

# FEDERAL RESERVE statistical release



G.17 (419) Supplement

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## INDUSTRIAL PRODUCTION AND CAPACITY UTILIZATION

Industrial production edged down 0.1 percent in September. Despite the declines in August and September, the index of industrial production was 140.5 percent of the 1992 average, a level still slightly above the June 2002 reading. Average production rose at an annual rate of 3.6 percent between the second and third quarters. Manufacturing output, which fell for the second consecutive month, dropped 0.3 percent in September, but the level of output was 2.5 percent above the December 2001 trough. Production at the nation's mines fell 1.1 percent in September, while the output of utilities rose 2.4 percent. Capacity utilization for total industry was 75.9 percent, a rate that is about the same as in June 2002. Both the capacity utilization rate and the change in overall industrial production were held down 0.1 percentage point by the effects of tropical storms on oil and gas extraction and petroleum refining around the Gulf of Mexico.

(over)

### INDUSTRIAL PRODUCTION AND CAPACITY UTILIZATION: SUMMARY

Seasonally adjusted

Industrial Production	Index, 1992=100				Percent change				Sept. 01 to Sept. 02
	2002 June <sup>r</sup>	July <sup>r</sup>	Aug. <sup>r</sup>	Sept. <sup>p</sup>	2002 June <sup>r</sup>	July <sup>r</sup>	Aug. <sup>r</sup>	Sept. <sup>p</sup>	
<b>Total index</b>	140.3	141.1	140.6	140.5	.6	.5	-.3	-.1	1.5
Previous estimates	140.3	140.9	140.5		.6	.4	-.3		
<b>Major market groups:</b>									
Products, total	128.0	128.5	127.9	127.6	.6	.4	-.5	-.2	.0
Consumer goods	122.3	123.2	121.8	121.7	.8	.7	-1.1	-.1	1.5
Business equipment	163.8	163.9	164.0	161.2	.4	.1	.0	-1.7	-4.3
Construction supplies	140.5	138.3	139.6	140.0	.7	-1.5	.9	.3	1.4
Materials	161.3	162.6	162.6	162.8	.7	.8	.0	.1	4.0
<b>Major industry groups:</b>									
Manufacturing	145.0	145.7	145.4	145.1	.6	.4	-.2	-.3	1.5
Durable	179.7	180.4	180.8	180.0	.7	.4	.3	-.5	2.2
Nondurable	111.4	112.0	111.3	111.3	.4	.5	-.6	.0	.8
Mining	96.0	95.7	96.3	95.3	1.0	-.3	.6	-1.1	-6.6
Utilities	124.9	127.8	124.6	127.6	1.3	2.3	-2.5	2.4	8.0
<b>Capacity Utilization</b>	Percent of capacity								Capacity growth
	Average 1967-01	1982 Low	1988-89 High	2001 Sept.	2002 June <sup>r</sup>	July <sup>r</sup>	Aug. <sup>r</sup>	Sept. <sup>p</sup>	Sept. 01 to Sept. 02
<b>Total industry</b>	81.9	71.1	85.4	75.5	76.0	76.3	76.0	75.9	1.0
Previous estimates					76.0	76.2	76.0		
Manufacturing	80.9	69.0	85.7	73.7	74.3	74.6	74.4	74.2	.9
Advanced processing	80.3	71.0	84.2	73.3	72.8	73.1	72.7	72.3	.6
Primary processing	82.0	65.7	88.3	74.4	76.7	77.0	77.0	77.1	1.6
Mining	87.6	80.3	88.0	90.9	85.1	84.8	85.3	84.4	.6
Utilities	87.6	75.9	92.6	85.1	87.1	88.8	86.4	88.2	4.3

## Market Groups

A second month of broad declines in consumer durable goods helped push the output of consumer goods down 0.1 percent in September. The index for appliances, furniture, and carpeting fell for a fourth consecutive month to a level near its trough in 2001, and the production of miscellaneous consumer goods contracted for a second month. The output of automotive products eased in both August and September, but together with July's sharp increase, production for the third quarter was up at an annual rate of more than 23 percent. The production of non-energy nondurables was unchanged in September, with higher output levels of clothing and chemical products offset by declines elsewhere. A small decline in the output of paper products ended a four-month series of increases. The index for consumer energy products increased 1.0 percent in September; in recent months this measure has been influenced by large weather-driven swings in the output of electricity for residential use.

The production of business equipment dropped 1.7 percent in September. A key contributor to this decline was a pullback in the production of industrial and other equipment, especially construction and farm machinery. The index for transit equipment was drawn down again last month and has now contracted for five quarters. In September, reduced motor vehicle assemblies for businesses led the decline and were accompanied by the eighteenth consecutive monthly contraction in commercial aircraft production. The output of information processing equipment remained weak in September and was little changed from twelve months ago. The output of defense and space equipment, which has increased more than 7 percent since September 2001, continued its upward climb.

Although the output of construction supplies rose slightly in September, its average in the third quarter was little changed from the second quarter. The production of business supplies also rose slightly in September; most of the increase was attributable to commercial electricity sales. Materials output, which has risen 4.0 percent since September 2001, edged up for a ninth month. Greater output of energy and nondurable materials slightly more than offset a decline in the output of durable materials.

## Industry Groups

Manufacturing output declined 0.3 percent in September; the production of durable goods was down, and the production of nondurable goods was unchanged. In the third quarter, manufacturing output rose at an annual rate of 3.3 percent after similarly sized increases in the first and second quarters. The production of durable and nondurable goods also increased in each of the last three quarters. Among durable goods, only the output of furniture and fixtures and aerospace and miscellaneous transportation equipment declined last quarter; both of these industries have been on downward trends for at least six quarters. In contrast, the production of motor vehicles and parts, primary and fabricated metals, and electrical machinery posted sizable gains. Among nondurable goods industries, the output of chemicals and products increased sharply in the third quarter. Production gains in the paper and products, printing and publishing, and rubber and plastics products industries more than offset output decreases in the food and tobacco products, apparel products, and petroleum products industries.

At 74.2 percent in September, the factory operating rate was 6.7 percentage points below its 1967–2001 average. This rate increased 1.7 percentage points between its December 2001 trough and July 2002, but it has fallen in each of the past two months. The utilization rate for primary-processing industries rose marginally in September to its highest level since February 2001, while the rate for advanced-processing industries posted a small decline. The operating rate at mines edged down to 84.4 percent, while the rate at utilities climbed to 88.2 percent.

## **Revision of Industrial Production and Capacity Utilization**

On November 26, the Federal Reserve Board will publish a revision to the index of industrial production (IP), the related measures of capacity and capacity utilization, and the data on industrial use of electric power. The revised estimates will be classified according to the 2002 North American Industrial Classification System (NAICS); previously, the estimates from 1987 forward were classified according to the 1987 Standard Industrial Classification system (SIC). NAICS changes the SIC system's industry composition of manufacturing. To preserve the continuity of the production, capacity, and utilization rate measures featured in the Federal Reserve's G.17 statistical release, portions of SIC 27 (printing and publishing) and SIC 24 (lumber and products) that are not classified in manufacturing under NAICS will continue to be included in the overall IP index and capacity utilization.

The revised production indexes will be based on annual output measures that are constructed by reclassifying the establishments in historical Censuses of Manufactures and Mineral Industries under NAICS; annual output indexes constructed this way will maximize the reliability and historical consistency of the IP industry detail. Data going back to at least 1972 will be restated using NAICS. The monthly indicators used in current IP will be incorporated into the revised IP indexes as far back as the data will allow.

The updated measures will reflect the incorporation of newly available, more comprehensive source data typical of annual revisions. The updating of source data for IP in the 2002 annual revision will include annual data from the 2000 Annual Survey of Manufactures of the Bureau of the Census and from selected editions of its 2000 and 2001 Current Industrial Reports. Annual data from the U.S. Geological Survey regarding metallic and nonmetallic minerals (except fuels) for 2000 and 2001 will also be introduced. The updating will include revisions to the monthly indicator for each industry (either physical product data, production-worker hours, or electric power usage) and revisions to seasonal factors.

Capacity and capacity utilization will be revised to incorporate preliminary data from the 2001 Survey of Plant Capacity of the Bureau of the Census, which covers manufacturing, along with other new data on capacity from the U.S. Geological Survey, the Department of Energy, and other organizations. The statistics on the industrial use of electric power will incorporate additional information received from utilities for the past few years and will include some data from the 2000 Annual Survey of Manufactures.

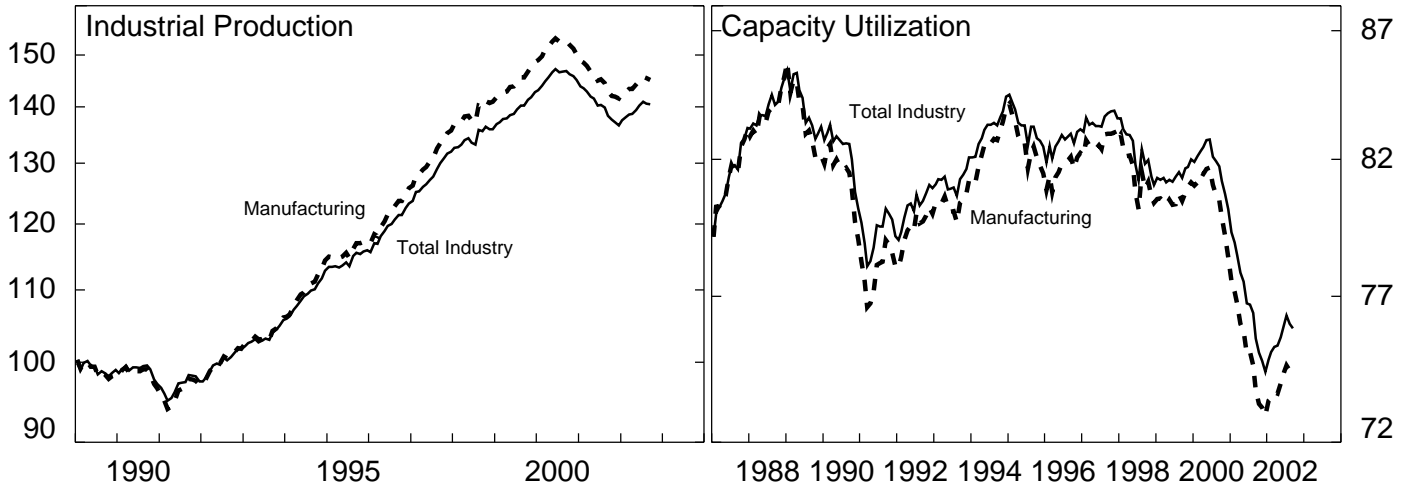
Once the revision is published, it will be made available on the Board's web site, [www.federalreserve.gov/releases/G17](http://www.federalreserve.gov/releases/G17). The revised data will also be available through the web site of the Department of Commerce. Further information on these revisions is available from the Board's Industrial Output Section (telephone 202-452-3197).

# Industrial Production and Capacity Utilization

(September data, seasonally adjusted)

Ratio scale, 1992=100

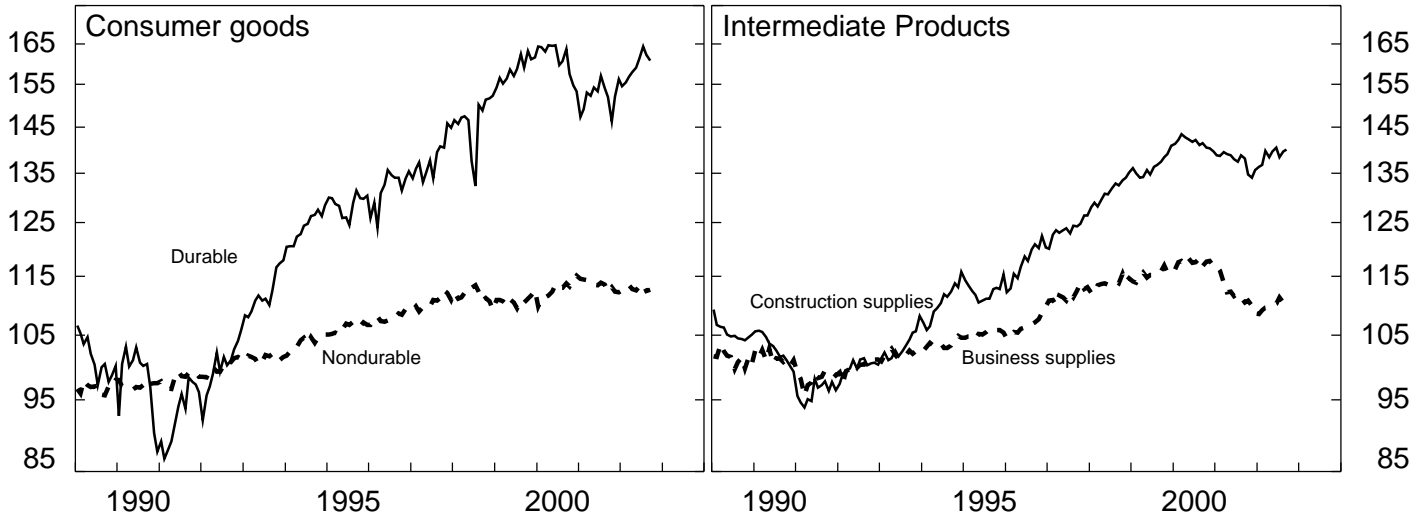
Percent of capacity



Ratio scale, 1992=100

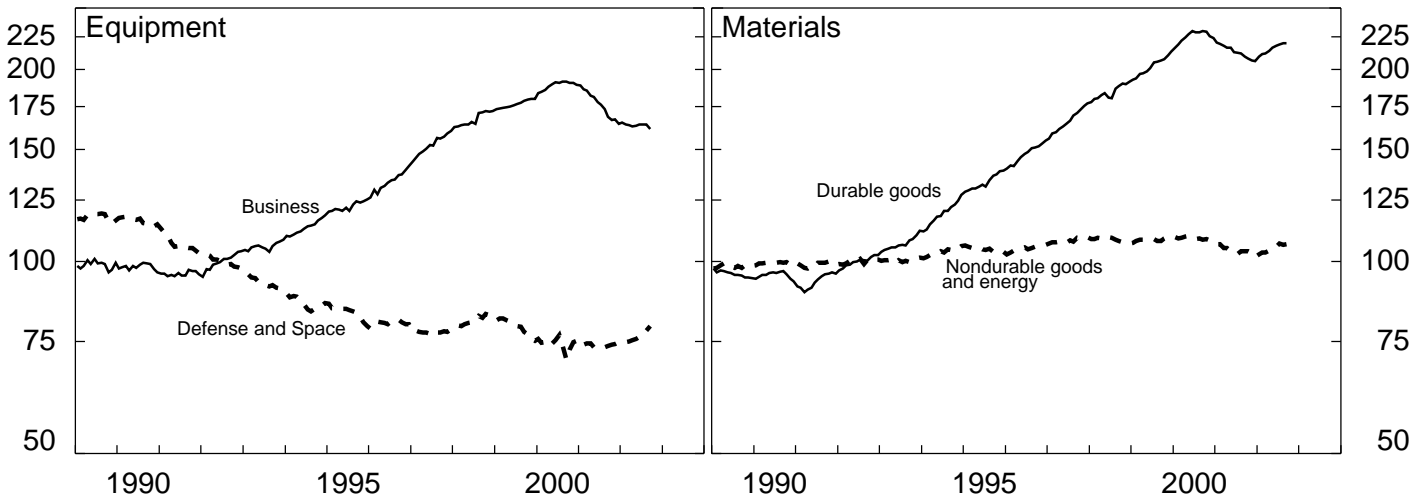
## Industrial Production, Market Groups

Ratio scale, 1992=100



Ratio scale, 1992=100

Ratio scale, 1992=100



**Table 1A**  
**INDUSTRIAL PRODUCTION: MARKET GROUPS**

Item	2001 IP Proportion <sup>1</sup>	Index, 1992=100											
		Seasonally Adjusted						Not seasonally adjusted					
		2002 Apr.	May	June <sup>r</sup>	July <sup>r</sup>	Aug. <sup>r</sup>	Sept. <sup>p</sup>	2002 Apr.	May	June <sup>r</sup>	July <sup>r</sup>	Aug. <sup>r</sup>	Sept. <sup>p</sup>
<b>Total index</b>	100.00	138.8	139.4	140.3	141.1	140.6	140.5	137.9	138.0	143.5	136.4	143.6	144.2
<b>Products, total</b>	61.89	127.0	127.3	128.0	128.5	127.9	127.6	126.3	126.0	130.5	124.9	131.2	131.0
<b>Final products</b>	46.44	129.2	129.3	130.2	130.9	130.1	129.5	128.7	128.2	132.1	124.6	132.6	132.0
<b>Consumer goods</b>	30.46	121.4	121.4	122.3	123.2	121.8	121.7	120.6	119.7	123.8	117.1	124.4	123.7
<b>Durable</b>	6.50	157.9	159.0	161.1	164.3	162.3	160.8	168.1	165.5	168.4	133.3	160.4	162.9
Automotive products	3.49	162.4	162.7	169.0	174.6	173.8	172.2	174.5	174.1	180.7	125.1	173.3	176.2
Autos and trucks	2.32	179.0	178.2	185.8	197.1	195.1	192.9	196.2	196.6	202.5	118.7	194.2	196.4
Autos	.69	104.1	102.3	104.5	107.2	102.0	95.5	113.1	111.7	115.4	69.5	102.4	98.8
Trucks	1.63	258.9	259.1	272.4	292.7	294.0	296.0	284.6	286.9	295.0	171.1	291.5	299.9
Auto parts and allied goods	1.17	136.2	138.3	142.3	138.7	139.8	139.5	140.1	138.1	146.1	136.5	140.0	143.9
Other durable goods	3.01	151.3	153.3	150.6	150.8	147.3	145.9	158.9	153.8	152.2	142.0	143.6	145.5
Appliances and electronics	.79	299.9	312.8	295.7	290.9	289.2	290.3	297.3	291.8	279.5	263.6	280.4	299.4
Appliances and air cond.	.51	145.1	154.2	141.9	138.9	137.6	138.5	149.9	149.1	138.1	124.3	131.1	139.1
Home electronics	.28	605.6	606.7	607.7	603.8	605.1	604.3	545.0	518.2	538.0	561.3	607.4	657.3
Carpeting and furniture	.81	119.4	119.1	116.0	116.4	112.9	111.7	123.6	116.8	123.1	117.2	116.7	116.3
Miscellaneous	1.41	109.8	110.4	111.5	112.6	109.3	107.6	120.2	116.9	113.6	104.1	103.3	102.6
<b>Nondurable</b>	23.96	112.8	112.6	113.2	113.6	112.5	112.6	109.8	109.2	113.5	112.7	116.0	114.6
Nonenergy	20.57	111.6	111.3	112.2	112.4	111.3	111.3	109.7	110.4	114.7	112.0	116.0	115.4
Foods and tobacco	11.18	109.9	109.3	109.7	109.4	108.0	107.7	107.3	108.2	114.5	109.4	115.3	113.3
Clothing	1.30	74.6	74.5	74.5	74.9	72.4	73.7	74.0	74.9	77.6	74.4	75.5	76.4
Chemical products	5.05	144.7	144.0	146.4	147.9	146.8	147.6	142.4	143.3	145.0	146.2	147.6	149.5
Paper products	3.04	96.7	97.7	98.9	99.1	100.2	99.8	96.9	96.8	97.7	99.3	101.0	101.2
Energy products	3.39	120.8	121.6	120.7	122.4	120.4	121.7	110.7	101.3	105.6	117.5	116.0	110.0
Fuels	1.17	117.7	115.6	114.5	114.2	114.7	113.0	117.4	117.9	117.6	116.6	116.1	114.7
Utilities	2.22	122.1	124.4	123.7	126.3	123.1	125.9	106.7	92.1	98.8	117.5	115.4	107.0
<b>Equipment, total</b>	15.98	141.3	141.6	142.3	142.5	143.0	141.3	141.5	142.0	145.2	136.1	145.0	144.9
<b>Business equipment</b>	13.06	162.9	163.2	163.8	163.9	164.0	161.2	163.2	163.8	167.8	155.6	166.8	166.3
Information processing & related	5.04	266.6	265.1	265.1	264.5	263.8	264.5	258.2	260.8	268.9	271.9	275.3	276.0
Computer and office	1.10	1012.6	1001.1	995.0	1005.3	1016.6	1028.2	954.6	969.8	968.5	1003.0	1026.3	1052.5
Industrial	3.68	113.3	116.5	116.0	115.5	117.3	115.1	113.4	115.6	117.4	112.4	117.8	117.5
Transit	2.93	113.8	111.9	113.2	114.9	111.5	107.5	120.2	117.9	120.0	88.6	110.8	108.4
Autos and trucks	1.36	158.6	159.2	165.4	171.3	166.9	160.2	175.4	175.2	182.8	109.3	166.7	163.1
Other	1.40	132.5	132.1	135.1	134.5	138.5	133.4	133.8	132.2	137.1	131.0	139.3	140.6
<b>Defense and space equipment</b>	2.01	75.3	75.7	76.1	76.7	78.0	79.2	74.9	75.1	75.9	75.3	77.3	79.1
Oil and gas well drilling	.72	102.0	101.4	104.4	104.1	105.4	105.2	101.2	102.2	103.7	104.9	106.7	106.1
Manufactured homes	.19	82.4	84.8	84.3	84.4	84.0	83.5	89.0	89.9	93.8	76.2	94.6	87.0
<b>Intermediate products</b>	15.45	120.3	120.9	121.5	121.4	121.3	121.8	119.1	119.4	125.5	125.0	127.0	127.5
Construction supplies	6.56	138.3	139.6	140.5	138.3	139.6	140.0	138.9	141.3	148.9	142.8	146.0	146.3
Business supplies	8.89	109.6	109.9	110.2	111.3	110.4	111.0	107.3	106.3	111.6	114.5	115.7	116.3
<b>Materials</b>	38.11	158.8	160.2	161.3	162.6	162.6	162.8	157.7	158.4	165.7	156.0	164.6	167.1
<b>Durable</b>	22.35	214.2	216.2	218.0	219.1	219.9	219.8	212.0	213.6	225.6	204.1	221.7	229.6
Consumer parts	4.65	165.8	166.0	167.5	171.7	171.3	169.7	173.6	171.3	172.2	137.3	175.1	175.9
Equipment parts	8.09	444.9	452.7	456.9	456.2	461.0	461.8	418.6	428.5	479.7	428.2	453.3	493.2
Semiconductors, printed circuit boards, and oth. elec. comps.	2.97	2813.7	2927.2	2979.9	3017.4	3045.9	3097.7	2416.4	2573.1	3349.1	2632.1	2935.7	3599.5
Other	9.60	122.7	123.6	124.5	124.4	124.7	124.9	122.7	123.5	127.6	123.8	127.1	128.5
Basic metals	2.69	108.1	109.9	111.2	109.4	112.8	112.8	110.5	110.4	112.8	107.1	111.1	113.5
<b>Nondurable</b>	7.63	104.8	107.1	107.1	107.9	108.1	108.3	107.4	106.8	108.5	105.6	108.0	108.6
Textile	.75	88.8	89.7	87.9	91.7	88.8	88.5	92.6	94.2	91.0	85.6	90.3	87.9
Paper	1.56	105.8	109.1	106.4	109.1	109.9	110.3	108.0	107.0	107.8	107.8	109.9	110.1
Chemical	3.50	105.9	108.6	108.9	109.5	110.1	110.5	108.2	108.5	109.8	107.8	109.5	110.9
Other	1.82	109.5	110.9	113.2	111.3	111.7	112.0	112.3	109.2	115.0	109.1	111.8	112.7
<b>Energy</b>	8.13	103.0	102.4	103.3	105.2	103.8	104.2	99.8	100.3	105.3	108.3	108.2	103.6
Primary	5.46	97.6	96.5	97.8	98.6	98.1	97.9	95.7	95.8	99.7	99.5	99.4	96.1
Converted fuel	2.67	113.3	113.4	113.8	117.8	114.6	116.3	107.2	108.5	115.6	125.0	124.7	117.7
<b>SPECIAL AGGREGATES</b>													
<b>Total excluding:</b>													
Autos and trucks	96.31	137.8	138.5	139.2	139.6	139.3	139.3	136.3	136.4	141.8	137.4	142.3	143.0
Motor vehicles and parts	93.65	136.7	137.4	137.9	138.4	138.0	138.0	134.9	135.0	140.6	137.5	141.0	141.6
Computers	98.45	132.8	133.4	134.3	135.0	134.6	134.4	132.1	132.1	137.5	130.5	137.4	137.9
Computers and semiconductors <sup>2</sup>	94.91	118.1	118.5	119.2	119.8	119.4	119.2	118.0	117.8	121.6	116.2	122.1	121.8
Computers, communications eq. and semiconductors	93.38	115.8	116.2	117.0	117.6	117.2	117.0	115.7	115.5	119.3	114.0	119.9	119.6
<b>Consumer goods excluding:</b>													
Autos and trucks	28.14	118.2	118.2	118.7	119.0	117.7	117.7	116.3	115.3	119.3	117.3	120.5	119.6
Energy	27.07	121.4	121.4	122.5	123.3	122.0	121.7	121.8	121.9	126.0	117.1	125.5	125.4
<b>Business equipment excluding:</b>													
Autos and trucks	11.70	163.1	163.3	163.1	162.4	163.1	160.9	160.9	161.6	165.0	161.9	166.3	166.2
Computer and office equipment	11.96	134.0	134.4	135.1	135.0	135.0	132.4	135.0	135.3	138.9	127.6	137.4	136.6
<b>Materials excluding:</b>													
Energy	29.98	176.9	179.1	180.3	181.2	181.8	181.9	176.7	177.4	185.5	171.1	182.9	188.0

1. The IP proportion data are estimates of the industries' relative contributions to overall IP growth in the following year.

2. Semiconductors include related electronic components.

**Table 1B**  
**INDUSTRIAL PRODUCTION: MARKET GROUPS**

Percent change

Item	2000 Q4 to 2001 Q4	Seasonally adjusted annual rate				Seasonally adjusted				Not seasonally adjusted				Sept. 01 to Sept. 02
		2001 Q4	2002 Q1	Q2 <sup>r</sup>	Q3 <sup>p</sup>	2002 June <sup>r</sup>	July <sup>r</sup>	Aug. <sup>r</sup>	Sept. <sup>p</sup>	2002 June <sup>r</sup>	July <sup>r</sup>	Aug. <sup>r</sup>	Sept. <sup>p</sup>	
<b>Total index</b>	-5.9	-6.7	2.6	4.2	3.6	.6	.5	-.3	-.1	4.0	-4.9	5.2	.4	1.5
<b>Products, total</b>	-5.2	-7.3	1.0	1.4	1.8	.6	.4	-.5	-.2	3.6	-4.3	5.1	-.2	.0
<b>Final products</b>	-5.1	-7.4	.6	.5	1.8	.7	.5	-.6	-.4	3.0	-5.7	6.4	-.4	-.3
<b>Consumer goods</b>	-1.7	-3.6	3.7	1.7	1.9	.8	.7	-1.1	-.1	3.4	-5.4	6.3	-.6	1.5
<b>Durable</b>	-2.3	-7.1	11.2	10.0	8.1	1.4	2.0	-1.3	-.9	1.8	-20.8	20.4	1.5	5.9
Automotive products	3.7	-6.5	13.2	16.1	23.3	3.8	3.3	-.5	-.9	3.8	-30.8	38.5	1.7	12.9
Autos and trucks	7.0	-6.3	16.1	17.1	34.7	4.3	6.1	-1.0	-1.2	3.0	-41.4	63.5	1.2	17.7
Autos	-6	3.0	52.4	-4.2	-7.8	2.1	2.6	-4.8	-6.3	3.3	-39.8	47.3	-3.6	3.1
Trucks	10.3	-9.8	3.5	27.4	55.6	5.1	7.5	.4	.7	2.8	-42.0	70.4	2.9	23.5
Auto parts and allied goods	-2.7	-6.7	7.5	13.9	1.2	2.9	-2.5	.8	-.2	5.8	-6.5	2.6	2.8	3.5
Other durable goods	-8.6	-8.0	8.8	2.8	-9.4	-1.8	.1	-2.4	-.9	-1.0	-6.7	1.1	1.3	-2.6
Appliances and electronics	-6.6	.2	30.6	.0	-15.8	-5.5	-1.6	-.6	.4	-4.2	-5.7	6.4	6.8	.7
Appliances and air cond.	3.5	-8.2	28.6	6.4	-21.7	-8.0	-2.1	-.9	.6	-7.4	-10.0	5.4	6.1	-3.3
Home electronics	-18.2	17.8	33.2	-11.1	-1.5	.2	-.6	.2	-.1	3.8	4.3	8.2	8.2	8.8
Carpeting and furniture	-5.6	2.3	.0	.0	-14.3	-2.6	.4	-3.0	-1.0	5.4	-4.8	-.4	-.4	-5.7
Miscellaneous	-11.4	-17.7	2.5	6.3	-2.5	1.0	1.0	-2.9	-1.6	-2.8	-8.4	-.8	-.7	-2.6
<b>Nondurable</b>	-1.5	-2.5	1.7	-.5	.2	.6	.4	-1.0	.1	3.9	-.7	2.9	-1.1	.3
Nonenergy	-.5	-1.7	.5	-2.9	.0	.8	.2	-.9	.0	3.9	-2.4	3.5	-.6	-.6
Foods and tobacco	-.8	.1	4.4	-.6	-4.4	.4	-.2	-1.3	-.3	5.9	-4.5	5.4	-1.7	.0
Clothing	-10.8	-13.1	6.6	-4.1	-4.4	-.1	.6	-3.3	1.8	3.6	-4.1	1.4	1.3	-1.5
Chemical products	6.1	4.5	-1.1	-7.5	6.8	1.7	1.1	-.7	.5	1.2	.8	.9	1.3	1.1
Paper products	-5.3	-12.8	-13.3	-2.9	8.1	1.3	.2	1.0	-.4	.9	1.7	1.7	.2	-5.1
Energy products	-6.8	-7.5	10.2	15.5	1.5	-.7	1.3	-1.6	1.0	4.3	11.3	-1.3	-5.2	5.9
Fuels	.9	4.0	6.5	-1.7	-6.6	-.9	-.3	.5	-1.5	-.3	-.9	-.4	-1.2	-.8
Utilities	-10.7	-13.2	12.2	25.6	5.6	-.5	2.1	-2.6	2.3	7.3	18.9	-1.7	-7.3	9.4
<b>Equipment, total</b>	-11.2	-14.4	-5.3	-1.9	1.5	.5	.1	.3	-1.1	2.3	-6.2	6.5	-.1	-3.9
<b>Business equipment</b>	-12.6	-14.2	-4.4	-2.3	-.6	.4	.1	.0	-1.7	2.4	-7.3	7.2	-.3	-4.3
Information processing & related	-11.5	-5.1	1.3	-4.1	-2.0	.0	-.2	-.3	.2	3.1	1.1	1.3	.2	-.6
Computer and office	-7.3	2.9	33.2	2.7	5.6	-.6	1.0	1.1	1.1	-.1	3.6	2.3	2.6	13.9
Industrial	-14.6	-13.3	-9.8	3.0	2.4	-.5	-.4	1.5	-1.9	1.6	-4.2	4.8	-.2	-3.8
Transit	-13.1	-28.1	-10.0	-9.3	-5.8	1.2	1.5	-2.9	-3.6	1.8	-26.2	25.1	-2.2	-13.7
Autos and trucks	-5.6	-15.9	30.4	20.8	13.2	3.9	3.6	-2.6	-4.0	4.4	-40.2	52.5	-2.2	11.6
Other	-10.6	-16.9	1.3	5.0	6.9	2.2	-.4	3.0	-3.7	3.7	-4.5	6.3	.9	1.3
<b>Defense and space equipment</b>	.2	4.2	2.8	4.4	12.3	.5	.7	1.7	1.6	1.2	-.9	2.7	2.3	7.3
Oil and gas well drilling	-16.0	-56.6	-32.2	-11.1	9.3	2.9	-.3	1.2	-.2	1.5	1.1	1.7	-.6	-25.1
Manufactured homes	4.6	1.7	-38.2	-17.3	.6	-.6	.0	-.4	-.6	4.4	-18.7	24.1	-8.0	-18.8
<b>Intermediate products</b>	-5.4	-7.1	2.2	4.1	2.0	.4	-.1	-.1	.4	5.2	-.4	1.5	.4	.9
Construction supplies	-3.8	-9.3	8.7	5.5	-.4	.7	-1.5	.9	.3	5.4	-4.2	2.3	.2	1.4
Business supplies	-6.6	-5.5	-2.4	3.1	3.9	.3	1.1	-.8	.5	5.0	2.6	1.0	.5	.5
<b>Materials</b>	-6.9	-5.8	5.3	8.8	6.5	.7	.8	.0	.1	4.6	-5.9	5.5	1.5	4.0
<b>Durable</b>	-8.6	-8.3	8.5	10.0	6.5	.8	.5	.4	-.1	5.6	-9.6	8.6	3.6	4.9
Consumer parts	-4.4	-9.3	21.2	9.8	11.2	.9	2.5	-.2	-.9	.6	-20.3	27.5	.5	9.3
Equipment parts	-11.1	-1.1	9.1	12.7	7.4	.9	-.2	1.1	.2	11.9	-10.7	5.9	8.8	7.3
Semiconductors, printed circuit boards, and oth. elec. comps.	-13.7	23.2	47.2	42.6	21.8	1.8	1.3	.9	1.7	30.2	-21.4	11.5	22.6	32.8
Other	-8.1	-13.7	2.1	7.8	3.4	.7	-.1	.2	.2	3.4	-3.0	2.6	1.1	.9
Basic metals	-13.9	-24.3	5.4	6.8	7.2	1.2	-1.6	3.1	.0	2.1	-5.0	3.7	2.2	-.5
<b>Nondurable</b>	-6.1	-2.7	2.6	10.9	6.9	.0	.8	.2	.2	1.6	-2.7	2.2	.6	4.0
Textile	-12.7	-14.7	10.2	5.8	4.2	-1.9	4.3	-3.2	-.3	-3.3	-6.0	5.5	-2.6	-.5
Paper	-5.0	-6.3	-10.7	10.4	10.4	-2.5	2.6	.7	.4	.7	.0	1.9	.2	-.2
Chemical	-7.2	-.2	9.7	15.0	8.7	.3	.6	.6	.3	1.2	-1.9	1.6	1.3	8.2
Other	-1.9	.8	-1.4	5.6	1.7	2.1	-1.7	.4	.2	5.2	-5.1	2.5	.8	1.6
<b>Energy</b>	-3.2	-2.1	-.7	3.3	6.0	1.0	1.8	-1.4	.4	5.0	2.9	-.2	-4.2	1.1
Primary	-1.0	-2.0	-3.7	-.4	3.7	1.3	.8	-.5	-.2	4.1	-.3	-.1	-3.3	-1.6
Converted fuel	-8.2	-2.2	5.4	10.4	9.8	.4	3.4	-2.7	1.5	6.6	8.1	-.2	-5.6	6.4
<b>SPECIAL AGGREGATES</b>														
<b>Total excluding:</b>														
Autos and trucks	-6.1	-6.6	1.9	3.6	2.6	.5	.3	-.2	.0	4.0	-3.1	3.6	.5	.9
Motor vehicles and parts	-6.2	-6.5	1.3	3.2	2.2	.4	.3	-.3	.0	4.1	-2.2	2.5	.4	.6
Computers	-5.8	-6.9	2.2	4.1	3.5	.7	.5	-.3	-.1	4.0	-5.0	5.3	.4	1.3
Computers and semiconductors <sup>1</sup>	-5.4	-7.6	1.0	3.1	3.0	.6	.5	-.4	-.2	3.3	-4.4	5.1	-.3	.4
Computers, communications eq. and semiconductors	-5.0	-7.3	1.3	3.2	3.3	.6	.6	-.4	-.2	3.3	-4.4	5.2	-.3	.6
<b>Consumer goods excluding:</b>														
Autos and trucks	-2.3	-3.3	2.7	.4	-.8	.4	.2	-1.1	.0	3.5	-1.6	2.7	-.7	.1
Energy	-1.0	-3.1	3.0	.2	2.0	.9	.7	-1.0	-.2	3.3	-7.1	7.2	.0	1.0
<b>Business equipment excluding:</b>														
Autos and trucks	-13.4	-14.0	-8.1	-5.1	-2.5	-.1	-.5	.4	-1.3	2.1	-1.9	2.7	-.1	-6.2
Computer and office equipment	-13.2	-15.7	-7.5	-2.8	-1.1	.5	.0	-.1	-1.9	2.7	-8.2	7.7	-.6	-5.9
<b>Materials excluding:</b>														
Energy	-7.9	-6.9	7.0	10.2	6.6	.6	.5	.3	.0	4.6	-7.8	6.9	2.8	4.7

Note—Percent changes shown in the first and last columns are based on seasonally adjusted data.

1. Semiconductors include related electronic components.



**Table 2A**  
**INDUSTRIAL PRODUCTION: INDUSTRY GROUPS**

Item	SIC	2001 IP Proportion <sup>1</sup>	Index, 1992=100											
			Seasonally Adjusted						Not seasonally adjusted					
			2002 Apr.	May	June <sup>r</sup>	July <sup>r</sup>	Aug. <sup>r</sup>	Sept. <sup>p</sup>	2002 Apr.	May	June <sup>r</sup>	July <sup>r</sup>	Aug. <sup>r</sup>	Sept. <sup>p</sup>
<b>Total index</b>		100.00	138.8	139.4	140.3	141.1	140.6	140.5	137.9	138.0	143.5	136.4	143.6	144.2
<b>Manufacturing</b>		86.74	143.4	144.2	145.0	145.7	145.4	145.1	143.5	143.8	149.1	139.8	148.2	149.9
<b>Primary processing</b>		33.26	170.3	172.9	173.8	174.7	175.1	175.3	170.4	171.2	179.4	166.2	176.7	181.2
<b>Advanced processing</b>		53.48	128.7	128.7	129.5	130.0	129.4	128.8	128.8	128.8	132.8	125.4	132.7	133.0
<b>Durable</b>		46.81	177.2	178.4	179.7	180.4	180.8	180.0	178.0	178.6	185.8	167.2	182.5	186.2
Lumber and products	24	2.15	111.6	111.8	113.5	113.2	112.5	113.2	112.6	112.1	118.8	112.1	116.4	117.3
Furniture and fixtures	25	1.57	134.8	134.7	132.5	134.0	133.1	131.6	132.7	133.1	137.9	134.4	142.0	140.6
Stone, clay, and glass products	32	2.66	129.6	130.0	129.9	130.0	129.6	130.2	130.8	131.0	135.3	132.8	134.7	135.6
<b>Primary metals</b>	33	2.93	112.1	115.2	116.2	113.6	117.8	118.1	115.6	116.4	117.9	110.4	116.3	119.1
Iron and steel	331,2	1.51	110.7	117.5	116.2	113.0	119.6	121.9	114.6	119.5	119.2	111.1	117.8	122.3
Raw steel		.06	101.2	100.9	108.4	108.5	113.2	119.0	106.2	103.8	109.9	105.3	111.9	118.6
Nonferrous	333-6,9	1.42	114.1	112.9	116.5	114.7	116.1	114.1	117.2	113.0	116.7	109.9	114.8	115.8
Fabricated metal products	34	5.85	128.2	130.0	130.6	131.5	130.8	129.7	126.4	128.6	133.8	130.1	133.6	133.4
Industrial machinery and equipment	35	7.69	206.8	208.3	208.4	207.1	211.0	208.1	210.8	210.2	211.8	202.2	208.1	210.0
Computer and office equip.	357	1.55	1177.6	1165.2	1158.6	1170.1	1183.2	1196.8	1095.4	1103.5	1096.7	1157.2	1195.5	1232.7
Electrical machinery	36	7.82	507.9	520.1	520.1	518.3	519.3	522.1	476.2	488.4	549.8	485.8	515.6	568.0
Semiconductors and related electronic components	3672-9	3.54	1949.0	2022.5	2054.1	2070.5	2091.3	2126.7	1712.3	1813.1	2278.4	1835.0	2024.6	2418.9
Transportation equipment	37	10.44	129.6	128.8	131.8	134.4	133.9	132.1	136.6	135.0	137.4	101.2	134.0	134.6
Motor vehicles and parts	371	6.35	179.3	178.8	185.5	191.9	191.1	188.1	193.8	192.2	197.2	124.2	192.8	193.7
Autos and light trucks		3.42	171.1	170.3	177.4	187.9	185.8	183.2	187.3	187.7	193.4	113.8	185.0	186.8
Aerospace and misc.	372-6,9	4.10	83.3	82.3	82.0	81.0	80.7	80.1	83.4	81.9	81.9	79.4	79.6	79.9
Instruments	38	4.51	112.2	111.6	111.8	112.7	112.4	113.0	110.3	110.5	114.1	115.6	117.0	117.1
Miscellaneous	39	1.18	115.8	117.8	119.8	119.5	118.6	117.7	116.1	117.1	119.9	115.1	119.0	119.4
<b>Nondurable</b>		39.93	110.5	111.0	111.4	112.0	111.3	111.3	110.1	110.1	113.8	111.7	114.7	114.8
Foods	20	9.66	114.0	113.2	113.6	113.4	112.4	112.2	111.5	111.8	116.7	115.6	118.5	119.4
Tobacco products	21	2.11	94.4	94.5	95.1	94.5	92.2	90.7	91.7	94.0	104.1	84.1	100.4	89.3
Textile mill products	22	1.17	86.7	86.8	85.8	88.1	85.9	85.3	91.6	89.1	91.2	86.4	87.6	86.2
Apparel products	23	1.46	88.3	88.7	88.7	89.3	86.9	87.0	87.8	89.0	90.8	87.9	89.2	89.3
Paper and products	26	3.29	105.3	108.3	107.1	108.7	108.7	109.9	108.0	105.8	108.0	107.4	109.0	109.8
Printing and publishing	27	6.62	94.9	95.3	96.0	96.2	96.4	96.2	93.9	92.9	96.7	99.7	100.9	102.5
Chemicals and products	28	9.75	122.2	123.3	124.2	126.0	125.4	125.9	123.0	123.2	124.8	124.1	125.5	127.2
Petroleum products	29	1.92	116.9	116.0	115.2	115.0	114.9	114.4	116.2	118.6	120.4	120.4	120.2	118.6
Rubber and plastics products	30	3.78	139.2	140.2	142.1	141.9	141.7	141.6	139.1	139.6	144.2	137.6	142.5	143.4
Leather and products	31	.16	59.5	59.2	59.5	61.1	59.1	61.0	59.7	59.8	61.3	57.7	59.6	61.9
<b>Mining</b>		6.19	95.3	95.1	96.0	95.7	96.3	95.3	95.7	96.8	98.5	96.8	99.6	97.3
Metal mining	10	.22	75.3	77.3	79.0	75.6	76.4	77.0	74.9	77.0	81.1	74.2	76.2	77.4
Coal mining	12	.69	101.8	101.7	103.3	101.6	103.1	108.5	101.8	99.3	103.4	94.8	104.3	109.5
Oil and gas extraction	13	4.61	90.3	89.7	90.3	90.6	91.0	88.4	90.5	90.1	90.3	90.3	90.9	87.8
Stone and earth minerals	14	.67	132.5	134.7	136.2	135.4	136.1	136.4	133.2	148.5	157.3	155.1	163.6	155.4
<b>Utilities</b>		7.07	123.9	123.3	124.9	127.8	124.6	127.6	112.5	109.1	119.0	131.3	129.0	121.2
Electric	491,3pt	5.60	126.6	124.4	127.5	130.9	126.9	131.0	112.0	116.5	133.5	149.7	146.8	137.2
Gas	492,3pt	1.47	113.9	119.1	114.9	115.6	115.3	114.2	112.9	80.1	62.9	59.7	59.4	58.7
<b>SPECIAL AGGREGATES</b>														
Computers, communications eq. and semiconductors <sup>2</sup>		6.62	1088.0	1107.5	1117.7	1116.5	1122.9	1135.6	992.8	1025.2	1175.0	1035.6	1103.5	1237.9
<b>Manufacturing excluding:</b>														
Motor vehicles and parts		80.39	141.2	142.1	142.5	142.7	142.5	142.3	140.3	140.7	146.0	141.2	145.4	147.1
Computer and office equipment		85.19	136.4	137.2	138.0	138.6	138.4	138.0	136.7	136.9	142.1	133.0	141.0	142.6
Computers and semiconductors <sup>2</sup>		81.65	119.2	119.8	120.5	120.9	120.7	120.2	120.1	120.1	123.6	116.4	123.2	123.7
Computers, communications eq. and semiconductors <sup>2</sup>		80.12	116.6	117.2	117.8	118.4	118.1	117.7	117.5	117.5	120.9	113.9	120.7	121.1
<b>Memo: Motor vehicle assemblies<sup>3</sup></b>														
Total			12.3	12.1	12.7	13.2	12.9	12.7	13.8	14.3	12.8	8.8	13.2	12.7
Autos			5.2	5.0	5.3	5.4	5.1	4.9	5.8	5.9	5.4	3.8	5.2	4.9
Trucks			7.1	7.0	7.4	7.8	7.8	7.8	8.0	8.4	7.4	5.0	8.0	7.8
Light			6.9	6.8	7.1	7.5	7.6	7.6	7.7	8.0	7.1	4.7	7.7	7.5
Heavy and medium			.3	.3	.3	.3	.3	.2	.3	.3	.3	.3	.3	.2

1. The IP proportion data are estimates of the industries' relative contributions to overall IP growth in the following year.

2. Semiconductors include related electronic components.

3. Millions of units at an annual rate.

Note—Primary processing manufacturing includes textile mill products, paper and products, industrial chemicals, synthetic materials, and fertilizers, petroleum products, rubber and plastics products, lumber and products, primary metals, fabricated metals, stone, clay, and glass products, semiconductors and related electronic components, and motor vehicle parts. Advanced processing manufacturing includes foods, tobacco products, apparel products, printing and publishing, chemical products and other agricultural chemicals, leather and products, furniture and fixtures, industrial machinery and equipment, electrical machinery except semiconductors and related electronic components, transportation equipment except motor vehicle parts, instruments, and miscellaneous manufactures.

**Table 2B**  
**INDUSTRIAL PRODUCTION: INDUSTRY GROUPS**

Percent change

Item	SIC	2000 Q4 to 2001 Q4	Seasonally adjusted annual rate				Seasonally adjusted				Not seasonally adjusted				Sept. 01 to Sept. 02
			2001 Q4	2002 Q1	Q2 <sup>r</sup>	Q3 <sup>p</sup>	2002 June <sup>r</sup>	July <sup>r</sup>	Aug. <sup>r</sup>	Sept. <sup>p</sup>	2002 June <sup>r</sup>	July <sup>r</sup>	Aug. <sup>r</sup>	Sept. <sup>p</sup>	
<b>Total index</b>		-5.9	-6.7	2.6	4.2	3.6	.6	.5	-3	-1	4.0	-4.9	5.2	.4	1.5
<b>Manufacturing</b>		-6.1	-6.3	3.0	3.6	3.3	.6	.4	-2	-3	3.7	-6.2	6.0	1.1	1.5
<b>Primary processing</b>		-7.2	-6.1	8.8	10.8	6.4	.6	.5	.2	.2	4.8	-7.4	6.3	2.6	5.2
<b>Advanced processing</b>		-5.4	-6.4	-.4	-.7	1.3	.6	.4	-.4	-.5	3.1	-5.5	5.8	.2	-.8
<b>Durable</b>		-8.3	-9.2	4.7	5.4	4.4	.7	.4	.3	-.5	4.0	-10.0	9.2	2.0	2.2
Lumber and products	24	-1.2	-9.4	-1.6	.2	2.3	1.5	-.3	-.6	.7	6.0	-5.6	3.8	.8	-2.7
Furniture and fixtures	25	-7.7	-8.0	-.4	-1.4	-3.3	-1.6	1.1	-.7	-1.1	3.6	-2.6	5.7	-1.0	-2.6
Stone, clay, and glass products	32	-3.0	-5.3	-2.2	6.8	.3	-.1	.1	-.3	.5	3.2	-1.8	1.5	.7	.2
Primary metals	33	-13.7	-26.4	11.2	9.0	7.2	.8	-2.2	3.6	.3	1.3	-6.4	5.4	2.4	1.4
Iron and steel	331,2	-13.0	-34.7	21.8	21.8	12.1	-1.1	-2.8	5.8	1.9	-.3	-6.8	6.1	3.8	8.2
Raw steel		-13.3	-41.5	35.9	11.2	44.8	7.4	.1	4.4	5.1	5.9	-4.1	6.2	6.1	12.5
Nonferrous	333-6,9	-14.5	-16.4	.9	-3.7	1.6	3.2	-1.5	1.2	-1.7	3.3	-5.8	4.5	.8	-5.8
Fabricated metal products	34	-6.4	-7.1	.6	4.8	3.2	.4	.7	-.5	-.8	4.1	-2.8	2.7	-.1	.8
Industrial machinery and equipment	35	-11.7	-12.0	7.0	4.3	1.8	.0	-.6	1.9	-1.4	.8	-4.6	3.0	.9	1.5
Computer and office equip.	357	-8.2	3.6	36.1	4.9	5.7	-.6	1.0	1.1	1.1	-.6	5.5	3.3	3.1	15.6
Electrical machinery	36	-14.3	.3	11.7	14.1	3.0	.0	-.4	.2	.6	12.6	-11.6	6.1	10.2	7.7
Semiconductors and related electronic components	3672-9	-14.9	14.4	39.0	34.5	18.6	1.6	.8	1.0	1.7	25.7	-19.5	10.3	19.5	26.8
Transportation equipment	37	-3.8	-13.3	4.8	5.2	10.7	2.3	1.9	-.4	-1.3	1.8	-26.4	32.5	.4	2.8
Motor vehicles and parts	371	-.4	-10.1	22.7	18.2	21.8	3.7	3.5	-.4	-1.6	2.6	-37.0	55.3	.5	14.5
Autos and light trucks		5.2	-6.4	18.2	15.8	32.8	4.2	5.9	-1.1	-1.4	3.1	-41.2	62.5	1.0	17.0
Aerospace and misc.	372-6,9	-8.9	-18.2	-20.4	-15.9	-9.1	-.4	-1.2	-.4	-.7	.1	-3.1	.2	.4	-15.7
Instruments	38	-4.4	-1.8	-1.3	-4.0	3.0	.2	.8	-.2	.6	3.3	1.3	1.2	.1	.2
Miscellaneous	39	-8.8	-14.5	8.8	9.2	2.9	1.7	-2	-.8	-.8	2.5	-4.0	3.4	.3	2.8
<b>Nondurable</b>		-3.5	-2.8	1.2	1.6	2.0	.4	.5	-.6	.0	3.4	-1.8	2.6	.1	.8
Foods	20	-.7	1.5	2.9	-1.0	-3.2	.4	-.2	-.9	-.1	4.4	-.9	2.5	.8	.5
Tobacco products	21	-1.2	-6.3	10.4	.9	-8.9	.6	-.6	-2.5	-1.6	10.7	-19.2	19.4	-11.0	-2.1
Textile mill products	22	-10.7	-12.9	12.6	7.4	-.1	-1.2	2.7	-2.5	-.6	2.4	-5.3	1.4	-1.6	-.7
Apparel products	23	-10.7	-16.1	5.2	-2.2	-3.9	.0	.6	-2.7	.1	2.0	-3.2	1.5	.1	-2.7
Paper and products	26	-6.1	-9.5	-5.3	10.1	8.6	-1.1	1.5	.0	1.1	2.1	-.6	1.5	.7	.3
Printing and publishing	27	-7.9	-7.0	-10.5	-2.5	3.7	.7	.2	.2	-.3	4.1	3.1	1.2	1.5	-3.6
Chemicals and products	28	-.2	4.2	1.9	1.1	8.3	.7	1.4	-.4	.4	1.3	-.5	1.2	1.3	4.0
Petroleum products	29	-1.2	1.8	9.2	-.7	-4.4	-.6	-.2	-.1	-.4	1.5	.1	-.2	-1.4	2.0
Rubber and plastics products	30	-5.2	-8.7	7.9	11.4	3.5	1.4	-.2	-.2	.0	3.3	-4.6	3.6	.6	3.8
Leather and products	31	-14.8	-17.4	6.6	-4.6	7.0	.5	2.8	-3.3	3.3	2.4	-5.8	3.3	3.8	-.6
<b>Mining</b>		-2.4	-11.8	-9.1	-3.5	1.3	1.0	-.3	.6	-1.1	1.8	-1.8	2.9	-2.3	-6.6
Metal mining	10	-13.4	-29.4	-18.5	-3.1	-4.4	2.2	-4.2	1.0	.8	5.3	-8.5	2.7	1.7	-15.6
Coal mining	12	-.5	-18.2	-10.1	-4.6	8.5	1.7	-1.7	1.6	5.1	4.1	-8.3	10.1	5.0	-2.9
Oil and gas extraction	13	-2.5	-11.0	-11.0	-5.0	-.5	.7	.3	.4	-2.8	.2	.0	.7	-3.4	-8.9
Stone and earth minerals	14	1.1	-5.1	10.1	5.1	4.6	1.2	-.6	.5	.2	5.9	-1.4	5.5	-5.0	3.9
<b>Utilities</b>		-6.1	-7.2	8.3	17.1	8.6	1.3	2.3	-2.5	2.4	9.1	10.3	-1.8	-6.1	8.0
Electric	491,3pt	-4.1	-3.4	3.2	14.0	11.5	2.5	2.7	-3.0	3.2	14.6	12.2	-1.9	-6.5	8.3
Gas	492,3pt	-13.1	-20.2	31.1	29.8	-3.2	-3.5	.6	-.3	-1.0	-21.5	-5.1	-.5	-1.3	6.8
<b>SPECIAL AGGREGATES</b>															
Computers, communications eq. and semiconductors <sup>1</sup>		-15.6	1.3	23.7	18.6	7.7	.9	-.1	.6	1.1	14.6	-11.9	6.6	12.2	14.2
<b>Manufacturing excluding:</b>															
Motor vehicles and parts		-6.6	-6.0	1.6	2.4	1.7	.3	.1	-.1	-.1	3.8	-3.3	2.9	1.2	.5
Computer and office equipment		-6.1	-6.5	2.5	3.6	3.2	.6	.4	-.2	-.3	3.8	-6.4	6.0	1.1	1.3
Computers and semiconductors <sup>1</sup>		-5.6	-7.3	1.1	2.4	2.6	.5	.4	-.2	-.4	2.9	-5.8	5.9	.3	.3
Computers, communications eq. and semiconductors <sup>1</sup>		-5.1	-6.9	1.5	2.5	3.0	.5	.5	-.2	-.4	2.9	-5.8	6.0	.3	.6

1. Semiconductors include related electronic components.

Note—Percent changes shown in the first and last columns are based on seasonally adjusted data.



**Table 3**  
**CAPACITY UTILIZATION: MANUFACTURING, MINING, AND UTILITIES**

Percent of capacity, seasonally adjusted

Item	SIC	2001 Proportion	1967- 2001 Ave.	1978- 1980 High	1982 Low	1988- 1989 High	1990- 1991 Low	1994- 1995 High	2001 Sept.	2002 Apr.	May	June <sup>r</sup>	July <sup>r</sup>	Aug. <sup>r</sup>	Sept. <sup>p</sup>
<b>Total industry</b>		100.00	81.9	87.3	71.1	85.4	78.1	84.5	75.5	75.3	75.6	76.0	76.3	76.0	75.9
<b>Manufacturing</b>		87.62	80.9	86.9	69.0	85.7	76.6	84.1	73.7	73.6	74.0	74.3	74.6	74.4	74.2
<b>Primary processing</b>		33.80	82.0	88.6	65.7	88.3	76.7	88.8	74.4	75.4	76.4	76.7	77.0	77.0	77.1
<b>Advanced processing</b>		53.82	80.3	86.3	71.0	84.2	76.6	81.3	73.3	72.5	72.4	72.8	73.1	72.7	72.3
<b>Durable</b>		49.11	79.4	87.7	63.9	84.6	73.1	83.7	71.0	70.8	71.2	71.7	71.8	71.9	71.5
Lumber and products	24	2.14	82.4	87.9	60.8	93.6	75.5	88.3	78.2	74.7	74.8	75.9	75.6	75.1	75.5
Furniture and fixtures	25	1.57	81.2	85.5	68.9	86.6	72.5	84.3	72.6	72.4	72.3	71.1	71.9	71.4	70.6
Stone, clay, and glass products	32	2.47	78.9	88.0	64.3	83.5	69.7	82.2	79.5	78.6	78.7	78.5	78.5	78.1	78.4
Primary metals	33	2.88	81.6	94.2	45.1	92.7	73.7	95.4	77.4	75.6	77.9	78.9	77.6	80.8	81.4
Iron and steel	331,2	1.50	81.3	95.8	37.0	95.2	71.8	98.8	76.9	77.7	83.1	82.8	81.2	86.7	89.1
Raw steel		.06	81.1	95.8	35.2	92.7	71.5	98.3	79.6	79.0	79.5	86.2	87.1	91.9	97.5
Nonferrous	333-6,9	1.37	82.1	91.1	60.1	89.3	74.2	92.2	77.8	73.2	72.4	74.8	73.6	74.5	73.3
Primary copper	3331	.03	75.5	81.5	42.1	86.3	73.5	101.1	72.7	69.6	71.5	71.9	70.9	72.9	
Primary aluminum	3334	.10	87.6	97.6	58.6	100.4	97.3	83.7	58.3	60.9	62.1	64.0	65.6	64.6	
Fabricated metal products	34	6.06	77.8	83.9	63.7	82.0	71.9	85.2	71.4	71.0	72.0	72.2	72.7	72.3	71.6
Industrial machinery and equipment	35	8.29	81.0	93.2	64.0	85.4	72.3	87.2	68.6	68.7	69.2	69.2	68.7	70.0	69.0
Computer and office equip.	357	2.05	80.7	92.6	65.5	86.9	66.9	85.3	61.6	67.1	65.9	64.9	65.0	65.2	65.4
Electrical machinery	36	9.17	81.1	89.4	71.6	84.0	75.0	90.6	64.8	66.0	67.2	66.8	66.1	65.8	65.8
Semiconductors and related electronic components	3672-9	4.55	79.6	91.6	75.7	81.1	75.6	91.0	60.0	66.2	67.9	68.1	67.8	67.6	67.9
Transportation equipment	37	10.77	76.0	84.8	57.2	85.8	68.5	76.8	72.6	72.7	72.2	73.8	75.2	74.8	73.7
Motor vehicles and parts	371	6.47	77.0	95.0	45.5	89.1	55.9	85.1	74.0	79.7	79.3	82.1	84.8	84.3	82.8
Autos and light trucks <sup>1</sup>		3.31	94.6	106.0	40.6	92.3	53.3	86.4	78.0	83.3	82.7	85.8	90.6	89.2	87.7
Aerospace and misc.	372-6,9	4.29	75.1	81.9	66.6	87.3	79.2	69.0	70.3	61.8	61.0	60.8	60.2	60.0	59.6
Instruments	38	4.57	81.1	92.7	78.4	81.4	77.2	78.3	72.7	72.5	72.1	72.3	72.9	72.7	73.2
Miscellaneous	39	1.19	76.0	79.4	65.4	79.0	71.7	80.7	72.4	72.9	74.1	75.2	75.0	74.3	73.6
<b>Nondurable</b>		38.51	83.0	87.5	76.4	87.3	80.7	84.6	77.3	77.3	77.6	77.9	78.3	77.8	77.7
Foods	20	9.11	82.6	84.6	79.1	85.4	82.7	84.0	78.2	79.4	78.8	79.1	78.9	78.1	77.9
Textile mill products	22	1.20	85.2	91.2	72.3	90.4	77.7	92.5	74.1	76.3	76.6	75.9	78.1	76.3	76.0
Apparel products	23	1.60	80.6	87.5	77.5	85.1	75.5	85.9	66.6	66.7	67.0	67.0	67.5	65.7	65.8
Paper and products	26	3.19	88.3	96.1	80.6	93.5	85.0	92.0	78.9	75.8	78.0	77.2	78.4	78.5	79.4
Pulp and paper	261-3	1.11	92.0	98.3	82.0	98.0	89.9	97.4	83.5	80.9	83.9	82.4	84.1	83.7	
Printing and publishing	27	6.61	84.9	93.9	82.0	91.7	79.6	82.2	73.4	70.3	70.7	71.3	71.6	71.9	71.9
Chemicals and products	28	9.60	79.2	84.6	69.9	86.2	79.3	79.9	76.3	76.7	77.2	77.6	78.5	78.0	78.1
Plastics materials	2821	.79	86.1	90.9	63.4	97.0	74.8	103.0	75.8	80.4	85.2	84.2			
Synthetic fibers	2823,4	.24	84.4	98.6	64.4	99.7	77.6	90.4	74.1	80.3	82.2	79.4	84.5	82.0	
Petroleum products	29	1.63	87.5	90.0	66.8	88.5	85.1	92.9	91.5	95.0	94.3	93.6	93.4	93.2	92.8
Rubber and plastics products	30	3.64	84.5	91.2	72.7	89.6	77.4	91.4	77.8	78.8	79.4	80.4	80.2	80.1	80.0
Leather and products	31	.17	80.6	92.1	75.8	83.3	76.1	85.5	68.9	69.4	69.2	69.8	71.9	69.7	72.2
<b>Mining</b>		6.14	87.6	96.0	80.3	88.0	87.0	89.3	90.9	84.4	84.2	85.1	84.8	85.3	84.4
Metal mining	10	.22	79.4	87.9	44.4	89.4	79.9	90.0	79.2	66.4	68.3	69.9	67.1	68.0	68.7
Coal mining	12	.60	86.7	99.4	76.6	91.5	83.4	88.4	86.4	78.5	78.4	79.8	78.4	79.7	83.8
Oil and gas extraction	13	4.75	88.7	97.3	82.3	88.2	88.7	90.1	92.4	85.2	84.6	85.2	85.4	85.8	83.3
Oil and gas well drilling	138	.70	74.2	104.3	50.9	69.3	60.0	76.9	77.3	54.6	54.2	55.8	55.6	56.3	56.2
Stone and earth minerals	14	.57	84.7	92.7	63.3	89.0	79.4	90.4	86.3	86.8	88.2	89.2	88.6	89.0	89.2
<b>Utilities</b>		6.24	87.6	89.1	75.9	92.6	83.4	92.5	85.1	87.0	86.3	87.1	88.8	86.4	88.2
Electric	491,3pt	4.71	89.7	88.2	78.9	95.0	87.1	96.1	87.5	88.4	86.6	88.4	90.4	87.4	89.8
Gas	492,3pt	1.53	81.8	93.7	69.1	85.0	67.1	87.6	78.7	83.9	87.7	84.6	85.1	84.9	84.0
<b>SPECIAL AGGREGATES</b>															
Computers, communications eq. and semiconductors <sup>2</sup>		8.52	80.0	90.9	77.3	81.9	72.4	88.2	60.7	63.8	64.4	64.4	63.7	63.5	63.6
Manufacturing ex. computers, communications eq., and semiconductors <sup>2</sup>		79.10	81.0	87.0	68.0	86.1	76.8	83.8	75.3	75.0	75.4	75.8	76.1	75.9	75.7

1. Series begins in 1977.

2. Semiconductors include related electronic components.

Note—Primary processing manufacturing includes textile mill products, paper and products, industrial chemicals, synthetic materials, and fertilizers, petroleum products, rubber and plastics products, lumber and products, primary metals, fabricated metals, stone, clay, and glass products, semiconductors and related electronic components, and motor vehicle parts. Advanced processing manufacturing includes foods, tobacco products, apparel products, printing and publishing, chemical products and other agricultural chemicals, leather and products, furniture and fixtures, industrial machinery and equipment, electrical machinery except semiconductors and related electronic components, transportation equipment except motor vehicle parts, instruments, and miscellaneous manufactures.

**Table 4**  
**INDUSTRIAL CAPACITY: MANUFACTURING, MINING, AND UTILITIES**

Item	SIC	Percent change								Capacity indexes						
		Annual rate			Fourth quarter to fourth quarter					Percent of 1992 output						
		1967- 2002 Ave.	1967- 1975 Ave.	1975- 2002 Ave.	1998	1999	2000	2001	2002 <sup>p</sup>	2001 Sept.	2002 Apr.	May	June	July	Aug.	Sept.
<b>Total industry</b>		3.1	3.8	2.9	6.4	3.9	4.0	1.7	1.0	183.3	184.4	184.5	184.7	184.8	185.0	185.2
<b>Manufacturing</b>		3.4	4.0	3.3	7.2	4.5	4.7	1.6	1.0	193.8	194.8	194.9	195.1	195.3	195.5	195.6
<b>Primary processing</b>		3.8	4.4	3.7	9.8	5.0	7.8	2.7	1.6	224.1	225.9	226.2	226.6	226.9	227.2	227.6
<b>Advanced processing</b>		3.2	3.7	3.0	5.5	4.2	2.9	.9	.6	177.0	177.6	177.7	177.8	177.8	177.9	178.0
<b>Durable</b>		4.2	3.7	4.3	10.4	6.6	8.1	3.0	1.6	247.9	250.1	250.4	250.8	251.1	251.5	251.9
Lumber and products	24	1.9	2.9	1.6	4.1	.5	2.1	1.0	.6	148.9	149.5	149.6	149.6	149.7	149.8	149.9
Furniture and fixtures	25	3.3	4.5	2.8	9.2	4.5	3.1	.5	.2	186.1	186.2	186.2	186.3	186.3	186.4	186.4
Stone, clay, and glass products	32	1.6	2.5	1.3	3.8	2.9	2.6	1.9	1.6	163.5	165.0	165.2	165.4	165.7	165.9	166.1
Primary metals	33	.4	1.7	-1	3.4	3.0	.3	-6	-4.4	150.5	148.4	147.8	147.2	146.5	145.8	145.1
Iron and steel	331,2	-.4	.7	-.8	2.8	1.9	-.1	-1.5	-8.1	146.6	142.5	141.5	140.3	139.1	137.9	136.7
Raw steel		-1.0	.3	-1.4	2.5	1.7	-.8	-2.8	-9.5	132.9	128.1	127.0	125.8	124.5	123.3	122.0
Nonferrous	333-6,9	1.7	3.8	1.1	4.4	4.4	1.0	.5	-.2	155.7	155.9	155.9	155.8	155.8	155.7	155.7
Primary copper	3331	.1	1.8	-.4	8.3	-1.2	-7.5	-5.3	-5.0	130.5	126.7	126.1	125.6	125.0	124.5	123.9
Primary aluminum	3334	1.1	5.2	-.2	.0	1.3	.2	.4	.5	106.3	106.6	106.7	106.7	106.8	106.8	106.8
Fabricated metal products	34	2.0	3.1	1.7	7.0	2.0	2.8	.7	.6	180.2	180.5	180.6	180.7	180.9	181.0	181.1
Industrial machinery and equipment	35	5.7	4.7	6.0	9.9	11.4	8.5	2.6	.7	299.2	300.9	301.1	301.3	301.4	301.6	301.7
Computer and office equip.	357	21.6	12.0	25.0	24.6	46.1	37.6	9.6	9.7	1682.6	1755.2	1769.2	1784.2	1799.6	1815.4	1831.4
Electrical machinery	36	10.0	5.9	11.4	27.7	16.3	30.8	9.9	6.8	748.0	769.7	774.3	779.1	784.1	789.1	794.1
Semiconductors and related electronic components	3672-9	21.4	13.1	24.2	56.0	27.6	54.3	16.8	13.7	2796.0	2943.9	2977.8	3014.5	3052.7	3091.9	3131.5
Transportation equipment	37	2.7	3.0	2.6	5.4	2.3	1.8	1.5	1.1	177.1	178.4	178.6	178.7	178.9	179.0	179.2
Motor vehicles and parts	371	3.5	4.4	3.2	6.3	3.2	2.3	2.6	2.4	222.0	225.0	225.4	225.9	226.3	226.7	227.2
Autos and light trucks <sup>1</sup>					6.0	2.9	2.7	3.8	4.2	200.8	205.4	206.0	206.7	207.5	208.2	208.9
Aerospace and misc.	372-6,9	1.5	1.1	1.7	4.0	1.1	1.1	-.2	-.6	135.2	134.9	134.8	134.7	134.6	134.6	134.5
Instruments	38	4.3	7.6	3.3	6.9	2.7	1.1	.1	-.5	155.0	154.8	154.7	154.6	154.6	154.5	154.4
Miscellaneous	39	2.1	4.4	1.3	2.4	2.9	.7	.2	1.4	158.1	158.8	159.0	159.2	159.5	159.7	159.9
<b>Nondurable</b>		2.5	4.3	1.9	3.2	1.7	.4	-.2	.2	142.9	143.0	143.0	143.0	143.1	143.1	143.2
Foods	20	2.2	3.0	2.0	2.4	2.7	.6	.4	.9	142.9	143.5	143.6	143.7	143.8	143.9	144.1
Textile mill products	22	1.4	4.4	.4	-1.1	-1.1	-2.2	-3.3	-3.2	116.0	113.7	113.4	113.1	112.8	112.5	112.2
Apparel products	23	1.0	2.3	.6	2.3	-.1	-.2	-2.1	-1.2	134.1	132.5	132.4	132.3	132.2	132.2	132.1
Paper and products	26	2.6	3.9	2.2	2.7	1.5	1.0	.6	-.6	138.9	138.9	138.8	138.7	138.6	138.5	138.4
Pulp and paper	261-3	2.1	2.9	1.9	.3	1.2	1.0	.6	-1.1	125.6	125.5	125.4	125.2	125.0	124.9	124.7
Printing and publishing	27	2.4	3.0	2.3	3.2	2.4	-.4	-.6	-1.9	135.9	135.0	134.8	134.6	134.3	134.0	133.7
Chemicals and products	28	3.5	6.8	2.5	5.3	2.1	.7	.4	2.1	158.5	159.4	159.7	160.0	160.4	160.7	161.1
Plastics materials	2821	5.8	12.7	3.7	5.5	3.2	1.8	1.3	.8	153.1	154.0	154.1	154.2	154.3	154.4	154.5
Synthetic fibers	2823,4	3.0	9.7	.9	3.8	-.3	-4.9	-7.3	2.1	112.9	110.8	111.0	111.4	111.8	112.3	112.8
Petroleum products	29	1.4	4.2	.6	2.2	1.6	.5	.7	.6	122.5	123.0	123.0	123.1	123.2	123.2	123.3
Rubber and plastics products	30	5.1	8.4	4.1	5.3	4.0	3.3	1.9	.8	175.4	176.6	176.7	176.8	176.9	177.0	177.1
Leather and products	31	-3.4	-1.5	-4.0	-3.8	-2.6	-4.8	-7.3	-4.5	89.2	85.8	85.5	85.3	85.0	84.8	84.6
<b>Mining</b>		.0	-.1	.1	-.6	-2.4	-1.9	.6	.4	112.3	112.9	112.9	112.9	112.9	112.9	112.9
Metal mining	10	.9	.5	1.0	-.1	-1.1	-2.4	-2.8	-2.7	115.2	113.5	113.2	112.9	112.7	112.4	112.1
Coal mining	12	2.1	2.4	2.0	.4	.4	1.3	1.2	-.2	129.3	129.7	129.6	129.6	129.5	129.4	129.4
Oil and gas extraction	13	-.6	-1.0	-.5	-1.8	-3.4	-2.2	.8	.8	105.0	105.9	106.0	106.0	106.0	106.1	106.1
Oil and gas well drilling	138	.7	.8	.7	-1.1	-1.7	.9	7.2	1.7	181.5	187.0	187.1	187.2	187.2	187.1	187.1
Stone and earth minerals	14	1.4	2.6	1.0	3.0	1.7	.5	.7	.5	152.1	152.6	152.7	152.7	152.8	152.9	152.9
<b>Utilities</b>		2.8	6.1	1.7	.1	2.4	2.9	5.1	3.9	138.7	142.5	143.0	143.4	143.8	144.2	144.6
Electric	491,3pt	3.7	7.8	2.4	.2	2.4	3.2	6.4	5.1	138.2	143.1	143.7	144.3	144.8	145.3	145.8
Gas	492,3pt	.3	2.3	-.3	.6	.2	-.2	-.2	.3	135.7	135.8	135.8	135.8	135.9	135.9	136.0
<b>SPECIAL AGGREGATES</b>																
Computers, communications eq. and semiconductors <sup>2</sup>		17.2	9.5	19.9	36.6	28.6	42.9	12.7	10.1	1638.3	1705.9	1720.4	1735.9	1752.1	1768.7	1785.5
Manufacturing ex. computers, communications eq., and semiconductors <sup>2</sup>		2.3	3.7	1.8	4.4	2.0	1.0	.3	.2	155.3	155.5	155.5	155.5	155.5	155.6	155.6

p. Preliminary estimate for current year.

1. Series begins in 1977.

2. Semiconductors include related electronic components.

**Table 5A**  
**INDUSTRIAL PRODUCTION, CAPACITY AND UTILIZATION FOR TOTAL INDUSTRY: HISTORICAL DATA**

Seasonally adjusted

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
<b>Industrial Production, Percent Change<sup>1</sup></b>																	
1990	-.5	.5	.5	-.6	.4	.0	.0	.2	.1	-.6	-1.3	-.6	2.0	.6	1.0	-5.8	-.2
1991	-.5	-.8	-.9	.3	.8	1.2	.1	.1	1.0	-.1	-.1	-.6	-8.3	1.5	6.2	1.1	-2.0
1992	.0	.5	.9	.7	.3	-.1	.9	-.3	.4	.5	.6	.0	.6	6.6	3.3	4.4	3.1
1993	.3	.4	.2	.3	-.4	.2	.2	-.2	1.0	.4	.5	.8	3.6	1.5	1.8	6.5	3.4
1994	.2	.3	.8	.6	.7	.5	.3	.4	.2	.8	.6	1.1	5.7	7.6	5.2	7.5	5.5
1995	.5	.0	.1	-.2	.3	.4	-.5	1.3	.4	-.1	.3	.2	5.9	.8	3.6	3.6	4.8
1996	-.3	1.2	-.1	1.0	.7	.7	.2	.6	.5	.0	1.0	.6	2.9	8.4	6.3	5.8	4.6
1997	.4	1.1	.1	.6	.3	.5	.5	1.0	.7	.7	.6	.2	7.7	6.0	7.7	8.2	6.9
1998	.6	.1	.3	.5	.3	-.6	-.2	1.9	-.2	.6	-.4	.0	4.5	3.2	2.8	3.5	5.1
1999	.7	.2	.4	.1	.4	.2	.6	.5	.0	.8	.4	.7	3.6	3.3	4.7	5.8	3.7
2000	.2	.6	.6	.5	.7	.4	-.4	.1	.1	-.4	-.3	-.4	5.8	7.0	.6	-2.6	4.5
2001	-.8	-.3	-.4	-.6	-.3	-.9	.1	-.3	-1.1	-.6	-.3	-.4	-6.1	-5.9	-4.7	-6.7	-3.9
2002	.6	.4	.3	.1	.5	.6	.5	-.3	-.1				2.6	4.2	3.6		
<b>Industrial Production</b>																	
1990	98.6	99.1	99.6	99.0	99.4	99.3	99.3	99.5	99.6	99.1	97.7	97.2	99.1	99.2	99.5	98.0	98.9
1991	96.7	95.9	95.0	95.4	96.1	97.2	97.3	97.4	98.4	98.3	98.1	97.5	95.9	96.2	97.7	98.0	97.0
1992	97.5	98.0	98.9	99.6	99.9	99.7	100.6	100.3	100.7	101.2	101.8	101.8	98.1	99.7	100.5	101.6	100.0
1993	102.2	102.6	102.8	103.1	102.7	102.9	103.2	103.0	104.0	104.4	104.9	105.7	102.5	102.9	103.4	105.0	103.4
1994	105.9	106.3	107.2	107.8	108.5	109.1	109.4	109.9	110.1	111.0	111.7	112.9	106.5	108.4	109.8	111.8	109.1
1995	113.4	113.4	113.5	113.3	113.6	114.1	113.5	115.0	115.5	115.4	115.8	116.0	113.4	113.7	114.7	115.7	114.4
1996	115.6	117.1	116.9	118.1	118.9	119.8	120.0	120.7	121.4	121.4	122.6	123.3	116.5	118.9	120.7	122.4	119.6
1997	123.7	125.1	125.3	126.1	126.5	127.2	127.8	129.1	130.0	130.9	131.7	132.0	124.7	126.6	129.0	131.5	127.9
1998	132.7	132.8	133.3	134.0	134.4	133.6	133.3	135.9	135.6	136.4	135.9	136.0	133.0	134.0	134.9	136.1	134.5
1999	136.9	137.2	137.8	137.9	138.5	138.8	139.6	140.2	140.3	141.3	141.9	142.9	137.3	138.4	140.0	142.0	139.4
2000	143.2	144.0	144.9	145.6	146.6	147.2	146.5	146.7	146.8	146.3	145.8	145.1	144.0	146.5	146.7	145.7	145.7
2001	143.9	143.5	142.9	142.0	141.6	140.3	140.4	140.0	138.5	137.7	137.2	136.7	143.5	141.3	139.6	137.2	140.1
2002	137.6	138.1	138.6	138.8	139.4	140.3	141.1	140.6	140.5				138.1	139.5	140.7		
<b>Capacity</b>																	
1990	119.2	119.3	119.5	119.7	119.9	120.1	120.2	120.4	120.6	120.8	121.0	121.2	119.3	119.9	120.4	121.0	120.2
1991	121.4	121.6	121.7	121.9	122.1	122.2	122.4	122.6	122.7	122.9	123.0	123.2	121.6	122.1	122.6	123.0	122.3
1992	123.4	123.6	123.8	124.1	124.3	124.5	124.7	124.9	125.2	125.4	125.6	125.8	123.6	124.3	124.9	125.6	124.6
1993	126.1	126.3	126.5	126.7	127.0	127.2	127.4	127.7	127.9	128.2	128.5	128.8	126.3	127.0	127.7	128.5	127.3
1994	129.1	129.4	129.8	130.1	130.5	130.9	131.4	131.8	132.2	132.7	133.2	133.7	129.4	130.5	131.8	133.2	131.2
1995	134.2	134.8	135.3	135.8	136.4	137.0	137.6	138.2	138.8	139.4	140.0	140.6	134.8	136.4	138.2	140.0	137.3
1996	141.2	141.9	142.5	143.1	143.8	144.4	145.0	145.7	146.3	147.0	147.6	148.3	141.9	143.8	145.7	147.6	144.7
1997	149.0	149.7	150.4	151.2	151.9	152.7	153.5	154.4	155.2	156.1	157.0	157.9	149.7	151.9	154.4	157.0	153.3
1998	158.9	159.8	160.7	161.6	162.5	163.3	164.2	164.9	165.7	166.4	167.1	167.8	159.8	162.5	164.9	167.1	163.6
1999	168.4	168.9	169.5	170.0	170.5	171.0	171.5	172.0	172.5	173.1	173.6	174.2	168.9	170.5	172.0	173.6	171.3
2000	174.8	175.4	176.0	176.6	177.2	177.9	178.5	179.0	179.6	180.1	180.6	181.1	175.4	177.2	179.0	180.6	178.1
2001	181.5	181.8	182.2	182.4	182.6	182.8	183.0	183.2	183.3	183.5	183.6	183.8	181.8	182.6	183.2	183.6	182.8
2002	183.9	184.1	184.2	184.4	184.5	184.7	184.8	185.0	185.2				184.1	184.5	185.0		
<b>Utilization</b>																	
1990	82.7	83.0	83.3	82.7	82.9	82.7	82.6	82.6	82.6	82.0	80.8	80.2	83.0	82.8	82.6	81.0	82.3
1991	79.6	78.9	78.1	78.2	78.7	79.6	79.5	79.5	80.2	80.0	79.8	79.2	78.9	78.8	79.7	79.6	79.3
1992	79.0	79.3	79.8	80.3	80.3	80.1	80.7	80.3	80.4	80.7	81.0	80.9	79.4	80.2	80.5	80.9	80.2
1993	81.1	81.3	81.2	81.4	80.9	80.9	81.0	80.6	81.3	81.4	81.6	82.1	81.2	81.1	81.0	81.7	81.2
1994	82.1	82.1	82.6	82.8	83.1	83.3	83.3	83.4	83.3	83.6	83.8	84.4	82.3	83.1	83.3	84.0	83.2
1995	84.5	84.2	83.9	83.4	83.3	83.3	82.5	83.2	83.2	82.8	82.7	82.5	84.2	83.3	83.0	82.7	83.3
1996	81.9	82.5	82.0	82.5	82.7	82.9	82.7	82.9	83.0	82.6	83.0	83.1	82.1	82.7	82.9	82.9	82.7
1997	83.1	83.6	83.3	83.4	83.3	83.3	83.2	83.6	83.7	83.8	83.9	83.6	83.3	83.3	83.5	83.8	83.5
1998	83.6	83.1	82.9	82.9	82.7	81.8	81.2	82.4	81.8	82.0	81.3	81.1	83.2	82.5	81.8	81.5	82.2
1999	81.3	81.2	81.3	81.1	81.2	81.2	81.4	81.5	81.3	81.7	81.7	82.0	81.3	81.2	81.4	81.8	81.4
2000	81.9	82.1	82.3	82.5	82.7	82.8	82.1	81.9	81.7	81.2	80.7	80.2	82.1	82.6	81.9	80.7	81.8
2001	79.3	78.9	78.5	77.8	77.5	76.7	76.7	76.4	75.5	75.0	74.7	74.4	78.9	77.4	76.2	74.7	76.8
2002	74.8	75.0	75.2	75.3	75.6	76.0	76.3	76.0	75.9				75.0	75.6	76.1		

1. Quarterly percent changes are at annual rates. Annual percent changes are calculated from annual averages.

**Table 5B**  
**INDUSTRIAL PRODUCTION, CAPACITY AND UTILIZATION FOR MANUFACTURING: HISTORICAL DATA**

Seasonally adjusted

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
<b>Industrial Production, Percent Change<sup>1</sup></b>																	
1990	-.2	.9	.3	-.8	.4	-.1	.0	.3	-.1	-.6	-1.3	-.6	2.9	-.1	.8	-6.3	-.5
1991	-.9	-.7	-1.1	.3	.7	1.4	.2	.2	1.1	-.1	-.2	-.5	-9.7	1.2	7.8	1.7	-2.4
1992	.1	.7	1.0	.6	.4	.0	.9	-.3	.3	.5	.6	-.1	2.0	7.4	4.1	3.7	4.0
1993	.7	.2	.2	.5	-.3	.0	.2	-.3	1.1	.4	.5	.9	4.2	2.1	1.3	6.9	3.7
1994	.1	.4	1.1	.8	.8	.3	.5	.6	.3	.9	.8	1.1	5.9	9.4	6.0	9.0	6.1
1995	.6	-.1	.2	-.3	.1	.5	-.7	1.2	.7	.0	.1	.1	6.4	.4	3.0	4.2	5.3
1996	-.3	1.2	-.2	1.2	.8	.9	.6	.6	.6	.0	1.0	.7	2.4	9.2	8.4	6.2	4.9
1997	.4	1.2	.3	.5	.4	.7	.4	1.3	.6	.6	.7	.3	8.8	6.8	8.9	8.7	7.9
1998	.9	.0	.2	.7	.2	-.7	-.2	2.3	-.2	.8	-.2	.2	6.0	3.0	3.2	5.2	5.9
1999	.6	.4	.2	.2	.6	.1	.4	.8	.0	.8	.6	.6	3.9	3.6	4.8	6.9	4.2
2000	.3	.5	.9	.3	.7	.5	-.4	-.1	.1	-.5	-.5	-.7	6.3	7.1	.4	-4.0	4.8
2001	-.8	-.3	-.4	-.8	-.2	-1.0	.2	-.5	-1.1	-.5	-.1	-.3	-7.1	-6.2	-4.9	-6.3	-4.4
2002	.7	.2	.4	.0	.6	.6	.4	-.2	-.3				3.0	3.6	3.3		
<b>Industrial Production</b>																	
1990	98.1	99.0	99.3	98.6	99.0	98.9	98.8	99.1	99.0	98.4	97.2	96.6	98.8	98.8	99.0	97.4	98.5
1991	95.8	95.1	94.1	94.4	95.0	96.3	96.6	96.8	97.8	97.8	97.6	97.1	95.0	95.2	97.0	97.5	96.2
1992	97.2	97.8	98.8	99.4	99.8	99.9	100.8	100.5	100.8	101.3	101.9	101.8	97.9	99.7	100.7	101.6	100.0
1993	102.5	102.7	102.9	103.4	103.1	103.1	103.3	103.0	104.2	104.6	105.2	106.1	102.7	103.2	103.5	105.3	103.7
1994	106.2	106.6	107.7	108.6	109.4	109.7	110.3	110.9	111.3	112.2	113.1	114.3	106.8	109.2	110.8	113.2	110.0
1995	115.0	114.9	115.1	114.8	115.0	115.5	114.7	116.1	117.0	117.0	117.2	117.3	115.0	115.1	116.0	117.2	115.8
1996	117.0	118.4	118.1	119.5	120.4	121.5	122.2	122.9	123.7	123.7	124.9	125.8	117.9	120.5	122.9	124.8	121.5
1997	126.3	127.8	128.2	128.9	129.4	130.4	130.9	132.6	133.5	134.3	135.3	135.7	127.4	129.6	132.3	135.1	131.1
1998	136.9	137.0	137.3	138.2	138.5	137.6	137.2	140.3	140.0	141.1	140.8	141.0	137.1	138.1	139.2	141.0	138.8
1999	141.8	142.4	142.7	143.0	143.8	143.9	144.4	145.6	145.7	146.8	147.7	148.6	142.3	143.6	145.2	147.7	144.7
2000	149.0	149.8	151.1	151.6	152.6	153.3	152.7	152.6	152.8	152.0	151.2	150.1	149.9	152.5	152.7	151.1	151.6
2001	148.9	148.4	147.9	146.7	146.4	145.0	145.2	144.5	142.9	142.1	142.0	141.6	148.4	146.0	144.2	141.9	144.8
2002	142.6	142.9	143.4	143.4	144.2	145.0	145.7	145.4	145.1				142.9	144.2	145.4		
<b>Capacity</b>																	
1990	119.9	120.1	120.3	120.5	120.7	120.9	121.1	121.3	121.5	121.7	122.0	122.2	120.1	120.7	121.3	122.0	121.0
1991	122.4	122.6	122.8	123.0	123.1	123.3	123.5	123.7	123.8	124.0	124.2	124.3	122.6	123.1	123.7	124.2	123.4
1992	124.6	124.8	125.0	125.3	125.5	125.8	126.0	126.2	126.5	126.7	127.0	127.2	124.8	125.5	126.2	127.0	125.9
1993	127.5	127.8	128.0	128.3	128.5	128.8	129.1	129.3	129.6	129.9	130.3	130.6	127.8	128.5	129.3	130.3	129.0
1994	131.0	131.3	131.7	132.1	132.6	133.0	133.5	134.0	134.5	135.0	135.6	136.1	131.3	132.6	134.0	135.6	133.4
1995	136.7	137.3	137.9	138.5	139.2	139.8	140.5	141.2	141.9	142.6	143.3	144.0	137.3	139.2	141.2	143.3	140.2
1996	144.7	145.5	146.2	147.0	147.7	148.5	149.2	149.9	150.7	151.4	152.2	153.0	145.5	147.7	149.9	152.2	148.8
1997	153.7	154.5	155.3	156.2	157.1	158.0	158.9	159.9	160.9	161.9	162.9	164.0	154.5	157.1	159.9	162.9	158.6
1998	165.1	166.2	167.2	168.3	169.3	170.3	171.2	172.2	173.0	173.9	174.6	175.4	166.2	169.3	172.1	174.6	170.6
1999	176.1	176.8	177.4	178.0	178.6	179.2	179.8	180.4	181.1	181.7	182.4	183.1	176.8	178.6	180.4	182.4	179.5
2000	183.8	184.6	185.4	186.1	186.9	187.7	188.4	189.1	189.8	190.4	191.0	191.5	184.6	186.9	189.1	191.0	187.9
2001	192.0	192.4	192.7	193.0	193.2	193.4	193.5	193.6	193.8	193.9	194.0	194.2	192.3	193.2	193.6	194.0	193.3
2002	194.3	194.4	194.6	194.8	194.9	195.1	195.3	195.5	195.6				194.4	194.9	195.5		
<b>Utilization</b>																	
1990	81.8	82.5	82.6	81.8	82.0	81.8	81.6	81.7	81.5	80.9	79.7	79.0	82.3	81.9	81.6	79.9	81.4
1991	78.2	77.5	76.6	76.8	77.1	78.1	78.2	78.2	79.0	78.9	78.6	78.1	77.5	77.3	78.5	78.5	77.9
1992	78.0	78.4	79.0	79.4	79.5	79.4	80.0	79.6	79.7	79.9	80.2	80.0	78.5	79.4	79.8	80.0	79.4
1993	80.4	80.4	80.4	80.6	80.2	80.0	80.1	79.7	80.4	80.5	80.7	81.2	80.4	80.3	80.0	80.8	80.4
1994	81.1	81.1	81.8	82.2	82.5	82.5	82.6	82.8	82.7	83.1	83.4	84.0	81.3	82.4	82.7	83.5	82.5
1995	84.1	83.7	83.5	82.9	82.6	82.6	81.7	82.3	82.5	82.1	81.8	81.5	83.8	82.7	82.1	81.8	82.6
1996	80.9	81.4	80.8	81.3	81.5	81.8	81.9	82.0	82.1	81.7	82.1	82.2	81.0	81.6	82.0	82.0	81.6
1997	82.1	82.7	82.5	82.5	82.4	82.5	82.4	83.0	83.0	83.0	83.0	82.7	82.5	82.5	82.8	82.9	82.7
1998	83.0	82.4	82.1	82.2	81.8	80.8	80.1	81.5	80.9	81.2	80.6	80.4	82.5	81.6	80.9	80.7	81.4
1999	80.5	80.6	80.4	80.3	80.5	80.3	80.3	80.7	80.5	80.8	81.0	81.1	80.5	80.4	80.5	81.0	80.6
2000	81.0	81.1	81.5	81.4	81.6	81.7	81.0	80.7	80.5	79.8	79.2	78.4	81.2	81.6	80.7	79.1	80.7
2001	77.6	77.2	76.7	76.0	75.8	75.0	75.1	74.6	73.7	73.3	73.2	72.9	77.2	75.6	74.5	73.1	75.1
2002	73.4	73.5	73.7	73.6	74.0	74.3	74.6	74.4	74.2				73.5	74.0	74.4		

1. Quarterly percent changes are at annual rates. Annual percent changes are calculated from annual averages.

**Table 6**  
**INDUSTRIAL PRODUCTION: INDUSTRY SUBTOTALS AND INDIVIDUAL SERIES**

Item	SIC	2001 IP Proportion	Index, 1992 = 100											
			Seasonally adjusted						Not seasonally adjusted					
			2002 Mar.	Apr.	May	June <sup>f</sup>	July <sup>f</sup>	Aug. <sup>f</sup>	2002 Mar.	Apr.	May	June <sup>f</sup>	July <sup>f</sup>	Aug. <sup>f</sup>
<b>Metal mining</b>	<b>10</b>	.22	80.0	75.3	77.3	79.0	75.6	76.4	79.4	74.9	77.0	81.1	74.2	76.2
Iron ore	101	.03	83.9	85.5	98.8	102.6	90.0		78.5	83.8	102.2	108.2	93.3	
Nonferrous ores	102-4,8,9	.19	79.3	73.6	73.7	75.0	73.2	73.2	79.6	73.4	72.7	76.5	70.9	72.1
Copper	102	.06	66.1	65.7	58.6	66.3	61.7		68.7	65.9	60.3	66.4	61.0	
<b>Coal mining</b>	<b>12</b>	.69	99.0	101.8	101.7	103.3	101.6	103.1	102.3	101.8	99.3	103.4	94.8	104.3
<b>Oil and gas extraction</b>	<b>13</b>	4.61	90.6	90.3	89.7	90.3	90.6	91.0	91.2	90.5	90.1	90.3	90.3	90.9
Crude oil and natural gas	131	3.63	88.4	88.3	87.6	88.1	88.6	88.8	89.3	88.6	87.9	88.1	88.0	88.5
Crude oil, total		1.82	78.8	78.5	79.0	79.5	77.8	78.8	79.3	78.9	79.1	78.9	77.2	78.5
Natural gas		1.81	101.7	101.8	99.5	100.0	103.5	102.8	103.2	102.2	100.0	100.9	103.0	102.3
Natural gas liquids	132	.27	111.1	112.7	114.0	109.3	107.6	107.1	112.1	114.1	115.1	110.2	108.7	108.0
Oil and gas well drilling	138	.72	104.5	102.0	101.4	104.4	104.1	105.4	102.7	101.2	102.2	103.7	104.9	106.7
<b>Stone and earth minerals</b>	<b>14</b>	.67	132.2	132.5	134.7	136.2	135.4	136.1	110.6	133.2	148.5	157.3	155.1	163.6
<b>Foods</b>	<b>20</b>	9.66	114.4	114.0	113.2	113.6	113.4	112.4	108.7	111.5	111.8	116.7	115.6	118.5
Meat products	201	1.67	127.5	125.9	127.2	128.7	129.3	128.6	124.3	127.9	127.2	132.7	125.8	131.3
Beef		.52	117.1	115.2	117.0	121.6	122.1	120.6	109.9	114.6	117.2	128.4	121.7	126.4
Pork		.34	114.9	113.5	118.9	115.3	115.6	115.0	112.8	116.8	110.4	110.2	104.4	112.0
Poultry		.80	147.8	146.2	145.0	146.9	147.8	147.6	145.8	148.8	148.6	152.9	144.9	150.1
Miscellaneous meats		.01	63.7	65.1	67.4	63.9	62.8	63.5	72.5	65.3	61.9	60.6	58.5	61.7
Dairy products	202	.96	103.9	106.1	104.6	105.8	103.9	106.2	109.8	113.3	112.3	112.4	103.8	101.5
Butter	2021	.01	113.3	113.4	113.0	116.2	110.7	113.9	126.7	127.3	116.8	99.3	86.7	83.3
Cheese	2022	.25	119.5	123.2	121.1	120.5	118.9	123.1	124.4	125.0	125.2	123.1	116.1	118.5
Concentrated milk	2023	.21	120.1	127.1	123.5	128.3	123.3	127.0	132.4	143.1	140.0	139.4	119.1	109.4
Frozen desserts	2024	.11	86.3	84.8	81.3	84.8	81.3	81.9	91.7	96.0	92.6	106.5	97.1	92.8
Milk and misc. dairy products	2026	.37	92.5	93.0	93.3	93.1	93.1	94.3	95.8	97.3	97.7	95.4	91.9	91.2
Canned and frozen food	203	1.23	102.4	102.3	101.3	98.2	99.9	94.7	93.2	94.7	95.3	97.8	103.1	107.8
Grain mill products	204	1.03	108.9	110.5	109.5	110.7	112.2	110.2	105.4	107.7	107.7	109.3	111.4	112.4
Bakery products	205	1.29	121.1	121.3	120.2	118.0	117.8	117.1	110.5	116.0	117.0	123.5	127.7	129.0
Sugar and confectionery	206	.62	110.9	110.7	105.8	112.2	113.7	109.4	104.6	101.9	95.4	103.3	102.0	106.9
Fats and oils	207	.18	144.0	143.9	145.3	147.2	139.2	136.3	145.1	142.6	141.2	141.0	131.6	135.0
Beverages	208	1.80	117.2	114.0	113.9	115.0	112.3	113.0	110.3	112.9	115.2	123.2	119.1	121.9
Beer and ale	2082,3	.54	102.5	94.4	91.8	97.2	91.8	93.0	103.0	100.5	102.2	109.3	97.2	96.3
Soft drinks	2086,7	1.04	128.3	127.5	129.6	127.6	126.7	126.8	114.4	120.8	125.8	135.4	141.1	143.8
Coffee and miscellaneous	209	.88	111.9	111.8	110.7	110.4	110.9	111.2	99.1	103.3	107.0	114.5	119.4	124.2
Roasted coffee	2095	.12	104.3	104.2	104.5	103.1			89.1	95.0	98.5	92.1		
<b>Tobacco products</b>	<b>21</b>	2.11	95.3	94.4	94.5	95.1	94.5	92.2	101.6	91.7	94.0	104.1	84.1	100.4
<b>Textile mill products</b>	<b>22</b>	1.17	87.2	86.7	86.8	85.8	88.1	85.9	87.3	91.6	89.1	91.2	86.4	87.6
Fabrics	221-4	.28	78.1	76.6	77.3	72.0	77.8	74.7	78.9	80.4	81.7	75.8	72.2	75.9
Cotton and synthetic	221,2	.23	82.3	80.5	81.6	74.8	81.6	78.3	83.0	84.8	86.4	78.9	75.4	80.2
Narrow fabrics	224	.03	81.5	79.7	76.0	78.5	80.4	76.1	82.9	79.4	77.4	80.1	76.5	76.1
Knit goods	225	.24	70.2	70.9	69.5	70.4	71.4	69.9	67.7	72.6	71.8	79.7	72.9	74.3
Knit garments	2253,4,7-9	.16	67.9	69.1	67.0	68.0	69.0	67.3	64.0	66.5	67.9	75.5	72.3	76.7
Fabric finishing	226	.10	71.7	71.5	70.9	69.6	70.9	69.1	72.0	77.4	78.4	71.5	64.8	70.2
Carpeting	227	.19	106.6	108.7	108.1	106.7	104.6	104.1	108.3	124.3	100.6	115.5	117.0	102.1
Yarns and miscellaneous	228,9	.37	111.9	109.8	111.5	113.6	116.4	113.2	112.8	112.5	114.7	116.5	109.6	115.0
Cotton and synthetic yarns	2281,2,4	.17	115.4	109.3	110.5	116.9	123.0	110.0	117.8	114.6	118.3	121.7	112.8	112.8
<b>Apparel products</b>	<b>23</b>	1.46	89.5	88.3	88.7	88.7	89.3	86.9	88.5	87.8	89.0	90.8	87.9	89.2
<b>Lumber and products</b>	<b>24</b>	2.15	112.9	111.6	111.8	113.5	113.2	112.5	111.6	112.6	112.1	118.8	112.1	116.4
Logging and lumber	241,2	.74	105.6	103.9	101.6	105.9	102.9	102.4	104.0	102.4	99.9	112.2	101.0	105.6
Logging	241	.25	83.3	84.8	82.6	84.5	80.7	78.4	75.1	73.9	78.5	87.0	86.0	87.2
Lumber products	243-5,9	1.41	119.0	118.0	119.7	119.8	121.1	120.3	117.9	120.5	121.2	124.7	120.6	124.7
Millwork and plywood	243	.80	129.0	127.3	128.1	127.9	129.5	129.0	126.0	127.4	130.0	131.3	132.0	133.4
Plywood	2435,6	.14	94.2	91.6	91.2	93.0	84.7	91.3	95.2	94.1	95.0	94.8	84.1	93.5
Manufactured homes	245	.19	81.5	82.4	84.8	84.3	84.4		83.4	89.0	89.9	93.8	76.2	

1. The IP proportion data are estimates of the industries' relative contributions to overall IP growth in the following year.



**Table 6 (continued)**  
**INDUSTRIAL PRODUCTION: INDUSTRY SUBTOTALS AND INDIVIDUAL SERIES**

Item	SIC	2001 IP Proportion <sup>1</sup>	Index, 1992 = 100											
			Seasonally adjusted						Not seasonally adjusted					
			2002 Mar.	Apr.	May	June <sup>f</sup>	July <sup>f</sup>	Aug. <sup>f</sup>	2002 Mar.	Apr.	May	June <sup>f</sup>	July <sup>f</sup>	Aug. <sup>f</sup>
<b>Furniture and fixtures</b>	<b>25</b>	1.57	134.8	134.8	134.7	132.5	134.0	133.1	130.1	132.7	133.1	137.9	134.4	142.0
Household furniture	251	.62	122.3	123.0	122.8	119.0	120.4	115.8	121.2	122.9	122.5	125.6	116.9	121.8
<b>Paper and products</b>	<b>26</b>	3.29	104.5	105.3	108.3	107.1	108.7	108.7	103.9	108.0	105.8	108.0	107.4	109.0
Pulp and paper	261-3	1.21	100.4	101.5	105.2	103.2	105.2	104.5	99.5	103.5	103.1	103.5	103.9	105.0
Wood pulp	261	.05	90.0	87.8	91.2	92.9	91.7	93.2	87.2	89.7	90.4	92.7	92.8	94.6
Paper	262	.73	97.1	100.6	102.0	98.5	102.9	101.6	96.7	101.6	99.3	98.7	101.3	101.4
Paperboard	263	.42	109.0	106.2	114.4	114.4	112.4	112.5	107.4	110.2	112.9	115.0	111.3	114.1
Paper products	265,7	2.09	107.0	107.8	110.3	109.5	111.0	111.4	106.7	110.9	107.6	110.9	109.7	111.6
Paperboard containers	265	.69	100.6	101.5	103.6	108.2	103.8	104.0	100.9	107.7	99.5	109.7	103.0	104.5
Converted paper products	267	1.40	110.8	111.5	114.2	110.6	115.2	115.8	110.1	112.8	112.2	111.8	113.5	115.6
<b>Printing and publishing</b>	<b>27</b>	6.62	95.4	94.9	95.3	96.0	96.2	96.4	90.3	93.9	92.9	96.7	99.7	100.9
Newspapers	271	1.44	79.4	79.4	80.1	80.2	79.9	79.1	76.4	84.8	78.5	78.4	77.2	73.9
Periodicals, books, and cards	272,3,7	2.18	96.5	94.2	94.5	96.9	96.9	97.9	96.0	94.4	93.8	95.4	97.4	99.1
Job printing	274-6,8,9	3.00	103.8	104.3	104.6	104.4	105.1	105.4	94.1	98.6	100.7	108.6	115.0	118.6
<b>Chemicals and products</b>	<b>28</b>	9.75	122.8	122.2	123.3	124.2	126.0	125.4	122.7	123.0	123.2	124.8	124.1	125.5
Industrial chemicals and synthetic materials	281,2,6	3.25	104.4	104.6	108.0	107.6	109.3	109.0	104.7	107.5	107.1	107.6	105.3	106.9
Basic chemicals	281	1.03	108.3	108.2	112.1	109.6	115.0	111.3	109.1	111.8	107.6	108.4	104.3	108.1
Alkalies and chlorine	2812	.06	69.8	72.2	71.7	73.9	78.1	73.7	71.2	71.8	73.0	71.8	76.8	72.9
Inorganic pigments	2816	.07	92.3	88.7	102.8	90.7	99.3	89.4	90.7	95.4	97.1	92.4	95.5	91.5
Inorganic chemicals, nec	2819	.80	115.2	115.3	119.4	117.0	123.1	119.8	116.4	119.5	113.4	115.2	109.1	115.1
Acids and other		.72	149.0	149.8	151.1	153.1			145.9	151.1	145.5	155.6		
Synthetic materials	282	1.15	113.9	113.9	118.2	117.2	117.1	117.8	115.1	118.3	119.1	118.6	115.4	116.0
Plastics materials	2821	.79	123.6	123.8	131.3	129.8			124.2	129.3	131.7	130.9		
Synthetic fibers	2823,4	.24	91.3	88.9	91.2	88.4	94.5	92.1	93.1	91.8	92.3	90.8	92.7	90.8
Industrial organic chemicals	286	1.07	93.1	93.8	96.0	97.8			92.4	94.7	96.5	97.6		
Chemical products	283-5,9	6.04	140.1	138.9	138.7	140.5	142.2	141.2	139.6	137.9	138.7	141.5	141.8	143.1
Drugs and medicines	283	3.62	160.4	157.3	155.0	159.6	161.2	160.7	162.8	156.6	157.5	154.5	154.3	155.6
Soap and toiletries	284	1.43	120.8	120.9	123.0	121.5	122.8	120.6	114.9	115.7	116.5	127.0	130.9	132.4
Paints	285	.36	110.9	112.0	113.1	114.3	113.9	113.9	114.1	123.3	125.1	131.7	120.5	120.3
Agricultural chemicals	287	.46	90.3	90.1	88.8	89.3	92.1	93.5	90.4	93.1	90.7	89.0	89.8	91.7
<b>Petroleum products</b>	<b>29</b>	1.92	116.7	116.9	116.0	115.2	115.0	114.9	110.2	116.2	118.6	120.4	120.4	120.2
Petroleum refining and misc.	291,9	1.70	112.9	113.5	112.2	111.1	111.2	111.4	107.7	113.4	114.8	115.5	115.8	115.4
Miscellaneous petroleum products		.32	112.5	110.6	112.1	110.7	109.9	110.0	106.9	112.6	118.8	122.5	124.8	125.6
Distillate fuel oil		.30	116.8	123.7	122.9	124.4	116.9		112.5	122.3	124.8	123.8	119.9	
Residual fuel oil		.04	70.1	70.9	65.5	60.6	61.5		68.0	67.3	65.2	60.4	63.3	
Aviation fuel and kerosene		.19	111.9	107.4	107.1	108.2	112.0		108.0	106.1	104.9	108.1	112.0	
Automotive gasoline		.85	114.6	115.5	112.8	111.0	112.9		108.9	115.5	115.4	115.4	115.2	
Paving and roofing materials	295	.22	151.5	147.5	150.7	152.7	149.2	146.6	131.7	140.3	152.6	164.0	162.0	163.6
<b>Rubber and plastics products</b>	<b>30</b>	3.78	139.1	139.2	140.2	142.1	141.9	141.7	138.1	139.1	139.6	144.2	137.6	142.5
Tires	301	.29	126.5	115.6	120.4	127.8	118.3	122.2	128.8	123.2	119.7	127.7	103.7	125.3
Other rubber products	302,5,6	.61	125.6	129.4	130.6	130.1	131.8	129.7	122.5	127.3	130.1	136.1	130.5	135.4
Plastics products, nec	308	2.89	144.1	144.7	145.2	147.0	147.5	147.2	143.1	144.0	144.5	148.3	143.6	146.5
<b>Leather and products</b>	<b>31</b>	.16	60.0	59.5	59.2	59.5	61.1	59.1	60.2	59.7	59.8	61.3	57.7	59.6
Shoes	314	.04	50.7	50.5	48.8	50.4	50.7	46.7	50.3	50.3	49.2	52.0	47.4	47.5
<b>Stone, clay, and glass products</b>	<b>32</b>	2.66	127.7	129.6	130.0	129.9	130.0	129.6	123.0	130.8	131.0	135.3	132.8	134.7
Pressed and blown glass	322	.32	107.1	107.6	109.0	108.1	110.7	109.0	107.6	109.4	109.0	112.0	112.1	111.3
Glass containers	3221	.12	76.6	78.7	81.1	79.0	80.3	77.8	80.1	81.3	82.4	81.7	82.7	81.4
Cement	324	.23	131.8	138.0	131.5	136.1	133.1		115.0	144.2	146.0	159.0	149.0	
Structural clay products	325	.12	111.5	115.7	117.9	118.1	116.4	117.7	114.4	117.7	120.5	122.7	111.2	122.9
Concrete and miscellaneous	326-9	1.60	128.1	129.0	130.5	129.6	129.2	128.7	122.7	129.8	129.7	133.1	131.9	131.9

1. The IP proportion data are estimates of the industries' relative contributions to overall IP growth in the following year.





**Table 6 (continued)**  
**INDUSTRIAL PRODUCTION: INDUSTRY SUBTOTALS AND INDIVIDUAL SERIES**

Item	SIC	2001 IP Proportion <sup>1</sup>	Index, 1992 = 100											
			Seasonally adjusted						Not seasonally adjusted					
			2002 Mar.	Apr.	May	June <sup>r</sup>	July <sup>r</sup>	Aug. <sup>r</sup>	2002 Mar.	Apr.	May	June <sup>r</sup>	July <sup>r</sup>	Aug. <sup>r</sup>
<b>Instruments</b>	<b>38</b>	4.51	112.8	112.2	111.6	111.8	112.7	112.4	110.5	110.3	110.5	114.1	115.6	117.0
Scientific and medical	381-4	3.88	116.4	116.2	115.4	115.3	116.5	116.4	113.6	114.0	114.2	118.1	120.2	121.9
Medical instruments	384	1.71	140.1	139.5	138.6	137.4	139.7	139.1	131.5	133.6	136.1	145.0	151.7	154.8
<b>Misc. manufactures</b>	<b>39</b>	1.18	116.4	115.8	117.8	119.8	119.5	118.6	116.2	116.1	117.1	119.9	115.1	119.0
Consumer goods	391,3,4,6	.51	107.0	105.5	107.5	109.3	109.6	105.4	107.8	107.1	107.3	108.9	103.0	105.1
Business supplies	395,9	.67	125.6	125.8	127.8	130.0	129.3	131.3	124.5	125.0	126.6	130.7	126.8	132.3
<b>Electric utilities</b>	<b>491,3pt</b>	5.60	124.6	126.6	124.4	127.5	130.9	126.9	116.9	112.0	116.5	133.5	149.7	146.8
Generation		2.39	121.4	123.3	121.0	124.1	127.4	123.6	115.9	111.6	116.3	132.8	143.7	138.1
Fossil fuel		1.25	125.7	127.7	125.7	128.8			112.7	113.2	118.6	138.1		
Hydro and nuclear		1.14	118.1	119.9	117.4	120.4			119.5	110.7	114.8	128.5		
Sales		3.22	126.9	129.0	126.9	130.0	133.6	129.4	117.5	112.2	116.5	133.8	154.3	153.6
Residential		1.42	129.1	131.2	129.2	133.4			117.0	105.0	107.3	133.6		
Nonresidential		1.80	125.5	127.5	125.4	127.6	131.2	127.8	118.1	117.8	123.6	134.1	143.5	143.6
Commercial and other		1.21	143.4	145.7	142.5	145.0			132.8	131.5	138.7	154.1		
Industrial		.59	98.9	100.4	99.9	101.8			96.2	97.5	101.4	104.4		
<b>Gas utilities</b>	<b>492,3pt</b>	1.47	111.4	113.9	119.1	114.9	115.6	115.3	172.4	112.9	80.1	62.9	59.7	59.4
Residential		.80	103.1	106.0	114.8	106.4	107.5	107.3	180.8	106.4	66.2	41.9	34.4	31.8
Commercial and other		.29	130.3	135.5	133.9	136.2	136.8	136.1	196.3	131.3	93.8	78.5	73.4	75.1
Gas transmission		.26	112.0	113.7	115.7	117.4	117.8	117.7	135.1	111.2	95.4	91.9	99.2	103.0

1. The IP proportion data are estimates of the industries' relative contributions to overall IP growth in the following year.

**Table 7**  
**INDUSTRIAL PRODUCTION: GROSS VALUE OF PRODUCTS**

Billions of 1996 dollars at annual rates, seasonally adjusted

Item	1992	2001	2001			2002			2002					
			Q2	Q3	Q4	Q1	Q2 <sup>r</sup>	Q3 <sup>p</sup>	Apr.	May	June <sup>r</sup>	July <sup>r</sup>	Aug. <sup>r</sup>	Sept. <sup>p</sup>
<b>Products, total</b>	2091.3	2724.4	2751.8	2726.5	2677.3	2696.0	2715.5	2732.7	2704.2	2710.7	2731.7	2744.9	2732.6	2720.5
<b>Final products</b>	1587.4	2102.7	2126.8	2103.9	2067.5	2080.6	2093.5	2108.1	2085.6	2088.7	2106.2	2121.4	2108.9	2094.0
Consumer goods	1079.6	1302.9	1309.1	1311.0	1302.2	1318.6	1330.0	1339.8	1325.9	1326.5	1337.6	1349.4	1336.9	1333.1
Durable	229.7	349.6	353.9	359.3	353.7	364.3	374.2	385.7	370.3	372.5	379.9	389.8	385.4	381.8
Automotive products	123.7	187.8	190.1	196.7	193.6	200.0	207.8	220.0	204.9	205.1	213.4	221.7	220.2	218.1
Other durable goods	106.0	160.5	162.7	159.7	157.3	161.0	161.6	157.4	161.1	163.6	160.2	160.2	156.8	155.3
Nondurable	851.9	953.3	955.1	952.0	948.5	954.7	956.6	955.4	956.2	954.8	958.8	961.0	952.8	952.5
Equipment, total	509.4	800.0	820.2	791.0	759.3	753.6	754.0	758.6	750.1	752.9	759.2	761.8	763.4	750.5
Business and defense	490.0	778.4	797.2	768.0	740.3	737.8	739.4	743.5	735.6	738.3	744.2	746.9	748.4	735.3
Business	402.1	715.8	735.3	705.6	676.3	673.1	673.5	675.0	670.4	672.3	677.9	680.1	680.0	665.0
Defense and space	89.0	64.4	64.2	64.0	64.7	65.1	66.0	68.0	65.5	66.1	66.5	66.9	68.1	69.1
<b>Intermediate products</b>	504.7	622.0	625.2	622.7	610.0	615.5	622.1	624.7	618.6	622.0	625.6	623.7	623.8	626.5
Construction supplies	200.1	274.0	276.1	275.7	268.3	274.6	278.4	278.2	275.8	278.4	281.1	275.9	278.9	279.8
Business supplies	304.8	347.6	348.5	346.3	341.2	340.2	342.8	345.8	342.1	342.7	343.6	347.3	344.1	346.0
Commercial energy products	72.6	92.2	93.2	93.6	91.7	93.6	95.5	96.9	95.8	94.8	96.0	97.8	95.5	97.5

**Table 8**  
**DIFFUSION INDEXES OF INDUSTRIAL PRODUCTION**

Percent												
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>One Month Earlier</b>												
2000	54.3	55.1	57.2	47.8	50.4	53.6	49.6	41.3	51.4	43.5	44.2	42.8
2001	46.0	36.6	39.9	43.1	41.7	40.9	47.8	43.5	39.5	42.0	38.8	52.2
2002	54.3	56.9	60.1	50.4	60.5	56.5	54.3	49.3				
<b>Three Months Earlier</b>												
2000	61.2	57.6	59.4	55.4	48.6	51.4	51.4	44.2	38.4	39.1	40.2	38.8
2001	39.5	37.5	36.6	38.0	37.7	37.7	39.1	40.2	41.3	36.6	33.0	39.1
2002	44.7	57.2	56.2	56.9	64.1	61.2	59.4	55.8				
<b>Six Months Earlier</b>												
2000	63.4	62.0	65.9	59.8	57.6	58.0	53.6	45.3	43.5	41.3	40.2	37.0
2001	35.5	32.6	32.2	30.8	31.9	32.6	30.1	32.6	35.9	30.4	34.1	35.5
2002	39.9	44.6	51.1	52.5	62.3	61.2	62.3	57.6				

Note—The diffusion indexes are calculated as the percentage of series that increased over the indicated span (one, three, or six months) plus one-half the percentage that were unchanged.

**Table 9**  
**ELECTRIC POWER USE: MANUFACTURING AND MINING**

Item	1987 SIC	1992 Billion KWH	Index, 1992 = 100											
			Seasonally adjusted						Not seasonally adjusted					
			2002 Mar.	Apr.	May	June <sup>f</sup>	July <sup>f</sup>	Aug. <sup>P</sup>	2002 Mar.	Apr.	May	June <sup>f</sup>	July <sup>f</sup>	Aug. <sup>P</sup>
<b>Total</b>		933.2	94.8	94.7	95.7	93.8	96.5	94.9	92.6	94.3	95.4	96.3	96.9	97.8
<b>MAJOR INDUSTRY GROUPS</b>														
<b>Manufacturing</b>		853.2	95.2	95.2	96.3	94.3	97.1	95.4	92.9	94.8	96.0	96.9	97.7	98.6
<b>Durable</b>		366.0	95.3	96.4	97.0	95.8	98.6	97.4	93.4	95.7	97.2	99.3	99.9	100.9
<b>Nondurable</b>		487.2	95.2	94.1	95.6	93.0	95.9	93.8	92.5	94.0	95.1	95.0	95.9	96.7
<b>Mining</b>		80.1	88.6	88.5	87.6	87.6	88.4	88.3	88.5	88.1	87.0	87.0	85.9	86.9
<b>INDUSTRY GROUPS and SERIES</b>														
<b>Metal mining</b>	<b>10</b>	18.6	96.2	96.3	97.5	98.1	100.3	98.3	97.7	97.8	97.8	97.0	98.6	97.5
Iron ore	101	7.3	91.8	101.9	100.1	110.4	113.9	106.9	95.5	99.7	102.8	107.5	109.8	106.0
Copper ore	102	6.6	112.2	102.3	99.5	99.9	101.6	99.0	108.3	106.1	103.9	98.9	100.9	101.8
<b>Coal mining</b>	<b>12</b>	12.7	95.7	95.2	92.5	91.2	90.4	91.8	102.9	98.1	89.4	87.4	78.4	85.9
<b>Oil and gas extraction</b>	<b>13</b>	36.0	72.6	73.4	72.0	72.1	73.2	75.3	70.3	70.4	72.0	72.8	74.1	74.5
Crude oil and natural gas	131	31.0	71.5	72.2	69.9	71.0	72.5	75.4	69.0	69.4	70.1	71.1	72.6	73.7
Natural gas liquids	132	3.6	69.9	67.5	73.8	68.5	66.5	62.1	68.6	65.3	72.0	70.3	68.1	66.2
<b>Stone and earth minerals</b>	<b>14</b>	12.8	105.0	103.2	102.8	103.4	103.0	99.3	98.2	101.9	102.6	104.7	103.9	101.1
Crushed stone	142	3.5	191.1	184.5	170.3	182.8	183.1	170.6	166.0	180.0	172.8	188.4	186.7	179.3
Sand and gravel	144	2.7	103.3	106.2	108.5	106.7	107.0	105.8	90.3	101.0	110.9	113.7	114.8	110.7
Chemical and fertilizer materials	147	4.7	78.4	77.2	81.2	81.0	80.0	77.4	79.2	77.6	79.0	78.7	77.2	76.2
<b>Foods</b>	<b>20</b>	58.8	122.7	121.6	122.3	120.2	121.4	119.9	113.5	117.0	119.1	123.7	127.6	129.3
Meat products	201	10.4	139.9	138.6	142.9	138.6	138.7	138.3	128.2	133.0	139.4	145.2	150.4	151.2
Dairy products	202	6.8	109.0	108.1	110.1	108.4	107.9	111.3	101.5	105.9	108.6	113.9	117.8	120.0
Canned and frozen food	203	8.0	116.5	116.6	116.6	113.1	116.3	108.0	105.9	108.0	109.7	112.6	120.0	123.0
Grain mill products	204	11.4	124.5	120.5	122.3	120.4	117.7	116.8	118.2	120.7	121.7	121.5	116.5	117.6
Bakery products	205	3.5	131.8	131.3	130.2	127.5	131.1	128.3	120.0	125.4	126.6	133.2	141.8	141.0
Sugar and confectionery	206	4.0	141.5	149.9	138.1	133.3	150.0	147.5	143.5	146.6	132.0	130.1	138.6	140.9
Fats and oils	207	3.9	116.6	114.3	108.8	110.5	109.8	112.4	113.2	113.7	106.0	108.1	106.8	109.6
Beverages	208	6.1	111.1	110.2	113.5	111.5	111.4	109.7	99.3	104.6	110.4	118.6	124.3	124.7
Coffee and miscellaneous	209	4.7	116.3	114.7	114.4	115.2	116.2	116.4	103.6	106.4	111.1	122.3	128.8	132.5
<b>Tobacco products</b>	<b>21</b>	1.5	73.6	78.7	84.1	81.1	84.3	81.3	69.2	74.7	79.5	84.8	89.5	90.4
<b>Textile mill products</b>	<b>22</b>	31.5	88.3	87.4	82.2	80.8	86.8	78.2	81.1	83.8	85.4	88.5	87.5	90.3
Fabrics	221-4	11.9	76.2	75.7	71.2	67.1	69.4	62.6	70.7	72.4	73.8	73.4	69.4	71.5
Knit goods	225	4.1	80.0	81.5	79.1	80.4	82.5	77.3	75.4	78.6	80.2	89.3	86.5	88.2
Fabric finishing	226	2.5	72.8	76.7	80.8	73.9	76.1	71.7	71.6	78.1	82.3	79.5	74.1	73.8
Yarn and thread	228	8.3	95.4	96.2	84.5	84.3	101.0	87.6	88.3	89.1	91.3	93.0	95.4	104.3
Miscellaneous textiles	229	3.3	102.7	99.4	99.6	102.6	104.1	98.2	92.4	98.8	100.0	109.8	111.2	109.9
<b>Apparel products</b>	<b>23</b>	8.2	86.4	87.0	86.3	84.9	86.5	83.1	79.7	82.8	86.3	93.6	95.8	98.1
Men's outerwear	231,2	2.0	76.5	77.9	76.2	75.1	81.7	76.0	69.9	73.6	77.5	87.2	89.6	90.5
Women's outerwear	233	2.5	83.6	81.3	81.0	76.8	78.9	77.3	78.8	78.5	82.5	87.5	90.4	93.7
<b>Lumber and products</b>	<b>24</b>	19.7	122.3	120.6	124.9	123.1	128.1	125.6	121.9	124.7	126.9	127.3	126.4	127.5
Lumber	242	7.7	100.3	99.8	102.1	102.2	104.0	102.9	103.4	105.2	105.2	104.4	101.1	101.6
Millwork and plywood	243	5.6	147.0	146.1	154.2	149.4	156.3	155.2	146.5	151.4	156.9	154.9	154.5	157.8
<b>Furniture and fixtures</b>	<b>25</b>	6.0	111.1	110.8	112.6	109.7	112.2	109.2	107.5	109.0	111.1	114.6	112.5	116.6
Household furniture	251	3.2	106.7	107.1	108.7	105.5	106.9	101.9	105.3	106.6	108.0	110.8	103.4	106.8
<b>Paper and products</b>	<b>26</b>	112.3	86.3	82.2	84.9	83.3	83.9	83.0	83.7	82.2	84.2	84.5	85.5	85.3
Wood pulp	261	8.8	77.1	72.2	82.4	77.9	73.0	72.5	73.2	72.0	79.9	75.7	74.2	73.9
Paper	262	61.5	72.6	68.1	70.2	68.3	68.8	67.1	70.2	68.2	69.5	69.4	69.9	69.0
Paperboard	263	28.1	126.4	121.6	126.1	123.7	129.8	131.2	126.1	123.4	126.5	125.1	129.6	131.0
Paperboard containers	265	5.0	103.1	101.7	100.2	100.0	100.6	101.3	98.2	100.2	99.4	102.0	105.5	106.7
Converted paper products	267	8.9	117.1	114.9	117.5	120.5	118.3	119.4	114.0	113.9	117.7	123.0	123.1	123.8
<b>Printing and publishing</b>	<b>27</b>	17.3	105.1	105.5	105.4	103.6	104.6	104.9	95.2	99.7	101.7	107.8	114.5	117.6
Newspapers	271	3.7	102.0	101.5	100.6	96.3	95.1	95.5	91.6	94.3	97.5	101.6	105.9	106.4
Commercial printing	275	9.2	112.6	114.6	115.5	113.9	114.8	116.1	102.7	108.3	111.1	118.4	125.3	130.1
<b>Chemicals and products</b>	<b>28</b>	171.6	86.5	85.3	88.8	84.1	88.7	86.6	87.2	88.0	88.2	84.2	84.5	84.6
Basic chemicals	281	78.9	71.7	70.7	73.2	67.5	72.1	69.6	76.1	74.9	73.1	64.6	63.0	62.7
Alkalies and chlorine	2812	14.9	40.6	40.3	43.4	39.9	41.5	38.8	41.8	40.5	44.3	41.3	40.9	40.4
Inorganic chemicals, nec	2819	38.3	64.1	64.6	65.7	55.7	64.6	61.4	74.2	72.5	65.8	48.1	46.2	46.0
Acid and fertilizer materials		14.0	52.0	52.8	52.7	52.1	56.0	56.5	52.5	52.3	54.8	53.9	56.0	55.6
Nuclear materials, nondefense		24.3	70.1	70.4	72.1	57.5	68.9	63.7	85.0	82.5	71.3	45.2	41.3	41.3

**Table 9 (continued)**  
**ELECTRIC POWER USE: MANUFACTURING AND MINING**

Item	1987 SIC	1992 Billion KWH	Index, 1992 = 100											
			Seasonally adjusted						Not seasonally adjusted					
			2002 Mar.	Apr.	May	June <sup>f</sup>	July <sup>f</sup>	Aug. <sup>p</sup>	2002 Mar.	Apr.	May	June <sup>f</sup>	July <sup>f</sup>	Aug. <sup>p</sup>
<b>Chemicals and Products (cont.)</b>														
Synthetic materials	282	29.1	98.7	96.3	103.9	99.4	103.1	102.2	94.5	98.8	103.7	104.1	104.8	105.5
Plastics materials	2821	18.2	125.9	124.0	133.3	125.9	132.1	131.9	122.6	126.5	133.0	132.4	132.1	133.1
Drugs and medicines	283	6.6	143.3	147.6	151.6	144.4	152.3	149.1	133.4	139.1	146.6	152.5	161.9	164.2
Soap and toiletries	284	3.0	132.3	127.6	131.0	126.9	131.2	127.0	126.7	122.9	124.9	133.6	140.8	140.4
Industrial organic chemicals	286	39.2	116.8	110.6	113.9	118.8	117.2	118.2	110.4	111.0	111.7	118.5	119.7	120.6
Agricultural chemicals	287	9.7	96.0	93.2	88.3	89.7	96.2	96.6	94.2	95.2	90.8	90.6	95.2	96.1
<b>Petroleum products</b>	<b>29</b>	47.0	103.1	103.6	103.0	103.8	103.8	102.4	99.3	102.5	103.7	105.0	105.3	105.7
<b>Rubber and plastics products</b>	<b>30</b>	37.9	117.3	120.1	120.4	119.0	122.9	121.0	114.7	119.0	120.1	124.4	125.0	127.3
Tires	301	4.3	107.2	107.6	106.3	104.6	113.7	109.7	102.4	106.0	106.6	110.9	115.4	118.5
Rubber products, nec	306	3.2	110.6	114.1	115.4	114.5	116.1	113.5	107.9	112.2	114.7	119.8	115.2	118.3
Plastics products, nec	308	28.9	120.8	124.1	124.5	123.1	126.3	124.9	118.7	123.2	124.2	128.4	128.9	131.0
<b>Leather and products</b>	<b>31</b>	1.0	62.7	62.5	62.4	60.2	62.0	61.7	59.7	61.2	61.4	62.3	63.4	65.7
Shoes	314	.3	58.9	59.8	60.2	54.5	57.0	56.7	54.2	56.8	58.1	57.4	60.1	63.7
<b>Stone, clay, &amp; glass products</b>	<b>32</b>	33.7	109.6	105.9	108.1	107.8	108.4	106.8	102.3	105.4	108.6	110.5	110.2	110.7
Flat glass	321	1.5	110.9	116.0	116.6	121.5	125.7	124.5	107.4	117.9	118.0	124.1	125.4	123.8
Pressed and blown glass	322	7.3	105.9	104.8	104.8	104.0	108.3	106.6	103.9	105.5	103.8	107.9	108.7	107.4
Cement	324	9.6	117.0	104.2	107.7	107.2	105.6	104.1	100.9	100.1	109.2	107.8	109.5	111.6
Structural clay products	325	1.4	110.8	107.7	112.1	113.7	111.4	103.8	104.8	108.7	113.7	115.0	111.0	106.0
Concrete products	327	4.7	132.4	129.3	135.0	134.9	136.5	135.0	125.4	129.7	134.9	138.6	139.9	138.1
<b>Primary metals</b>	<b>33</b>	150.8	77.6	79.0	80.1	80.0	83.7	83.2	78.4	80.2	81.7	82.4	82.6	83.2
Basic steel and mill products	331	57.0	93.9	98.3	98.8	102.9	109.2	107.1	97.4	100.5	101.8	104.0	104.2	106.6
Iron and steel foundries	332	9.9	103.5	104.7	108.1	105.4	103.7	103.6	104.7	107.7	108.1	107.6	100.0	98.6
Primary nonferrous metals	333	66.2	50.6	49.4	50.5	50.3	51.0	50.5	49.5	49.3	51.2	50.7	52.6	51.2
Aluminum	3334	60.3	26.9	26.4	27.1	29.7	29.5	29.8	26.1	26.4	27.9	30.3	30.6	30.7
Nonferrous foundries	336	2.7	150.9	155.2	152.2	150.8	153.2	158.4	148.3	155.4	151.8	154.8	151.7	160.4
<b>Fabricated metal products</b>	<b>34</b>	31.6	116.4	118.2	119.5	119.0	120.8	119.1	114.9	116.9	118.2	122.7	122.7	124.0
Metal containers	341	2.9	91.0	92.3	92.5	91.2	92.9	94.4	89.0	92.7	93.4	93.6	95.7	96.3
Hardware, tools, and cutlery	342	2.6	101.1	105.8	103.7	103.3	107.0	107.6	99.6	103.8	102.7	108.3	108.8	113.0
Structural metal products	344	5.5	133.3	133.8	134.2	133.6	133.3	132.3	131.4	131.2	130.5	133.1	134.7	137.7
Fasteners	345	1.7	107.2	105.9	114.1	108.8	109.7	110.4	104.1	103.6	112.1	114.2	113.3	115.5
Metal stampings	346	6.7	136.2	139.4	143.7	145.2	153.0	146.2	136.2	138.8	142.1	151.6	150.1	151.7
<b>Industrial machinery and equipment</b>	<b>35</b>	33.2	96.4	98.4	100.2	99.6	100.3	99.1	93.0	95.3	98.6	103.4	104.9	106.9
Engines and turbines	351	2.6	118.0	130.9	135.9	132.0	145.9	135.6	120.7	128.0	136.3	136.3	139.9	141.4
Farm	352	2.0	65.4	66.2	67.0	65.0	67.6	62.9	66.7	67.3	66.8	66.7	65.8	63.6
Construction and allied	353	3.9	103.2	102.1	104.8	102.7	100.2	97.5	98.2	97.6	103.4	105.3	104.3	104.7
Metalworking	354	4.1	101.5	100.0	101.3	104.6	103.8	101.4	97.1	95.9	98.1	108.2	109.7	111.7
Special industry	355	2.4	95.7	102.1	102.9	103.9	103.0	100.3	92.2	98.2	99.6	107.5	108.2	109.5
General industrial	356	5.2	99.6	102.5	103.3	100.6	100.1	98.2	96.6	99.5	101.6	104.4	104.5	106.8
Computer and office equip.	357	5.1	69.7	71.4	73.9	72.6	73.3	77.6	67.2	69.4	73.4	76.3	77.1	81.5
Service industry machines	358	3.4	97.6	97.3	97.3	102.3	102.7	103.0	91.4	94.0	96.2	106.3	109.7	111.2
<b>Electrical machinery</b>	<b>36</b>	33.0	95.9	98.3	99.3	97.0	97.4	96.3	92.4	95.1	97.7	100.6	101.7	102.7
Electrical distribution	361	1.3	93.3	94.0	99.8	100.2	102.5	102.6	92.4	93.6	99.1	102.0	105.8	107.9
Electrical industrial	362	3.9	71.3	69.0	71.8	72.5	76.4	75.7	69.9	68.3	71.9	75.1	78.2	79.4
Household appliances	363	2.4	86.0	86.6	85.5	84.0	85.9	81.6	83.9	85.7	88.9	90.9	89.8	86.6
Lighting and wiring products	364	3.0	128.6	129.0	132.3	126.7	126.6	129.5	125.7	127.3	128.4	131.2	130.5	133.8
TV and radio sets	365	.8	116.9	117.3	119.1	116.9	121.7	119.6	111.8	111.8	119.7	121.1	126.3	126.8
Communication equipment	366	3.3	95.8	100.5	104.9	98.3	96.3	95.1	91.4	95.6	100.0	101.5	104.4	103.8
Electronic components	367	14.6	100.1	104.2	103.5	102.3	101.8	101.7	96.4	100.3	101.8	105.6	106.5	107.8
<b>Transportation equipment</b>	<b>37</b>	39.8	110.3	112.9	108.5	104.6	110.2	107.6	107.2	109.6	107.6	110.6	111.8	114.0
Motor vehicles and parts	371	22.8	129.3	132.3	125.3	121.9	131.6	127.8	126.5	128.8	124.6	129.9	131.9	134.8
Aircraft and parts	372	10.7	70.2	72.3	74.4	67.0	66.6	64.3	67.0	69.3	73.1	69.9	69.4	68.7
Ships and boats	373	2.2	88.7	92.8	87.8	89.4	89.4	90.5	89.0	91.3	87.1	91.1	90.4	89.5
<b>Instruments</b>	<b>38</b>	13.6	94.9	99.4	97.7	93.6	94.8	93.0	90.7	95.0	95.1	97.9	102.4	101.8
Photographic equip. & supplies	386	1.8	103.1	111.5	108.3	100.9	102.4	98.2	102.1	107.1	103.7	103.6	109.6	104.4
<b>Miscellaneous manufactures</b>	<b>39</b>	4.5	128.9	127.0	130.1	126.6	127.8	125.1	122.4	125.9	129.5	132.1	134.0	133.8
<b>SUPPLEMENTARY GROUPS</b>														
Total, excluding nuclear nondefense		908.9	95.9	95.8	96.7	95.5	97.8	96.3	92.9	94.9	96.5	98.6	99.4	100.3
Utility sales to industry		835.5	94.2	94.5	95.0	94.4	97.1	95.2	92.3	94.3	95.4	96.4	96.9	97.8
Industrial generation		97.7	95.6	97.7	97.5	96.5	94.7	95.8	96.9	94.2	95.9	94.2	96.4	97.5



## Explanatory Note

The statistical release of **Industrial Production and Capacity Utilization** reports measures of output, capacity, and capacity utilization in manufacturing, mining, and the electric and gas utilities industries. The release also includes monthly indexes on the use of electric power in manufacturing and mining. Files containing data in the release and historical data are available under “Research and Data” at [www.federalreserve.gov](http://www.federalreserve.gov), the Board’s World Wide Web site. For paid access to these files through the Department of Commerce’s Economic Bulletin Board or World Wide Web site, please call STAT-USA at 1-800-STAT-USA or (202) 452-1986. Diskettes containing historical data and the data published in this release are available from the Board of Governors of the Federal Reserve System, Publications Services, (202) 452-3245.

### Industrial Production

**Coverage.** The industrial production (IP) index measures output in the manufacturing, mining, and electric and gas utilities industries; the reference period for the index is 1992. For the period since 1997, the total IP index has been constructed from 276 individual series based on the 1987 Standard Industrial Classification (SIC). These individual series are classified in two ways: (1) market groups (shown in table 1), such as consumer goods, equipment, intermediate products, and materials; and (2) industry groups (shown in tables 2 and 6), such as two-digit SIC industries and major aggregates of these industries—for example, durable and nondurable manufacturing, mining, and utilities.

**Market groups.** For purposes of analysis, the individual IP series are grouped into final products, intermediate products, and materials. Final products are assumed to be purchased by consumers, businesses, or government for final use. Intermediate products are expected to become inputs in nonindustrial sectors, such as construction, agriculture, and services. Materials are industrial output requiring further processing within the industrial sector. Total products comprise final and intermediate products; final products are divided into consumer goods and equipment.

**Timing.** The first estimate of output for a month is published around the 15th of the following month. The estimate is preliminary (denoted by the superscript “p” in tables) and subject to revision in each of the subsequent three months as new source data become available. (Revised estimates are denoted by the superscript “r” in tables.) After the fourth month, indexes are not revised further until the time of an annual revision or a benchmark revision. The last three benchmark revisions were published in 1990, 1985, and 1976.

**Source data.** In annual or benchmark revisions, the individual IP indexes are constructed from a variety of source data, such as the quinquennial *Censuses of Manufactures and Mineral Industries* and the *Annual Survey of Manufactures*, prepared by the Bureau of the Census; the *Minerals Yearbook*, prepared by the U.S. Geological Survey; and publications of the Department of Energy. On a monthly basis, the individual indexes of industrial production are constructed from two main types of source data: (1) output measured in physical units and (2) data on inputs to the production process, from which output is inferred. Data on physical products, such as tons of steel or barrels of oil, are obtained from private trade associations as well as from government agencies including those listed above; data of this type are used to estimate monthly IP where possible and appropriate. When suitable data on physical product are unavailable, estimates of output are based on either production-worker hours or electric power use by industry. Data on hours worked by production workers are collected in the monthly establishment survey conducted by the Bureau of Labor Statistics. The data on electric power use are described below. The factors used to convert inputs into estimates of production are based on historical relationships between the inputs and the comprehensive data used to benchmark the IP indexes; these factors also may be influenced by technological or cyclical developments. Especially for the first and second estimates for a given month, the available source data are limited and subject to revision.

**Weights.** In the index, series that measure the output of an individual industry are weighted according to their proportion in the total value-added output of all industries. The industrial production index, which extends back to 1919, is built as a chain-type index since 1977. The components of IP are combined using annual estimates of value added per unit of output; for the data since 1992, the annual unit-value-added estimates are linearly interpolated to get monthly weights. The IP proportions shown in column 1 of tables 1A, 2A, and 6 are estimates of the industries’ relative contributions to overall growth in the following year. For example, a 1 percent increase in durable goods manufacturing in 1997 would account for an increase in total IP of nearly 1/2 percent.

**Seasonal adjustment.** Individual series are seasonally adjusted by the X–11 ARIMA method, developed at Statistics Canada. For series based on production-worker hours, the current seasonal factors were estimated with data through October 2000; for other series, the factors were estimated with data through at least June 2000. Series are preadjusted for the effects of holidays or the business cycle where appropriate. For the data since 1977, all seasonally adjusted aggregate indexes are calculated by aggregating the seasonally adjusted indexes of the individual series.

**Reliability.** The average revision to the *level* of the total IP index, without regard to sign, between the first and the fourth estimates was 0.28 percent during the 1987–2001 period. The average revision to the *percent change* in total IP, without regard to sign, from the first to the fourth estimates was 0.22 percentage point during

the 1987–2001 period. In most cases (about 84 percent), the direction of change in output indicated by the first estimate for a given month is the same as that shown by the fourth estimate.

**Rounding.** The published percent changes are calculated from unrounded indexes, and may not be the same as percent changes calculated from the rounded indexes shown in the release.

### Capacity Utilization

**Definition.** Capacity utilization is calculated for the manufacturing, mining, and electric and gas utilities industries. For a given industry, the utilization rate is equal to an output index divided by a capacity index. Output is measured by seasonally adjusted indexes of industrial production. The capacity indexes attempt to capture the concept of sustainable practical capacity, which is defined as the greatest level of output that a plant can maintain within the framework of a realistic work schedule, taking account of normal downtime, and assuming sufficient availability of inputs to operate the machinery and equipment in place. The 76 individual capacity indexes are based on a variety of data, including capacity data measured in physical units compiled by trade associations, surveys of utilization rates and investment, and estimates of growth of the capital input.

**Groups.** Estimates of capacity and utilization are available for a variety of groups, including primary and advanced processing industries within manufacturing, durable and nondurable manufacturing, total manufacturing, mining, utilities, and total industry. Component industries of the primary and advanced processing groups within manufacturing are listed in the note on tables 2 and 3 of the release.

**Weights.** Although each utilization rate is the result of dividing an IP series by a corresponding capacity index, aggregate utilization rates are equivalent to combinations of individual utilization rates aggregated with proportions that reflect current capacity levels of output valued in current-period value added per unit of actual output. The implied proportions of individual industry operating rates in the rate for total industry for the most recent year are shown in the first column of table 3.

**Perspective.** The historical highs and lows in capacity utilization shown in the tables above are specific to each series and did not all occur in the same month. Industrial plants usually operate at capacity utilization rates that are well below 100 percent: none of the broad aggregates has ever reached 100 percent. For total industry and total manufacturing, utilization rates have exceeded 90 percent only in wartime.

### Electric Power

Data on electric power (expressed in kilowatt hours) are collected by the Federal Reserve District Banks from electric utilities and also from manufacturing and mining establishments that generate electric power for their own use (cogenerators). The indexes of power use shown in table 9 are sums of kilowatt hours used by an industry or industry group expressed as a percentage of that industry’s or group’s usage in 1992. The first column of the table shows, for reference, electric power use in billions of kilowatt hours as reported by manufacturing and mining industries in the 1992 censuses of those industries. The supplementary group, “Total, less nuclear nondefense,” is shown separately because the value-added proportion for the nondefense nuclear material series (part of SIC 2819) in total IP is considerably smaller than its share of total electric power use. Excluding this component from total power use facilitates comparisons with total IP.

### References

The annual revision published in November 2001 was described in an article published in the *Federal Reserve Bulletin*, vol. 88 (March 2002), pp. 173–187. A description of the aggregation methods for industrial production and capacity utilization is included in an article in the *Federal Reserve Bulletin*, vol. 83 (February 1997), pp. 67–92. The Federal Reserve methodology for constructing industry-level measures of capital is detailed in “Capital Stock Estimates for Manufacturing Industries: Methods and Data” by Mike Mohr and Charles Gilbert (1996), which can be obtained at

[www.federalreserve.gov/releases/g17/capital\\_stock\\_doc-latest.pdf](http://www.federalreserve.gov/releases/g17/capital_stock_doc-latest.pdf)

Industrial Production—1986 Edition contains a more detailed description of the other methods used to compile the industrial production index, plus a history of its development, a glossary of terms, and a bibliography. The major revisions to the IP indexes and capacity utilization since 1990 have been described in the *Federal Reserve Bulletin* (April 1990, June 1990, June 1993, March 1994, January 1995, January 1996, February 1997, February 1998, January 1999, March 2000, March 2001, and March 2002).

### Release Schedule

At 9:15 a.m. on:

**2002:** January 16, February 15, March 15, April 16, May 15, June 14, July 16, August 15, September 17, October 17, November 15, and December 17.

**2003:** January 17, February 14, March 14, April 15, May 15, June 17, July 16, August 15, September 15, October 16, November 14, and December 16.