FEDERAL RESERVE statistical release

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INDUSTRIAL PRODUCTION AND CAPACITY UTILIZATION

Industrial production fell 0.6 percent in February, its fifth consecutive monthly decline. Manufacturing output decreased 0.4 percent; it has fallen about 2-1/2 percent (not at an annual rate) since September. Excluding motor vehicles and parts, manufacturing output decreased 0.5 percent in February. Output at utilities dropped back 2.3 percent, and production in mining slipped 0.5 percent. At 146.0 percent of its 1992 average, industrial production was 1.2 percent above its February 2000 level. The rate of capacity utilization for total industry fell to 79.4 percent in February, its sixth consecutive monthly decline, and is 2.7 percent percentage points below its 1967–2000 average.

Market Groups

The index for consumer goods fell 0.5 percent in February; the production of nondurables decreased 0.7 percent, while the output of durables rose 0.5 percent. The output of nondurable consumer goods was pulled down by declines in the production of clothing, foods and tobacco, paper products, and energy products. The production of

(over)

INDUSTRIAL PRODUCTION AND CAPACITY UTILIZATION: SUMMARY
Seasonally adjusted

	1992=100				Percent change				
Industrial production	2000 Nov.[r]	Dec.[r]	2001 Jan.[r]	Feb.[p]	2000 Nov.[r]	Dec.[r]	2001 Jan.[r]	Feb.[p]	Feb. '00 to Feb. '01
Total index	148.2	147.7	146.8	146.0	–.3	–.3	–.6	–.6	1.2
Previous estimates	148.2	147.4	147.0		–.3	–.5	–.3		
Major market groups									
Products, total	136.3	136.3	135.6	134.9	.0	.0	–.5	–.5	.5
Consumer goods	122.4	122.8	121.7	121.2	–.3	.4	–.9	–.5	–1.3
Business equipment	200.6	199.4	198.6	198.1	.3	–.6	–.4	–.3	6.0
Construction supplies	141.6	141.5	141.6	140.3	–.5	.0	.0	–.9	–2.2
Materials	169.9	168.4	167.1	166.0	–.7	–.9	–.8	–.6	2.2
Major industry groups									
Manufacturing	154.1	152.9	152.0	151.3	–.5	–.8	–.6	–.4	.9
Durable	196.7	195.5	193.4	192.6	–.4	–.6	–1.1	–.4	3.4
Nondurable	115.5	114.4	114.4	113.9	–.7	–1.0	.0	–.5	–2.1
Mining	101.1	100.2	102.3	101.8	.9	–.8	2.1	–.5	2.7
Utilities	121.9	129.8	125.5	122.6	1.6	6.4	–3.3	–2.3	2.6

	Percent of capacity								Capacity growth
Capacity utilization	Average 1967–2000	1982 low	1988–89 high	2000 Feb.	2000 Nov.[r]	Dec.[r]	2001 Jan.[r]	Feb.[p]	Feb. '00 to Feb. '01
Total industry	82.1	71.1	85.4	82.0	81.4	80.8	80.1	79.4	4.5
Manufacturing	81.1	69.0	85.7	81.2	80.5	79.5	78.7	78.1	4.9
Advanced processing	80.6	71.0	84.2	79.4	79.7	79.2	78.8	78.4	2.6
Primary processing	82.2	65.7	88.3	85.2	82.8	81.1	79.7	78.8	8.5
Mining	87.4	80.3	88.0	84.9	87.3	86.7	88.6	88.2	–1.1
Utilities	87.6	75.9	92.6	91.1	90.7	96.3	92.8	90.4	3.4

consumer durables rebounded a bit; a downturn in motor vehicle output had contributed to a sharp drop-off during the previous four months.

The output of business equipment slipped 0.3 percent in February. The index for industrial and other equipment dropped 1.0 percent with declines in machinery and construction equipment more than offsetting a rise in farm equipment. The production of transit equipment, which had decreased considerably in the previous two months, fell 0.8 percent because of further cuts in the assembly of medium and heavy trucks. The output of information processing equipment posted a relatively small gain of 0.7 percent. The gains in this sector, which includes computers, have slowed, on balance, in recent months.

The output of construction supplies fell 0.9 percent in February after having been unchanged in the previous two months; the index is now 2.2 percent below its year-ago level. The output of materials dropped 0.6 percent, with similar declines posted for both durable and nondurable materials. Among durable materials industries, the output of semiconductors and related electronic components increased a modest 0.3 percent. However, the production of motor-vehicle-related parts and materials posted another large decline. Among nondurable materials, the output of textiles dropped 2.2 percent in February; declines in the output of paper and chemicals essentially reversed gains posted in January. The index for energy materials dropped 0.7 percent in February after two months of little change.

Industry Groups

Manufacturing output declined 0.4 percent in February, with similar decreases in the production of durable and nondurable goods; the losses were widespread. Among durable goods industries, the largest decreases came in stone, clay, and glass products, fabricated metal products, industrial machinery other than computers, and miscellaneous manufacturing. The output of motor vehicles and parts, which had fallen almost 22 percent (not at an annual rate) between September and January, was little changed in February. Among nondurables, a 1.3 percent rise in petroleum refining was the only significant increase.

The factory operating rate declined further in February, to 78.1 percent, which is 3.0 percentage points below its 1967–2000 average and the lowest level since late 1991. Capacity utilization in high-tech industries (computers, communications equipment, and semiconductors) dropped to 80.6 percent in February, or 9.4 percentage points below its July 2000 peak. The utilization rate for primary-processing industries fell 0.9 percentage point, to 78.8 percent, while that for advanced-processing industries dipped 0.4 percentage point, to 78.4 percent. The operating rate at utilities fell again, to 90.4 percent from the high rate of 96.3 percent recorded in December. The operating rate for mining declined slightly to 88.2 percent.

New Release Format

This statistical release, the G.17, was redesigned beginning with the preceding issue. Special aggregates have been added. Although some detailed industry data no longer appear in the regular release, they continue to be available on the Federal Reserve Board's public web site (www.federalreserve.gov/releases/g17).

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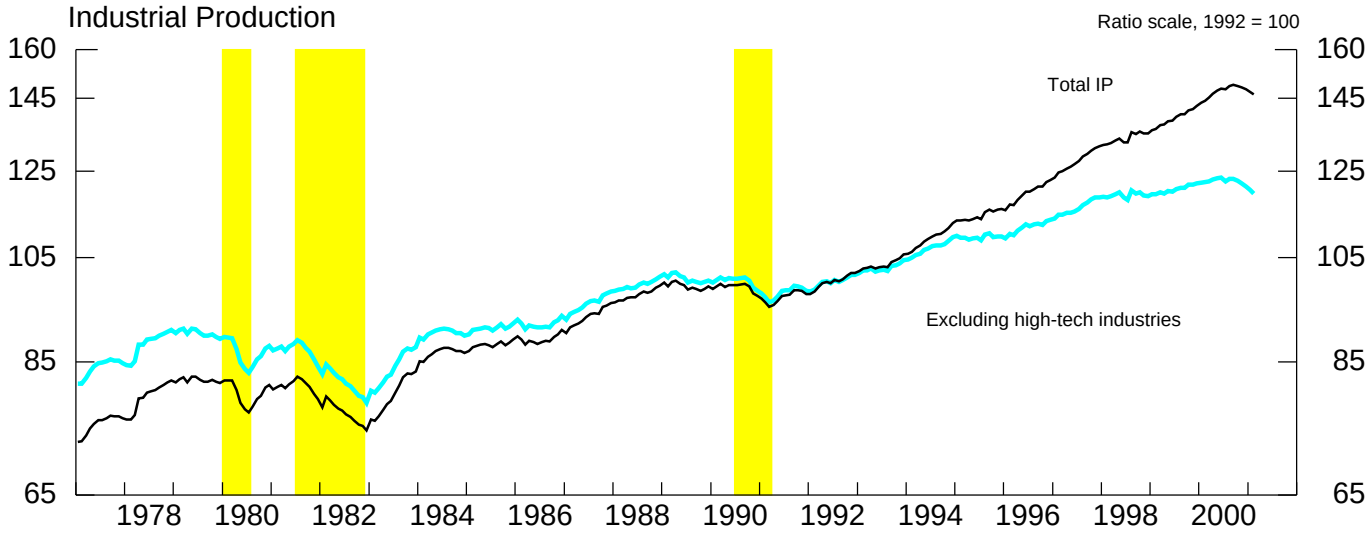
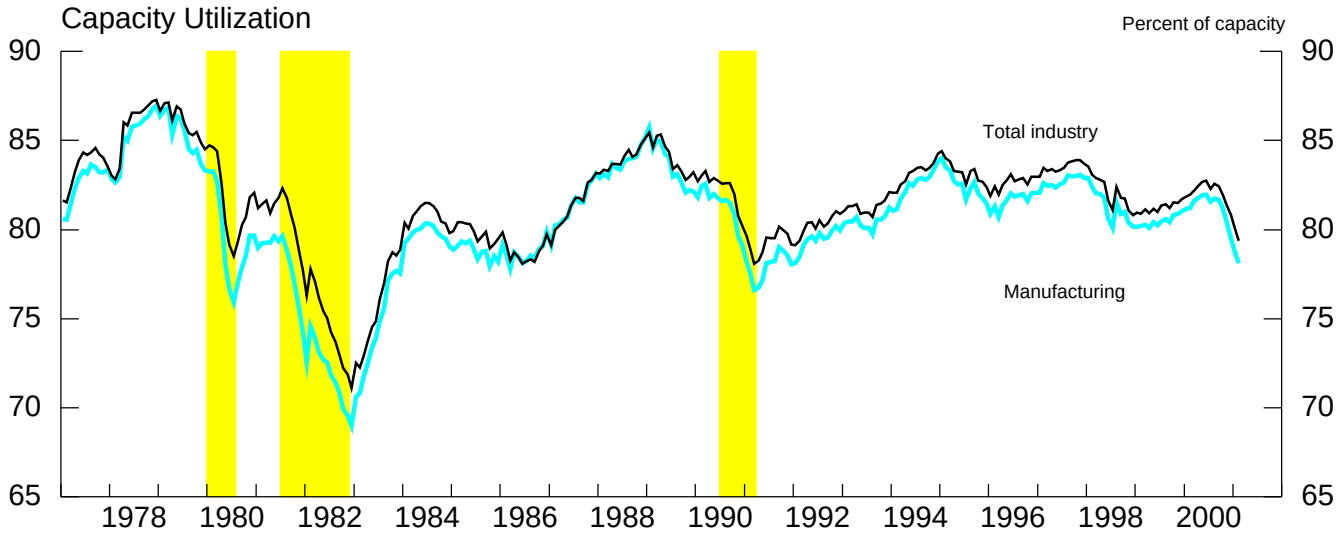
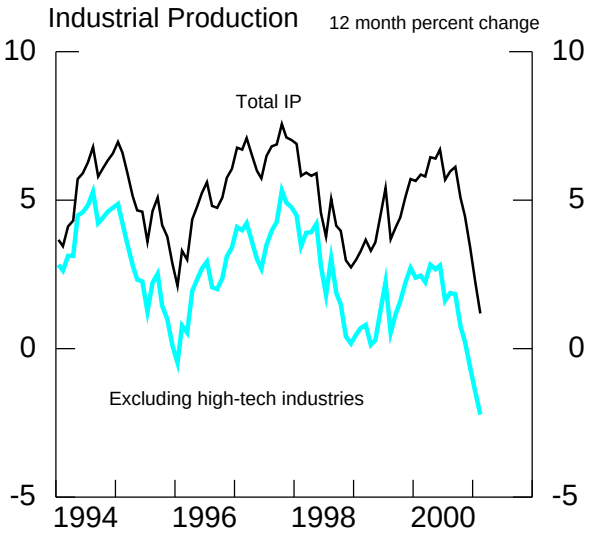
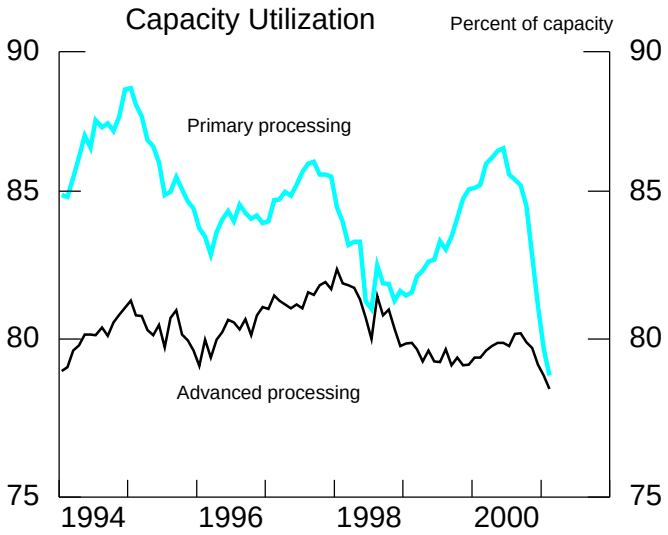
Further detail is available on the Board's web site (**www.federalreserve.gov/releases/G17/**).









High-tech industries are defined as semiconductors and related electronic components (SIC 3672-9), computers (SIC 357), and communications equipment (SIC 366).
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

Item		2000 proportion[1]	Fourth quarter to fourth quarter			Annual rate				Monthly rate				Feb. '00 to Feb. '01
			1998	1999	2000	2000 Q1	Q2	Q3	Q4[r]	2000 Nov.[r]	Dec.[r]	2001 Jan.[r]	Feb.[p]	
Total IP		100.00	3.2	5.1	4.3	6.7	7.9	3.5	–.6	–.3	–.3	–.6	–.6	1.2
MARKET GROUPS														
Products		60.78	3.2	3.4	3.0	5.3	4.9	2.2	–.2	.0	.0	–.5	–.5	.5
Consumer goods		28.72	.2	3.1	.5	1.2	4.3	–.5	–2.8	–.3	.4	–.9	–.5	–1.3
Durable		6.10	4.3	8.2	–4.4	.9	4.4	–8.9	–12.9	–1.9	–.5	–3.0	.5	–7.9
Automotive products		2.88	5.4	3.3	–6.9	2.4	5.5	–10.8	–21.9	–3.0	–2.0	–5.9	1.7	–13.0
Home electronics		.45	11.7	53.3	3.3	–28.7	31.8	1.3	19.5	–.4	3.1	–1.8	–.6	7.8
Appliances, furniture, carpeting		1.36	6.9	6.0	–1.4	11.7	1.4	–10.9	–6.3	–2.0	2.3	–1.5	.3	–4.3
Miscellaneous goods		1.41	–2.5	4.6	–4.2	2.2	–2.9	–6.2	–9.7	–.3	–1.4	.9	–1.1	–6.1
Nondurable		22.62	–1.0	1.6	1.9	1.3	4.2	2.0	.1	.2	.6	–.3	–.7	.5
Non-energy		19.18	–.5	1.5	1.2	.8	3.6	1.6	–1.1	–.1	–.3	.2	–.6	.3
Foods and tobacco		9.97	.6	.2	.9	4.2	.2	1.2	–2.1	.3	–.5	–.4	–.5	–1.3
Clothing		1.39	–8.1	–4.9	–4.4	1.9	–2.4	–9.6	–7.0	.7	–1.0	.1	–2.2	–7.7
Chemical products		4.95	3.3	5.8	2.5	–5.0	13.8	.7	1.3	–.4	.4	.8	.0	5.0
Paper products		2.88	–5.4	2.6	3.1	–1.3	2.2	10.6	1.5	–1.1	–.3	1.2	–1.6	2.0
Energy		3.44	–4.1	2.5	5.9	4.4	7.9	4.5	6.7	1.6	5.2	–3.2	–1.1	1.7
Business equipment		14.25	9.1	5.7	11.1	16.4	10.7	12.1	5.3	.3	–.6	–.4	–.3	6.0
Transit		2.60	12.9	–8.9	–8.8	–2.7	–2.6	–8.2	–20.3	.1	–3.5	–4.5	–.8	–14.8
Information processing		5.92	16.8	21.0	23.1	27.5	20.2	26.5	18.6	1.3	–.2	1.7	.7	19.0
Industrial and other		5.72	–.1	–1.5	8.6	14.9	7.7	7.7	4.4	–.7	.1	–.9	–1.0	2.7
Defense and space equipment		1.94	8.2	–3.1	–3.3	–13.8	–2.8	.7	3.6	2.3	.6	1.4	–.1	3.4
Construction supplies		6.13	7.6	4.5	.5	7.0	.3	–1.1	–3.9	–.5	.0	.0	–.9	–2.2
Business supplies		9.03	1.8	2.3	1.9	5.0	2.7	–2.1	1.9	.1	–.1	–.4	–.9	–1.0
Materials		39.22	3.7	8.0	6.3	8.8	12.7	5.6	–1.1	–.7	–.9	–.8	–.6	2.2
Durable		22.78	7.2	10.9	12.2	17.8	21.1	11.9	–.7	–.9	–.9	–1.2	–.6	5.2
Consumer parts		4.49	.1	7.1	.2	4.7	4.5	–1.8	–6.3	–4.0	–2.8	–7.2	–2.0	–12.3
Equipment parts		8.68	20.5	22.0	36.4	43.9	57.0	36.2	12.4	1.1	.8	.8	.3	27.5
Other		9.61	–.6	3.4	–1.7	3.8	1.5	–2.0	–9.7	–1.4	–1.6	–.5	–1.0	–5.2
Nondurable		8.38	–2.8	5.6	–5.2	–4.1	–1.1	–7.6	–7.7	–2.3	–2.0	–.1	–.6	–6.5
Textile		.73	–8.5	–1.2	–9.7	1.8	–1.1	–13.1	–23.8	–4.8	.8	–.2	–2.2	–13.5
Paper		1.53	–2.9	4.2	–4.5	–3.2	1.4	–13.6	–1.8	–3.2	–3.5	.5	–.5	–6.2
Chemical		4.31	–4.0	9.4	–6.2	–5.3	–.6	–6.8	–11.7	–1.8	–3.4	.8	–.6	–7.2
Energy		8.06	–.7	.5	1.7	–3.0	3.7	1.8	4.4	1.4	.1	.0	–.7	2.6
INDUSTRY GROUPS														
Manufacturing		87.40	4.0	5.6	4.3	7.1	8.0	3.7	–1.3	–.5	–.8	–.6	–.4	.9
Durable		47.81	8.0	8.2	8.5	12.7	13.7	8.1	–.1	–.4	–.6	–1.1	–.4	3.4
Lumber and products	24	1.82	5.4	.5	–7.4	.8	–6.7	–10.5	–12.5	–1.4	–1.6	–2.2	.5	–10.5
Furniture and fixtures	25	1.61	6.2	3.1	5.6	4.4	6.5	7.2	4.5	–1.5	.4	–.1	–.7	2.6
Stone, clay, and glass products	32	2.38	5.6	2.3	.9	.3	.9	7.3	–4.4	–2.0	–1.7	.6	–1.5	–1.8
Primary metals	33	3.32	–3.4	8.0	–5.6	2.7	2.7	–10.0	–16.5	–1.4	–.8	–2.2	–.6	–8.9
Fabricated metals	34	5.49	1.5	1.6	1.0	6.8	1.5	.5	–4.3	–1.0	–1.1	.3	–1.3	–2.9
Industrial machinery and equipment	35	9.06	11.6	13.6	14.4	25.2	12.4	13.3	7.3	.1	.1	–1.1	–.4	6.6
Electrical machinery	36	9.02	20.4	25.2	39.4	44.9	58.8	39.1	18.0	1.2	1.8	.8	.2	30.8
Motor vehicles and parts	371	5.72	3.3	5.9	–6.4	3.0	9.9	–11.2	–23.6	–4.2	–5.2	–9.4	–.1	–19.3
Aerospace and miscellaneous transportation equipment	372–6,9	3.52	10.4	–11.6	–.3	–6.0	–3.5	2.9	5.6	1.9	.1	–.5	–.8	.7
Instruments	38	4.54	3.9	4.5	1.9	–4.2	5.2	5.1	1.9	.9	–1.1	1.4	.2	4.6
Miscellaneous	39	1.31	.7	6.6	.0	2.6	–.9	1.7	–3.1	–.7	–.6	.8	–1.3	–1.6
Nondurable		39.59	–.4	2.5	–.7	.5	1.2	–1.5	–2.7	–.7	–1.0	.0	–.5	–2.1
Food and tobacco products	20,21	10.52	.8	.3	.8	3.9	.0	1.5	–2.0	.1	–.4	–.4	–.4	–1.2
Textile mill products	22	1.23	–6.5	–.2	–7.9	4.4	–2.4	–13.1	–18.8	–4.0	1.9	–2.1	–1.2	–11.8
Apparel products	23	1.41	–6.3	–4.0	–5.3	.6	–4.2	–9.1	–8.1	.0	–1.2	.5	–2.1	–8.1
Paper and products	26	3.30	–.1	3.0	–3.1	–3.4	1.2	–12.7	3.2	–2.1	–1.8	–1.4	.0	–5.3
Printing and publishing	27	6.59	–1.8	1.8	1.9	.5	.6	4.1	2.5	–.4	–.6	.7	–1.1	1.1
Chemicals and products	28	10.33	.2	6.7	–1.3	–4.1	3.3	–1.4	–2.9	–.8	–1.6	.3	–.1	–1.5
Petroleum products	29	2.39	2.1	.2	1.2	4.9	8.2	–3.2	–4.3	.3	–1.7	–.7	1.3	.1
Rubber and plastics products	30	3.65	1.6	3.6	–1.8	3.7	.1	–1.0	–9.4	–1.6	–1.0	1.2	–1.1	–3.8
Mining	10–14	6.69	–5.3	–.5	1.6	1.8	2.3	2.8	–.7	.9	–.8	2.1	–.5	2.7
Utilities	491,2,3pt	5.91	–1.4	2.3	6.7	4.5	11.8	1.0	10.1	1.6	6.4	–3.3	–2.3	2.6
Electric		4.45	1.6	1.7	6.6	1.7	13.1	–1.1	13.6	2.5	4.0	–3.4	–2.4	3.2
Gas		1.46	–11.9	4.6	7.2	14.7	6.9	8.1	–.3	–1.3	14.3	–3.1	–2.0	.2

NOTE. Under industry groups, the figures to the right of the series descriptions are 1987 Standard Industrial Classification (SIC) codes. The abbreviation pt denotes part of an SIC code. Additional industry detail is available on the Board's web site (www.federalreserve.gov/releases/G17). Under market groups, in the products category, 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. Under industry groups, in the nondurables category, leather and products (SIC 31) is 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.

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Table 2
INDUSTRIAL PRODUCTION: SPECIAL AGGREGATES AND SELECTED DETAIL

Percent change, seasonally adjusted

Item		2000 proportion	Fourth quarter to fourth quarter 1998	1999	2000	Annual rate 2000 Q1	Q2	Q3	Q4[r]	Monthly rate 2000 Nov.[r]	Dec.[r]	2001 Jan.[r]	Feb.[p]	Feb. '00 to Feb. '01
Total industry		100.00	3.2	5.1	4.3	6.7	7.9	3.5	–.6	–.3	–.3	–.6	–.6	1.2
Energy		13.92	–3.1	1.2	4.3	2.7	6.8	2.9	4.9	1.4	1.9	–.9	–.8	3.0
Consumer products		3.44	–4.1	2.5	5.9	4.4	7.9	4.5	6.7	1.6	5.2	–3.2	–1.1	1.7
Commercial products		1.90	–.5	1.0	8.7	17.3	15.4	.2	2.9	.5	4.3	–1.9	–1.2	3.1
Oil and gas well drilling		.52	–26.3	5.6	18.9	30.2	17.6	20.2	8.5	1.7	.1	5.5	–.4	17.3
Converted fuel		2.29	–.2	2.8	5.3	6.0	–1.9	4.2	13.6	1.2	–.8	–3.8	–.7	–1.8
Primary materials		5.78	–1.0	–.7	.2	–6.9	6.2	.9	.9	1.5	.4	1.4	–.6	4.5
Non-energy		86.08	4.1	5.6	4.3	7.2	8.0	3.6	–1.5	–.6	–.7	–.5	–.5	.9
Selected high-technology industries		8.48	37.2	40.6	55.6	73.7	70.4	56.9	26.3	1.7	1.5	1.0	.8	40.4
Computers and office equipment	357	2.37	54.0	54.3	42.0	61.4	33.0	51.9	24.8	1.0	.4	1.0	1.0	28.6
Communications equipment	366	1.94	9.0	13.4	35.5	40.5	30.3	41.6	30.2	2.2	.6	2.6	1.6	31.8
Semiconductors and related electronic components	3672–9	4.16	45.7	47.8	74.1	99.7	120.5	66.4	25.5	1.9	2.5	.4	.3	51.6
Excluding selected high-technology industries		77.60	1.2	2.3	–.6	1.5	2.3	–1.6	–4.5	–.9	–1.0	–.7	–.7	–3.2
Motor vehicles and parts	371	5.72	3.3	5.9	–6.4	3.0	9.9	–11.2	–23.6	–4.2	–5.2	–9.4	–.1	–19.3
Motor vehicles	3711,3	3.10	6.9	2.1	–12.3	4.6	6.9	–20.1	–33.7	–2.6	–6.1	–6.6	1.5	–21.7
Motor vehicle parts	3714	2.47	–1.6	10.8	3.3	1.2	17.8	2.9	–7.1	–5.5	–4.8	–11.6	–2.4	–14.6
Excluding motor vehicles and parts		71.88	1.1	2.0	–.1	1.4	1.7	–.8	–2.8	–.6	–.7	–.1	–.7	–1.9
Consumer goods		22.72	–.4	2.5	.4	.2	3.3	–.3	–1.6	–.2	.1	.0	–.6	–.5
Business equipment		9.47	3.3	–2.4	5.3	6.2	5.0	6.3	3.9	.0	–.6	–.6	–.9	1.9
Business supplies		7.13	2.3	2.6	.2	2.3	–.3	–2.6	1.6	.0	–1.2	.0	–.8	–2.0
Materials		24.30	–1.0	3.3	–2.4	.7	.6	–3.1	–7.4	–1.5	–1.5	–.2	–.7	–4.5
Measures excluding selected high-technology industries														
Total industry		91.52	.7	2.2	.1	1.7	2.9	–.9	–3.1	–.5	–.5	–.8	–.7	–2.2
Manufacturing		78.92	1.2	2.3	–.5	1.5	2.4	–1.4	–4.3	–.8	–1.0	–.8	–.6	–3.0
Durable		39.33	2.7	2.2	–.3	2.4	3.5	–1.3	–5.8	–.9	–1.1	–1.6	–.7	–4.0
Industrial machinery	351–6,8,9	6.69	.5	1.2	4.9	13.3	5.1	.7	.9	–.2	.0	–1.9	–1.0	–1.1
Electrical machinery	361–5,9,71	2.92	–.3	6.5	.3	–7.1	7.9	1.7	–1.0	–.8	1.5	.0	–1.0	2.2
Measures excluding motor vehicles and parts														
Total industry		94.28	3.2	5.0	5.0	6.9	7.8	4.5	.9	–.1	–.1	–.1	–.6	2.5
Manufacturing		81.67	4.1	5.5	5.1	7.4	7.9	4.9	.4	–.3	–.5	–.1	–.5	2.4
Durable		42.09	8.7	8.5	10.6	14.1	14.3	11.0	3.4	.1	.0	–.1	–.4	6.6
Primary processing[1]		34.36	4.3	8.8	5.7	10.4	12.5	3.8	–3.3	–1.3	–1.2	–1.1	–.5	.4
Advanced processing[2]		53.04	3.9	3.7	3.4	5.0	5.1	3.7	.0	.0	–.5	–.3	–.4	1.3

NOTE. See notes to table 1.

1. Primary processing consists of textile mill products, paper and products, industrial chemicals, synthetic materials, and fertilizers, petroleum products, rubber and plastics products, lumber and products, primary metals, fabricated metals, stone, clay, and glass products, semiconductors and related electronic components, and motor vehicle parts.

2. Advanced processing consists of foods, tobacco products, apparel products, printing and publishing, chemical products and other agricultural chemicals, leather and products, furniture and fixtures, industrial machinery and equipment, electrical machinery except semiconductors and related electronic components, transportation equipment except motor vehicle parts, instruments, and miscellaneous manufactures.

Table 3
MOTOR VEHICLE ASSEMBLIES

Millions of units, seasonally adjusted annual rate

Item	2000 average	2000 Q1	Q2	Q3	Q4	2000 Nov.	Dec.	2001 Jan.	Feb.
Total	12.77	13.12	13.36	12.79	11.62	11.68	10.99	10.39	10.36
Autos	5.54	5.65	5.77	5.70	5.00	5.02	4.68	4.94	4.77
Trucks	7.23	7.47	7.59	7.09	6.62	6.66	6.31	5.44	5.59
Light	6.84	7.01	7.15	6.74	6.31	6.32	5.99	5.17	5.35
Medium and heavy	.39	.46	.44	.35	.31	.34	.31	.28	.23
MEMO									
Autos and light trucks	12.38	12.66	12.92	12.44	11.30	11.34	10.67	10.11	10.13

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

1992 = 100, seasonally adjusted

Item		2000 proportion	2000 June	July	Aug.	Sept.	Oct.	Nov.[r]	Dec.[r]	2001 Jan.[r]	Feb.[p]
Total IP		100.00	147.9	147.6	148.6	149.0	148.7	148.2	147.7	146.8	146.0
MARKET GROUPS											
Products		60.78	136.0	135.8	136.6	136.7	136.3	136.3	136.3	135.6	134.9
Consumer goods		28.72	124.2	122.9	123.8	123.8	122.7	122.4	122.8	121.7	121.2
Durable		6.10	164.4	158.7	160.0	162.8	157.3	154.3	153.6	149.0	149.7
Automotive products		2.88	157.8	149.4	153.8	156.7	148.0	143.6	140.8	132.4	134.7
Home electronics		.45	775.8	743.3	743.6	786.2	785.9	783.0	807.4	792.9	787.9
Appliances, furniture, carpeting		1.36	139.6	134.8	133.7	137.8	134.0	131.3	134.4	132.3	132.6
Miscellaneous goods		1.41	120.5	121.3	119.7	118.1	117.5	117.1	115.5	116.6	115.2
Nondurable		22.62	114.8	114.5	115.2	114.7	114.5	114.6	115.3	114.9	114.1
Non-energy		19.18	114.5	114.4	114.9	114.1	114.3	114.2	113.9	114.1	113.4
Foods and tobacco		9.97	110.8	111.0	111.4	110.5	110.4	110.7	110.1	109.7	109.2
Clothing		1.39	85.1	85.6	84.2	83.1	82.7	83.2	82.4	82.5	80.7
Chemical products		4.95	139.3	137.4	139.4	138.4	139.0	138.5	139.0	140.1	140.1
Paper products		2.88	111.6	112.4	112.4	112.4	113.8	112.5	112.2	113.6	111.8
Energy		3.44	117.0	114.9	117.1	118.4	115.5	117.3	123.4	119.5	118.2
Business equipment		14.25	192.8	195.0	197.8	199.5	200.0	200.6	199.4	198.6	198.1
Transit		2.60	130.1	127.6	126.8	127.7	121.6	121.8	117.6	112.2	111.3
Information processing		5.92	307.0	313.9	322.1	327.2	332.3	336.7	336.0	341.7	344.0
Industrial and other		5.72	143.6	145.4	147.0	147.3	148.8	147.8	147.9	146.6	145.1
Defense and space equipment		1.94	76.3	77.9	76.1	73.7	75.3	77.0	77.5	78.5	78.5
Construction supplies		6.13	143.4	143.8	142.7	143.1	142.3	141.6	141.5	141.6	140.3
Business supplies		9.03	120.5	119.8	120.6	120.0	120.7	120.7	120.7	120.2	119.1
Materials		39.22	169.4	169.0	170.5	171.3	171.1	169.9	168.4	167.1	166.0
Durable		22.78	230.3	230.5	233.8	235.7	235.0	232.9	230.9	228.0	226.6
Consumer parts		4.49	165.7	158.3	168.3	169.0	168.5	161.8	157.3	146.0	143.1
Equipment parts		8.68	486.2	499.9	505.7	512.1	515.9	521.4	525.5	529.5	531.0
Other		9.61	135.9	135.3	134.7	135.5	133.7	131.8	129.8	129.1	127.8
Nondurable		8.38	115.2	113.9	112.8	112.7	113.4	110.7	108.6	108.4	107.8
Textile		.73	101.7	97.9	99.3	95.9	94.0	89.5	90.3	90.1	88.1
Paper		1.53	118.1	114.9	112.8	113.8	117.2	113.4	109.4	110.0	109.4
Chemical		4.31	118.4	117.0	116.8	116.3	115.9	113.7	109.8	110.7	110.1
Energy		8.06	103.1	102.9	104.2	104.3	103.9	105.4	105.5	105.4	104.7
INDUSTRY GROUPS											
Manufacturing		87.40	153.8	153.7	154.6	155.1	154.9	154.1	152.9	152.0	151.3
Durable		47.81	194.6	194.7	196.9	198.4	197.6	196.7	195.5	193.4	192.6
Lumber and products	24	1.82	118.7	118.6	115.5	116.8	114.8	113.2	111.4	109.0	109.5
Furniture and fixtures	25	1.61	141.9	142.6	143.8	146.6	147.2	145.0	145.6	145.4	144.3
Stone, clay, and glass products	32	2.38	134.6	136.3	136.1	136.5	137.3	134.6	132.3	133.1	131.1
Primary metals	33	3.32	136.4	133.9	132.4	133.9	129.0	127.3	126.3	123.5	122.8
Fabricated metals	34	5.49	135.7	136.1	136.3	136.0	136.0	134.7	133.2	133.7	131.9
Industrial machinery and equipment	35	9.06	250.9	253.9	257.9	260.0	261.5	261.9	262.2	259.3	258.2
Electrical machinery	36	9.02	555.0	571.2	580.0	592.2	597.4	604.4	615.1	619.7	621.0
Motor vehicles and parts	371	5.72	176.1	163.1	173.9	175.5	167.2	160.1	151.8	137.6	137.4
Aerospace and miscellaneous transportation equipment	372–6,9	3.52	93.6	94.9	93.5	92.1	93.6	95.4	95.5	94.9	94.2
Instruments	38	4.54	122.2	122.6	123.3	123.7	123.5	124.6	123.2	124.9	125.2
Miscellaneous	39	1.31	130.5	132.1	130.8	130.9	131.1	130.2	129.4	130.4	128.7
Nondurable		39.59	116.7	116.3	116.3	116.0	116.3	115.5	114.4	114.4	113.9
Food and tobacco products	20,21	10.52	111.1	111.6	111.8	111.0	111.0	111.1	110.6	110.2	109.7
Textile mill products	22	1.23	103.1	101.4	99.4	98.4	96.7	92.8	94.6	92.6	91.5
Apparel products	23	1.41	91.2	92.0	90.7	89.5	89.2	89.2	88.1	88.6	86.7
Paper and products	26	3.30	118.8	114.9	113.3	113.7	117.1	114.7	112.7	111.1	111.1
Printing and publishing	27	6.59	109.1	110.0	110.4	110.9	111.6	111.2	110.6	111.4	110.1
Chemicals and products	28	10.33	125.9	124.8	125.9	125.4	125.8	124.8	122.9	123.2	123.0
Petroleum products	29	2.39	118.8	117.0	117.6	117.4	116.5	116.9	114.9	114.1	115.6
Rubber and plastics products	30	3.65	143.5	144.4	142.1	141.9	141.3	139.1	137.6	139.3	137.8
Mining	10–14	6.69	100.4	100.5	101.0	100.4	100.1	101.1	100.2	102.3	101.8
Utilities	491,2,3pt	5.91	121.7	119.1	122.1	121.7	120.0	121.9	129.8	125.5	122.6
Electric		4.45	124.8	121.1	126.1	124.7	124.2	127.3	132.4	128.0	125.0
Gas		1.46	110.5	111.0	108.4	110.5	105.8	104.5	119.4	115.7	113.3

NOTE. See notes to table 1.

Table 5
INDUSTRIAL PRODUCTION INDEXES: SPECIAL AGGREGATES

1992 = 100, seasonally adjusted

Item		2000 proportion	2000 June	July	Aug.	Sept.	Oct.	Nov.r	Dec.r	2001 Jan.r	Feb.p
Total industry		100.00	147.9	147.6	148.6	149.0	148.7	148.2	147.7	146.8	146.0
Energy		13.92	110.0	109.2	110.8	110.7	109.8	111.3	113.5	112.5	111.5
Consumer products		3.44	117.0	114.9	117.1	118.4	115.5	117.3	123.4	119.5	118.2
Commercial products		1.90	132.5	129.2	132.3	129.3	128.9	129.5	135.1	132.5	130.9
Oil and gas well drilling		.52	130.8	136.2	137.1	132.8	136.5	138.9	139.1	146.7	146.1
Converted fuel		2.29	112.4	110.8	115.1	116.6	117.2	118.7	117.8	113.3	112.5
Primary materials		5.78	98.4	98.7	98.9	98.5	97.8	99.3	99.7	101.1	100.5
Non-energy		86.08	154.5	154.3	155.2	155.6	155.4	154.5	153.4	152.6	151.8
Selected high-technology industries		8.48	1193.1	1248.0	1281.6	1310.3	1334.8	1358.1	1378.0	1392.5	1403.4
Computers and office equipment	357	2.37	1316.2	1370.4	1421.6	1464.2	1487.4	1502.8	1508.3	1522.7	1537.6
Communications equipment	366	1.94	345.8	362.7	372.3	378.5	390.0	398.6	400.9	411.4	418.1
Semiconductors and related electronic components	3672–9	4.16	2059.6	2156.9	2203.2	2248.6	2282.9	2327.1	2385.2	2394.2	2401.1
Excluding selected high-technology industries		77.60	125.7	124.8	125.3	125.3	124.8	123.7	122.5	121.6	120.8
Motor vehicles and parts	371	5.72	176.1	163.1	173.9	175.5	167.2	160.1	151.8	137.6	137.4
Motor vehicles	3711,3	3.10	165.3	152.2	158.0	160.2	147.0	143.1	134.4	125.5	127.3
Motor vehicle parts	3714	2.47	194.6	180.6	200.9	201.0	201.0	190.0	180.8	159.8	156.0
Excluding motor vehicles and parts		71.88	122.7	122.5	122.4	122.3	122.3	121.6	120.7	120.6	119.7
Consumer goods		22.72	116.9	116.5	116.6	116.2	116.1	115.8	115.9	115.9	115.2
Business equipment		9.47	135.8	136.9	138.2	138.6	139.5	139.5	138.7	137.9	136.6
Business supplies		7.13	117.6	117.5	117.8	117.7	118.6	118.6	117.1	117.2	116.2
Materials		24.30	125.9	125.2	124.5	124.9	124.4	122.4	120.6	120.4	119.6
Measures excluding selected high-technology industries											
Total industry		91.52	123.4	122.5	123.2	123.2	122.6	122.0	121.3	120.4	119.6
Manufacturing		78.92	125.3	124.5	124.9	125.0	124.6	123.6	122.3	121.3	120.6
Durable		39.33	134.7	133.3	134.3	134.8	133.5	132.2	130.7	128.6	127.7
Industrial machinery	351–6,8,9	6.69	148.7	148.7	149.7	149.7	149.9	149.6	149.6	146.8	145.3
Electrical machinery	361–5,9,71	2.92	137.8	135.9	135.6	138.9	136.6	135.4	137.5	137.4	136.1
Measures excluding motor vehicles and parts											
Total industry		94.28	146.5	146.9	147.4	147.7	147.8	147.7	147.6	147.4	146.6
Manufacturing		81.67	152.6	153.2	153.5	153.9	154.3	153.8	153.1	153.0	152.3
Durable		42.09	197.2	199.4	200.2	201.7	202.0	202.2	202.1	201.9	201.0
Primary processing		34.36	180.1	179.4	180.3	181.2	181.1	178.8	176.6	174.6	173.6
Advanced processing		53.04	139.4	139.5	140.5	140.8	140.5	140.5	139.8	139.4	138.9

NOTE. See notes to table 2.

Table 6
CAPACITY UTILIZATION

Percent of capacity, seasonally adjusted

Item		2000 proportion	1967-2000 ave.	1988-89 high	1990-91 low	1994-95 high	2000 Q1	Q2	Q3	Q4[r]	2000 Nov.[r]	Dec.[r]	2001 Jan.[r]	Feb.[p]
Total industry		100.00	82.1	85.4	78.1	84.4	82.0	82.6	82.4	81.4	81.4	80.8	80.1	79.4
Manufacturing		88.70	81.1	85.7	76.6	84.0	81.3	81.9	81.7	80.4	80.5	79.5	78.7	78.1
Durable		49.19	79.6	84.6	73.1	83.6	81.7	82.7	82.5	80.7	80.8	79.7	78.3	77.5
Lumber and products	24	1.89	82.6	93.6	75.5	89.4	83.3	81.6	79.1	76.2	76.3	75.0	73.3	73.6
Furniture and fixtures	25	1.65	81.3	86.6	72.5	83.9	79.1	79.6	80.1	80.1	79.6	79.6	79.3	78.6
Stone, clay, and glass products	32	2.31	78.9	83.5	69.7	86.8	84.9	84.5	85.5	84.0	83.9	82.3	82.6	81.3
Primary metals	33	3.13	81.6	92.7	73.7	95.4	88.9	89.4	87.0	83.1	82.9	82.3	80.5	80.0
Fabricated metals	34	5.85	77.9	82.0	71.9	85.2	77.8	77.6	77.1	75.8	75.8	74.8	74.9	73.8
Industrial machinery and equipment	35	9.34	81.4	85.4	72.3	87.3	81.7	81.9	82.7	82.5	82.5	82.1	80.7	79.8
Electrical machinery	36	9.26	81.4	84.0	75.0	90.1	86.3	90.4	90.9	87.3	87.1	86.2	84.9	83.3
Motor vehicles and parts	371	5.74	77.0	89.1	55.9	85.9	83.0	84.5	81.7	76.0	76.2	72.1	65.3	65.1
Aerospace and miscellaneous transportation equipment	372,6–9	4.01	75.2	87.3	60.7	85.3	71.7	71.1	71.7	72.8	73.3	73.4	73.0	72.4
Instruments	38	4.69	81.6	81.4	74.5	82.6	78.9	79.6	80.3	80.5	81.1	80.1	81.1	81.2
Miscellaneous	39	1.32	75.9	79.0	71.7	81.9	81.8	81.3	81.4	80.5	80.5	79.9	80.5	79.4
Nondurable		39.52	83.2	87.3	79.7	85.6	80.9	80.9	80.5	79.8	79.9	79.1	79.1	78.7
Food and tobacco products	20,21	10.54	83.3	85.9	79.1	85.8	81.2	81.2	81.6	81.2	81.4	81.0	80.8	80.4
Textile mill products	22	1.26	85.5	90.4	77.7	92.6	83.6	83.4	80.9	77.1	75.6	77.1	75.7	74.9
Apparel products	23	1.64	80.6	85.1	70.7	85.9	72.1	71.8	70.5	69.4	69.7	69.0	69.5	68.1
Paper and products	26	3.18	88.7	93.5	83.1	91.6	85.8	85.9	82.9	83.3	83.2	81.7	80.4	80.4
Printing and publishing	27	6.59	85.4	91.7	77.8	87.7	80.9	81.0	81.8	82.3	82.4	81.9	82.5	81.6
Chemicals and products	28	10.56	79.3	86.2	74.2	84.2	77.1	77.2	76.4	75.5	75.7	74.5	74.6	74.4
Petroleum products	29	1.97	87.3	88.5	85.1	97.1	94.1	96.0	95.3	94.3	94.9	93.4	92.7	93.9
Rubber and plastics products	30	3.58	84.7	89.6	77.4	91.3	85.3	84.6	83.7	80.9	80.8	79.7	80.5	79.5
Mining		5.96	87.4	88.0	82.0	91.0	85.2	85.8	86.6	86.7	87.3	86.7	88.6	88.2
Utilities		5.33	87.6	92.6	83.0	93.5	89.5	91.2	90.7	92.1	90.7	96.3	92.8	90.4
Selected high-technology industries		9.18	80.4	81.9	72.4	87.9	84.7	88.0	89.1	85.3	85.3	83.6	82.2	80.6
Computers and office equipment	357	2.79	81.2	86.9	66.9	91.4	77.4	76.4	79.1	78.2	78.4	76.9	76.2	75.4
Communications equipment	366	2.03	80.4	84.8	73.4	87.8	78.6	80.8	84.9	87.3	87.7	87.1	88.2	88.3
Semiconductors and related electronic components	3672–9	4.36	80.0	81.1	72.6	90.8	92.0	98.5	97.0	88.3	88.1	85.8	82.7	80.0
Measures excluding selected high-technology industries														
Total industry		90.82	82.2	85.7	78.4	84.2	81.7	82.0	81.5	80.7	80.7	80.2	79.5	78.9
Manufacturing		79.52	81.2	86.1	76.8	83.8	80.9	81.1	80.6	79.5	79.6	78.7	78.0	77.5
Industrial machinery	351–6,8,9	6.54	81.3	85.5	72.9	88.1	83.2	84.1	84.1	84.2	84.2	84.1	82.5	81.6
Electrical machinery	361–5,9,71	2.88	83.4	87.5	74.3	93.2	83.2	84.2	83.9	83.0	82.4	83.4	83.2	82.3
Primary processing		33.89	82.2	88.3	76.7	88.7	85.4	86.4	85.4	82.8	82.8	81.1	79.7	78.8
Advanced processing		54.81	80.6	84.2	76.6	82.3	79.5	79.8	80.1	79.6	79.7	79.2	78.8	78.4

NOTE. See notes to table 2.

Table 7
INDUSTRIAL CAPACITY

Percent change

Item	Average annual rate				Fourth quarter to fourth quarter				Annual rate				Monthly rate
	1967-79	1980-88	1989-94	1995-2001	1998	1999	2000	2001[p]	2000 Q2	Q3	Q4	2001 Q1	2001 Feb.
Total industry	3.5	2.2	2.2	5.0	6.5	4.6	4.6	3.2	4.6	4.5	4.6	4.1	.3
Manufacturing	3.7	2.5	2.5	5.6	7.2	5.1	5.0	3.5	5.1	5.0	5.1	4.5	.3
Durable	3.6	3.1	3.0	8.8	10.2	8.4	8.8	6.3	8.8	8.8	9.2	8.2	.6
Nondurable	3.9	1.8	2.0	2.0	4.1	1.3	.8	.3	1.0	.8	.5	.3	.0
Mining	.4	.2	–.6	–.2	–.1	–1.5	–.8	–1.0	–.5	–.9	–1.5	–1.4	–.1
Utilities	4.9	1.2	1.4	2.1	1.1	2.4	3.3	3.9	3.4	3.3	3.3	3.5	.3
Selected high-technology industries	11.3	15.9	13.5	40.5	39.5	37.8	47.6	31.3	46.2	49.3	50.9	42.7	2.7
Manufacturing ex. selected high-technology industries	3.3	1.4	1.7	2.5	4.4	2.1	1.3	.7	1.4	1.2	1.0	.8	.1
Primary processing	3.8	1.6	3.3	7.8	9.4	4.9	8.0	5.5	7.7	8.6	9.5	8.1	.6
Advanced processing	3.7	3.1	2.1	4.1	5.7	5.2	3.0	2.2	3.2	2.6	2.4	2.3	.2

Table 8
Gross Value of Products

Billions of 1996 dollars at annual rate, seasonally adjusted

Item	1996	2000	1999 Q4	2000 Q1	Q2	Q3	Q4[r]	2000 Nov.[r]	Dec.[r]	2001 Jan.[r]	Feb.[p]
Products, total	2,427.8	2,878.3	2,807.0	2,842.8	2,875.0	2,879.2	2,861.8	2,863.2	2,854.7	2,826.2	2,815.8
Final products	1,862.5	2,216.4	2,154.6	2,180.0	2,209.0	2,217.1	2,201.4	2,203.7	2,195.2	2,169.0	2,163.9
Consumer goods	1,225.0	1,342.5	1,335.8	1,338.6	1,351.6	1,347.1	1,331.9	1,331.2	1,329.7	1,310.7	1,307.7
Durable	303.9	372.3	378.7	377.3	382.4	371.5	355.2	353.7	350.1	336.4	339.5
Automotive products	162.6	195.0	197.6	198.6	201.7	195.3	181.9	181.6	176.4	165.1	168.5
Other durable goods	141.3	177.9	181.9	179.1	181.0	176.7	175.2	173.8	176.4	175.3	174.5
Nondurable	921.0	970.2	958.0	962.0	970.1	975.3	974.6	975.3	977.0	970.4	964.9
Equipment, total	637.5	872.7	821.7	846.8	863.9	878.9	879.8	883.3	875.3	868.9	866.8
Business and defense	610.2	850.4	798.3	823.6	841.2	856.4	859.4	862.8	855.5	848.9	846.8
Business	538.6	788.8	736.8	765.5	784.1	800.3	802.4	805.5	797.4	789.6	787.8
Defense and space	71.6	65.9	68.7	66.4	65.7	65.3	66.1	66.4	66.8	67.6	67.3
Intermediate products	565.3	661.9	651.4	661.7	664.9	661.2	659.4	658.6	658.5	656.0	650.8
Construction supplies	235.0	285.5	282.1	286.9	286.6	284.9	281.8	281.4	281.3	281.1	278.7
Business supplies	330.3	376.1	369.0	374.4	377.9	375.9	377.1	376.8	376.7	374.5	371.7
Commercial energy products	85.5	96.0	90.1	93.9	97.1	96.8	97.0	95.7	99.1	97.1	96.8

Table 9
Diffusion Indexes of Industrial Production

Percent

Item	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
One month earlier												
1999	53.6	56.5	55.4	59.4	55.1	50.7	58.2	55.8	48.6	64.5	53.3	59.8
2000	58.7	50.4	56.5	51.4	51.4	56.2	54.2	43.5	54.0	43.5	45.7	38.9
2001	46.7											
Three months earlier												
1999	52.9	56.9	56.5	56.5	55.8	58.0	56.2	63.4	58.0	62.0	58.3	62.7
2000	61.2	62.0	59.8	56.2	54.0	52.9	49.6	44.9	48.9	43.1	45.3	42.0
2001	39.7											
Six months earlier												
1999	59.1	53.3	56.2	54.3	58.0	59.8	60.1	60.1	61.6	67.4	62.7	62.7
2000	68.1	65.9	68.1	64.1	60.0	55.4	49.6	43.8	47.5	44.9	41.7	40.2
2001	35.5											

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

Table 10
Electric Power Use

1992 = 100

Item	1992 billion kWh	Seasonally adjusted						Not seasonally adjusted					
		2000 Aug.	Sept.	Oct.	Nov.[r]	Dec.[r]	2001 Jan.[p]	2000 Aug.	Sept.	Oct.	Nov.[r]	Dec.[r]	2001 Jan.[p]
Total manufacturing and mining	933.2	107.7	109.1	109.8	109.7	108.2	106.4	111.0	112.7	111.5	109.4	107.1	103.8
Manufacturing	853.2	108.4	109.8	110.7	110.4	109.0	107.2	112.0	113.6	112.6	110.0	107.5	104.2
Durable	366.0	110.3	111.3	111.4	110.3	109.9	109.7	113.9	115.1	113.0	109.3	107.4	105.7
Nondurable	487.2	106.8	108.6	110.1	110.5	108.3	105.3	110.5	112.4	112.2	110.6	107.6	103.0
Mining	80.1	99.0	100.1	97.5	99.6	97.2	94.9	97.2	99.8	97.0	100.9	100.8	99.0
Total ex. nuclear nondefense	908.9	109.6	110.1	110.2	109.9	108.8	108.4	113.8	114.3	111.8	109.2	107.0	105.3
Utility sales to industry	835.5	108.9	109.6	110.3	110.1	108.5	106.4	111.7	113.5	111.9	109.8	107.1	103.5
Industrial generation	97.7	98.6	102.8	102.9	104.2	103.3	105.3	101.0	100.4	105.3	103.5	106.6	108.7

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

Table 11
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]																	
1979	–.5	.8	.3	–.9	1.2	.0	–.7	–.4	.1	.4	–.5	–.2	2.2	1.1	–2.3	–.3	3.3
1980	.5	.1	.0	–1.9	–2.5	–1.3	–.6	1.2	1.5	.7	1.6	.5	.8	–15.0	–4.2	14.2	–2.8
1981	–.9	.5	.5	–.7	.8	.6	.9	–.4	–.8	–.8	–1.4	–1.1	1.9	2.2	4.1	–10.5	1.6
1982	–1.6	2.2	–.7	–.9	–.8	–.3	–.8	–.5	–.7	–.8	–.3	–.8	–6.4	–5.2	–7.3	–7.5	–5.4
1983	2.1	–.2	1.0	1.3	1.2	.6	1.8	1.3	1.7	.8	–.1	.5	6.8	11.9	17.3	10.3	3.7
1984	2.1	–.2	1.1	.5	.6	.5	.2	.0	–.1	–.5	.1	–.4	11.1	7.2	2.6	–2.6	8.9
1985	.4	.9	.3	.2	.2	–.2	–.4	.6	.6	–.9	.6	.7	3.0	2.8	.3	1.4	1.6
1986	.6	–.7	–1.0	.8	–.2	–.3	.3	.3	–.1	.9	.5	.9	2.0	–1.7	.7	6.5	1.1
1987	–.6	1.2	.4	.4	.4	.9	.6	.1	–.1	1.4	.3	.6	4.2	6.7	5.6	7.1	4.6
1988	.1	.3	.0	.6	.1	.1	.7	.5	–.4	.3	.8	.5	3.2	3.1	3.9	3.6	4.5
1989	.6	–.8	.9	.2	–.6	–.2	–1.0	.4	–.2	–.5	.4	.5	3.8	.5	–4.4	–.1	1.8
1990	–.5	.5	.5	–.6	.4	.0	.0	.2	.1	–.6	–1.3	–.6	2.0	.6	1.0	–5.8	–.2
1991	–.5	–.8	–.9	.3	.8	1.2	.1	.1	1.0	–.1	–.1	–.6	–8.3	1.5	6.2	1.1	–2.0
1992	.1	.5	.9	.7	.3	–.2	.7	–.3	.4	.7	.5	.0	1.0	6.5	2.4	5.0	3.1
1993	.4	.5	.2	.3	–.5	.3	.2	–.2	1.1	.3	.4	.8	3.8	1.5	1.9	6.2	3.5
1994	.2	.3	.8	.5	.8	.4	.6	.3	.1	.5	.7	1.0	5.5	7.7	5.8	6.3	5.4
1995	.6	–.1	.2	–.2	.4	.4	–.4	1.3	.6	–.4	.3	.1	6.0	1.1	4.4	2.9	4.8
1996	–.2	1.1	–.1	1.1	.8	.8	.0	.6	.5	.0	1.0	.4	2.8	9.2	5.4	5.3	4.6
1997	.5	1.0	.2	.6	.3	.6	.7	.9	.6	.6	.6	.3	7.6	6.1	7.9	7.3	6.8
1998	.4	.0	.3	.5	.4	–.7	–.1	2.1	–.3	.5	–.4	.1	3.6	3.0	3.4	2.9	4.9
1999	.6	.3	.7	.1	.7	.2	.8	.4	.1	.8	.3	.7	3.9	4.9	5.8	5.7	4.2
2000	.5	.5	.7	.7	.7	.5	–.2	.7	.2	–.2	–.3	–.3	6.7	7.9	3.5	–.6	5.7
2001	–.6	–.6															
IP (*1992=100*)																	
1999	135.9	136.3	137.3	137.4	138.4	138.6	139.7	140.3	140.4	141.5	141.9	142.8	136.5	138.1	140.1	142.1	139.6
2000	143.6	144.3	145.2	146.3	147.2	147.9	147.6	148.6	149.0	148.7	148.2	147.7	144.4	147.1	148.4	148.2	147.5
2001	146.8	146.0															
Capacity (*percent of 1992 output*)																	
1999	167.9	168.6	169.2	169.9	170.5	171.1	171.7	172.3	172.9	173.5	174.1	174.8	168.6	170.5	172.3	174.1	171.4
2000	175.4	176.1	176.7	177.4	178.1	178.7	179.4	180.1	180.7	181.4	182.1	182.8	176.1	178.1	180.1	182.1	179.1
2001	183.4	183.9															
Utilization (*percent*)																	
1979	86.7	87.1	87.1	86.1	86.9	86.7	85.9	85.4	85.3	85.5	84.9	84.5	87.0	86.6	85.5	85.0	86.0
1980	84.7	84.6	84.4	82.6	80.4	79.2	78.5	79.3	80.3	80.7	81.8	82.1	84.6	80.7	79.4	81.5	81.5
1981	81.2	81.4	81.6	80.9	81.4	81.8	82.3	81.8	80.9	80.1	78.8	77.7	81.4	81.4	81.7	78.9	80.8
1982	76.3	77.8	77.1	76.2	75.4	75.0	74.2	73.7	73.0	72.2	71.9	71.1	77.1	75.6	73.6	71.7	74.5
1983	72.5	72.3	72.9	73.7	74.5	74.8	76.1	77.0	78.2	78.7	78.6	78.9	72.6	74.4	77.1	78.7	75.7
1984	80.4	80.1	80.8	81.0	81.3	81.5	81.5	81.3	81.0	80.5	80.4	79.8	80.4	81.3	81.3	80.2	80.8
1985	79.9	80.4	80.4	80.3	80.3	79.9	79.4	79.6	79.9	79.0	79.2	79.5	80.2	80.2	79.6	79.2	79.8
1986	79.8	79.2	78.2	78.7	78.4	78.1	78.2	78.3	78.2	78.8	79.1	79.7	79.1	78.4	78.2	79.2	78.7
1987	79.1	80.0	80.2	80.5	80.7	81.4	81.8	81.8	81.6	82.6	82.8	83.2	79.8	80.8	81.7	82.9	81.3
1988	83.2	83.4	83.3	83.7	83.7	83.6	84.1	84.5	84.1	84.2	84.8	85.1	83.3	83.7	84.2	84.7	84.0
1989	85.4	84.6	85.3	85.3	84.7	84.4	83.4	83.6	83.3	82.8	83.0	83.2	85.1	84.8	83.4	83.0	84.1
1990	82.7	83.0	83.3	82.7	82.9	82.7	82.6	82.6	82.6	82.0	80.8	80.2	83.0	82.8	82.6	81.0	82.3
1991	79.6	78.9	78.1	78.2	78.7	79.6	79.5	79.5	80.2	80.0	79.8	79.2	78.9	78.8	79.7	79.6	79.3
1992	79.1	79.4	79.9	80.4	80.4	80.1	80.5	80.2	80.3	80.8	81.0	80.9	79.5	80.3	80.3	80.9	80.2
1993	81.0	81.3	81.3	81.4	80.9	80.9	81.0	80.7	81.4	81.5	81.6	82.1	81.2	81.1	81.0	81.7	81.3
1994	82.1	82.1	82.5	82.7	83.2	83.3	83.5	83.5	83.3	83.5	83.7	84.3	82.2	83.1	83.4	83.8	83.1
1995	84.4	84.0	83.8	83.3	83.3	83.2	82.5	83.3	83.4	82.8	82.7	82.4	84.1	83.3	83.1	82.6	83.3
1996	81.9	82.4	82.0	82.5	82.8	83.1	82.7	82.8	82.9	82.5	83.0	83.0	82.1	82.8	82.8	82.8	82.6
1997	83.0	83.5	83.3	83.4	83.3	83.3	83.5	83.8	83.8	83.9	83.9	83.7	83.3	83.3	83.7	83.8	83.5
1998	83.5	83.1	82.9	82.8	82.7	81.6	81.1	82.4	81.8	81.8	81.1	80.8	83.2	82.4	81.8	81.2	82.1
1999	81.0	80.9	81.1	80.9	81.2	81.0	81.3	81.4	81.2	81.5	81.5	81.7	81.0	81.0	81.3	81.6	81.2
2000	81.9	82.0	82.2	82.5	82.7	82.7	82.3	82.6	82.4	82.0	81.4	80.8	82.0	82.6	82.4	81.4	82.1
2001	80.1	79.4															

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

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

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
IP (*percent change*)																	
1979	–.3	.7	.4	–1.5	1.5	.1	–.5	–.9	.0	.5	–.7	–.1	3.4	.3	–2.4	–1.5	3.6
1980	.2	.3	–.4	–2.1	–3.1	–1.5	–.7	1.7	1.5	1.1	1.7	.3	–.4	–17.7	–4.7	16.8	–3.9
1981	–.6	.6	.3	.2	.7	–.1	.6	–.8	–.8	–1.1	–1.6	–1.6	2.5	4.2	–.1	–13.1	1.6
1982	–2.0	2.9	–.7	–.9	–.4	.0	–.8	–.5	–.5	–1.2	–.3	–.7	–7.6	–2.7	–5.6	–8.0	–5.9
1983	2.5	.4	1.4	1.1	1.4	.8	1.5	1.1	2.2	.6	.3	–.1	11.5	14.7	17.1	11.2	5.7
1984	2.5	.6	.7	.5	.4	.7	.3	.1	–.2	.0	.1	–.3	13.2	6.6	3.4	–.4	9.9
1985	.1	.6	.7	.2	.5	–.3	–.4	.9	.4	–.8	1.1	–.1	2.1	4.2	1.1	1.6	2.3
1986	1.5	–.5	–.9	1.4	–.1	–.3	.3	.6	.0	.8	.4	1.2	4.5	1.7	1.7	6.7	2.8
1987	–.8	1.6	.2	.5	.3	1.0	.7	–.2	.1	1.3	.5	.6	5.0	7.0	5.5	7.6	5.3
1988	–.2	.4	–.1	1.0	–.1	.0	.7	.3	.2	.2	.9	.6	2.3	4.1	3.7	5.2	4.7
1989	.9	–1.2	.8	.1	–.7	.0	–1.1	.3	–.3	–.6	.4	.1	4.3	–.7	–4.5	–1.4	1.9
1990	–.2	.9	.3	–.8	.4	–.1	.0	.3	–.1	–.6	–1.3	–.6	2.9	–.1	.8	–6.3	–.5
1991	–.9	–.7	–1.1	.3	.7	1.4	.2	.2	1.1	–.1	–.2	–.5	–9.7	1.2	7.8	1.7	–2.4
1992	.3	.6	1.0	.6	.4	–.1	.7	–.2	.3	.7	.5	–.1	2.4	7.3	3.0	4.5	4.0
1993	.7	.3	.2	.5	–.4	.0	.2	–.2	1.3	.2	.5	.9	4.4	2.0	1.5	6.6	3.7
1994	.0	.4	1.0	.8	.9	.2	.8	.5	.2	.6	.9	1.0	5.6	9.4	6.6	7.6	6.0
1995	.6	–.2	.3	–.3	.2	.5	–.6	1.3	.9	–.3	.2	.1	6.5	.7	3.9	3.6	5.3
1996	–.2	1.0	–.2	1.3	.9	.9	.2	.6	.6	.0	1.0	.6	2.3	10.1	7.1	5.7	4.9
1997	.5	1.2	.4	.5	.3	.8	.6	1.1	.5	.6	.7	.4	8.5	6.7	9.0	7.7	7.8
1998	.6	.0	.2	.6	.3	–.8	–.1	2.3	–.2	.7	–.2	.2	4.8	2.8	3.9	4.7	5.6
1999	.5	.5	.5	.2	.8	.2	.6	.6	.1	.9	.5	.6	4.1	5.4	6.0	6.8	4.8
2000	.6	.4	.9	.6	.6	.4	–.1	.6	.3	–.1	–.5	–.8	7.1	8.0	3.7	–1.3	6.1
2001	–.6	–.4															
IP (*1992=100*)																	
1999	140.5	141.2	141.9	142.2	143.4	143.6	144.5	145.3	145.6	146.8	147.5	148.4	141.2	143.1	145.1	147.6	144.8
2000	149.2	149.9	151.3	152.2	153.1	153.8	153.7	154.6	155.1	154.9	154.1	152.9	150.1	153.0	154.4	153.9	153.6
2001	152.0	151.3															
Capacity (*percent of 1992 output*)																	
1999	175.3	176.0	176.8	177.5	178.3	179.0	179.7	180.3	181.0	181.7	182.4	183.1	176.0	178.3	180.3	182.4	179.3
2000	183.8	184.6	185.3	186.1	186.9	187.6	188.4	189.1	189.9	190.7	191.5	192.3	184.6	186.9	189.2	191.5	188.0
2001	193.0	193.7															
Utilization (*percent*)																	
1979	86.4	86.7	86.9	85.3	86.4	86.3	85.6	84.5	84.3	84.5	83.6	83.3	86.7	86.0	84.8	83.8	85.3
1980	83.3	83.3	82.7	80.8	78.1	76.7	75.9	77.0	77.9	78.6	79.7	79.7	83.1	78.5	76.9	79.3	79.5
1981	79.0	79.2	79.3	79.3	79.6	79.3	79.6	78.8	78.0	77.0	75.6	74.2	79.2	79.4	78.8	75.6	78.3
1982	72.6	74.6	73.9	73.1	72.7	72.6	71.8	71.4	70.9	69.9	69.6	69.0	73.7	72.8	71.4	69.5	71.8
1983	70.6	70.8	71.8	72.5	73.4	73.9	74.8	75.6	77.2	77.6	77.7	77.5	71.1	73.2	75.9	77.6	74.4
1984	79.3	79.5	79.8	80.0	80.1	80.3	80.4	80.2	79.8	79.6	79.5	79.0	79.5	80.1	80.1	79.4	79.8
1985	78.9	79.1	79.3	79.2	79.4	78.9	78.3	78.8	78.8	77.9	78.5	78.2	79.1	79.2	78.6	78.2	78.8
1986	79.1	78.6	77.8	78.7	78.5	78.1	78.2	78.6	78.4	78.9	79.1	79.9	78.5	78.5	78.4	79.3	78.7
1987	79.1	80.2	80.3	80.6	80.7	81.4	81.8	81.5	81.5	82.5	82.8	83.1	79.9	80.9	81.6	82.8	81.3
1988	82.9	83.1	82.9	83.7	83.5	83.4	83.8	84.0	84.0	84.1	84.8	85.1	83.0	83.5	83.9	84.7	83.8
1989	85.7	84.5	85.0	85.0	84.2	84.1	83.0	83.1	82.7	82.1	82.2	82.1	85.1	84.4	82.9	82.1	83.6
1990	81.8	82.5	82.6	81.8	82.0	81.8	81.6	81.7	81.5	80.9	79.7	79.0	82.3	81.9	81.6	79.9	81.4
1991	78.2	77.5	76.6	76.8	77.1	78.1	78.2	78.2	79.0	78.9	78.6	78.1	77.5	77.3	78.5	78.5	77.9
1992	78.1	78.5	79.1	79.5	79.6	79.4	79.8	79.5	79.6	79.9	80.2	79.9	78.6	79.5	79.6	80.0	79.4
1993	80.4	80.4	80.4	80.7	80.2	80.1	80.1	79.7	80.6	80.6	80.7	81.3	80.4	80.3	80.1	80.9	80.4
1994	81.1	81.1	81.7	82.1	82.6	82.5	82.8	82.9	82.8	83.0	83.3	83.8	81.3	82.4	82.8	83.4	82.5
1995	84.0	83.5	83.3	82.7	82.5	82.6	81.7	82.3	82.7	82.0	81.7	81.4	83.6	82.6	82.2	81.7	82.5
1996	80.9	81.3	80.7	81.4	81.7	82.0	81.8	81.9	82.0	81.6	82.0	82.1	81.0	81.7	81.9	81.9	81.6
1997	82.1	82.6	82.5	82.5	82.3	82.5	82.6	83.1	83.0	83.0	83.1	82.9	82.4	82.5	82.9	83.0	82.7
1998	82.9	82.4	82.0	82.0	81.8	80.6	80.1	81.5	80.9	81.0	80.4	80.2	82.4	81.5	80.8	80.5	81.3
1999	80.2	80.2	80.3	80.1	80.4	80.2	80.4	80.6	80.4	80.8	80.9	81.0	80.2	80.3	80.5	80.9	80.5
2000	81.2	81.2	81.6	81.8	81.9	82.0	81.6	81.7	81.7	81.2	80.5	79.5	81.3	81.9	81.7	80.4	81.3
2001	78.7	78.1															

NOTE. See note to table 11.

Table 13

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)*																	
1979	–.7	.8	.2	–1.1	1.1	–.1	–.8	–.5	.0	.3	–.6	–.3	.9	–.1	–3.5	–1.4	2.2
1980	.3	.0	–.1	–2.2	–2.7	–1.3	–.8	1.2	1.6	.6	1.6	.5	–.7	–16.6	–4.9	13.8	–4.0
1981	–.9	.4	.4	–.8	.8	.5	.9	–.5	–1.0	–.8	–1.6	–1.4	1.3	1.1	3.2	–11.8	.8
1982	–1.6	2.0	–.8	–.9	–.9	–.4	–1.0	–.4	–1.0	–1.0	–.3	–1.2	–7.7	–5.8	–8.2	–9.1	–6.5
1983	2.5	–.4	.8	1.2	1.2	.4	1.8	1.4	1.6	.6	–.2	.5	6.9	10.6	16.8	8.7	2.8
1984	1.9	–.3	1.0	.4	.4	.3	.1	–.1	–.2	–.5	.0	–.5	9.7	5.3	1.0	–3.5	7.5
1985	.3	.9	.2	.1	.2	–.1	–.5	.6	.7	–.8	.3	.7	2.3	2.5	.5	1.0	.9
1986	.7	–.8	–1.1	.8	–.3	–.2	.0	.2	–.2	1.0	.4	1.0	1.7	–1.8	–.6	6.3	.8
1987	–.8	1.2	.3	.4	.5	.8	.5	.1	–.2	1.3	.3	.5	3.5	6.8	5.0	6.5	4.2
1988	.1	.2	.1	.4	–.2	.1	.6	.5	–.3	.4	.6	.5	2.8	1.8	3.3	3.5	3.9
1989	.5	–.7	.9	.1	–.7	–.3	–.9	.4	–.3	–.3	.2	.3	3.5	–.3	–4.8	–.4	1.4
1990	–.4	.5	.5	–.5	.3	–.1	.0	.1	.2	–.6	–1.4	–.7	1.7	.6	.7	–6.4	–.5
1991	–.5	–.9	–1.0	.4	.8	1.2	.1	.0	1.0	–.2	–.2	–.7	–8.8	1.4	6.1	.4	–2.4
1992	–.2	.4	.8	.7	.2	–.4	.6	–.4	.3	.6	.4	.0	–.6	5.7	1.3	3.9	2.2
1993	.4	.5	.1	.3	–.6	.2	.2	–.2	1.0	.2	.4	.7	3.7	.8	1.2	5.0	2.8
1994	.1	.3	.6	.3	.7	.3	.4	.2	.0	.4	.6	.8	4.5	5.6	4.0	4.2	4.1
1995	.3	–.3	–.1	–.4	.2	.3	–.6	1.1	.3	–.7	.1	–.1	2.9	–1.3	2.2	–.5	2.4
1996	–.3	.9	–.3	1.0	.6	.6	–.3	.3	.2	–.4	.8	.2	.7	7.0	2.2	2.0	2.0
1997	.3	.8	–.1	.4	.1	.3	.4	.8	.5	.6	.4	.1	5.2	3.0	5.4	6.4	4.1
1998	.1	–.2	.3	.4	.3	–1.1	–.5	2.0	–.6	.2	–.6	–.2	1.0	1.8	–.1	.0	2.7
1999	.4	.0	.5	–.3	.5	–.1	.4	.3	.0	.6	.0	.3	.9	1.4	2.9	3.4	1.2
2000	.1	.1	.2	.3	.3	.0	–.7	.5	.0	–.4	–.5	–.5	1.7	2.9	–.9	–3.1	1.8
2001	–.8	–.7															
IP *(1992=100)*																	
1999	119.3	119.4	119.9	119.6	120.2	120.1	120.6	120.9	120.9	121.7	121.7	122.1	119.5	119.9	120.8	121.8	120.5
2000	122.2	122.3	122.6	123.0	123.4	123.4	122.5	123.2	123.2	122.6	122.0	121.3	122.4	123.2	122.9	122.0	122.6
2001	120.4	119.6															
Capacity *(percent of 1992 output)*																	
1999	147.1	147.3	147.6	147.8	148.1	148.3	148.5	148.7	148.9	149.1	149.3	149.5	147.3	148.1	148.7	149.3	148.3
2000	149.6	149.8	150.0	150.2	150.3	150.5	150.7	150.8	150.9	151.0	151.2	151.3	149.8	150.3	150.8	151.2	150.5
2001	151.4	151.5															
Utilization *(percent)*																	
1979	86.6	87.1	87.1	86.1	86.8	86.6	85.8	85.2	85.1	85.3	84.7	84.3	86.9	86.5	85.4	84.7	85.9
1980	84.4	84.3	84.1	82.1	79.8	78.7	78.0	78.8	80.0	80.4	81.6	81.8	84.3	80.2	78.9	81.3	81.2
1981	81.0	81.2	81.5	80.7	81.3	81.6	82.2	81.6	80.7	79.9	78.5	77.3	81.2	81.2	81.5	78.6	80.6
1982	76.0	77.4	76.7	75.9	75.1	74.7	73.9	73.5	72.6	71.8	71.5	70.5	76.7	75.2	73.3	71.3	74.1
1983	72.3	72.0	72.6	73.4	74.2	74.5	75.8	76.8	78.0	78.4	78.2	78.6	72.3	74.0	76.9	78.4	75.4
1984	80.0	79.7	80.4	80.6	80.8	81.0	80.9	80.7	80.5	80.0	79.9	79.3	80.1	80.8	80.7	79.7	80.3
1985	79.5	80.0	80.1	80.0	80.0	79.8	79.3	79.6	80.0	79.1	79.2	79.6	79.9	79.9	79.6	79.3	79.7
1986	80.1	79.4	78.5	79.0	78.7	78.5	78.4	78.5	78.3	79.0	79.3	80.0	79.3	78.7	78.4	79.4	79.0
1987	79.4	80.2	80.5	80.8	81.1	81.7	82.1	82.2	81.9	83.0	83.2	83.5	80.0	81.2	82.1	83.2	81.6
1988	83.6	83.7	83.7	84.0	83.8	83.9	84.3	84.6	84.3	84.6	85.0	85.3	83.7	83.9	84.4	85.0	84.2
1989	85.7	85.0	85.6	85.6	84.9	84.6	83.6	83.9	83.5	83.2	83.3	83.4	85.4	85.0	83.7	83.3	84.4
1990	83.0	83.3	83.7	83.1	83.3	83.1	83.0	83.0	83.0	82.4	81.1	80.5	83.3	83.2	83.0	81.4	82.7
1991	80.0	79.2	78.4	78.6	79.1	80.0	80.0	79.9	80.6	80.4	80.2	79.5	79.2	79.2	80.2	80.0	79.7
1992	79.3	79.5	80.1	80.6	80.6	80.2	80.7	80.3	80.4	80.8	81.0	81.0	79.7	80.5	80.4	80.9	80.4
1993	81.2	81.5	81.5	81.6	81.0	81.1	81.2	80.9	81.6	81.6	81.8	82.2	81.4	81.2	81.2	81.9	81.4
1994	82.2	82.3	82.7	82.7	83.2	83.3	83.5	83.5	83.3	83.4	83.7	84.2	82.4	83.1	83.4	83.7	83.1
1995	84.2	83.8	83.5	83.0	83.0	83.1	82.5	83.2	83.3	82.5	82.4	82.2	83.8	83.0	83.0	82.4	83.1
1996	81.8	82.4	81.9	82.6	82.9	83.3	82.8	82.9	82.9	82.5	83.0	83.0	82.0	82.9	82.9	82.8	82.7
1997	83.1	83.6	83.3	83.4	83.3	83.3	83.4	83.8	83.9	84.2	84.2	84.0	83.3	83.3	83.7	84.2	83.6
1998	83.8	83.3	83.3	83.3	83.3	82.1	81.4	82.8	82.1	82.0	81.3	81.0	83.5	82.9	82.1	81.4	82.5
1999	81.1	81.0	81.2	80.9	81.2	81.0	81.2	81.3	81.2	81.7	81.5	81.7	81.1	81.0	81.3	81.6	81.3
2000	81.6	81.6	81.7	81.9	82.1	82.0	81.3	81.7	81.6	81.2	80.7	80.2	81.7	82.0	81.5	80.7	81.5
2001	79.5	78.9															

NOTE. Excluded industries are computers, communications equipment, and semiconductors and related electronic components. See also note to table 11.

Table 14

HISTORICAL STATISTICS FOR INDUSTRIAL PRODUCTION, CAPACITY, AND UTILIZATION: Manufacturing 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)*																	
1979	–.7	.7	.3	–1.7	1.4	.0	–.6	–1.1	–.1	.4	–.9	–.2	1.9	–1.2	–3.8	–2.9	2.2
1980	.0	.1	–.6	–2.4	–3.4	–1.5	–.9	1.7	1.6	1.0	1.7	.2	–2.3	–19.9	–5.6	16.5	–5.4
1981	–.6	.4	.2	.1	.7	–.3	.5	–.9	–1.1	–1.2	–1.8	–2.0	1.8	2.8	–1.7	–15.0	.5
1982	–2.1	2.7	–.8	–.9	–.5	–.1	–1.0	–.3	–.9	–1.4	–.4	–1.1	–9.4	–3.4	–6.7	–10.2	–7.4
1983	3.1	.3	1.3	1.0	1.4	.6	1.5	1.1	2.1	.4	.1	–.1	12.1	13.2	16.3	9.1	4.7
1984	2.3	.4	.6	.3	.1	.5	.2	–.1	–.3	.0	.0	–.4	11.6	4.0	1.4	–1.3	8.1
1985	.0	.6	.6	.1	.5	–.1	–.5	.9	.4	–.8	.8	–.1	1.2	4.0	1.4	1.1	1.5
1986	1.6	–.6	–1.0	1.5	–.2	–.1	–.1	.6	–.1	.9	.3	1.3	4.4	1.9	.3	6.6	2.5
1987	–1.0	1.6	.1	.6	.4	.9	.6	–.2	.0	1.3	.5	.5	4.1	7.1	4.8	6.9	4.8
1988	–.2	.2	.1	.8	–.4	.0	.6	.1	.3	.4	.8	.5	1.8	2.6	2.9	5.3	4.0
1989	.9	–1.1	.8	.0	–.7	–.1	–1.0	.3	–.3	–.4	.2	–.1	4.1	–1.7	–5.0	–1.8	1.4
1990	–.1	.9	.4	–.7	.4	–.2	.1	.2	.0	–.7	–1.4	–.7	2.7	–.1	.4	–7.1	–.9
1991	–.8	–.8	–1.2	.4	.7	1.5	.2	.1	1.2	–.2	–.3	–.6	–10.3	1.0	7.8	1.0	–2.8
1992	.0	.5	1.0	.6	.3	–.2	.6	–.3	.2	.5	.5	–.1	.6	6.3	1.7	3.1	2.9
1993	.8	.3	.1	.5	–.5	.0	.2	–.4	1.2	.1	.4	.8	4.3	1.3	.6	5.2	2.9
1994	.0	.4	.8	.5	.8	.0	.6	.3	.1	.4	.7	.8	4.5	7.1	4.5	5.2	4.5
1995	.3	–.5	–.1	–.5	.1	.3	–.8	1.0	.6	–.7	–.1	–.1	2.9	–2.0	1.3	–.3	2.4
1996	–.3	.8	–.5	1.2	.7	.7	–.1	.2	.3	–.4	.8	.4	–.2	7.6	3.6	2.0	1.9
1997	.3	.9	.0	.3	.0	.5	.4	.9	.4	.6	.5	.1	5.8	3.2	6.2	6.7	4.7
1998	.3	–.2	.2	.6	.2	–1.2	–.5	2.2	–.6	.4	–.5	–.1	2.0	1.4	.0	1.6	3.2
1999	.2	.2	.2	–.2	.6	–.1	.3	.4	.1	.7	.2	.2	.7	1.4	2.7	4.4	1.5
2000	.1	.0	.5	.1	.2	.0	–.7	.3	.1	–.4	–.8	–1.0	1.5	2.4	–1.4	–4.3	1.7
2001	–.8	–.6															
IP *(1992=100)*																	
1999	121.2	121.5	121.7	121.5	122.2	122.0	122.4	122.9	123.0	123.9	124.1	124.3	121.5	121.9	122.7	124.1	122.5
2000	124.3	124.3	124.9	125.1	125.4	125.3	124.5	124.9	125.0	124.6	123.6	122.3	124.5	125.2	124.8	123.5	124.5
2001	121.3	120.6															
Capacity *(percent of 1992 output)*																	
1999	151.0	151.3	151.6	151.8	152.1	152.3	152.5	152.7	153.0	153.2	153.4	153.5	151.3	152.1	152.7	153.4	152.4
2000	153.7	153.9	154.1	154.3	154.4	154.6	154.8	154.9	155.0	155.2	155.3	155.4	153.9	154.4	154.9	155.3	154.6
2001	155.5	155.6															
Utilization *(percent)*																	
1979	86.3	86.7	86.8	85.2	86.2	86.0	85.4	84.2	84.0	84.2	83.3	83.0	86.6	85.8	84.5	83.5	85.1
1980	82.8	82.8	82.2	80.1	77.2	75.9	75.1	76.3	77.4	78.0	79.2	79.2	82.6	77.8	76.3	78.8	78.8
1981	78.6	78.8	78.9	78.8	79.3	78.9	79.2	78.4	77.5	76.5	75.0	73.4	78.8	79.0	78.4	75.0	77.8
1982	71.9	73.8	73.2	72.5	72.0	71.9	71.1	70.9	70.2	69.2	68.8	68.0	72.9	72.1	70.7	68.7	71.1
1983	70.1	70.3	71.2	71.9	72.9	73.3	74.4	75.2	76.8	77.0	77.1	77.0	70.5	72.7	75.5	77.1	73.9
1984	78.7	79.0	79.3	79.4	79.3	79.6	79.6	79.4	79.0	78.9	78.8	78.4	79.0	79.4	79.3	78.7	79.1
1985	78.2	78.5	78.8	78.7	78.9	78.7	78.1	78.7	78.8	78.0	78.5	78.2	78.5	78.8	78.5	78.2	78.5
1986	79.4	78.8	78.0	79.0	78.8	78.6	78.4	78.8	78.6	79.2	79.3	80.2	78.7	78.8	78.6	79.6	78.9
1987	79.3	80.5	80.5	80.9	81.1	81.8	82.2	82.0	81.9	82.9	83.2	83.6	80.1	81.3	82.0	83.2	81.7
1988	83.3	83.5	83.4	84.0	83.6	83.6	84.1	84.1	84.3	84.5	85.1	85.4	83.4	83.8	84.2	85.0	84.1
1989	86.1	85.0	85.5	85.3	84.5	84.3	83.2	83.4	82.9	82.5	82.5	82.3	85.5	84.7	83.2	82.4	83.9
1990	82.1	82.8	83.0	82.3	82.4	82.1	82.1	82.1	81.9	81.3	80.0	79.3	82.6	82.3	82.0	80.2	81.8
1991	78.5	77.8	76.8	77.0	77.5	78.5	78.6	78.6	79.5	79.3	78.9	78.4	77.7	77.7	78.9	78.9	78.3
1992	78.3	78.6	79.3	79.7	79.8	79.5	79.9	79.6	79.6	79.9	80.1	79.9	78.7	79.7	79.7	80.0	79.5
1993	80.4	80.5	80.5	80.9	80.3	80.2	80.3	79.9	80.7	80.6	80.8	81.3	80.5	80.5	80.3	80.9	80.5
1994	81.2	81.3	81.8	82.1	82.6	82.4	82.7	82.8	82.7	82.8	83.2	83.7	81.4	82.3	82.7	83.2	82.4
1995	83.8	83.2	82.9	82.4	82.2	82.3	81.5	82.1	82.5	81.7	81.4	81.1	83.3	82.3	82.0	81.4	82.3
1996	80.7	81.1	80.6	81.3	81.7	82.1	81.9	81.9	81.9	81.4	81.9	82.0	80.8	81.7	81.9	81.8	81.6
1997	82.1	82.6	82.4	82.4	82.2	82.4	82.5	83.0	83.1	83.3	83.4	83.1	82.4	82.4	82.8	83.3	82.7
1998	83.1	82.6	82.4	82.5	82.4	81.1	80.4	81.8	81.1	81.2	80.6	80.3	82.7	82.0	81.1	80.7	81.6
1999	80.3	80.3	80.3	80.0	80.4	80.1	80.2	80.4	80.4	80.9	80.9	80.9	80.3	80.2	80.4	80.9	80.4
2000	80.9	80.8	81.0	81.1	81.2	81.0	80.4	80.6	80.6	80.3	79.6	78.7	80.9	81.1	80.6	79.5	80.5
2001	78.0	77.5															

NOTE. See note to table 13.

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 1992. For the period since 1997, the total IP index has been constructed from 276 individual series based on the 1987 Standard Industrial Classification (SIC) 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 intermediate products (which are inputs to nonindustrial sectors). Materials are inputs in the manufacture of products. Major industry groups include two-digit SIC 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 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 an annually weighted chain-type index since 1977. Between 1977 and 1992, the weights for months from January to June were drawn from the year containing the month being estimated and the preceding year; for months from July to December, the weights are drawn from the current and following year. Since mid 1992, the weights change monthly, eliminating distortions in the contributions of several high-technology industries—sectors where weights shift noticeably year-to-year. Thus, the current formula for the growth in monthly IP (or any of the sub-aggregates) since mid 1992 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 ½ 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 48 percent of the source data (in value-added terms) are available; the fraction of available source data increases to about 85 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:

Proportion (in percent) of industrial production covered by data available in successive monthly estimates, 1999.

	Month of estimate			
Type of data	1st	2nd	3rd	4th
Physical product	19[1]	33	46[2]	47
Production-worker hours	28[3]	28	28	28
Electric power use	0	22	22	22
Federal Reserve estimates[4]	53	17	3	3[5]
Total industrial production	100	100	100	100

1. Includes provisional series totaling nearly 13 percent of IP that are derived from weekly data and for which the actual data may lag several months.

2. Includes quarterly data totaling 6 percent of IP that, on average, are received for the third estimate of industrial production. Specifically, 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.

3. This figure refers only to those individual series that both initially and ultimately are based on the hours data.

4. Estimates for series not yet covered by data for physical product or electric power use.

5. Includes monthly and quarterly physical product data totaling 3 percent of IP that typically are available too late for inclusion in the current index but are included at the time of an annual revision.

Until the source data for a particular series become available for a given month, estimates for the missing observations are based on other available data, such as labor input, recent trends in output and orders, and anecdotal reports from industry sources. After the fourth month that an estimate is published, indexes are not revised further until the time of an annual revision or a benchmark revision. These historical revisions are typically published in the late fall of each year; the most recent revision was published on December 5, 2000, and incorporated revised source data as well as data from the 1998 *Annual Survey of Manufactures* and the 1997 *Census of Manufactures.*

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 October 2000; for other series, the factors were estimated with data through at least June 2000. Series are pre-adjusted for the effects of holidays or the business cycle when appropriate. For the data since 1977, all seasonally adjusted aggregate indexes are calculated by aggregating the seasonally adjusted indexes of the individual series.

Reliability. The average revision to the *level* of the total IP index, without regard to sign, between the first and the fourth estimates was 0.27 percent during the 1987–99 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 1987–99 period. In most cases (about 83 percent), the direction of change in output indicated by the first estimate for a given month is the same as that shown by the fourth estimate.

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

Capacity Utilization

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 78 detailed industries (55 in manufacturing, 21 in mining, and 2 in utilities), which mostly correspond to industries at the two- and three-digit SIC level. Estimates of capacity and utilization are available for a variety of groups, including primary and advanced processing industries within manufacturing, durable and nondurable manufacturing, total manufacturing, mining, utilities, and total industry. Also, special aggregates are available, such as high-tech industries and manufacturing excluding high-tech industries. Component industries of the primary- and advanced-processing groups within manufacturing are listed in the note on table 2 of the release.

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 15 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 more than 80 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 1967–1999 period, the average total industry utilization rate is 82.0 percent; for manufacturing, the average factory operating rate has been 81.1 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 6 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 3-digit SIC level for mining and manufacturing. Aggregates for 2-digit industries, as well as for total mining, durable, nondurable, total manufacturing and total industrial electric power use, are computed. An aggregate showing total industry excluding nuclear nondefense is shown separately because the value-added proportion for the nondefense nuclear material series (part of SIC 2819) in total IP is considerably 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 2- and 3-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 1998 *Annual Survey of Manufactures* (the most recent available) suggests the Federal Reserve data cover about 75 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 3-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 aggregated, using self weights, to the 3-digit SIC industry levels and above. Where reports are late or unavailable for some reason, responses are estimated.

Seasonal Adjustment. Series are seasonal adjusted at the 3-digit SIC 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.

Description of Tables.

Table 1 summarizes the latest changes in output for the major market and industry groupings. Fourth-quarter to fourth-quarter changes for the past three years are shown. Output changes expressed at an annual rate for the past four quarters as well as monthly changes for the latest four months are shown. In addition, year-over-year changes are displayed for the latest IP month.

Table 2, which is in the same format as table 1, summarizes the latest changes in output for a special group of aggregates that have been constructed for analytical purposes. The total index is sub-divided into two broad categories: an *energy* grouping, which includes consumer energy products, commercial energy products, energy materials, and oil and gas well drilling, and a *nonenergy* grouping, which includes the remaining portion of the total index. Within the nonenergy aggregate, several other analytically useful categories are shown. One of these is a grouping of high-technology industries, which is composed of semiconductors and related electronic components, and industries that use a large concentration of these parts—computers and communication equipment. Other sub-groupings of the market and industry structures excluding this high-technology grouping and motor vehicles and parts are shown.

Table 3 displays the last nine months of motor vehicle assemblies, shown at seasonally adjusted annual rates. Seasonal factors for auto, light truck, and medium and heavy truck production are available on the Board's web site (**www.federalreserve.gov/releases/G17/mvsf.html**). Monthly changes in the IP indexes for the corresponding motor vehicle series will differ slightly from the monthly changes in assemblies, mainly because the IP indexes are built from a weighted (based on relative values) aggregate of the individual models.

Tables 4 and 5 show seasonally adjusted indexes for recent months for the major market and industry groups included on table 1 and the special aggregates displayed on table 2.

Table 6 summarizes the capacity utilization for the major industry groupings as well as for a few special aggregates. In addition to the utilization rates for the most recent four months and four quarters, the 1967–1999 average of utilization rates and operating rates for relevant cyclical peaks and troughs also are shown for each series.

Table 7 summarizes capacity growth. Average rates of growth in capacity for selected historical periods and for the most recent five years (on a fourth-quarter to fourth-quarter basis) are shown. In addition, growth rates for capacity on a annual-average basis are shown for the latest four quarters; the capacity growth rate for the current IP month is shown as well.

Table 8 shows total products expressed in gross values in billions of chained 1996 dollars at an annual rate. Compiling the IP index using gross-value weights facilitates comparison with other dollar-based data. The gross-value system focuses on products that leave the industrial sector and includes both final and intermediate products. The materials consumed in making final and intermediate products are implicitly included in the value weights applied to product series. The gross-product weights are derived from *Census of Manufactures* and *Annual Survey of Manufactures* data.

Table 9 shows diffusion indexes, which are calculated as the percentage of IP series that increased over the relevant span (one, three, or six months) plus one-half of the percentage of series that were unchanged. Because available source data for the current IP month account for a little less than half of the total index, the diffusion indexes are published with a one-month lag.

Table 10 shows the most recent six months in index form (both seasonally and not seasonally adjusted) of electric power use by industry for the major industry aggregates.

Tables 11–14 display historical seasonally adjusted data for total IP and manufacturing as well as the aggregates excluding high-technology industries. Monthly changes in output as well as indexes for output, utilization, and capacity are shown.

Note: The summary tables in the G17 release do not include all of the publicly available data. The more detailed series for IP, utilization, capacity, and electric power are available at the Board's web site (**www.federalreserve.gov/releases/G17/download.html**).

References and Release Dates

References. The annual revision published in early December 2000 will be described in an article to be published in the March 2001 *Federal Reserve Bulletin*. The annual revision published late 1999 is described more completely in the *Federal Reserve Bulletin*, vol.86 (March 2000). 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, and March 2000).

Release Schedule for 2001

At 9:15 a.m. on

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