	8.5	2.5	59.1				
Manufacturing	-6.4	2.6	0	3.7	New Census Bureau economic census inventory book value data for 1997; new Census Bu- reau annual survey of manufactures inventory book value data for 1998; Federal budget dat on defense aircraft purchases for 1997.			
Retail trade	1	2.9	1.5	26.2	Revised Census Bureau annual retail trade survey (ARTS) inventory book value data for 1997, new ARTS data for 1998; revised BEA estimates based on inventory data from trade sources for 1990; revised Census Bureau monthly inventory data for 1999			
Other than manufacturing and trade	5	1.8	2	9.7	Revised IRS tabulations of inventory book value data from corporate tax returns for 1997;new IRS tabulations of inventory book value data from sole proprietorship, partnership and from corporate tax returns for 1998; Census Bureau Quarterly Financial Report data for mining for 1999.			
Inventory valuation adjustment	1.2	-3.0	3	-15.6	Revised information on accounting methods used for inventory reporting in the annual trade survey (ATS), and in the annual retail trade survey (ARTS) for 1997; new ATS and ARTS information for 1998.			
Net exports of goods and services	-1.0	-1.9	1	-254.0	Revised BEA international transactions accounts estimates for 1997-99.			
Exports	-1.6	3	-8.1	990.2				
Goods Services	–.1 –1.5	.7 –1.1	.2 –8.3	699.2 291.0				
Imports Goods	5 0	1.6 .1	-8.0 5	1,244.2				
Services	5	1.5	-7.5	195.6				
Government consumption expenditures and gross investment.	6.9	11.2	4.3	1,634.4				
Federal consumption expenditures and gross investment Of which: Nondefense	.4 .3	1.9 1.3	-2.0 -2.6	568.6 203.5				
Consumption expenditures	.3	.4	-2.0	159.6				
Of which: Services	.3	2	-4.0	148.9				
Of which: Other services	 7	9	-4.5	37.5	Revised allocation of FY 1998 Federal budget data for 1997 and 1998; revised FY 1999 Fed-			
Gross investment	.1	.9	2.0	44.0	eral budget data for 1998 and 1999; preliminary FY 2000 Federal budget data for 1999.			
Of which:								
Equipment and software	.2	1.1	2.3	33.0	Revised allocation of FY 1998 Federal budget data for 1997 and 1998; revised allocation of FY 1999 Federal budget data for 1998 and 1999; preliminary FY 2000 Federal budget data for 1999; Census Bureau economic census data for 1997; BLS employment data for 1997; new Census Bureau service annual survey data for 1998.			

## Table 3.--NIPA Revisions: Selected Component Detail and Major Source Data--Continued

		Billions of	of dollars		
NIPA component	Re	vision in le	vel	Revised 1999	Major source data incorporated <sup>1</sup>
	1997	1998	1999	level	
State and local consumption expenditures and gross investment.	6.5	9.3	6.4	1,065.8	
Consumption expenditures Of which:	.5	.9	-2.4	855.0	
Nondurable goods	-2.7	-2.7	-4.0	91.3	Census Bureau census of governments tabulations for FY 1997; revised Census Bureau Go ernment Finances tabulations for FY 1998.
Services	3.4	3.7	1.7	747.7	
Of which: Compensation of general government employees, except own-account investment.	4.4	3.8	2.2	624.1	Revised BLS tabulations of wages and salaries of employees covered by State unemployme insurance for 1997 and 1998; new BLS tabulations for 1999; Census Bureau census of g ernments tabulations for FY 1997; revised Census Bureau <i>Government Finances (GF)</i> tabulations of retirement plans for FY 1998; new <i>GF</i> tabulations for FY 1999; HHS medical e penditure panel survey data on health insurance for 1997; BLS data on employer costs for health insurance for 1998 and 1999.
Other services	-1.1	-1.0	-2.2	40.6	
Gross investment	6.0	8.4	8.9	210.9	ernment Finances tabulations for FY 1998.
Of which: Structures	6.5	8.8	7.8	157.5	Census Bureau census of governments tabulations for FY 1997; revised Census Bureau <i>Government Finances</i> tabulations for FY 1998; revised Census Bureau value of construction p in place data for 1997-99.
Gross domestic product	17.6	30.3	43.1	9,299.2	
Plus: Net receipts of income	2.9	6.4	9.0	-11.0	Revised BEA international transactions accounts estimates for 1997-99.
Income receipts from the rest of the world Income payments to the rest of the world	-1.3 -4.2	.1 -6.3	3.6 -5.4	305.9 316.9	
Equals: Gross national product	20.4	36.7	52.0	9,288.2	
Less: Statistical discrepancy <sup>2</sup>	32.9	22.8	53.2	-71.9	
Equals: Gross national income	-12.5	13.8	-1.2	9,360.1	
Compensation of employees		-27.0	-31.9	5,299.8	
Wage and salary accruals	13	3.3	2.8	4,475.1	
Wage and salary disbursements	0	4.7 1	-2.3 -2.1	4,470.0 724.4	
Federal	2	3	-1.5	184.9	Revised postal service data for 1997; new Postal Service data 1998 and 1999; revised Offic of Personnel Management data for 1997 and 1998; revised FY 1998 and FY 1999 Federa
State and local			0	500 F	Budget data for 1997 and 1998; preliminary FY 2000 Federal Budget data for 1999.
	0	.2	6	539.5	insurance for 1997 and 1998; new BLS tabulations for 1999.
Private	.3	4.8	2	3,745.6	Revised BLS tabulations of wage and salaries of employees covered by State unemploymen insurance for 1997 and 1998; new BLS tabulations for 1999; revised USDA data on farm wages for 1997 and 1998; new USDA data for 1999; new BEA international transactions a counts data on rest-of-the-world wage and salary accruals for 1997-99.
Wage accruals less disbursements	1.2	-1.4	5.2	5.2	Revised BLS tabulations of wage and salaries of employees covered by State unemploymen insurance for 1997 and 1998; new BLS tabulations for 1999.
Supplements to wages and salaries	-25.7	-30.3	-34.8	824.6	Insurance for 1997 and 1998; new BLS tabulations for 1999.
Of which: Other labor income	-25.5	-30.2	-34.8	501.0	
Of which: Private pension and profit-sharing plans	-8.5	-14.1		60.4	DOL tabulations of data on employer contributions to pension and profit-sharing plans for 19
Group health and life insurance	-15.5	-12.5		292.0	Pension Benefit Guaranty Corporation tabulations of assets and liabilities for 1998 and 19
Workers' compensation	-1.9	-3.2		34.5	ployer costs for life insurance for 1999.
Proprietors' income with IVA and CCAdj	<b>2.6</b> .2	<b>14.6</b> .3	<b>5.0</b> –6.0	<b>663.5</b> 25.3	
Of which: Proprietors' income with IVA Nonfarm Of which:	.3 2.4	.4 14.2	-4.9 10.9	33.6 638.2	Revised USDA data for 1997 and 1998; new USDA data for 1999.
Or which: Proprietors' income CCAdj	3.0 8	12.9 1.1	7.6 3.9	586.9 52.7	New IRS tabulations of sole proprietorship and partnership tax return data for 1998. Capital consumption allowances: New IRS tabulations of sole proprietorship and partnership return data for 1998. Consumption of fixed capital: Revised BEA fixed investment and pric estimates for 1997-99.
Rental income of persons with CCAdj	-1.9	-2.0	-2.5	143.4	
Of which: Rental income of persons	-1.7	-1.0	-2.5	199.4	Revised Federal Reserve Board flow-of-funds accounts residential mortgage liabilities data fo 1997-99; revised USDA data on rent on farms owned by nonoperator landlords for 1997 a 1998; new USDA data for 1999; trade source data on property insurance for 1998; Censu Bureau current population survey data on owner- and tenant-occupied units for 1999; revis

# Table 3.--NIPA Revisions: Selected Component Detail and Major Source Data--Continued

	Billions of dollars									
NIPA component	Re	vision in le	vel	Revised	Major source data incorporated <sup>1</sup>					
	1997	1998	1999	level						
Corporate profits with IVA and CCAdj	-4.7	-33.4	-36.7	856.0						
Profits before tax	-3.5	-23.7	-25.5	823.0	Revised IRS tabulations of corporate tax return data for 1997; new IRS tabulations for 1998; regulatory agency and public financial reports profits data for 1999.					
Of which: Domestic	-6.1	-27.2	-33.6	711.6						
Mining	0	-2.0	-3.4	2.4						
Construction Manufacturing	1.2 9.9	7.0 11.6	7.8 13.5	36.2 183.9						
Transportation	.6	3.6	4.6	24.5						
Communications Electric, gas, and sanitary services	-21.6	-26.0 -2.7	-28.6 -4.3	26.6 38.6						
Wholesale trade	1.8	9.6	13.5	58.5						
Retail trade Finance, insurance, and real estate	3 2.2	7.2 -22.3	8.9 -31.8	84.8 190.8						
Financial	1.5	-26.5	-36.1	172.0						
Other Services	.7 5	4.2 -12.6	4.1 -13.8	18.7 61.0						
Rest of the world	2.6	3.5	8.1	111.4	Revised BEA international transactions accounts estimates for 1997-99.					
Receipts from the rest of the world Less: Payments to the rest of the world	3 -2.9	7 -4.2	3.1 -4.9	169.3 57.9						
IVA	1.0	-4.2	-4.9	-9.1						
CCAdj	-2.4	-5.7	-15.1	42.1	Capital consumption allowances: Revised IRS tabulations of corporate tax return data for 1997 new IRS tabulations for 1998. Consumption of fixed capital: Revised BEA fixed investment					
					and price estimates for 1997-99.					
Net interest <sup>3</sup>	1	47.0	39.6	507.1						
Monetary interest paid Of which:	-2.4	34.9		2,396.1						
Domestic business	-1.6	37.1		1,709.9	Revised IRS tabulations of corporate tax return data for 1997; new IRS tabulations for 1998;					
					new IRS tabulations of sole proprietorship and partnership tax return data for 1998; Federal Reserve Board flow-of-funds accounts residential mortgage liabilities data for 1997-99 and nonfinancial corporate liabilities data for 1998 and 1999; revised USDA data on interest pai by farmers for 1997 and 1998; new USDA data for 1999. Federal Deposit Insurance Cor- poration data, Credit Union National Association data, Office of Thrift Supervision data, and trade source data on investment companies for 1999.					
Of which:	1.2	42.1		731.0						
Financial corporations Nonfinancial corporations	-2.0	-15.1		447.7						
Sole proprietorships and partnerships	4	11.7	-6.9	189.6 194.8	Deviand Endered Departie Depart experies experit date for 1000, regulatory experses date for					
Persons	-1.9	-5.9	-0.9	194.0	Revised Federal Reserve Board consumer credit data for 1999; regulatory agency data for 1997-99.					
Government Federal	2.0	2.8 3	.2 –3.6	357.0 281.8	Revised FY 1999 Federal budget data for 1998 and 1999; preliminary FY 2000 Federal budge					
					data for 1999; revised BEA international transactions accounts estimates for 1997-99.					
State and local	2.0	3.2	3.8	75.1	Census Bureau census of governments tabulations for FY 1997; revised Census Bureau Gov- ernment Finances tabulations for FY 1998.					
Monetary interest received	-2.4	34.9		2,396.1						
Of which: Domestic business	-6.2	3.6		1.533.8	Revised IRS tabulations of corporate tax return data for 1997; new IRS tabulations for 1998;					
Of which:	0.2	0.0		1,000.0	new IRS tabulations of sole protect and return duration for room root and tabulations of root protects in partnership tax return data for 1998; Federal Reserve Board flow-of-funds accounts nonfinancial corporate assets data for 1998 and 1999; Federal Deposit Insurance Corporation data, Credit Union National Association data, Office of Thrift Supervision data, and trade source data on investment companies for 1999.					
Financial corporations	-5.2	29.3		1,219.5						
Nonfinancial corporations Financial sole proprietorships and partnerships	-1.8	-19.0 -6.7		262.4 51.9						
Persons	2.1	30.6		542.7						
Government Of which:	2.9	2.7		84.6						
State and local	2.7	3.4		68.9	Census Bureau census of governments tabulations for FY 1997; revised Census Bureau Gov-					
Rest of the world	-1.2	-2.1		235.0	ernment Finances tabulations for FY 1998. Revised BEA international transactions accounts estimates for 1997-99.					
Imputed interest paid (by domestic financial corporate business).	6.1	8.5		520.1	Revised DLA international transactions accounts estimates for 1357-35.					
Of which: Life insurance carriers	6.1	8.2	8.2	177.3	trade source data on life insurance for 1998; Federal Reserve Board flow-of-funds accounts					
Imputed interest received	6.1	8.5		520.1	life insurance companies assets data for 1998 and 1999. Revised Federal Reserve Board flow-of-funds accounts sector assets data for 1997-99; Federa Deoosit Insurance Corporation data for 1999.					
Of which:					Doposi, mounanoo oorporanon aala 101 1333.					
Domestic business Persons	5 7.0	-2.1 12.3		72.0 421.1						
From banks, credit agencies, and investment	.9	4.2	8.5	243.8						
companies. From life insurance carriers	6.1	8.2	8.2	177.3						
Rest of the world	0.1	0.2 0	-3.3	16.4						
Consumption of fixed capital	4.2	12.7	25.2	1,161.0						
Private	3.9	11.0	21.7	961.4	Revised BEA fixed investment and price estimates for 1997-99.					
Corporate Noncorporate	2.7	7.4 3.6	15.8 5.9	676.9 284.5						
Capital consumption allowances	1	5.1	9.4	984.9						
Of which:										
Noncorporate	.1	3.5	8.7	265.9	New IRS tabulations of sole proprietorship and partnership tax return data for 1998; revised BEA fixed investment estimates for 1997-99.					

#### Table 3.-NIPA Revisions: Selected Component Detail and Major Source Data-Continued

		Billions o	f dollars	-	-
NIPA component	Po	vision in le		Revised	Major source data incorporated <sup>1</sup>
	1997	1998	1999	1999 level	
Less: CCAdj Corporate	-3.3 -2.4	-5.8 -5.7	-12.3 -15.1	23.5 42.1	CCAdj is calculated as consumption of fixed capital less capital consumption allowances.
Noncorporate Of which:	-1.1	1	2.8	-18.6	
Nonfarm proprietors' income Government	8	1.1 1.8	3.9 3.6	52.7 199.6	
Of which: General government	.4	1.8	3.5	170.3	Perpetual-inventory calculations at current cost, based on gross investment and on investment prices for 1997-99. See also entries for gross investment.
Nonfactor income	.2	1.8	.2	729.4	,
Of which: Indirect business tax and nontax liability	.4	2.6	1.8	718.1	
Of which: State and local	1.6	3.5	2.7	617.5	reau Government Finances (GF) tabulations for FY 1998; new GF tabulations for FY 1999; revised Census Bureau quarterly tax revenue data for 1997 and 1998; new tax revenue da
Less: Subsidies less current surplus of government	.1	.7	1.9	28.4	for 1999.
enterprises. Federal	1.1	.3	1.0	39.3	
State and local	-1.0	.4	.8	-11.0	data for 1999; new FY 1998 Postal Service financial data for 1997 and 1998; new Treasury Department data for 1999. For consumption of enterprise fixed capital: Perpetual-inventory calculations at current cost based on gross investment and on investment prices for 1997- 99. See also entries for gross investment. Census Bureau census of governments tabulations for FY 1997; revised Census Bureau <i>Gov- emment Finances</i> tabulations for FY 1998. For consumption of enterprise fixed capital: Per- petual-inventory calculations at current cost, based on gross investment and on investment prices for 1997-99. See also entries for gross investment.
Addenda: Gross domestic income	-15.3	7.5	-10.2	9,371.1	
National income	-17.1	7	-26.6	7,469.7	See entries under "gross national income."
Gross saving	-19.0	8.4	-9.5	1,717.6	
Personal income	-25.5 2.6	32.1 4.7 -30.2 14.6 -2.0 2.8	-2.2 -2.3 -34.8 5.0 -2.5 6.0	7,789.6 4,470.0 501.0 663.5 143.4 370.3	
Personal interest income	11.4 11.2	43.0 47.0 44.3	32.4 39.6 39.0	963.7 507.1 624.2	See entries under "net interest." See entries under "net interest."
Rest of the world Net interest paid by government Federal State and local	4 1	2.9 1.8 .4 1.4	.7 –.4 1.9 –2.3	-117.0 261.7 264.7 -3.0	
Interest paid by persons	-1.9	-5.9 6	-2.3 -6.9 -2.0	-3.0 194.8 1,016.2	
From government Federal	1 .2	5 .2	-2.1 -9.5	986.5 734.5	
Of which: Hospital and supplementary medical insurance State and local Of which:	0 4	.1 –.7	-7.7 7.3	208.1 252.0	New Treasury Department data for 1999.
Medical care	4	.1	6.5	189.0	New Health Care Financing Administration tabulations of medicaid for 1999.
Less: Personal contributions for social insurance Of which:	2	.3	3.9	338.5	
Federal	2	.2	3.9	336.6	Revised Social Security Administration (SSA) data on taxable wages for 1998; new SSA data on taxable wages for 1999.
Less: Personal tax and nontax payments	.5 1.0	-1.7 .3	1 2.0	1,152.0 902.2	
State and local	5	-2.0	-2.2	249.7	personal income tax collections data for 1999.
Equals: Disposable personal income	-14.6	33.8	-2.0	6,637.7	
Less: Personal outlays Personal consumption expenditures Interest paid by persons	3.6 4.9 -1.9	-1.9 2.3 -5.9	6.8 11.4 -6.9	6,490.1 6,268.7 194.8	
Personal transfer payments to the rest of the world (net)	.6	1.7	2.3	26.6	
Equals: Personal saving	-18.2	35.7	-8.7	147.6	

In these descriptions, "new" indicates this is the first time that data from the specific source are being incorporated into the component estimate for the given year, and "revised" indicates that data from the specific source were incorporated previously and now revised data from that source are being incorporated.
 The statistical discrepancy is gross national product (GNP) less gross national income (GNI); it is also the difference between gross domestic grout (GOP) and gross domestic income (GDI), which is GNI) less net income receipts from the rest of the world. The statistical discrepancy arises because the product-side measures of GNP and GDP are estimated independently from the income-side measures of GNI and GDI.
 Net interest is the sum of monetary interest paid by domestic business and by the rest of the world and imputed interest paid by domestic financial corporate business, less monetary interest received by domestic business and by the rest of the world.

BEA Bureau of Economic Analysis BLS Bureau of Labor Statistics CCAdj Capital consumption adjustment DOL Department of Labor FY Fiscal year HHS Department of Health and Human Services US Internet Revenue Sociece

IRS Internal Revenue Service IVA Inventory valuation adjustment USDA U.S. Department of Agriculture

sundries. The revisions to "goods other than motor vehicles and parts" resulted from the incorporation of revised 1997 Economic Census data, revised annual retail sales data for 1998, and revised monthly sales data for 1999.

Motor vehicles and parts was revised up \$1.1 billion for 1997, was revised down \$0.4 billion for 1998, and was revised up \$4.6 billion for 1999. For 1998, a downward revision to new autos was mostly offset by an upward revision to "other motor vehicles." For 1999, an upward revision to "other motor vehicles" more than offset a downward revision to new autos. The revisions to new autos were primarily accounted for by improved estimates of average expenditure per unit that were based on more detailed price data by model. The revisions to "other motor vehicles" were primarily accounted for by purchases of new trucks; for 1998, the revision reflected the incorporation of product shipments data from the Census Bureau annual survey of manufactures, and for 1999, it reflected a revised estimate of sales of trucks to consumers.

*PCE for services.*—PCE for services was revised up for all 3 years: \$5.4 billion for 1997, \$7.8 billion for 1998, and \$6.3 billion for 1999. For 1997, the revision was primarily accounted for by an upward revision to medical care services. For 1998, upward revisions to "other services," to medical care services, and to housing services more than offset a downward revisions to "other services," to housing, and to medical care services more than offset downward revisions to recreation and to household operation.

The upward revisions to medical care services for 1997 and 1998 reflected upward revisions to nursing homes, to physicians, and to health insurance that more than offset downward revisions to hospitals. For 1999, upward revisions to hospitals, to nursing homes, and to health insurance more than offset a downward revision to physicians. For 1997, the revisions to nursing homes and to physicians reflected Census Bureau Economic Census data; for 1998, the revisions reflected Census Bureau service annual survey (SAS) data that were benchmarked to the Economic Census data; and for 1999, the revisions reflected preliminary tabulations from the SAS. For 1997, the revision to health insurance reflected the incorporation of a new data source-the medical expenditure panel survey (MEPS) from the Department of Health and Human Services (see the section "Changes in Methodology")-for employer and household costs for private health insurance; for 1998 and 1999, the revisions reflected extrapolation from the 1997 estimate using BLS data on employer costs for health insurance and BLS tabulations of wages and salaries of employees covered by unemployment insurance. For 1997, the revision to hospitals was more than accounted for by government hospitals, reflecting new and revised data from Census Bureau surveys of State and local governments. For 1998, the revision to hospitals reflected a downward revision to government hospitals that more than offset an upward revision to nonprofit hospitals; the revision to government hospitals reflected new data from Census Bureau surveys of State and local governments, and the revision to nonprofit hospitals was based on newly incorporated expense data from trade sources. For 1999, the revision to hospitals reflected upward revisions to nonprofit and to proprietary hospitals that more than offset a downward revision to government hospitals; the revisions to nonprofit and to proprietary hospitals reflected trade source data on community hospital expenses, and the revision to government hospitals reflected extrapolation from the 1998 estimate.

The upward revision to "other services" for 1998 was primarily accounted for by personal business services; for 1999, the revision reflected an upward revision to personal business services that was partly offset by a downward revision to religious and welfare activities. For both years, the revisions to personal business services were primarily accounted for by "services furnished without payment by financial intermediaries except life insurance carriers."<sup>2</sup> For 1999, "expense of handling life insurance and pension plans" also contributed to the upward revision. The revisions to "services furnished without payment by financial intermediaries except life insurance carriers" were primarily accounted for by commercial banks, based on revised data on assets by sector from the Federal Reserve Board flow-of-funds accounts. The revisions to "expense of handling life insurance and pension plans" and to religious and welfare activities for 1999 reflected the incorporation of BLS

<sup>2.</sup> This PCE category consists of imputed payments made by persons to depository institutions—that is, commercial banks, mutual savings banks, savings and loan associations, credit unions, and regulated investment companies—to purchase checking, bookkeeping, and investment services for which they do not pay an explicit service charge. For additional information, see U.S. Department of Commerce, Bureau of Economic Analysis, *Personal Consumption Expenditures*, Methodology Paper No. 6 (Washington, DC: U.S. Government Printing Office, 1990): 11–12.

tabulations of wages and salaries of employees covered by unemployment insurance.

The upward revisions to housing for 1998 and 1999 were primarily accounted for by "other" housing, particularly hotels and motels, and reflected SAS data for 1998 that were benchmarked to the 1997 Economic Census and preliminary tabulations from the SAS for 1999.

The downward revisions to recreation for 1998 and 1999 were primarily to subcategories of "other" recreation, reflecting SAS data for 1998 that were benchmarked to the 1997 Economic Census and preliminary tabulations from the SAS for 1999.

The downward revision to household operation services for 1999 reflected small downward revisions to several subcomponents that were partly offset by an upward revision to telephone and telegraph that was primarily based on new trade source data on cellular telephone revenues.

#### Incorporating Source Data on the Basis of "Best Change"

As is usual in annual NIPA revisions, this revision covered the most recent 3 calendar years—1997–99 (and the first quarter of 2000). The NIPA estimates before 1997 will not be revised until the next comprehensive revision, which is tentatively scheduled for 2003. The annual revisions are limited to the most recent 3 years in order to coincide with the availability of major source data, particularly the Internal Revenue Service tabulations of income tax returns for corporations, and to reduce the frequency of revisions to the historical estimates (for example, revisions to the pre-1996 chain-type price and quantity measures are avoided because the estimates for 1996, the reference year, are not revised).

In this year's annual revision, there were several instances in which source data were revised for years prior to 1997 or new source data became available that would have led to revisions for prior years. For example, on July 3. 2000, the Census Bureau released revised data on the value of construction put in place back to 1983. In addition, detailed data from the 1997 Economic Census have become available since last year's comprehensive NIPA revision; if these data had been available for the comprehensive revision, incorporating them would have resulted in revisions to the pre-1997 NIPA estimates.<sup>1</sup> If the levels of the data from the quinquennial economic censuses differ from those from the annual surveys, such as the service annual survey, the annual data are usually benchmarked to the census data, so the annual estimates for the intercensal years are revised.

The new and revised source data that would have affected the NIPA estimates before 1997 are incorporated into the estimates for 1997–99 on either a "best-level" basis or a "best-change" basis. Incorporating the source data on a best-level basis provides estimates that are more consistent with the source data, but it results in a discontinuity between the estimates for 1996 and those for 1997; this discontinuity distorts the measure of the change in the estimates. Incorporating the source data on a best-change basis provides accurate measures of the change in the estimates for all periods, but it results in levels of the estimates that are not fully consistent with the source data.

In general, BEA incorporates the source data on a bestchange basis in order to preserve accurate estimates of growth and consistent time series.<sup>2</sup> For example, the NIPA estimate of investment in single-family structures of \$159.1 billion for 1996 is based on the previously published Census Bureau data on the value of construction put in place. The revised Census Bureau data are \$170.8 billion for 1996 and \$175.2 billion for 1997. On a bestchange basis, the revised NIPA estimate of \$163.2 billion for 1997 was calculated by applying the 2.6-percent growth rate from 1996 to 1997 in the revised Census Bureau data to the NIPA estimate for 1996 (that is, 163.2 = $1.026 \times 159.1$ ). Thus, the correct period-to-period change for 1996 to 1997 is preserved, but the level of the NIPA estimate for 1997 is now \$12 billion lower than the level of the Census Bureau data.

In the next comprehensive NIPA revision, the estimates of all components will be based on the best levels of the benchmark source data series, such as the benchmark input-output accounts. For most components of GDP, rough calculations suggest that when the estimates for 1997 are computed on a best-level basis, rather than on a best-change basis, the resulting revisions will generally be small. These rough calculations suggest that the largest revisions for 1997 will be to the following components: Nonresidential fixed investment in prepackaged software, up about \$13 billion, based on differences between the levels of the 1997 Service Annual Survey and the 1997 Economic Census; residential fixed investment, up about \$12 billion, based on revisions to Census Bureau data on the value of construction put in place; and personal consumption expenditures for services, up about \$7 billion, based on differences between the levels of the 1997 Service Annual Survey and the 1997 Economic Census. More precise estimates of these revisions will be available after the 1997 benchmark input-output accounts are completed.

<sup>1.</sup> The 1997 Economic Census data that were incorporated in the 1999 comprehensive NIPA revision were preliminary retail sales data, which were used in the estimation of personal consumption expenditures for goods, and preliminary data on shipments of computers, which were used in the estimation of nonresidential fixed investment. For more information, see Eugene P. Seskin, "Improved Estimates of the National Income and Product Accounts for 1959–98: Results of the Comprehensive Revision," SURVEY OF CURRENT BUSINESS 79 (December 1999): 15–43.

Several years ago, BEA implemented a program, as described in its strategic plan, to speed up the compilation of its benchmark input-output accounts and the benchmarking of the NIPA's to those accounts. This goal was met with the release of the 1992 benchmark input-output accounts in late 1997 and the release of the comprehensive NIPA revision in October 1999. As a consequence, much of the data from the 1997 Economic Census were not available in time to be fully incorporated in the NIPA comprehensive revision.

However, the NIPA estimates of foreign transactions incorporate the annual revision of the international transactions accounts on the best–level basis in order to maintain consistency in BEA's published estimates.

Nonresidential structures.-Nonresidential structures was revised up for all 3 years: \$1.7 billion for 1997, \$10.4 billion for 1998, and \$12.2 billion for 1999. For 1998, upward revisions to gas utilities and to industrial structures accounted for most of the revision. For 1999, upward revisions to industrial structures and to gas utilities more than offset a downward revision to petroleum and natural gas well drilling and exploration. The revisions to industrial structures and gas utilities reflected the incorporation of revised Census Bureau data on the value of construction put in place.<sup>3</sup> The revision to petroleum and natural gas well drilling and exploration reflected newly incorporated trade source data on drilling footage and newly incorporated prices that are used to calculate the currentdollar estimates.

Equipment and software.—Equipment and software was revised up for all 3 years: \$11.5 billion for 1997, \$5.8 billion for 1998, and \$24.0 billion for 1999. For 1997, the revision was accounted for by upward revisions to information processing equipment and software and to "other" equipment. Within information processing equipment and software, upward revisions to software and to computers and peripheral equipment were partly offset by a downward revision to "other." For 1998, upward revisions to information processing equipment and software and to "other" equipment were partly offset by a downward revision to transportation equipment—specifically, aircraft. Within information processing equipment and software, a large upward revision to software was partly offset by downward revisions to "other," to computers and peripheral equipment, and to communication equipment. For 1999, a large upward revision to information processing equipment and software was partly offset by a downward revision to transportation equipment. Within information processing equipment and software, a large upward revision to software was partly offset by downward revisions to "other," to computers and peripheral equipment, and to communication equipment. Within transportation equipment, downward revisions to trucks, buses, and truck trailers and to aircraft were partly offset by an upward revision to autos.

Within information processing equipment and software, the revisions to computers and periph-

eral equipment, to communication equipment, and to "other" reflected newly available Census Bureau data from the 1997 Economic Census and the 1998 Annual Survey of Manufactures. The revisions to software reflected newly available Census Bureau data from the 1997 Economic Census, the 1998 Service Annual Survey, and the unpublished BLS National Industry-Occupation Employment Matrix.

Within transportation equipment, the revision to trucks, buses, and truck trailers reflected a revision to the business share of light truck purchases, which is calculated from trade source data. The revision to autos was primarily accounted for by improved estimates of average expenditure per unit that were based on more detailed price data by model. The revisions to aircraft reflected product shipments data from the Census Bureau 1998 Annual Survey of Manufactures and revised product shipments data from the Census Bureau current industrial reports.

The revisions to "other" equipment reflecte newly available data from the 1997 Economic Census and the 1998 Annual Survey of Manufactures.

*Residential fixed investment.*—Residential fixed investment was revised down for all 3 years: \$1.0 billion for 1997, \$3.3 billion for 1998, and \$7.5 billion for 1999. For all 3 years, the revisions were primarily accounted for by single-family structures, reflecting revised Census Bureau data on the value of construction put in place.<sup>4</sup>

*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.<sup>5</sup> Change in private inventories was revised down \$5.4 billion for 1997, was revised up \$5.8 billion for 1998, and was revised down \$1.3 billion for 1999.

The revisions to change in farm inventories were negligible for 1997 and 1998; for 1999, the change was revised down \$3.6 billion, reflecting newly available U.S. Department of Agriculture data on the composition and timing of crop market sales.<sup>6</sup>

The change in private nonfarm inventories was revised down \$5.7 billion for 1997, was revised up

<sup>3.</sup> The Census Bureau data on value of construction put in place are the major source data for the estimates of both nonresidential and residential structures. The revised structures estimates were based on the "best period-to-period change" rather than the "best level" of the appropriate Census series (see the box "Incorporating Source Data on the Basis of 'Best Change'").

<sup>4.</sup> See footnote 3.

<sup>5.</sup> The inventory valuation adjustment, 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.

<sup>6.</sup> The inventory valuation adjustment is not needed for farm inventories, because they are measured on a current-market-price basis.

\$5.5 billion for 1998, and was revised up \$2.2 billion for 1999. For 1997, the revision was more than accounted for by a downward revision to the change in book value for manufacturing, reflecting newly available data from the 1997 Economic Census.

For 1998, upward revisions to the change in book value for retail trade, for manufacturing, and for "other than manufacturing and trade" more than offset a downward revision to the inventory valuation adjustment (IVA), which was in manufacturing and in wholesale trade. The revisions to the change in book value reflected newly available data from the Census Bureau annual survey of manufactures and annual retail trade survey and newly available inventory data from IRS tabulations of corporate and of sole proprietorship and partnership tax returns for 1998. The revisions to the IVA's for manufacturing and for wholesale trade reflected revised acquisition costs.

For 1999, the upward revision was mostly accounted for by an upward revision to the change in book value for retail trade, reflecting revised monthly data from the Census Bureau monthly retail trade survey.

Net exports of goods and services.—Net exports of goods and services was revised down for all 3 years: \$1.0 billion for 1997, \$1.9 billion for 1998, and \$0.1 billion for 1999. For 1997, the revision was more than accounted for by a downward revision to exports of services. For 1998, the revision was mostly accounted for by an upward revision to imports of services. For 1999, a downward revision to exports of services was mostly offset by a downward revision to imports of services. For all 3 years, the revisions primarily reflected incorporation of revised data from BEA's international transactions accounts (ITA's) (see the section "Changes in Methodology").

Government consumption expenditures and gross investment.—Government consumption expenditures and gross investment was revised up for all 3 years: \$6.9 billion for 1997, \$11.2 billion for 1998, and \$4.3 billion for 1999.

Federal Government consumption expenditures and gross investment was revised up for 1997, was revised up for 1998, and was revised down for 1999. For 1998, the upward revision reflected small upward revisions to both nondefense and defense consumption expenditures and gross investment. For 1999, the downward revision was more than accounted for by a downward revision to nondefense consumption expenditures and gross investment. Within nondefense consumption expenditures and gross investment, a downward revision to "other" services was partly offset by an upward revision to nondefense equipment and software investment; the revisions primarily reflected revised Federal budget data for fiscal year 1999 and preliminary budget data for fiscal year 2000.

State and local government consumption expenditures and gross investment was revised up for all 3 years. The upward revisions were primarily to investment, specifically to structures, reflecting the incorporation of revised Census Bureau data on the value of construction put in place. Consumption expenditures was revised up by small amounts for 1997 and for 1998 and was revised down \$2.4 billion for 1999. Within consumption expenditures, for 1997 and for 1998, upward revisions to compensation of employees were partly offset by downward revisions to nondurable goods and to "other" services. For 1999, downward revisions to nondurable goods and to "other" services more than offset an upward revision to compensation of employees. For all 3 years, the revisions to nondurable goods and to "other" services reflected the incorporation of new and revised data from Census Bureau surveys of State and local governments; the upward revisions to compensation of employees were primarily to employer contributions to group health insurance, resulting from incorporating new data from the medical expenditure panel survey (see the section "Changes in Methodology").

Net receipts of income.—Net receipts of income from the rest of the world, which is excluded from GDP but included in gross national product, was revised up for all 3 years: \$2.9 billion for 1997, \$6.4 billion for 1998, and \$9.0 billion for 1999. Income receipts from the rest of the world was revised down for 1997, was revised up for 1998, and was revised up for 1999; income payments was revised down for all 3 years. These revisions reflected the incorporation of the annual revision of the ITA's: For income receipts, primarily updated source data-including the final results from the U.S. Treasury Department's Benchmark Survey of U.S. Portfolio Investment Abroad as of December 31, 1997-and a newly developed adjustment to account for the undercoverage of securities transactions; for income payments, primarily updated

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source data. (For more information about the revision of the ITA's, see the section "Changes in Methodology.")

*Gross national product (GNP).*—GNP was revised up for all 3 years: \$20.4 billion, or 0.2 percent, for 1997; \$36.7 billion, or 0.4 percent, for 1998; and \$52.0 billion, or 0.6 percent, for 1999. These revisions to GNP were larger than those to GDP, reflecting the upward revisions to net receipts of income.

*Gross domestic income (GDI).*—GDI, which measures the costs incurred and the incomes earned in the production of GDP, was revised down \$15.3 billion for 1997, was revised up \$7.5 billion for 1998, and was revised down \$10.2 billion for 1999 (see the addenda to table 3).

For 1997, the downward revision to GDI reflected downward revisions to supplements to wages and salaries and to domestic corporate profits with inventory valuation adjustment (IVA) and capital consumption adjustment (CCAdj) that more than offset upward revisions to domestic net interest, to consumption of fixed capital (CFC), and to proprietors' income with IVA and CCAdj. For 1998, the upward revision to GDI reflected upward revisions to domestic net interest, to proprietors' income with IVA and CCAdj, to CFC, to wage and salary accruals, and to indirect business tax and nontax liability that more than offset downward revisions to domestic corporate profits with IVA and CCAdj, to supplements to wages and salaries, and to rental income of persons with CCAdj. For 1999, the downward revision to GDI reflected downward revisions to domestic corporate profits, to supplements to wages and salaries, and to rental income of persons that more than offset upward revisions to domestic net interest, to CFC, to proprietors' income, and to wage and salary accruals.

*Statistical discrepancy.*—Revisions to the statistical discrepancy reflect differences between the revisions to GDP and those to GDI.<sup>7</sup> For all 3 years, the revisions to GDP were larger (in absolute value) than those to GDI. For 1997, the statistical discrepancy was revised from –\$3.2 billion to \$29.7 billion (from zero percent to 0.4 percent of GDP), reflecting an upward revision to GDP and a downward revision to GDI. For 1998, the statistical discrep-

ancy was revised from -\$47.6 billion to -\$24.8 billion (from -0.5 percent to -0.3 percent of GDP), primarily reflecting an upward revision to GDP. For 1999, the statistical discrepancy was revised from -\$125.1 billion to -\$71.9 billion (from -1.4 percent to -0.8 percent of GDP), primarily reflecting an upward revision to GDP.

*Compensation of employees.*—Compensation of employees was revised down for all 3 years: \$24.4 billion for 1997, \$27.0 billion for 1998, and \$31.9 billion for 1999.

For all 3 years, the downward revisions were more than accounted for by downward revisions to other labor income. For 1997 and 1998, the revisions to other labor income were to employer contributions to group health insurance, reflecting a new data source—the medical expenditure panel survey (see the section " Changes in Methodology")—and to employer contributions to pension and profit-sharing plans, reflecting newly available Department of Labor tabulations of IRS data on these contributions.<sup>8</sup>

For 1998, the downward revision to other labor income was partly offset by an upward revision to wage and salary accruals, reflecting newly available source data for industries *not* covered by State unemployment insurance.

For 1999, the downward revisions to other labor income and to government wage and salary accruals were partly offset by an upward revision to the adjustment "wage accruals less disbursements," which reflected newly available BLS tabulations of wages and salaries of employees covered by State unemployment insurance.<sup>9</sup>

*Proprietors' income with IVA and CCAdj*—Proprietors' income with IVA and CCAdj was revised up for all 3 years: \$2.6 billion for 1997, \$14.6 billion for 1998, and \$5.0 billion for 1999. For 1997 and 1998, the upward revisions were mostly accounted for by nonfarm proprietors' income. For 1999, an upward revision to nonfarm proprietors' income was partly offset by a downward revision to farm proprietors' income

<sup>7.</sup> For a further discussion, see the box "The Statistical Discrepancy," SURVEY 77 (August 1997): 19.

<sup>8.</sup> For 1999, the revision cannot be attributed to the same level of component detail as those for 1997 and 1998, because for 1999, the previously published estimates were prepared at a less detailed level.

<sup>9.</sup> Wage accruals less disbursements (WALD) is the difference between wages earned, or accrued, and wages paid, or disbursed. In the NIPA's, 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 consists of BEA estimates of bonus payments that are declared at the end of a year but that are actually paid the next year.

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The revisions to nonfarm proprietors' income primarily reflected newly incorporated IRS tabulations of sole proprietorship and partnership tax return data for 1998. The CCAdj for nonfarm proprietors' income was revised down for 1997, was revised up for 1998, and was revised up for 1999. (The CCAdj converts depreciation as reported on income tax returns to depreciation based on the replacement cost of the fixed assets; see "Consumption of fixed capital.") The revision to farm proprietors' income primarily reflected newly incorporated information from the U.S. Department of Agriculture.

*Rental income of persons with CCAdj.*—Rental income of persons with CCAdj was revised down for all 3 years: \$1.9 billion for 1997, \$2.0 billion for 1998, and \$2.5 billion for 1999. For 1997 and for 1999, the revisions were primarily accounted for by rental income of persons (without CCAdj) and resulted from upward revisions to several categories of residential housing expenses—mainly property taxes, origination fees, and other closing costs—and from downward revisions to royalties, all reflecting the incorporation of data from regular sources. For 1998, about half of the revision was accounted for by a revision to the CCAdj that reflected revised prices for residential housing.

*Corporate profits with IVA and CCAdj.*—Corporate profits with IVA and CCAdj was revised down for all 3 years: \$4.7 billion for 1997, \$33.4 billion for 1998, and \$36.7 billion for 1999. Most of the downward revisions were accounted for by profits before tax. For 1997, the CCAdj was also revised down. For 1998, the CCAdj and the IVA were bot revised down. For 1999, a downward revision to the CCAdj accounted for about half of the revision; the IVA was revised up. (For more information on the CCAdj, see "Consumption of fixed capital.")

Corporate profits before tax was revised down for all 3 years, as downward revisions to domestic profits more than offset upward revisions to restof-the-world profits. The revisions to domestic profits primarily reflected revised IRS tabulations of corporate tax returns for 1997, newly available preliminary tabulations for 1998, and other data from regular sources. The revisions to the rest-ofthe-world profits were primarily accounted for by downward revisions to payments on foreign investment in the United States; for 1999, an upward revision to receipts from U.S. investment abroad also contributed. The revisions to the rest-of-theworld profits reflected the incorporation of the annual revision of the ITA's.

*Net interest.*—Net interest was revised up for all 3 years: \$11.4 billion for 1997, \$47.0 billion for 1998, and \$39.6 billion for 1999.<sup>10</sup>

For 1997, the upward revision was accounted for by a downward revision to monetary interest received by domestic business—primarily by financial corporations—and by an upward revision to imputed interest paid by domestic business primarily by life insurance carriers.

For 1998, the upward revision was accounted for by upward revisions to monetary interest paid by domestic business—primarily by financial corporations—and to imputed interest paid by domestic business—primarily by life insurance carriers—and by downward revisions to imputed interest received by domestic business and to monetary interest received by the rest of the world.

The revisions to monetary interest reflected revised and newly available IRS tabulations of corporate tax return data. The revisions to imputed interest reflected newly incorporated regular source data. The revision to rest-of-the-world interest reflected the annual revision of the ITA's.

For 1999, the upward revision was accounted for by the revised 1998 levels and by newly incorporated regular source data, mainly reports from financial regulatory agencies.<sup>11</sup>

*Consumption of fixed capital (CFC).*—CFC—that is, the charge for the using up of private and government fixed capital—was revised up for all 3 years: \$4.2 billion for 1997, \$12.7 billion for 1998, and \$25.2 billion for 1999. The relatively large upward revisions to the private component of CFC and the smaller upward revisions to the government component reflected the incorporation of revised BEA estimates of fixed investment, primarily for software, and of prices. (The estimates of investment and prices are direct inputs into the calculation of both private and government net capital stocks, which are used to calculat the CFC.)

Private capital consumption allowances (CCA)—that is, tax-return-based depreciation for

<sup>10.</sup> Net interest is calculated as the sum of monetary interest paid by domestic business and by the rest of the world and imputed interest paid by domestic financial corporate business, less monetary interest received by domestic business and by the rest of the world and imputed interest received by domestic business and by the rest of the world.

<sup>11.</sup> For 1999, the revision cannot be attributed to the same level of component detail as for 1998, because for 1999, the previously published estimates were prepared at a less detailed level.

corporations and nonfarm proprietorships and historical-cost depreciation (using consistent service lives) for farm proprietorships, rental income of persons, and nonprofit institutions-was revised up for all 3 years: \$0.5 billion for 1997, \$5.1 billion for 1998, and \$9.4 billion for 1999. For all 3 years, the revisions primarily reflected revised BEA estimates of software investment, which is not included in IRS depreciation for corporations or for nonfarm proprietors and partnerships. For 1998, the revision also reflected newly available IRS tax return data for nonfarm proprietorships and partnerships. For 1999, the revision also reflected revised BEA projections of IRS depreciation and amortization using BEA estimates of investment flows and IRS service lives and depreciation conventions.

Private capital consumption adjustment (CCAdj), which is derived as the difference between private CCA and private CFC, was revised down for all 3 years: \$3.3 billion for 1997, \$5.8 billion for 1998, and \$12.3 billion for 1999.

Nonfactor income.—Nonfactor income—which comprises indirect business tax and nontax liability, business transfer payments, and "subsidies less current surplus of government enterprises"-was revised up for all 3 years: \$0.2 billion for 1997, \$1.8 billion for 1998, and \$0.2 billion for 1999. For 1998, the revision primarily reflected an upward revision to indirect business taxes that was partly offset by an upward revision to "subsidies less current surplus of government enterprises," which is subtracted in aggregating nonfactor incomes. For 1999, an upward revision to indirect business taxes was offset by an upward revision to "subsidies less current surplus of government enterprises." For all 3 years, the revisions to business transfer payments were negligible.

For all 3 years, the revisions to indirect business taxes reflected upward revisions to State and local indirect business taxes that were partly offset by downward revisions to Federal indirect business taxes. The revisions to State and local indirect business taxes were mostly accounted for by property taxes and reflected newly available and revised data from Census Bureau surveys of State and local governments. The revisions to Federal indirect business taxes were mostly accounted for by excise taxes and reflected newly incorporated data from the Treasury Department.

For 1999, the revision to subsidies less current surplus of government enterprises reflected up-

ward revisions to both the Federal component, based on newly incorporated data on outlays from the Monthly Treasury Statement, and the State and local component, based on data from Census Bureau annual surveys of State and local governments.

*National income.*—National income—income that originates from production—was revised down for all 3 years: \$17.1 billion for 1997, \$0.7 billion for 1998, and \$26.6 billion for 1999. These revisions reflected the previously described revisions to compensation of employees, proprietors' income, rental income of persons, corporate profits, and net interest.

Personal income and its disposition.—Personal income-income received by persons from participation in production, from government and business transfer payments, and from government interest—was revised down \$14.1 billion for 1997, was revised up \$32.1 billion for 1998, and was revised down \$2.2 billion for 1999. These revisions partly reflected the previously described revisions to the components of national income that are included in personal income-wage and salary disbursements, other labor income, proprietors' income, and rental income of persons-and to the components of personal income-personal dividend income and personal interest income-that are derived from related components of national income. The revisions also resulted from revisions to transfer payments to persons and to personal contributions for social insurance.

Personal dividend income—which consists of dividend income received by persons from all sources and which equals national income dividends less dividends received by government—was revised up for all 3 years: \$1.5 billion for 1997, \$2.8 billion for 1998, and \$6.0 billion for 1999. These revisions reflected newly incorporated IRS tabulations of corporate tax return data, the annual revision of the ITA's, and data from public financial statements.

Personal interest income—which consists of monetary and imputed interest received by persons from all sources and which equals net interest plus interest paid by persons and interest paid by government less interest received by government—was revised up for all 3 years: \$9.1 billion for 1997, \$43.0 billion for 1998, and \$32.4 billion for 1999.<sup>12</sup> These revisions reflected the previously described upward revisions to net interest and also upward revisions to interest paid by government that more than offset downward revisions to interest paid by persons and upward revisions to interest received by government. The revisions to interest paid by persons reflected revised data on consumer credit from the Federal Reserve Board. The upward revisions to interest paid by government and to interest received by government were more than accounted for by revisions to State and local government interest paid and received, reflecting new and revised data from Census Bureau surveys of State and local governments.

Transfer payments to persons was revised down for all 3 years: \$0.2 billion for 1997, \$0.6 billion for 1998, and \$2.0 billion for 1999. For 1999, the revision resulted from a downward revision to Federal benefits for hospital and supplementary medical insurance (medicare) that more than offset an upward revision to State and local government benefits for medical care. The revision to Federal medicare benefits reflected newly incorporated data from the Treasury Department. The revision to State and local government medical care transfer payments reflected newly incorporated data on payments for medicaid from the Health Care Financing Administration.

Personal contributions for social insurance which is subtracted in calculating personal income—was revised down \$0.2 billion for 1997, was revised up \$0.3 billion for 1998, and was revised up \$3.9 billion for 1999. For 1999, the revision was attributable to an upward revision to personal contributions for Federal old-age, survivors, disability, and health insurance trust funds (social security), reflecting new taxable wage data from the Social Security Administration.

Personal tax and nontax payments was revised up \$0.5 billion for 1997, was revised down \$1.7 billion for 1998, and was revised down \$0.1 billion for 1999. For 1997, an upward revision to Federal Government tax and nontax payments more than offset a downward revision to State and local government tax payments. For 1998 and 1999, downward revisions to State and local tax and nontax payments more than offset upward revisions to Federal Government tax payments. The revisions to State and local tax and nontax payments reflected new and revised data from Census Bureau surveys of State and local governments. The revisions to Federal Government tax payments reflected newly incorporated data from the Treasury Department.

Reflecting the revisions to personal income and to personal tax and nontax payments, disposable personal income (DPI) was revised down \$14.6 billion for 1997, was revised up \$33.8 billion for 1998, and was revised down \$2.0 billion for 1999.

Personal outlays—PCE, interest paid by persons, and "personal transfer payments to the rest of the world (net)"—was revised up \$3.6 billion for 1997, was revised down \$1.9 billion for 1998, and was revised up \$6.8 billion for 1999. For 1997 and for 1999, upward revisions to PCE and to "personal transfer payments to the rest of the world (net)" more than offset downward revisions to interest paid by persons. For 1998, a downward revision to interest paid by persons more than offset upward revisions to PCE and to "personal transfer payments to the rest of the world (net)."

Personal saving—the difference between DPI and personal outlays—was revised down \$18.2 billion for 1997, was revised up \$35.7 billion for 1998, and was revised down \$8.7 billion for 1999. For 1997, the downward revision to personal saving reflected the downward revision to DPI and the upward revision to personal outlays. For 1998, the upward revision reflected the upward revision to DPI and the downward revision to personal outlays. For 1999, the downward revision reflected the upward revision to personal outlays and the downward revision to DPI. The revisions to the personal saving rate-personal saving as a percentage of DPI—were similar to those for personal saving; the rate was revised down from 4.5 percent to 4.2 percent for 1997, was revised up from 3.7 percent to 4.2 percent for 1998, and was revised down from 2.4 percent to 2.2 percent for 1999.

*Gross saving and investment.*—Gross saving was revised down \$19.0 billion for 1997, was revised up \$8.4 billion for 1998, and was revised down \$9.5 billion for 1999. Gross saving as a percentage of GNP was revised down 0.3 percentage point to 18.0 percent for 1997, was unrevised at 18.8 percent for 1998, and was revised down 0.2 percentage point to 18.5 percent for 1999.

For 1997, the revision to gross saving reflected downward revisions to gross private saving and to gross government saving. Within gross private saving, downward revisions to personal saving and to undistributed profits with IVA and CCAdj more than offset an upward revision to corporate con-

<sup>12.</sup> Personal interest income includes income received by publicly administered government employee retirement plans. For a discussion of the treatment of these plans, see Moulton, Parker, Seskin, "Definitional and Classificational Changes," 11–12.

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sumption of fixed capital (CFC). Within gross government saving, an upward revision to the Federal Government current deficit was largely offset by an upward revision to the State and local government current surplus.

For 1998, gross private saving and gross government saving were both revised up. Within gross private saving, upward revisions to personal saving, to corporate CFC, and to noncorporate CFC more than offset a large downward revision to undistributed profits with IVA and CCAdj. The upward revision to gross government saving was largely accounted for by an upward revision to the Federal Government current surplus.

For 1999, a downward revision to gross private saving more than offset an upward revision to gross government saving. Within gross private saving, downward revisions to undistributed profits with IVA and CCAdj and to personal saving more than offset upward revisions to corporate CFC, to noncorporate CFC, and to the adjustment "wage accruals less disbursements." The upward revision to gross government saving reflected upward revisions to the Federal Government current surplus, to the Federal Government CFC, and to the State and local government CFC.

Gross investment—the sum of gross private domestic investment, gross government investment, and net foreign investment—was revised up for all 3 years: \$14.0 billion for 1997, \$31.2 billion for 1998, and \$43.6 billion for 1999. For all 3 years, all the components were revised up.

#### Annual price estimates

Revisions to the chain-type price indexes result from the incorporation of newly available and revised source data, the introduction of methodological changes that affect the use of source data. and the regularly scheduled incorporation of annual weights for the most recent year (1999). In this annual revision, the source data for price indexes that were used for deflation and the source data that affected implicit prices were revised.13 Methodological changes included a change in the deflator for imports of computers, beginning wit 1999, and a change in the deflator for petroleum and gas well drilling and exploration, beginning with 2000 (see the section "Changes in Methodology"). In addition, the prices used for deflation reflected updated seasonal adjustment factors.

Newly available source data resulted in revisions to the implicit prices for four types of PCE for services—automobile insurance, health insurance, brokerage and investment charges, and "services furnished without payment by financial intermediaries except life insurance carriers"—and for Federal Government and State and local government compensation of employees. The revisions to most of these prices reflected the previously discussed revisions to the corresponding current-dollar estimates.

The level of the chain-type price index for gross domestic purchases was revised up for all 3 years: 0.03 index point to 101.64 for 1997, 0.10 index point to 102.45 for 1998, and 0.22 index point to 104.08 for 1999. Reflecting these revisions in level, the annual percent increase in the index was unrevised at 1.6 percent for 1997, was revised up 0.1 percentage point to 0.8 percent for 1998, and was revised up 0.1 percentage point to 1.6 percent for 1999 (see the addendum to table 4). For all 3 years, the revisions to the annual percent increase in the chain-price index for GDP were the same as those to the chain-price index for gross domestic purchases.

The largest contributor to the upward revisions to the percent change in gross domestic purchases prices was the upward revision to PCE for services. Within PCE for services, the largest contributor was "services furnished without payment by financial intermediaries except life insurance carriers."

By major component of GDP, the largest revisions were to the percent change in the price index for Federal nondefense consumption expenditures and gross investment, which was revised up 0.5 percentage point for 1997, was revised down 0.3 percentage point for 1998, and was revised down 0.8 percentage point for 1999; compensation of employees accounted for the revisions. The only other major GDP component that was revised by more than 0.3 percentage point was State and local government expenditures and gross investment, which was revised up 0.4 percentage point for 1997; compensation of employees also accounted for this revision.

#### Annual real GDP estimates

In general, revisions to real GDP reflect four factors: (1) Revisions to the current-dollar components of GDP for which chained-dollar estimates are prepared by deflation, (2) revisions to the prices used in deflation, (3) revisions to the quantities used to estimate components of real GDP by

<sup>13.</sup> The implicit prices are computed by dividing the current-dollar estimates by the chained-dollar estimates that are derived from the quantity data used in quantity extrapolation and direct valuation.

	[Per	cent change	e from prece	eding period	4]					
			1997			1998			1999	
	1996	Prevously published	Revised	Revision	Prevously published	Revised	Revision	Prevously published	Revised	Revision
					Current	dollars				
Gross domestic product	5.6	6.2	6.5	0.3	5.5	5.7	0.2	5.7	5.8	0.1
Personal consumption expenditures Durable goods Nondurable goods Services	<b>5.4</b> 4.5 5.1 5.7	<b>5.5</b> 4.3 4.3 6.3	<b>5.6</b> 4.2 4.3 6.5	<b>.1</b> –.1 0 .2	<b>5.9</b> 8.6 4.1 6.2	<b>5.8</b> 8.0 4.0 6.3	- <b>.1</b> 6 1 .1	<b>7.0</b> 8.7 7.9 6.2	<b>7.1</b> 9.7 8.1 6.2	<b>.1</b> 1.0 .2 0
Gross private domestic fixed investment Nonresidential Structures Equipment and software Residential	<b>9.2</b> 9.0 9.9 8.7 9.7	<b>8.5</b> 9.6 12.9 8.5 5.1	<b>9.5</b> 11.1 13.7 10.3 4.8	<b>1.0</b> 1.5 .8 1.8 –.3	<b>11.0</b> 10.7 7.4 11.8 12.0	<b>10.9</b> 10.8 10.7 10.8 11.3	- <b>.1</b> .1 3.3 -1.0 7	<b>8.1</b> 6.9 .2 9.1 11.5	<b>9.1</b> 8.6 .8 11.3 10.5	<b>1.0</b> 1.7 .6 2.2 –1.0
Change in private inventories										
Net exports of goods and services Exports Imports	6.8 6.7	10.7 9.7	10.6 9.6	1 1	2 5.6	0 5.8		 3.3 12.2	2.5 11.3	8 9
Government consumption expenditures and gross investment Federal National defense Nondefense State and local	<b>3.6</b> 1.9 1.8 2.1 4.7	<b>4.2</b> 1.2 –1.3 6.1 5.9	<b>4.6</b> 1.2 –1.2 6.3 6.7	.4 0 .1 .2 .8	<b>3.3</b> .2 –1.1 2.6 5.1	<b>3.6</b> .4 -1.0 3.1 5.3	<b>.3</b> .2 .1 .5 .2	<b>6.6</b> 5.9 4.6 8.4 6.9	<b>6.1</b> 5.2 4.5 6.3 6.5	- <b>.5</b> 7 1 -2.1 4
					Chained (19	996) dollars				
Gross domestic product	3.6	4.2	4.4	.2	4.3	4.4	.1	4.2	4.2	0
Personal consumption expenditures Durable goods Nondurable goods Services	<b>3.2</b> 5.6 2.9 2.8	<b>3.4</b> 6.6 2.9 3.1	<b>3.6</b> 6.6 2.9 3.3	.2 0 0 .2	<b>4.9</b> 11.3 4.0 4.1	<b>4.7</b> 10.6 4.0 3.9	- <b>.2</b> 7 0 2	<b>5.3</b> 11.5 5.4 4.0	<b>5.3</b> 12.4 5.6 3.7	<b>0</b> .9 .2 –.3
Gross private domestic fixed investment Nonresidential	<b>9.3</b> 10.0 7.1 11.0 7.4	<b>8.5</b> 10.7 8.5 11.5 2.3	<b>9.6</b> 12.2 9.1 13.3 2.0	<b>1.1</b> 1.5 .6 1.8 –.3	<b>11.8</b> 12.7 4.1 15.8 9.2	<b>11.8</b> 13.0 7.2 15.0 8.3	<b>0</b> .3 3.1 8 9	<b>8.1</b> 8.3 -2.4 12.0 7.4	<b>9.2</b> 10.1 -1.4 14.1 6.4	<b>1.1</b> 1.8 1.0 2.1 –1.0
Change in private inventories										
Net exports of goods and services Exports	8.2 8.6	12.5 13.7	12.3 13.7	2 0	2.2 11.6	2.3 11.9	.1 .3	3.8 11.7	2.9 10.7	9 -1.0
Government consumption expenditures and gross investment Federal National defense Nondefense State and local	<b>1.1</b> 9 -1.3 0 2.3	<b>2.2</b> 2 -2.5 4.5 3.7	<b>2.4</b> 4 -2.6 4.2 4.0	<b>.2</b> 2 1 3 .3	<b>1.7</b> –.9 –1.9 .9 3.2	<b>2.1</b> 5 -1.7 1.8 3.6	<b>.4</b> .4 .2 .9 .4	<b>3.7</b> 2.8 1.8 4.7 4.2	<b>3.3</b> 2.5 2.0 3.4 3.8	- <b>.4</b> 3 .2 -1.3 4
		I		(	Chain-type p	price indexe	s			L
Gross domestic product	1.9	1.9	1.9	0	1.2	1.3	.1	1.4	1.5	.1
Personal consumption expenditures Durable goods Nondurable goods Services	<b>2.1</b> -1.0 2.1 2.8	<b>2.0</b> -2.2 1.3 3.2	<b>1.9</b> -2.3 1.3 3.1	- <b>.1</b> 1 0 1	<b>.9</b> -2.4 0 2.1	<b>1.1</b> -2.4 0 2.3	.2 0 0 .2	<b>1.6</b> -2.6 2.3 2.1	<b>1.8</b> -2.4 2.3 2.4	<b>.2</b> .2 0 .3
Gross private domestic fixed investment Nonresidential Structures Equipment and software Residential	- <b>.1</b> 9 2.7 -2.1 2.1	- <b>.1</b> -1.0 4.1 -2.6 2.7	- <b>.1</b> -1.0 4.2 -2.7 2.7	<b>0</b> 0 1 1 0	- <b>.8</b> -1.8 3.1 -3.4 2.6	- <b>.8</b> -1.9 3.3 -3.6 2.8	<b>0</b> 1 .2 2 .2	<b>0</b> -1.3 2.6 -2.5 3.9	- <b>.1</b> -1.3 2.3 -2.5 3.8	- <b>.1</b> 0 3 0 1
Change in private inventories										
Net exports of goods and services Exports Imports	-1.3 -1.8	-1.5 -3.6	1.5 3.6	0 0	-2.3 -5.3	-2.2 -5.4	 1	5 .4	–.4 .6	 .1 .2
Government consumption expenditures and gross investment Federal National defense Nondefense State and local	<b>2.5</b> 2.9 3.2 2.2 2.3	<b>1.9</b> 1.3 1.2 1.6 2.2	<b>2.2</b> 1.6 1.4 2.1 2.6	<b>.3</b> .3 .2 .5 .4	<b>1.5</b> 1.1 .8 1.6 1.8	<b>1.4</b> 1.0 .8 1.3 1.7	- <b>.1</b> 1 0 3 1	<b>2.7</b> 3.0 2.7 3.6 2.5	<b>2.6</b> 2.6 2.5 2.8 2.7	- <b>.1</b> 4 2 8 .2
Addendum: Gross domestic purchases	1.8	1.6	1.6	0	.7	.8	.1	1.5	1.6	.1

# Table 4.—Revisions to Percent Change in GDP, Real GDP, and Price Indexes (Chain-Type Weights)

[Percent change from preceding period]

extrapolation or direct valuation, and (4) revisions resulting from the use of revised and updated weights in the calculation of real GDP.

For the GDP components for which chaineddollar estimates are prepared by extrapolation or direct valuation, the current-dollar and chaineddollar estimates are based on independent source data; consequently, the corresponding revisions are unrelated.<sup>14</sup> Thus, differences between the current-dollar revisions and the chained-dollar revisions to these components are reflected as revisions to their implicit prices. In this annual revision, the revisions to the current-dollar GDP estimates are larger than those to the chained-dollar GDP estimates, resulting in upward revisions to the implicit prices.

The annual percent change in real GDP was revised up 0.2 percentage point to 4.4 percent for 1997, was revised up 0.1 percentage point to 4.4 percent for 1998, and was unrevised at 4.2 percent for 1999 (table 4).

For 1997, the largest contributors to the upward revision to real GDP growth were fixed investment in equipment and software, PCE for services, and State and local government consumption expenditures and gross investment; the contributions of these components were partly offset by a downward revision to change in private inventories. For 1998, the largest contributors to the upward revision to real GDP growth were change in private inventories, nonresidential structures, State and local government consumption expenditures and gross investment, and Federal consumption expenditures and gross investment; the contributions of these components were partly offset by downward revisions to PCE for services, to PCE for goods, to investment in equipment and software, and to residential investment and by an upward revision to imports of goods and services (which is subtracted in the calculation of GDP). For 1999, the contributions of an upward revision to investment in equipment and software, of a downward revision to imports of goods and services, and of upward revisions to PCE for goods and to nonresidential structures were offset by downward revisions to PCE for services, to exports of goods and services, to State and local government consumption expenditures and gross investment, to residential investment, and to change in private inventories.

*Revisions to the components of real GDP.*—The annual percent change in real PCE was revised up 0.2 percentage point to 3.6 percent for 1997, was revised down 0.2 percentage point to 4.7 percent for 1998, and was unrevised at 5.3 percent for 1999. For 1997, the upward revision was mostly accounted for by an upward revision to PCE for services (medical care services). For 1998, the downward revision was the result of widespread downward revisions to PCE for durable goods and to PCE for services. For 1999, upward revisions to PCE for durable goods (mainly motor vehicles and parts) and to PCE for nondurable goods (mainly gasoline and oil and food) were offset by a downward revision to PCE for services (mainly recreation).

The change in nonresidential fixed investment was revised up for all 3 years: 1.5 percentage points to 12.2 percent for 1997, 0.3 percentage point to 13.0 percent for 1998, and 1.8 percentage points to 10.1 percent for 1999. For 1997, equipment and software primarily accounted for the revision. Within equipment and software, the upward revision was mainly to information processing equipment and software, specifically software. For 1998, an upward revision to structures (mainly utilities) was partly offset by a downward revision to equipment and software. Within equipment and software, a downward revision to transportation equipment (mainly aircraft) more than offset an upward revision to information processing equipment and software; within information processing equipment and software, a large upward revision to software more than offset downward revisions to computers and peripheral equipment and to "other" information processing equipment. For 1999, an upward revision to equipment and software (mainly software) accounted for most of the revision.

The change in residential investment was revised down for all 3 years: 0.3 percentage point to 2.0 percent for 1997, 0.9 percentage point to 8.3 percent for 1998, and 1.0 percentage point to 6.4 percent for 1999. For all 3 years, single-family structures accounted for most of the revisions.

The change in inventory investment was revised down \$5.3 billion (chained dollars) for 1997, was revised up \$5.9 billion for 1998, and was revised up \$3.1 billion for 1999. For all 3 years, nonfarm inventory investment accounted for most of the revisions. Within nonfarm inventory investment, for 1997, a downward revision to manufacturing more than accounted for the revision; for 1998, upward

<sup>14.</sup> For a list of these components, see table 2 in "Updated Summary NIPA Methodologies," SURVEY 78 (September 1998): 14–35. An updated version of this table will be published in the October 2000 SURVEY.

revisions to retail trade and to "other" nonfarm inventories more than accounted for the revision; and for 1999, an upward revision to wholesale trade accounted for most of the revision.

The change in exports of goods and services was revised down 0.2 percentage point to 12.3 percent for 1997, was revised up 0.1 percentage point to 2.3 percent for 1998, and was revised down 0.9 percentage point to 2.9 percent for 1999. For 1999, the revision was mainly accounted for by widespread downward revisions within exports of services.

The change in imports of goods and services was unrevised at 13.7 percent for 1997, was revised up 0.3 percentage point to 11.9 percent for 1998, and was revised down 1.0 percentage point to 10.7 percent for 1999. The downward revision for 1999 was mostly accounted for by "other private services" and by travel.

The change in government consumption expenditures and gross investment was revised up 0.2 percentage point to 2.4 percent for 1997, was revised up 0.4 percentage point to 2.1 percent for 1998, and was revised down 0.4 percentage point to 3.3 percent for 1999. For 1997, an upward revision to State and local investment in structures more than offset a downward revision to State and local consumption expenditures for nondurable goods. For 1998, the revision was largely accounted for by upward revisions to State and local structures, to State and local compensation of employees, and to Federal nondefense consumption expenditures for nondurable goods. For 1999, the revision was more than accounted for by downward revisions to State and local consumption expenditures (mainly compensation of employees) and to Federal nondefense consumption expenditures (mainly "other services").

## Quarterly estimates

Revisions to the quarterly (and monthly) NIPA estimates reflect the revisions to the annual estimates from the newly incorporated annual source data, the incorporation of new and revised monthly and quarterly source data (including the updating of seasonal factors that are used to indicate quarterly patterns), and the introduction of changes in methodology. In this annual revision, the changes in methodology primarily affected other labor income and price measures for the estimates of certain components of fixed investment and of foreign transactions.

In general, the quarter-to-quarter patterns of change in the principal measures of real output and prices on the revised basis are not markedly different from those on the previously published basis (table 5). For real GDP, the revisions to the 13 quarterly percent changes (at annual rates) averaged 0.5 percentage point (without regard to sign). The changes were revised up for five quarters, were revised down for seven quarters, and were unrevised for one quarter. The largest upward revisions to the percent changes in real GDP were 1.0 percentage point for the second quarter of 1997 and for the fourth quarter of 1999. For the second quarter of 1997, the growth rate of real GDP was revised to 5.9 percent; the upward revision was largely attributable to investment in equipment and software, to exports of goods, and to PCE for services. For the fourth quarter of 1999, the

 Table 5.—GDP, Real GDP, the GDP Price Index, and the Gross Domestic Purchases Price Index:

 Revisions to Percent Change From Preceding Quarter

	GDP				Real GDP		G	DP price in	dex	Gross domestic purchases price index		
	Prevously published	Revised	Revision	Prevously published	Revised	Revision	Prevously published	Revised	Revision	Prevously published	Revised	Revision
1996:IV	6.4			4.6			1.6			2.1		
1997: J	7.4 6.7 5.2 4.3	7.3 7.9 5.5 4.2	1 1.2 .3 1	4.5 4.9 3.8 3.0	4.4 5.9 4.2 2.8	1 1.0 .4 2	2.8 1.8 1.3 1.3	2.9 1.9 1.2 1.4	.1 .1 1 .1	2.3 .8 1.2 1.2	2.4 .8 1.0 1.3	.1 0 2 .1
1998:1 II III IV	7.7 3.4 5.4 7.0	7.6 4.1 5.0 6.8	1 .7 4 2	6.9 2.2 3.8 5.9	6.5 2.9 3.4 5.6	4 .7 4 3	.9 1.1 1.3 .8	1.0 1.1 1.5 1.1	.1 0 .2 .3	1 .8 1.0 .9	.1 .8 1.1 1.2	.2 0 .1 .3
1999:1 II II IV	5.7 3.3 6.8 9.4	5.9 3.9 6.7 9.7	.2 .6 –.1 .3	3.7 1.9 5.7 7.3	3.5 2.5 5.7 8.3	2 .6 0 1.0	2.0 1.3 1.1 2.0	2.2 1.4 1.1 1.6	.2 .1 0 4	1.6 1.9 1.7 2.3	1.9 2.0 1.7 1.9	.3 .1 0 –.4
2000:1	8.6	8.3	3	5.5	4.8	7	3.0	3.3	.3	3.5	3.8	.3

[Percent change at annual rates; based on seasonally adjusted annual rates]

growth rate of real GDP was revised to 8.3 percent; the upward revision was attributable to investment in equipment and software and to change in private inventories. The largest downward revision to the percent changes in real GDP was 0.7 percentage point, to 4.8 percent, for the first quarter of 2000; the downward revision was attributable to investment in equipment and software and to change in private inventories.

For gross domestic purchases prices, the revisions to the 13 quarterly percent changes (at annual rates) averaged 0.2 percentage point (without regard to sign). The changes were revised up for eight quarters, were revised down for two quarters, and were unrevised for three quarters. The largest revision was a downward revision of 0.4 percentage point for the fourth quarter of 1999; the principal source of the revision was prices of PCE for services.

## **Changes in Methodology**

This section describes the changes in methodology—either in the source data or in the methods used to prepare the estimates—that were incorporated into this annual revision.<sup>15</sup> Several of these changes were identified as high priority items in BEA's strategic plan for maintaining and improving the Nation's economic accounts.<sup>16</sup>

*Classification by industry.*—For this annual NIPA revision, the source data collected by other Federal agencies under the new North American Classification System (NAICS) were converted to the 1987 Standard Industrial Classification (SIC) in order to be consistent with the other BEA source data that remain on an SIC basis. Specifically, for BEA's industry-based estimates of change in private inventories, profits, nonfarm proprietors' income, and net interest for 1997 and 1998, industry concordances between NAICS and the SIC were developed to convert the NAICS-based source data to

#### Implementation of the North American Industry Classification System

This annual revision of the NIPA's incorporates some source data from Federal agencies that were collected under the new North American Industry Classification System (NAICS). However, much of the source data remain on the Standard Industrial Classification (SIC) basis, and the NIPA estimates by industry are presented on that basis (see below for the tentative schedule for implementing NAICS).

NAICS is an economic classification system that groups establishments into industries and that provides the framework for collecting, analyzing, and disseminating economic data on an industry basis. NAICS is unique because it is constructed under a single conceptual framework in which economic units that use similar production processes are classified in the same industry. As a result, the data are more appropriately classified for measuring productivity, unit labor costs, and input-output relationships.

NAICS was adopted by the United States, Canada, and Mexico on April 9, 1997. NAICS replaces the SIC, which had been the U.S. standard since the 1930's and which was last updated in 1987.<sup>1</sup>

BEAs plan for implementing NAICS depends on the implementation schedules of its source data agencies. The

Census Bureau released data for the 1997 Economic Census on a NAICS basis in 1999 and 2000, and BEA released data on foreign direct investment in the United States (FDIUS) on a NAICS basis in 1999.<sup>2</sup> Full implementation of NAICS by BEA's three major source data providers the Census Bureau, the Bureau of Labor Statistics (BLS), and the Internal Revenue Service (IRS)—will be completed in 2004.

BEA's tentative plans for NAICS implementation are as follows:

2000: BEA converted NAICS-based source data to an SIC basis; it did not publish NAICS-based estimates.

2001: BEA will convert its inventory estimates to a NAICS basis. Other NAICS-based source data will continue to be converted to an SIC basis.

2002: BEA will convert its estimates of State personal income (based on data from BLS) to a NAICS basis and will publish the benchmark 1997 input-output accounts on a NAICS basis (based on data from the 1997 Economic Census).

2003–2004: Based on its 1997 benchmark input-output accounts and the full implementation of NAICS by all of its source-data agencies, BEA will finish converting all of its industry-based estimates to a NAICS basis, including a new set of benchmark NIPA estimates.

<sup>15.</sup> These methodological changes update the information in two tables that list the principal source data and methods used to prepare the estimates of GDP. These tables were published in "Updated Summary NIPA Methodologies," 14–35; updated tables will be published in the October 2000 SURVEY.

<sup>16.</sup> See "BEA's Mid-Decade Strategic Plan: A Progress Report," SURVEY 76 (June 1996): 52–55.

<sup>1.</sup> See Executive Office of the President, Office of Management and Budget, North American Industry Classification System, United States, 1997 (Washington DC: Bernan Press, 1998) and Executive Office of the President, Office of Management and Budget, Standard Industrial Classification Manual, 1987 (Washington DC: Government Printing Office, 1987).

<sup>2.</sup> BEA's FDIUS program uses the enterprise—a multiestablishment company and its majority-owned domestic subsidiaries or divisions—and not the establishment, as its statistical unit.

an SIC basis using special tabulations of IRS and Census Bureau source data. For BEA's productbased estimates of personal consumption expenditures and private investment in equipment and software, product concordances between NAICS and the SIC were developed to convert the NAICSbased source data to an SIC basis using special tabulations of Census Bureau source data.<sup>17</sup> These converted data were then incorporated into the NIPA estimates. (For more information, see the box "Implementation of the North American Industry Classification System.")

Medical expenditure panel survey (MEPS).—The revised estimates of employer contributions to group health insurance, which accounts for about half of other labor income, are now based on MEPS—a new Department of Health and Human Services survey that covers both health insurance purchased by employers for their employees and health insurance provided by employers on a selfinsured basis.<sup>18</sup> The estimate is introduced on a "best-level" basis for 1997 because MEPS provides-for the first time-a benchmark for the level of employer health insurance costs. Previously, the health insurance estimates were based on total contributions from the Health Care Administration's national Financing health accounts less employee contributions from the BLS consumer expenditure survey. Estimates for

later years continue to be extrapolated using BLS data on employer costs for employee compensation and BLS tabulations of wages and salaries of employees covered by unemployment insurance.

Net exports of goods and services and net receipts of *income*.—The major source of the NIPA estimates of foreign transactions is the U.S. international transactions accounts (ITA's), which are also prepared by BEA. In this year's annual ITA revision, newly available data from regular sources, including revised monthly data on foreign travelers in the United States, and from surveys conducted by BEA and by the Department of Treasury were incorporated. Several improvements in the estimating methodologies were also introduced; these include improved estimates of net U.S. purchases of foreign securities, newly developed estimates of expenditures of temporary nonagricultural workers in the United States, and improved estimation techniques for expenditures of international organizations and of foreign embassies in the United States.<sup>19</sup> In addition to incorporating the ITA revisions, the NIPA's also incorporate revisions to the items that adjust for the differences between the two sets of accounts (these differences are identified in NIPA table 4.5B).

As usual, the ITA revisions were incorporate into the NIPA's at their "best level," beginning wit estimates for 1997; the NIPA estimates of foreign transactions for earlier years were not revised. (The revisions of the ITA's for years before 1997 will be incorporated in the next comprehensive

19. See Christopher L. Bach, "U.S. International Transactions, Revised Estimates for 1982–99," SURVEY 80 (July 2000): 70–77.

## Availability of Revised Estimates and Related Information

The estimates shown in the NIPA tables that follow this article and the estimates for earlier periods (for most tables, beginning with 1929 for annual estimates and with 1946 for quarterly estimates) are available on BEA's Web site at <www.bea.doc.gov>. Later this year, the NIPA estimates will be available on a CD-ROM.

Publication of the revised estimates and related estimates will continue in subsequent issues of the SURVEY OF CURRENT BUSINESS. The September SURVEY will present table 5.16, which shows changes in the net stock of produced assets; reconciliation table 8.28, which shows the relationship between personal income in the NIPA's and adjusted gross income published by the Internal Revenue Service; and new estimates of fixed assets and consumer durable goods for 1999 and revised estimates for 1997–98.

The October SURVEY will present "Updated Summary NIPA Methodologies," which lists the principal source

data and estimating methods used in preparing the current-dollar and real estimates of GDP; tables 3.15–3.17 (government spending by function), tables 3.18–3.20 (government sector reconciliation tables), and tables 9.1–9.6 (seasonally unadjusted estimates); revised real inventories, sales, and inventory-sales ratios for manufacturing and trade for 1997:I–2000:I; and revised estimates of State personal income that incorporate the results of this annual revision of the NIPA's.

The December SURVEY will present revised and updated estimates of gross product by industry.

In early 2001, BEA will publish *National Income and Product Accounts of the United States, 1929–97*, which will present the full set of NIPA tables and will describe definitions and statistical conventions.

The availability of the CD–ROM and the volume will be announced in the SURVEY and on BEA's Web site.

<sup>17.</sup> The NAICS and the SIC are industry, not product, classification systems. However, product data from the 1997 Economic Census use a NAICS coding scheme, so a concordance between the 1997 scheme and the one used in the 1992 Economic Census (which was based on the SIC) had to be developed.

<sup>18.</sup> Self insurance by employers accounts for about half of all health insurance provided to employees.

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NIPA revision.) As a result, there are discontinuities between the NIPA estimates for 1996 and those for 1997 (table 6).

The change in current-dollar net exports of goods and services (and in current-dollar GDP) from 1996 to 1997 is overstated by \$2.3 billion. The discontinuity is primarily accounted for by exports of "other" private services, reflecting the incorporation of newly developed estimates of expenditures by temporary nonagricultural workers in the United States.

For net receipts of income, the change from 1996 to 1997 is overstated by \$1.7 billion. The discontinuity is more than accounted for by corporate profits paid to the rest of the world, reflecting improved estimates of the current-cost adjustment.<sup>20</sup> For GNP, which includes both net exports of goods and services and net receipts of income, the change is overstated by \$3.9 billion.

New prices.—In this annual revision, price measures are modified for the estimates of some components of fixed investment and of foreign transactions to account for several price indexes that are no longer available from the Bureau of Labor Statistics (BLS).

The first modification is to a price index that is used in the deflation of computers and peripheral equipment, a component of equipment and software: The BLS international price index for imported computers replaces a weighted average of the producer price index (PPI) for large-scale computers, the PPI for mid-range computers, and an unpublished BLS price index for imported personal computers, beginning with January 1999. This BLS international price index for imported computers is also be used to deflate imports of mainframes and personal computers for the estimates of foreign transactions.

The second modification is to the price index that is used to deflate petroleum and gas well drilling and exploration, a component of nonresidential structures: The PPI for oil and gas field services replaces PPI's for onshore field services and for offshore field services, beginning with January 2000.

## **Presentational Changes**

Table 7.20.—In this annual revision, a new NIPA table, table 7.20, is introduced that shows annual chain-type quantity and price indexes for personal consumption expenditures (PCE) by type of expenditure. The items that are shown correspond to

[Billions of dollars]						
		1996		1997	Change, 19	96 to 1997
	Published	Discon- tinuity 1	Adjusted	Revised	Published	Adjusted
Net exports of goods and services	-89.0	2.3	-86.7	-89.3	-0.3	-2.6
Exports	874.2 618.4 255.8	2.3 0 2.3	876.5 618.4 258.1	966.4 688.9 277.5	92.2 70.5 21.7	90.0 70.5 19.4
Imports	963.1 808.3 154.8	1 0 1	963.0 808.3 154.7	1,055.8 885.1 170.7	92.7 76.8 15.9	92.7 76.8 16.0
Net receipts of income	18.1	1.7	19.7	7.1	-11.0	-12.7
Receipts Corporate profits Interest Compensation of employees	245.6 140.6 103.2 1.8	8 8 0 0	244.8 139.8 103.2 1.8	281.3 159.4 120.1 1.8	35.7 18.8 16.9 0	36.5 19.6 16.9 0
Payments Corporate profits Interest Compensation of employees	227.5 39.8 181.4 6.3	-2.5 -2.5 0 0	225.0 37.3 181.4 6.3	274.2 48.7 218.8 6.7	46.7 9.0 37.4 .4	49.2 11.4 37.4 .4
Transfer payments to rest of the world (net)	39.8	-2.1	37.7	40.8	1.0	3.1
Addenda: GDP GNP	7,813.2 7,831.2	2.3 3.9	7,815.5 7,835.1	8,318.4 8,325.4	505.2 494.2	502.9 490.3

#### Table 6.—Discontinuities in NIPA Foreign Transactions: 1996–97

[Dillions of dollars]

Equals the revisions to the U.S. international transactions accounts that have not been car-ried back in the NIPA's at this time.

<sup>20.</sup> See Bach, "U.S. International Transactions," 74.

those shown in table 2.5 for the chained-dollar estimates of PCE by type of expenditure. The new table provides estimates for the PCE aggregates by type of expenditure that were not previously available in the NIPA tables; most of the detailed items are already in table 7.5, which shows the chain-type quantity and price indexes for PC *by type of product.* The estimates in the new table begin with 1929 (see the box Availability of Revised Estimates and Related Information").

*Table 8.26.*—Two lines have been deleted from table 8.26, which shows the relation between monetary interest paid and received in the NIPA's and in corresponding IRS measures. Line 26 showed NIPA estimates of monetary interest received by sole proprietorships and partnerships, and line 25 showed the corresponding IRS estimates. The IRS no longer publishes estimates of total interest received by financial partnerships. The NIPA estimates of monetary interest received by financial sole proprietorships and partnerships are currently derived from IRS estimates of partnership receipts. These NIPA estimates will continue to be published in line 27 in table 8.20, which shows interest paid and received by sector and legal form of organization.

Appendix A follows.

## Appendix A.-Revisions to the National Income and Product Accounts

[Billions of dollars]

	1997		1998		1999		
	Revised	Revision	Revised	Revision	Revised	Revision	
	Account 1.—National Income and Product Account						
Compensation of employees	4,651.3	-24.4	4,984.2	-27.0	5,299.8	-31.9	
Wage and salary accruals	3,886.0	1.3	4,192.8	3.3	4,475.1	2.8	
Disbursements	3,888.9	0	4,190.7	4.7	4,470.0	-2.	
Wage accruals less disbursements	-2.9 765.3	1.2 –25.7	2.1 791.4	-1.4 -30.3	5.2 824.6	5.1 –34.8	
Supplements to wages and salaries Employer contributions for social insurance	289.9	-23.7	305.9	1	323.6	-34.	
Other labor income	475.4	-25.5	485.5	-30.2	501.0	-34.	
Proprietors' income with inventory valuation and capital consumption adjustments	581.2	2.6	620.7	14.6	663.5	5.	
Rental income of persons with capital consumption adjustment	128.3	-1.9	135.4	-2.0	143.4	-2.	
Corporate profits with inventory valuation and capital consumption adjustments	833.8	-4.7	815.0	-33.4	856.0	-36.	
Corporate profits with inventory valuation adjustment	800.8	-2.4	775.1	-27.7	813.9	-21.	
Profits before tax	792.4	-3.5	758.2	-23.7	823.0	-25.	
Profits tax liability	237.2	-1.1	244.6	4.4	255.9	-3.	
Profits after tax	555.2	-2.4	513.6	-28.1	567.1	-22.	
Dividends	335.2	1.5	351.5	2.9	370.7	6.	
Undistributed profits	220.0	-3.9	162.1	-31.0	196.4	-28.	
Inventory valuation adjustment Capital consumption adjustment	8.4 32.9	1.0 –2.4	17.0 39.9	–3.9 –5.7	-9.1 42.1	3.9 –15.1	
Net interest	423.9	11.4	482.7	47.0	507.1	39.6	
National income	6,618.4	-17.1	7,038.1	7	7,469.7	-26.	
Business transfer payments	36.8	–.1	38.0	1	39.7		
To persons	27.9	0	28.7	1	29.7		
To the rest of the world	8.9	1	9.3	0	9.9		
Indirect business tax and nontax liability	646.2	.4	679.6	2.6	718.1	1.	
Less: Subsidies less current surplus of government enterprises	19.1	.1	21.5	.7	28.4	1.9	
Consumption of fixed capital Private	1,013.3 832.4	4.2 3.9	1,077.3 889.4	12.7 11.0	1,161.0 961.4	25. 21.	
Government	180.9	3.9 .4	188.0	1.8	199.6	21.	
General government	154.6	.4	160.4	1.8	170.3	3.	
Government enterprises	26.3	0	27.5	1	29.3	0	
Gross national income	8,295.7	-12.5	8,811.4	13.8	9,360.1	-1.3	
Less: Income receipts from the rest of the world	281.3	-1.3	285.4	.1	305.9	3.	
Plus: Income payments to the rest of the world	274.2	-4.2	288.9	-6.3	316.9	-5.4	
Gross domestic income	8,288.6	-15.3	8,815.0	7.5	9,371.1	-10.2	
Statistical discrepancy	29.7	32.9	-24.8	22.8	-71.9	53.2	
GROSS DOMESTIC PRODUCT	8,318.4	17.6	8,790.2	30.3	9,299.2	43.1	
Personal consumption expenditures	5,529.3	4.9	5,850.9	2.3	6,268.7	11.4	
Durable goods	642.5	4	693.9	-4.3	761.3	2.	
Nondurable goods	1,641.6	1	1,707.6	-1.3	1,845.5	2.	
Services	3,245.2	5.4	3,449.3	7.8	3,661.9	6.	
Gross private domestic investment	1,390.5	6.8	1,549.9	18.7	1,650.1	27.	
Fixed investment	1,327.7	12.3	1,472.9	12.9	1,606.8	28.	
Nonresidential	999.4	13.3	1,107.5	16.2	1,203.1	36.	
Structures	255.8	1.7	283.2	10.4	285.6	12.	
Equipment and software	743.6	11.5	824.3	5.8	917.4	24.	
Residential Change in private inventories	328.2 62.9	-1.0 -5.4	365.4 77.0	-3.3 5.8	403.8 43.3	-7. -1.	
Net exports of goods and services	-89.3	-1.0	-151.5	-1.9	-254.0		
Exports Imports	966.4 1,055.8	-1.6 5	966.0 1,117.5	3 1.6	990.2 1,244.2	-8. -8.	
Government consumption expenditures and gross investment	1,487.9	6.9	1,540.9	11.2	1,634.4	4.	
Federal	538.2	.4	540.6	1.9	568.8	-2.	
National defense	352.6	.1	349.2	.6	365.0		
Nondefense	185.6	.3	191.4	1.3	203.5	-2.	
State and local	949.7	6.5	1,000.3	9.3	1,065.8	6.	
GROSS DOMESTIC PRODUCT	8,318.4	17.6	8,790.2	30.3	9,299.2	43.	

# Appendix A.—Revisions to the National Income and Product Accounts—Continued

[Billions of dollars]

	1997		1998		1999		
	Revised	Revision	Revised	Revision	Revised	Revision	
	Account 2.—Personal Income and Outlay Account						
Personal tax and nontax payments	968.8	0.5	1,070.9	-1.7	1,152.0	-0.1	
Personal outlays	5,715.3	3.6	6,054.7	-1.9	6,490.1	6.8	
Personal consumption expenditures	5,529.3 164.8	4.9 -1.9	5,850.9 179.8	2.3 -5.9	6,268.7 194.8	11.4 6.9	
Interest paid by persons Personal transfer payments to the rest of the world (net)	21.2	-1.9	24.0	-3.9	26.6	-0.9	
Personal saving	252.9	-18.2	265.4	35.7	147.6	-8.7	
PERSONAL TAXES, OUTLAYS, AND SAVING	6,937.0	-14.1	7,391.0	32.1	7,789.6	-2.2	
Wage and salary disbursements	3,888.9	0	4,190.7	4.7	4,470.0	-2.3	
Other labor income	475.4	-25.5	485.5	-30.2	501.0	-34.8	
Proprietors' income with inventory valuation and capital consumption adjustments	581.2	2.6	620.7	14.6	663.5	5.0	
Rental income of persons with capital consumption adjustment	128.3	-1.9	135.4	-2.0	143.4	-2.5	
Personal dividend income	334.9	1.5	351.1	2.8	370.3	6.0	
Dividends Less: Dividends received by government	335.2 .3	1.5 0	351.5 .4	2.9 .1	370.7 .4	6.0 .1	
		-					
Personal interest income Net interest	864.0 423.9	9.1 11.4	940.8 482.7	43.0 47.0	963.7 507.1	32.4 39.6	
Net interest paid by government	275.3	4	278.2	1.8	261.7	4	
Interest paid by persons	164.8	-1.9	179.8	-5.9	194.8	-6.9	
Transfer payments to persons From business	962.2 27.9	2 0	983.0 28.7	6 1	1,016.2 29.7	–2.0 .1	
From government	934.4	–.1	954.3	5	986.5	-2.1	
Less: Personal contributions for social insurance	297.9	2	316.2	.3	338.5	3.9	
PERSONAL INCOME	6,937.0	-14.1	7,391.0	32.1	7,789.6	-2.2	
	Account 3.—Government Receipts and Expenditures Account						
Consumption expenditures	1,223.3	.4	1,262.1	1.1	1,325.7	-6.5	
Transfer payments	945.0	.5	965.1	1	998.1	-1.1	
To persons	934.4	1	954.3	5	986.5	-2.1	
To the rest of the world (net)	10.6	.6	10.8	.4	11.6	1.1	
Net interest paid	275.3	4	278.2	1.8	261.7	4	
Less: Dividends received by government	.3	0	.4	.1	.4	.1	
Subsidies less current surplus of government enterprises	19.1	.1	21.5	.7	28.4	1.9	
Less: Wage accruals less disbursements	0	0	0	0	0	0	
Current surplus or deficit (-), national income and product accounts Federal	-22.3 -53.3	-1.0 -4.5	90.7 49.0	2.0 2.1	174.4 124.4	8.0 9.0	
State and local	31.0	3.5	41.7	0	50.0	-1.0	
GOVERNMENT CURRENT EXPENDITURES AND SURPLUS	2,440.0	5	2,617.2	.4	2,788.0	0	
Personal tax and nontax payments	968.8	.5	1,070.9	-1.7	1,152.0	1	
Corporate profits tax liability	237.2	-1.1	244.6	4.4	255.9	-3.5	
Indirect business tax and nontax liability	646.2	.4	679.6	2.6	718.1	1.8	
Contributions for social insurance	587.8	4	622.1	.2	662.1	3.9	
Employer Personal	289.9 297.9	2 2	305.9 316.2	1 .3	323.6 338.5	0 3.9	
						5.0	

# Appendix A.-Revisions to the National Income and Product Accounts-Continued

[Billions of dollars]

	1997		1998		1999		
	Revised	Revision	Revised	Revision	Revised	Revision	
	Account 4.—Foreign Transactions Account						
Exports of goods and services	966.4	-1.6	966.0	-0.3	990.2	-8.1	
Income receipts	281.3	-1.3	285.4	.1	305.9	3.6	
RECEIPTS FROM THE REST OF THE WORLD	1,247.7	-2.9	1,251.4	2	1,296.1	-4.5	
Imports of goods and services	1,055.8	5	1,117.5	1.6	1,244.2	-8.0	
Income payments	274.2	-4.2	288.9	-6.3	316.9	-5.4	
Transfer payments to the rest of the world (net) From persons (net) From government (net) From business	40.8 21.2 10.6 8.9	1.2 .6 .1	44.1 24.0 10.8 9.3	2.1 1.7 .4 0	48.1 26.6 11.6 9.9	3.5 2.3 1.1 .1	
Net foreign investment	-123.1	.6	-199.1	2.4	-313.2	5.3	
PAYMENTS TO THE REST OF THE WORLD	1,247.7	-2.9	1,251.4	2	1,296.1	-4.5	
	Account 5.—Gross Saving and Investment Account						
Gross private domestic investment	1,390.5	6.8	1,549.9	18.7	1,650.1	27.4	
Gross government investment	264.6	6.5	278.8	10.1	308.7	10.9	
Net foreign investment	-123.1	.6	-199.1	2.4	-313.2	5.3	
GROSS INVESTMENT	1,532.1	14.0	1,629.6	31.2	1,645.6	43.6	
Personal saving	252.9	-18.2	265.4	35.7	147.6	-8.7	
Wage accruals less disbursements (private)	-2.9	1.2	2.1	-1.4	5.2	5.2	
Undistributed corporate profits with inventory valuation and capital consumption adjustments	261.3	-5.3	218.9	-40.7	229.4	-39.2	
Consumption of fixed capital Private Government General government Government enterprises	1,013.3 832.4 180.9 154.6 26.3	4.2 3.9 .4 .4 0	1,077.3 889.4 188.0 160.4 27.5	12.7 11.0 1.8 1.8 –.1	1,161.0 961.4 199.6 170.3 29.3	25.2 21.7 3.6 3.5 0	
Government current surplus or deficit (-), national income and product accounts	-22.3	-1.0	90.7	2.0	174.4	8.0	
Statistical discrepancy	29.7	32.9	-24.8	22.8	-71.9	53.2	
GROSS SAVING AND STATISTICAL DISCREPANCY	1,532.1	14.0	1,629.6	31.2	1,645.6	43.6	