### **FEDERAL RESERVE statistical release**



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### G.17 (419)

### INDUSTRIAL PRODUCTION AND CAPACITY UTILIZATION

Industrial production rose 0.4 percent in December after a decrease of 0.1 percent in November. Output in November was previously estimated to have advanced; weaker data for a number of industries, particularly steel, led to the downward revision. For the fourth quarter as a whole, industrial production decreased 0.5 percent (annual rate). In the manufacturing sector, output increased 0.7 percent in December, and most major

(over)

#### INDUSTRIAL PRODUCTION AND CAPACITY UTILIZATION: SUMMARY

ly adjusted		2002=	100				Percent c	hange	
	2006				2006			0	Dec. '05 to
rial production	Sept. <sup>r</sup>	Oct. <sup>r</sup>	Nov. <sup>r</sup>	Dec. <sup>p</sup>	Sept. <sup>r</sup>	Oct. <sup>r</sup>	Nov. <sup>r</sup>	Dec. <sup>p</sup>	Dec. '06
ndex	112.2	112.1	112.0	112.4	3	1	1	.4	3.0
ous estimates	112.1	112.1	112.3		4	.0	.2		
narket groups									
roducts	112.7	112.4	112.7	113.4	1	3	.2	.6	2.9
imer goods	107.6	107.2	107.3	107.6	1	4	.1	.2	.6
ess equipment	128.5	128.6	129.8	131.8	1	.1	.9	1.6	10.4
ustrial supplies	110.7	111.1	110.5	110.7	7	.4	5	.2	1.1
ruction	110.3	109.0	107.9	108.2	9	-1.1	-1.0	.2	-2.8
als	112.2	112.1	111.9	112.2	4	1	1	.2	3.8
ndustry groups									
acturing (see note below)	114.3	113.6	113.5	114.3	.0	6	.0	.7	3.3
ous estimates	114.3	113.7	113.9		1	5	.3		
	101.0	101.1	100.6	101.4	1.1	.0	4	.8	4.7
S	104.5	109.3	109.6	106.7	-3.9	4.6	.2	-2.6	-1.1
									Capacity
				ercent of ca					growth
	Average	1994-95	2001-02	2005	2006				Dec. '05 to
ty utilization	1972-2005	high	low	Dec.	Sept. <sup>r</sup>	Oct. <sup>r</sup>	Nov."	Dec. <sup>p</sup>	Dec. '06
ndustry	81.0	85.1	73.6	81.3	82.0	81.8	81.6	81.8	2.4
ous estimates					82.0	81.8	81.8		
acturing (see note below)	79.8	84.6	71.6	79.8	80.9	80.2	80.0	80.4	2.6
ous estimates					80.8	80.3	80.3		
	87.3	88.9	84.8	87.8	91.2	91.1	90.7	91.3	.7
8	86.8	93.7	83.8	87.9	83.9	87.6	87.6	85.1	2.2
of-process groups									
	86.4	89.5	82.0	85.6	89.6	89.2	88.9	89.1	.3
y and semifinished	82.2	88.2	74.6	83.9	83.5	83.3	82.7	82.5	3.0
d	77.8	80.5	70.0	76.7	78.0	77.7	78.1	78.6	2.2
	82.2	88.2	74.6	83.9	83.5	83.3	82.7	82.5	5

r Revised. p Preliminary.

Note. The statistics in this release cover output, capacity, and capacity utilization in the U.S. industrial sector, which is defined by the Federal Reserve to comprise manufacturing, mining, and electric and gas utilities. Mining is defined as all industries in sector 21 of the North American Industry Classification System (NAICS); electric and gas utilities are those in NAICS sectors 2211 and 2212. Manufacturing comprises NAICS manufacturing industries (sector 31-33) plus the logging industry and the newspaper, periodical, book, and directory publishing industries. Logging and publishing are classified elsewhere in NAICS (under agriculture and information respectively), but historically they were considered to be manufacturing and were included in the industrial sector under the Standard Industrial Classification (SIC) system. In December 2002 the Federal Reserve reclassified all its industrial output data from the SIC system to NAICS.

industry groups registered gains. The output of utilities fell 2.6 percent, the result of relatively mild temperatures during the month, while the output of mines moved up 0.8 percent. Over the twelve months ending in December, total industrial production increased 3.0 percent, to a level that was 112.4 percent of its 2002 average, and total industrial capacity expanded 2.4 percent. The rate of capacity utilization in December, at 81.8 percent, was 0.5 percentage point above its year-earlier level and 0.8 percentage point above its 1972–2005 average.

### Market Groups

The output of consumer goods edged up 0.2 percent in December; a gain of 1.5 percent in consumer durables more than offset a small decrease in consumer nondurables. For the fourth quarter as a whole, consumer goods fell 0.8 percent (annual rate). The gains in consumer durables were widespread in December; automotive products advanced 2.3 percent, home electronics gained 1.9 percent, and smaller increases were recorded elsewhere.

The output of consumer nondurables, pulled down by a decrease in the index for residential energy sales, declined 0.2 percent. The output of non-energy nondurables in December was unchanged; a decline of 0.3 percent in the production of foods and tobacco offset gains in the production of clothing, of chemical products, and of paper products.

Broad-based advances lifted the output of business equipment 1.6 percent in December; for the fourth quarter as a whole, this index rose at an annual rate of 5.4 percent. Strength in commercial aircraft production continued to support gains in the index for transit equipment. The output of information processing equipment picked up 1.2 percent in December, the fourth consecutive month of gains around 1 percent. Industrial and other equipment production advanced 1.3 percent in December but was little changed for the quarter as a whole. For December, the production of defense and space equipment increased 0.8 percent.

Construction supplies output edged up 0.2 percent in December after four consecutive months of declines; for the fourth quarter as a whole, this index fell at an annual rate of more than 9 percent. The index for materials also edged up in December after several months of declines; the gains were broadly based except for energy materials, which declined.

#### Industry Groups

Manufacturing production increased 0.7 percent in December; however, output for the fourth quarter as a whole was down 1.4 percent (annual rate) from the third quarter. In December, the factory operating rate moved up 0.4 percentage point, to 80.4 percent, 0.6 percentage point above its 1972–2005 average. The production of durable goods increased 1.1 percent in December; the largest gains were in motor vehicles and parts and in computer and electronic product manufacturing. Most other major durable goods industries also showed gains; the exceptions were nonmetallic mineral products, fabricated metal products, and furniture and related products, all of which continued their recent monthly declines. Among the selected high-technology industries, gains in computer and peripheral equipment and in semiconductors and related electronic components more than offset a decrease in the output of communications equipment. After five months of declines, primary metal production, supported by an increase of 1.6 percent in iron and steel production, turned up in December. Likewise, machinery manufacturing advanced 1.2 percent after several months of declines. The production of nondurable goods, which increased 0.3 percent, included sizable gains for apparel and leather and for petroleum and coal products; smaller increases were posted in paper, in printing and support, and in chemicals. In contrast, the production indexes for food, beverage, and tobacco products, for textile and product mills, and for plastics and rubber products all declined. Production in the non-NAICS manufacturing industries (logging and publishing) edged up.

In December, the output of natural gas utilities dropped 8.9 percent, and the output of electric utilities decreased 1.4 percent. The gain in mining output was primarily due to increases in crude oil extraction and in nonmetallic mineral mining. Capacity utilization for industries in the crude stage of processing increased 0.2 percentage point, to 89.1 percent, a rate that is 2.7 percentage points above its 1972–2005 average. Capacity utilization for industries in the primary and semifinished stages edged down 0.2 percentage point, to 82.5 percent, and the capacity utilization for finished goods producers increased 0.5 percentage point, to 78.6 percent.

#### Tables

- 1. Industrial Production: Market and Industry Group Summary; percent change
- 2. Industrial Production: Special Aggregates and Selected Detail; percent change
- 3. Motor Vehicle Assemblies
- 4. Industrial Production: Market and Industry Group Summary; indexes
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- 12. Historical Statistics: Manufacturing
- 13. Historical Statistics: Total Industry Excluding Selected High-Technology Industries
- 14. Historical Statistics: Manufacturing Excluding Selected High-Technology Industries

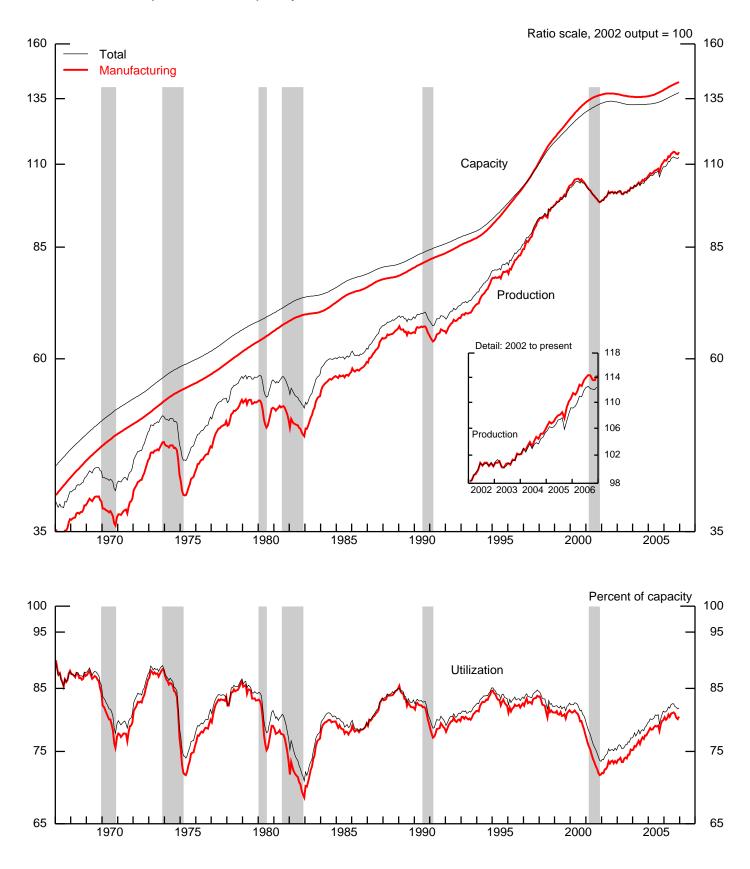
Further detail is available on the Board's website (www.federalreserve.gov/releases/G17/).

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

On December 11, 2006, the Federal Reserve Board issued its annual revision to the index of industrial production (IP) and the related measures of capacity and capacity utilization. The revised IP indexes incorporated data from the 2004 and 2005 Annual Surveys of Manufactures and data from selected editions of the 2004 and 2005 Current Industrial Reports, all from the U.S. Census Bureau. Annual data from the U.S. Geological Survey regarding metallic and nonmetallic minerals (except fuels) for 2004 and 2005 were also incorporated. The updating included revisions to the monthly indicator for each industry (either product data or input data) and to seasonal factors.

Capacity and capacity utilization were revised to incorporate preliminary data from the Census Bureau's 2005 Survey of Plant Capacity, which covers manufacturing, along with new data on capacity from the U.S. Geological Survey, the Department of Energy, and other organizations.

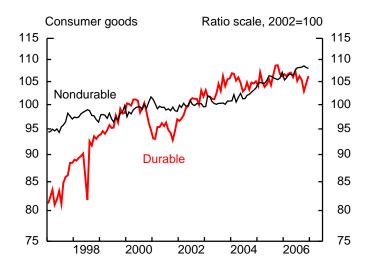
The revision is available on the Board's website at www.federalreserve.gov/releases/G17. The revised data are also available through the website of the Department of Commerce. Further information on these revisions is available from the Board's Industrial Output Section (telephone number 202-452-3197).

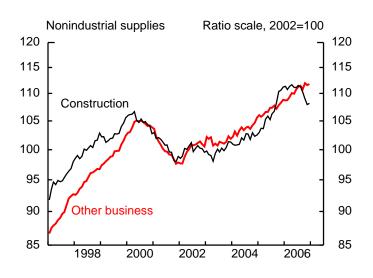


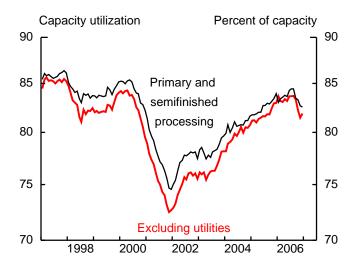
1. Industrial production, capacity, and utilization

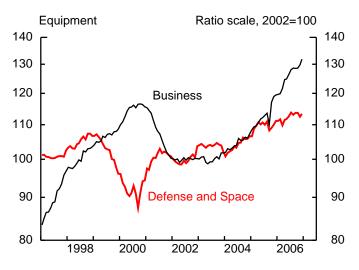
Notes: The shaded areas are periods of business recession as defined by the National Bureau of Economic Research (NBER). See note on cover page.

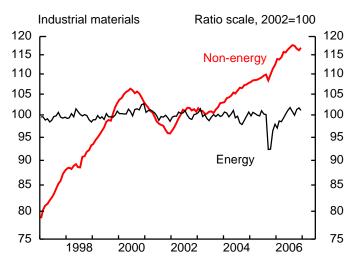
### 2. Industrial production and capacity utilization

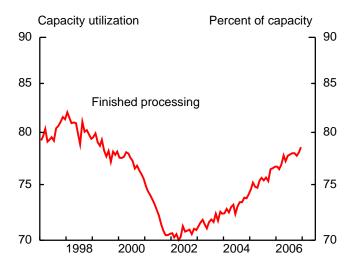




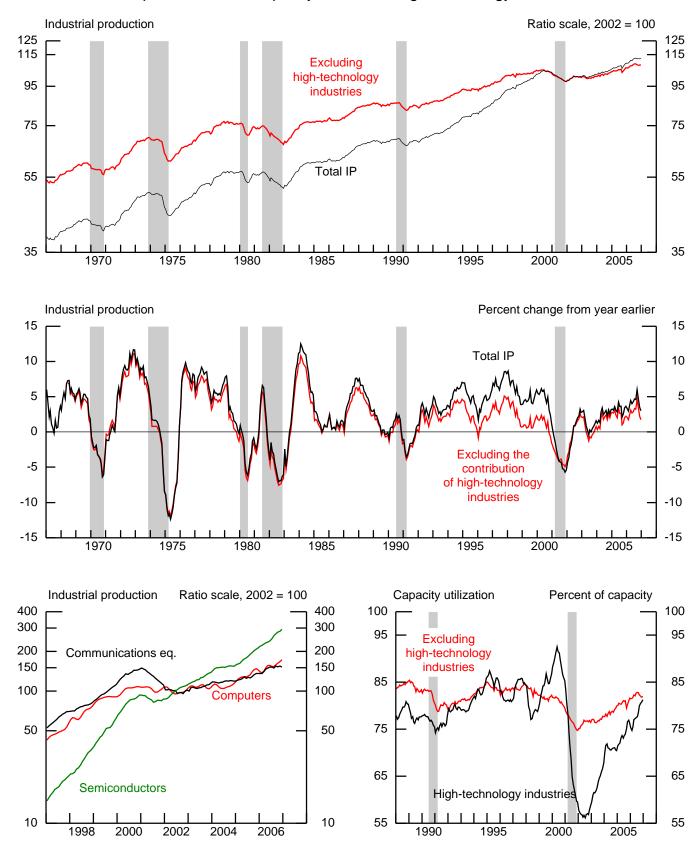








#### 3. Industrial production and capacity utilization, high-technology industries



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			Fou	orth quarte	er to	1				1				T
_		0005		urth quar		000 -	Annua	al rate			Montl	hly rate		Dec. '05
Item		2005 proportion <sup>1</sup>	2004	2005	2006	2006 Q1	Q2	Q3 <sup>r</sup>	Q4 <sup>p</sup>	2006 Sept. <sup>r</sup>	Oct.r	Nov. <sup>r</sup>	Dec. <sup>p</sup>	to Dec. '06
Total IP		100.00	3.0	3.2	3.7	5.0	6.5	4.0	5	3	1	1	.4	3.0
MARKET GROUPS														
Final products and nonindustrial supplies	S	57.48	2.6	4.8	2.6	1.1	5.7	3.9	.0	3	1	.0	.5	2.4
Consumer goods		30.27	1.8	2.7	.9	-1.2	3.0	2.6	8	1	4	.1	.2	.6
Durable		7.46	2	2.3	-2.4	-2.3	1.0	-4.6	-3.8	8	-2.3	1.6	1.5	.1
Automotive products Home electronics		3.59	-3.2	-1.8 16.8	-4.5 15.0	-2.7 16.0	-1.8 44.2	-10.1	-3.3 15.7	-1.2	-4.0 .1	4.0 2.1	2.3 1.9	2
Appliances, furniture, carpeting		1.29	2.2	3.1	-4.3	-3.6	-1.6	-5.1	-6.8	-1.9	-1.1	.1	.6	-2.5
Miscellaneous goods		2.23	2.1	6.4	-1.0	-3.7	.4	5.6	-5.8	3	-1.1	-1.0	.8	8
Nondurable		22.80	2.6	2.9	2.0	8	3.7	5.0	.1	.1	.3	4	2	.8
Non-energy		17.05	2.2	3.4	2.2	.7	2.9	3.0	2.1	.5	.4	2	.0	1.6
Foods and tobacco		9.28	2.3	4.8	1.4	.3	.2	1.3	3.8	1.0	.4	.2	3	.3
Clothing		.61	-10.5	3	1.6	1.8	5.3	-1.4	.9	5	1.0	3	1.4	2.4
Chemical products Paper products		4.82	3.8 3.2	.9 2.2	3.4 2.9	2.5	6.6 5.7	7.8	-3.1 8.1	2 1.0	5 2.2	7 -1.1	.3 .2	3.0 3.0
Energy		5.76	3.7	1.7	1.2	-2.0	6.1	10.9	-5.8	-1.3	1	-1.1	8	-1.8
Energy		5.70	5.7	1.7	1.2	-5.2	0.1	10.9	-5.0	-1.5	1	0	0	-1.0
Business equipment		9.36	5.3	11.2	9.8	6.7	17.2	10.4	5.4	1	.1	.9	1.6	10.4
Transit		1.68	6.0	20.5	17.5	35.7	12.5	10.1	13.5	3	.6	2.8	2.6	16.9
Information processing		2.73	7.2	13.7	10.6	-2.5	29.8	8.0	9.5	1.0	1.0	.7	1.2	11.8
Industrial and other		4.94	3.9	6.7	6.6	2.4	12.4	11.9	.2	6	6	.3	1.3	7.1
Defense and space equipment		1.73	2.5	3.8	2.8	3.1	3.8	5.6	-1.0	.5	.1	-1.0	.8	2.0
Construction supplies Business supplies		4.38 11.08	1.6 2.9	8.0 3.4	-2.2 3.2	1.4 2.3	.6 5.0	9 3.3	-9.3 2.2	9 6	-1.1 1.0	-1.0 3	.2 .2	-2.8 2.7
Materials		42.52	3.4	1.1	5.2	10.6	7.6	4.3	-1.3	4	1	1	.2	3.8
Non-energy		29.84	4.8	3.5	4.9	10.5	7.0	4.9	-2.6	2	7	4	.6	4.0
Durable		18.32	5.4	7.0	6.2	10.1	10.3	6.6	-1.7	.0	6	3	.7	5.9
Consumer parts		3.38	.2	1.7	-2.9	1.5	4.7	-8.3	-8.6	-1.1	-2.6	.5	1.6	8
Equipment parts		6.24	9.4	16.0	20.5	19.4	20.6	27.9	14.6	1.2	.9	1.0	1.1	19.9
Other		8.69	4.5	2.7	4	6.7	5.1	-1.9	-10.5	5	-1.1	-1.7	.2	-1.5
Nondurable		11.52	3.8	-2.1	2.6 -7.2	-3.8	1.7 -7.8	2.3 -4.2	-4.1 -13.0	4	7 -1.6	4	.3	1.0
Textile Paper		.64 2.31	-3.4	.2 2	-7.2	-3.8	-7.8	-4.2 3.8	-13.0 8	-2.1	-1.0 4	6 5	.6 .2	-6.2 1.2
Chemical		5.32	7.7	-6.5	5.4	22.6	4.4	4.7	-7.8	-1.1	-1.5	2	.5	2.3
Energy		12.68	2	-4.2	6.1	10.9	9.1	2.5	2.0	9	1.4	.4	6	3.2
INDUSTRY GROUPS														
Manufacturing		80.94	3.4	4.4	3.5	5.5	5.5	4.4	-1.4	.0	6	.0	.7	3.3
Manufacturing (NAICS)		76.60	3.5	4.6	3.7	6.0	5.7	4.8	-1.7	.0	8	.0	.7	3.5
Durable manufacturing		40.23	3.7	7.9	4.9	5.5	9.4	5.5	5	3	7	.3	1.1	5.5
Wood products	321	1.52	1.8	10.5	-14.9	-8.9	-10.8	-11.8	-26.7	-2.4	-3.4	-3.1	.1	-16.0
Nonmetallic mineral products	327	2.30	3.8	5.8	-2.7	9.8	-2.1	-5.2	-12.0	-2.4	-1.2	5	1	-2.4
Primary metal Fabricated metal products	331 332	2.83 5.39	7.4 1.6	-2.3 6.1	-1.6 3.6	12.8 5.7	14.7 5.8	-6.8 5.3	-22.1 -2.1	-1.5 1	-2.7 2	-3.8 5	1.1 5	-2.5 3.4
Machinery	333	4.92	5.0	8.2	4.7	-2.8	8.6	19.9	-2.1	1	-1.8	2	3	4.4
Computer and electronic products	334	7.38	10.2	18.3	19.5	11.2	27.4	20.6	19.4	1.9	1.5	.9	2.0	20.2
Electrical equip., appliances,														
and components	335	1.91	2.0	3.8	2.4	4.6	6.5	1.9	-3.1	-2.3	.3	.0	1.4	3.8
Motor vehicles and parts	3361–3	5.90	-1.6	.2	-3.6	9	.0	-9.8	-3.6	-1.3	-3.7	3.4	2.6	.9
Aerospace and miscellaneous							110	10.1	10 -	_			-	10.0
transportation equipment	3364-9	3.27	2.0	15.0	15.1	23.0	14.8	12.4	10.7	.5	1.1	1.2	.9	13.0
Furniture and related products	337 339	1.62 3.20	3.5	1.7 8.7	-1.2 4.7	-1.1	6.9 4.9	-3.2	-6.7	-1.6	4 .4	6	9	-1.3 6.2
Miscellaneous	539	5.20	2.2	ð./	4./	.6	4.9	5.8	7.5	.0	.4	1.1	1.1	0.2
Nondurable manufacturing		36.37	3.2	.9	2.3	6.6	1.7	4.1	-3.0	.3	9	3	.3	1.3
Food, beverage, and tobacco products	311,2	10.83	1.2	5.3	2.0	1.8	.3	1.1	4.7	1.1	.5	.2	2	1.0
Textile and product mills	313,4	1.12	7	2.0	-6.4	-3.7	-6.7	-5.5	-9.6	-1.6	-1.3	.3	2	-5.5
Apparel and leather	315,6	.66	-9.6	.4	.9	1.2	4.1	-1.4	2	4	.7	4	1.4	1.6
Paper Printing and support	322 323	2.64 2.03	3.0	1 1.9	5 4.2	3 8.7	-2.0 5.6	2.1	-1.9 4.2	.6 .4	-1.0	2 8	.1 .5	9 4.2
Petroleum and coal products	323	4.19	1.9	-3.6	4.2	13.9	-4.4	-1.5	4.2 -9.8	2.2	-4.3	8	.5 2.7	3.4
Chemical	325	11.53	6.1	-2.5	4.1	12.7	5.1	5.7	-6.3	7	-1.1	5	.3	2.2
Plastics and rubber products	326	3.38	.8	3.0	.1	3.1	5.5	1.9	-9.5	-1.0	-1.5	.2	5	-1.1
Other manufacturing (non-NAICS)	1133,5111	4.34	2.6	.6	6	-4.0	1.5	-3.9	4.4	.2	2.1	-1.1	.1	4
Mining	21	9.20	8	-5.5	7.7	21.8	7.9	.6	1.6	1.1	.0	4	.8	4.7
Utilities	2211,2	9.86	1.6	2.1	2.4	-12.1	14.3	4.6	4.5	-3.9	4.6	.2	-2.6	-1.1
Electric Natural gas	2211	8.12	2.2	3.4	2.1	-9.2	11.5	1.7	5.7	-5.0	4.8	.9 3.0	-1.4	1.2
Natural gas	2212	1.74	-1.4	-3.4	3.5	-24.7	28.8	19.9	-1.5	1.7	3.4	-3.0	-8.9	-11.2
		1	1			1				1				1

r Revised. p Preliminary.

NOTE. Under the 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 a 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. 7

Percent change, seasonally adjusted						-				-				
				irth quart urth quar			Annua	al rate			Month	nly rate		Dec. '05
Item		2005		î		2006			0.47	2006		,	<b>D</b>	to
		proportion	2004	2005	2006	Q1	Q2	Q3 <sup>r</sup>	Q4 <sup>p</sup>	Sept. <sup>r</sup>	Oct.r	Nov. <sup>r</sup>	Dec. <sup>p</sup>	Dec. '06
Total industry		100.00	3.0	3.2	3.7	5.0	6.5	4.0	5	3	1	1	.4	3.0
Energy		21.83	1.5	-1.8	5.0	4.8	8.7	5.8	1.0	-1.0	1.2	2	6	2.4
Consumer products		5.76	3.7	1.7	1.2	-5.2	6.1	10.9	-5.8 10.9	-1.3 -1.4	1	8	8	-1.8
Commercial products Oil and gas well drilling	213111	2.84	4.5 8.3	.5 11.8	5.7 14.7	-3.1 17.2	6.9 31.6	8.7 11.8	.5	-1.4	3.8 6	7 -1.7	6 1.6	4.3 15.7
Converted fuel	215111	3.98	2.1	-2.5	3.8	-4.9	18.1	6.7	-3.2	-3.7	2.2	.7	-1.7	1.4
Primary materials		8.70	-1.3	-4.9	7.1	18.7	5.3	.8	4.6	.4	1.0	.2	1	4.1
Non-energy		78.17	3.3	4.6	3.4	5.1	5.9	3.5	-1.0	1	4	.0	.6	3.2
Selected high-technology industries		4.78	10.4	28.1	26.3	13.5	33.7	27.3	31.8	3.1	2.2	1.7	2.2	27.3
Computers and peripheral equipment	3341	1.20	6.6	30.4	14.6	-16.2	48.2	2.3	36.0	3.0	2.8	2.9	3.1	19.2
Communications equipment	3342	1.06	6.2	12.9	13.2	7.3	38.8	6.6	3.6	3.3	7	.7	-1.7	11.4
Semiconductors and related	224412 0	2.52	127	22.0	27.7	20.5	25.7	51.2	10.5	2.1	2.1	1.4	2.2	28.0
electronic components	334412–9	2.52	13.7	33.8	37.7	32.5	25.7	51.3	42.5	3.1	3.1	1.4	3.3	38.0
Excluding selected high-technology industries		73.40	2.8	3.1	1.9	4.5	4.2	2.0	-3.0	4	6	1	.5	1.6
Motor vehicles and parts	3361-3	5.90	-1.6	.2	-3.6	9	.0	-9.8	-3.6	-1.3	-3.7	3.4	2.6	.9
Motor vehicles	3361	2.66	-3.0	-2.5	-5.8	1.3	-2.0	-16.9	-4.6	-2.3	-5.6	5.8	4.0	2.7
Motor vehicle parts	3363	2.81	-1.1	1.3	.1	4	7.1	-3.5	-2.5	6	-2.3	1.7	1.7	2.5
Excluding motor vehicles and parts		67.50	3.2	3.4	2.4	5.0	4.5	3.1	-2.9	3	4	4	.4	1.7
Consumer goods		21.12	2.4	3.6	1.4	.0	2.6	2.7	.1	.3	.0	3	.1	1.0
Business equipment Construction supplies		7.20	4.4	8.9 8.0	10.2 -2.3	9.5 1.3	14.6 .3	13.0 -1.0	4.1 -9.4	5 -1.0	.2	.6 -1.0	1.5 .2	10.1 -2.9
Business supplies		7.91	2.1	3.1	.8	3.0	3.1	-1.0	-2.3	-1.0	-1.1	3	.2	.6
Materials		25.14	4.4	.7	2.5	9.9	4.8	2.3	-6.3	5	9	8	.2	1.2
Measures excluding selected high-technology industries		05.22	2.5	1.0	2.6	4.5	5.2	2.0	2.1	5	2	1	2	1.0
Total industry Manufacturing <sup>1</sup>		95.22 76.17	2.5 3.0	1.9 2.9	2.6 2.0	4.5 4.9	5.2 3.8	2.9 3.0	-2.1 -3.3	5 3	2 8	1 2	.3	1.8 1.8
Durable		35.65	2.8	2.9 5.2	2.0	4.9	5.8 6.2	2.5	-3.5 -4.5	5 8	8 -1.1	2	.6 .9	2.6
Measures excluding motor vehicles and parts														
Total industry		94.10	3.3	3.4	4.2	5.4	6.9	4.9	4	3	.1	2	.3	3.1
Manufacturing <sup>1</sup>		75.05	3.9	4.7	4.0	6.0	5.9	5.5	-1.2	.1	4	3	.6	3.5
Durable		34.53	4.8	9.3	6.3	6.5	10.9	7.9	.0	2	2	2	.9	6.2
Measures excluding selected high-technology industries														
and motor vehicles and parts Total industry		89.33	2.9	2.1	3.0	4.9	5.5	3.7	-2.0	4	.0	4	1	1.9
Manufacturing <sup>1</sup>		70.27	3.4	3.1	2.5	4.9 5.4	3.3 4.1	4.0	-2.0	4	.0 6	4 4	.1 .4	1.9
Stage-of-process components of non-energy materials, measures of the input to Finished processors Primary and semifinished processors		12.58 17.26	5.2	8.3 1	9.4 1.6	10.5 10.5	11.2 3.9	11.9	4.4	.3 5	3 9	.6 -1.1	1.0	9.7 .0
		17.20	1.1	••	1.0	10.0	0.7	.1			.,	1.1	.2	

### Table 2 INDUSTRIAL PRODUCTION: SPECIAL AGGREGATES AND SELECTED DETAIL Percent change, seasonally adjusted Percent change, seasonally adjusted

r Revised. p Preliminary. 1. Refer to note on cover page.

### Table 3 MOTOR VEHICLE ASSEMBLIES Millions of units, seasonally adjusted annual rate

	2006	2006				2006			
Item	average	Q1	Q2	Q3	Q4	Sept.	Oct.	Nov.	Dec.
Total	11.24	11.66	11.52	10.96	10.93	10.95	10.53	10.93	11.33
Autos	4.37	4.49	4.35	4.29	4.37	4.47	4.44	4.26	4.42
Trucks	6.87	7.17	7.17	6.67	6.56	6.48	6.09	6.67	6.91
Light	6.41	6.69	6.72	6.20	6.10	6.02	5.64	6.22	6.43
Medium and heavy	.46	.48	.45	.47	.46	.46	.46	.44	.49
Memo									
Autos and light trucks	10.78	11.18	11.07	10.49	10.47	10.49	10.08	10.49	10.85

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

## Table 4 INDUSTRIAL PRODUCTION INDEXES: MARKET AND INDUSTRY GROUP SUMMARY 2002 = 100, seasonally adjusted

Item		2005 proportion	2006 Apr.	May	June	July	Aug.	Sept. <sup>r</sup>	Oct.r	Nov. <sup>r</sup>	Dec. <sup>p</sup>
Fotal IP		100.00	110.9	110.9	111.9	112.3	112.5	112.2	112.1	112.0	112.4
MARKET GROUPS											
Final products and nonindustrial supplies		57.48	111.0	110.8	111.9	112.2	112.5	112.2	112.1	112.1	112.6
Consumer goods		30.27	106.8	106.4	107.6	107.4	107.8	107.6	107.2	107.3	107.6
Durable		7.46	107.0	106.0	107.4	105.1	106.2	105.4	102.9	104.6	106.2
Automotive products		3.59	101.2	99.9	102.8	97.9	99.6	98.4	94.5	98.3	100.6
Home electronics		.35	176.6	174.3	177.0	172.4	168.2	174.1	174.3	178.0	181.5
Appliances, furniture, carpeting		1.29	106.7	106.0	104.5	104.2	105.4	103.4	102.3	102.3	103.0
Miscellaneous goods		2.23	108.0	107.6	107.9	109.1	109.5	109.2	108.1	107.0	107.9
Nondurable Non-energy		22.80 17.05	106.6 107.7	106.4 106.7	107.6 107.1	108.1 107.9	108.2 107.7	108.2 108.3	108.5 108.7	108.1 108.4	107.9 108.5
Foods and tobacco		9.28	107.7	108.6	107.1	107.9	107.7	108.5	1108.7	1108.4	1108.5
Clothing		.61	80.2	79.9	80.3	81.0	79.5	79.1	79.8	79.6	80.7
Chemical products		4.82	110.1	109.1	110.7	111.6	112.4	112.1	111.6	110.8	111.1
Paper products		1.83	101.7	100.8	101.6	101.6	101.0	102.0	104.2	103.1	103.3
Energy		5.76	103.8	105.8	109.3	109.0	109.8	108.4	108.4	107.4	106.5
Business equipment		9.36	124.6	124.8	126.4	128.1	128.6	128.5	128.6	129.8	131.8
Transit		1.68	136.9	136.6	139.0	140.7	141.2	140.7	141.5	145.4	149.2
Information processing		2.73	135.2	137.6	139.8	140.3	139.5	140.8	142.2	143.1	144.9
Industrial and other		4.94	114.7	114.0	115.0	117.4	118.4	117.8	117.1	117.5	119.1
Defense and space equipment		1.73	111.5	111.8	112.6	113.8	113.0	113.6	113.7	112.5	113.4
Construction supplies		4.38	111.6	111.1	111.1	111.6	111.3	110.3	109.0	107.9	108.2
Business supplies		11.08	110.1	109.9	110.8	111.2	111.5	110.8	111.9	111.6	111.8
Materials		42.52	110.9	111.0	111.9	112.5	112.6	112.2	112.1	111.9	112.2
Non-energy		29.84	115.7	115.6	116.4	117.0	117.6	117.4	116.6	116.2	116.9
Durable		18.32	123.4	123.3	124.3	125.2	125.9	125.9	125.1	124.7	125.6
Consumer parts		3.38	104.2	101.4	102.2	100.2	101.1	100.0	97.3	97.9	99.4
Equipment parts		6.24	154.7	155.7	158.0	163.0	166.6	168.5	170.0	171.8	173.6
Other Nondurable		8.69 11.52	110.9 104.1	111.3 103.9	111.6 104.4	111.4 104.6	110.6 104.9	110.1 104.5	108.9 103.8	107.0 103.4	107.2 103.7
Textile		.64	87.7	87.0	86.9	87.2	86.7	84.8	83.5	83.0	83.5
Paper		2.31	100.0	99.7	100.3	100.6	100.8	101.4	100.9	100.5	100.7
Chemical		5.32	109.2	110.0	110.3	111.1	111.7	110.5	108.9	108.6	109.1
Energy		12.68	99.4	100.2	101.1	101.7	100.9	100.0	101.3	101.7	101.1
INDUSTRY GROUPS											
Manufacturing		80.94	112.8	112.6	113.5	113.9	114.3	114.3	113.6	113.5	114.3
Manufacturing (NAICS)		76.60	113.7	113.5	114.5	114.9	115.4	115.3	114.4	114.5	115.3
Durable manufacturing		40.23	120.3	120.1	121.3	121.7	122.6	122.2	121.4	121.7	123.0
Wood products	321	1.52	111.3	111.1	109.3	109.3	107.4	104.8	101.2	98.0	98.2
Nonmetallic mineral products	327	2.30	114.5	113.3	114.0	113.4	113.3	110.6	109.3	108.8	108.6
Primary metal	331	2.83	114.3	117.1	117.7	115.7	114.5	112.8	109.8	105.6	106.8
Fabricated metal products Machinery	332 333	5.39 4.92	109.4 116.2	108.4 114.1	109.1 114.8	109.9 119.6	110.7 121.0	110.5 120.6	110.3 118.4	109.8 118.2	109.3 119.7
Computer and electronic products	333	7.38	164.0	165.8	169.1	171.6	121.0	120.0	118.4	118.2	185.1
Electrical equip., appliances,	554	7.50	104.0	105.0	107.1	1/1.0	177.0	111.4		101.5	105.1
and components	335	1.91	106.6	106.7	105.6	107.6	107.6	105.1	105.5	105.4	106.9
Motor vehicles and parts	3361-3	5.90	104.3	102.5	104.6	100.3	102.2	100.9	97.1	100.5	103.1
Aerospace and miscellaneous		-	-								
transportation equipment	3364–9	3.27	120.1	120.9	122.4	124.5	124.6	125.2	126.6	128.1	129.2
Furniture and related products	337	1.62	105.5	106.4	106.6	104.9	106.4	104.7	104.2	103.6	102.7
Miscellaneous	339	3.20	115.9	115.7	116.5	116.9	118.1	118.0	118.5	119.9	121.1
Nondurable manufacturing		36.37	106.3	106.1	107.0	107.4	107.5	107.8	106.9	106.5	106.9
Food, beverage, and tobacco products	311,2	10.83	110.2	108.7	108.6	109.4	108.9	110.1	110.7	110.9	110.7
Textile and product mills	313,4	1.12	94.3	93.8	93.5	93.6	92.8	91.3	90.1	90.4	90.3
Apparel and leather	315,6	.66	81.4	81.2	81.4	82.3	80.6	80.2	80.8	80.5	81.7
Paper	322	2.64	97.6	97.8	99.0	98.0	98.7	99.3	98.3	98.1	98.2
Printing and support	323	2.03	103.9	102.7	103.0	102.7	102.7	103.1	104.3	103.4	103.9
Petroleum and coal products	324	4.19	105.3	108.9	112.3	111.7	112.8	115.3	110.4	108.9	111.8
Chemical Plastics and rubber products	325 326	11.53 3.38	110.1 106.9	110.0 105.9	111.1 106.9	111.8 108.1	112.4 107.1	111.7 106.1	110.4 104.5	109.8 104.7	110.2 104.1
×	1133,5111	4.34	99.0	98.0	98.1	98.1	97.0	97.2	99.2	98.1	98.1
Other manufacturing (non-NAICS)											
	21	9.20	99.7	100.7	101.1	101.0	99.9	101.0	101.1	100.6	101.4
Mining	21 2211.2	9.20 9.86	99.7 105.3	100.7 105.7	101.1 107.4	101.0 108.7	99.9 108.8	101.0 104.5	101.1 109.3	100.6 109.6	
Other manufacturing (non-NAICS) Mining Utilities Electric	21 2211,2 2211	9.20 9.86 8.12	99.7 105.3 108.0	100.7 105.7 108.5	101.1 107.4 109.7	101.0 108.7 111.1	99.9 108.8 111.0	101.0 104.5 105.5	101.1 109.3 110.6	100.6 109.6 111.6	101.4 106.7 110.0

r Revised. p Preliminary. NOTE. Refer to notes on table 1.

## Table 5 INDUSTRIAL PRODUCTION INDEXES: SPECIAL AGGREGATES 2002 = 100, seasonally adjusted

Item		2005 proportion	2006 Apr.	May	June	July	Aug.	Sept. <sup>r</sup>	Oct.r	Nov. <sup>r</sup>	Dec. <sup>p</sup>
Total industry		100.00	110.9	110.9	111.9	112.3	112.5	112.2	112.1	112.0	112.4
·											
Energy		21.83	102.9	104.0	105.6	106.0	106.0	104.9	106.2	106.1	105.4
Consumer products		5.76	103.8	105.8	109.3	109.0	109.8	108.4	108.4	107.4	106.5
Commercial products		2.84	111.0	112.3	113.4	114.1	115.6	114.0	118.4	117.5	116.9
Oil and gas well drilling	213111	.56	162.3	164.7	167.0	165.9	170.5	171.6	170.6	167.7	170.3
Converted fuel		3.98	102.3	104.1	104.9	107.6	106.3	102.4	104.7	105.5	103.7
Primary materials		8.70	97.9	98.2	99.2	99.0	98.2	98.7	99.6	99.8	99.7
Non-energy		78.17	113.1	112.7	113.5	114.0	114.2	114.1	113.6	113.6	114.3
Selected high-technology industries		4.78	189.5	192.8	196.0	199.3	204.3	210.7	215.4	219.0	223.8
Computers and peripheral equipment	3341	1.20	150.2	156.1	156.5	153.4	153.7	158.3	162.7	167.4	172.6
Communications equipment	3342	1.06	146.8	149.4	151.8	151.7	149.3	154.2	153.2	154.3	151.7
Semiconductors and related											
electronic components	334412–9	2.52	232.6	234.4	239.7	249.8	262.9	271.2	279.6	283.7	293.2
Excluding selected high-technology											
industries		73.40	109.0	108.4	109.1	109.4	109.5	109.1	108.4	108.3	108.9
Motor vehicles and parts	3361-3	5.90	104.3	102.5	104.6	100.3	102.2	100.9	97.1	100.5	103.1
Motor vehicles	3361	2.66	105.1	102.7	106.1	98.7	101.7	99.3	93.8	99.2	103.1
Motor vehicle parts	3363	2.81	101.5	100.3	101.5	99.5	100.8	100.2	97.9	99.6	101.2
Excluding motor vehicles and parts		67.50	109.4	108.9	109.4	110.2	110.1	109.8	109.4	109.0	109.3
Consumer goods		21.12	108.0	107.0	107.4	108.2	108.0	108.4	108.4	108.1	108.2
Business equipment		7.20	118.4	118.1	119.7	122.1	122.9	122.2	122.5	123.3	125.1
Construction supplies		4.34	111.2	110.7	110.6	111.1	110.8	109.8	108.5	107.4	107.7
Business supplies		7.91	106.5	105.8	106.5	106.6	106.2	105.7	105.6	105.3	105.7
Materials		25.14	108.6	108.5	109.0	109.5	109.5	109.0	108.0	107.2	107.4
Measures excluding selected high-technology											
industries											
Total industry		95.22	107.6	107.4	108.3	108.6	108.7	108.2	107.9	107.8	108.1
Manufacturing <sup>1</sup>		76.17	108.7	108.3	109.2	109.5	109.7	109.4	108.5	108.3	109.0
Durable		35.65	112.3	111.8	112.8	113.0	113.5	112.6	111.3	111.4	112.5
Measures excluding motor vehicles and parts											
Total industry		94.10	111.4	111.4	112.3	113.1	113.2	112.9	113.0	112.8	113.1
Manufacturing <sup>1</sup>		75.05	113.5	113.4	114.3	115.1	115.3	115.4	114.9	114.6	115.2
Durable		34.53	123.2	123.3	124.3	125.6	126.3	126.1	125.8	125.6	126.6
Measures excluding selected high-technology											
industries and motor vehicles and parts		89.33	107.7	107.7	108.5	109.2	109.1	108.6	108.6	108.2	108.4
industries and motor vehicles and parts Total industry											
industries and motor vehicles and parts Total industry Manufacturing <sup>1</sup>		70.27	109.1	108.8	109.6	110.2	110.3	110.1	109.5	109.0	109.5
Total industry Manufacturing <sup>1</sup>			109.1	108.8	109.6	110.2	110.3	110.1	109.5	109.0	109.5
Total industry Manufacturing <sup>1</sup> Stage-of-process components of non-energy			109.1	108.8	109.6	110.2	110.3	110.1	109.5	109.0	109.5
Total industry			109.1	108.8	109.6	110.2	110.3	110.1	109.5	109.0	109.5

r Revised. p Preliminary. 1. Refer to note on cover page.

### Table 6 DIFFUSION INDEXES OF INDUSTRIAL PRODUCTION

Item	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
One month earlier												
2004	56.1	58.7	49.5	62.4	59.1	44.2	60.7	57.8	49.5	59.7	50.5	56.1
2005	54.8	50.5	52.1	52.5	56.4	56.1	56.8	51.2	61.1	58.4	58.4	52.1
2006	63.4	48.2	58.7	60.4	50.2	61.1	59.4	51.2	46.5	43.6	46.9	
Three months earlier												
2004	58.7	57.4	56.1	59.7	61.4	53.8	53.8	57.8	57.1	56.1	51.2	60.7
2005	58.7	61.4	54.8	53.1	57.8	60.1	57.8	57.8	56.8	56.1	56.4	57.8
2006	61.4	56.8	63.0	59.7	56.1	61.1	58.1	57.4	52.5	44.6	40.3	
Six months earlier												
2004	61.1	61.1	55.4	62.7	58.4	57.1	60.1	61.1	59.4	58.4	56.4	64.7
2005	58.7	57.4	59.7	58.1	62.7	59.1	61.1	55.8	62.4	63.0	59.4	56.4
2006	59.1	57.4	64.0	63.0	62.0	64.0	61.4	64.4	59.4	47.5	47.9	

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.

	2005 proportion	1972- 2005 ave.	1988- 89	1994- 95	2001- 02	2006				2006			
	proportion												
		a.e.	high	high	low	Q1	Q2	Q3 <sup>r</sup>	Q4 <sup>p</sup>	Sept. <sup>r</sup>	Oct.r	Nov. <sup>r</sup>	Dec. <sup>p</sup>
	100.00	81.0	85.0	85.1	73.6	81.2	82.0	82.3	81.7	82.0	81.8	81.6	81.8
	82.51	79.8	85.4	84.6	71.6	80.1	80.6	80.9	80.2	80.9	80.2	80.0	80.4
													80.2
	42.53	78.0	84.5	84.2	68.1	78.3	79.3	79.5	78.7	79.3	78.5	78.5	79.1
321	1.46	80.2	88.2	87.7	71.0	86.1	83.3	80.4	74.0	78.5	75.7	73.2	73.2
327	2.19	79.4	85.1	84.1	75.8	85.2	84.1	82.3	79.0	80.7	79.6	78.9	78.6
331	2.60	80.6	93.8	95.6	68.5	86.5	89.9	88.8	83.9	87.8	85.6	82.5	83.
332	5.65	77.2		85.1	69.2	78.9	79.9	80.7	80.0	80.7	80.5	80.0	79.
333	5.16	78.6	85.2	87.6	63.7	77.9	79.0		80.5	82.1	80.4	80.1	80.
334	8.59	78.4	81.4	84.3	58.6	74.2	76.1	77.2	78.1	77.7	78.0	77.8	78.
													85.0
3361-3	6.06	77.6	89.7	89.0	68.9	78.1	77.8	75.6	74.8	75.4	72.5	75.0	76.9
						_							
													79.
													77.
339	3.32	76.7	82.5	81.3	70.6	77.5	77.7	78.1	78.8	78.1	78.1	78.8	79.
	35.91	81.7	86.8	854	74 9	81.7	81.8	82.4	81.6	82.5	817	81.4	81.0
311.2													81.
													77.
,													75.
													85.
				86.4		79.4	80.1			79.4	80.1		79.:
											90.9		92.3
325		78.3	85.1	81.4			78.5		78.0	79.2	78.2	77.8	78.0
326	3.11	83.8	89.8	91.9	75.1	87.4	87.9	87.5	84.6	86.4	84.9	84.8	84.
1133,5111	4.08	84.8	91.0	83.3	81.3	84.2	84.3	83.2	83.9	83.0	84.6	83.6	83.6
21	8 41	87.3	86.1	88.9	84.8	89.4	91.0	90.9	91.0	91.2	91.1	90.7	91.3
2211,2	9.08	86.8	92.7	93.7	83.8	83.5	85.9	86.4	86.8	83.9	87.6	87.6	85.1
	5.62	79.0	00.0	07.4	56.0	75.0	77.0	70.7	00.0	70.0	00.5		01 /
2241													81.3
													82 71.0
3342	1.52	15.0	00.0	00.0	40.2	05.2	/0.0	/1.0	12.3	12.9	12.4	12.9	/1.
334412-9	2.82	80.5	82.9	93.5	58.1	82.9	81.3	83.5	84.4	84.5	84.9	83.9	84.
													81.9
	76.88	79.9	85.9	84.5	72.8	80.5	80.9	81.3	80.3	81.1	80.3	80.1	80.5
	12.41	86.4	88.1	89.5	82.0	87.3	88.8	89.4	89.1	89.6	89.2	88.9	89.
	47.45	82.2	86.5	88.2	74.6	83.3	83.9	84.1	82.8	83.5	83.3	82.7	82.5
	40.14	77.8	82.8	80.5	70.0	76.7	77.6	77.9	78.1	78.0	77.7	78.1	78.6
	327 331 332 333 334 335 3361–3 3364–9 337 339 311,2 313,4 315,6 322 323 324 325 326 1133,5111 21 2211,2 3341 3342	78.44           42.53           321         1.46           327         2.19           331         2.60           332         5.65           333         5.16           334         8.59           335         1.87           3361–3         6.06           3364–9         3.96           337         1.66           339         3.32           311,2         10.98           313,4         1.15           315,6         .76           322         2.49           323         2.12           324         3.55           325         11.76           326         3.11           1133,5111         4.08           21         8.41           2211,2         9.08           5.63         3341           3342         1.52           334412–9         2.82           334412–9         2.82           94.37         76.88           12.41         47.45	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	78.44 $79.5$ $85.3$ $84.7$ $42.53$ $78.0$ $84.5$ $84.2$ $321$ $1.46$ $80.2$ $88.2$ $87.7$ $327$ $2.19$ $79.4$ $85.1$ $84.1$ $331$ $2.60$ $80.6$ $93.8$ $95.6$ $332$ $5.65$ $77.2$ $81.6$ $85.1$ $333$ $5.16$ $78.6$ $85.2$ $87.6$ $334$ $8.59$ $78.4$ $81.4$ $84.3$ $335$ $1.87$ $83.2$ $89.1$ $93.1$ $3361-3$ $6.06$ $77.6$ $89.7$ $89.0$ $3364-9$ $3.96$ $72.4$ $87.1$ $68.5$ $337$ $1.66$ $78.5$ $82.2$ $82.9$ $339$ $3.32$ $76.7$ $82.5$ $81.3$ $311.2$ $10.98$ $81.6$ $85.9$ $84.1$ $313.4$ $1.15$ $82.4$ $91.2$ $91.4$ $315.6$ $.76$ $78.9$ $84.3$ $87.1$ $322$ $2.49$ $87.9$ $92.5$ $92.0$ $323$ $2.12$ $83.8$ $91.8$ $86.4$ $324$ $3.55$ $86.1$ $89.0$ $90.6$ $325$ $11.76$ $78.3$ $85.1$ $81.4$ $326$ $3.11$ $83.8$ $91.9$ $83.3$ $21$ $8.41$ $87.3$ $86.1$ $88.9$ $324$ $1.52$ $75.6$ $80.8$ $87.4$ $3341$ $1.30$ $78.2$ $79.9$ $84.2$ $334412-9$ $2.82$ $80.5$	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$

## Table 7 CAPACITY UTILIZATION Percent of capacity, seasonally adjusted

r Revised. p Preliminary. 1. Refer to note on cover page.

### Table 8 INDUSTRIAL CAPACITY Percent change

	1	Average ai	nnual rate		Fourth	quarter t	to fourth	quarter		Annua	al rate		Monthly rate
Item	1972-	1980-	1989-	1995-					2006				2006
	79	88	94	2006	2003	2004	2005	2006	Q1	Q2	Q3	Q4	Dec.
Total industry	3.1	2.0	2.3	3.4	9	.1	1.1	2.4	2.4	2.5	2.4	2.3	.2
Manufacturing <sup>1</sup>	3.3	2.3	2.6	3.8	9	.0	1.7	2.7	2.8	2.8	2.6	2.4	.2
Mining Utilities	.8 4.3	.1 2.1	9 1.6	6 2.3	-2.1 3.2	3 2.6	-1.7 .0	.6 2.1	3 1.2	.5 2.0	1.0 2.5	1.1 2.5	.1 .2
Selected high-technology industries	20.9	19.1	17.3	27.9	1.4	4.3	18.3	19.6	22.0	19.9	18.2	18.5	1.5
Manufacturing <sup>1</sup> ex. selected high-technology industries	2.6	1.3	1.6	1.7	8	2	.6	1.4	1.4	1.4	1.4	1.3	.1
STAGE-OF-PROCESS GROUPS Crude	1.7	.3	4	2	-2.2	1	-1.1	.3	2	.3	.5	.5	.0
Primary and semifinished Finished	3.0 3.9	1.4 3.5	2.6 2.7	4.0 3.6	-1.4	.4 .5	1.4 2.0	3.0 2.3	2.9 2.6	3.1 2.4	3.1 2.2	3.0 2.1	.2 .2

p Preliminary. 1. Refer to note on cover page.

### Table 9 GROSS VALUE OF FINAL PRODUCTS AND NONINDUSTRIAL SUPPLIES Billions of 2000 dollars at annual rate, seasonally adjusted Seasonally adjusted

			2005	2006				2006			
Item	2000	2006	Q4	Q1	Q2	Q3 <sup>r</sup>	Q4 <sup>p</sup>	Sept. <sup>r</sup>	Oct.r	Nov. <sup>r</sup>	Dec. <sup>p</sup>
Final products and nonindustrial supplies	2,812.5	3,044.9	2,997.3	3,012.9	3,045.3	3,075.0	3,066.2	3,073.9	3,056.4	3,059.5	3,082.8
Final products	2,112.0	2,302.7	2,264.3	2,276.5	2,302.5	2,327.4	2,321.8	2,329.3	2,308.6	2,317.2	2,339.5
Consumer goods	1,480.7	1,606.1	1,598.1	1,600.7	1,607.9	1,619.6	1,609.9	1,621.7	1,602.7	1,608.1	1,618.9
Durable	471.7	504.7	514.2	511.4	511.4	503.1	498.3	502.1	488.0	498.9	508.0
Automotive products	278.9	296.1	305.0	303.3	301.5	293.1	291.1	292.7	280.8	292.5	299.9
Other durable goods	192.9	208.3	209.0	207.9	209.6	209.6	206.8	209.0	206.6	206.1	207.8
Nondurable	1,009.0	1,097.5	1,082.6	1,087.3	1,094.0	1,111.5	1,106.2	1,114.2	1,107.7	1,104.1	1,106.9
Equipment, total	631.3	706.3	672.1	683.0	704.0	718.4	723.5	718.1	717.2	720.4	732.8
Business and defense	614.9	689.4	654.0	666.1	686.5	701.3	707.5	701.1	700.7	704.7	717.1
Business	556.8	620.0	584.2	596.4	617.0	631.4	638.3	631.0	630.5	636.2	648.3
Defense and space	58.2	71.5	70.7	71.0	71.5	72.2	71.9	72.4	72.4	71.4	71.9
Nonindustrial supplies	700.5	742.6	733.2	736.6	743.1	748.1	745.0	745.2	747.9	742.9	744.2
Construction supplies	197.2	207.9	209.1	209.3	209.6	209.2	203.7	207.6	205.0	203.0	203.2
Business supplies	503.3	534.7	524.0	527.2	533.4	538.9	541.5	537.7	543.1	540.1	541.3
Commercial energy products	136.0	155.9	152.7	152.4	154.4	157.7	161.0	157.5	162.4	160.4	160.2

r Revised. p Preliminary.

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

Percent change, seasonally adjusted

		Fou	irth quarte	er to									
		fo	urth quar	ter		Annu	al rate			Month	nly rate		Dec. '05
Item	2005				2006				2006				to
	gross value1	2004	2005	2006	Q1	Q2	Q3 <sup>r</sup>	Q4 <sup>p</sup>	Sept. <sup>r</sup>	Oct.r	Nov. <sup>r</sup>	Dec. <sup>p</sup>	Dec. '06
Finished	1896.0	2.4	5.6	3.3	3.1	6.1	2.3	1.7	.0	6	.8	1.1	4.1
Semifinished	1679.2	2.4	6.2	2.8	1.2	5.9	5.7	-1.2	-1.1	.3	.0	.0	2.6
Primary	983.0	4.5	8	1.3	5.8	4.4	5.0	-9.3	2	-1.6	-1.3	.5	6
Crude	413.5	5.2	-8.3	7.5	24.9	6.5	2.5	-1.9	.4	5	2	.2	4.7

r Revised. p Preliminary.

1. Billions of 2000 dollars.

Seasonally adjusted Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	04	Annual
1000	Jun.	100.	ivitai.	ripi.	inay	Juite	July	riug.	Bept.	000	1101.	Dee.	Q1	Q2	25	<u>ر</u> ب	7 minuur
IP (percent																	
change) <sup>1</sup>																	
1984	2.0	.5	.5	.6	.5	.4	.3	.1	1	1	.4	.1	12.5	6.5	2.9	.5	9.1
1985	3	.4	.2	2	.1	.1	6	.5	.4	4	.3	1.0	1.2	.7	5	2.7	1.4
1986	.5	8	6	.1	.2	3	.6	2	.2	.4	.5	.9	2.4	-2.4	1.7	4.6	1.1
1987 1988	3	1.3 .4	.2	.6 .5	.7 1	.5	.6 .2	.7 .5	.3 3	1.5 .6	.5	.5	5.4 3.4	7.2	7.3 2.1	9.9 3.3	5.1 5.1
1900	.0	.4	.5	.5	1	.2	.2	.3	5	.0	.2	.4	5.4	5.4	2.1	5.5	5.1
1989	.2	5	.3	.0	7	.0	9	1.0	3	1	.3	.7	1.5	-1.8	-2.4	1.8	.9
1990	6	.9	.5	1	.2	.3	2	.3	.2	7	-1.2	7	3.0	2.8	1.4	-5.9	1.0
1991	5	7	5	.2	1.0	1.0	.0	.2	.9	2	1	3	-7.6	2.7	5.7	1.0	-1.5
1992	5	.7	.8	.7	.4	.1	.8	5	.2	.7	.4	.1	3	7.1	3.1	4.0	2.9
1993	.5	.3	.0	.3	4	.3	.4	.0	.5	.8	.4	.6	3.7	1.1	2.4	6.4	3.4
1004	~	0	1.0	_	F	7	2	~	2	0	7	1 1	5.0	7.2	<b>F</b> 1	0.2	
1994 1995	.5 .4	.0 .1	1.0 .1	.5 1	.5 .2	.7 .3	.2 4	.5 1.3	.3 .4	.9 2	.7 .3	1.1 .3	5.6 6.0	7.3 1.0	5.1 3.8	8.3 3.5	5.5 5.0
1996	8	1.5	2	.9	.7	.9	2	.7	.5	.0	.9	.7	2.0	8.4	5.2	6.1	4.3
1997	.2	1.2	.8	1	.6	.4	.5	1.3	.9	.8	1.0	.4	8.3	5.5	9.0	11.1	7.2
1998	.5	.1	.0	.5	.7	5	3	2.2	2	.7	1	.4	4.7	3.3	3.8	5.3	6.1
1000	-	~	-	^	0	1	-	~	4	1.0	-	<u>_</u>	10	10	4.4	0.0	47
1999 2000	.6 .1	.5 .4	.2 .4	.2	.8 .3	1 .1	.7 3	.5 3	4 .5	1.3 5	.6 .0	.9 4	4.9 5.3	4.0 5.9	4.4 5	8.2 -1.6	4.7 4.5
2000	.1 7	.4 6	.4 4	.8 3	.3 7	.1 6	3 4	3 4	.5 4	5 6	.0 5	4	-5.7	-5.4	5 -5.6	-1.6	-3.5
2002	.5	.0	.8	.4	.4	.0	3	.2	.1	3	.4	4	2.7	6.4	2.3	4	.0
2003	.6	.3	2	8	1	.2	.4	1	.5	1	.8	.0	2.3	-3.2	2.5	3.3	1.1
2004	_	_	_	-	_	_	-	-	-	_	-	-		~ -			
2004 2005	.2	.7	6	.6	.6	7	.6 .0	.2	2 -1.6	.7 1.2	.2	.6 .8	3.3 4.6	2.5 2.8	1.8 .8	4.3	2.5 3.2
2005	.0	.6 .3	1 .5	.1	.4 1	.6 .9	.0	.3	-1.0	1	1	.8	4.0	2.8 6.5	.8 4.0	4.7 5	4.0
2000	.0	.5	.5	.9	1	.9	.4	.2	5	1	1	.4	5.0	0.5	4.0	5	4.0
<b>IP</b> (2002=100)																	
2004	102.3	103.0	102.4	103.1	103.7	102.9	103.6	103.8	103.6	104.4	104.7	105.3	102.6	103.2	103.7	104.8	103.6
2005	105.6	106.2	106.1	106.2	106.6	107.3	107.3	107.6	105.8	107.1	108.2	109.1	106.0	106.7	106.9	108.1	106.9
2006	109.1	109.4	110.0	110.9	110.9	111.9	112.3	112.5	112.2	112.1	112.0	112.4	109.5	111.2	112.3	112.2	111.2
Capacity																	
(percent of																	
2002 output)																	
2004	132.4	132.4	132.5	132.5	132.5	132.5	132.6	132.6	132.6	132.6	132.6	132.7	132.4	132.5	132.6	132.6	132.5
2005	132.7	132.7	132.8	132.9	133.0	133.1	133.2	133.4	133.6	133.8	134.1	134.3	132.7	133.0	133.4	134.1	133.3
2006	134.6	134.8	135.1	135.4	135.7	136.0	136.2	136.5	136.8	137.0	137.3	137.5	134.9	135.7	136.5	137.3	136.1
T 1411 41																	
Utilization (percent)																	
1984	79.5	79.8	80.1	80.5	80.8	80.9	81.0	80.9	80.6	80.3	80.5	80.4	79.8	80.7	80.8	80.4	80.4
1985	80.0	80.1	80.0	79.7	79.6	79.4	78.7	78.9	79.1	78.6	78.8	79.5	80.0	79.6	78.9	79.0	79.4
1986	79.8	79.0	78.4	78.4	78.4	78.1	78.5	78.3	78.3	78.6	78.8	79.4	79.1	78.3	78.4	78.9	78.7
1987	79.0	79.9	79.9	80.2	80.5	80.8	81.1	81.6	81.6	82.7	83.0	83.3	79.6	80.5	81.4	83.0	81.1
1988	83.2	83.5	83.6	84.0	83.9	84.0	84.1	84.5	84.2	84.6	84.7	84.9	83.4	84.0	84.2	84.7	84.1
1989	85.0	84.5	84.6	84.4	83.7	83.6	82.6	83.3	82.8	82.6	82.7	83.1	84.7	83.9	82.9	82.8	83.6
1989	83.0	84.5	83.2	84.4	83.7	83.0	82.0	83.3	82.8	82.0	82.7	80.2	84.7	83.9	82.9	82.8	83.0
1991	79.7	79.0	78.5	78.6	79.3	79.9	79.8	79.8	80.4	80.1	79.9	79.5	79.1	79.3	80.0	79.9	79.6
1992	79.0	79.4	79.9	80.3	80.4	80.3	80.8	80.3	80.3	80.8	80.9	80.8	79.4	80.3	80.5	80.8	80.3
1993	81.1	81.3	81.1	81.3	80.9	81.0	81.2	81.1	81.4	81.8	82.0	82.3	81.2	81.1	81.2	82.1	81.4
100.1					00.5	0.5.0	0.5 -			0.1.5	<u></u>	0		0.5 -	0.5.0	0.1.7	
1994	82.6	82.4	83.1	83.3	83.5	83.8	83.7	83.8	83.8	84.2	84.4	85.1	82.7	83.5	83.8	84.6	83.6
1995 1996	85.1 82.3	84.8 83.2	84.6 82.6	84.1 83.0	84.0 83.2	83.9 83.6	83.2 83.0	84.0 83.2	84.0 83.3	83.5 83.0	83.4 83.3	83.3 83.5	84.8 82.7	84.0 83.3	83.7 83.2	83.4 83.3	84.0 83.1
1996	82.3	83.2 83.8	82.0 84.1	83.6	83.6	83.5	83.5	83.2 84.0	83.5 84.3	83.0 84.4	83.3 84.7	83.5 84.5	82.7	83.6	83.2 83.9	83.5 84.5	83.9
1997	84.3	83.9	83.3	83.0	83.0	82.3	83.5 81.6	82.9	82.3	82.5	82.0	81.9	83.8	82.9	82.3	82.2	82.8
1999	82.1	82.1	81.9	81.8	82.1	81.6	81.8	81.9	81.3	82.0	82.2	82.6	82.0	81.8	81.7	82.3	81.9
2000	82.3	82.3	82.3	82.6	82.5	82.3	81.8	81.3	81.4	80.8	80.5	79.9	82.3	82.5	81.5	80.4	81.7
2001	79.2	78.5	78.0	77.5	76.8	76.2	75.7	75.3	74.8	74.2	73.7	73.6	78.5	76.9	75.3	73.8	76.1
2002 2003	73.8 75.7	73.8 76.0	74.3 75.9	74.5 75.4	74.7 75.4	75.4 75.7	75.1 76.0	75.2 76.0	75.3 76.4	75.1 76.4	75.5 77.1	75.2 77.1	74.0 75.9	74.9 75.5	75.2 76.1	75.3 76.8	74.8 76.1
2005	13.1	70.0	13.7	13.4	13.4	13.1	70.0	70.0	70.4	70.4	//.1	//.1	13.7	13.5	/0.1	70.0	/0.1
2004	77.2	77.8	77.3	77.8	78.2	77.7	78.1	78.3	78.2	78.7	78.9	79.4	77.5	77.9	78.2	79.0	78.1
2005	79.6	80.0	79.9	79.9	80.2	80.6	80.5	80.7	79.2	80.0	80.7	81.3	79.8	80.2	80.1	80.7	80.2
2006	81.1	81.1	81.4	81.9	81.7	82.3	82.4	82.4	82.0	81.8	81.6	81.8	81.2	82.0	82.3	81.7	81.8
1 Quarterly changes						-											

## Table 11 HISTORICAL STATISTICS FOR INDUSTRIAL PRODUCTION, CAPACITY, AND UTILIZATION: Total Industry Seasonally adjusted Seasonally adjusted

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

Seasonally adjusted									~								
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
<b>IP</b> $(percent change)^2$																	
1984	1.9	1.1	.5	.5	.3	.5	.5	.2	2	.4	.3	.4	12.9	6.4	3.8	2.9	10.0
1985	4	3	.8	3	.1	.2	6	.6	.1	2	.7	.4	.3	1.1	.3	2.5	1.9
1986 1987	1.1 3	7 1.4	3 .1	.4 .5	.2	3 .4	.5 .7	.3 .5	.2	.4 1.6	.5	.9	4.6	.0 7.0	2.5 7.2	5.0 11.4	2.3 5.7
1987	2	.1	.1		.0 1	.4	./	.1	.0	.6	.0	.6 .4	2.4	4.3	1.4	5.0	5.3
1900		.1	.5	.0	.1	.1	.1	.1		.0	.0		2.1	1.5	1.1	5.0	5.5
1989	.7	-1.0	1	.1	8	.1	-1.1	1.0	3	2	.2	.2	1.7	-3.2	-2.9	.6	.8
1990	2	1.4	.4	2	.1	.2	2	.3	.0	8	-1.1	7	4.5	2.6	.8	-6.5	.8
1991 1992	8 5	7 .8	6 .9	.3 .5	.7 .6	1.1 .3	.2 .8	.3 4	1.1 .1	2 .6	2 .4	1 1	-9.0 .7	2.3 8.1	7.4 4.2	1.8 2.8	-1.9 3.8
1993	1.1	.0	2	.6	1	1	.3	4	.6	.0	.4	.6	4.6	1.6	1.7	7.2	3.7
1994	.3	.1	1.3	.8	.7	.3	.5	.7	.4	1.0	.8	1.2	5.5	9.2	6.0	10.1	6.1
1995 1996	.4	.0 1.5	.2 3	2 1.1	.0 .7	.4 1.1	6 .3	1.2	.9 .7	1 .0	.1 .9	.3	6.4 1.1	.4 9.6	3.1 7.6	4.4 6.5	5.5 4.6
1997	.1	1.4	1.1	3	.8	.6	.4	1.5	.9	.0	1.2	.5	9.8	6.6	10.0	12.1	8.5
1998	.8	.0	2	.6	.5	6	4	2.6	3	.9	.2	.5	6.3	2.8	4.1	7.5	6.9
1000	4	0	1	.3	1.0	2	5	7	2	1.6	0	0	5 4	4.5	4.1	9.9	5 4
1999 2000	.4	.8	1 .7	.3	1.0	3 .2	.5 1	.7 6	3 .5	1.6 4	.8 4	.8 7	5.4 5.8	4.5	4.1 7	-3.2	5.4 4.8
2000	6	6	4	3	7	6	3	7	3	7	3	.2	-6.6	-5.7	-6.2	-5.0	-4.2
2002	.4	.1	.8	.1	.6	1.1	4	.4	.1	5	.4	4	3.1	5.8	3.1	8	.0
2003	.5	.0	.2	9	1	.6	.1	2	.7	1	1.0	1	1.7	-2.3	2.2	3.7	1.1
2004	.0	.7	1	.6	.6	7	.8	.6	3	.7	.0	.6	2.9	3.7	3.5	3.7	2.9
2005	.5	.6	2	.2	.6	.4	.1	.4	8	1.5	.9	.4	5.1	3.1	1.9	7.5	3.9
2006	.8	2	.4	1.0	2	.9	.4	.4	.0	6	.0	.7	5.5	5.5	4.4	-1.4	4.6
<b>IP</b> (2002=100)																	
2004	102.1	102.9	102.8	103.4	104.0	103.3	104.1	104.7	104.4	105.2	105.2	105.8	102.6	103.5	104.4	105.4	104.0
2005	106.4	107.0	106.7	106.9	107.6	108.0	108.1	108.4	107.5	109.2	110.1	110.6	106.7	107.5	108.0	110.0	108.0
2006	111.5	111.2	111.7	112.8	112.6	113.5	113.9	114.3	114.3	113.6	113.5	114.3	111.5	113.0	114.2	113.8	113.0
Capacity (percent of																	
2002 output) 2004	135.7	135.7	135.7	135.7	135.7	135.7	135.7	135.7	135.8	135.8	135.9	136.0	135.7	135.7	135.7	135.9	135.7
2004	135.7	135.7	135.7	135.7	135.7	135.7	135.7	135.7	135.8	135.8	133.9	138.6	135.7	135.7	135.7	133.9	135.7
2006	138.9	139.2	139.5	139.9	140.2	140.5	140.8	141.1	141.3	141.6	141.9	142.2	139.2	140.2	141.1	141.9	140.6
Utilization																	
(percent)	70.0	70.0	70.0	70.5	70 5	70.7	70.0	70.0	70.4	70.5	70 (	70 (	70.0	70 (	70.7	70 (	70.4
1984 1985	78.2 79.1	79.0 78.6	79.2 79.0	79.5 78.5	79.5 78.4	79.7 78.3	79.9 77.7	79.8 78.0	79.4 77.9	79.5 77.6	79.6 77.9	79.6 78.2	78.8 78.9	79.6 78.4	79.7 77.9	79.6 77.9	79.4 78.3
1986	78.9	78.3	78.0	78.2	78.3	77.9	78.2	78.3	78.4	78.5	78.8	79.3	78.4	78.1	78.3	78.9	78.4
1987	78.9	79.9	79.7	79.9	80.4	80.5	80.9	81.1	81.4	82.5	82.9	83.2	79.5	80.3	81.1	82.9	80.9
1988	83.0	83.0	83.2	83.9	83.7	83.8	83.8	83.9	84.1	84.5	84.7	84.9	83.1	83.8	83.9	84.7	83.9
1989	85.4	84.4	84.2	84.1	83.2	83.2	82.1	82.6	82.2	81.9	81.9	81.8	84.7	83.5	82.3	81.9	83.1
1990	81.5	82.5	82.6	82.2	82.2	82.2	81.9	81.9	81.8	81.0	79.9	79.2	82.2	82.2	81.8	80.0	81.6
1991	78.4	77.7	77.1	77.2	77.7	78.4	78.5	78.6	79.3	79.0	78.7	78.5	77.7	77.8	78.8	78.8	78.3
1992	78.0	78.5	79.0	79.3	79.6	79.7	80.2	79.7	79.5	79.8	79.9	79.6	78.5	79.5	79.8	79.8	79.4
1993	80.3	80.3	80.0	80.3	80.1	79.9	80.1	79.9	80.2	80.8	80.9	81.3	80.2	80.1	80.0	81.0	80.3
1994	81.3	81.2	82.1	82.5	82.7	82.7	82.8	83.1	83.1	83.6	83.9	84.6	81.5	82.6	83.0	84.0	82.8
1995	84.6	84.2	84.0	83.5	83.1	83.1	82.2	82.7	83.1	82.6	82.3	82.1	84.3	83.2	82.7	82.3	83.1
1996	81.0	81.8	81.2	81.7	81.8	82.3	82.0	82.1	82.3	81.8	82.2	82.5	81.3	81.9	82.2	82.2	81.9
1997 1998	82.1 83.6	82.8 83.0	83.3 82.3	82.5 82.2	82.7 82.1	82.7 81.0	82.4 80.2	83.2 81.8	83.3 81.1	83.4 81.4	83.8 81.1	83.6 81.1	82.8 83.0	82.6 81.8	83.0 81.0	83.6 81.2	83.0 81.7
1770	05.0		02.3	02.2	02.1	01.0	00.2	01.0	01.1	01.4	01.1	01.1	05.0	01.0	01.0	01.2	01./
1999	81.0	81.2	80.8	80.7	81.1	80.5	80.5	80.7	80.0	80.9	81.1	81.4	81.0	80.7	80.4	81.1	80.8
2000	81.1 76.0	81.0	81.2	81.4	81.0 74.6	80.8	80.4	79.6 72.0	79.7 72.5	79.0 71.0	78.4 71.6	77.6	81.1	81.1	79.9 73.0	78.3	80.1 73.0
2001 2002	76.9 71.9	76.2 71.9	75.7 72.4	75.3 72.4	74.6 72.8	73.9 73.6	73.5 73.2	72.9 73.5	72.5 73.6	71.9 73.3	71.6 73.6	71.7 73.3	76.3 72.0	74.6 72.9	73.0 73.5	71.7 73.4	73.9 73.0
2002	73.7	73.8	74.1	73.5	73.5	74.0	74.1	74.0	74.6	74.5	75.3	75.2	73.9	73.6	74.2	75.0	73.0
					_												
2004	75.3	75.8 78.6	75.7	76.2	76.6	76.1 78.9	76.7 78.8	77.2	76.9	77.4 79.2	77.4 79.7	77.8	75.6	76.3	76.9	77.6	76.6
2005 2006	78.2 80.3	78.6	78.3 80.1	78.4 80.7	78.7 80.3	78.9	78.8 80.9	79.0 81.1	78.1 80.9	79.2 80.2	79.7 80.0	79.8 80.4	78.4 80.1	78.7 80.6	78.6 80.9	79.6 80.2	78.8 80.4
2000	00.5	, , , ,	00.1	00.7	00.5	00.0	00.7	01.1	00.7	00.2	00.0	50.4	00.1	00.0	00.7	00.2	00.7
1 Pafar to note on c																	I

## Table 12 HISTORICAL STATISTICS FOR INDUSTRIAL PRODUCTION, CAPACITY, AND UTILIZATION: Manufacturing<sup>1</sup> Seasonally adjusted

 1. Refer to note on cover page.

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

easonally adjusted	Terr	<b>F</b> .1	M		M	T	T 1		<b>C</b>	0.4	N	D	01	02	02	0.1	A
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
IP (percent																	
change) <sup>2</sup> 1984	2.0	.3	.4	5	.4	.2	2	.0	2	2	2	.1	11.4	5.0	1.5	3	7.9
1985	3	.5	.4	.5 1	.4	.2	.2 5	.0	2 .5	2	.3 .3	1.1	.9	1.1	2	3	1.0
1986	.5	8	7	.0	.1	2	.3	2	.2	.4	.4	.8	2.3	-2.7	.5	4.0	.9
1987	5	1.2	.2	.5	.6	.4	.5	.6	.2	1.4	.5	.4	4.4	6.4	6.1	9.0	4.3
1988	.0	.4	.2	.5	2	.2	.1	.5	4	.5	.2	.4	3.0	2.7	1.4	2.9	4.4
1989	.3	5	.3	1	7	.0	-1.1	.9	3	2	.3	.7	1.8	-2.0	-3.3	1.0	.6
1990	7	.9	.4	2	.1	.2	2	.3	.1	8	-1.2	7	2.2	2.3	1.0	-6.5	.3
1991	5	8	6	.2	1.0	1.0	.0	.1	.9	2	2	5	-8.1	2.2	5.4	.4	-2.0
1992 1993	8 .5	.7	.7	.6 .3	.3	1 .2	.8 .3	6 1	.2	.6 .7	.3	.0	-1.9 3.0	6.1 .4	1.8 1.6	2.9 5.1	1.9 2.5
1775		.5	1	.5	+	.2	.5	1	.+	./	.5		5.0		1.0	5.1	2.3
1994	.4	.0	.9	.3	.4	.6	.1	.3	.0	.6	.4	.9	4.2	5.4	3.3	5.5	4.0
1995 1996	.2	2 1.4	2 4	3 .8	.0 .4	.1 .7	5 5	1.1 .4	.1 .4	5 2	.1 .8	.2	3.0 3	-1.4 6.0	1.5 2.2	.4 3.4	2.4
1996	-1.0	.8	4	.8 4	.4	.7	5	.4	.4	2	.8 .7	.3	5	2.1	6.0	3.4 8.3	4.2
1998	.2	1	1	.2	.5	9	8	2.0	6	.5	3	.0	1.7	1.0	2	2.2	3.1
1000							2		-		2		0	-	1.0		1.0
1999 2000	.2	.2	1 .1	2 .4	.6 .0	5 1	.3 5	.4 4	5 .4	1.2 6	.3 2	.6 5	.9 .7	.3 1.7	1.2 -2.9	5.5 -3.0	1.2
2000	7	5	4	1	.0 6	1 4	3	4	5	0 6	2	1	-6.4	-4.1	-4.3	-5.3	-4.1
2002	.7	.1	.8	.4	.4	.9	3	.1	.0	4	.3	6	2.9	6.1	1.7	-1.3	.1
2003	.5	.2	3	8	1	.2	.3	1	.5	1	.8	1	1.0	-4.0	1.7	2.7	.2
2004	.1	.6	6	.7	.6	8	.7	.2	2	.7	.2	.6	1.9	2.6	1.6	4.0	1.9
2004	.2	.5	2	1	.3	.6	1	.2	-1.9	1.0	1.0	.8	3.8	1.5	5	3.0	2.5
2006	1	.2	.4	.7	2	.8	.3	.1	5	2	1	.3	4.5	5.2	2.9	-2.1	2.8
<b>IP</b> (2002=100)																	
2004	100.9	101.6	100.9	101.6	102.3	101.5	102.1	102.3	102.1	102.8	103.1	103.7	101.1	101.8	102.2	103.2	102.1
2005	103.9	104.4	104.2	104.2	104.4	105.1	105.0	105.2	103.2	104.2	105.3	106.2	104.2	104.6	104.4	105.2	104.6
2006	106.1	106.3	106.8	107.6	107.4	108.3	108.6	108.7	108.2	107.9	107.8	108.1	106.4	107.7	108.5	107.9	107.5
Capacity																	
(percent of																	
2002 output)																	
2004 2005	129.9 129.7	129.9 129.7	129.9 129.7	129.9 129.7	129.9 129.6	129.9 129.7	129.9 129.7	129.9 129.7	129.9 129.8	129.8 129.9	129.8 130.0	129.8 130.1	129.9 129.7	129.9 129.7	129.9 129.7	129.8 130.0	129.9 129.8
2005	129.7	129.7	129.7	129.7	129.0	129.7	129.7	129.7	129.8	129.9	130.0	130.1	129.7	129.7	129.7	130.0	129.8
2000	10012	10011	10010	10017	10010	10110	10112	10110	10110	10110	10110	10117	10011	10010	10110	10110	10111
Utilization																	
(percent) 1984	79.3	79.5	79.8	80.1	80.4	80.5	80.6	80.5	80.2	79.9	80.1	80.0	79.5	80.4	80.4	80.0	80.1
1985	79.3	79.5	79.8	79.7	79.6	79.5	78.9	79.1	79.4	79.9	79.1	79.8	79.3	79.6	79.1	79.3	79.5
1986	80.2	79.4	78.8	78.8	78.8	78.6	78.8	78.5	78.6	78.8	79.1	79.6	79.5	78.7	78.6	79.2	79.0
1987	79.2	80.1	80.1	80.4	80.8	81.1	81.4	81.8	81.9	83.0	83.3	83.6	79.8	80.8	81.7	83.3	81.4
1988	83.6	83.9	84.0	84.4	84.2	84.3	84.4	84.8	84.4	84.8	84.9	85.2	83.8	84.3	84.5	85.0	84.4
1989	85.4	84.9	85.1	84.9	84.2	84.0	83.0	83.6	83.2	82.9	83.0	83.4	85.1	84.3	83.3	83.1	84.0
1990	82.7	83.3	83.5	83.2	83.2	83.3	83.0	83.1	83.1	82.4	81.2	80.5	83.2	83.2	83.1	81.4	82.7
1991	80.0	79.3	78.7	78.8	79.5	80.1	80.1	80.0	80.6	80.4	80.1	79.6	79.4	79.5	80.2	80.1	79.8
1992	79.0	79.4	79.9	80.4	80.5	80.3	80.9	80.3	80.4	80.8	81.0	80.9	79.4	80.4	80.5	80.9	80.3
1993	81.2	81.4	81.3	81.4	81.0	81.1	81.3	81.2	81.4	81.9	82.1	82.4	81.3	81.2	81.3	82.1	81.5
1994	82.6	82.5	83.1	83.2	83.5	83.8	83.8	83.9	83.8	84.2	84.4	85.0	82.7	83.5	83.8	84.5	83.6
1995	85.0	84.7	84.4	84.0	83.8	83.8	83.2	83.9	83.9	83.3	83.2	83.2	84.7	83.9	83.6	83.2	83.9
1996 1997	82.2 83.4	83.2 83.9	82.7 84.1	83.2 83.5	83.4 83.4	83.8 83.3	83.2 83.3	83.4 83.8	83.5 84.1	83.1 84.4	83.6 84.7	83.8 84.5	82.7 83.8	83.4 83.4	83.4	83.5 84.5	83.3 83.9
1997 1998	83.4 84.3	83.9 84.0	84.1 83.6	83.5 83.6	83.4 83.8	83.3 82.8	83.3 82.0	83.8 83.3	84.1 82.6	84.4 82.8	84.7 82.4	84.5 82.2	83.8 84.0	83.4 83.4	83.7 82.7	84.5 82.5	83.9
1999	82.2	82.1	81.8	81.5	81.8	81.3	81.4	81.5	81.0	81.8	81.9	82.2	82.1	81.6	81.3	81.9	81.7
2000 2001	81.8 78.8	81.7 78.3	81.6 77.9	81.8 77.8	81.7 77.3	81.5 76.9	81.0 76.6	80.6 76.3	80.8 75.8	80.2 75.3	80.0 74.9	79.5 74.7	81.7 78.4	81.7 77.3	80.8 76.2	79.9 75.0	81.0 76.7
2001	78.8	78.3	77.9 75.7	77.8 75.9	77.3 76.2	76.9	76.6	76.3 76.7	75.8	75.3	76.8	76.4	78.4 75.3	77.3 76.4	76.2	75.0	76.7
2002	76.9	77.1	77.0	76.4	76.4	76.6	76.8	76.8	77.2	77.1	77.7	77.7	77.0	76.4	76.9	77.5	77.0
2004 2005	77.7	78.2	77.7	78.2	78.7	78.1	78.6	78.8	78.6	79.2	79.4	79.9	77.9	78.4	78.7	79.5	78.6
	80.1	80.5	80.4	80.3	80.6	81.1	80.9	81.1	79.5 82.3	80.2 82.0	81.0 81.8	81.6 81.9	80.3 81.6	80.6 82.3	80.5 82.6	80.9	80.6
2005	81.5	81.5	81.8	82.3	82.1	82.7	82.8	82.8	- <u></u>							81.9	

# Table 13 HISTORICAL STATISTICS FOR INDUSTRIAL PRODUCTION, CAPACITY, AND UTILIZATION: Total Industry Excluding Selected High-Technology Industries' Seasonally adjusted

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

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

Seasonally adjusted	0,																
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
<b>IP</b> (percent																	
change) <sup>3</sup>																	
1984	1.8	.9	.4	.4	.1	.3	.3	.0	3	.4	.3	.3	11.4	4.4	2.0	1.9	8.4
1985	5	3	.9	2	.1	.1	4	.6	.2	3	.6	.4	2	1.7	.7	2.5	1.4
1986	1.2	7	3	.4	.1	2	.2	.2	.2	.3	.4	.8	4.7	3	1.2	4.3	2.2
1987 1988	5	1.4 .2	.1	.4	.7 2	.3	.6 .0	.3	.5	1.5 .5	.5	.5 .4	4.7	5.9 3.5	5.7 .5	10.4 4.6	4.6
1988	2	.2	.2	.0	2	.0	.0	.1	.5	.5	.5	.4	1.9	5.5	.3	4.0	4.4
1989	.8	-1.1	1	.0	9	.1	-1.3	.9	3	3	.1	.1	2.0	-3.6	-4.0	4	.4
1990	3	1.4	.3	3	.1	.2	2	.3	1	8	-1.2	8	3.7	2.0	.3	-7.2	.0
1991	8	8	8	.4	.6	1.1	.3	.2	1.1	2	3	3	-9.8	1.5	7.1	1.0	-2.6
1992	8	.8	.9 3	.4	.5	.1 2	.7	5 2	.0 .5	.4	.3	2	-1.2	6.9	2.6	1.5	2.6
1993	1.1	.0	5	.5	1	2	.5	2		./	.5	.5	3.8	.8	.6	5.7	2.6
1994	.1	.0	1.2	.6	.5	.2	.3	.5	.1	.7	.6	.9	3.9	7.1	3.9	6.7	4.4
1995	.2	3	1	4	2	.2	8	.9	.6	4	1	.1	3.0	-2.5	.3	.8	2.5
1996	-1.2	1.3	5	1.0	.4	.8	1	.4	.5	4	.8	.7	-1.7	6.8	4.1	3.2	1.5
1997 1998	2 .5	1.0 1	.9 3	7 .4	.5 .4	.4 -1.1	.1 9	1.3 2.4	.7 7	.6 .7	.9 1	.2 .2	6.0 3.0	2.6 .0	6.6 6	8.8 4.0	4.9 3.5
1998	.5	1	5	.4	.4	-1.1	9	2.4	/	./	1	.2	5.0	.0	0	4.0	5.5
1999	.0	.5	5	1	.8	7	.0	.6	5	1.4	.4	.4	.9	.2	.4	6.9	1.4
2000	3	1	.3	.3	4	.0	4	8	.4	6	6	9	.5	.9	-3.5	-5.0	.8
2001	6	5	4	1	6	5	1	7	4	7	3	.1	-7.5	-4.1	-4.7	-5.2	-4.9
2002 2003	.5	.0 2	.8 .2	.1 -1.0	.6 1	1.0 .5	5	.3	.0	6 2	.3 1.0	6 3	3.4	5.4 -3.1	2.4 1.2	-2.0 3.0	.1
2003	.+	2	.2	-1.0	1		.0	5	./	2	1.0	5	.1	-5.1	1.2	5.0	.0
2004	2	.6	2	.7	.6	7	.8	.6	4	.7	.0	.5	1.3	3.9	3.3	3.4	2.2
2005	.4	.5	3	.0	.5	.3	1	.2	-1.1	1.4	.8	.4	4.1	1.6	.4	5.5	3.0
2006	.8	3	.3	.8	4	.8	.3	.2	3	8	2	.6	4.9	3.8	3.0	-3.3	3.2
<b>IP</b> (2002=100)																	
2004	100.5	101.1	100.9	101.6	102.2	101.5	102.4	102.9	102.6	103.3	103.3	103.9	100.8	101.8	102.6	103.5	102.2
2005	104.3	104.8	104.5	104.5	105.0	105.3	105.3	105.5	104.3	105.8	106.6	107.0	104.5	104.9	105.0	106.5	105.2
2006	107.9	107.5	107.8	108.7	108.3	109.2	109.5	109.7	109.4	108.5	108.3	109.0	107.7	108.7	109.5	108.6	108.6
Capacity																	
(percent of																	
2002 output)																	
2004	132.8	132.7	132.7	132.7	132.7	132.7	132.6	132.6	132.6	132.6	132.6	132.6	132.8	132.7	132.6	132.6	132.7
2005	132.6	132.6	132.7	132.7	132.8	132.8	132.9	133.0	133.1	133.3	133.4	133.6	132.6	132.8	133.0	133.4	133.0
2006	133.7	133.9	134.0	134.2	134.3	134.5	134.7	134.8	135.0	135.1	135.2	135.4	133.9	134.3	134.8	135.2	134.6
Utilization																	
(percent)																	
1984	77.8	78.5	78.7	79.0	79.0	79.1	79.3	79.2	78.8	79.0	79.0	79.2	78.4	79.0	79.1	79.1	78.9
1985	78.6	78.3	78.8	78.5	78.4	78.3	77.9	78.2	78.2	77.9	78.3	78.5	78.6	78.4	78.1	78.2	78.3
1986 1987	79.4 79.1	78.8 80.1	78.4 80.0	78.7 80.2	78.7 80.7	78.4 80.8	78.5 81.2	78.6 81.4	78.7 81.7	78.8 82.9	79.0 83.3	79.6 83.6	78.9 79.7	78.6 80.6	78.6 81.4	79.1 83.2	78.8 81.2
1988	83.4	83.5	83.7	84.3	84.1	84.2	84.1	84.2	84.4	84.8	85.0	85.3	83.5	84.2	84.2	85.0	84.3
1989	85.9	84.9	84.7	84.6	83.7	83.7	82.4	83.0	82.7	82.2	82.2	82.2	85.2	84.0	82.7	82.2	83.5
1990	81.8	82.8	82.9	82.6	82.5	82.5	82.2	82.3	82.1	81.3	80.2	79.5	82.5	82.5	82.2	80.3	81.9
1991 1992	78.7 77.9	77.9 78.4	77.2 79.0	77.4 79.3	77.8 79.6	78.6 79.7	78.7 80.2	78.7 79.7	79.5 79.6	79.3 79.8	78.9 80.0	78.6 79.7	78.0 78.4	77.9 79.5	79.0 79.8	78.9 79.8	78.4 79.4
1992	80.4	80.4	80.1	80.4	80.2	80.0	80.2	79.9	80.2	80.7	80.9	81.2	80.3	80.2	80.1	81.0	80.4
1994	81.2	81.2	82.0	82.4	82.7	82.7	82.8	83.1	83.1	83.5	83.8	84.5	81.5	82.6	83.0	83.9	82.8
1995	84.4	84.0	83.7	83.2	82.9	82.9	82.0	82.6	82.9	82.3	82.0	81.9	84.0	83.0	82.5	82.1	82.9
1996 1997	80.8 82.2	81.7 82.8	81.1 83.2	81.7 82.3	81.9 82.4	82.4 82.4	82.2 82.1	82.3 82.9	82.4 83.1	81.9 83.2	82.3 83.6	82.6 83.5	81.2 82.7	82.0 82.4	82.3 82.7	82.3 83.4	81.9 82.8
1998	83.5	83.1	83.2	82.5	82.6	81.4	80.5	82.9	81.3	83.2 81.6	81.3	81.2	83.1	82.4	81.3	83.4 81.4	82.0
1999	81.0	81.2	80.6	80.3	80.7	80.0	79.8	80.2	79.5	80.5	80.7	80.8	80.9	80.3	79.8	80.7	80.4
2000	80.4	80.2	80.3	80.4	79.9	79.8	79.3	78.6	78.8	78.2	77.7	76.9	80.3	80.0	78.9	77.6	79.2
2001 2002	76.3	75.8 73.3	75.5 73.9	75.4 73.9	74.9 74.4	74.5 75.2	74.4 74.8	73.8 75.1	73.5 75.2	73.0 74.8	72.8 75.0	72.9 74.6	75.9 73.5	74.9 74.5	73.9 75.0	72.9 74.8	74.4 74.5
2002 2003	75.0	73.3	75.1	73.9	74.4	73.2	74.8	73.1	75.3	74.8	75.0	75.8	75.0	74.5	75.0	74.8	74.3
2004	75.7	76.2	76.0	76.6	77.1	76.5	77.2	77.6	77.3	77.9	77.9	78.3	76.0	76.7	77.4	78.1	77.0
2005	78.7	79.0	78.8	78.7	79.1	79.3	79.2	79.3	78.4	79.4	79.9	80.1	78.8	79.0	79.0	79.8	79.2
2006	80.7	80.3	80.5	81.0	80.6	81.2	81.3	81.4	81.1	80.3	80.1	80.5	80.5	80.9	81.3	80.3	80.8
													1				1

# Table 14 HISTORICAL STATISTICS FOR INDUSTRIAL PRODUCTION, CAPACITY, AND UTILIZATION: Manufacturing' Excluding Selected High-Technology Industries<sup>2</sup> Seasonally adjusted

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

#### 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. More detailed descriptions of industrial production and capacity utilization 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 2002. 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. For a detailed description of the contents of the statistical tables, see below.

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 production-worker hours by industry. Data on hours worked by production workers are collected in the monthly establishment survey conducted by the Bureau of Labor Statistics. 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 8 percent. If output in this industry increased 10 percent in a month, then this gain would boost growth in total IP by 8/10 percentage point (0.08 x 10% = 0.8%). 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 70 percent of the source data (in value-added terms) are available; the fraction of available source data increases to about 84 percent for estimates in the second month that the estimate is published, 96 percent in the third month, and 97 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 2005)

	Month of estimate									
Type of data	1st	2nd	3rd	4th						
Physical product	27	42	54	54						
Production-worker hours	43	43	43	43						
IP data received	70	84	96	97						
IP data estimated	30	16	4	3						

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 (25 percent out of total of 52 percent). Of the 25 percent, about two-thirds (17 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 3 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 2006; for other series, the factors were estimated with data through at least June 2006. 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 1987–2005 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 1987–2005 period. In most cases (about 86 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 87 detailed industries (69 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 24 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 72 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 4 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 1972–2005 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.

#### REFERENCES AND RELEASE DATES

**References.** The annual revision published in November 2005 is described in an article published in the *Federal Reserve Bulletin*, vol. 92, pp. A39–A58. 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, Winter 2005).

#### **Release Schedule**

At 9:15 a.m. on

**2006**: January 17, February 15, March 17, April 14, May 16, June 15, July 17, August 16, September 15, October 17, November 16, and December 15.

**2007**: January 17, February 15, March 16, April 17, May 16, June 15, July 17, August 15, September 14, October 16, November 16, and December 14.