

# FEDERAL RESERVE statistical release



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## INDUSTRIAL PRODUCTION AND CAPACITY UTILIZATION

Industrial production, which had been essentially flat between October and February, accelerated in March and April. The total index was revised upward to show a gain of 0.5 percent in March and is estimated to have risen 0.6 percent in April. Manufacturing output also grew 0.6 percent in April, its third straight monthly gain of close to 1/2 percent. Some of the acceleration came in high-technology industries, but many other industries showed improvement as well. At 134.0 percent of its 1992 average, industrial production in April was 2.0 percent higher than in April 1998. Capacity utilization in manufacturing, mining, and electric and gas utilities rose 0.2 percentage point in April, to 80.6 percent, down from 82.6 percent a year earlier.

### Market Groups

The production of consumer goods, which had been little changed in March, advanced 0.6 percent in April. The output of durable consumer goods jumped 2.1 percent, more than reversing a decline in March; output gains were  
(over)

### INDUSTRIAL PRODUCTION AND CAPACITY UTILIZATION: SUMMARY

Seasonally adjusted

	Index, 1992=100				Percent change				Apr. 98 to Apr. 99
	1999 Jan. <sup>r</sup>	Feb. <sup>r</sup>	Mar. <sup>r</sup>	Apr. <sup>p</sup>	1999 Jan. <sup>r</sup>	Feb. <sup>r</sup>	Mar. <sup>r</sup>	Apr. <sup>p</sup>	
<b>Industrial Production</b>									
<b>Total index</b>	132.3	132.5	133.2	134.0	.0	.1	.5	.6	2.0
Previous estimates	132.3	132.6	132.8		-.1	.3	.1		
<u>Major market groups:</u>									
Products, total	124.5	124.6	125.0	125.5	.1	.1	.3	.4	1.2
Consumer goods	115.2	115.5	115.3	116.0	.2	.3	-.1	.6	-.4
Business equipment	167.3	167.2	168.3	168.9	-.4	.0	.7	.3	4.1
Construction supplies	132.4	131.7	131.5	132.0	1.1	-.5	-.2	.4	5.3
Materials	144.9	145.3	146.5	147.9	-.2	.3	.8	.9	3.3
<u>Major industry groups:</u>									
Manufacturing	136.4	136.9	137.5	138.4	-.2	.4	.4	.6	2.5
Durable	161.4	161.7	162.8	164.2	-.1	.2	.7	.8	5.1
Nondurable	111.3	112.0	112.0	112.4	-.4	.6	.1	.3	-.6
Mining	98.5	97.7	97.0	97.1	-.5	-.8	-.7	.1	-8.1
Utilities	114.7	112.3	115.5	116.2	2.7	-2.1	2.8	.7	3.0
	Percent of capacity								Capacity growth
<b>Capacity Utilization</b>	Average 1967-98	1982 Low	1988-89 High	1998 Apr.	1999 Jan. <sup>r</sup>	Feb. <sup>r</sup>	Mar. <sup>r</sup>	Apr. <sup>p</sup>	Apr. 98 to Apr. 99
<b>Total industry</b>	82.1	71.1	85.4	82.6	80.4	80.2	80.4	80.6	4.5
Previous estimates					80.3	80.3	80.1		
Manufacturing	81.1	69.0	85.7	81.7	79.5	79.5	79.6	79.8	5.0
Advanced processing	80.5	70.4	84.2	80.7	78.2	78.4	78.5	78.8	6.0
Primary processing	82.4	66.2	88.9	84.6	83.0	82.8	82.7	83.0	2.6
Mining	87.5	80.3	88.0	88.2	81.5	80.8	80.2	80.2	1.1
Utilities	87.4	75.9	92.6	89.5	90.5	88.5	90.9	91.5	.7

sizable for automotive products, carpeting and furniture, and home electronics. The production of nondurable consumer goods rose 0.2 percent, even though the output of tobacco products declined and the production of gasoline was cut by disruptions at refineries. The advance in the production of nonenergy nondurable consumer goods was led by a continued recovery in the output of consumer chemical products and an uptick in apparel production.

The output of business equipment increased 0.3 percent in April after an upward-revised advance of 0.7 percent in March. Although the assembly of business vehicles gained substantially, a further drop in the production of civil transport aircraft caused the measure for transit equipment to decline again. The index for industrial equipment, which had fallen over the two preceding quarters, turned up, and the index for information processing equipment rose substantially further; the latter increased more than 3 percent over March and April. In contrast, the production of farm machinery and equipment fell back after some recovery in February and March. The production of defense and space equipment fell 2.0 percent in April, partly because of a strike at a major shipyard.

The production of construction supplies, which had eased in February and March from the high level in January, resumed its growth. Over the past twelve months, it has increased 5.3 percent. The index for business supplies, which had been stagnant for about a year, has picked up recently. The output of materials increased 0.9 percent in April after an upward-revised gain of 0.8 percent in March. The indexes for both durable goods materials and energy materials rose more than 1 percent, with large increases in semiconductors and computer parts for a second month and a rebound in coal production from a dip in March.

### Industry Groups

Production in manufacturing increased 0.6 percent, compared with 0.4 percent in the two preceding months. The factory operating rate rose 0.2 percentage point, to 79.8 percent, but was down from 81.7 percent last April. Durable goods production rose 0.8 percent, a gain similar to that in March, and the advances were again widespread. The increase in the output of electrical machinery, boosted by an acceleration of production in the semiconductor and communications industries, rose to 2.5 percent in April. The production of motor vehicles and parts rose 2.3 percent, and computer output increased nearly 2 percent. Production declined at facilities for iron and steel, aircraft and parts, and shipbuilding. With the solid gains in production, the rate of capacity utilization in durable manufacturing rose 0.3 percentage point, to 79.6 percent, a level close to its 1967–98 average.

The output of nondurable manufactured goods advanced 0.3 percent; production has been in a slow recovery since last fall and has increased about 1 percent over the past three months. The output of textile mill products, apparel, and paper and products rebounded from declines in March, while the production of chemicals and products and rubber and plastics products advanced further. The operating rate in nondurable manufacturing rose 0.2 percentage point. But at 80.6 percent, utilization for these industries is more than 2 percentage points below its level of April 1998 and is nearly 3 percentage points below its long-term average.

Despite rebounds in coal and metal ores, mining production edged up only 0.1 percent; it has dropped 10 percent over the past fifteen months. Drilling for oil and gas wells fell back in April to a very low level. Primarily because of the low level of oil and gas extraction, the rate of capacity utilization in mining remained at 80.2 percent in April, down from 88.2 percent twelve months earlier.

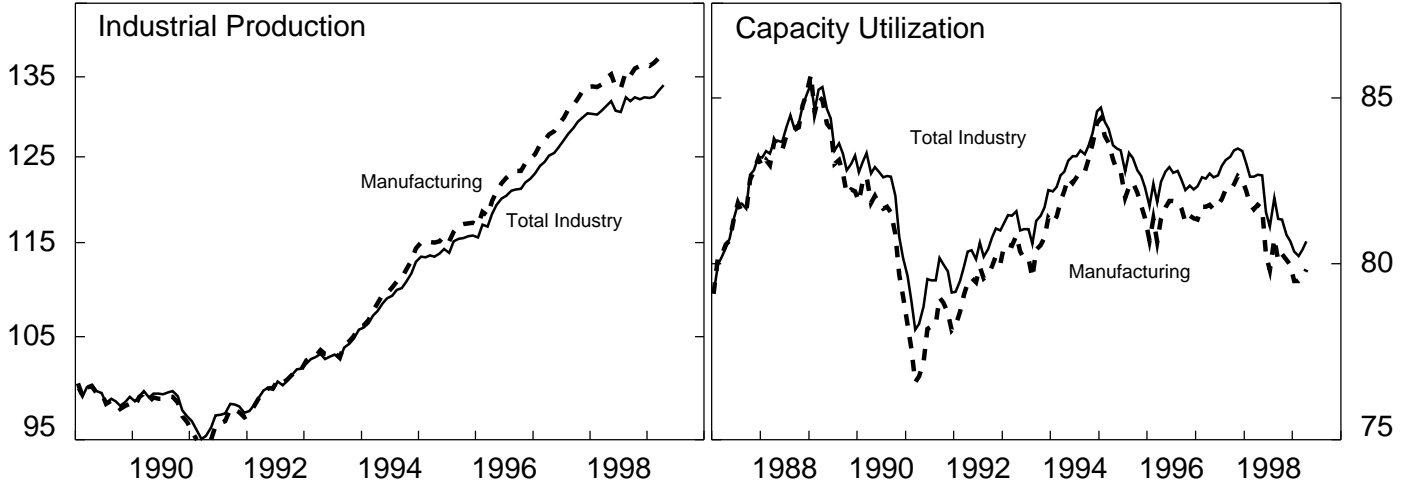
Output at utilities, which had rebounded 2.8 percent in March, advanced another 0.7 percent and is up 3.0 percent from the level of April 1998. The operating rate at electric utilities is near its 1988–89 high, while utilization at gas utilities is below its 1967–98 average.

# Industrial Production and Capacity Utilization

(April data, seasonally adjusted)

Ratio scale, 1992=100

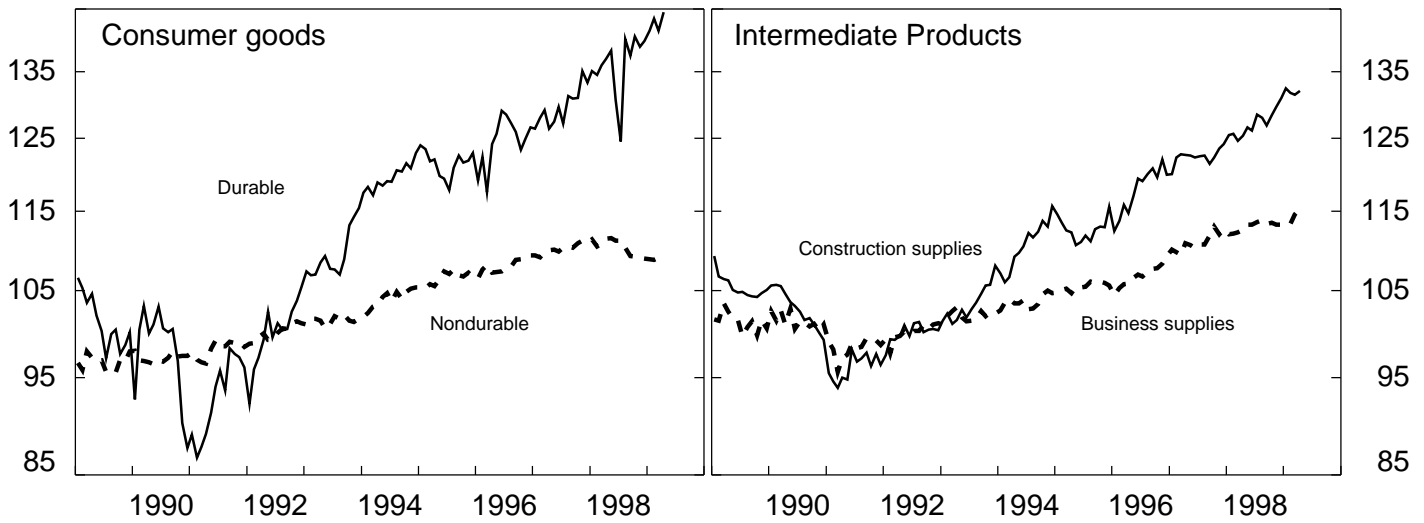
Percent of capacity



## Industrial Production, Market Groups

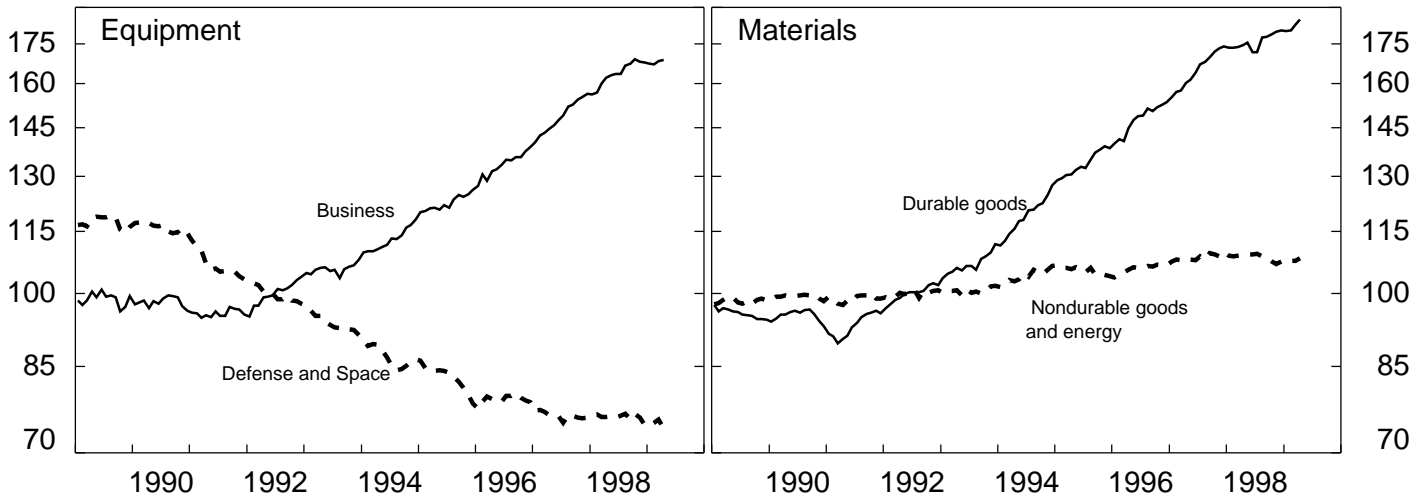
Ratio scale, 1992=100

Ratio scale, 1992=100



Ratio scale, 1992=100

Ratio scale, 1992=100



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

Item	1998 IP Proportion <sup>1</sup>	Index, 1992=100											
		Seasonally Adjusted						Not seasonally adjusted					
		1998 Nov.	Dec.	1999 Jan. <sup>f</sup>	Feb. <sup>f</sup>	Mar. <sup>f</sup>	Apr. <sup>P</sup>	1998 Nov.	Dec.	1999 Jan. <sup>f</sup>	Feb. <sup>f</sup>	Mar. <sup>f</sup>	Apr. <sup>P</sup>
<b>Total index</b>	100.00	132.2	132.3	132.3	132.5	133.2	134.0	131.0	129.7	129.8	132.2	133.5	132.5
<b>Products, total</b>	61.26	124.5	124.4	124.5	124.6	125.0	125.5	122.8	120.9	121.6	123.1	123.6	123.2
<b>Final products</b>	46.12	126.1	125.9	125.8	126.0	126.3	126.7	124.1	122.4	123.6	125.5	126.0	124.5
<b>Consumer goods</b>	27.67	114.8	114.9	115.2	115.5	115.3	116.0	112.4	111.3	113.8	114.6	114.9	113.2
<b>Durable</b>	6.01	138.9	139.8	141.5	143.4	141.5	144.5	135.7	130.6	135.9	148.1	150.3	149.4
Automotive products	2.66	139.6	139.8	141.7	141.2	139.5	142.4	135.1	124.6	133.7	150.7	153.7	147.3
Autos and trucks	1.58	149.1	147.7	149.4	149.4	147.3	151.5	142.7	125.7	139.0	166.3	169.4	157.6
Autos	.54	113.7	115.5	111.7	107.0	109.7	112.1	109.7	98.2	104.8	117.9	124.4	116.2
Trucks	1.04	183.2	179.1	185.2	188.9	183.0	188.9	174.5	152.5	171.6	211.4	211.9	196.7
Auto parts and allied goods	1.08	125.9	128.2	130.5	129.3	128.2	129.2	124.2	122.3	125.9	128.9	131.9	132.7
Other durable goods	3.36	137.9	139.5	141.0	144.9	142.8	145.9	135.9	135.3	137.3	145.7	147.1	150.8
Appliances and electronics	.95	222.5	226.0	229.6	241.7	236.1	238.6	215.7	207.9	221.4	249.1	239.7	239.2
Appliances and air cond.	.48	132.3	133.7	132.9	140.0	133.3	133.4	124.6	115.7	129.6	153.1	146.5	139.0
Home electronics	.46	365.0	372.5	386.5	406.9	407.0	415.2	363.4	362.5	368.2	394.3	381.6	400.7
Carpeting and furniture	.84	117.5	116.8	120.7	123.1	116.3	121.8	114.7	109.2	117.3	122.4	117.3	126.7
Miscellaneous	1.57	109.5	111.4	110.9	112.6	114.2	116.1	109.2	113.7	108.5	111.5	119.9	121.6
<b>Nondurable</b>	21.66	109.0	108.9	108.9	108.8	109.0	109.2	106.8	106.6	108.5	106.7	106.5	104.6
Nonenergy	18.90	109.3	109.1	108.2	108.6	108.3	108.6	107.3	104.3	103.8	104.2	104.8	104.9
Foods and tobacco	9.68	109.6	109.6	110.0	110.1	109.9	109.6	108.4	103.2	105.1	105.4	106.3	105.7
Clothing	1.81	94.5	94.6	93.4	92.8	91.4	91.9	93.5	90.9	87.0	90.2	89.1	90.1
Chemical products	4.59	119.3	118.7	115.3	117.8	118.7	120.3	113.5	113.0	110.4	110.6	111.9	112.7
Paper products	2.83	104.1	103.6	102.0	101.0	99.7	99.8	104.2	104.7	101.4	100.5	100.1	100.9
Energy products	2.76	106.5	107.1	113.3	110.3	113.7	113.0	103.5	122.8	141.6	124.6	118.8	103.2
Fuels	.94	109.1	109.6	112.2	113.3	111.8	109.7	112.5	112.9	108.0	107.4	106.5	109.2
Utilities	1.82	104.5	105.2	113.3	108.1	114.2	114.2	98.1	127.2	158.3	132.8	124.4	99.4
<b>Equipment, total</b>	18.45	146.5	145.6	145.0	144.9	146.1	145.9	145.6	142.6	141.5	145.3	146.4	145.2
<b>Business equipment</b>	15.36	168.1	167.9	167.3	167.2	168.3	168.9	166.4	163.4	162.4	167.6	168.6	167.5
Information processing & related	5.92	219.7	220.8	222.0	222.1	225.4	229.3	218.2	219.7	214.9	216.0	218.1	224.2
Computer and office	1.38	745.2	759.9	777.0	787.3	806.2	820.2	725.9	738.6	740.0	753.6	749.3	795.5
Industrial	4.81	139.9	141.3	139.9	137.8	137.7	138.7	137.9	136.5	136.0	138.5	138.2	136.7
Transit	3.16	140.5	139.6	137.6	136.4	136.3	135.0	138.2	132.1	133.7	142.7	144.6	138.5
Autos and trucks	1.24	136.4	136.0	134.8	133.0	131.7	134.8	130.6	115.3	125.6	146.0	148.2	141.5
Other	1.47	138.5	131.7	131.5	140.3	141.9	136.6	138.0	125.8	128.4	143.3	142.7	135.8
<b>Defense and space equipment</b>	2.07	75.7	74.6	74.4	74.9	75.5	74.0	76.4	76.6	74.9	75.3	75.9	74.1
Oil and gas well drilling	.78	115.2	103.2	99.2	97.4	104.2	97.2	116.4	105.4	99.1	95.3	98.6	97.3
Manufactured homes	.24	154.6	156.6	159.1	154.1	152.8	151.0	149.4	123.5	136.6	149.1	155.0	160.8
<b>Intermediate products</b>	15.13	119.3	119.8	120.3	120.2	120.9	121.5	118.9	116.5	115.7	116.1	116.5	119.3
Construction supplies	6.06	129.6	131.0	132.4	131.7	131.5	132.0	129.4	124.3	123.6	126.4	127.0	130.9
Business supplies	9.07	113.2	113.3	113.1	113.4	114.6	115.3	112.7	111.9	110.9	110.0	110.3	112.5
<b>Materials</b>	38.74	144.6	145.2	144.9	145.3	146.5	147.9	144.3	144.1	143.2	147.1	149.9	147.8
<b>Durable</b>	23.55	179.9	180.4	180.1	180.4	182.7	184.9	180.1	179.5	175.2	182.0	188.5	184.8
Consumer parts	4.42	145.6	144.8	141.9	145.8	149.1	151.0	142.4	131.5	141.0	152.9	159.9	158.5
Equipment parts	8.64	289.9	292.6	293.2	293.0	296.9	302.7	295.3	308.1	284.6	294.1	312.2	294.7
Semiconductors, printed circuit boards, and oth. elec. comps.	2.98	936.9	960.1	962.0	970.2	994.2	1030	958.1	1047	880.2	958.7	1113	951.2
Other	10.50	129.3	129.3	129.8	128.8	129.9	130.5	128.6	126.6	125.1	128.0	129.2	130.3
Basic metals	3.35	117.3	116.3	118.4	116.5	117.6	117.6	117.2	114.5	116.8	119.2	120.3	119.5
<b>Nondurable</b>	8.48	112.2	112.5	112.0	113.0	113.1	113.2	111.2	108.3	111.3	114.1	113.9	115.3
Textile	.91	103.0	102.5	99.0	99.6	100.0	100.4	103.4	95.2	98.8	100.2	101.2	102.6
Paper	1.80	112.7	114.7	116.5	115.8	116.6	117.6	111.7	112.0	117.4	118.7	117.0	118.0
Chemical	3.92	113.7	113.0	112.8	114.0	114.6	114.4	112.4	109.7	111.8	115.7	115.7	117.3
Other	1.86	113.2	114.4	112.5	114.8	113.0	113.2	112.2	108.1	110.4	113.1	113.4	114.9
<b>Energy</b>	6.71	101.5	102.6	102.6	102.4	102.4	103.5	99.9	103.8	105.4	104.5	102.7	100.1
Primary	4.28	99.8	100.3	100.4	100.5	98.8	100.1	98.4	100.8	101.9	103.8	99.9	98.4
Converted fuel	2.43	104.9	107.2	107.1	106.0	109.3	110.3	102.8	109.5	112.2	106.1	108.3	103.5
<b>SPECIAL AGGREGATES</b>													
<b>Total excluding:</b>													
Autos and trucks	97.18	131.9	132.1	132.0	132.3	133.0	133.7	130.8	129.9	129.7	131.4	132.7	131.9
Motor vehicles and parts	94.86	131.4	131.7	131.7	131.8	132.4	133.1	130.3	129.8	129.2	130.7	131.7	130.9
Computers	97.75	127.4	127.5	127.4	127.6	128.2	128.9	126.3	125.0	125.1	127.4	128.7	127.5
Computers and semiconductors <sup>2</sup>	94.29	118.4	118.4	118.3	118.4	118.9	119.4	117.1	115.3	116.2	118.1	118.6	118.2
<b>Consumer goods excluding:</b>													
Autos and trucks	26.09	113.0	113.2	113.4	113.7	113.6	114.1	110.8	110.5	112.5	112.0	112.1	110.9
Energy	24.91	115.8	115.8	115.4	116.1	115.5	116.4	113.5	110.0	110.7	113.5	114.5	114.3
<b>Business equipment excluding:</b>													
Autos and trucks	14.11	171.6	171.5	170.9	171.1	172.5	172.8	170.3	168.8	166.5	169.9	170.7	170.4
Computer and office equipment	13.98	144.6	144.1	143.1	142.9	143.5	143.8	143.2	140.1	139.2	143.9	144.8	142.9
<b>Materials excluding:</b>													
Energy	32.03	158.2	158.6	158.2	158.8	160.3	161.8	158.3	156.8	155.1	160.5	164.7	162.8

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	1997 Q4 to 1998 Q4	Seasonally adjusted annual rate				Seasonally adjusted				Not seasonally adjusted				Apr. 98 to Apr. 99
		1998 Q2	Q3	Q4	1999 Q1 <sup>r</sup>	1999 Jan. <sup>r</sup>	Feb. <sup>r</sup>	Mar. <sup>r</sup>	Apr. <sup>p</sup>	1999 Jan. <sup>r</sup>	Feb. <sup>r</sup>	Mar. <sup>r</sup>	Apr. <sup>p</sup>	
<b>Total index</b>	1.9	2.8	.9	2.2	1.1	.0	.1	.5	.6	.1	1.8	1.0	-.8	2.0
<b>Products, total</b>	2.1	4.2	.2	1.5	.4	.1	.1	.3	.4	.6	1.2	.4	-.3	1.2
<b>Final products</b>	2.0	4.6	-.8	1.3	-.6	.0	.1	.3	.3	1.0	1.5	.4	-1.2	.4
<b>Consumer goods</b>	-.4	1.4	-3.9	.1	1.2	.2	.3	-.1	.6	2.3	.7	.2	-1.5	-.4
<b>Durable</b>	4.9	.3	-3.6	18.0	7.1	1.2	1.4	-1.3	2.1	4.0	9.0	1.5	-.6	5.5
Automotive products	3.9	-4.2	-7.6	41.9	1.9	1.4	-.4	-1.2	2.0	7.4	12.7	2.0	-4.2	5.8
Autos and trucks	3.1	-14.0	-14.3	77.5	-1.3	1.1	.0	-1.4	2.9	10.6	19.7	1.9	-7.0	7.2
Autos	.7	-19.2	26.9	27.6	-21.7	-3.3	-4.2	2.5	2.1	6.8	12.4	5.6	-6.6	4.4
Trucks	5.0	-10.2	-30.5	112.4	10.5	3.4	2.0	-3.2	3.3	12.6	23.2	.2	-7.2	8.7
Auto parts and allied goods	6.0	13.4	4.4	2.5	6.9	1.7	-.9	-.8	.7	2.9	2.4	2.3	.6	4.4
Other durable goods	5.6	3.9	-.8	1.9	11.5	1.1	2.8	-1.5	2.2	1.5	6.1	1.0	2.5	5.2
Appliances and electronics	19.5	6.1	14.6	25.5	29.0	1.6	5.3	-2.3	1.1	6.5	12.5	-3.8	-.2	17.3
Appliances and air cond.	11.3	-1.4	6.3	17.1	11.7	-.6	5.3	-4.8	.1	12.0	18.1	-4.3	-5.1	7.2
Home electronics	27.8	13.1	22.9	34.7	48.5	3.8	5.3	.0	2.0	1.6	7.1	-3.2	5.0	28.0
Carpeting and furniture	3.6	3.1	-2.0	5.1	6.3	3.3	1.9	-5.5	4.7	7.5	4.3	-4.1	8.0	5.1
Miscellaneous	-1.2	2.9	-8.2	-12.3	3.8	-.5	1.6	1.4	1.6	-4.6	2.7	7.5	1.4	-1.8
<b>Nondurable</b>	-1.8	1.7	-3.9	-4.4	-.4	.0	-.1	.2	.2	1.8	-1.6	-.2	-1.8	-2.0
Nonenergy	-1.6	-.4	-6.6	-.6	-2.0	-.9	.3	-.2	.3	-.5	.4	.6	.1	-2.5
Foods and tobacco	.6	-.3	-7.6	5.6	3.3	.3	.0	-.1	-.3	1.8	.3	.9	-.6	-.5
Clothing	-5.7	-3.7	-5.7	-11.3	-9.4	-1.3	-.7	-1.5	.6	-4.3	3.7	-1.3	1.1	-8.0
Chemical products	-2.4	5.3	-9.7	-4.4	-3.7	-2.9	2.2	.7	1.4	-2.3	.2	1.2	.7	-2.3
Paper products	-4.7	-7.2	1.9	-7.3	-12.3	-1.5	-1.0	-1.2	.1	-3.1	-.8	-.4	.8	-6.0
Energy products	-3.4	17.5	16.1	-26.9	11.2	5.8	-2.7	3.2	-.6	15.3	-12.0	-4.7	-13.1	1.3
Fuels	-.6	1.7	-.7	-7.2	13.1	2.4	1.0	-1.4	-1.8	-4.3	-.6	-.8	2.5	-1.7
Utilities	-4.9	26.7	25.3	-35.2	10.2	7.7	-4.6	5.6	.0	24.4	-16.1	-6.3	-20.1	2.9
<b>Equipment, total</b>	5.7	9.6	4.0	3.2	-3.3	-.5	-.1	.9	-.2	-.8	2.8	.7	-.8	1.6
<b>Business equipment</b>	8.3	13.8	7.2	6.2	-1.8	-.4	.0	.7	.3	-.6	3.2	.6	-.6	4.1
Information processing & related	14.4	20.7	11.0	11.2	6.3	.6	.0	1.5	1.7	-2.2	.5	1.0	2.8	11.3
Computer and office	54.7	60.7	38.8	46.4	29.6	2.3	1.3	2.4	1.7	.2	1.8	-.6	6.2	36.4
Industrial	1.5	5.9	5.4	-2.9	-6.8	-1.0	-1.4	-.1	.7	-.4	1.8	-.2	-1.1	-.5
Transit	12.1	15.8	6.5	19.1	-10.2	-1.4	-.9	-.1	-1.0	1.2	6.7	1.3	-4.2	1.0
Autos and trucks	5.2	-12.0	8.1	58.4	-8.5	-.9	-1.4	-1.0	2.4	8.9	16.3	1.5	-4.5	9.2
Other	-1.4	7.6	-1.8	-8.2	2.4	-.1	6.6	1.2	-3.7	2.1	11.5	-.4	-4.8	-2.9
<b>Defense and space equipment</b>	-.2	-1.3	.8	-2.4	-3.3	-.2	.6	.8	-2.0	-2.2	.6	.8	-2.4	-2.5
Oil and gas well drilling	-25.3	-27.2	-37.8	-39.6	-37.1	-3.8	-1.9	7.0	-6.7	-6.0	-3.9	3.5	-1.3	-34.1
Manufactured homes	9.1	-1.4	1.3	16.8	3.5	1.6	-3.1	-.9	-1.2	10.6	9.1	4.0	3.7	2.0
<b>Intermediate products</b>	2.4	3.0	3.4	1.8	3.5	.3	-.1	.6	.6	-.8	.4	.4	2.4	3.6
Construction supplies	5.1	2.4	5.6	5.9	7.0	1.1	-.5	-.2	.4	-.6	2.2	.5	3.0	5.3
Business supplies	.7	3.3	2.0	-.8	1.2	-.2	.3	1.1	.6	-.9	-.9	.3	2.0	2.5
<b>Materials</b>	1.6	.7	2.0	3.5	2.2	-.2	.3	.8	.9	-.6	2.7	1.9	-1.4	3.3
<b>Durable</b>	3.8	.5	4.2	9.5	3.1	-.2	.2	1.3	1.2	-2.4	3.8	3.6	-2.0	5.9
Consumer parts	-1.5	-6.1	2.6	9.3	.2	-2.0	2.7	2.3	1.2	7.2	8.4	4.6	-.9	4.6
Equipment parts	11.9	6.6	14.8	17.7	6.4	.2	-.1	1.3	2.0	-7.7	3.4	6.2	-5.6	13.4
Semiconductors, printed circuit boards, and oth. elec. comps.	29.7	11.4	45.6	61.2	19.0	.2	.9	2.5	3.6	-15.9	8.9	16.1	-14.6	39.1
Other	-.8	-2.0	-4.1	3.1	1.6	.3	-.7	.8	.4	-1.2	2.3	.9	.9	.1
Basic metals	-5.7	-9.3	-6.7	-9.1	.8	1.8	-1.6	1.0	-.1	1.9	2.1	.9	-.7	-4.8
<b>Nondurable</b>	-2.8	-1.7	-3.8	-3.2	2.0	-.5	.9	.1	.2	2.8	2.5	-.2	1.3	-1.0
Textile	-7.2	.0	-7.4	-12.9	-18.6	-3.5	.6	.5	.3	3.8	1.4	1.0	1.4	-9.1
Paper	-2.6	-1.6	-.4	-6.2	6.9	1.5	-.6	.7	.8	4.8	1.1	-1.5	.8	1.1
Chemical	-3.7	-3.1	-7.3	-2.7	4.4	-.2	1.1	.5	-.2	1.9	3.5	.0	1.4	-1.6
Other	1.3	.4	2.5	3.8	2.8	-1.7	2.0	-1.6	.1	2.1	2.5	.3	1.2	2.0
<b>Energy</b>	-.7	4.5	1.9	-8.1	-.6	.0	-.2	.0	1.1	1.5	-.8	-1.7	-2.6	-.2
Primary	.1	.3	3.0	-4.7	-3.9	.1	.2	-1.7	1.3	1.0	1.9	-3.8	-1.5	-1.2
Converted fuel	-2.2	12.8	.1	-13.8	5.4	-.1	-1.0	3.1	.9	2.4	-5.4	2.0	-4.5	1.5
<b>SPECIAL AGGREGATE</b>														
<b>Total excluding:</b>														
Autos and trucks	1.8	3.3	1.1	.7	1.3	-.1	.2	.6	.5	-.2	1.3	1.0	-.6	1.8
Motor vehicles and parts	1.9	3.8	.6	.6	1.3	.0	.1	.5	.5	-.5	1.1	.8	-.6	1.7
Computers	.9	1.7	.1	1.3	.4	-.1	.1	.5	.6	.1	1.8	1.0	-.9	1.2
Computers and semiconductors <sup>1</sup>	-.1	1.3	-1.2	-.3	-.2	-.1	.1	.4	.4	.8	1.6	.5	-.4	.1
<b>Consumer goods excluding:</b>														
Autos and trucks	-.6	2.5	-3.2	-3.4	1.4	-.2	.3	-.1	.5	1.8	-.5	.1	-1.1	-.8
Energy	.0	-.2	-5.9	3.7	.2	-.3	.6	-.5	.7	.6	2.6	.8	-.1	-.6
<b>Business equipment excluding:</b>														
Autos and trucks	8.5	16.3	7.0	2.5	-1.1	-.3	.1	.8	.2	-1.3	2.0	.5	-.2	3.6
Computer and office equipment	4.2	9.3	4.2	2.7	-4.8	-.7	-.2	.5	.2	-.7	3.4	.7	-1.4	1.0
<b>Materials excluding:</b>														
Energy	2.0	-.1	1.9	6.0	2.8	-.2	.4	1.0	.9	-1.1	3.5	2.6	-1.2	4.1

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	1998 IP Proportion <sup>1</sup>	Index, 1992=100											
			Seasonally Adjusted						Not seasonally adjusted					
			1998 Nov.	Dec.	1999 Jan. <sup>f</sup>	Feb. <sup>f</sup>	Mar. <sup>f</sup>	Apr. <sup>P</sup>	1998 Nov.	Dec.	1999 Jan. <sup>f</sup>	Feb. <sup>f</sup>	Mar. <sup>f</sup>	Apr. <sup>P</sup>
<b>Total index</b>		100.00	132.2	132.3	132.3	132.5	133.2	134.0	131.0	129.7	129.8	132.2	133.5	132.5
<b>Manufacturing</b>		88.55	136.4	136.7	136.4	136.9	137.5	138.4	135.6	133.1	132.3	136.0	138.0	137.7
<b>Primary processing</b>		27.97	120.3	121.3	121.8	121.6	121.8	122.2	120.0	117.9	118.5	120.8	121.3	122.7
<b>Advanced processing</b>		60.59	144.6	144.4	143.8	144.6	145.4	146.5	143.2	140.5	139.0	143.3	146.1	144.9
<b>Durable</b>		49.28	161.0	161.5	161.4	161.7	162.8	164.2	160.2	158.0	156.5	162.6	166.4	164.2
Lumber and products	24	2.12	118.3	121.4	122.0	121.7	122.0	121.8	117.8	113.3	115.4	118.9	120.9	122.2
Furniture and fixtures	25	1.41	123.6	122.9	122.5	124.6	125.7	127.1	122.5	120.6	117.9	123.5	122.2	125.5
Stone, clay, and glass products	32	2.43	130.5	131.6	133.5	132.2	131.4	133.0	130.4	125.4	125.5	125.9	127.3	132.9
Primary metals	33	3.60	118.7	118.6	120.7	118.3	120.3	119.6	118.4	114.9	119.5	121.5	123.7	122.2
Iron and steel	331,2	1.91	109.7	114.6	116.7	112.6	116.3	114.2	109.0	110.1	115.1	116.3	119.6	117.5
Raw steel		.09	100.2	102.0	106.6	106.6	109.1	107.7	99.5	99.4	107.1	111.1	113.4	110.3
Nonferrous	333-6,9	1.69	129.3	123.4	125.4	125.1	125.1	126.0	129.6	120.7	124.8	127.7	128.6	127.9
Fabricated metal products	34	5.55	127.7	128.7	127.6	126.7	127.2	127.9	128.1	128.5	123.3	124.7	125.7	125.4
Industrial machinery and equipment	35	9.98	211.1	212.7	212.3	213.8	215.2	216.4	205.3	204.2	205.5	214.5	216.2	217.0
Computer and office equip.	357	2.25	746.9	761.6	778.9	789.4	807.9	823.1	727.5	740.2	741.7	755.6	750.9	798.3
Electrical machinery	36	8.56	304.8	307.3	308.7	310.1	314.4	322.3	311.8	320.3	296.1	310.6	330.3	312.2
Semiconductors and related electronic components	3672-9	3.46	779.3	794.8	797.8	803.0	820.8	847.6	803.3	868.8	743.3	801.8	915.0	796.4
Transportation equipment	37	9.43	127.1	125.6	124.0	125.3	125.9	126.1	124.5	116.8	122.1	131.7	135.4	131.0
Motor vehicles and parts	371	5.14	148.8	146.6	145.3	147.8	149.2	152.6	143.2	126.1	141.0	161.2	168.1	162.1
Autos and light trucks		2.55	138.1	137.3	137.9	137.0	135.9	139.6	132.4	116.9	128.5	152.3	156.0	145.2
Aerospace and misc.	372-6,9	4.30	105.7	104.8	103.2	103.2	103.3	100.4	105.9	106.7	103.3	103.5	104.3	101.3
Instruments	38	4.88	114.1	113.9	114.3	113.9	114.6	115.4	113.4	113.5	111.5	112.2	113.1	113.6
Miscellaneous	39	1.32	114.1	115.4	114.8	115.9	116.8	118.4	117.8	116.9	111.2	114.2	116.6	118.0
<b>Nondurable</b>		39.28	111.6	111.7	111.3	112.0	112.0	112.4	110.6	107.9	107.7	109.0	109.4	110.8
Foods	20	9.00	111.3	111.1	112.0	112.2	111.8	111.8	110.8	107.6	106.9	106.4	106.9	107.9
Tobacco products	21	1.29	99.8	100.0	96.9	97.1	97.7	96.2	98.8	78.8	96.1	101.6	104.9	92.5
Textile mill products	22	1.56	108.8	109.4	109.3	109.7	105.6	108.4	107.0	97.2	103.5	107.5	105.0	112.0
Apparel products	23	1.73	95.5	95.3	94.1	93.8	93.4	94.0	95.7	95.3	91.0	92.0	92.2	91.6
Paper and products	26	3.50	112.3	115.3	116.2	116.5	116.0	116.9	110.8	111.2	116.6	118.6	116.4	118.0
Printing and publishing	27	6.79	105.4	105.1	103.6	103.7	104.1	104.4	105.8	103.7	99.4	100.0	99.8	103.7
Chemicals and products	28	9.78	114.7	114.0	112.5	114.5	115.6	116.1	111.0	109.3	109.7	111.6	113.0	114.3
Petroleum products	29	1.59	112.8	112.5	116.7	116.3	115.9	114.9	114.3	112.4	107.7	107.4	108.2	113.1
Rubber and plastics products	30	3.83	135.0	136.0	135.4	136.2	137.0	138.1	135.6	135.5	133.3	136.4	137.5	137.7
Leather and products	31	.21	74.3	73.0	70.9	70.5	69.9	69.7	74.7	73.1	69.1	69.8	70.3	70.0
<b>Mining</b>		5.19	101.1	99.0	98.5	97.7	97.0	97.1	101.4	97.3	95.4	97.3	94.7	96.4
Metal mining	10	.36	110.7	108.3	110.1	108.4	104.5	106.3	109.9	108.2	103.6	106.9	103.9	104.7
Coal mining	12	.82	108.6	114.5	107.7	109.1	103.4	107.2	107.5	110.3	106.6	114.8	107.5	106.7
Oil and gas extraction	13	3.38	94.2	91.0	91.5	91.0	91.7	91.0	95.4	92.5	91.6	91.6	91.1	90.9
Stone and earth minerals	14	.64	132.1	125.6	126.9	121.9	121.2	120.0	132.2	108.8	104.5	109.3	99.7	118.3
<b>Utilities</b>		6.25	110.6	111.8	114.7	112.3	115.5	116.2	105.1	120.0	133.2	121.0	117.7	105.5
Electric	491,3pt	5.28	114.6	115.2	116.2	114.1	117.3	118.1	106.6	115.6	122.4	113.2	111.8	105.5
Gas	492,3pt	.97	92.0	96.0	108.4	104.3	107.1	107.7	102.1	145.2	189.6	162.6	150.2	109.9
<b>SPECIAL AGGREGATES</b>														
Computers, communications eq. and semiconductors <sup>2</sup>		7.81	562.8	571.2	576.6	580.7	593.1	609.3	571.9	598.9	551.9	573.8	611.8	587.6
<b>Manufacturing excluding:</b>														
Motor vehicles and parts		83.41	135.7	136.2	136.0	136.3	136.9	137.6	135.1	133.5	131.8	134.4	136.1	136.2
Computer and office equipment		86.30	130.9	131.1	130.8	131.2	131.7	132.4	130.2	127.7	126.9	130.4	132.4	131.9
Computers and semiconductors <sup>2</sup>		82.84	120.4	120.5	120.1	120.5	120.8	121.4	119.4	116.5	116.6	119.6	120.7	121.0
Computers, communications eq. and semiconductors <sup>2</sup>		80.74	118.8	118.9	118.5	118.9	119.2	119.6	117.7	114.7	115.0	118.0	119.0	119.3
<b>Memo: Motor vehicle assemblies<sup>3</sup></b>														
Total			12.9	12.8	12.8	12.7	12.6	12.9	12.0	11.6	11.6	13.0	15.3	13.6
Autos			5.8	5.8	5.6	5.4	5.5	5.6	5.4	5.3	5.1	5.5	6.7	5.9
Trucks			7.1	6.9	7.2	7.3	7.0	7.2	6.6	6.3	6.4	7.5	8.6	7.7
Light			6.7	6.5	6.8	6.9	6.7	6.9	6.2	5.9	6.1	7.1	8.2	7.3
Heavy and medium			0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4

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, and stone, clay, and glass products. 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, transportation equipment, instruments, and miscellaneous manufactures.

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

Percent change

Item	SIC	1997 Q4 to 1998 Q4	Seasonally adjusted annual rate				Seasonally adjusted				Not seasonally adjusted				Apr. 98 to Apr. 99
			1998 Q2	Q3	Q4	1999 Q1 <sup>r</sup>	1999 Jan. <sup>r</sup>	Feb. <sup>r</sup>	Mar. <sup>r</sup>	Apr. <sup>p</sup>	1999 Jan. <sup>r</sup>	Feb. <sup>r</sup>	Mar. <sup>r</sup>	Apr. <sup>p</sup>	
<b>Total index</b>		1.9	2.8	.9	2.2	1.1	.0	.1	.5	.6	.1	1.8	1.0	-.8	2.0
<b>Manufacturing</b>		2.5	2.5	.4	4.9	1.6	-.2	.4	.4	.6	-.6	2.7	1.5	-.2	2.5
<b>Primary processing</b>		-.3	-.6	-2.8	1.2	3.9	.4	-.2	.1	.4	.5	1.9	.4	1.2	.6
<b>Advanced processing</b>		3.9	3.9	1.9	6.6	.6	-.5	.6	.6	.7	-1.1	3.1	1.9	-.8	3.4
<b>Durable</b>		5.3	4.6	4.7	8.6	1.9	-.1	.2	.7	.8	-1.0	3.9	2.3	-1.3	5.1
Lumber and products	24	4.2	2.9	4.4	5.4	9.2	.5	-.2	.3	-.2	1.8	3.1	1.7	1.1	4.9
Furniture and fixtures	25	3.4	4.8	-1.2	9.6	2.0	-.3	1.7	.8	1.1	-2.3	4.8	-1.1	2.7	5.0
Stone, clay, and glass products	32	5.0	-1.3	7.8	12.7	6.9	1.4	-1.0	-.6	1.3	.1	.3	1.1	4.4	7.3
<b>Primary metals</b>	33	-7.1	-8.6	-9.2	-9.7	1.6	1.7	-2.0	1.7	-.6	4.0	1.6	1.8	-1.2	-6.2
Iron and steel	331,2	-11.7	-12.7	-16.0	-18.2	8.4	1.9	-3.6	3.3	-1.8	4.6	1.0	2.8	-1.7	-9.9
Raw steel		-12.9	-6.0	-9.7	-37.7	14.0	4.4	.1	2.3	-1.3	7.7	3.8	2.1	-2.8	-12.0
Nonferrous	333-6,9	-1.7	-3.3	-.6	.5	-5.3	1.6	-.2	.0	.7	3.4	2.3	.7	-.6	-1.8
Fabricated metal products	34	.6	3.2	-4.2	3.2	-1.8	-.9	-.7	.4	.6	-4.1	1.2	.8	-.2	.1
Industrial machinery and equipment	35	12.9	19.5	10.1	7.4	4.0	-.2	.7	.7	.6	.7	4.3	.8	.3	7.9
Computer and office equip.	357	53.0	58.1	37.6	45.9	29.6	2.3	1.3	2.3	1.9	.2	1.9	-.6	6.3	36.0
Electrical machinery	36	11.4	6.8	14.7	17.7	8.4	.5	.4	1.4	2.5	-7.6	4.9	6.3	-5.5	14.8
Semiconductors and related electronic components	3672-9	25.7	9.6	37.6	51.7	16.6	.4	.6	2.2	3.3	-14.4	7.9	14.1	-13.0	33.4
Transportation equipment	37	3.1	-2.6	3.7	17.3	-5.9	-1.2	1.0	.5	.1	4.5	7.9	2.8	-3.3	2.2
Motor vehicles and parts	371	.7	-14.5	5.7	37.3	-3.0	-.9	1.7	.9	2.3	11.9	14.3	4.3	-3.6	8.4
Autos and light trucks		2.6	-14.9	-8.7	67.9	-4.9	.4	-.7	-.8	2.8	10.0	18.5	2.4	-6.9	6.7
Aerospace and misc.	372-6,9	6.6	14.1	2.0	-3.0	-9.5	-1.6	.1	.0	-2.7	-3.2	.2	.8	-2.8	-5.0
Instruments	38	1.9	2.9	.8	3.4	.2	.4	-.4	.6	.8	-1.8	.6	.8	.5	2.1
Miscellaneous	39	-3.4	-2.1	-5.0	-8.4	2.5	-.5	1.0	.7	1.4	-4.9	2.8	2.0	1.2	-1.4
<b>Nondurable</b>		-.9	-.2	-4.7	.3	1.2	-.4	.6	.1	.3	-.1	1.2	.3	1.3	-.6
Foods	20	1.8	-.1	-6.5	8.8	5.5	.8	.2	-.4	.0	-.7	-.4	.4	1.0	1.4
Tobacco products	21	-8.7	-2.6	-10.3	-18.1	-12.8	-3.1	.1	.6	-1.5	22.0	5.7	3.2	-11.8	-12.4
Textile mill products	22	-2.9	-1.3	-4.0	-6.5	-7.0	.0	.4	-3.8	2.7	6.5	3.9	-2.4	6.7	-4.3
Apparel products	23	-6.1	-4.3	-5.5	-12.0	-9.2	-1.3	-.3	-.5	.6	-4.5	1.1	.2	-.7	-6.9
Paper and products	26	-1.2	-1.8	.2	-2.4	6.9	.8	.3	-.4	.7	4.9	1.7	-1.9	1.4	1.5
Printing and publishing	27	-1.8	-2.0	-2.1	-.3	-4.1	-1.4	.1	.4	.3	-4.1	.5	-.1	3.9	-1.0
Chemicals and products	28	-2.3	.6	-8.3	-1.6	.9	-1.4	1.8	.9	.4	.4	1.7	1.3	1.1	-1.3
Petroleum products	29	1.5	1.3	2.8	-2.9	16.8	3.8	-.3	-.4	-.9	-4.3	-.3	.8	4.5	1.8
Rubber and plastics products	30	3.4	5.4	-1.2	7.1	4.2	-.5	.6	.6	.8	-1.6	2.3	.8	.2	3.6
Leather and products	31	-7.4	-11.2	-6.7	-4.6	-15.1	-2.9	-.6	-.8	-.3	-5.5	1.0	.7	-.5	-8.6
<b>Mining</b>		-4.9	-6.2	-6.1	-10.8	-11.1	-.5	-.8	-.7	.1	-2.0	2.0	-2.7	1.8	-8.1
Metal mining	10	-1.2	-21.4	-2.7	14.9	-10.9	1.6	-1.5	-3.6	1.7	-4.2	3.2	-2.9	.8	-.5
Coal mining	12	3.0	4.5	19.5	-5.2	-15.4	-5.9	1.3	-5.2	3.7	-3.4	7.8	-6.4	-.8	-.1
Oil and gas extraction	13	-8.5	-8.2	-12.0	-17.7	-10.8	.5	-.5	.8	-.8	-1.0	-.1	-.6	-.1	-11.6
Stone and earth minerals	14	3.5	3.1	-3.6	7.2	-6.6	1.0	-3.9	-.6	-1.0	-3.9	4.6	-8.8	18.6	-2.7
<b>Utilities</b>		-1.1	17.9	14.7	-20.5	4.4	2.7	-2.1	2.8	.7	11.0	-9.1	-2.8	-10.3	3.0
Electric	491,3pt	1.4	21.3	10.0	-14.1	-2.9	.9	-1.8	2.8	.7	5.8	-7.4	-1.3	-5.6	2.5
Gas	492,3pt	-13.4	1.3	42.2	-47.7	54.9	12.9	-3.7	2.7	.5	30.6	-14.3	-7.6	-26.9	5.5
<b>SPECIAL AGGREGATES</b>															
Computers, communications eq. and semiconductors <sup>1</sup>		26.7	23.5	28.7	32.2	16.2	1.0	.7	2.1	2.7	-7.9	4.0	6.6	-3.9	26.2
<b>Manufacturing excluding:</b>															
Motor vehicles and parts		2.6	3.6	.1	3.1	1.9	-.2	.3	.4	.5	-1.3	2.0	1.3	.0	2.2
Computer and office equipment		1.4	1.1	-.5	3.9	.8	-.3	.3	.4	.6	-.6	2.8	1.5	-.4	1.7
Computers and semiconductors <sup>1</sup>		.3	.7	-2.0	2.2	.1	-.3	.3	.3	.4	.1	2.5	.9	.3	.4
Computers, communications eq. and semiconductors <sup>1</sup>		.2	.3	-2.3	2.4	.1	-.3	.3	.2	.4	.2	2.6	.9	.2	.3

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	1998 Proportion	1967- 1998 Ave.	1978- 1980 High	1982 Low	1988- 1989 High	1990- 1991 Low	1994- 1995 High	1998 Apr.	1998 Nov.	Dec.	1999 Jan. <sup>f</sup>	Feb. <sup>f</sup>	Mar. <sup>f</sup>	Apr. <sup>p</sup>
<b>Total industry</b>		100.00	82.1	87.3	71.1	85.4	78.1	84.7	82.6	80.8	80.7	80.4	80.2	80.4	80.6
<b>Manufacturing</b>		89.41	81.1	86.9	69.0	85.7	76.6	84.4	81.7	80.1	80.0	79.5	79.5	79.6	79.8
<b>Primary processing</b>		27.08	82.4	88.1	66.2	88.9	77.7	89.2	84.6	82.4	82.9	83.0	82.8	82.7	83.0
<b>Advanced processing</b>		62.33	80.5	86.7	70.4	84.2	76.1	82.3	80.7	79.4	79.0	78.2	78.4	78.5	78.8
<b>Durable</b>		50.51	79.5	87.7	63.9	84.6	73.1	84.1	81.1	80.0	79.8	79.3	79.1	79.3	79.6
Lumber and products	24	2.11	82.5	87.9	60.8	93.6	75.5	88.0	81.4	81.6	83.6	83.8	83.4	83.5	83.2
Furniture and fixtures	25	1.46	81.3	85.5	68.9	86.6	72.5	84.3	78.1	79.1	78.5	78.1	79.3	79.9	80.6
Stone, clay, and glass products	32	2.40	78.3	88.0	64.3	83.5	69.7	83.3	80.4	84.4	85.1	86.3	85.3	84.7	85.6
Primary metals	33	3.33	81.3	94.2	45.1	92.7	73.7	93.8	90.0	82.2	81.9	83.2	81.4	82.6	82.0
Iron and steel	331,2	1.83	81.2	95.8	37.0	95.2	71.8	96.4	89.1	74.9	77.9	79.1	76.1	78.4	76.9
Raw steel		.09	81.0	95.8	35.2	92.7	71.5	98.7	89.8	70.7	71.6	74.6	74.4	75.9	74.8
Nonferrous	333-6,9	1.50	81.5	91.1	60.1	89.3	74.2	91.2	91.2	91.3	87.0	88.3	88.0	88.0	88.5
Primary copper	3331	.05	75.6	81.5	42.1	86.3	73.5	102.4	88.9	88.9	81.6	76.3	81.1	77.8	
Primary aluminum	3334	.11	88.4	97.6	58.6	100.4	97.3	83.7	88.2	88.9	88.4	88.1	88.6	89.2	
Fabricated metal products	34	5.86	78.0	83.9	63.7	82.0	71.9	85.5	77.7	75.9	76.4	75.6	75.0	75.2	75.7
Industrial machinery and equipment	35	9.77	81.4	93.2	64.0	85.4	72.3	87.5	86.5	83.9	83.6	82.5	82.3	82.1	81.9
Computer and office equip.	357	2.46	81.2	92.6	65.5	86.9	66.9	86.8	86.7	80.6	79.2	78.2	76.7	76.2	75.4
Electrical machinery	36	9.49	81.0	89.4	71.6	84.0	75.0	90.2	77.7	76.8	76.5	76.0	75.5	75.7	76.7
Semiconductors and related electronic components	3672-9	4.09	80.0	91.6	75.7	81.1	75.6	95.2	75.6	79.2	79.0	77.7	76.6	76.7	
Transportation equipment	37	9.77	75.9	84.8	57.2	85.8	68.5	77.9	79.4	80.8	79.8	78.7	79.4	79.8	79.9
Motor vehicles and parts	371	5.53	76.8	95.0	45.5	89.1	55.9	87.9	76.7	80.0	78.7	77.9	79.2	79.8	81.6
Autos and light trucks <sup>1</sup>		2.58	94.6	40.6	92.3	53.3	92.5	83.9	83.9	87.1	86.5	86.8	86.3	85.6	88.0
Aerospace and misc.	372-6,9	4.24	75.2	81.9	66.6	87.3	79.2	69.1	83.0	82.3	81.5	80.1	80.2	80.2	78.0
Instruments	38	4.95	81.6	92.7	78.4	81.4	77.2	77.5	80.8	80.4	80.1	80.2	79.7	80.0	80.4
Miscellaneous	39	1.38	75.7	79.4	65.4	79.0	71.7	79.7	79.7	74.9	75.7	75.2	75.8	76.2	77.2
<b>Nondurable</b>		38.90	83.4	87.5	76.4	87.3	80.7	84.8	82.9	80.7	80.6	80.1	80.5	80.4	80.6
Foods	20	8.95	83.0	84.6	79.1	85.4	82.7	84.4	82.5	81.8	81.6	82.0	82.1	81.6	81.5
Textile mill products	22	1.54	85.6	91.2	72.3	90.4	77.7	93.0	84.0	80.5	80.9	80.9	81.2	78.1	80.2
Apparel products	23	1.90	80.9	87.5	77.5	85.1	75.5	85.5	75.2	71.6	71.6	70.7	70.6	70.3	70.8
Paper and products	26	3.24	89.1	96.1	80.6	93.5	85.0	93.0	87.8	84.2	86.2	86.7	86.8	86.3	86.8
Pulp and paper	261-3	1.27	92.4	98.3	82.0	98.0	89.9	97.0	93.5	89.3	90.8	92.1	91.7	92.3	
Printing and publishing	27	6.64	85.7	93.9	82.0	91.7	79.6	82.2	83.1	81.4	81.0	79.7	79.7	79.9	80.1
Chemicals and products	28	10.16	79.5	84.6	69.9	86.2	79.3	80.4	79.7	76.6	76.1	74.9	76.2	76.8	77.1
Plastics materials	2821	.73	86.7	90.9	63.4	97.0	74.8	102.7	91.7	94.1	93.1	88.2			
Synthetic fibers	2823,4	.33	85.0	98.6	64.4	99.7	77.6	90.3	90.0	79.6	76.2	81.3	84.7	84.0	
Petroleum products	29	1.33	86.9	90.0	66.8	88.5	85.1	93.1	96.9	96.3	96.0	99.5	99.1	98.6	97.7
Rubber and plastics products	30	3.69	84.5	91.2	72.7	89.6	77.4	91.0	85.7	84.5	84.8	84.1	84.2	84.4	84.6
Leather and products	31	.26	80.3	92.1	75.8	83.3	76.1	85.4	64.8	63.0	62.0	60.4	60.2	60.0	60.1
<b>Mining</b>		4.98	87.5	96.0	80.3	88.0	87.0	88.9	88.2	83.8	82.0	81.5	80.8	80.2	80.2
Metal mining	10	.33	79.4	87.9	44.4	89.4	79.9	89.4	87.3	90.2	88.3	89.7	88.4	85.1	86.6
Coal mining	12	.80	86.6	99.4	76.6	91.5	83.4	90.8	83.3	83.6	87.9	82.6	83.5	79.0	81.8
Oil and gas extraction	13	3.25	88.5	97.3	82.3	88.2	88.7	89.5	89.6	81.8	78.9	79.3	78.8	79.5	78.8
Oil and gas well drilling	138	.84	74.3	104.3	50.9	69.3	60.0	73.8	83.4	64.3	57.5	55.3	54.3	58.1	54.3
Stone and earth minerals	14	.60	84.8	92.7	63.3	89.0	79.4	91.6	85.6	89.5	84.8	85.4	81.8	81.0	79.9
<b>Utilities</b>		5.60	87.4	89.1	75.9	92.6	83.4	93.6	89.5	87.3	88.2	90.5	88.5	90.9	91.5
Electric	491,3pt	4.53	89.4	88.2	78.9	95.0	87.1	96.3	93.1	92.2	92.6	93.4	91.6	94.2	94.8
Gas	492,3pt	1.07	82.1	93.7	69.1	85.0	67.1	87.8	74.4	66.5	69.4	78.2	75.2	77.1	77.4
<b>SPECIAL AGGREGATES</b>															
Computers, communications eq. and semiconductors <sup>2</sup>		8.90	80.3	90.9	77.3	81.9	72.4	89.7	78.7	77.2	76.5	75.5	74.5	74.5	75.1
Manufacturing ex. computers, communications eq., and semiconductors <sup>2</sup>		80.51	81.2	87.0	68.0	86.1	76.8	83.9	82.2	80.7	80.6	80.2	80.3	80.4	80.7

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 plastic products, lumber and products, primary metals, fabricated metals, and stone, clay, and glass products. 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, transportation equipment, 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						
		1967-1999 Ave.	1967-1975 Ave.	1975-1999 Ave.	1995	1996	1997	1998	1999 <sup>p</sup>	1998 Apr.	1998 Nov.	1999 Dec.	1999 Jan.	1999 Feb.	1999 Mar.	1999 Apr.
<b>Total industry</b>		3.1	3.8	2.9	5.4	5.7	5.1	5.0	3.2	158.9	163.5	164.1	164.6	165.2	165.7	166.1
<b>Manufacturing</b>		3.4	4.0	3.2	6.0	6.4	5.8	5.6	3.6	165.1	170.3	171.0	171.6	172.2	172.8	173.3
<b>Primary processing</b>		2.3	4.1	1.7	3.3	3.8	3.9	3.0	1.8	143.7	146.1	146.4	146.7	146.9	147.2	147.4
<b>Advanced processing</b>		4.0	4.0	4.0	7.4	7.4	6.4	6.6	4.3	175.4	182.0	182.9	183.7	184.5	185.2	185.9
<b>Durable</b>		4.0	3.7	4.1	9.5	9.7	8.6	7.9	5.2	192.7	201.2	202.3	203.4	204.4	205.4	206.3
Lumber and products	24	2.0	2.9	1.7	3.0	3.9	4.2	2.9	2.3	142.6	144.9	145.2	145.5	145.8	146.1	146.4
Furniture and fixtures	25	3.1	4.5	2.5	2.5	5.9	5.1	1.9	2.2	155.0	156.4	156.6	156.8	157.1	157.3	157.6
Stone, clay, and glass products	32	1.6	2.5	1.2	5.7	4.9	2.9	.6	1.7	154.3	154.6	154.7	154.8	154.9	155.1	155.3
Primary metals	33	.5	1.7	.0	2.7	3.6	3.4	3.4	1.6	141.6	144.4	144.8	145.1	145.4	145.6	145.8
Iron and steel	331,2	-.1	.7	-.4	1.9	5.0	3.9	5.1	2.1	142.1	146.6	147.1	147.6	147.9	148.3	148.5
Raw steel		-.4	.3	-.7	3.1	2.8	5.8	6.8	2.1	136.3	141.8	142.4	142.9	143.3	143.7	143.9
Nonferrous	333-6,9	1.7	3.8	.8	3.5	2.0	2.8	1.4	1.0	140.7	141.7	141.9	142.0	142.1	142.3	142.4
Primary copper	3331	.2	1.8	-.4	2.0	-.4	-.6	.8	.4	122.4	123.1	123.1	123.2	123.3	123.3	123.4
Primary aluminum	3334	1.2	5.2	-.3	.1	.4	.1	.0	.0	104.2	104.2	104.2	104.2	104.2	104.2	104.2
Fabricated metal products	34	2.0	3.1	1.6	5.2	5.5	6.5	4.3	.1	164.4	168.2	168.6	168.8	169.0	169.1	169.1
Industrial machinery and equipment	35	6.0	4.7	6.5	11.5	13.0	12.1	14.6	10.4	231.8	251.7	254.5	257.2	259.7	262.1	264.4
Computer and office equip.	357	22.5	12.0	26.7	34.7	46.1	43.2	59.4	40.3	698.5	926.2	961.5	995.6	1029	1061	1091
Electrical machinery	36	9.0	5.9	10.2	28.8	30.3	23.6	18.3	13.2	361.4	396.7	401.6	406.3	411.0	415.6	420.1
Semiconductors and related electronic components	3672-9	20.1	13.1	22.8	58.7	56.6	46.7	33.4	26.8	840.0	984.5	1006	1027	1048	1070	1092
Transportation equipment	37	2.6	3.0	2.4	4.3	2.5	2.0	2.1	.4	155.3	157.2	157.4	157.6	157.7	157.8	157.8
Motor vehicles and parts	371	3.2	4.4	2.8	8.4	3.9	3.2	2.5	-.9	183.5	186.1	186.4	186.6	186.7	186.9	187.0
Autos and light trucks <sup>1</sup>					4.5	-.5	.8	2.8	-.7	156.0	158.5	158.7	158.8	158.8	158.7	158.6
Aerospace and misc.	372-6,9	1.5	1.1	1.7	-.4	.5	.2	1.4	-.2	127.3	128.5	128.6	128.7	128.8	128.8	128.8
Instruments	38	4.5	7.6	3.4	2.6	.1	1.3	2.4	2.8	139.9	142.0	142.3	142.6	142.9	143.2	143.5
Miscellaneous	39	2.1	4.4	1.3	1.7	1.9	1.9	1.9	1.8	150.7	152.3	152.6	152.8	153.0	153.3	153.5
<b>Nondurable</b>		2.7	4.3	2.1	2.1	2.3	2.0	2.6	1.3	136.3	138.4	138.7	138.9	139.1	139.3	139.4
Foods	20	2.3	3.0	2.0	2.2	2.0	1.2	2.8	1.5	133.6	135.9	136.2	136.5	136.7	136.9	137.1
Textile mill products	22	2.1	4.4	1.3	2.0	2.2	4.6	.9	-.1	134.9	135.2	135.2	135.2	135.2	135.2	135.2
Apparel products	23	1.1	2.3	.7	2.3	.7	1.8	-.7	-1.3	134.2	133.4	133.2	133.1	132.9	132.8	132.6
Paper and products	26	2.8	3.9	2.4	2.4	2.9	2.4	3.0	2.1	131.2	133.4	133.7	133.9	134.2	134.4	134.7
Pulp and paper	261-3	2.3	2.9	2.1	2.9	1.6	1.5	1.7	1.0	121.6	122.8	122.9	123.0	123.2	123.3	123.4
Printing and publishing	27	2.6	3.0	2.5	.7	.3	.1	3.1	.8	126.9	129.5	129.8	130.0	130.2	130.3	130.4
Chemicals and products	28	3.6	6.8	2.5	2.8	3.5	2.7	2.4	1.2	147.7	149.7	149.9	150.1	150.3	150.5	150.6
Plastics materials	2821	6.3	12.7	4.0	5.0	5.7	4.1	3.6	3.3	140.2	143.2	143.6	144.0	144.4	144.8	145.2
Synthetic fibers	2823,4	3.7	9.7	1.5	.4	-.3	2.5	2.9	3.4	124.1	126.1	126.5	126.8	127.1	127.5	127.8
Petroleum products	29	1.5	4.2	.5	-.2	.8	1.3	1.1	1.1	116.4	117.1	117.2	117.3	117.4	117.5	117.6
Rubber and plastics products	30	5.5	8.4	4.4	4.4	4.9	5.1	4.8	5.4	155.4	159.7	160.4	161.0	161.7	162.4	163.1
Leather and products	31	-.9	-.5	-.3	3.4	3.5	-.3	-.4	-.6	117.7	117.9	117.7	117.4	117.0	116.5	115.9
<b>Mining</b>		.2	-.1	.4	-.4	.4	1.5	1.0	.9	119.8	120.6	120.7	120.8	120.9	121.0	121.1
Metal mining	10	1.3	.5	1.6	.7	1.6	2.9	.8	.5	122.5	122.7	122.7	122.7	122.7	122.8	122.8
Coal mining	12	2.4	2.4	2.3	.6	1.7	1.7	1.7	1.9	128.7	130.0	130.2	130.4	130.6	130.8	131.0
Oil and gas extraction	13	-.4	-.1	-.2	-.1	-.2	1.0	.4	.1	114.8	115.2	115.3	115.3	115.4	115.4	115.4
Oil and gas well drilling	138	.6	.8	.6	-.1	-.2	.9	1.9	-.1	177.0	179.1	179.3	179.3	179.3	179.2	179.1
Stone and earth minerals	14	1.5	2.6	1.2	2.4	3.5	4.4	4.1	4.1	144.1	147.6	148.1	148.6	149.2	149.7	150.1
<b>Utilities</b>		2.6	6.1	1.3	1.7	1.9	.3	.7	.4	126.1	126.7	126.8	126.8	126.9	127.0	127.0
Electric	491,3pt	3.6	7.8	2.0	2.2	1.9	-.1	.6	.6	123.7	124.3	124.3	124.4	124.5	124.5	124.6
Gas	492,3pt	.5	2.3	-.2	.5	2.1	1.9	1.5	1.4	137.1	138.2	138.4	138.6	138.7	138.9	139.1
<b>SPECIAL AGGREGATES</b>																
Computers, communications eq. and semiconductors <sup>2</sup>		16.5	9.5	19.3	41.0	46.3	37.4	34.8	25.8	613.4	729.4	746.6	763.3	779.7	795.8	811.6
Manufacturing ex. computers, communications eq., and semiconductors <sup>2</sup>		2.4	3.7	1.9	3.2	2.9	2.7	2.6	1.2	145.1	147.3	147.5	147.8	148.0	148.1	148.3

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>																	
1987	-.6	1.2	.4	.4	.4	.9	.6	.1	-.1	1.4	.3	.6	4.2	6.7	5.6	7.1	4.6
1988	.1	.3	.0	.6	.1	.1	.7	.5	-.4	.3	.8	.5	3.2	3.1	3.9	3.6	4.5
1989	.6	-.8	.9	.2	-.6	-.2	-.1	.4	-.2	-.5	.4	.5	3.8	.5	-.4	-.1	1.8
1990	-.5	.5	.5	-.6	.4	.0	.0	.2	.1	-.6	-.1	-.6	2.0	.6	1.0	-.5	-.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	.2	.6	.7	.7	.2	-.1	.8	-.3	.4	.6	.5	.1	1.3	6.1	2.7	4.6	3.1
1993	.5	.5	.2	.4	-.5	.2	.2	-.4	1.0	.4	.5	.8	4.3	1.5	1.2	6.4	3.5
1994	.2	.5	.7	.4	.7	.5	.3	.5	.2	.7	.8	1.1	6.1	7.1	5.2	7.6	5.4
1995	.5	-.1	.2	-.1	.3	.4	-.3	1.1	.3	.0	.2	.0	6.3	1.3	3.5	3.0	4.9
1996	-.2	1.3	-.2	1.2	.9	.7	.2	.5	.1	.1	.6	.3	2.8	9.6	5.5	3.5	4.5
1997	.5	.7	.4	.6	.3	.5	.7	.6	.5	.6	.5	.3	6.6	6.0	7.2	6.6	6.0
1998	.0	-.1	.4	.5	.4	-.9	-.1	1.4	-.4	.4	-.2	.1	1.6	2.8	.9	2.2	3.6
1999	.0	.1	.5	.6									1.1				
<b>Industrial Production</b>																	
1987	90.2	91.2	91.6	92.0	92.4	93.2	93.7	93.8	93.7	95.0	95.3	95.9	91.0	92.5	93.8	95.4	93.2
1988	95.9	96.2	96.3	96.8	96.9	97.0	97.6	98.1	97.8	98.0	98.8	99.3	96.1	96.9	97.8	98.7	97.4
1989	99.8	99.0	100.0	100.2	99.6	99.4	98.4	98.8	98.6	98.2	98.6	99.0	99.6	99.7	98.6	98.6	99.1
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	97.7	98.2	98.9	99.6	99.9	99.7	100.5	100.2	100.6	101.2	101.7	101.8	98.3	99.8	100.4	101.5	100.0
1993	102.3	102.7	102.9	103.3	102.7	103.0	103.2	102.8	103.9	104.3	104.8	105.7	102.6	103.0	103.3	104.9	103.5
1994	105.9	106.4	107.2	107.6	108.4	108.9	109.3	109.8	110.0	110.8	111.6	112.9	106.5	108.3	109.7	111.7	109.1
1995	113.4	113.4	113.6	113.4	113.8	114.3	113.9	115.1	115.4	115.5	115.7	115.8	113.5	113.8	114.8	115.7	114.4
1996	115.5	117.0	116.8	118.2	119.2	120.0	120.3	120.9	121.1	121.2	121.9	122.3	116.5	119.2	120.8	121.8	119.5
1997	123.0	123.9	124.4	125.1	125.5	126.1	127.0	127.8	128.5	129.3	129.9	130.3	123.7	125.6	127.8	129.8	126.8
1998	130.3	130.2	130.7	131.3	131.9	130.6	130.5	132.4	131.9	132.4	132.2	132.3	130.4	131.3	131.6	132.3	131.3
1999	132.3	132.5	133.2	134.0									132.7				
<b>Capacity</b>																	
1987	114.0	114.1	114.2	114.3	114.4	114.5	114.6	114.7	114.9	115.0	115.1	115.2	114.1	114.4	114.7	115.1	114.6
1988	115.3	115.5	115.6	115.7	115.8	115.9	116.0	116.2	116.3	116.4	116.5	116.7	115.5	115.8	116.2	116.5	116.0
1989	116.8	117.0	117.2	117.4	117.6	117.8	118.0	118.2	118.4	118.6	118.8	119.0	117.0	117.6	118.2	118.8	117.9
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	124.0	124.2	124.5	124.7	124.9	125.1	125.3	125.5	125.7	123.6	124.2	124.9	125.5	124.5
1993	125.9	126.2	126.4	126.6	126.9	127.1	127.4	127.6	127.8	128.1	128.3	128.6	126.2	126.9	127.6	128.3	127.2
1994	128.9	129.3	129.7	130.1	130.5	130.9	131.3	131.7	132.1	132.6	133.0	133.4	129.3	130.5	131.7	133.0	131.1
1995	133.9	134.5	135.1	135.7	136.4	137.0	137.6	138.2	138.8	139.5	140.1	140.8	134.5	136.4	138.2	140.1	137.3
1996	141.4	142.1	142.8	143.4	144.1	144.8	145.5	146.1	146.8	147.4	148.1	148.8	142.1	144.1	146.1	148.1	145.1
1997	149.4	150.1	150.7	151.3	152.0	152.6	153.2	153.8	154.4	155.0	155.7	156.3	150.1	152.0	153.8	155.7	152.9
1998	157.0	157.6	158.3	158.9	159.6	160.3	160.9	161.5	162.2	162.8	163.5	164.1	157.6	159.6	161.5	163.5	160.5
1999	164.6	165.2	165.7	166.1									165.1				
<b>Utilization</b>																	
1987	79.1	80.0	80.2	80.5	80.7	81.4	81.8	81.8	81.6	82.6	82.8	83.2	79.8	80.8	81.7	82.9	81.3
1988	83.2	83.4	83.3	83.7	83.7	83.6	84.1	84.5	84.1	84.2	84.8	85.1	83.3	83.7	84.2	84.7	84.0
1989	85.4	84.6	85.3	85.3	84.7	84.4	83.4	83.6	83.3	82.8	83.0	83.2	85.1	84.8	83.4	83.0	84.1
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	79.2	79.5	79.9	80.3	80.4	80.1	80.6	80.2	80.4	80.8	81.0	81.0	79.5	80.3	80.4	80.9	80.3
1993	81.2	81.4	81.4	81.5	81.0	81.0	81.0	80.6	81.3	81.4	81.7	82.2	81.3	81.2	81.0	81.8	81.3
1994	82.1	82.3	82.6	82.7	83.1	83.2	83.2	83.4	83.3	83.5	83.9	84.6	82.4	83.0	83.3	84.0	83.2
1995	84.7	84.3	84.1	83.5	83.4	83.4	82.7	83.3	83.1	82.8	82.6	82.3	84.3	83.5	83.1	82.6	83.4
1996	81.7	82.4	81.8	82.4	82.7	82.9	82.7	82.8	82.5	82.2	82.3	82.2	82.0	82.7	82.7	82.2	82.4
1997	82.3	82.6	82.5	82.7	82.6	82.6	82.9	83.1	83.2	83.4	83.4	83.4	82.5	82.6	83.1	83.4	82.9
1998	83.0	82.6	82.6	82.6	82.6	81.5	81.1	82.0	81.3	81.3	80.8	80.7	82.7	82.3	81.5	80.9	81.8
1999	80.4	80.2	80.4	80.6									80.3				

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>																	
1987	-.8	1.6	.2	.5	.3	1.0	.7	-.2	.1	1.3	.5	.6	5.0	7.0	5.5	7.6	5.3
1988	-.2	.4	-.1	1.0	-.1	.0	.7	.3	.2	.2	.9	.6	2.3	4.1	3.7	5.2	4.7
1989	.9	-1.2	.8	.1	-.7	.0	-1.1	.3	-.3	-.6	.4	.1	4.3	-.7	-4.5	-1.4	1.9
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	.3	.7	.8	.6	.4	.0	.7	-.2	.3	.5	.6	-.1	2.7	6.8	3.4	4.0	4.0
1993	.9	.2	.2	.6	-.4	.0	.2	-.5	1.2	.4	.5	.9	4.9	2.1	.5	6.9	3.7
1994	.1	.6	.9	.7	.8	.2	.5	.6	.3	.8	.9	1.1	6.3	8.8	5.8	9.2	6.0
1995	.6	-.2	.2	-.1	.1	.5	-.5	.9	.7	.1	.1	.1	6.7	1.1	2.9	3.8	5.4
1996	-.3	1.3	-.3	1.4	1.0	.8	.5	.5	.2	.0	.7	.4	2.1	10.6	7.0	3.9	4.7
1997	.5	.9	.5	.6	.3	.7	.7	.8	.4	.6	.8	.3	7.2	6.6	7.7	7.5	6.8
1998	.1	-.1	.3	.6	.3	-1.2	-.1	1.6	-.4	.7	.2	.2	2.4	2.5	.4	4.9	4.2
1999	-.2	.4	.4	.6									1.6				
<b>Industrial Production</b>																	
1987	89.6	91.0	91.2	91.6	91.9	92.8	93.4	93.3	93.4	94.6	95.1	95.6	90.6	92.1	93.4	95.1	92.8
1988	95.4	95.8	95.7	96.7	96.6	96.6	97.3	97.5	97.7	97.9	98.9	99.4	95.6	96.6	97.5	98.7	97.1
1989	100.3	99.1	99.9	100.0	99.4	99.4	98.3	98.7	98.4	97.8	98.2	98.3	99.8	99.6	98.5	98.1	99.0
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	97.4	98.1	98.9	99.5	99.9	99.9	100.6	100.4	100.7	101.2	101.8	101.7	98.1	99.7	100.6	101.6	100.0
1993	102.6	102.8	103.0	103.6	103.2	103.2	103.4	102.9	104.1	104.5	105.1	106.0	102.8	103.3	103.5	105.2	103.7
1994	106.1	106.7	107.6	108.4	109.3	109.5	110.1	110.7	111.1	112.0	113.0	114.3	106.8	109.1	110.7	113.1	109.9
1995	115.0	114.8	115.1	115.0	115.1	115.7	115.1	116.2	117.0	117.1	117.2	117.3	115.0	115.3	116.1	117.2	115.9
1996	116.9	118.4	118.1	119.7	120.9	121.8	122.4	123.0	123.3	123.3	124.2	124.7	117.8	120.8	122.9	124.1	121.4
1997	125.3	126.4	127.0	127.7	128.1	129.0	129.8	130.8	131.4	132.2	133.3	133.7	126.2	128.3	130.7	133.1	129.7
1998	133.8	133.7	134.1	134.9	135.4	133.7	133.6	135.7	135.2	136.1	136.4	136.7	133.8	134.7	134.8	136.4	135.1
1999	136.4	136.9	137.5	138.4									137.0				
<b>Capacity</b>																	
1987	113.2	113.4	113.6	113.8	113.9	114.1	114.2	114.4	114.6	114.7	114.9	115.0	113.4	113.9	114.4	114.9	114.1
1988	115.2	115.3	115.4	115.6	115.7	115.8	116.0	116.1	116.3	116.5	116.6	116.8	115.3	115.7	116.1	116.6	115.9
1989	117.0	117.3	117.5	117.8	118.0	118.3	118.5	118.7	119.0	119.2	119.5	119.7	117.3	118.0	118.7	119.5	118.4
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	124.5	124.8	125.0	125.2	125.5	125.7	125.9	126.2	126.4	126.6	126.9	127.1	124.8	125.5	126.2	126.9	125.8
1993	127.4	127.6	127.9	128.2	128.4	128.7	129.0	129.3	129.5	129.8	130.1	130.3	127.6	128.4	129.3	130.1	128.8
1994	130.7	131.1	131.6	132.0	132.5	132.9	133.4	133.8	134.3	134.8	135.2	135.7	131.1	132.5	133.8	135.2	133.2
1995	136.3	137.0	137.7	138.4	139.1	139.8	140.5	141.2	141.9	142.6	143.4	144.2	137.0	139.1	141.2	143.4	140.2
1996	144.9	145.7	146.4	147.2	148.0	148.8	149.5	150.3	151.0	151.8	152.5	153.3	145.7	148.0	150.3	152.5	149.1
1997	154.1	154.8	155.5	156.2	157.0	157.8	158.4	159.1	159.9	160.6	161.3	162.1	154.8	157.0	159.1	161.3	158.1
1998	162.8	163.5	164.3	165.1	165.8	166.6	167.3	168.1	168.8	169.6	170.3	171.0	163.5	165.8	168.1	170.3	166.9
1999	171.6	172.2	172.8	173.3									172.2				
<b>Utilization</b>																	
1987	79.1	80.2	80.3	80.6	80.7	81.4	81.8	81.5	81.5	82.5	82.8	83.1	79.9	80.9	81.6	82.8	81.3
1988	82.9	83.1	82.9	83.7	83.5	83.4	83.8	84.0	84.1	84.8	85.1	85.1	83.0	83.5	83.9	84.7	83.8
1989	85.7	84.5	85.0	85.0	84.2	84.1	83.0	83.1	82.7	82.1	82.2	82.1	85.1	84.4	82.9	82.1	83.6
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	78.2	78.6	79.1	79.4	79.6	79.5	79.9	79.6	79.7	79.9	80.2	80.0	78.6	79.5	79.7	80.1	79.5
1993	80.5	80.6	80.5	80.8	80.4	80.1	80.1	79.6	80.4	80.5	80.8	81.4	80.5	80.4	80.0	80.9	80.5
1994	81.2	81.4	81.8	82.2	82.5	82.4	82.6	82.8	82.7	83.1	83.6	84.2	81.5	82.4	82.7	83.6	82.5
1995	84.4	83.8	83.6	83.1	82.8	82.7	81.9	82.3	82.4	82.1	81.7	81.3	83.9	82.9	82.2	81.7	82.7
1996	80.7	81.3	80.6	81.3	81.7	81.9	81.9	81.8	81.6	81.2	81.4	81.3	80.9	81.6	81.8	81.3	81.4
1997	81.3	81.7	81.7	81.7	81.6	81.7	81.9	82.2	82.2	82.3	82.6	82.5	81.6	81.7	82.1	82.5	82.0
1998	82.2	81.8	81.6	81.7	81.6	80.2	79.8	80.7	80.1	80.3	80.1	80.0	81.8	81.2	80.2	80.1	80.8
1999	79.5	79.5	79.6	79.8									79.5				

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	1998 IP Proportion	Index, 1992 = 100											
			Seasonally adjusted						Not seasonally adjusted					
			1998 Oct.	Nov.	Dec.	1999 Jan. <sup>f</sup>	Feb. <sup>f</sup>	Mar. <sup>f</sup>	1998 Oct.	Nov.	Dec.	1999 Jan. <sup>f</sup>	Feb. <sup>f</sup>	Mar. <sup>f</sup>
<b>Metal mining</b>	<b>10</b>	.36	113.6	110.7	108.3	110.1	108.4	104.5	114.0	109.9	108.2	103.6	106.9	103.9
Iron ore	101	.06	111.8	109.5	113.9	116.0	117.1	112.6	111.5	113.9	111.3	105.1	108.1	108.7
Nonferrous ores	102-4,8,9	.30	114.3	111.2	107.6	109.3	107.1	103.3	114.9	109.6	108.0	103.7	107.1	103.3
Copper	102	.08	102.8	113.2	106.2	112.0	102.4	103.7	103.6	110.8	104.2	107.3	103.5	102.6
<b>Coal mining</b>	<b>12</b>	.82	110.8	108.6	114.5	107.7	109.1	103.4	116.6	107.5	110.3	106.6	114.8	107.5
<b>Oil and gas extraction</b>	<b>13</b>	3.38	96.8	94.2	91.0	91.5	91.0	91.7	96.3	95.4	92.5	91.6	91.6	91.1
Crude oil and natural gas	131	2.43	94.4	91.9	90.7	92.0	91.7	91.2	93.5	93.2	92.5	92.5	93.1	91.7
Crude oil, total		1.28	84.1	82.0	80.0	80.7	79.6	79.9	84.5	82.5	80.8	81.1	80.7	80.3
Natural gas		1.16	108.7	105.6	105.7	107.7	108.4	106.9	106.1	107.9	108.6	108.3	110.2	107.4
Natural gas liquids	132	.16	101.6	102.3	95.9	99.5	101.0	100.0	102.6	103.5	94.0	97.5	101.4	100.9
Oil and gas well drilling	138	.78	119.4	115.2	103.2	99.2	97.4	104.2	120.0	116.4	105.4	99.1	95.3	98.6
<b>Stone and earth minerals</b>	<b>14</b>	.64	118.8	132.1	125.6	126.9	121.9	121.2	136.0	132.2	108.8	104.5	109.3	99.7
<b>Foods</b>	<b>20</b>	9.00	109.1	111.3	111.1	112.0	112.2	111.8	114.3	110.8	107.6	106.9	106.4	106.9
Meat products	201	1.18	118.8	120.6	120.7	123.7	120.4	120.6	124.1	119.8	116.8	123.4	120.7	120.6
Beef		.37	112.7	113.9	112.9	118.2	116.2	115.8	114.4	109.3	105.3	115.8	113.8	111.9
Pork		.32	112.0	116.1	116.7	115.1	113.0	113.7	120.2	122.6	120.6	116.0	114.3	116.4
Poultry		.48	130.8	131.4	131.7	136.7	131.2	131.4	135.9	127.1	123.9	136.2	131.8	131.4
Miscellaneous meats		.01	75.2	72.7	78.1	71.1	72.0	78.0	76.0	73.8	79.8	69.9	75.5	86.9
Dairy products	202	.77	104.7	104.7	106.9	108.5	109.9	108.9	96.8	95.7	101.6	104.7	111.0	113.9
Butter	2021	.01	86.5	95.2	85.6	101.4	98.1	92.0	80.5	89.8	96.3	124.3	120.0	103.5
Cheese	2022	.17	111.3	116.9	117.6	117.0	117.2	120.3	110.6	116.8	118.9	113.8	118.4	122.6
Concentrated milk	2023	.14	102.2	102.7	100.4	108.4	115.3	110.4	83.4	85.9	105.3	113.4	120.4	120.5
Frozen desserts	2024	.15	115.2	111.1	118.5	115.9	116.8	113.3	99.9	86.8	84.5	90.1	109.4	119.3
Milk and misc. dairy products	2026	.31	99.4	97.7	101.3	101.8	101.9	101.8	96.0	94.2	99.0	101.3	103.4	105.0
Canned and frozen food	203	1.21	99.0	103.7	107.4	107.6	105.5	103.5	110.6	103.3	100.2	97.0	95.1	94.7
Grain mill products	204	.98	101.1	102.2	100.6	100.6	101.1	99.2	104.6	104.7	102.5	99.5	98.3	97.7
Bakery products	205	1.04	103.9	105.1	106.1	105.2	106.1	107.3	108.0	102.6	100.4	98.4	96.5	98.1
Sugar and confectionery	206	.63	107.4	107.4	105.6	106.7	109.5	107.5	125.6	125.4	121.0	109.4	105.1	101.3
Fats and oils	207	.23	106.2	105.4	100.8	101.9	104.5	105.7	110.4	112.1	104.3	103.3	107.4	108.2
Beverages	208	1.81	118.3	122.9	121.0	123.3	123.1	122.6	122.3	118.1	108.6	112.8	112.0	116.9
Beer and ale	2082,3	.55	100.5	107.1	100.0	112.5	108.8	108.7	95.2	94.4	82.0	105.4	103.4	112.2
Soft drinks	2086,7	1.02	132.1	136.3	138.7	133.7	135.4	134.6	138.8	130.9	127.3	121.8	119.8	121.0
Coffee and miscellaneous	209	1.16	115.6	116.5	115.1	114.1	117.6	119.0	120.3	116.2	115.3	109.6	112.3	107.6
Roasted coffee	2095	.19	103.1	102.2	95.1	92.2	100.9		108.1	109.4	114.4	101.3	114.4	
<b>Tobacco products</b>	<b>21</b>	1.29	101.9	99.8	100.0	96.9	97.1	97.7	111.3	98.8	78.8	96.1	101.6	104.9
<b>Textile mill products</b>	<b>22</b>	1.56	112.4	108.8	109.4	109.3	109.7	105.6	118.9	107.0	97.2	103.5	107.5	105.0
Fabrics	221-4	.37	105.2	97.8	97.3	92.1	92.9	95.2	110.3	97.4	91.6	92.0	92.4	96.2
Cotton and synthetic	221,2	.31	106.5	98.0	98.0	92.0			113.6	98.1	91.3	91.6		
Narrow fabrics	224	.04	115.5	116.8	112.7	115.3	119.3	117.1	116.3	117.4	112.8	114.4	116.5	117.0
Knit goods	225	.45	118.3	120.5	124.8	124.2	122.8	119.1	128.3	116.2	109.5	104.3	116.3	112.2
Knit garments	2253,4,7-9	.32	120.5	123.1	128.8	129.3	128.0	122.8	125.7	116.4	115.1	107.9	121.5	114.2
Fabric finishing	226	.14	95.2	87.1	81.4	80.4			100.1	90.6	70.8	79.4		
Carpeting	227	.21	116.3	111.4	108.7	126.0	128.9	102.6	128.7	104.5	80.9	123.5	123.0	107.5
Yarns and miscellaneous	228,9	.40	118.4	115.1	116.9	114.0	115.1	114.1	119.9	114.9	109.1	114.1	116.1	116.3
Cotton and synthetic yarns	2281,2,4	.17	106.7	99.9	100.8	98.9	101.3	99.8	108.6	98.8	83.7	99.9	104.9	104.0
<b>Apparel products</b>	<b>23</b>	1.73	97.3	95.5	95.3	94.1	93.8	93.4	98.6	95.7	95.3	91.0	92.0	92.2
<b>Lumber and products</b>	<b>24</b>	2.12	118.0	118.3	121.4	122.0	121.7	122.0	123.6	117.8	113.3	115.4	118.9	120.9
Logging and lumber	241,2	.82	108.8	106.1	110.9	110.9	111.6	113.0	115.0	105.8	102.0	104.5	110.4	112.3
Logging	241	.28	92.2	91.5	92.7	95.2	90.8	92.4	99.1	93.4	90.3	88.5	86.5	85.2
Lumber products	243-5,9	1.29	125.0	127.4	129.4	130.3	129.3	128.9	130.1	126.8	121.9	123.6	125.4	127.5
Millwork and plywood	243	.69	121.1	123.4	127.7	126.8	127.2	126.3	124.0	124.9	125.5	120.3	120.3	122.9
Plywood	2435,6	.12	100.5	103.4	104.6	102.0	105.2	100.2	103.9	100.6	94.1	98.1	104.2	101.5
Manufactured homes	245	.24	150.9	154.6	156.6	159.1	154.1	152.8	167.6	149.4	123.5	136.6	149.1	155.0

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	1998 IP Proportion <sup>1</sup>	Index, 1992 = 100											
			Seasonally adjusted						Not seasonally adjusted					
			1998 Oct.	Nov.	Dec.	1999 Jan. <sup>f</sup>	Feb. <sup>f</sup>	Mar. <sup>f</sup>	1998 Oct.	Nov.	Dec.	1999 Jan. <sup>f</sup>	Feb. <sup>f</sup>	Mar. <sup>f</sup>
<b>Furniture and fixtures</b>	<b>25</b>	1.41	124.5	123.6	122.9	122.5	124.6	125.7	125.7	122.5	120.6	117.9	123.5	122.2
Household furniture	251	.63	121.7	119.6	119.6	118.9	121.1	121.0	123.1	118.1	118.8	115.2	122.1	120.7
<b>Paper and products</b>	<b>26</b>	3.50	115.4	112.3	115.3	116.2	116.5	116.0	117.3	110.8	111.2	116.6	118.6	116.4
Pulp and paper	261-3	1.46	113.3	109.7	111.6	113.3	112.9	113.8	113.2	108.9	109.3	114.0	115.8	114.0
Wood pulp	261	.10	97.4	97.9	96.0	95.7	98.8	101.8	97.3	98.2	94.4	97.1	99.4	99.1
Paper	262	.91	113.5	108.8	112.4	113.0	112.6	111.3	113.0	108.5	110.8	113.5	115.5	111.7
Paperboard	263	.45	117.2	114.6	113.9	118.6	117.4	122.4	117.3	112.4	109.5	119.0	120.4	122.4
Paper products	265.7	2.04	116.9	114.2	117.9	118.2	119.1	117.6	120.3	112.0	112.5	118.5	120.6	118.1
Paperboard containers	265	.73	114.3	120.1	123.8	122.3	123.9	122.0	126.1	114.5	110.5	119.3	123.5	122.6
Converted paper products	267	1.31	118.4	111.0	114.8	116.1	116.5	115.3	117.1	110.6	113.6	118.1	119.0	115.5
<b>Printing and publishing</b>	<b>27</b>	6.79	104.2	105.4	105.1	103.6	103.7	104.1	107.2	105.8	103.7	99.4	100.0	99.8
Newspapers	271	1.63	97.2	96.6	96.6	98.1	99.6	99.8	105.5	103.1	97.7	92.8	99.1	95.5
Periodicals, books, and cards	272,3,7	2.03	105.2	104.7	103.4	101.4	100.2	98.9	103.5	104.4	105.3	100.3	99.5	99.5
Job printing	274-6,8,9	3.12	107.3	110.6	110.7	108.0	108.1	109.7	110.4	108.0	105.9	102.4	100.5	102.3
<b>Chemicals and products</b>	<b>28</b>	9.78	113.1	114.7	114.0	112.5	114.5	115.6	115.0	111.0	109.3	109.7	111.6	113.0
Industrial chemicals and synthetic materials	281,2,6	3.49	108.1	111.0	110.7	110.1	111.8	112.6	108.2	109.8	107.9	109.8	113.6	113.9
Basic chemicals	281	.77	88.4	92.9	92.4	92.2	92.9	95.8	90.2	93.0	89.2	90.4	95.5	95.6
Alkalies and chlorine	2812	.09	116.7	117.0	107.4	109.4	119.2	120.6	116.4	116.3	109.1	110.0	120.4	120.5
Inorganic pigments	2816	.09	100.5	101.5	101.4	100.5	94.2	108.6	99.1	95.2	99.7	100.2	96.3	106.7
Inorganic chemicals, nec	2819	.46	81.5	88.6	89.4	88.4	88.9	90.8	84.2	89.1	84.8	85.8	92.2	90.8
Acids and other		.35	99.2	106.7	107.9	106.5	105.8	105.7	103.2	108.7	99.8	100.1	112.0	102.4
Synthetic materials	282	1.27	118.8	122.7	120.0	118.6	123.4	123.0	120.0	120.6	114.4	117.4	125.7	126.1
Plastics materials	2821	.81	127.2	134.7	133.6	127.0			127.8	132.0	125.7	125.2		
Synthetic fibers	2823,4	.35	102.9	100.4	96.4	103.0	107.7	107.1	106.3	99.0	93.8	101.9	109.9	106.9
Industrial organic chemicals	286	1.45	111.8	112.9	114.7	114.4			109.9	111.4	114.4	116.0		
Chemical products	283-5,9	5.62	116.6	117.9	117.1	114.5	116.9	118.2	119.7	111.9	110.5	109.7	110.5	112.7
Drugs and medicines	283	3.02	115.7	117.7	117.8	114.8	118.0	118.9	120.1	112.3	112.0	108.5	109.5	110.5
Soap and toiletries	284	1.57	119.9	122.1	120.4	116.1	117.3	118.0	122.5	115.9	114.8	114.0	112.7	114.6
Paints	285	.42	106.5	103.5	102.7	107.9	110.9	111.7	108.2	91.2	78.1	92.5	108.9	114.5
Agricultural chemicals	287	.67	111.3	108.0	106.6	108.2	108.7	110.1	112.1	109.7	106.4	108.9	109.5	110.3
<b>Petroleum products</b>	<b>29</b>	1.59	110.4	112.8	112.5	116.7	116.3	115.9	111.7	114.3	112.4	107.7	107.4	108.2
Petroleum refining and misc.	291,9	1.40	108.2	110.5	109.6	113.5	112.9	112.2	107.8	110.9	109.9	106.7	105.8	106.6
Miscellaneous petroleum products		.30	112.9	117.5	113.1	121.8	116.4	118.0	112.4	107.1	99.8	100.2	101.6	110.7
Distillate fuel oil		.27	105.1	109.7	110.6	112.1	117.0		108.4	115.7	115.4	107.6	110.2	
Residual fuel oil		.04	78.6	79.7	81.4	80.5	77.8		74.9	83.0	90.7	87.2	83.6	
Aviation fuel and kerosene		.13	107.0	115.9	111.7	116.1	115.7		106.7	119.4	118.5	119.5	113.2	
Automotive gasoline		.66	109.7	109.0	109.5	112.5	112.1		108.5	111.5	112.3	108.4	106.5	
Paving and roofing materials	295	.19	128.2	131.3	135.8	142.7	144.0	146.4	143.7	142.4	132.7	114.8	119.7	120.8
<b>Rubber and plastics products</b>	<b>30</b>	3.83	133.4	135.0	136.0	135.4	136.2	137.0	135.3	135.6	135.5	133.3	136.4	137.5
Tires	301	.32	125.3	131.4	132.2	132.7	133.3	134.3	132.9	128.9	110.4	134.3	146.0	147.6
Other rubber products	302,5,6	.61	125.5	129.2	132.3	130.3	126.9	125.8	128.6	127.1	126.9	121.5	126.8	126.1
Plastics products, nec	308	2.90	136.4	137.0	137.6	137.1	138.9	140.2	137.4	138.6	140.6	136.2	137.7	139.2
<b>Leather and products</b>	<b>31</b>	.21	72.8	74.3	73.0	70.9	70.5	69.9	74.2	74.7	73.1	69.1	69.8	70.3
Shoes	314	.07	63.9	65.8	64.6	62.1	63.1	61.7	66.1	66.4	64.7	60.6	60.9	60.7
<b>Stone, clay, and glass products</b>	<b>32</b>	2.43	128.3	130.5	131.6	133.5	132.2	131.4	133.0	130.4	125.4	125.5	125.9	127.3
Pressed and blown glass	322	.32	110.9	112.9	114.5	111.8	111.6	112.8	114.0	111.6	102.7	108.8	112.3	112.5
Glass containers	3221	.12	83.1	87.6	86.0	84.6	83.1	84.9	85.6	84.4	65.6	81.3	87.1	88.2
Cement	324	.21	125.0	134.9	141.4	144.0	148.1		152.6	129.7	106.7	86.2	106.1	
Structural clay products	325	.11	128.7	128.5	128.2	126.9	126.1	125.7	131.1	125.2	115.8	114.4	123.3	128.0
Concrete and miscellaneous	326-9	1.46	132.1	133.5	134.6	137.7	135.1	133.4	134.3	134.8	134.0	135.5	131.1	130.2

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	1998 IP Proportion <sup>1</sup>	Index, 1992 = 100											
			Seasonally adjusted						Not seasonally adjusted					
			1998 Oct.	Nov.	Dec.	1999 Jan. <sup>f</sup>	Feb. <sup>f</sup>	Mar. <sup>f</sup>	1998 Oct.	Nov.	Dec.	1999 Jan. <sup>f</sup>	Feb. <sup>f</sup>	Mar. <sup>f</sup>
<b>Instruments</b>	<b>38</b>	4.88	114.6	114.1	113.9	114.3	113.9	114.6	115.0	113.4	113.5	111.5	112.2	113.1
Scientific and medical	381-4	4.09	116.5	115.9	115.7	116.6	115.7	116.5	116.9	114.9	115.2	113.3	113.8	114.8
Medical instruments	384	1.60	128.3	129.5	129.7	129.5	127.4	128.9	130.6	124.9	123.0	120.6	120.4	122.7
<b>Misc. manufactures</b>	<b>39</b>	1.32	115.9	114.1	115.4	114.8	115.9	116.8	118.8	117.8	116.9	111.2	114.2	116.6
Consumer goods	391,3,4,6	.62	105.1	104.4	105.3	103.6	104.6	106.7	108.4	109.2	107.2	100.4	103.5	107.1
Business supplies	395,9	.70	127.2	124.4	126.1	126.6	127.8	127.3	129.5	126.5	126.8	122.2	125.2	126.2
<b>Electric utilities</b>	<b>491,3pt</b>	5.28	120.3	114.6	115.2	116.2	114.1	117.3	111.4	106.6	115.6	122.4	113.2	111.8
Generation		1.97	116.2	112.2	114.0	115.4	115.3	116.2	105.4	105.6	114.7	120.0	117.4	112.3
Fossil fuel		.95	111.7	107.6	111.1	111.2	110.3		107.6	102.8	109.7	112.1	106.0	
Hydro and nuclear		1.02	120.2	116.2	116.5	119.0	119.7		103.2	108.0	119.1	127.2	127.7	
Sales		3.31	122.9	116.2	115.9	116.7	113.4	118.1	115.3	107.4	116.3	123.9	110.8	111.6
Residential		1.39	130.1	113.4	112.5	117.7	111.8		111.4	100.1	118.9	138.3	115.4	
Nonresidential		1.92	117.7	118.0	118.3	115.9	114.5	117.4	118.1	112.6	114.5	113.9	107.7	111.9
Commercial and other		1.19	124.6	123.7	122.5	122.2	120.0		123.6	115.9	118.2	121.1	112.1	
Industrial		.73	107.7	109.7	112.2	106.8	106.5		110.2	107.7	109.2	103.4	101.3	
<b>Gas utilities</b>	<b>492,3pt</b>	.97	98.7	92.0	96.0	108.4	104.3	107.1	69.1	102.1	145.2	189.6	162.6	150.2
Residential		.43	86.8	82.1	86.6	102.0	98.6	102.2	49.6	97.0	152.9	214.3	181.3	162.1
Commercial and other		.16	114.3	100.0	102.9	116.9	113.4	113.0	76.7	113.5	159.7	207.6	183.5	164.9
Gas transmission		.32	106.6	99.5	103.3	112.9	107.1	110.7	88.5	104.1	131.9	156.8	134.8	132.2

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 1992 dollars at annual rates, seasonally adjusted

Item	1992	1998	1997 Q4	1998 Q1	Q2	Q3	Q4	1999 Q1 <sup>f</sup>	1998 Nov.	Dec.	1999 Jan. <sup>f</sup>	Feb. <sup>f</sup>	Mar. <sup>f</sup>	Apr. <sup>p</sup>
<b>Products, total</b>	2001.9	2489.8	2450.4	2464.5	2486.2	2493.6	2515.1	2528.7	2511.6	2513.9	2527.3	2527.7	2530.9	2540.8
<b>Final products</b>	1552.1	1958.0	1924.5	1937.5	1955.3	1956.0	1976.1	1983.5	1973.4	1972.7	1982.5	1983.9	1984.0	1990.4
Consumer goods	1049.6	1212.3	1213.4	1216.5	1217.2	1206.9	1214.9	1227.3	1212.6	1215.0	1227.4	1229.6	1225.0	1231.3
Durable	238.3	321.0	318.9	321.5	318.6	314.6	332.6	338.9	330.4	332.5	337.6	342.5	336.5	344.6
Automotive products	123.8	165.8	169.7	165.7	162.8	159.3	175.9	176.2	175.3	175.4	177.2	176.7	174.6	178.4
Other durable goods	114.4	155.3	149.0	156.1	156.2	155.7	156.2	162.6	154.6	156.7	160.0	165.8	161.8	166.2
Nondurable	811.3	892.7	895.4	896.1	899.5	893.2	884.9	891.3	884.6	885.0	892.6	890.2	891.2	890.0
Equipment, total	502.5	746.9	713.5	723.7	741.4	753.2	765.7	760.0	765.2	762.0	758.8	758.0	763.1	763.0
Business and defense	483.9	722.2	686.4	695.3	715.1	729.7	744.4	740.6	743.5	742.1	739.3	739.1	743.3	744.6
Business	399.2	659.0	624.9	633.6	653.9	668.5	683.7	680.5	682.6	682.2	679.7	679.1	682.7	685.7
Defense and space	84.7	63.9	64.1	64.3	63.9	64.1	63.7	63.1	63.9	62.9	62.6	63.1	63.6	62.1
<b>Intermediate products</b>	449.9	533.6	526.7	528.0	532.0	538.1	539.9	545.7	539.1	541.9	545.4	544.6	547.3	550.6
Construction supplies	177.2	224.9	218.1	221.6	223.0	226.1	229.2	233.5	228.5	231.6	234.2	233.4	232.9	233.8
Business supplies	272.7	308.3	308.4	306.0	308.6	311.7	310.3	311.8	310.2	309.8	310.7	310.7	313.9	316.4
Commercial energy products	70.4	82.7	83.0	80.5	82.5	86.0	83.4	84.6	83.9	82.4	85.6	83.6	84.6	86.0

**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>												
1997	53.4	65.7	53.7	51.3	53.7	56.3	58.8	49.8	55.6	55.8	61.4	50.9
1998	55.8	47.2	50.2	53.7	49.1	39.3	54.7	46.8	39.7	56.2	48.3	52.1
1999	49.6	52.8	51.9									
<b>Three Months Earlier</b>												
1997	58.2	65.7	59.0	62.7	54.9	55.6	60.2	60.9	59.0	58.1	65.5	63.7
1998	59.6	52.1	54.3	49.1	55.4	44.2	46.8	44.6	45.7	47.6	49.1	52.1
1999	49.4	49.4	53.2									
<b>Six Months Earlier</b>												
1997	65.3	65.7	63.8	61.6	58.4	62.7	67.3	62.8	63.5	66.9	68.8	65.0
1998	63.7	63.3	61.0	58.1	56.6	48.3	46.8	46.4	43.3	47.6	46.4	48.7
1999	52.8	53.2	56.2									

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					
			1998 Oct.	Nov.	Dec.	1999 Jan. <sup>r</sup>	Feb. <sup>r</sup>	Mar. <sup>p</sup>	1998 Oct.	Nov.	Dec.	1999 Jan. <sup>r</sup>	Feb. <sup>r</sup>	Mar. <sup>p</sup>
<b>Total</b>		934.1	106.5	107.2	107.5	106.6	106.8	107.6	108.0	106.1	105.9	104.4	103.8	105.4
<b>MAJOR INDUSTRY GROUPS</b>														
<b>Manufacturing</b>		854.0	106.7	107.4	107.9	106.9	107.1	108.0	108.4	106.3	105.9	104.3	103.9	105.6
<b>Durable</b>		365.8	107.9	107.7	108.2	106.9	106.3	106.9	109.2	106.4	105.9	104.1	104.2	105.6
<b>Nondurable</b>		488.3	105.7	107.2	107.7	107.0	107.7	108.8	107.7	106.2	106.0	104.6	103.7	105.6
<b>Mining</b>		80.1	103.4	103.6	102.9	102.5	103.2	102.1	102.9	103.7	105.8	106.1	102.8	102.6
<b>INDUSTRY GROUPS and SERIES</b>														
<b>Metal mining</b>	<b>10</b>	18.6	118.1	114.0	112.0	113.7	114.7	115.8	119.3	115.4	114.4	115.5	111.0	116.7
Iron ore	101	7.3	112.7	113.0	109.5	117.8	116.6	116.8	117.2	115.0	114.0	114.9	108.8	120.8
Copper ore	102	6.6	130.9	120.2	122.2	119.8	122.5	123.9	130.4	122.6	123.1	125.9	122.3	122.3
<b>Coal mining</b>	<b>12</b>	12.7	99.6	99.7	99.6	100.8	100.0	98.6	95.8	101.1	107.7	111.0	110.9	106.3
<b>Oil and gas extraction</b>	<b>13</b>	36.0	89.2	92.2	90.6	87.6	90.3	88.2	89.0	89.7	92.3	92.4	88.7	87.3
Crude oil and natural gas	131	31.0	87.5	90.9	90.1	86.6	89.4	88.0	87.7	89.0	91.5	91.6	88.0	87.1
Natural gas liquids	132	3.6	83.1	80.0	81.1	80.5	84.2	82.1	83.4	79.8	85.3	84.0	75.9	79.0
<b>Stone and earth minerals</b>	<b>14</b>	12.8	119.1	119.6	121.9	122.9	119.8	118.4	119.9	122.1	121.9	117.3	113.1	112.4
Crushed stone	142	3.5	159.6	154.8	166.6	173.0	167.2	171.5	170.5	167.9	169.0	150.3	140.3	142.7
Sand and gravel	144	2.7	111.5	108.8	110.7	117.3	115.4	109.6	121.6	116.4	108.5	101.9	93.8	94.2
Chemical and fertilizer materials	147	4.7	112.5	114.0	111.6	108.2	106.3	103.0	104.8	111.8	112.9	113.3	112.7	108.7
<b>Foods</b>	<b>20</b>	58.8	117.6	119.1	120.1	119.1	120.5	120.9	122.8	119.2	116.0	114.0	112.8	112.4
Meat products	201	10.3	129.4	129.6	130.9	130.2	132.5	131.1	133.1	127.2	125.8	124.3	121.8	120.5
Dairy products	202	6.8	106.6	110.1	111.3	107.8	111.3	109.5	107.8	105.5	105.2	102.4	101.5	101.5
Canned and frozen food	203	8.1	111.5	117.0	121.2	121.6	119.5	116.6	124.4	116.3	113.0	109.5	107.5	106.5
Grain mill products	204	11.4	137.1	136.4	138.4	137.7	137.2	139.4	143.7	141.1	134.6	136.5	135.5	135.8
Bakery products	205	3.5	113.2	114.6	115.3	114.5	115.7	117.0	117.6	111.8	109.1	107.1	105.2	107.0
Sugar and confectionery	206	4.0	97.6	100.3	99.3	103.7	112.4	126.7	101.2	116.5	112.7	111.8	116.8	114.6
Fats and oils	207	3.9	110.9	111.2	104.3	98.0	99.4	94.0	108.0	115.6	112.2	108.6	102.6	95.3
Beverages	208	6.1	112.8	114.5	116.6	112.5	113.8	112.6	118.5	109.9	107.0	102.5	100.7	101.2
Coffee and miscellaneous	209	4.7	107.7	109.2	107.7	106.9	108.9	110.1	111.8	107.2	103.7	99.9	100.0	100.8
<b>Tobacco products</b>	<b>21</b>	1.5	95.5	97.7	96.1	94.4	89.6	94.1	102.9	97.8	90.9	86.7	88.9	89.6
<b>Textile mill products</b>	<b>22</b>	31.5	109.7	116.2	118.1	117.5	113.0	115.4	114.9	113.2	109.4	100.7	108.4	109.8
Fabrics	221-4	11.8	106.3	110.3	115.4	116.2	111.9	111.6	111.2	106.8	106.2	99.0	107.2	106.0
Knit goods	225	4.1	110.1	112.5	117.7	118.2	117.0	112.3	114.9	106.4	105.3	98.7	111.2	104.5
Fabric finishing	226	2.5	112.8	112.3	113.7	112.7	109.4	106.8	112.9	112.4	111.6	103.2	107.4	106.3
Yarn and thread	228	8.3	98.2	111.4	115.0	110.3	99.8	105.1	103.6	108.0	105.4	92.3	95.3	99.9
Miscellaneous textiles	229	3.4	124.3	131.2	124.2	125.2	125.0	134.3	130.9	130.4	117.7	109.9	120.3	128.7
<b>Apparel products</b>	<b>23</b>	8.2	98.6	96.8	98.2	101.0	96.8	99.5	101.5	92.4	90.0	87.5	90.5	90.5
Men's outerwear	231,2	2.0	87.5	87.4	90.9	95.3	89.8	91.5	91.1	82.8	81.1	78.3	81.1	80.8
Women's outerwear	233	2.5	116.8	111.0	114.4	117.7	113.1	118.4	120.7	105.8	103.3	101.6	104.9	106.1
<b>Lumber and products</b>	<b>24</b>	19.8	120.8	120.7	119.6	118.8	117.7	122.0	119.7	121.4	119.8	119.6	121.2	122.6
Lumber	242	7.7	120.2	119.3	120.1	120.3	115.9	122.4	118.3	121.2	120.5	121.1	121.4	123.6
Millwork and plywood	243	5.6	125.1	123.0	122.8	120.5	120.7	124.6	124.4	123.3	123.1	121.3	123.9	125.2
<b>Furniture and fixtures</b>	<b>25</b>	6.0	120.2	118.3	117.3	117.2	119.0	119.4	121.7	116.8	114.9	112.0	118.2	116.8
Household furniture	251	3.2	116.6	113.9	114.0	113.2	115.1	115.4	117.9	112.5	113.2	109.6	116.1	115.1
<b>Paper and products</b>	<b>26</b>	113.3	104.8	102.3	104.8	104.1	103.5	103.9	105.3	103.0	104.7	104.0	100.7	101.5
Wood pulp	261	8.8	97.0	91.1	86.4	90.4	89.3	88.4	94.9	94.8	92.9	93.9	86.6	89.3
Paper	262	62.3	103.7	97.8	102.8	101.7	101.5	102.3	104.1	98.7	102.5	102.4	98.5	99.2
Paperboard	263	28.3	116.7	125.8	125.1	122.8	122.2	121.8	116.9	125.3	125.3	122.8	121.3	122.1
Paperboard containers	265	5.1	102.6	107.5	105.0	104.5	104.0	106.8	104.7	107.5	102.4	100.9	99.8	102.3
Converted paper products	267	8.9	105.4	106.4	106.1	106.6	103.8	101.4	107.4	105.6	104.5	101.9	101.2	100.0
<b>Printing and publishing</b>	<b>27</b>	17.3	112.5	115.5	116.8	114.3	114.4	115.5	116.5	111.9	110.9	106.9	104.1	105.1
Newspapers	271	3.6	103.4	102.3	104.0	101.0	99.0	99.2	105.4	98.8	101.6	96.7	91.0	90.1
Commercial printing	275	9.2	121.8	122.6	123.8	119.9	120.0	122.1	125.0	120.1	118.5	114.0	111.9	114.5
<b>Chemicals and products</b>	<b>28</b>	171.7	98.2	100.2	100.2	98.9	101.2	102.7	99.2	98.6	99.9	100.3	98.3	102.0
Basic chemicals	281	78.9	90.4	93.1	92.8	91.9	94.3	96.5	90.7	91.7	93.5	94.4	91.9	97.5
Alkalies and chlorine	2812	14.9	81.1	85.4	80.7	81.4	83.4	84.4	83.1	82.9	80.4	80.0	81.0	86.3
Inorganic chemicals, nec	2819	38.3	84.0	87.5	88.7	88.9	91.5	96.6	84.4	86.3	90.2	93.1	89.5	100.2
Acid and fertilizer materials		14.0	99.2	90.6	93.9	95.2	95.9	97.3	98.5	92.0	95.8	98.2	93.4	93.3
Nuclear materials, nondefense		24.3	76.5	85.9	86.1	85.8	89.4	96.3	77.4	83.4	87.5	90.5	87.5	103.6



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

Item	1987 SIC	1992 Billion KWH	Index, 1992 = 100											
			Seasonally adjusted						Not seasonally adjusted					
			1998 Oct.	Nov.	Dec.	1999 Jan. <sup>f</sup>	Feb. <sup>f</sup>	Mar. <sup>p</sup>	1998 Oct.	Nov.	Dec.	1999 Jan. <sup>f</sup>	Feb. <sup>f</sup>	Mar. <sup>p</sup>
<b>Chemicals and Products (cont.)</b>														
Synthetic materials	282	29.2	101.2	104.6	104.9	103.3	106.8	105.8	103.1	103.2	103.2	103.6	104.2	103.2
Plastics materials	2821	18.3	126.5	130.3	128.9	129.1	134.8	129.9	127.8	127.7	129.6	127.3	129.4	128.5
Drugs and medicines	283	6.7	131.5	131.8	132.2	129.0	132.7	132.8	136.6	125.9	125.8	122.0	123.2	123.5
Soap and toiletries	284	3.0	116.6	117.4	115.7	111.6	112.7	113.5	119.3	111.4	110.4	109.6	108.4	110.3
Industrial organic chemicals	286	39.2	101.7	100.2	109.3	105.2	102.9	104.8	105.3	100.3	106.8	104.8	100.0	101.7
Agricultural chemicals	287	9.7	121.6	116.2	113.4	115.2	115.4	117.6	120.6	116.8	115.2	116.8	113.5	115.3
<b>Petroleum products</b>	<b>29</b>	47.0	106.8	108.1	105.3	106.4	110.3	110.1	107.3	107.8	107.8	106.3	104.2	104.4
<b>Rubber and plastics products</b>	<b>30</b>	38.0	126.4	129.0	129.7	130.6	125.6	127.2	129.4	127.7	124.1	120.3	124.7	126.7
Tires	301	4.3	115.9	116.0	112.3	112.3	108.0	107.2	120.5	115.8	103.7	102.3	107.9	105.5
Rubber products, nec	306	3.2	117.5	119.5	123.9	121.9	118.8	117.8	120.6	117.6	118.9	113.6	118.9	118.2
Plastics products, nec	308	28.9	130.5	133.7	134.7	136.4	130.9	133.6	133.1	132.3	129.9	125.6	129.7	133.2
<b>Leather and products</b>	<b>31</b>	1.0	79.4	78.6	79.8	79.5	75.5	79.4	80.0	76.3	76.0	75.2	74.1	76.1
Shoes	314	.3	71.6	72.6	73.8	75.3	70.9	73.9	73.0	69.7	68.7	69.3	68.1	68.4
<b>Stone, clay, &amp; glass products</b>	<b>32</b>	33.8	112.5	112.7	113.9	115.0	116.7	114.7	115.9	114.4	114.0	111.3	109.0	108.2
Flat glass	321	1.5	105.7	108.9	109.3	108.7	106.4	106.3	106.9	109.3	109.4	104.3	102.6	104.6
Pressed and blown glass	322	7.3	106.7	106.3	109.7	106.6	107.3	107.5	109.4	106.5	106.9	104.3	105.2	104.5
Cement	324	9.6	114.3	112.4	112.3	117.6	128.0	121.3	121.7	117.8	117.1	110.8	107.5	104.8
Structural clay products	325	1.4	97.4	100.1	102.7	103.7	100.6	101.5	97.7	100.4	102.7	98.4	96.2	99.4
Concrete products	327	4.7	127.2	128.0	127.3	131.8	129.8	127.4	130.3	129.7	128.3	128.8	123.1	122.8
<b>Primary metals</b>	<b>33</b>	150.9	100.9	100.2	99.7	97.5	98.5	98.6	101.7	99.3	99.1	97.9	97.6	100.1
Basic steel and mill products	331	57.0	112.6	109.3	108.2	104.8	107.2	108.8	113.3	107.5	106.2	106.1	106.8	111.1
Iron and steel foundries	332	9.9	114.4	112.7	117.9	119.0	114.1	113.2	117.4	115.9	115.4	112.5	116.8	116.4
Primary nonferrous metals	333	66.2	80.6	81.8	80.3	79.6	80.2	79.8	80.7	80.2	81.4	81.0	77.2	80.0
Aluminum	3334	60.3	71.7	72.7	71.0	70.4	71.8	71.1	71.8	71.8	72.1	71.7	68.6	71.8
Nonferrous foundries	336	2.7	134.2	131.9	136.3	134.8	125.3	129.1	137.2	134.6	135.4	131.4	130.1	131.4
<b>Fabricated metal products</b>	<b>34</b>	31.4	116.5	116.4	116.9	117.5	113.7	115.2	118.2	115.0	113.3	112.3	113.9	115.0
Metal containers	341	2.9	100.7	100.6	109.1	107.2	102.1	105.6	101.3	100.0	104.0	102.9	100.9	104.9
Hardware, tools, and cutlery	342	2.7	111.8	115.3	112.2	112.1	109.5	112.6	113.6	113.6	108.5	105.5	109.2	110.6
Structural metal products	344	5.4	121.7	118.5	117.8	119.2	114.2	116.5	122.3	117.4	115.9	116.7	115.3	116.6
Fasteners	345	1.7	114.1	116.3	112.7	112.4	110.5	110.1	116.5	113.7	108.5	105.9	110.6	110.1
Metal stampings	346	6.7	131.8	131.9	133.3	133.2	131.0	131.5	135.4	130.6	129.0	125.9	132.5	133.3
<b>Industrial machinery and equipment</b>	<b>35</b>	33.2	114.6	113.7	115.5	113.7	113.2	112.9	115.0	111.0	110.2	107.4	111.1	109.5
Engines and turbines	351	2.6	113.3	111.6	113.9	112.7	109.5	103.7	113.2	112.5	109.8	108.5	111.2	104.0
Farm	352	2.0	90.7	83.8	85.5	82.1	81.9	83.6	87.5	83.8	84.7	83.2	86.3	86.8
Construction and allied	353	3.8	128.8	124.5	131.3	128.2	138.8	129.1	127.4	124.2	123.2	123.1	137.7	123.7
Metalworking	354	4.1	120.6	122.2	122.5	121.1	120.2	122.0	121.7	117.8	117.0	113.9	118.6	119.3
Special industry	355	2.4	119.4	118.3	121.7	116.8	116.6	118.3	120.8	113.1	116.9	109.8	114.5	115.1
General industrial	356	5.2	119.5	117.2	119.0	116.2	113.8	114.5	120.2	114.1	113.1	109.1	112.4	112.6
Computer and office equip.	357	5.1	90.9	91.9	91.3	90.9	89.7	90.2	91.0	89.7	88.9	86.8	86.1	84.0
Service industry machines	358	3.5	114.0	108.8	114.0	116.0	110.5	113.5	114.7	106.3	106.2	105.3	105.4	110.5
<b>Electrical machinery</b>	<b>36</b>	33.0	110.5	110.6	111.9	110.1	108.4	110.2	112.4	107.8	108.2	104.5	104.2	106.2
Electrical distribution	361	1.3	93.8	92.6	95.3	92.8	90.7	93.9	95.5	89.9	90.6	87.2	88.3	90.9
Electrical industrial	362	4.0	94.8	96.1	94.2	91.7	90.0	92.0	94.6	93.5	90.7	88.5	88.7	90.5
Household appliances	363	2.4	101.1	103.0	106.4	101.9	99.0	103.9	103.9	98.0	94.7	94.3	96.5	100.4
Lighting and wiring products	364	3.0	118.4	118.8	121.2	118.6	117.2	121.3	120.9	117.4	116.3	112.1	117.4	119.3
TV and radio sets	365	.8	122.0	119.4	119.9	116.8	116.6	120.8	125.9	116.8	116.0	111.8	110.0	115.3
Communication equipment	366	3.3	106.7	104.3	106.5	105.1	104.2	104.8	107.1	100.3	104.4	98.4	97.8	99.2
Electronic components	367	14.5	119.2	118.9	119.8	119.5	117.5	119.0	120.7	115.7	117.0	113.8	111.7	114.0
<b>Transportation equipment</b>	<b>37</b>	39.6	109.5	109.7	111.2	111.1	106.8	108.7	111.5	107.7	106.2	105.2	104.2	105.5
Motor vehicles and parts	371	22.8	121.1	119.0	121.7	122.6	118.0	118.2	123.5	117.5	115.6	115.6	114.4	114.7
Aircraft and parts	372	10.7	88.9	92.5	92.4	90.6	89.5	87.6	90.9	90.1	88.8	85.5	86.6	84.3
Ships and boats	373	2.2	101.6	105.6	104.0	102.9	101.6	108.7	98.7	103.2	104.3	105.3	107.4	108.7
<b>Instruments</b>	<b>38</b>	13.7	99.1	100.7	104.1	99.4	101.6	100.9	101.2	96.9	98.5	95.0	97.6	97.1
Photographic equip. & supplies	386	1.8	83.1	85.7	90.5	85.0	82.9	86.7	85.5	81.9	85.3	86.0	82.6	85.6
<b>Miscellaneous manufactures</b>	<b>39</b>	4.5	120.5	123.5	123.6	124.4	119.3	122.5	122.5	120.4	117.6	115.2	116.3	119.1
<b>SUPPLEMENTARY GROUPS</b>														
Total, excluding nuclear nondefense		909.8	107.8	108.1	108.5	107.6	107.6	108.1	109.4	107.1	106.8	105.1	104.6	105.5
Utility sales to industry		835.3	106.8	107.5	108.2	106.8	107.8	107.5	108.3	106.7	106.0	104.3	104.4	105.5
Industrial generation		98.8	101.2	97.4	100.2	101.1	100.7	103.7	102.9	97.1	104.4	106.2	95.9	103.8

## 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 statistical releases at <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 1992, the total IP index has been constructed from 264 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, and 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 Department of the Interior; 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 an annually weighted chain-type index since 1977. The components of IP are combined using estimates of value added per unit of output. For months from January to June, the weights are drawn from the year containing the month being estimated and the preceding year; for months from July to December, the weights are drawn from the current and following year. 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 1998; for other series, the factors were estimated with data through at least June 1998. 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 1987–97 period. The average revision to the *percent change* in total IP, without regard to sign,

from the first to the fourth estimates was 0.21 percentage point during the 1987–97 period. In most cases (about 83 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 on November 24, 1998 is described more completely in the *Federal Reserve Bulletin*, vol.85 (January 1999).

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. *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. To obtain *Industrial Production—1986 Edition* (\$9.00 per copy), write to Board of Governors of the Federal Reserve System, Publications Services, Washington, DC 20551. 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, and January 1996, February 1997, February 1998, January 1999). The basic methodology used to estimate capacity and utilization is discussed in the June 1990 *Federal Reserve Bulletin*.

### Release Schedule for 1999

At 9:15 a.m. on January 15, February 17, March 16, April 16, May 14, June 16, July 16, August 17, September 16, October 15, November 16, and December 15.