FEDERAL RESERVE statistical release



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INDUSTRIAL PRODUCTION AND CAPACITY UTILIZATION

Industrial production fell 0.2 percent in April after an increase of 0.1 percent in March. Revisions altered the previously published pattern of output for January through March, but industrial output in the first quarter is still reported to have risen at an annual rate of 3.6 percent. In April, the output indexes for manufacturing and mining were unchanged, and the output of utilities dropped 2.3 percent. At 118.3 percent of the 1997 average, overall industrial output was 3.1 percent above its April 2004 level. The rate of capacity utilization for total industry fell 0.2 percentage point, to 79.2 percent, a rate 1.8 percentage points below its 1972–2004 average.

(over)

INDUSTRIAL PRODUCTION AND CAPACITY UTILIZATION: SUMMARY

Seasonally adjusted

		199	7=100			Pe	ercent chang	e	
	2005	E l r	3.6 r	4 0	2005	E l r	3.6	4 D	Apr. '04 to
Industrial production	Jan. ^r	Feb.r	Mar.r	Apr.p	Jan.r	Feb. ^r	Mar.r	Apr.p	Apr. '05
Total index Previous estimates	117.8 117.9	118.3 118.2	118.5 118.5	118.3	1 .0	.5 .2	.1 .3	2	3.1
Major market groups Final Products Consumer goods Business equipment Nonindustrial supplies Construction Materials	115.8 112.4 125.2 114.6 108.5 120.8	116.7 113.4 125.6 114.7 109.5 121.3	116.6 113.2 125.5 115.5 109.6 121.5	116.2 112.2 126.5 115.4 110.1 121.4	1 7 1.2 .1 .6	.7 .9 .3 .0 .9	1 1 .0 .7 .1	4 9 .8 .0 .5	3.4 1.4 8.4 3.0 3.4 2.8
Major industry groups Manufacturing (see note below) Previous estimates Mining Utilities	120.2 120.1 90.8 114.0	120.8 120.5 93.0 112.7	120.4 120.4 93.5 116.8	120.5 93.5 114.1	.4 .3 7 -3.8	.5 .3 2.4 -1.2	3 1 .5 3.6	.0 .0 -2.3	3.5 1.5 .7
				Percent of	capacity				Capacity growth
Capacity utilization	Average 1972–2004	1982 low	1988–89 high	2004 Apr.	2005 Jan. ^r	Feb. ^r	Mar.r	Apr.p	Apr. '04 to Apr. '05
Total industry <i>Previous estimates</i>	81.0	70.8	85.1	77.7	79.1 79.2	79.4 79.3	79.4 79.4	79.2	1.2
Manufacturing (see note below) Previous estimates	79.8	68.5	85.6	76.3	78.1 78.0	78.3 78.2	78.0 78.0	77.9	1.4
Mining Utilities	87.1 86.8	78.6 77.7	85.8 92.8	87.1 84.4	86.1 83.8	88.2 82.8	88.8 85.7	88.9 83.7	6 1.6
Stage-of-process groups Crude Primary and semifinished Finished	86.4 82.1 77.9	77.3 68.0 71.1	88.9 86.5 83.1	85.8 79.5 74.0	85.6 80.3 76.3	86.8 80.0 77.1	87.0 80.3 76.8	87.3 79.8 76.7	3 2.2 .3

r Revised. p Preliminary.

NOTE—The statistics in this release cover output, capacity, and capacity utilization in the industrial sector, which the Federal Reserve defines as manufacturing, mining, and electric and gas utilities. Manufacturing comprises those industries included in the North American Industry Classification System, or NAICS, definition of manufacturing *plus* the logging and newspaper, periodical, book and directory publishing industries that have traditionally been considered manufacturing and included in the industrial sector.

Market Groups

The output of consumer goods fell 0.9 percent in April. The production of durable goods dropped 2.1 percent, largely as a result of steep declines in the output of automotive products and in the production of appliances, furniture, and carpeting. The index of consumer nondurable goods fell 0.4 percent; a drop of 2.5 percent in the energy component more than offset gains elsewhere. All categories of nondurable non-energy goods advanced except paper products.

The production of business equipment moved up 0.8 percent. The index for industrial and other equipment and the index for information processing equipment each increased about 1.0 percent. The output of transit equipment fell 0.4 percent. The production of defense and space equipment jumped 1.6 percent and was more than 9 percent above its year-ago level. In April, the production of non-industrial supplies was, on balance, unchanged. The index of construction supplies advanced 0.5 percent, and the output of business supplies moved down 0.2 percent.

The production of materials edged down 0.1 percent. The index for energy materials fell 0.6 percent, and the index for non-energy materials edged up 0.1 percent. In the durable materials component, the output of consumer parts tumbled 2.4 percent; the output of other materials also moved down. After little change in March, production of equipment parts rose 1.6 percent in April because of gains in the output of semiconductors and computer parts. Within the nondurable category, the producers of paper materials and of chemical materials posted gains; the output of textile materials declined 1.8 percent.

Industry Groups

Manufacturing production was unchanged in April, and the factory operating rate edged down 0.1 percentage point, to 77.9 percent. Under durable goods, in which overall output was also unchanged, the production of motor vehicles and parts fell 3.5 percent. The indexes for wood products, primary metals, and furniture and related products also posted declines, but production rose noticeably in machinery, computer and electronic products, and aerospace and miscellaneous transportation equipment. The production of nondurable goods advanced 0.2 percent in April and the gains were widespread. The output of apparel and leather rose 0.9 percent, but this index was down 8.8 percent over the past twelve months. The production of non-NAICS manufacturing (logging and publishing) decreased 0.8 percent; it had increased at an annual rate of 10.9 percent in the first quarter.

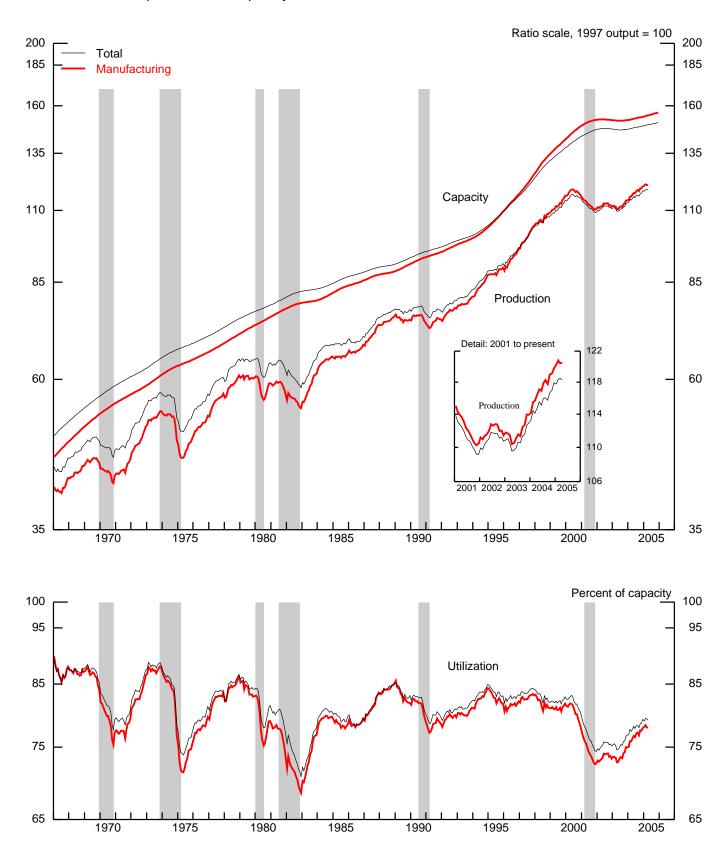
The output of mines was unchanged in April; the operating rate in mining edged up 0.1 percentage point, to 88.9 percent. Oil and gas extraction ticked up after having increased at an annual rate of 9.1 percent in the first quarter, but the output of coal mines fell 2.0 percent. Decreases in the output of both electric and gas utilities contributed to a decline of 2.3 percent in utility output and to a decline of 2 percentage points in the utilities operating rate, to 83.7 percent. Capacity utilization for industries in the crude stage of processing increased 0.3 percentage point, to 87.3 percent, a rate that is 0.9 percentage point above its 1972–2004 average. However, the operating rate for industries in the primary and semifinished stages fell 0.5 percentage point, to 79.8 percent, and the utilization rate for finished goods producers declined 0.1 percentage point, to 76.7 percent. Capacity utilization in both these industry groups remained below their respective long-run averages.

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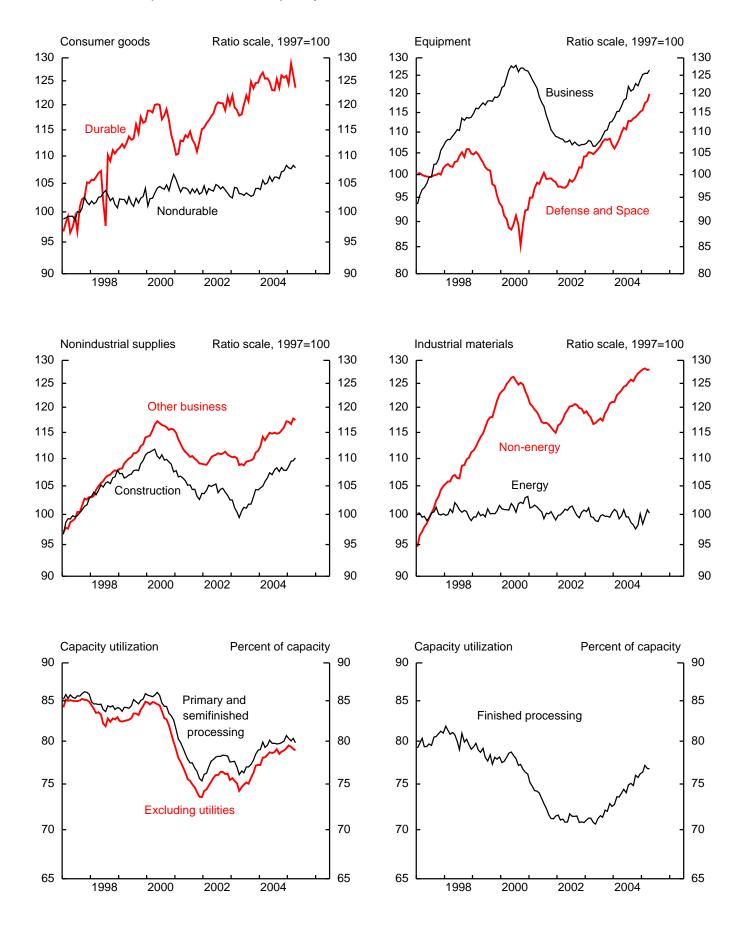
Further detail is available on the Board's web site (www.federalreserve.gov/releases/G17/).

1. Industrial production, capacity, and utilization

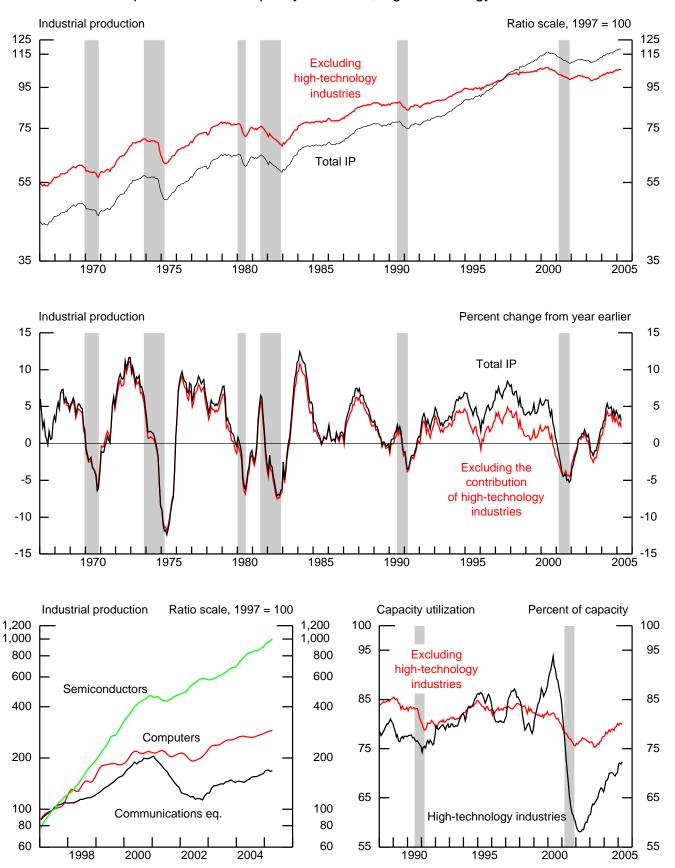


Notes: The shaded areas are periods of business recession as defined by the National Bureau of Economic Research (NBER). See note on cover page.

2. Industrial production and capacity utilization



3. Industrial production and capacity utilization, high-technology industries



Notes: High-technology industries are defined as semiconductors and related electronic components (NAICS 334412-9), computers (NAICS 3341), and communications equipment (NAICS 3342).

The shaded areas are periods of business recession as defined by the NBER.

Table 1 INDUSTRIAL PRODUCTION: MARKET AND INDUSTRY GROUP SUMMARY

Percent change, seasonally adjusted

			i	rth quarte urth quart			Annua	al rate			Month	ly rate		Apr. '04
Item		2004 proportion ¹	2002	2003	2004	2004 O2	03	04	2005 O1 ^r	2005 Jan. ^r	Feb.r	Mar.r	Apr.p	to Apr. '05
Total IP		100.00	1.5	1.2	4.3	4.3	2.7	4.5	3.6	1	.5	.1	2	3.1
Market Groups		57.00		17	4.7	4.2	2.0	5.2	27	1		1	2	2.2
Final products and nonindustrial suppli Consumer goods	es	57.99 30.29	.6 1.6	1.7	4.7 3.0	4.2	3.2	5.3	3.7 1.5	1 7	.6 .9	.1 1	3 9	3.3
Durable		8.44	6.4	3.3	1.5	-5.2	-1.5	6.7	1.4	-1.4	3.5	-2.0	-2.1	-1.6
Automotive products		4.46	10.1	5.2	1.1	-10.8	9	13.9	2.0	-2.6	6.1	-3.3	-3.0	-1.7
Home electronics		.32	-4.0	34.8	-8.0	-27.1	-23.5	6.3	1.2	3.3	6.3	-2.7	.8	-4.8
Appliances, furniture, carpeting Miscellaneous goods		1.40 2.25	1.8	1.4 -3.5	3.0 2.6	2.8 6.3	-1.0 .7	1.3 -3.4	2.1	8	.7 1	.6 7	-2.5 2	-1.1 -1.1
Nondurable		21.85	2	-3.3 .4	3.7	3.1	1.8	5.7	1.5	4	1 1	.6	4	2.6
Non-energy		17.69	-2.3	.8	4.3	6.4	2.5	4.5	2.7	.4	.0	1	.1	2.7
Foods and tobacco		9.69	-3.6	2.4	4.4	5.4	2.7	4.0	.2	.3	7	.2	.1	2.3
Clothing		.68	-9.7	-14.9	-5.1	-1.5	-17.6	-1.0	-9.5	8	-1.1	-1.2	.9	-9.2
Chemical products Paper products		4.80 2.03	.9 8	.6 .6	4.1 7.1	9.3 7.9	4.3 4.4	5.0 6.0	4.1	2.1	2.0	8 .3	.1 6	3.7 5.8
Energy		4.16	10.1	-1.4	1.0	-10.6	-1.2	11.0	-3.3	-3.9	-1.0	3.6	-2.5	1.9
Business equipment		10.01	-2.6	4.7	9.8	11.2	12.0	5.4	8.7	1.2	.3	.0	.8	8.4
Transit Information processing		1.82 2.88	-12.6 -3.7	.2 16.3	10.9 9.9	8.8 9.7	8.2 18.5	12.8 11.5	12.7 16.6	1.7 1.8	2.1	-2.0 .5	4 1.1	6.9 15.2
Industrial and other		5.30	2.1	5	9.9 9.4	12.9	9.8	2	3.1	.7	.8 7	.3 .4	1.1	5.2
Defense and space equipment		1.97	3.8	5.3	6.1	13.6	9.1	5.3	9.1	.4	1.5	.5	1.6	9.1
Construction supplies		4.37	.1	.6	3.9	7.2	3.7	.2	4.5	.6	.9	.1	.5	3.4
Business supplies		10.95	1.4	.0	4.8	4.8	.7	4.6	3.4	1	3	.9	2	2.8
Materials		42.01	2.8	.5	3.6	4.5	1.9	3.4	3.4	2	.4	.2	1	2.8
Non-energy Durable		30.11 18.80	3.5 4.6	.8	5.4 7.0	6.5 7.1	4.5 5.4	4.9 7.0	3.3 5.2	.4 .7	.1 .3	3 2	.1	3.6 4.9
Consumer parts		4.02	7.1	2.2	2.1	-6.8	-2.7	10.1	3.3	2	2.3	-1.8	1 -2.4	9
Equipment parts		6.21	6.2	5.8	16.1	20.2	13.4	11.8	16.2	1.9	.8	.1	1.6	14.1
Other		8.57	1.9	9	2.7	4.8	3.5	2.2	-1.6	.2	9	.4	4	1.0
Nondurable		11.32	1.7	-1.3	2.9	5.5	2.9	1.5	.0	.0	2	4	.5	1.5
Textile Paper		.60 2.58	2.0 2.1	-13.0 -4.3	-4.4 3.2	-10.3 6.0	7.3 3.7	-4.3 6	-4.6 3.3	.3	-1.7 1	-1.0 .1	-1.8 .8	-3.2 2.9
Chemical		4.55	2.1	2.0	4.9	11.0	4.6	3.4	-5.6	-2.4	1	8	.6	1.2
Energy		11.90	.4	3	-1.2	7	-4.8	7	3.8	-1.7	1.1	1.3	6	.4
INDUSTRY GROUPS														
Manufacturing		81.91	1.3	1.5	5.1	6.0	4.0	4.6	4.0	.4	.5	3	.0	3.5
Manufacturing (NAICS)		77.18 42.78	1.6	1.6 3.3	5.1	5.9	4.1	4.8	3.6	.3	.6	3	.1	3.5
Durable manufacturing Wood products	321	1.55	.0	3.3	6.6 .8	6.0 4.7	5.9 -2.2	6.4 .9	5.4 -7.5	.3 1.2	1.0 -3.9	5 .5	.0 -1.1	4.8 -4.5
Nonmetallic mineral products	327	2.22	.3	1.7	4.4	3.3	5.5	4.0	5.6	7	1.6	-1.1	.5	3.6
Primary metal	331	2.77	7.1	.6	3.3	4.3	12.2	2.4	-7.6	.1	-2.1	1.4	5	2.3
Fabricated metal products	332	5.65	2	-2.9	3.2	6.2	2.6	2	6	.0	3	1	.4	1.0
Machinery Computer and electronic products	333 334	5.46 7.36	1.3 5.6	.6 14.5	11.9 15.2	12.1 19.4	7.0 16.9	4.6 12.3	5.6 23.2	1.2	.0 1.6	4 .8	1.4 1.8	6.4 18.4
Electrical equip., appliances,	334	7.50	3.0	14.5	13.2	17.4	10.7	12.3	23.2	2.7	1.0	.0	1.0	10.4
and components	335	2.15	-5.2	1.1	6.0	4.5	11.1	7	-3.1	-1.2	-1.8	1.0	.2	2.1
Motor vehicles and parts	3361–3	7.24	11.3	4.8	2.9	-8.6	-1.1	16.3	4.0	-1.7	5.2	-4.0	-3.5	-1.7
Aerospace and miscellaneous transportation equipment	3364–9	3.55	-7.5	.8	4.5	5.9	4.7	5.0	8.3	1	1.6	4	1.2	6.6
Furniture and related products	3304–9	1.70	4.2	.8 -1.8	2.4	6.5	4.7 -1.4	9	-4.3	.1 -1.1	1.6 -1.0	.4 .4	-1.8	-2.9
Miscellaneous	339	3.13	7.4	-2.2	4.3	5.9	1.3	4.2	5.5	.8	.4	.0	.1	3.3
Nondurable manufacturing	211.2	34.41	4	4	3.1	5.7	1.7	2.9	1.4	.2 .7	.1	2	.2	2.0
Food, beverage, and tobacco products Textile and product mills	311,2 313,4	11.44	-2.9 .4	2.1 -8.5	3.9 -2.5	4.4 -6.7	1.9 5.1	3.9 -5.2	2.0	2.7	6 6	.3 2	.2 8	2.6
Apparel and leather	315,4	.74	-9.3	-14.3	-4.6	-1.0	-16.1	-1.0	-10.2	-1.0	-1.2	-1.2	o .9	-8.8
Paper	322	2.97	4.1	-3.3	3.3	8.5	2.8	7	4.4	1.8	9	3	.5	2.0
Printing and support	323	2.17	-3.2	-3.5	.9	-1.6	2	1.3	3.0	.7	3	.9	.5	1.8
Petroleum and coal products	324	1.98	4.1	1.2	4.0 4.2	3.5 9.9	6.4	5.9 4.7	2.1	-2.5	3.0	-1.3	.6	5.2 2.3
Chemical Plastics and rubber products	325 326	10.46 3.57	1.0	1.2 -2.2	1.6	7.3	3.1 -2.0	4.7	2 2.3	8 1.2	1.0 -1.0	7 .3	.4 7	1
Other manufacturing (non-NAICS)	1133,5111	4.73	-3.9	.3	5.2	8.2	3.4	.5	10.9	1.6	5	.4	8	3.2
Mining	21	8.28	-3.8	.2	-2.0	-3.2	-2.0	-3.6	9.3	7	2.4	.5	.0	1.5
Utilities Electric	2211,2 2211	9.82 8.15	7.1 5.7	6 .5	2.7	-3.7 .5	-4.7 -7.4	10.4 13.0	-4.7 -6.1	-3.8 -3.7	-1.2 -1.0	3.6	-2.3 -2.1	.7
Natural gas	2211	1.67	15.4	.3 -6.2	-2.5	-23.1	11.3	-2.2	2.8	-3.7	-1.0 -2.1	6.7	-3.3	3.1
	2212	1.07	13.1	3.2	2.5		11.0		2.0	10		5.7	5.5	J.1

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NOTE. Under industry groups, the figures to the right of the series descriptions are 2002 North American Industry Classification System (NAICS) codes. The abbreviation pt denotes part of an NAICS code. Additional industry detail is available on the Board's web site (www.federalreserve.gov/releases/G17). Under market groups, in the products category, miscellaneous consumer nondurables, oil and gas drilling, and manufactured homes are not shown separately; in the nondurable materials category, containers and miscellaneous nondurable materials are not shown separately.

1. The proportion data are estimates of the relative contribution of each series to the growth of total industrial production in the following year.

Table 2 INDUSTRIAL PRODUCTION: SPECIAL AGGREGATES AND SELECTED DETAIL

Percent change, seasonally adjusted

Tao			rth quart urth quar			Annua	ıl rate			Month	ıly rate		Apr. '04
Item	2004 proportion	2002	2003	2004	2004 Q2	Q3	Q4	2005 Q1 ^r	2005 Jan. ^r	Feb.r	Mar.r	Apr.p	to Apr. '05
Total industry	100.00	1.5	1.2	4.3	4.3	2.7	4.5	3.6	1	.5	.1	2	3.1
Energy	18.87	2.9	3	.6	-2.9	-3.9	4.3	1.1	-2.6	.5	2.0	-1.2	1.0
Consumer products	4.16	10.1	-1.4	1.0	-10.6	-1.2	11.0	-3.3	-3.9	-1.0	3.6	-2.5	1.9
Commercial products	2.50	4.7	.1	7.4	-1.4	-5.2	16.3	-5.6	-4.5	4	3.0	-1.7	1.0
Oil and gas well drilling	.31	-15.5	21.0	8.6	10.3	8.0	17.1	18.1	4	2.5	1.7	4	11.2
Converted fuel	3.87	4.0	.0	1.7	2.8	-10.0	9.6	.5	-1.9	9	1.8	8	1.2
Primary materials	8.03	-1.5	4	-2.6	-2.4	-2.2	-5.4	5.4	-1.6	2.1	1.1	5	.1
Non-energy	81.13	1.2	1.5	5.1	6.0	4.2	4.5	4.1	.4	.5	3	.0	3.5
Selected high-technology industries	4.48	8.1	18.7	18.7	24.3	15.6	14.5	30.5	3.8	1.5	.8	1.8	20.3
Computer and peripheral equipment 334	1 1.02	.9	21.8	6.9	4	-1.0	13.8	16.4	1.6	1.2	1.1	.9	8.6
Communications equipment 334	2 1.21	-14.3	22.5	9.6	5.2	22.3	13.2	23.4	4.1	.4	-1.3	.6	16.6
Semiconductors and related													
electronic components 334412-	9 2.25	25.2	16.2	29.9	49.9	20.0	15.4	40.7	4.6	2.2	1.7	2.8	27.5
Excluding selected high-technology industries	76.65	.7	.4	4.2	4.8	3.4	3.9	2.6	.2	.4	4	1	2.5
	7.24	11.2		2.9	-8.6								1.7
Motor vehicles and parts 3361– Motor vehicles 336		11.3	4.8		-8.6	-1.1 2.5	16.3 18.1	4.0	-1.7	5.2 9.0	-4.0 -6.0	-3.5	-1.7
Motor vehicle parts 336		11.1	6.7 2.7	2.4 1.7	-6.3	-4.0	18.1	1.4 6.4	-3.2 2	2.4	-6.0 -2.5	-4.9 -2.4	-4.0 7
1													
Excluding motor vehicles and parts	69.41	4	.0	4.4	6.4	3.9	2.7	2.5	.4	1	.0	.3	3.0
Consumer goods	21.98	-1.2	.7	3.7	5.4	1.4	3.4	2.2	.4	.1	1	1	1.9
Business equipment	7.74	-2.2	.1	9.3	12.8	11.7	1.9	6.5	.8	1	.6	1.2	7.8
Construction supplies	4.33	.2	.6	3.8	7.2	3.6	.1	4.5	.6	.9	.1	.5	3.3
Business supplies Materials	8.12 25.22	2 .7	9 9	3.2 3.9	5.3 5.1	1.6 4.3	.9 3.0	5.0	1.0	4 4	.3 1	.1 .2	2.3 2.2
Measures excluding selected high-technology industries													
Total industry	95.52	1.0	.3	3.5	3.3	2.0	4.0	2.3	3	.4	.1	3	2.3
Manufacturing ¹	77.43	.7	.4	4.2	4.9	3.3	4.0	2.5	.2	.4	4	1	2.5
Durable	38.48	2.3	1.2	5.1	3.8	4.7	5.4	2.6	1	.9	6	3	2.9
Measures excluding motor vehicles and parts													
Total industry	92.76	.8	.9	4.4	5.5	3.0	3.6	3.5	.0	.1	.5	.1	3.5
Manufacturing ^l Durable	74.67 35.72	.4 1.6	1.2 2.9	5.3 7.4	7.6 9.4	4.5 7.4	3.5 4.4	4.0 5.7	.6 .7	.0 .1	.1 .3	.4 .6	4.0 6.1
Measures excluding selected high-technology industries and motor vehicles and parts													
Total industry	88.28	.3	1	3.6	4.4	2.3	3.0	2.2	2	.0	.5	.0	2.6
Manufacturing ^l	70.18	3	.0	4.4	6.5	3.8	2.8	2.4	.3	1	.0	.3	2.9
Stage-of-process components of non-energy materials, measures of the input to Finished processors	13.41	5.5	1.9	8.4	7.4	6.4	8.1	8.9	.9	.9	5	.2	6.7
Primary and semifinished processors	16.70	1.7	.0	3.0	5.7	2.9	2.4	-1.1	.0	6	0	.1	1.1
Timary and seminimistica processors	10.70	1./	.0	5.0	3.1	2.7	2.4	-1.1	.0	0	.0	.1	1.1

Table 3 MOTOR VEHICLE ASSEMBLIES

Millions of units, seasonally adjusted annual rate

Item	2004 average	2004 Q2	Q3	Q4	2005 Q1	2005 Jan.	Feb.	Mar.	Apr.
Total	11.96	11.89	11.84	12.02	12.16	11.89	12.58	12.02	11.35
Autos	4.23	4.20	4.27	4.15	4.43	4.37	4.56	4.37	4.09
Trucks	7.73	7.69	7.57	7.87	7.73	7.51	8.02	7.65	7.25
Light	7.37	7.36	7.19	7.46	7.28	7.03	7.59	7.23	6.84
Medium and heavy	.36	.33	.38	.41	.45	.49	.43	.42	.41
MEMO Autos and light trucks	11.60	11.56	11.46	11.61	11.72	11.40	12.14	11.61	10.94

Note. Seasonal factors and underlying data for auto, light truck, and medium and heavy truck production are available on the Board's web site, www.federalreserve.gov/releases/G17/mvsf.htm

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1. See note on cover page.

Table 4 INDUSTRIAL PRODUCTION INDEXES: MARKET AND INDUSTRY GROUP SUMMARY

1997 = 100, seasonally adjusted

Item		2004 proportion	2004 Aug.	Sept.	Oct.	Nov.	Dec.	2005 Jan. ^r	Feb.r	Mar.r	Apr.p
Total IP		100.00	116.0	115.7	116.6	116.9	117.9	117.8	118.3	118.5	118.3
Market Groups											
Final products and nonindustrial supplie	s	57.99	113.6	113.3	114.6	114.6	115.6	115.5	116.2	116.3	116.0
Consumer goods		30.29	111.4	110.7	112.3	112.3	113.1	112.4	113.4	113.2	112.2
Durable		8.44	125.4	123.5	126.2	125.7	126.1	124.3	128.8	126.2	123.6
Automotive products Home electronics		4.46 .32	135.3 225.2	133.1 221.2	137.8 234.9	136.8 225.2	137.9 210.1	134.3 217.0	142.5 230.8	137.8 224.6	133.6 226.4
Appliances, furniture, carpeting		1.40	114.4	112.8	113.3	114.0	114.7	113.9	114.6	115.3	112.4
Miscellaneous goods		2.25	103.6	102.3	102.4	102.5	102.5	102.7	102.6	101.9	101.7
Nondurable		21.85	106.1	105.8	107.0	107.2	108.2	107.8	107.6	108.3	107.8
Non-energy		17.69	105.1	104.7	105.9	105.8	106.2	106.7	106.7	106.7	106.7
Foods and tobacco		9.69	103.9	104.0	104.9	105.1	105.2	105.5	104.8	105.0	105.1
Clothing		.68	47.5	47.8	47.6	48.0	47.4	47.1	46.5	46.0	46.4
Chemical products Paper products		4.80 2.03	126.9 111.5	125.7 109.7	128.3 110.5	126.9 111.5	127.5 113.5	127.5 115.9	130.1 115.1	129.1 115.5	129.2 114.8
Energy		4.16	111.3	111.5	110.3	111.3	118.1	113.4	112.3	116.3	113.4
Lifeigy		4.10	111.2	111.5	112.7	114.2	110.1	113.4	112.3	110.5	113
Business equipment		10.01	120.7	121.1	122.7	122.1	123.7	125.2	125.6	125.5	126.5
Transit		1.82	90.5	90.7	93.5	92.8	94.0	95.6	97.6	95.6	95.2
Information processing		2.88	177.7	179.3	180.8	182.3	185.3	188.6	190.1	191.1	193.2
Industrial and other		5.30	100.7	100.9	101.8	100.7	101.9	102.6	101.9	102.2	103.3
Defense and space equipment		1.97	112.7	113.5	113.8	114.5	115.1	115.6	117.4	118.0	119.9
Construction supplies		4.37	108.3	107.6	108.3	107.8	107.8	108.5	109.5	109.6	110.1
Business supplies		10.95	114.8	114.9	115.3	115.9	117.2	117.1	116.7	117.7	117.5
N		42.01	110.2	110.0	110.4	100.1	101.0	100.0	121.2	101.5	101
Materials		42.01	119.3 125.8	118.9 125.5	119.4	120.1	121.0 127.5	120.8 128.1	121.3 128.2	121.5 127.9	121.4 128.0
Non-energy Durable		30.11 18.80	143.6	143.3	126.4 144.8	127.1 145.8	146.2	147.2	147.7	147.5	147.3
Consumer parts		4.02	109.2	108.5	110.7	110.6	110.9	110.6	113.2	111.1	108.5
Equipment parts		6.21	240.0	241.5	243.9	247.2	250.4	255.2	257.2	257.5	261.7
Other		8.57	98.9	98.3	98.9	99.5	99.1	99.2	98.3	98.7	98.4
Nondurable		11.32	98.3	97.8	98.1	98.4	98.8	98.7	98.5	98.1	98.6
Textile		.60	68.0	67.6	67.1	67.0	67.1	67.3	66.1	65.4	64.3
Paper		2.58	93.5	94.2	93.3	94.0	94.4	94.7	94.6	94.7	95.5
Chemical		4.55	106.0	104.9 98.2	105.1 97.6	106.4 98.2	107.1 100.1	104.5 98.4	105.2 99.5	104.4	105.0
Energy		11.90	98.6	98.2	97.0	98.2	100.1	98.4	99.3	100.8	100.2
INDUSTRY GROUPS											
Manufacturing		81.91	118.3	117.7	119.0	119.1	119.7	120.2	120.8	120.4	120.5
Manufacturing (NAICS)		77.18	119.0	118.6	120.0	120.0	120.6	120.9	121.6	121.2	121.3
Durable manufacturing		42.78	134.4	134.1	135.7	135.9	136.8	137.3	138.6	138.0	137.
Wood products	321	1.55	104.7	102.8	106.2	104.2	104.1	105.4	101.3	101.8	100.6
Nonmetallic mineral products Primary metal	327 331	2.22 2.77	106.9 93.2	106.4 94.2	106.5 94.3	106.7 95.2	108.8 93.1	108.0 93.2	109.8 91.3	108.6 92.5	109.1 92.1
Fabricated metal products	332	5.65	97.6	96.9	94.3	97.0	97.2	97.2	96.9	96.8	97.2
Machinery	333	5.46	96.6	97.3	98.6	98.7	99.0	100.2	100.3	99.9	101.2
Computer and electronic products	334	7.36	295.4	298.0	301.0	303.5	308.0	316.2	321.2	323.9	329.8
Electrical equip., appliances,											
and components	335	2.15	96.3	96.1	94.9	95.3	97.1	95.9	94.1	95.0	95.2
Motor vehicles and parts	3361–3	7.24	124.5	123.1	127.4	126.7	128.2	126.0	132.6	127.3	122.9
Aerospace and miscellaneous	2264.0	2.55	100.0	100.2	101.2	101.7	100.6	102.7	104.2	1047	1066
transportation equipment	3364–9	3.55	100.8	100.3	101.3	101.7	102.6	102.7	104.3	104.7	106.0
Furniture and related products Miscellaneous	337 339	1.70 3.13	109.7 122.1	108.1 120.9	108.7 122.4	108.5 122.9	109.4 123.1	108.3 124.2	107.2 124.6	107.6 124.6	105.6 124.7
wiscendieous	339	3.13	122.1	120.9	122.4	122.9	123.1	124.2	124.0	124.0	124.
Nondurable manufacturing		34.41	100.7	100.2	101.2	101.2	101.4	101.6	101.7	101.5	101.7
Food, beverage, and tobacco products	311,2	11.44	104.4	104.5	105.6	105.4	105.6	106.3	105.7	106.0	106.2
Textile and product mills	313,4	1.07	76.4	75.5	76.5	75.1	74.0	76.0	75.5	75.4	74.1
Apparel and leather	315,6	.74	48.1	48.5	48.2	48.7	48.1	47.6	47.1	46.5	46.9
Paper Printing and support	322 323	2.97 2.17	95.2 86.9	95.2 88.8	95.8 87.8	95.2 88.0	95.5 87.8	97.2 88.4	96.3 88.2	96.0 89.0	96.5 89.4
Petroleum and coal products	323	1.98	86.9 111.6	88.8 108.0	87.8 110.1	88.0 112.0	87.8 113.6	88.4 110.7	88.2 114.1	89.0 112.6	113.3
Chemical Chemical	325	10.46	111.8	110.5	112.1	112.0	112.7	111.8	112.9	112.1	112.6
Plastics and rubber products	326	3.57	104.4	103.2	104.6	104.1	104.3	105.5	104.5	104.8	104.1
Other manufacturing (non-NAICS)	1133,5111	4.73	105.9	104.0	103.8	104.4	106.1	107.8	107.2	107.6	106.
Mining	21	8.28	91.9	89.4	89.0	90.6	91.4	90.8	93.0	93.5	93.5
Utilities	2211,2	9.82	111.1	114.8	114.3	114.9	118.5	114.0	112.7	116.8	114.1
Electric	2211	8.15	113.4	117.9	118.5	118.2	121.7	117.2	116.1	119.6	117.1
Natural gas	2212	1.67	98.5	98.1	93.4	97.3	101.4	97.3	95.2	101.6	98.3

r Revised. p Preliminary. NOTE. See notes to table 1.

Table 5 INDUSTRIAL PRODUCTION INDEXES: SPECIAL AGGREGATES

1997 = 100, seasonally adjusted

Item		proportion	A	C 4			D .				
		proportion	Aug.	Sept.	Oct.	Nov.	Dec.	Jan. ^r	Feb.r	Mar.r	Apr.p
Total industry		100.00	116.0	115.7	116.6	116.9	117.9	117.8	118.3	118.5	118.3
Energy		18.87	104.2	104.4	104.2	105.4	107.8	105.0	105.6	107.7	106.5
Consumer products		4.16	111.2	111.5	112.7	114.2	118.1	113.4	112.3	116.3	113.4
Commercial products		2.50	118.5	121.7	122.1	124.7	128.0	122.2	121.8	125.4	123.2
Oil and gas well drilling		.31	116.4	116.0	116.4	122.0	123.5	123.0	126.1	128.2	127.7
Converted fuel		3.87	101.8	103.4	103.3	105.2	107.6	105.5	104.6	106.4	105.5
Primary materials		8.03	96.6	95.2	94.4	94.4	96.1	94.5	96.5	97.6	97.2
Non-energy		81.13	118.2	117.8	119.0	119.1	119.7	120.2	120.8	120.4	120.5
Selected high-technology industries		4.48	415.7	418.4	422.2	429.8	436.6	453.3	460.2	463.8	472.3
Computer and peripheral equipment	3341	1.02	265.5	268.6	272.2	275.0	277.9	282.3	285.8	289.0	291.5
Communicationsequipment	3342	1.21	155.8	155.5	157.3	160.5	162.2	168.9	169.6	167.4	168.4
Semiconductors and related											
electronic components	334412–9	2.25	851.7	858.9	863.7	881.5	900.0	941.0	961.9	978.3	1,005.6
Excluding selected high-technology industries		76.65	103.6	103.2	104.2	104.2	104.6	104.9	105.3	104.9	104.8
Motor vehicles and parts	3361–3	7.24	124.5	123.1	127.4	126.7	128.2	126.0	132.6	127.3	122.9
Motor vehicles *	3361	3.30	129.7	127.1	132.6	131.5	131.8	127.6	139.0	130.6	124.2
Motor vehicle parts	3363	3.43	119.4	118.6	121.0	120.7	122.7	122.4	125.4	122.3	119.3
Excluding motor vehicles and parts		69.41	101.7	101.4	102.1	102.2	102.5	102.9	102.9	102.9	103.2
Consumer goods		21.98	105.9	105.3	106.5	106.3	106.6	107.0	107.1	107.0	106.9
Businessequipment		7.74	102.1	102.3	103.3	102.4	103.8	104.7	104.6	105.2	106.5
Construction supplies		4.33	108.1	107.4	108.1	107.6	107.6	108.3	109.2	109.4	109.9
Business supplies		8.12	100.5	99.8	100.3	100.2	100.8	101.9	101.4	101.7	101.8
Materials		25.22	97.4	97.0	97.6	98.1	98.1	98.2	97.8	97.7	97.9
Measures excluding selected high-technolindustries	ology			-	-						
Total industry		95.52	103.7	103.4	104.2	104.4	105.2	104.9	105.3	105.5	105.1
Manufacturing ¹		77.43	103.7	103.2	104.3	104.3	104.8	105.0	105.4	105.0	104.9
Durable		38.48	106.1	105.8	107.1	107.0	107.6	107.5	108.5	107.8	107.5
Measures excluding motor vehicles and Total industry	parts	92.76	115.4	115.1	115.8	116.2	117.1	117.1	117.3	117.8	117.9
Manufacturing ¹		74.67	117.7	117.2	118.2	118.4	117.1	117.1	117.3	117.8	120.2
Durable		35.72	135.6	135.5	136.6	136.9	137.7	138.8	138.9	139.3	140.2
Measures excluding selected high-technolindustries and motor vehicles and pa											
Total industry		88.28	102.2	101.9	102.5	102.7	103.5	103.3	103.3	103.8	103.8
Manufacturing ^l		70.18	101.9	101.4	102.3	102.3	102.7	103.1	103.0	103.0	103.3
Stage-of-process components of non-ene materials, measures of the input to Finished processors	ergy	13.41	156.4	156.8	158.1	159.3	160.5	162.0	163.5	162.7	163.0
Primary and semifinished processors		16.70	101.3	100.5	101.2	101.6	101.6	101.6	101.0	101.0	101.0
Timely and seminimistica processors		10.70	101.5	100.3	101.2	101.0	101.0	101.0	101.0	101.0	101.0

Table 6 **DIFFUSION INDEXES OF INDUSTRIAL PRODUCTION**

Percent

Item	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
One month earlier												
2003	43.7	50.7	43.0	37.0	52.7	56.0	49.7	48.3	59.0	60.3	71.0	58.7
2004	59.0	61.7	49.7	61.7	58.3	53.5	58.3	56.3	44.7	58.7	56.7	57.7
2005	54.7	48.2	53.3									
Three months earlier												
2003	42.7	40.3	40.7	35.3	37.3	47.3	57.3	55.7	57.3	61.7	71.7	66.3
2004	66.3	61.0	62.0	62.7	61.7	61.3	60.0	58.0	53.0	56.7	56.3	62.7
2005	59.2	56.7	54.7									
Six months earlier												
2003	39.7	36.0	36.3	34.7	38.7	43.3	44.0	43.7	51.7	62.0	69.7	67.7
2004	67.3	70.3	67.7	72.3	65.7	62.0	66.3	62.7	58.3	60.7	60.0	65.0
2005	62.0	57.0	60.3									

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.

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1. See note on cover page.

Table 7 CAPACITY UTILIZATION

Percent of capacity, seasonally adjusted

Item		2004	1972- 2004	1988- 89	1990- 91	1994- 95	2004			2005	2005			
		proportion	ave.	high	low	high	Q2	Q3	Q4	Q1r	Jan.r	Feb.r	Mar.r	Apr.p
Total industry		100.00	81.0	85.1	78.6	84.9	77.9	78.2	78.8	79.3	79.1	79.4	79.4	79.2
Manufacturing		84.08	79.8	85.6	77.2	84.3	76.5	77.0	77.6	78.1	78.1	78.3	78.0	77.9
Manufacturing (NAICS)		79.81	79.6	85.5	77.0	84.4	75.9	76.4	77.1	77.5	77.4	77.7	77.4	77.3
Durable manufacturing		45.64	78.0	84.5	73.4	83.6	73.8	74.4	75.2	75.6	75.5	76.0	75.5	75.3
Wood products	321	1.56	80.0	88.9	73.1	87.7	78.5	78.2	78.5	77.0	78.9	75.8	76.2	75.3
Nonmetallic mineral products	327	2.19	79.2	84.9	72.0	83.6	79.3	80.2	80.8	81.7	81.2	82.4	81.4	81.7
Primary metal	331	2.60	80.5	94.3	74.6	95.5	79.4	81.9	82.6	81.1	81.8	80.1	81.2	80.8
Fabricated metal products	332	6.36	76.6	80.2	71.6	83.6	69.6	70.1	70.1	69.9	70.1	69.9	69.8	70.0
Machinery	333	5.63	78.8	84.8	73.0	86.9	76.3	77.5	78.4	79.4	79.5	79.5	79.1	80.2
Computer and electronic products	334	8.65	78.7	81.7	76.6	83.9	69.8	70.9	71.1	73.0	72.7	73.2	73.2	73.9
Electrical equip., appliances,														
and components	335	2.16	82.7	87.5	75.1	92.5	77.8	80.1	80.2	79.8	80.5	79.1	79.9	80.1
Motor vehicles and parts	3361-3	7.11	77.8	90.3	56.0	87.8	80.4	79.8	82.6	82.9	81.4	85.5	81.9	78.9
Aerospace and miscellaneous														
transportation equipment	3364-9	4.31	72.4	88.7	82.1	67.9	64.3	64.9	65.5	66.6	65.9	66.9	67.1	67.8
Furniture and related products	337	1.83	78.7	83.6	69.4	83.4	73.6	73.5	73.5	72.9	73.2	72.5	72.8	71.5
Miscellaneous	339	3.24	76.5	81.7	77.7	80.6	76.3	76.5	77.2	78.1	78.0	78.2	78.1	78.0
Nondurable manufacturing		34.16	81.8	87.1	81.7	85.4	78.9	79.3	79.8	80.2	80.2	80.2	80.1	80.3
Food, beverage, and tobacco products	311,2	11.09	81.9	85.6	81.0	84.0	80.6	80.9	81.6	82.0	82.2	81.8	82.0	82.1
Textile and product mills	313,4	1.15	83.1	91.5	77.2	90.7	73.2	74.8	74.5	75.7	75.8	75.6	75.7	75.3
Apparel and leather	315,6	.86	79.3	84.2	77.3	89.2	69.2	68.5	70.6	70.9	71.0	70.9	70.8	72.1
Paper	322	2.71	88.1	93.7	85.2	92.5	86.1	86.8	86.6	87.6	88.2	87.4	87.1	87.6
Printing and support	323	2.39	83.7	91.6	82.7	86.0	72.1	72.0	72.1	72.5	72.4	72.2	72.8	73.1
Petroleum and coal products	324	1.68	86.1	88.9	82.9	90.3	89.1	90.2	91.3	91.6	90.3	92.9	91.7	92.2
Chemical	325	10.88	78.4	85.7	80.9	81.1	75.4	75.9	76.6	76.4	76.2	76.9	76.3	76.5
Plastics and rubber products	326	3.40	83.7	91.1	77.1	92.2	83.4	83.2	83.5	84.1	84.5	83.7	84.0	83.5
Other manufacturing (non-NAICS)	1133,5111	4.28	84.9	90.5	80.4	83.9	87.0	87.6	87.6	89.7	90.0	89.4	89.7	88.9
Mining	21	6.99	87.1	85.8	83.5	89.1	86.6	86.3	85.6	87.7	86.1	88.2	88.8	88.9
Utilities	2211,2	8.92	86.8	92.8	84.2	93.9	85.1	83.7	85.4	84.1	83.8	82.8	85.7	83.7
Selected high-technology industries		5.49	78.3	81.0	74.3	86.4	69.7	69.9	69.8	71.9	71.9	72.1	71.8	72.3
Computer and peripheral equipment	3341	1.17	78.4	80.2	67.5	85.0	74.2	73.7	75.9	78.2	77.6	78.3	78.7	78.8
Communicationsequipment	3342	1.83	76.0	80.8	73.4	87.4	53.7	56.7	58.8	62.2	62.2	62.6	61.8	62.2
Semiconductors and related														
electronic components	334412–9	2.50	81.1	82.8	77.5	90.4	80.5	78.5	75.6	76.8	76.9	76.8	76.6	77.3
Measures excluding selected high-technindustries	ology													
		94.51	81.1	85.5	78.8	84.8	78.6	78.9	79.6	80.0	79.8	80.1	80.2	79.9
Total industry			79.9	86.0	77.3	84.2	77.2	77.8	78.5	79.0	78.9	79.2	78.9	78.8
Total industry Manufacturing ¹		78.59	19.9	00.0	, , , , ,									
Manufacturing ¹		78.39	19.9	00.0										
		10.28	86.4	88.9	84.8	89.3	85.8	85.7	85.5	86.5	85.6	86.8	87.0	87.3
Manufacturing ¹ STAGE-OF-PROCESS GROUPS						89.3 87.8	85.8 79.8		85.5 80.2	86.5 80.2	85.6 80.3	86.8 80.0	87.0 80.3	87.3 79.8

Table 8 INDUSTRIAL CAPACITY

Percent change

		Average a	ınnual rate		Fourt	h quarter	to fourth	quarter		Annual	rate		Monthly rate
Item	1972-	1980-	1989-	1995-		_			2004		2005		2005
	79	88	94	2005	2002	2003	2004	2005p	Q3	Q4	Q1	Q2	Apr.
Total industry	3.0	1.9	2.3	3.5	.5	2	1.2	1.3	1.3	1.2	1.2	1.3	.1
Manufacturing ^l	3.2	2.2	2.6	3.9	.0	1	1.1	1.5	1.3	1.3	1.4	1.6	.1
Mining Utilities	.8 4.3	.1 2.1	9 1.6	5 2.4	6 4.6	-1.7 3.0	4 1.9	8 1.1	3 1.8	6 1.8	8 1.4	9 1.0	1 .1
Selected high-technology industries	18.3	16.9	15.8	28.4	8.0	8.4	13.4	14.4	14.1	15.3	15.7	14.4	1.1
Manufacturing ¹ ex. selected high-technology industries	2.5	1.3	1.7	1.6	4	6	.1	.5	.1	.1	.3	.6	.0
STAGE-OF-PROCESS GROUPS Crude	1.7	.3	3	3	8	-2.2	2	4	1	3	5	5	.0
Primary and semifinished	3.0	1.5	2.6	4.3	.8	2	2.0	2.1	2.3	2.3	2.2	2.1	.2
Finished	3.7	3.2	2.6	3.2	.3	.6	.3	.8	.2	.2	.4	.8	.1

r Revised. p Preliminary.

1. See note on cover page.

p Preliminary.
1. See note on cover page.

Table 9 GROSS VALUE OF FINAL PRODUCTS AND NONINDUSTRIAL SUPPLIES

Billions of 2000 dollars at annual rate, seasonally adjusted

Item	2000	2004	2004	00	02	0.4	2005	2005	E1.	34	4 0
	2000	2004	Q1	Q2	Q3	Q4	Q1r	Jan. ^r	Feb.r	Mar.r	Apr.p
Final products and nonindustrial supplies	2,815.1	2,859.0	2,824.5	2,842.8	2,863.9	2,905.0	2,931.0	2,915.9	2,939.7	2,937.5	2,925.3
Final products	2,113.6	2,163.9	2,139.0	2,148.8	2,167.5	2,201.3	2,222.7	2,210.3	2,232.5	2,225.4	2,212.4
Consumer goods	1,481.0	1,542.9	1,539.9	1,534.9	1,536.6	1,560.1	1,568.8	1,557.0	1,577.1	1,572.2	1,555.8
Durable	470.8	509.9	517.0	507.4	505.0	515.1	517.0	506.4	528.9	515.8	503.3
Automotive products	279.5	317.1	323.1	313.3	312.6	323.3	325.1	315.3	336.1	323.9	313.2
Other durable goods	191.4	193.0	194.2	194.2	192.6	192.0	192.2	191.3	193.1	192.2	190.3
Nondurable	1,010.2	1,033.6	1,024.5	1,028.2	1,032.0	1,045.7	1,052.3	1,050.1	1,050.2	1,056.6	1,051.6
Equipment, total	632.7	623.2	599.5	615.8	634.1	644.5	658.3	658.1	659.5	657.2	661.8
Business and defense	616.8	609.9	586.8	602.7	620.9	630.4	643.7	643.3	644.9	643.1	647.8
Business	558.7	536.7	516.3	529.7	546.7	555.2	567.0	567.6	567.9	565.7	569.0
Defense and space	58.1	72.6	69.8	72.2	73.6	74.6	76.1	75.4	76.4	76.7	77.8
Nonindustrial supplies Construction supplies	701.4 196.8	695.3 192.0	685.8 188.5	694.0 191.8	696.6 193.7	704.0 193.9	708.7 195.8	705.9 194.3	707.7 196.3	712.4 196.7	713.0 197.5
Business supplies	504.6	503.3	497.3	502.2	502.9	510.1	512.9	511.6	511.4	515.7	515.5
Commercial energy products	136.0	148.5	147.8	147.5	146.1	151.5	149.3	148.0	148.7	151.3	150.6

r Revised. p Preliminary.

Percent change, seasonally adjusted

Table 10 GROSS-VALUE-WEIGHTED INDUSTRIAL PRODUCTION: STAGE-OF-PROCESS GROUPS

Item		1	rth quarte urth quar			Annua	l rate			Month	nly rate		Apr. '04
nem	2004 gross value ¹	2002	2003	2004	2004 Q2	Q3	Q4	2005 Q1 ^r	2005 Jan. ^r	Feb.r	Mar.r	Apr.p	to Apr. '05
Finished	1,830.4	.3	3.5	5.2	3.9	4.6	6.1	5.1	.4	1.3	8	2	3.7
Semifinished	1,631.9	3.8	.2	5.2	4.4	.7	7.0	2.8	1	.1	.2	5	2.8
Primary	948.6	3.4	.1	1.6	2	2.2	3.6	1	-1.3	1	.9	8	1.6
Crude	400.2	6	-1.3	2.3	3.2	2.4	.3	2.1	9	.4	.0	.5	2.0

r Revised. p Preliminary.
1. Billions of 2000 dollars.

1997 = 100

	1997		(Seasonally	adjusted				No	ot seasona	lly adjuste	ed	
Item	billion	2004			2005			2004			2005		
	kWh	Oct.	Nov.	Dec.	Jan.r	Feb.r	Mar.p	Oct.	Nov.	Dec.	Jan. ^r	Feb.r	Mar.p
Total Industry	983.9	93.3	93.6	93.6	94.0	94.3	93.9	95.2	93.2	92.0	91.9	91.3	91.9
Manufacturing ¹	890.9	94.0	94.2	94.0	94.6	95.0	94.5	96.0	93.7	92.2	92.2	91.9	92.4
Durable	386.5	95.1	95.1	95.9	96.1	96.9	95.8	96.5	93.6	92.8	92.8	93.9	94.6
Nondurable	498.4	93.3	93.6	92.6	93.4	93.5	93.5	95.7	93.8	91.8	91.8	90.4	90.9
Mining	93.0	83.2	85.2	86.8	85.5	83.7	84.4	83.8	86.3	88.5	87.7	83.5	83.5
Total ex. nuclear nondefense Utility sales to industry	962.6 913.5	94.2 90.9	94.5 91.1	94.6 90.9	95.0 91.6	95.2 91.6	94.8 91.2	95.7 92.9	93.6 90.7	92.4 89.1	92.3 89.0	91.7 89.0	92.3 89.1
Industrial generation	70.4	132.2	135.7	132.6	132.7	132.0	134.5	132.4	133.3	137.6	138.0	128.2	136.2

r Revised. p Preliminary.

1. See note on cover page.

Note. Additional industry detail is available on the Board's web site, www.federalreserve.gov/releases/g17/download.htm.

Table 11 **ELECTRIC POWER USE**

Table 12
HISTORICAL STATISTICS FOR INDUSTRIAL PRODUCTION, CAPACITY, AND UTILIZATION: Total Industry
Seasonally adjusted

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
IP (percent change) ¹										_		_					_
1983 1984	1.9 2.1	6 .4	.9 .5	1.2	.7	.6 .4	1.6	1.1	1.6	.8 1	.3	.5	4.4 12.5	9.4 6.2	14.8 2.9	10.9	2.6 9.0
1984 1985	3	.4	.3 .1	2	.3	.0	.3 7	.5	2 .4	1 4	.3	1.0	12.3	.5	2.9 7	2.6	1.3
1986	.5	8	6	.0	.2	3	.6	2	.2	.4	.5	.9	2.4	-2.6	1.6	4.6	1.0
1987	3	1.3	.1	.6	.7	.5	.6	.7	.2	1.5	.5	.5	5.5	7.0	7.0	9.8	5.1
1988 1989	.0	.4 5	.3	.5 1	1 7	.2	.2 9	.5 1.0	3 3	.6 .0	.2	.4 .7	3.4 1.5	3.3 -1.9	2.1 -2.5	3.2 2.0	5.0
1990	6	.9	.5	.0	.1	.3	2	.3	.2	7	-1.2	7	2.6	2.9	1.3	-5.9	.9
1991	5	6	5	.2	1.0	1.0	.0	.1	.8	2	1	3	-7.5	2.6	5.6	.9	-1.5
1992	6	.7	.8	.7	.5	.0	.8	4	.2	.7	.4	.0	3	7.1	2.7	3.9	2.8
1993 1994	.5 .4	.4 .0	.0 1.0	.3 .5	4 .6	.2 .7	.3 .2	.1 .5	.4 .2	.7 .9	.5 .6	.5 1.1	3.7 5.2	1.1 7.5	2.2 5.2	6.3 8.1	3.3 5.4
1995	.3	.0	.1	.0	.2	.3	4	1.4	.4	2	.2	.5	5.2	1.0	3.8	3.7	4.8
1996	9	1.5	2	.9	.7	.9	1	.7	.6	.1	.9	.7	1.7	8.3	5.5	6.4	4.3
1997	.3	1.2	.5	.2	.4	.5	.6	1.0	.9	.8	.6	.4	8.6	5.7	8.6	9.5	7.3
1998 1999	.5 .6	.2	.2 .4	.6 .2	.5 .7	4 .0	2 .6	1.9 .6	3 3	.8 1.2	2 .5	.2 1.0	4.6 4.4	4.3 4.3	3.4 4.7	4.5 7.4	5.8 4.5
2000	1	.4	.6	.7	.6	.0	5	3	.4	5	1	2	4.7	6.7	-1.4	-2.0	4.3
2001	-1.0	6	3	2	5	6	4	1	5	4	5	.0	-6.7	-4.6	-4.7	-4.2	-3.6
2002	.7	2	.6	.4	.2	.7	1	.0	.0	5	.1	4	2.3	4.4	1.7	-2.3	3
2003	.2	.1	4	9	.1	.3	.6	1	.7	.2	1.0	.2	7	-4.0	4.1	5.7	.0
2004 2005	.3 1	1.1	3 .1	.5 2	.7	4	.7	.1	3	.8	.3	.8	5.6 3.6	4.3	2.7	4.5	4.2
IP (1997=100)	1	.5	.1	2									3.0				
2003	110.9	111.0	110.6	109.5	109.6	109.9	110.6	110.5	111.3	111.6	112.7	112.9	110.8	109.7	110.8	112.4	110.9
2004 2005	113.2 117.8	114.4 118.3	114.1 118.5	114.7 118.3	115.5	115.1	115.9	116.0	115.7	116.6	116.9	117.9	113.9 118.2	115.1	115.9	117.2	115.5
Capacity (percent of 1997 output)																	
2003	147.1	147.0	146.9	146.9	146.8	146.8	146.7	146.8	146.8	146.9	146.9	147.0	147.0	146.8	146.8	146.9	146.9
2004 2005	147.2 148.9	147.3 149.1	147.5 149.3	147.6 149.4	147.8	147.9	148.1	148.2	148.4	148.5	148.7	148.8	147.3 149.1	147.8	148.2	148.7	148.0
Utilization (percent)																	
1983	72.1	71.6	72.1	73.0	73.5	73.9	75.0	75.8	76.9	77.5	77.7	78.0	71.9	73.4	75.9	77.7	74.7
1984	79.5	79.8	80.1	80.4	80.7	80.9	81.0	80.9	80.6	80.4	80.5	80.4	79.8	80.7	80.8	80.4	80.4
1985 1986	80.0	80.2 79.2	80.2 78.6	79.9 78.5	79.7 78.6	79.6 78.2	78.9 78.6	79.1 78.4	79.3 78.4	78.9 78.7	79.0 78.9	79.7 79.5	80.1 79.3	79.7 78.5	79.1 78.5	79.2 79.0	79.5 78.8
1987	79.1	80.0	80.0	80.3	80.7	81.0	81.3	81.8	81.8	82.9	83.3	83.5	79.7	80.7	81.6	83.2	81.3
1988	83.5	83.7	83.9	84.2	84.1	84.2	84.3	84.7	84.4	84.8	84.8	85.1	83.7	84.2	84.5	84.9	84.3
1989	85.1	84.6	84.7	84.5	83.8	83.6	82.7	83.3	82.9	82.7	82.7	83.1	84.8	84.0	82.9	82.8	83.6
1990 1991	82.4 79.7	83.0 79.1	83.2 78.6	83.0 78.6	82.9 79.4	83.0 80.0	82.7 79.9	82.7 79.9	82.8 80.5	82.0 80.2	80.9 80.0	80.2 79.6	82.9 79.2	82.9 79.4	82.7 80.1	81.1 79.9	82.4 79.6
1992	79.1	79.5	80.0	80.4	80.6	80.4	80.8	80.3	80.3	80.7	80.9	80.8	79.5	80.4	80.5	80.8	80.3
1993	81.1	81.3	81.1	81.3	80.9	80.9	81.1	81.0	81.2	81.7	81.9	82.2	81.2	81.0	81.1	81.9	81.3
1994 1995	82.4 84.8	82.2 84.5	82.8 84.3	83.0 83.9	83.3 83.7	83.6	83.6 82.9	83.7 83.7	83.6 83.7	84.1 83.2	84.3 83.0	84.9	82.5	83.3 83.7	83.6	84.4	83.5 83.7
1995	84.8	84.5	84.3	82.5	83.7	83.6 83.1	82.9	82.8	83.7	82.6	83.0	83.0 83.2	84.5 82.2	82.8	83.4 82.8	83.0 82.9	83.7
1997	83.1	83.7	83.7	83.5	83.4	83.4	83.5	83.8	84.1	84.3	84.3	84.1	83.5	83.4	83.8	84.2	83.7
1998	84.0	83.6	83.3	83.4	83.3	82.5	81.9	83.1	82.4	82.7	82.1	82.0	83.7	83.1	82.5	82.3	82.9
1999 2000	82.1 82.5	82.1 82.5	82.1 82.7	81.9 82.9	82.2 83.2	81.9 82.9	82.1 82.2	82.3 81.7	81.7 81.7	82.3 81.1	82.4 80.7	82.9 80.3	82.1 82.6	82.0 83.0	82.0 81.9	82.5 80.7	82.2 82.0
2001	79.3	78.6	78.1	77.8	77.2	76.6	76.1	75.9	75.4	75.0	74.5	74.4	78.7	77.2	75.8	74.6	76.6
2002	74.8	74.6	74.9	75.1	75.3	75.8	75.7	75.7	75.7	75.4	75.5	75.2	74.7	75.4	75.7	75.4	75.3
2003	75.4	75.5	75.2	74.6	74.7	74.9	75.4	75.3	75.8	76.0	76.7	76.8	75.4	74.7	75.5	76.5	75.5
2004	76.9	77.7	77.4	77.7	78.2	77.8	78.3	78.3	78.0	78.5	78.7	79.2	77.3	77.9	78.2	78.8	78.1
2005	79.1	79.4	79.4	79.2									79.3				I

^{1.} Quarterly changes are at annual rates. Annual changes are calculated from annual averages.

Table 13 HISTORICAL STATISTICS FOR INDUSTRIAL PRODUCTION, CAPACITY, AND UTILIZATION: Manufacturing¹ Seasonally adjusted

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
IP (percent change) ²																	
1983	2.5	2	1.0	1.2	1.3	.8	1.5	.8	1.9	1.1	.3	.2	8.7	12.3	15.5	12.5	4.6
1984	1.9	1.1	.5	.5	.3	.5	.5	.2	2	.4	.4	.4	12.9	6.1	3.8	2.8	9.9
1985	4	3	.8	3	.1	.1	6	.6	.1	2	.6	.4	.1	1.0	.0	2.4	1.7
1986	1.2	7	3	.3	.2	4	.5	.3	.2	.4	.5	.9	4.6	3	2.4	5.0	2.2
1987	3	1.5	.0	.5	.7	.4	.7	.5	.5	1.6	.6	.6	6.0	6.7	6.9	11.2	5.5
988	2	.1	.3	.8	1	.1	.1	.1	.4	.6	.2	.4	2.4	4.2	1.4	4.9	5.2
1989	.8	-1.0	1	.1	9	.2	-1.1	.9	3	1	.2	.2	1.6	-3.4	-3.0	.8	.8
1990	2	1.4	.4	2	.0	.3	2	.3	.0	8	-1.1	8	4.1	2.7	.6	-6.5	.7
991	8 6	6 .9	6 .9	.3	.8 .7	1.1	.3	.3 3	1.0	2 .6	2 .4	1 2	-8.9 .8	2.1 8.0	7.3	1.6	-2.0
1993 1994	1.1	.2 .1	1 1.3	.5 .8	1 .7	1 .3	.3 .5	.0 .7	.6 .3	.8 1.1	.5 .7	.6 1.1	4.7 5.1	1.6 9.5	1.4 6.1	7.1 9.8	3.5 6.0
995	.4	1	.2	1	.0	.4	6	1.2	.9	1	.0	.5	5.6	.4	3.1	4.6	5.3
996	-1.1	1.5	3	1.2	.7	1.1	.3	.6	.8	.0	.9	1.0	.7	9.5	8.0	6.8	4.6
1997	.3	1.4	.8	.1	.5	.7	.5	1.2	.9	.7	.8	.5	10.2	6.8	9.5	10.2	8.5
1998	.8	.2	.1	.8	.3	5	2	2.2	4	1.0	.0	.4	6.3	3.9	3.6	6.6	6.6
1999	.4	.7	.1	.4	.9	2	.4	.9	3	1.3	.6	.9	4.9	4.9	4.5	9.0	5.2
2000	0.	.3	.9	.7	.4	.0	3	6	.3	5	5	5	5.2	6.7	-1.8	-3.7	4.6
0001	9 .7	6 2	4 .4	2 .2	5 .3	7 .8	3 2	4 .1	5 .0	5 7	2 .0	.2 5	-7.6 2.8	-4.8 3.4	-5.2 2.2	-4.0 -3.2	-4.2 4
.003	.3	1	2	9	.1	.6	.3	2	1.0	.3	1.1	.0	6	-3.3	3.9	6.5	.0
2004	.2	1.2	.1	9	.6	1	.8	.4	4	1.1	.1	.5	5.6	6.0	4.0	4.6	4.8
005	.4	.5	3	.0	.0	.1	.0	••	• • •	1.1	.1	.5	4.0	0.0	1.0	1.0	1.0
P (1997=100)																	
2003	111.8	111.6	111.5	110.4	110.5	111.1	111.5	111.3	112.4	112.7	113.9	113.9	111.6	110.7	111.7	113.5	111.9
2004	114.1	115.5	115.6	116.4	117.1	116.9	117.8	118.3	117.7	119.0	119.1	119.7	115.1	116.8	117.9	119.3	117.2
Capacity percent of 997 output)	120.2	120.8	120.4	120.5									120.4				
2003	151.9	151.8	151.8	151.7	151.7	151.6	151.6	151.7	151.7	151.8	151.9	152.0	151.8	151.7	151.7	151.9	151.8
2004 2005	152.1 153.9	152.2 154.1	152.3 154.3	152.5 154.5	152.6	152.8	153.0	153.1	153.3	153.4	153.6	153.8	152.2 154.1	152.6	153.1	153.6	152.9
Utilization																	
percent)	5 0.4	=0.0	=0.4		50.0	50 0	#8 0						= 0.0				
1983	70.1	70.0	70.6	71.4	72.3	72.8	73.9	74.4	75.8	76.6	76.7	76.8	70.3	72.2	74.7	76.7	73.5
1984 1985	78.2 79.2	78.9 78.7	79.2 79.2	79.4 78.7	79.4 78.6	79.6 78.6	79.8 77.9	79.8	79.4 78.2	79.6	79.6	79.7	78.8 79.0	79.5 78.6	79.7 78.1	79.6	79.4
1986	79.2	78.7	78.2	78.4	78.4	78.1	78.4	78.3 78.4	78.5	77.8 78.6	78.2 78.9	78.4 79.4	79.0	78.3	78.4	78.1 79.0	78.5 78.6
1987	79.1	80.0	79.9	80.1	80.6	80.7	81.1	81.3	81.6	82.8	83.2	83.5	79.7	80.5	81.3	83.2	81.2
.988	83.3	83.4	83.6	84.2	84.0	84.1	84.1	84.1	84.3	84.8	84.9	85.1	83.4	84.1	84.2	84.9	84.1
1989	85.6	84.6	84.3	84.2	83.3	83.2	82.1	82.7	82.3	82.0	81.9	81.9	84.8	83.6	82.4	81.9	83.2
1990	81.5	82.5	82.6	82.3	82.1	82.2	81.8	81.9	81.7	81.0	79.9	79.2	82.2	82.2	81.8	80.0	81.6
991	78.4	77.8	77.2	77.3	77.8	78.5	78.6	78.7	79.4	79.1	78.8	78.6	77.8	77.9	78.9	78.8	78.3
992	78.1	78.6	79.1	79.3	79.7	79.7	80.2	79.7	79.5	79.8	79.9	79.6	78.6	79.6	79.8	79.8	79.4
993	80.3	80.3	80.0	80.3	80.1	79.9	79.9	79.8	80.1	80.6	80.8	81.1	80.2	80.1	79.9	80.8	80.3
1994 1995	81.1 84.3	81.0 83.9	81.8 83.6	82.2 83.2	82.6 82.8	82.5 82.7	82.7 81.8	83.0 82.4	82.9 82.7	83.4 82.2	83.7 81.8	84.3 81.8	81.3 83.9	82.4 82.9	82.8 82.3	83.8 82.0	82.6 82.8
996	84.3	81.3	80.6	83.2	82.8	82.7	81.8	82.4	82.7	82.2	81.8	81.8	80.8	82.9	82.3	82.0	82.8
997	81.9	82.7	82.9	82.5	82.4	82.6	82.5	83.0	83.2	83.2	83.3	83.2	82.5	82.5	82.9	83.2	82.8
1998	83.3	82.8	82.3	82.4	82.2	81.2	80.6	81.9	81.2	81.6	81.1	81.1	82.8	81.9	81.2	81.3	81.8
1999	81.0	81.2	80.9	80.9	81.2	80.7	80.8	81.1	80.5	81.2	81.4	81.8	81.1	81.0	80.8	81.5	81.1
2000	81.4	81.3	81.6	81.8	81.8	81.5	80.9	80.1	80.1	79.4	78.8	78.1	81.4	81.7	80.4	78.8	80.€
2001	77.1	76.5	76.0	75.6	75.1	74.4	74.1	73.7	73.2	72.8	72.5	72.6	76.5	75.0	73.7	72.6	74.5
.002	73.0	72.9	73.1	73.2	73.5	74.1	73.9	74.1	74.1	73.6	73.7	73.3	73.0	73.6	74.0	73.5	73.5
	1	70. r	73.4	72.8	72.8	73.3	73.5	73.4	74.1	74.3	75.0	75.0	73.5	73.0	73.7	74.8	73.7
2003	73.6	73.5															
2003 2004 2005	73.6 75.1 78.1	73.5 75.9 78.3	75.9 78.0	76.3 77.9	76.7	76.5	77.0	77.2	76.8	77.5	77.5	77.9	75.6 78.1	76.5	77.0	77.6	76.7

See note on cover page.
 Quarterly changes are at annual rates. Annual changes are calculated from annual averages.

Table 14 HISTORICAL STATISTICS FOR INDUSTRIAL PRODUCTION, CAPACITY, AND UTILIZATION: Total Industry Excluding Selected High-Technology Industries

Seasonally adjusted

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
IP (percent change) ¹																	
1983	1.9	7	.8	1.2	.7	.5	1.5	1.2	1.3	.8	.2	.5	3.7	8.5	13.8	9.6	1.8
1984	2.0	.3	.4	.5	.4	.2	.2	.0	2	2	.4	.1	11.4	4.8	1.6	2	7.9
1985	3	.5	.1	.0	.1	.0	6	.4	.5	4	.3	1.1	.9	1.0	3	2.7	1.0
1986 1987	.6 4	8 1.2	7 .1	.0	.1	2 .4	.3	3 .6	.2	.4 1.4	.4	.8	2.5 4.5	-2.9 6.3	.6 6.0	4.0 9.0	.9
		1.2		.3	.0		.5		.1			.4					4.2
1988 1989	.0	.4 5	.2	.4 1	1 7	.2	.1 -1.1	.5 .9	4 3	.5 1	.2	.4 .7	3.2 1.7	2.7 -2.1	1.5 -3.3	2.9	4.4
1990	7	.8	.4	1	.1	.3	2	.3	.2	8	-1.3	7	2.0	2.4	.9	-6.5	.3
991	4	8	6	.2	1.0	1.0	.0	.1	.9	2	2	5	-8.0	2.1	5.4	.3	-2.0
.992	8	.7	.7	.6	.3	2	.7	5	.1	.6	.3	.0	-1.8	6.1	1.6	2.9	1.9
1993 1994	.5 .4	.3 .0	.0 .8	.3 .3	4 .5	.2 .6	.3 .0	.0 .3	.3 .0	.6 .7	.4 .4	.4 .9	3.1 4.2	.6 5.5	1.4 3.2	5.1 5.7	2.5 4.0
.995	.1	2	2	2	.0	.2	6	1.2	.1	5	.0	.4	2.8	-1.4	1.4	.5	2.4
1996	-1.1	1.3	4	.8	.4	.7	4	.4	.5	2	.8	.5	5	6.0	2.5	3.8	1.7
1997	.0	.8	.2	.0	.1	.3	.4	.7	.7	.7	.4	.1	4.9	2.0	5.8	7.1	4.2
1998	.2	.0	.1	.5	.3	8	6	1.7	5	.7	5	1	1.8	2.1	2	2.3	3.1
1999	.2	.1	.1	1	.5	3	.3	.5	5	1.0	.2	.7	.3	.7	1.6	4.9	1.2
2000	6 -1.0	.1	.3 3	.3 1	.3 4	1 5	7 3	4 .0	.2 5	6 4	3 5	3 .0	.5 -6.9	2.8 -3.5	-3.5 -3.7	-3.6	1.1
2001 2002	.8	6 2	s .6	1	.2	3 .7	2	2	1	5	1	5	2.6	4.2	-3.7	-4.4 -3.4	-4.1 2
2003	.1	.0	5	-1.0	.0	.2	.6	2	.7	.1	1.0	.2	-1.8	-5.1	3.3	5.1	-1.0
2004	.2	1.0	4	.5	.6	4	.7	.0	3	.8	.2	.8	4.9	3.3	2.0	4.0	3.4
2005	3	.4	.1	3									2.3				
IP (1997=100)																	
2003	100.5	100.4	99.9	98.9	98.9	99.1	99.7	99.5	100.2	100.3	101.3	101.5	100.3	99.0	99.8	101.0	100.0
2004 2005	101.7 104.9	102.7 105.3	102.3 105.5	102.8 105.1	103.4	103.0	103.7	103.7	103.4	104.2	104.4	105.2	102.2 105.2	103.1	103.6	104.6	103.4
C apacity (percent of 1997 output)																	
2003 2004	131.6 131.1	131.5 131.1	131.5 131.1	131.4 131.2	131.3 131.2	131.2 131.2	131.1 131.3	131.1 131.3	131.1 131.3	131.0 131.4	131.0 131.4	131.0 131.4	131.5 131.1	131.3 131.2	131.1 131.3	131.0 131.4	131.2 131.2
2005	131.4	131.5	131.5	131.6	131.2	131.2	131.3	131.3	131.3	131.4	131.4	131.4	131.5	131.2	131.3	131.4	131.2
U tilization																	
(percent)																	
1983	72.0	71.4	72.0	72.8	73.3	73.7	74.8	75.7	76.7	77.2	77.4	77.7	71.8	73.3	75.7	77.4	74.6
1984 1985	79.3 79.7	79.5 80.0	79.7 79.9	80.1 79.8	80.3 79.7	80.4 79.6	80.5 79.0	80.4 79.2	80.1 79.5	79.9 79.1	80.1 79.2	80.1 80.0	79.5 79.9	80.3 79.7	80.4 79.2	80.0 79.4	80.0 79.6
1986	80.3	79.6	78.9	78.8	78.9	78.7	78.9	78.6	78.6	78.9	79.2	79.7	79.6	78.8	78.7	79.3	79.1
1987	79.3	80.2	80.2	80.6	81.0	81.2	81.6	82.0	82.1	83.2	83.5	83.8	79.9	80.9	81.9	83.5	81.6
1988	83.8	84.1	84.2	84.6	84.4	84.5	84.6	85.0	84.6	85.0	85.1	85.4	84.1	84.5	84.7	85.1	84.6
1989	85.5	85.0	85.2	84.9	84.2	84.1	83.0	83.6	83.2	83.0	83.0	83.4	85.2	84.4	83.3	83.1	84.0
1990 1991	82.7 80.1	83.3 79.4	83.5 78.8	83.3 78.9	83.2 79.5	83.3 80.2	83.0 80.1	83.1 80.1	83.1 80.7	82.4 80.5	81.2 80.2	80.5 79.7	83.2 79.4	83.3 79.5	83.1 80.3	81.4 80.1	82.7 79.9
.992	79.0	79.5	80.0	80.4	80.6	80.4	80.9	80.4	80.4	80.8	81.0	80.9	79.5	80.5	80.6	80.9	80.4
1993	81.2	81.3	81.2	81.4	80.9	81.0	81.2	81.1	81.2	81.7	81.9	82.2	81.2	81.1	81.2	81.9	81.4
1994	82.4	82.3	82.9	83.0	83.3	83.7	83.6	83.7	83.6	84.0	84.2	84.8	82.5	83.3	83.6	84.3	83.5
1995	84.7	84.4	84.1	83.7	83.5	83.5	82.8	83.6	83.5	82.9	82.8	82.9	84.4	83.6	83.3	82.9	83.5
1996 1997	81.8 83.2	82.7 83.7	82.2 83.6	82.7 83.3	82.9 83.1	83.3 83.1	82.8 83.2	83.0 83.5	83.2 83.9	82.8 84.2	83.2 84.2	83.4 84.0	82.2 83.5	83.0 83.2	83.0 83.5	83.2 84.1	82.8 83.6
.998	83.9	83.7	83.5	83.7	83.7	82.8	82.1	83.3	82.7	83.1	82.5	82.3	83.7	83.4	82.7	82.6	83.1
1998	83.9	83.7	83.5	81.7	83.7	82.8	82.1	81.9	82.7	82.0	82.5	82.5	83.7	81.7	82.7	82.0	81.9
2000	81.9	81.8	82.0	82.2	82.3	82.1	81.5	81.0	81.1	80.6	80.3	79.9	81.9	82.2	81.2	80.2	81.4
2001	79.1	78.5	78.2	78.1	77.8	77.3	77.0	76.9	76.5	76.1	75.6	75.6	78.6	77.7	76.8	75.8	77.2
	76.1	75.9	76.3	76.5	76.7	77.2	77.1	77.0	76.9	76.5	76.5	76.2	76.1	76.8	77.0	76.4	76.6
2002 2003	76.3	76.4	76.0	75.3	75.3	75.6	76.0	75.9	76.4	76.5	77.3	77.5	76.2	75.4	76.1	77.1	76.2
2002	76.3 77.6 79.8	76.4 78.3 80.1	76.0 78.0 80.2	75.3 78.4 79.9	75.3 78.8	75.6 78.5	76.0 79.0	75.9 79.0	76.4 78.7	76.5 79.3	77.3 79.5	77.5 80.1	76.2 78.0 80.0	75.4 78.6	76.1 78.9	77.1 79.6	76.2 78.8

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

Note. Selected high-technology industries are computers, communications equipment, and semiconductors and related electronic components.

Table 15 HISTORICAL STATISTICS FOR INDUSTRIAL PRODUCTION, CAPACITY, AND UTILIZATION: Manufacturing 1 Excluding Selected High-Technology Industries

Seasonally adjusted

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
IP (percent change) ²																	
1983	2.5	2	.9	1.1	1.3	.7	1.3	.9	1.6	1.1	.2	.2	8.0	11.3	14.3	10.9	3.6
1984	1.8	.9	.4	.3	.1	.3	.4	.0	3	.4	.3	.3	11.5	4.3	2.1	1.9	8.4
1985	5	2	.8	2	.1	.1	4	.6	.2	3	.6	.4	2	1.8	.5	2.5	1.4
1986	1.3	7	3	.3	.1	2	.2	.2	.2	.3	.4	.8	4.8	5	1.2	4.3	2.2
1987	4	1.4	.0	.4	.7	.3	.6	.3	.4	1.5	.6	.5	4.9	5.8	5.5	10.3	4.6
1988 1989	2 .8	.2 -1.1	.3	.7	2 9	.0	.0 -1.3	.1 .9	.3 3	.6 2	.3	.4 .1	2.1	3.5 -3.7	.6 -4.0	4.6 1	4.5
1990	3	1.4	.3	2	.0	.2	2	.3	1	8	-1.2	8	3.3	2.1	.2	-7.2	.0
1991	8	8	8	.3	.7	1.1	.3	.2	1.1	2	3	3	-9.6	1.4	7.0	.9	-2.6
1992	8	.8	.9	.4	.6	.1	.7	4	1	.4	.3	3	-1.0	6.9	2.5	1.4	2.5
1993	1.1	.1	2	.5	1	2	.2	2	.5	.7	.4	.5	3.9	1.0	.4	5.7	2.6
1994 1995	.1 .1	.1 3	1.1 1	.6 4	.6 2	.1	.3 8	.5 1.0	.0	.8 4	.5 2	.9	3.9 2.7	7.2 -2.5	3.8	7.0	4.4 2.5
1996	-1.3	1.3	5	1.0	.4	.9	.0	.4	.6	3	.7	.7	-1.9	6.8	4.5	3.7	1.6
1997	1	1.0	.4	3	.2	.5	.3	1.0	.7	.6	.5	.2	5.9	2.6	6.3	7.4	4.9
1998	.5	1	1	.6	.2	-1.0	7	2.1	7	.9	2	.1	3.0	1.3	7	4.1	3.5
1999	.0	.3	3	.0	.7	6	.0	.8	5	1.1	.3	.6	.2	.8	.8	6.2	1.4
2000	6	1	.6	.2	1	.0	6	8	.1	6	7	6	.4	2.2	-4.3	-5.7	.9
2001	9	5	4	.0	4	6	2	3	5	5	3	.2	-8.0	-3.4	-4.0	-4.2	-4.9
2002	.8	2	.4	.1	.3	.7	2	.0	1	8	1	6	3.2	3.1	1.3	-4.6	3
2003	.3	3	3	-1.0	.0	.5	.3	4	.9	.2	1.2	.0	-2.0	-4.6	2.9	5.9	-1.2
2004	.0	1.1	.1	.6	.5	2	.8	.3	5	1.1	.0	.5	4.7	4.9	3.3	4.0	3.9
2005	.2	.4	4	1									2.5				
IP (1997=100)																	
2003	99.6	99.3	99.0	98.0	97.9	98.5	98.8	98.4	99.3	99.5	100.6	100.6	99.3	98.1	98.8	100.2	99.1
2004 2005	100.7 105.0	101.7 105.4	101.8 105.0	102.4 104.9	102.9	102.6	103.4	103.7	103.2	104.3	104.3	104.8	101.4 105.1	102.6	103.5	104.5	102.9
Capacity (percent of 1997 output)																	
2003	133.6	133.5	133.4	133.4	133.3	133.2	133.1	133.1	133.0	133.0	133.0	132.9	133.5	133.3	133.1	133.0	133.2
2004	132.9	132.9	132.9	132.9	132.9	133.0	133.0	133.0	133.0	133.0	133.0	133.1	132.9	132.9	133.0	133.0	133.0
2005	133.1	133.1	133.2	133.3									133.1				
Utilization																	
(percent) 1983	69.9	69.7	70.3	71.1	72.1	72.6	73.5	74.2	75.4	76.2	76.3	76.4	70.0	71.9	74.4	76.3	73.1
1984	77.8	78.4	78.7	78.9	78.9	79.0	79.2	79.1	78.7	78.9	79.0	79.2	78.3	78.9	79.0	79.0	78.8
1985	78.6	78.3	78.8	78.6	78.5	78.5	78.0	78.4	78.4	78.1	78.4	78.7	78.6	78.5	78.2	78.4	78.4
1986	79.6	79.0	78.6	78.8	78.8	78.6	78.7	78.7	78.8	78.9	79.2	79.7	79.1	78.7	78.7	79.3	78.9
1987	79.3	80.3	80.2	80.4	80.9	81.0	81.4	81.6	81.9	83.1	83.5	83.9	79.9	80.8	81.6	83.5	81.5
1988	83.7	83.8	84.0	84.6	84.4	84.4	84.4	84.4	84.6	85.0	85.2	85.4	83.8	84.5	84.5	85.2	84.5
1989	86.0	85.0	84.9	84.7	83.8	83.8	82.5	83.1	82.7	82.3	82.3	82.2	85.3	84.1	82.8	82.3	83.6
1990 1991	81.8 78.7	82.8 78.0	83.0 77.3	82.6 77.5	82.5 77.9	82.5 78.7	82.2 78.8	82.3 78.8	82.1 79.6	81.3 79.3	80.2 79.0	79.4 78.7	82.5 78.0	82.6 78.0	82.2 79.1	80.3 79.0	81.9 78.5
	/0./	70.0		79.4	79.8	79.7	80.2	79.7	79.6	79.8	79.0	79.6	78.6	79.6	79.1	79.8	79.4
1992	78.0	78.5	79.2	17.4	,,,,												1
1992 1993		78.5 80.3	79.2 80.0	80.4	80.1	79.9	80.0	79.8	80.0	80.5	80.7	81.0	80.2	80.1	79.9	80.8	80.3
1992 1993 1994	78.0 80.3 81.0	80.3 81.0	80.0 81.8	80.4 82.1	80.1 82.5	79.9 82.5	82.6	82.9	82.8	83.3	83.6	84.2	81.3	82.4	82.8	83.7	82.5
1992 1993 1994 1995	78.0 80.3 81.0 84.1	80.3 81.0 83.7	80.0 81.8 83.4	80.4 82.1 82.9	80.1 82.5 82.5	79.9 82.5 82.5	82.6 81.6	82.9 82.2	82.8 82.4	83.3 81.9	83.6 81.5	84.2 81.6	81.3 83.7	82.4 82.6	82.8 82.1	83.7 81.6	82.5 82.5
1992 1993 1994 1995 1996	78.0 80.3 81.0 84.1 80.3	80.3 81.0 83.7 81.1	80.0 81.8 83.4 80.5	80.4 82.1 82.9 81.2	80.1 82.5 82.5 81.3	79.9 82.5 82.5 81.8	82.6 81.6 81.6	82.9 82.2 81.7	82.8 82.4 82.0	83.3 81.9 81.5	83.6 81.5 81.9	84.2 81.6 82.3	81.3 83.7 80.7	82.4 82.6 81.4	82.8 82.1 81.8	83.7 81.6 81.9	82.5 82.5 81.5
1992 1993 1994 1995	78.0 80.3 81.0 84.1	80.3 81.0 83.7 81.1 82.5	80.0 81.8 83.4 80.5 82.6	80.4 82.1 82.9 81.2 82.2	80.1 82.5 82.5 81.3 82.0	79.9 82.5 82.5	82.6 81.6	82.9 82.2	82.8 82.4 82.0 82.8	83.3 81.9 81.5 83.0	83.6 81.5 81.9 83.1	84.2 81.6	81.3 83.7 80.7 82.4	82.4 82.6 81.4 82.1	82.8 82.1	83.7 81.6	82.5 82.5 81.5 82.5
1992 1993 1994 1995 1996 1997	78.0 80.3 81.0 84.1 80.3 82.0	80.3 81.0 83.7 81.1 82.5	80.0 81.8 83.4 80.5 82.6	80.4 82.1 82.9 81.2 82.2	80.1 82.5 82.5 81.3 82.0	79.9 82.5 82.5 81.8 82.1	82.6 81.6 81.6 82.0	82.9 82.2 81.7 82.5	82.8 82.4 82.0 82.8	83.3 81.9 81.5 83.0	83.6 81.5 81.9 83.1	84.2 81.6 82.3 82.9	81.3 83.7 80.7 82.4	82.4 82.6 81.4 82.1	82.8 82.1 81.8 82.5	83.7 81.6 81.9 83.0	82.5 82.5 81.5 82.5
1992 1993 1994 1995 1996 1997 1998 1999	78.0 80.3 81.0 84.1 80.3 82.0 83.1 81.1	80.3 81.0 83.7 81.1 82.5	80.0 81.8 83.4 80.5 82.6	80.4 82.1 82.9 81.2 82.2 82.7 80.5	80.1 82.5 82.5 81.3 82.0 82.5 80.9	79.9 82.5 82.5 81.8 82.1 81.5 80.3	82.6 81.6 81.6 82.0 80.7 80.1	82.9 82.2 81.7 82.5 82.1 80.5	82.8 82.4 82.0 82.8 81.3 80.0	83.3 81.9 81.5 83.0 81.9 80.7	83.6 81.5 81.9 83.1 81.5 80.8	84.2 81.6 82.3 82.9 81.3 81.2	81.3 83.7 80.7 82.4 82.7 81.0	82.4 82.6 81.4 82.1 82.2 80.6	82.8 82.1 81.8 82.5 81.4 80.2	83.7 81.6 81.9 83.0 81.6 80.9	82.5 82.5 81.5 82.5 82.0 80.7
1992 1993 1994 1995 1996 1997 1998 1999 2000	78.0 80.3 81.0 84.1 80.3 82.0 83.1 81.1 80.6	80.3 81.0 83.7 81.1 82.5 82.7 81.1 80.4	80.0 81.8 83.4 80.5 82.6 82.4 80.7 80.7	80.4 82.1 82.9 81.2 82.2 82.7 80.5 80.8	80.1 82.5 82.5 81.3 82.0 82.5 80.9 80.6	79.9 82.5 82.5 81.8 82.1 81.5 80.3 80.5	82.6 81.6 81.6 82.0 80.7 80.1 79.9	82.9 82.2 81.7 82.5 82.1 80.5 79.2	82.8 82.4 82.0 82.8 81.3 80.0 79.2	83.3 81.9 81.5 83.0 81.9 80.7 78.6	83.6 81.5 81.9 83.1 81.5 80.8 78.0	84.2 81.6 82.3 82.9 81.3 81.2 77.5	81.3 83.7 80.7 82.4 82.7 81.0 80.6	82.4 82.6 81.4 82.1 82.2 80.6 80.6	82.8 82.1 81.8 82.5 81.4 80.2 79.4	83.7 81.6 81.9 83.0 81.6 80.9 78.0	82.5 82.5 81.5 82.5 82.0 80.7 79.7
1992 1993 1994 1995 1996 1997 1998 1999 2000 2001	78.0 80.3 81.0 84.1 80.3 82.0 83.1 81.1 80.6 76.7	80.3 81.0 83.7 81.1 82.5 82.7 81.1 80.4 76.2	80.0 81.8 83.4 80.5 82.6 82.4 80.7 80.7 75.9	80.4 82.1 82.9 81.2 82.2 82.7 80.5 80.8 75.8	80.1 82.5 82.5 81.3 82.0 82.5 80.9 80.6 75.5	79.9 82.5 82.5 81.8 82.1 81.5 80.3 80.5 75.1	82.6 81.6 81.6 82.0 80.7 80.1 79.9 74.9	82.9 82.2 81.7 82.5 82.1 80.5 79.2 74.7	82.8 82.4 82.0 82.8 81.3 80.0 79.2 74.3	83.3 81.9 81.5 83.0 81.9 80.7 78.6 73.9	83.6 81.5 81.9 83.1 81.5 80.8 78.0 73.7	84.2 81.6 82.3 82.9 81.3 81.2 77.5 73.8	81.3 83.7 80.7 82.4 82.7 81.0 80.6 76.3	82.4 82.6 81.4 82.1 82.2 80.6 80.6 75.5	82.8 82.1 81.8 82.5 81.4 80.2 79.4 74.6	83.7 81.6 81.9 83.0 81.6 80.9 78.0 73.8	82.5 82.5 81.5 82.5 82.0 80.7 79.7 75.1
1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002	78.0 80.3 81.0 84.1 80.3 82.0 83.1 81.1 80.6 76.7 74.4	80.3 81.0 83.7 81.1 82.5 82.7 81.1 80.4 76.2 74.3	80.0 81.8 83.4 80.5 82.6 82.4 80.7 75.9 74.6	80.4 82.1 82.9 81.2 82.2 82.7 80.5 80.8 75.8 74.7	80.1 82.5 82.5 81.3 82.0 82.5 80.9 80.6 75.5 74.9	79.9 82.5 82.5 81.8 82.1 81.5 80.3 80.5 75.1 75.5	82.6 81.6 81.6 82.0 80.7 80.1 79.9 74.9 75.4	82.9 82.2 81.7 82.5 82.1 80.5 79.2 74.7 75.4	82.8 82.4 82.0 82.8 81.3 80.0 79.2 74.3 75.3	83.3 81.9 81.5 83.0 81.9 80.7 78.6 73.9 74.8	83.6 81.5 81.9 83.1 81.5 80.8 78.0 73.7 74.7	84.2 81.6 82.3 82.9 81.3 81.2 77.5 73.8 74.3	81.3 83.7 80.7 82.4 82.7 81.0 80.6 76.3 74.4	82.4 82.6 81.4 82.1 82.2 80.6 80.6 75.5 75.0	82.8 82.1 81.8 82.5 81.4 80.2 79.4 74.6 75.4	83.7 81.6 81.9 83.0 81.6 80.9 78.0 73.8 74.6	82.5 82.5 81.5 82.5 82.0 80.7 79.7 75.1 74.9
1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003	78.0 80.3 81.0 84.1 80.3 82.0 83.1 81.1 80.6 76.7 74.4	80.3 81.0 83.7 81.1 82.5 82.7 81.1 80.4 76.2 74.3	80.0 81.8 83.4 80.5 82.6 82.4 80.7 75.9 74.6	80.4 82.1 82.9 81.2 82.2 82.7 80.5 80.8 75.8 74.7	80.1 82.5 82.5 81.3 82.0 82.5 80.9 80.6 75.5 74.9	79.9 82.5 82.5 81.8 82.1 81.5 80.3 80.5 75.1 75.5	82.6 81.6 81.6 82.0 80.7 80.1 79.9 74.9 75.4	82.9 82.2 81.7 82.5 82.1 80.5 79.2 74.7 75.4	82.8 82.4 82.0 82.8 81.3 80.0 79.2 74.3 75.3	83.3 81.9 81.5 83.0 81.9 80.7 78.6 73.9 74.8	83.6 81.5 81.9 83.1 81.5 80.8 78.0 73.7 74.7	84.2 81.6 82.3 82.9 81.3 81.2 77.5 73.8 74.3	81.3 83.7 80.7 82.4 82.7 81.0 80.6 76.3 74.4	82.4 82.6 81.4 82.1 82.2 80.6 80.6 75.5 75.0	82.8 82.1 81.8 82.5 81.4 80.2 79.4 74.6 75.4	83.7 81.6 81.9 83.0 81.6 80.9 78.0 73.8 74.6	82.5 82.5 81.5 82.5 82.0 80.7 79.7 75.1 74.9
1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002	78.0 80.3 81.0 84.1 80.3 82.0 83.1 81.1 80.6 76.7 74.4	80.3 81.0 83.7 81.1 82.5 82.7 81.1 80.4 76.2 74.3	80.0 81.8 83.4 80.5 82.6 82.4 80.7 75.9 74.6	80.4 82.1 82.9 81.2 82.2 82.7 80.5 80.8 75.8 74.7	80.1 82.5 82.5 81.3 82.0 82.5 80.9 80.6 75.5 74.9	79.9 82.5 82.5 81.8 82.1 81.5 80.3 80.5 75.1 75.5	82.6 81.6 81.6 82.0 80.7 80.1 79.9 74.9 75.4	82.9 82.2 81.7 82.5 82.1 80.5 79.2 74.7 75.4	82.8 82.4 82.0 82.8 81.3 80.0 79.2 74.3 75.3	83.3 81.9 81.5 83.0 81.9 80.7 78.6 73.9 74.8	83.6 81.5 81.9 83.1 81.5 80.8 78.0 73.7 74.7	84.2 81.6 82.3 82.9 81.3 81.2 77.5 73.8 74.3	81.3 83.7 80.7 82.4 82.7 81.0 80.6 76.3 74.4	82.4 82.6 81.4 82.1 82.2 80.6 80.6 75.5 75.0	82.8 82.1 81.8 82.5 81.4 80.2 79.4 74.6 75.4	83.7 81.6 81.9 83.0 81.6 80.9 78.0 73.8 74.6	82.5 82.5 81.5 82.5 82.0 80.7 79.7 75.1 74.9

See note on cover page.
 Quarterly changes are at annual rates. Annual changes are calculated from annual averages.
 Note. Selected high-technology industries are computers, communications equipment, and semiconductors and related electronic components.

EXPLANATORY NOTE

The Industrial Production and Capacity Utilization statistical release, which is published around the middle of the month, 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. More detailed descriptions of industrial production, capacity utilization, and electric power are available at www.federalreserve.gov/releases/G17 at the Board's World Wide Web site. In addition, files containing data shown in the release, more detailed series that were published in the G.17 prior to December 2000, and historical data are available at the Board's Web site. Instructions for searching for and downloading specific series are provided as well. For paid access to the data 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 also 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 the real output of the manufacturing, mining, and electric and gas utilities industries; the reference period for the index is 1997. Manufacturing consists of those industries included in the North American Industry Classification System, or NAICS, definition of manufacturing plus those industries-logging and newspaper, periodical, book and directory publishing-that have traditionally been considered to be manufacturing and included in the industrial sector. For the period since 1997, the total IP index has been constructed from 300 individual series based on the 2002 North American Industrial Classification System (NAICS) codes. These individual series are classified in two ways: (1) market groups, and (2) industry groups. Market groups consist of products and materials. Total products are the aggregate of final products, such as consumer goods and equipment, and nonindustrial supplies (which are inputs to nonindustrial sectors). Materials are inputs in the manufacture of products. Major industry groups include three-digit NAICS industries and aggregates of these industries—for example, durable and nondurable manufacturing, mining, and utilities. A complete description of the market and industry structures, including details regarding series classification, relative importance weights, and data sources, is available on the Board's web site (www.federalreserve.gov/releases/G17/About.html). Changes in output for the market and industry groups are summarized in table 1 and the levels of output (in index form) are shown in table 4. Special aggregates, that highlight the relative importance and contributions of several key industries, such as high-technology and motor vehicles, are summarized in tables 2 and 5.

Source data. 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 and from government agencies; data of this type are used to estimate monthly IP wherever possible and appropriate. Production indexes for a few industries are derived by dividing estimated nominal output (calculated using unit production or sales and unit values) by a corresponding Fisher price index; the most notable of these fall within the high-technology grouping and include computers, communications equipment, and semiconductors. When suitable data on physical product are not available, 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 annual data used to benchmark the IP indexes; these factors also may be influenced by technological or cyclical developments. The annual data used in benchmarking 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 United States Geological Survey of the Department of the Interior; and publications of the Department of Energy

Aggregation Methodology and Weights. The aggregation method for the IP index is a version of the Fisher-ideal index formula. (For a detailed discussion of the aggregation method, see *Federal Reserve Bulletin* February 1997 and March 2001.) In the IP index, series that measure the output of an individual industry are combined using weights derived from their proportion in the total value-added output of all industries. The IP index, which extends back to 1919, is built as a chain-type index since 1972. The current formula for the growth in monthly IP (or any of the sub-aggregates) since 1972 is the geometric mean of the change in output (I), and, as can be seen below, is computed using the unit value added estimate for the current month (p_m) and the estimate for previous month:

$$\frac{I_{m}^{A}}{I_{m-1}^{A}} = \sqrt{\frac{\sum I_{m}p_{m-1}}{\sum I_{m-1}p_{m-1}}} \times \frac{\sum I_{m}p_{m}}{\sum I_{m-1}p_{m}}$$

The IP proportions (typically shown in the first column of the relevant tables in the G.17 release) are estimates of the industries' relative contributions to overall growth in the following year. For example, the relative importance weight of the motor vehicles and parts industry is about 5 percent. If output in this industry increased 10 percent in a month, then this gain would boost growth in total IP by $\frac{1}{2}$ percentage point (0.05 x 10% = 0.5%). To assist users with calculations, the Federal Reserve's web site provides supplemental monthly statistics that represent the exact proportionate contribution of a monthly change in a component index to the monthly change in the total index (www.federalreserve.gov/releases/G17/ipdisk/ipweights.sa).

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.) For the first estimate of output for a given month, about 59 percent of the source data (in value-added terms) are available; the fraction of available source data increases to about 86 percent for estimates in the second month that the estimate is published, 96 percent in the third month, and 96 percent in the fourth month. Data availability by data type is summarized in the table below:

Availability of Monthly IP Data in Publication Window (Percent of value added in 2004)

	Month of estimate									
Type of data	1st	2nd	3rd	4th						
Physical product	24	40	50	50						
Production-worker hours	35	35	35	35						
Electric power use	0	11	11	11						
IP data received	59	86	96	96						
IP data estimated	41	14	4	4						

NOTE—The physical product group includes series based on either monthly or quarterly data. As can be seen in the first line of the table, in the first month, a physical product indicator is available for about half of the series (in terms of value added) that ultimately are based on physical product data (24 percent out of total of 50 percent). Of the 24 percent, about five—sixths (20 percent of total IP) include series that are derived from weekly physical product data and for which actual monthly data may lag up to several months. On average, quarterly product data are received for the third estimate of industrial production. Specifically, quarterly data are available for the second estimate of the last month of a quarter, the third estimate of the second month of a quarter, and the fourth estimate of the first month of a quarter. About 4 percent of the source data for monthly IP—all physical product measures—are available too late for direct inclusion in the current index and are incorporated at the time of an annual historical revision.

Seasonal adjustment. Individual series are seasonally adjusted using Census X-12 ARIMA. For series based on production-worker hours, the current seasonal factors were estimated with data through September 2004; for other series, the factors were estimated with data through at least June 2004. Series are pre-adjusted for the effects of holidays or the business cycle when appropriate. For the data since 1972, 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 0.27 percent during the 1987–2003 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 1987–2003 period. In most cases (about 85 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

Overview. The Federal Reserve Board constructs estimates of capacity and capacity utilization for industries in manufacturing, mining, and electric and gas utilities. For a given industry, the capacity utilization rate is equal to an output index (seasonally adjusted) divided by a capacity index. The Federal Reserve Board's capacity indexes attempt to capture the concept of *sustainable maximum output*—the greatest level of output a plant can maintain within the framework of a realistic work schedule, after factoring in normal downtime and assuming sufficient availability of inputs to operate the capital in place.

Coverage. Capacity indexes are constructed for 85 detailed industries (67 in manufacturing, 16 in mining, and 2 in utilities), which mostly correspond to industries at the three- and four-digit NAICS level. Estimates of capacity and utilization are available for a variety of groups, including durable and nondurable manufacturing, total manufacturing, mining, utilities, and total industry. Manufacturing consists of those industries included in the North American Industry Classification System, or NAICS, definition of manufacturing *plus* those industries—logging and newspaper, periodical, book and directory publishing—that have traditionally been considered to be manufacturing and included in the industrial sector. Also, special aggregates are available, such as high-tech industries and manufacturing excluding high-tech industries.

Source Data. The monthly rates of capacity utilization are designed to be consistent with both the monthly data on production and the periodically available data on capacity and utilization. Because there is no direct monthly information on overall industrial capacity or utilization rates, the Federal Reserve first estimates annual capacity indexes from the source data. Capacity data reported in physical units from government sources (primarily from the U.S. Geological Survey and the Department of Energy's Energy Information Administration) and trade sources are available for portions of several industries in manufacturing (e.g., paper, industrial chemicals, petroleum refining, motor vehicles), as well as for electric utilities and mining; these industries represent about 20 percent of total industrial capacity. When physical product data are unavailable for manufacturing industries, capacity indexes are based on responses to the Bureau of the Census's Survey of Plant Capacity (SPC); these industries account for a bit less than 75 percent of total industry capacity. In the absence of utilization data for a few mining and petroleum series, capacity is based on trends through peaks in production (roughly 5 percent of total industry capacity). A detailed description of the methodology used to construct the capacity indexes is available on the Board's web site (www.federalreserve.gov/releases/G17/cap_notes.html).

Aggregation Methodology. Monthly capacity aggregates are calculated in three steps: (1) utilization aggregates are calculated on an annual basis through the most recent full year as capacity-weighted aggregates of individual utilization rates; (2) the annual aggregate capacity is derived from the corresponding production and utilization aggregates; (3) the monthly capacity aggregate is obtained by interpolating with a Fisher index of its constituent monthly capacity series. Utilization rates for the

individual series and aggregates are calculated by dividing the pertinent monthly production index by the related capacity index.

Consistency. A major aim is that the Federal Reserve utilization rates be consistent over time so that, for example, a rate of 85 percent means about the same degree of tightness that it meant in the past. A major task for the Federal Reserve in developing reasonable and consistent time series of capacity and utilization is dealing with inconsistencies between the movements of the industrial production index and the survey-based utilization rates. The McGraw-Hill/DRI Survey, now discontinued, was the primary source of manufacturing utilization rates for many years. This was a survey of large companies that reported, on average, higher utilization rates than those reported by establishments covered by the SPC (currently the primary source of factory operating rates) for the fourteen years they overlapped. Adjustments have been made to keep the industry utilization rates currently reported by the Federal Reserve roughly in line with rates formerly reported by McGraw-Hill. As a consequence, the rates reported by the Federal Reserve tend to be higher than the rates reported in the SPC.

Perspective. Over the 1972–2004 period, the average total industry utilization rate is 81.0 percent; for manufacturing, the average factory operating rate has been 79.8 percent. 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. The highs and lows in capacity utilization shown in table 7 are specific to each series and do not all occur in the same month.

ELECTRIC POWER

Coverage. Electric power data for sales by utilities to industry users and for electric power produced by cogenerators (manufacturing and mining firms that produce electricity for their own use or to sell to a utility) are generally collected at the 4-digit NAICS and 3-digit SIC level for mining and manufacturing. Aggregates for 3-digit industries, as well as for total mining, durable, nondurable, total manufacturing and total industrial electric power use, are computed. Manufacturing consists of those industries included in the North American Industry Classification System, or NAICS, definition of manufacturing plus those industries-logging and newspaper, periodical, book and directory publishing-that have traditionally been considered to be manufacturing and included in the industrial sector. An aggregate showing total industry excluding nuclear nondefense is shown separately because the value-added proportion for the nondefense nuclear material series (part of NAICS 3251) in total IP is considerably less than its share of total electric power use. In addition, aggregates for utility sales to industrial users and industry generation are computed. While only the major aggregates are shown in the release, data for the 3- and 4-digit industries are available on the Board's web site (www.federalreserve.gov/releases/G17).

Source Data. Electric power data are collected from a sample of utilities and cogenerators covering all twelve Federal Reserve Districts. The primary criterion for inclusion of a utility in the panel is whether the utility provides electric power to industrial customers. A comparison of Federal Reserve kilowatt-hour aggregates to estimates from the 1997 *Census of Manufactures* and recent reporting panel statistics suggests the Federal Reserve data cover about 50 percent of the overall sales to manufacturing in that year. The cogeneration panel covers about 50 percent of cogeneration used directly by manufacturers. In order to provide more complete coverage and correct for any shortcomings of the survey, the series are benchmarked at the 4-digit industry level to the latest available data from the *Annual Survey of Manufactures* and the *Census of Manufactures*.

Methodology. The data we receive from utilities and cogenerators are edited for anomalies and summed to the 4-digit NAICS industry levels and above. Where reports are late or unavailable for some reason, responses are estimated.

Seasonal Adjustment. Series are seasonally adjusted at the 4-digit NAICS level, with seasonally-adjusted aggregates typically computed as sums of seasonally adjusted components. The seasonal adjustment procedure (Census X-12 program) is used without trading-day

adjustments because the reporting periods of the various utilities are not the same. A leap year adjustment is also made where appropriate.

REFERENCES AND RELEASE DATES

References. The annual revision published in December 2004 is described in an article published in the *Federal Reserve Bulletin*, vol. 91 (Winter 2005), pp. 9–25. 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.

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, March 2002, April 2003, Winter 2004).

Release Schedule

At 9:15 a.m. on

2005: January 14, February 16, March 16, April 15, May 17, June 15, July 15, August 16, September 14, October 14, November 17, and December 15.