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PRODUCTIVITY AND COSTS  
Preliminary Fourth-Quarter and  
Annual Averages for 2001

The Bureau of Labor Statistics of the U.S. Department of Labor today reported preliminary productivity data--as measured by output per hour of all persons--for the fourth quarter and for the full year 2001. The seasonally adjusted annual rates of productivity change in the fourth quarter and the annual average changes were:

	Fourth quarter	Annual averages 2000-2001
Business sector	3.4	1.8
Nonfarm business sector	3.5	1.8

In the fourth quarter, productivity advanced 3.4 percent in the business sector as output declined 0.3 percent and hours worked fell 3.6 percent (seasonally adjusted annual rates). In the nonfarm business sector, productivity rose 3.5 percent as output decreased 0.4 percent and hours dropped 3.7 percent. On an annual average basis, productivity in both the business and nonfarm business sectors rose 1.8 percent in 2001. This was the smallest annual productivity gain since 1995, when output per hour increased 0.7 percent in business and 0.9 percent in nonfarm business. Fourth-quarter productivity and related measures are summarized in table A and annual average data in table B. Detailed information is presented in tables 1 through 5.

In the manufacturing sector, increases in productivity were:

	Fourth quarter	Annual averages 2000-2001
Manufacturing sector	3.5	1.0
Durable goods manufacturing	2.3	0.5
Nondurable goods manufacturing	4.3	1.5

Manufacturing productivity grew 3.5 percent in the fourth quarter, reflecting a drop in output of 7.2 percent and a larger decline, 10.4 percent, in hours of all persons. On an annual average basis, output per hour in the manufacturing sector posted a 1.0-percent increase in 2001. Output and hours in manufacturing, which includes about 16 percent of U.S. business-sector employment, tend to vary more from quarter to quarter than data for the more aggregate business and nonfarm business sectors.

Table A. Productivity and costs: Preliminary fourth-quarter 2001 measures  
(Seasonally adjusted annual rates)

Sector	Productivity	Output	Hours	Hourly compensation	Real hourly compensation	Unit labor costs
Percent change from preceding quarter						
Business	3.4	-0.3	-3.6	2.3	2.7	-1.1
Nonfarm business	3.5	-0.4	-3.7	2.3	2.8	-1.1
Manufacturing	3.5	-7.2	-10.4	2.6	3.0	-0.9
Durable	2.3	-10.3	-12.3	3.6	4.0	1.3
Nondurable	4.3	-3.3	-7.3	1.4	1.8	-2.8
Percent change from same quarter a year ago						
Business	1.5	-0.5	-2.0	4.0	2.1	2.4
Nonfarm business	1.6	-0.5	-2.1	3.9	2.0	2.2
Manufacturing	0.7	-6.4	-7.0	4.5	2.6	3.8
Durable	0.0	-8.5	-8.5	5.1	3.2	5.1
Nondurable	1.1	-3.6	-4.7	3.9	2.1	2.8

The data sources and methods used in the preparation of the manufacturing series differ from those used in preparing the business and nonfarm business series, and these measures are not directly comparable. Output measures for business and nonfarm business are based on measures of gross domestic product prepared by the Bureau of Economic Analysis of the U.S. Department of Commerce. Quarterly output measures for manufacturing reflect indexes of industrial production independently prepared by the Board of Governors of the Federal Reserve System. See Technical Notes for further information on data sources.

#### THIRD-TO-FOURTH QUARTER CHANGES, 2001

##### Business

Productivity in the business sector grew 3.4 percent in the fourth quarter of 2001, reflecting a decline of 0.3 percent in output and a 3.6-percent decrease in hours of all persons engaged in the sector (seasonally adjusted annual rates). Hours fell faster in the fourth quarter than at any time since the first quarter of 1991, when they dropped 4.6 percent. Revised data for the third quarter of 2001 show that output per hour rose 0.7 percent as output decreased 2.3 percent and hours declined 2.9 percent.

Hourly compensation increased at a 2.3-percent annual rate in the fourth quarter of 2001, following a 3.3-percent increase one quarter earlier. This measure includes wages and salaries, supplements, employer contributions to employee-benefit plans, and taxes. Real hourly compensation, which takes into account changes in consumer prices, grew at an annual rate of 2.7 percent during the fourth quarter of 2001. This measure rose 2.6 percent in the third quarter.

The unit labor cost measure, which relates compensation to output, decreased at a 1.1-percent annual rate during the fourth quarter. During the third quarter of 2001, unit labor costs had increased 2.6 percent. The implicit price deflator for business output, which reflects changes in both unit labor costs and unit nonlabor payments, declined 1.5 percent in fourth-quarter 2001.

##### Nonfarm business

In the nonfarm business sector, productivity increased 3.5 percent in the fourth quarter of 2001. Output declined 0.4 percent and hours of all persons--employees, proprietors, and unpaid family workers--fell 3.7 percent (seasonally adjusted annual rates). Productivity increased 1.1 percent in the third quarter of 2001 (as revised), when output decreased 2.3 percent and hours dropped 3.4 percent (table 2).

Hourly compensation in the nonfarm business sector rose 2.3 percent in the fourth quarter of 2001, following an increase of 3.7 percent in the third quarter. When the changes in consumer prices were taken into account, real hourly compensation increased 2.8 percent during the fourth quarter of 2001 and 3.0 percent one quarter earlier.

Unit labor costs decreased 1.1 percent in the fourth quarter, after increasing 2.6 percent in the third quarter of 2001. The implicit price deflator for nonfarm business output declined 0.7 percent in the fourth quarter of 2001, after increasing 1.7 percent one quarter earlier.

#### Manufacturing

Manufacturing productivity grew at a 3.5-percent seasonally adjusted annual rate in the fourth quarter of 2001 as output fell 7.2 percent and hours fell further, 10.4 percent (table 3). The hours decline was the largest since the second quarter of 1982, when hours dropped 11.0 percent. In the third quarter, total manufacturing productivity increased 2.6 percent (as revised), reflecting a 4.9-percent fall in output and a 7.3-percent decrease in hours. In durable goods manufacturing, productivity rose 2.3 percent in the fourth quarter as output fell 10.3 percent and hours dropped 12.3 percent (table 4). Among nondurable goods manufacturers, productivity rose 4.3 percent in the fourth quarter, reflecting a 3.3-percent decline in output and a 7.3-percent drop in hours of all persons (table 5).

Average hourly compensation of manufacturing workers increased 2.6 percent in the fourth quarter of 2001, reflecting increases in hourly compensation of 3.6 percent in durable goods manufacturing and 1.4 percent in nondurable goods manufacturing. When the increase in consumer prices was taken into account, real hourly compensation in total manufacturing rose 3.0 percent.

Unit labor costs for the manufacturing sector declined 0.9 percent. In durable goods manufacturing, unit labor costs rose 1.3 percent. By contrast, unit labor costs of nondurable goods manufacturers fell 2.8 percent in the fourth quarter of 2001.

#### ANNUAL AVERAGE CHANGES, 2000-2001

#### Business

Business sector productivity increased 1.8 percent when the annual average for 2001 was compared with the annual average for 2000 (table B). Output increased 0.8 percent and hours of all persons engaged in the sector decreased 1.0 percent. Productivity had increased 3.4 percent in 2000, when output grew 4.6 percent and hours increased 1.1 percent.

Hourly compensation in the business sector increased 6.0 percent in 2001, following a 6.4-percent rise in 2000. Real hourly compensation increased 3.0 percent in both years. Unit labor costs increased 4.0 percent in 2001, compared with a 2.9-percent increase in the previous year. The implicit price deflator rose 1.8 percent in 2001 and 1.9 percent in 2000.

Table B. Annual average changes in productivity and related measures,  
1992-2001

Measure	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
<b>Business:</b>										
Productivity	3.9	0.5	1.3	0.7	2.8	2.3	2.7	2.5	3.4	1.8
Output	3.7	3.1	4.9	3.1	4.4	5.2	4.9	4.6	4.6	0.8
Hours	-0.2	2.6	3.5	2.4	1.6	2.9	2.2	2.0	1.1	-1.0
Hourly compensation	5.3	2.5	2.0	2.1	3.2	3.1	5.5	4.6	6.4	6.0
Real hourly compensation	2.6	-0.1	-0.2	-0.4	0.4	0.9	4.0	2.4	3.0	3.0
Unit labor costs	1.4	1.9	0.7	1.4	0.4	0.8	2.8	2.0	2.9	4.0
<b>Nonfarm Business:</b>										
Productivity	3.7	0.5	1.3	0.9	2.5	2.0	2.6	2.3	3.3	1.8
Output	3.5	3.3	4.7	3.4	4.3	5.1	5.0	4.6	4.5	0.8
Hours	-0.2	2.9	3.3	2.4	1.7	3.1	2.4	2.2	1.1	-0.9
Hourly compensation	5.3	2.2	2.1	2.1	3.1	3.0	5.4	4.4	6.5	5.8
Real hourly compensation	2.6	-0.4	-0.1	-0.4	0.3	0.8	3.9	2.2	3.1	2.8
Unit labor costs	1.6	1.7	0.8	1.2	0.5	0.9	2.7	2.0	3.1	3.9
<b>Manufacturing:</b>										
Productivity	5.3	1.9	3.0	3.8	3.5	4.3	5.4	4.5	6.1	1.0
Output	4.8	3.3	5.3	4.3	3.1	6.1	5.1	3.7	4.6	-4.3
Hours	-0.4	1.4	2.2	0.4	-0.4	1.8	-0.2	-0.8	-1.4	-5.3
Hourly compensation	4.6	2.7	2.8	2.1	1.4	1.9	5.4	4.0	7.0	7.3
Real hourly compensation	1.9	0.2	0.6	-0.4	-1.3	-0.3	3.9	1.9	3.5	4.4
Unit labor costs	-0.6	0.8	-0.2	-1.7	-2.1	-2.3	0.0	-0.5	0.9	6.2

#### Nonfarm business

Productivity increased 1.8 percent in the nonfarm business sector during 2001, reflecting a 0.8-percent rise in output and a 0.9-percent decline in hours. During 2000, productivity had increased 3.3 percent in nonfarm business, as output grew 4.5 percent and hours of all persons increased 1.1 percent.

In 2001, hourly compensation increased 5.8 percent, following a 6.5 percent rise in 2000. When the increase in consumer prices was taken into account, real hourly compensation rose 2.8 percent in 2001 and 3.1 percent in 2000. Unit labor costs in the nonfarm business sector rose 3.9 percent in 2001, compared with a 3.1-percent increase one year earlier. The implicit price deflator for nonfarm business rose 1.7 percent in 2001 and 2.0 percent in 2000.

#### Manufacturing

In manufacturing, labor productivity rose 1.0 percent in 2001, compared with a 6.1 percent increase in 2000. The small increase in 2001 occurred when output fell 4.3 percent and hours of all persons fell 5.3 percent (table B). There was a 0.5-percent increase in durable goods manufacturing productivity, where output fell 5.4 percent and hours fell 5.9 percent. A somewhat larger increase in productivity of 1.5 percent was posted in nondurable goods manufacturing, reflecting an output decrease of 2.9 percent and a drop of 4.4 percent in hours of all persons.

Hourly compensation of manufacturing workers increased 7.3 percent in 2001, following a 7.0-percent increase in 2000. Taking into account the rise in consumer prices, real hourly compensation in manufacturing rose 4.4 percent in 2001 and 3.5 percent in 2000.

Unit labor costs in manufacturing grew 6.2 percent in 2001. This was the largest annual increase since 1981, when these costs rose 8.9 percent. Unit labor costs in durable goods manufacturing increased 7.4 percent in 2001, compared with a 4.8 percent rise in unit labor costs in nondurable goods manufacturing.

Revised Measures

Current and previous measures for the third quarter of 2001 for the business, nonfarm business, and manufacturing sectors are compared in table C. In the business and nonfarm business sectors, output and productivity measures were lower than those published on Dec. 6; unit labor costs were higher. Output and productivity growth in the manufacturing sector were slightly higher than the figures published on Dec. 6.

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 Table C. Previous and revised productivity and related measures  
 Quarterly percent change at seasonally adjusted annual rate  
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Sector	Productivity	Output	Hours	Hourly compensation	Real hourly compensation	Unit labor costs
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Third quarter 2001						
Business:						
Previous	1.1	-1.9	-2.9	3.5	2.8	2.4
Current	0.7	-2.3	-2.9	3.3	2.6	2.6
Nonfarm business:						
Previous	1.5	-2.0	-3.4	3.8	3.1	2.3
Current	1.1	-2.3	-3.4	3.7	3.0	2.6
Manufacturing:						
Previous	2.5	-5.0	-7.4	3.6	2.9	1.1
Current	2.6	-4.9	-7.3	3.5	2.8	0.8

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 Revised measures: Nonfinancial Corporations

Revised productivity and output measures for the third quarter for nonfinancial corporations also were announced today. Output decreased more and productivity increased less than reported on Dec. 6. The downward revision to productivity led to faster growth in unit labor costs than previously reported (table D).

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 Table D. Nonfinancial corporations: Previous and revised productivity and cost measures  
 Quarterly percent changes at seasonally adjusted annual rates  
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	Productivity	Output	Hours	Hourly compensation	Real hourly compensation	Unit labor costs	Unit profits	Implicit price deflator
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Third quarter 2001								
Previous	2.4	-1.3	-3.6	4.9	4.2	2.5	-25.7	1.5
Current	0.9	-2.6	-3.5	4.7	4.0	3.8	-26.1	2.8

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 Next release date

The next release of Productivity and Costs is scheduled for 8:30 A.M. EST, Thursday, March 7, 2002. Revised fourth-quarter and annual average measures for business, nonfarm business, and manufacturing will be released at that time.

## TECHNICAL NOTES

**Labor Hours:** Hours data for the labor productivity and cost measures include hours for all persons working in the sector-wage and salary workers, the self-employed, and unpaid family workers. The primary source of hours and employment data is the BLS Current Employment Statistics (CES) program, which provides monthly survey data on the number of jobs held by wage and salary workers in nonfarm establishments. The CES also provides average weekly paid hours of production and nonsupervisory workers in these establishments. Average weekly paid hours of nonproduction and supervisory workers are estimated by the Office of Productivity and Technology. Weekly paid hours are adjusted to hours at work using the BLS Hours at Work survey, conducted for this purpose.

Data from the BLS Current Population Survey (CPS) are used for farm labor; in the nonfarm sector, the National Income and Product Accounts (NIPA) prepared by the Bureau of Economic Analysis (BEA) of the Department of Commerce and the CPS are used to measure labor input for government enterprises, proprietors, and unpaid family workers.

**Output:** Business sector output is an annual-weighted index constructed after excluding from gross domestic product (GDP) the following outputs: General government, nonprofit institutions, paid employees of private households, and the rental value of owner-occupied dwellings. Corresponding exclusions also are made in labor inputs. Business output accounted for about 77 percent of the value of GDP in 1996. Nonfarm business, which also excludes farming, accounted for about 76 percent of GDP in 1996.

Annual indexes for manufacturing and its durable and nondurable goods components are constructed by deflating current-dollar industry value of production data from the U.S. Bureau of the Census with deflators from the BEA. These deflators are based on data from the BLS producer price program and other sources. The industry shipments are aggregated using annual weights, and intrasector transactions are removed. Quarterly manufacturing output measures are based on the index of industrial production prepared monthly by the Board of Governors of the Federal Reserve System adjusted to be consistent with annual indexes of manufacturing sector output prepared by BLS. Durables include the following 2-digit SIC industries: Primary metal industries; fabricated metal products; nonelectrical machinery; industrial and commercial machinery and computer equipment; electronic and other electrical equipment; transportation equipment; instruments; lumber and lumber products; furniture and fixtures; stone, clay, and glass and concrete products; and miscellaneous manufactures. Nondurables include: Food and kindred products, tobacco products, textile mill products, apparel products, paper and allied products, printing and publishing, chemicals and chemical products, petroleum refining and related industries, rubber and plastic products, and leather and leather products.

Nonfinancial corporate output is an annual-weighted index constructed by excluding from GDP the following outputs: General government; nonprofit institutions; employees of private households; the rental value of owner-occupied dwellings; unincorporated business; and those corporations which are depository institutions, nondepository institutions, security and commodity brokers, insurance carriers, regulated investment offices, small business investment offices, and real estate investment trusts. Nonfinancial corporations accounted for about 53 percent of the value of GDP in 1996.

**Productivity:** These productivity measures describe the relationship between real output and the labor time involved in its production. They show the changes from period to period in the amount of goods and services produced per hour. Although these measures relate output to hours at work of all persons engaged in a sector, they do not measure the specific contribution of labor, capital, or any other factor of production. Rather, they reflect the joint effects of many influences, including changes in technology; capital investment; level of output; utilization of capacity, energy, and materials; the organization of production; managerial skill; and the characteristics and effort of the work force.

Information in this release will be made available to sensory-impaired individuals upon request. Voice phone: 202-691-5200; Federal Relay Service number: 1-800-877-8339.

Table 1. Business sector: Productivity, hourly compensation, unit labor costs, and prices, seasonally adjusted

Year and quarter	Output per hour of all persons	Output	Hours of all persons	Compensation per hour (1)	Real compensation per hour (2)	Unit labor costs	Unit non-labor payments (3)	Implicit price deflator (4)	
Indexes 1992=100									
1999	I	112.7	132.4	117.4	123.1	106.6	109.2	114.5	111.2
	II	112.4	132.9	118.2	124.4	106.9	110.7	112.6	111.4
	III	113.3	134.6	118.8	126.1	107.5	111.3	112.3	111.7
	IV	115.3	137.8	119.5	127.3	107.7	110.4	114.8	112.0
	ANNUAL	113.4	134.4	118.5	125.2	107.3	110.4	113.6	111.6
2000	I	115.3	138.6	120.2	129.3	108.4	112.2	114.2	112.9
	II	117.5	140.8	119.8	132.1	110.0	112.5	115.1	113.5
	III	117.8	141.2	119.9	134.3	110.8	114.0	113.8	113.9
	IV	118.7	141.9	119.5	137.4	112.5	115.8	112.0	114.4
	ANNUAL	117.3	140.6	119.8	133.3	110.5	113.6	113.8	113.7
2001	I	118.6	142.3	119.9	139.1	112.8	117.3	111.7	115.2
	II	119.3	142.1	119.1	140.9	113.4	118.1	111.5	115.7
	III	r119.5	r141.2	118.2	142.1	r114.1	r118.9	111.7	116.2
	IV	120.5	141.1	117.1	142.9	114.9	118.6	111.0	115.8
	ANNUAL	119.5	141.7	118.6	141.2	113.8	118.2	111.5	115.7
Percent change from previous quarter at annual rate(5)									
1999	I	3.0	3.5	0.5	4.5	2.9	1.5	0.9	1.3
	II	-1.1	1.6	2.7	4.3	1.4	5.4	-6.4	0.8
	III	3.1	5.1	1.9	5.3	2.3	2.2	-1.2	0.9
	IV	7.4	9.9	2.3	4.0	0.7	-3.2	9.0	1.2
	ANNUAL	2.5	4.6	2.0	4.6	2.4	2.0	-0.8	0.9
2000	I	-0.1	2.2	2.3	6.5	2.4	6.6	-2.1	3.2
	II	7.7	6.5	-1.1	9.0	5.9	1.3	3.5	2.1
	III	1.2	1.3	0.1	6.8	3.1	5.5	-4.5	1.7
	IV	3.0	1.8	-1.1	9.5	6.4	6.3	-6.1	1.6
	ANNUAL	3.4	4.6	1.1	6.4	3.0	2.9	0.2	1.9
2001	I	-0.2	1.2	1.4	5.1	0.9	5.3	-1.3	2.9
	II	2.2	-0.7	-2.8	5.2	2.1	3.0	-0.6	1.7
	III	r0.7	r-2.3	-2.9	r3.3	r2.6	r2.6	r0.6	r1.9
	IV	3.4	-0.3	-3.6	2.3	2.7	-1.1	-2.3	-1.5
	ANNUAL	1.8	0.8	-1.0	6.0	3.0	4.0	-2.0	1.8
Percent change from corresponding quarter of previous year									
1999	I	2.5	4.5	1.9	4.7	3.1	2.2	-1.4	0.8
	II	2.2	4.4	2.1	4.4	2.5	2.2	-1.2	0.9
	III	2.3	4.6	2.2	4.6	2.2	2.2	-1.2	0.9
	IV	3.0	5.0	1.9	4.5	1.8	1.4	0.5	1.1
	ANNUAL	2.5	4.6	2.0	4.6	2.4	2.0	-0.8	0.9
2000	I	2.3	4.7	2.3	5.0	1.7	2.7	-0.3	1.5
	II	4.5	5.9	1.4	6.2	2.8	1.6	2.2	1.9
	III	4.0	4.9	0.9	6.6	3.0	2.5	1.3	2.1
	IV	2.9	3.0	0.0	7.9	4.4	4.9	-2.4	2.1
	ANNUAL	3.4	4.6	1.1	6.4	3.0	2.9	0.2	1.9
2001	I	2.9	2.7	-0.2	7.6	4.1	4.6	-2.2	2.1
	II	1.6	0.9	-0.6	6.6	3.1	5.0	-3.2	2.0
	III	r1.4	r0.0	-1.4	5.8	3.0	r4.3	-1.9	2.0
	IV	1.5	-0.5	-2.0	4.0	2.1	2.4	-0.9	1.2
	ANNUAL	1.8	0.8	-1.0	6.0	3.0	4.0	-2.0	1.8

See footnotes following Table 6.  
r=revised

February 6, 2002  
Source: Bureau of Labor Statistics

Table 2. Nonfarm business sector: Productivity, hourly compensation, unit labor costs, and prices, seasonally adjusted

Year and quarter	Output per hour of all persons	Output	Hours of all persons	Compensation per hour (1)	Real compensation per hour (2)	Unit labor costs	Unit non-labor payments (3)	Implicit price deflator (4)	
Indexes 1992=100									
1999	I	112.2	132.8	118.3	122.2	105.8	109.0	116.0	111.5
	II	111.8	133.2	119.2	123.5	106.1	110.5	114.2	111.8
	III	112.7	134.9	119.7	125.1	106.8	111.1	114.0	112.1
	IV	114.8	138.1	120.3	126.6	107.1	110.2	116.5	112.5
	ANNUAL	112.9	134.8	119.4	124.4	106.5	110.2	115.2	112.0
2000	I	114.8	138.8	120.9	128.7	107.9	112.1	115.9	113.5
	II	116.7	141.0	120.8	131.2	109.2	112.5	116.7	114.0
	III	117.2	141.4	120.7	133.6	110.2	114.0	115.3	114.5
	IV	117.8	142.1	120.6	136.5	111.8	115.8	113.4	114.9
	ANNUAL	116.6	140.8	120.8	132.5	109.8	113.6	115.3	114.2
2001	I	117.8	142.5	121.0	138.1	112.0	117.2	113.1	115.7
	II	118.4	142.4	120.2	139.7	112.4	118.0	112.9	116.1
	III	r118.7	r141.5	119.2	141.0	r113.2	118.7	112.9	116.6
	IV	119.8	141.4	118.1	141.8	114.0	118.4	112.9	116.4
	ANNUAL	118.7	142.0	119.6	140.1	112.9	118.1	113.0	116.2
Percent change from previous quarter at annual rate(5)									
1999	I	2.3	3.5	1.1	3.6	2.0	1.3	1.9	1.5
	II	-1.3	1.4	2.8	4.2	1.4	5.6	-5.9	1.2
	III	3.2	5.3	2.0	5.5	2.4	2.2	-0.9	1.0
	IV	7.8	9.8	1.9	4.7	1.4	-2.9	9.0	1.4
	ANNUAL	2.3	4.6	2.2	4.4	2.2	2.0	-0.4	1.1
2000	I	0.0	2.0	2.0	6.9	2.8	6.9	-1.8	3.5
	II	6.7	6.5	-0.2	8.1	5.0	1.3	2.5	1.7
	III	1.6	1.2	-0.5	7.4	3.7	5.7	-4.4	1.8
	IV	2.3	1.8	-0.5	8.9	5.8	6.4	-6.6	1.5
	ANNUAL	3.3	4.5	1.1	6.5	3.1	3.1	0.1	2.0
2001	I	-0.1	1.4	1.4	4.9	0.7	5.0	-1.2	2.7
	II	2.1	-0.4	-2.4	4.7	1.6	2.6	-0.5	1.5
	III	r1.1	r-2.3	-3.4	r3.7	r3.0	r2.6	r0.0	r1.7
	IV	3.5	-0.4	-3.7	2.3	2.8	-1.1	0.1	-0.7
	ANNUAL	1.8	0.8	-0.9	5.8	2.8	3.9	-2.1	1.7
Percent change from corresponding quarter of previous year									
1999	I	2.3	4.5	2.1	4.5	2.9	2.1	-1.1	0.9
	II	1.9	4.3	2.4	4.2	2.2	2.3	-0.9	1.1
	III	2.1	4.6	2.4	4.3	1.9	2.1	-0.8	1.0
	IV	2.9	4.9	1.9	4.5	1.8	1.5	0.9	1.3
	ANNUAL	2.3	4.6	2.2	4.4	2.2	2.0	-0.4	1.1
2000	I	2.4	4.6	2.2	5.3	2.0	2.9	0.0	1.8
	II	4.4	5.9	1.4	6.3	2.9	1.8	2.1	1.9
	III	4.0	4.8	0.8	6.7	3.2	2.7	1.2	2.1
	IV	2.6	2.8	0.2	7.8	4.3	5.0	-2.6	2.2
	ANNUAL	3.3	4.5	1.1	6.5	3.1	3.1	0.1	2.0
2001	I	2.6	2.7	0.1	7.3	3.8	4.6	-2.5	2.0
	II	1.5	1.0	-0.5	6.5	2.9	4.9	-3.2	1.9
	III	r1.3	r0.1	r-1.2	r5.5	2.8	4.1	-2.1	1.8
	IV	1.6	-0.5	-2.1	3.9	2.0	2.2	-0.4	1.3
	ANNUAL	1.8	0.8	-0.9	5.8	2.8	3.9	-2.1	1.7

See footnotes following Table 6.  
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February 6, 2002  
Source: Bureau of Labor Statistics



Table 3. Manufacturing sector: Productivity, hourly compensation, and unit labor costs, seasonally adjusted

Year and quarter	Output per hour of all persons	Output	Hours of all persons	Compensation per hour (1)	Real compensation per hour (2)	Unit labor costs	
----- Indexes 1992=100							
1999	I	127.6	133.1	104.3	119.8	103.7	93.9
	II	128.3	134.2	104.5	121.2	104.2	94.4
	III	129.6	135.6	104.6	123.0	104.9	94.9
	IV	132.7	137.8	103.8	124.5	105.4	93.8
	ANNUAL	129.6	135.2	104.3	122.1	104.6	94.3
2000	I	135.2	139.9	103.5	126.3	105.9	93.4
	II	137.2	142.3	103.8	128.6	107.0	93.8
	III	138.3	142.5	103.0	131.9	108.8	95.4
	IV	139.2	141.1	101.3	135.9	111.3	97.6
	ANNUAL	137.5	141.5	102.9	130.7	108.3	95.1
2001	I	138.3	138.5	100.1	137.9	111.8	99.7
	II	138.1	136.3	98.7	140.0	112.6	101.3
	III	139.0	r134.6	96.8	141.2	113.4	r101.5
	IV	140.2	132.1	94.2	142.1	114.2	101.3
	ANNUAL	138.9	135.4	97.5	140.2	113.0	101.0
----- Percent change from previous quarter at annual rate(5)							
1999	I	5.6	3.2	-2.3	2.4	0.9	-3.0
	II	2.4	3.1	0.7	4.8	1.9	2.4
	III	3.9	4.4	0.4	6.0	2.9	2.0
	IV	10.1	6.7	-3.1	5.2	1.9	-4.5
	ANNUAL	4.5	3.7	-0.8	4.0	1.9	-0.5
2000	I	7.6	6.3	-1.2	5.9	1.8	-1.6
	II	6.1	7.1	0.9	7.5	4.5	1.4
	III	3.3	0.4	-2.8	10.6	6.8	7.1
	IV	2.8	-4.0	-6.6	12.7	9.5	9.7
	ANNUAL	6.1	4.6	-1.4	7.0	3.5	0.9
2001	I	-2.7	-7.1	-4.5	6.0	1.7	8.9
	II	-0.5	-6.2	-5.7	6.1	2.9	6.7
	III	r2.6	r-4.9	r-7.3	r3.5	r2.8	r0.8
	IV	3.5	-7.2	-10.4	2.6	3.0	-0.9
	ANNUAL	1.0	-4.3	-5.3	7.3	4.4	6.2
----- Percent change from corresponding quarter of previous year							
1999	I	4.7	3.2	-1.4	3.8	2.2	-0.9
	II	4.3	3.3	-0.9	3.5	1.6	-0.7
	III	3.7	3.8	0.1	4.1	1.7	0.4
	IV	5.5	4.3	-1.1	4.6	1.9	-0.8
	ANNUAL	4.5	3.7	-0.8	4.0	1.9	-0.5
2000	I	6.0	5.1	-0.8	5.5	2.1	-0.5
	II	6.9	6.1	-0.7	6.1	2.8	-0.7
	III	6.7	5.1	-1.5	7.3	3.7	0.5
	IV	4.9	2.3	-2.4	9.1	5.6	4.0
	ANNUAL	6.1	4.6	-1.4	7.0	3.5	0.9
2001	I	2.3	-1.0	-3.3	9.2	5.6	6.7
	II	0.7	-4.3	-4.9	8.8	5.2	8.1
	III	0.5	r-5.5	-6.0	7.0	4.2	6.5
	IV	0.7	-6.4	-7.0	4.5	2.6	3.8
	ANNUAL	1.0	-4.3	-5.3	7.3	4.4	6.2

See footnotes following Table 6.  
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February 6, 2002  
Source: Bureau of Labor Statistics

Table 4. Durable manufacturing sector: Productivity, hourly compensation, and unit labor costs, seasonally adjusted

Year and quarter	Output per hour of all persons	Output	Hours of all persons	Compensation per hour (1)	Real compensation per hour (2)	Unit labor costs	
----- Indexes 1992=100							
1999	I	140.7	154.5	109.8	117.6	101.8	83.6
	II	142.1	156.1	109.9	119.3	102.6	84.0
	III	143.9	159.4	110.7	121.1	103.3	84.1
	IV	147.3	161.8	109.8	122.7	103.9	83.3
	ANNUAL	143.5	157.9	110.1	120.2	103.0	83.8
2000	I	152.0	166.7	109.7	124.4	104.3	81.8
	II	155.0	171.0	110.3	126.7	105.4	81.7
	III	156.4	171.6	109.7	130.1	107.3	83.2
	IV	156.9	169.5	108.0	134.6	110.2	85.7
	ANNUAL	155.1	169.7	109.4	128.9	106.9	83.1
2001	I	155.2	165.2	106.5	136.6	110.7	88.0
	II	155.2	162.5	104.7	138.7	111.6	89.3
	III	r156.0	r159.3	102.1	140.2	112.6	r89.8
	IV	156.9	155.0	98.8	141.4	113.7	90.1
	ANNUAL	155.8	160.5	103.0	139.2	112.2	89.3
----- Percent change from previous quarter at annual rate(5)							
1999	I	8.3	4.0	-4.0	3.8	2.2	-4.1
	II	4.0	4.4	0.3	5.9	2.9	1.7
	III	5.2	8.5	3.1	6.1	3.0	0.8
	IV	9.7	6.2	-3.2	5.5	2.2	-3.8
	ANNUAL	6.9	6.1	-0.8	4.7	2.5	-2.1
2000	I	13.5	12.8	-0.6	5.6	1.5	-7.0
	II	8.2	10.7	2.3	7.7	4.6	-0.5
	III	3.7	1.4	-2.2	11.2	7.4	7.3
	IV	1.3	-4.8	-6.0	14.3	11.1	12.9
	ANNUAL	8.1	7.4	-0.6	7.3	3.8	-0.8
2001	I	-4.3	-9.7	-5.6	6.1	1.9	10.9
	II	0.0	-6.5	-6.6	6.3	3.1	6.2
	III	r2.0	r-7.6	-9.4	r4.3	r3.6	r2.3
	IV	2.3	-10.3	-12.3	3.6	4.0	1.3
	ANNUAL	0.5	-5.4	-5.9	7.9	5.0	7.4
----- Percent change from corresponding quarter of previous year							
1999	I	7.6	6.0	-1.5	4.2	2.6	-3.2
	II	7.3	6.1	-1.0	4.3	2.3	-2.8
	III	6.1	6.6	0.5	4.9	2.6	-1.1
	IV	6.8	5.7	-1.0	5.3	2.6	-1.4
	ANNUAL	6.9	6.1	-0.8	4.7	2.5	-2.1
2000	I	8.0	7.9	-0.1	5.7	2.4	-2.1
	II	9.1	9.5	0.4	6.2	2.8	-2.7
	III	8.7	7.7	-0.9	7.5	3.9	-1.1
	IV	6.5	4.8	-1.7	9.6	6.1	2.9
	ANNUAL	8.1	7.4	-0.6	7.3	3.8	-0.8
2001	I	2.1	-0.9	-2.9	9.8	6.2	7.5
	II	0.1	-5.0	-5.1	9.4	5.8	9.3
	III	-0.3	-7.2	-6.9	7.7	4.9	r8.0
	IV	0.0	-8.5	-8.5	5.1	3.2	5.1
	ANNUAL	0.5	-5.4	-5.9	7.9	5.0	7.4

See footnotes following Table 6.  
r=revised

February 6, 2002  
Source: Bureau of Labor Statistics

Table 5. Nondurable manufacturing sector: Productivity, hourly compensation, and unit labor costs, seasonally adjusted

Year and quarter	Output per hour of all persons	Output	Hours of all persons	Compensation per hour (1)	Real compensation per hour (2)	Unit labor costs	
----- Indexes 1992=100							
1999	I	116.6	113.2	97.1	122.0	105.6	104.7
	II	116.6	113.6	97.4	123.0	105.7	105.5
	III	117.4	113.4	96.6	124.6	106.3	106.1
	IV	120.5	115.4	95.8	126.0	106.6	104.6
	ANNUAL	117.8	113.9	96.7	123.9	106.1	105.2
2000	I	120.6	115.0	95.3	127.9	107.2	106.1
	II	121.7	115.7	95.1	130.1	108.3	106.9
	III	122.6	115.4	94.2	133.1	109.8	108.6
	IV	124.0	114.6	92.4	136.2	111.5	109.8
	ANNUAL	122.2	115.2	94.2	131.8	109.2	107.8
2001	I	123.8	113.5	91.7	138.2	112.0	111.7
	II	123.3	111.8	90.7	140.2	112.8	113.7
	III	124.1	r111.4	r89.8	r141.1	r113.3	r113.7
	IV	125.4	110.5	88.1	141.6	113.8	112.9
	ANNUAL	124.1	111.8	90.1	140.2	113.0	113.0
----- Percent change from previous quarter at annual rate(5)							
1999	I	1.8	2.2	0.4	0.5	-1.1	-1.3
	II	0.2	1.4	1.3	3.2	0.3	3.0
	III	2.9	-0.6	-3.4	5.2	2.2	2.3
	IV	10.7	7.4	-3.0	4.8	1.5	-5.3
	ANNUAL	1.6	0.7	-0.9	2.8	0.7	1.2
2000	I	0.5	-1.6	-2.1	6.3	2.2	5.7
	II	3.6	2.5	-1.1	6.9	3.9	3.2
	III	2.9	-0.9	-3.7	9.4	5.7	6.3
	IV	4.8	-2.9	-7.4	9.7	6.6	4.7
	ANNUAL	3.8	1.1	-2.6	6.4	2.9	2.5
2001	I	-0.9	-3.7	-2.8	5.9	1.7	6.9
	II	-1.6	-5.9	-4.4	5.9	2.8	7.6
	III	r2.7	r-1.5	r-4.1	r2.6	r1.9	r-0.1
	IV	4.3	-3.3	-7.3	1.4	1.8	-2.8
	ANNUAL	1.5	-2.9	-4.4	6.4	3.5	4.8
----- Percent change from corresponding quarter of previous year							
1999	I	1.2	-0.1	-1.4	3.1	1.5	1.8
	II	0.6	0.0	-0.6	2.3	0.4	1.7
	III	0.8	0.3	-0.5	2.5	0.2	1.6
	IV	3.8	2.6	-1.2	3.4	0.7	-0.4
	ANNUAL	1.6	0.7	-0.9	2.8	0.7	1.2
2000	I	3.5	1.6	-1.8	4.9	1.5	1.3
	II	4.4	1.9	-2.4	5.8	2.4	1.4
	III	4.4	1.8	-2.5	6.8	3.3	2.4
	IV	3.0	-0.7	-3.6	8.1	4.6	5.0
	ANNUAL	3.8	1.1	-2.6	6.4	2.9	2.5
2001	I	2.6	-1.3	-3.8	8.0	4.5	5.3
	II	1.3	-3.3	-4.6	7.7	4.2	6.4
	III	1.2	-3.5	-4.7	r6.0	r3.2	r4.7
	IV	1.1	-3.6	-4.7	3.9	2.1	2.8
	ANNUAL	1.5	-2.9	-4.4	6.4	3.5	4.8

See footnotes following Table 6.  
r=revised

February 6, 2002  
Source: Bureau of Labor Statistics

Table 6. Nonfinancial corporations: Productivity, hourly compensation, unit labor costs, unit profits, and prices, seasonally adjusted

Year and quarter	Output per all-employee hour	Output	Employee hours	Hourly compensation (1)	Real hourly compensation (2)	Unit labor costs	Unit non-labor costs (6)	Total unit costs (7)	Unit profits (8)	Implicit price deflator (4)	
Indexes 1992=100											
1999	I	114.5	139.5	121.9	119.1	103.1	104.1	102.8	103.7	141.6	106.9
	II	114.7	140.8	122.7	120.4	103.5	104.9	103.4	104.5	135.4	107.1
	III	115.4	142.5	123.4	121.9	104.0	105.6	105.0	105.4	128.0	107.4
	IV	116.4	144.8	124.3	123.2	104.2	105.8	105.1	105.6	131.3	107.8
	ANNUAL	115.3	141.9	123.1	121.2	103.8	105.1	104.1	104.8	134.0	107.3
2000	I	117.2	146.6	125.1	125.0	104.8	106.6	106.2	106.5	135.1	108.9
	II	118.8	148.7	125.1	127.6	106.1	107.4	106.5	107.1	139.3	109.8
	III	119.6	149.7	125.2	129.7	107.0	108.5	107.1	108.1	135.8	110.5
	IV	119.8	149.8	125.1	132.7	108.7	110.8	107.8	110.0	120.5	110.9
	ANNUAL	118.8	148.7	125.1	128.8	106.7	108.3	106.9	107.9	132.6	110.0
2001	I	119.9	150.1	125.1	134.5	109.1	112.2	109.3	111.4	111.1	111.4
	II	120.9	150.4	124.4	136.5	109.9	112.9	111.2	112.5	107.4	112.0
	III	r121.2	r149.4	123.3	r138.1	r110.9	r114.0	r114.2	r114.0	r99.6	r112.8
Percent change from previous quarter at annual rate (5)											
1999	I	4.5	6.8	2.2	4.3	2.7	-0.2	-1.7	-0.6	11.6	0.7
	II	0.8	3.6	2.8	4.2	1.4	3.4	2.4	3.1	-16.4	0.8
	III	2.4	4.9	2.5	5.2	2.1	2.7	6.1	3.6	-20.0	0.8
	IV	3.5	6.5	2.9	4.2	0.9	0.7	0.7	0.7	10.5	1.7
	ANNUAL	3.1	5.6	2.4	4.5	2.3	1.3	1.9	1.4	-5.4	0.7
2000	I	2.8	5.3	2.5	6.0	2.0	3.2	4.1	3.4	12.2	4.3
	II	5.6	5.7	0.1	8.4	5.4	2.7	1.1	2.3	13.0	3.4
	III	2.6	2.8	0.2	7.0	3.3	4.3	2.4	3.8	-9.8	2.2
	IV	0.7	0.3	-0.3	9.6	6.5	8.9	2.6	7.2	-38.0	1.6
	ANNUAL	3.1	4.8	1.7	6.3	2.8	3.1	2.7	3.0	-1.0	2.5
2001	I	0.5	0.7	0.2	5.5	1.3	5.0	5.8	5.2	-27.8	1.8
	II	3.3	0.8	-2.4	6.1	2.9	2.7	7.0	3.8	-12.6	2.3
	III	r0.9	r-2.6	r-3.5	r4.7	r4.0	r3.8	r11.2	r5.7	r-26.1	r2.8
Percent change from corresponding quarter of previous year											
1999	I	4.2	6.3	2.1	4.6	3.1	0.4	1.1	0.6	-1.6	0.4
	II	3.2	5.8	2.5	4.3	2.3	1.1	1.5	1.2	-3.6	0.7
	III	2.4	5.1	2.6	4.4	2.0	2.0	3.1	2.3	-11.6	0.7
	IV	2.8	5.5	2.6	4.5	1.8	1.6	1.8	1.7	-4.7	1.0
	ANNUAL	3.1	5.6	2.4	4.5	2.3	1.3	1.9	1.4	-5.4	0.7
2000	I	2.4	5.1	2.7	4.9	1.6	2.5	3.3	2.7	-4.6	1.9
	II	3.6	5.6	2.0	6.0	2.6	2.3	3.0	2.5	2.9	2.5
	III	3.6	5.1	1.4	6.4	2.9	2.7	2.0	2.5	6.0	2.9
	IV	2.9	3.5	0.6	7.8	4.3	4.7	2.5	4.1	-8.2	2.9
	ANNUAL	3.1	4.8	1.7	6.3	2.8	3.1	2.7	3.0	-1.0	2.5
2001	I	2.3	2.3	0.0	7.6	4.1	5.2	2.9	4.6	-17.8	2.2
	II	1.8	1.2	-0.6	7.0	3.5	5.2	4.4	5.0	-22.9	2.0
	III	r1.3	r-0.2	-1.5	6.5	3.7	r5.1	r6.6	r5.5	r-26.7	r2.1

See footnotes following Table 6.  
r=revised

February 6, 2002  
Source: Bureau of Labor Statistics

SOURCES: Output data are from the Bureau of Economic Analysis and the Census Bureau of the U.S. Department of Commerce; the Bureau of Labor Statistics, U.S. Department of Labor; and the Federal Reserve Board. Compensation and hours data are from the Bureau of Labor Statistics and the Bureau of Economic Analysis.

RELIABILITY: Productivity and cost measures are regularly revised, as more complete information becomes available. The measures are first published within 40 days of the close of the reference period; revisions appear 30 days later, and second revisions after an additional 60 days. In the business sector, the third publication (second revision) of a quarterly index of output per hour of all persons has differed from the initial value by between -1.5 and +1.7 index points approximately 95 percent of the time. This interval is based on the performance of this measure between the fourth quarter of 1995 and the third quarter of 2001.

Footnotes, Tables 1-6

(1) Wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. Except for nonfinancial corporations, where there are no self-employed, data also include an estimate of wages, salaries, and supplemental payments for the self-employed.

(2) Compensation per hour adjusted for changes in consumer prices. The change for recent quarters is based on the Consumer Price Index for all urban consumers (CPI-U). The trend from 1978-2000 is based on the Consumer Price Index research series (CPI-U-RS).

(3) Unit nonlabor payments include profits, capital consumption allowances, interest, rental income of persons, and indirect taxes.

(4) Current dollar output divided by the output index.

(5) Quarterly changes: Percent change compounded at annual rate from the original data rather than index numbers. Annual changes: Percent change between annual average levels.

(6) Unit nonlabor costs include capital consumption allowances, interest, rental income of persons, and indirect taxes. For nonfinancial corporations, rental income of persons is zero by definition.

(7) Total unit costs are the sum of unit labor and nonlabor costs.

(8) Unit profits include corporate profits with inventory valuation and capital consumption adjustments.