FEDERAL RESERVE statistical release

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March 16, 2016

INDUSTRIAL PRODUCTION AND CAPACITY UTILIZATION

Industrial production decreased 0.5 percent in February after increasing 0.8 percent in January. Sizable declines in the indexes for both utilities and mining in February outweighed a gain of 0.2 percent for manufacturing. The output of utilities dropped 4.0 percent, as unseasonably warm weather curbed the demand

(over)

Industrial Production and Capacity Utilization: Summary
Seasonally adjusted

	2012=100						Percent change						
Industrial production	2015 Sept.[r]	Oct.[r]	Nov.[r]	Dec.[r]	2016 Jan.[r]	Feb.[p]	2015 Sept.[r]	Oct.[r]	Nov.[r]	Dec.[r]	2016 Jan.[r]	Feb.[p]	Feb. '15 to Feb. '16
Total index	107.5	107.3	106.5	106.0	106.9	106.3	.0	-.1	-.7	-.5	.8	-.5	-1.0
Previous estimates	107.5	107.4	106.6	105.9	106.8		.0	-.1	-.8	-.7	.9		
Major market groups													
Final Products	104.6	104.4	103.6	103.0	104.4	103.9	-.3	-.3	-.7	-.5	1.3	-.4	-.2
Consumer goods	106.6	106.4	105.8	105.3	107.1	106.4	-.2	-.2	-.6	-.4	1.8	-.7	1.1
Business equipment	106.9	106.5	105.2	104.2	104.9	105.5	-.4	-.3	-1.2	-.9	.6	.6	-.2
Nonindustrial supplies	106.2	107.2	107.0	106.7	107.3	107.2	.5	.9	-.2	-.3	.6	.0	1.4
Construction	109.5	111.7	111.7	112.0	111.6	112.2	-.6	2.0	.0	.2	-.3	.5	2.8
Materials	110.3	109.9	108.8	108.3	108.7	107.9	.1	-.4	-.9	-.5	.4	-.7	-2.6
Major industry groups													
Manufacturing (see note below)	105.8	106.1	105.9	105.6	106.2	106.4	-.1	.3	-.2	-.2	.5	.2	1.8
Previous estimates	105.8	106.2	105.9	105.7	106.2		-.1	.3	-.2	-.2	.5		
Mining	115.8	114.0	112.2	110.4	109.7	108.1	-.8	-1.5	-1.6	-1.6	-.7	-1.4	-9.9
Utilities	104.9	103.0	99.3	98.2	102.3	98.2	1.7	-1.8	-3.6	-1.2	4.2	-4.0	-9.3

	Percent of capacity												Capacity growth
Capacity utilization	Average 1972-2015	1988-89 high	1990-91 low	1994-95 high	2009 low	2015 Feb.	2015 Sept.[r]	Oct.[r]	Nov.[r]	Dec.[r]	2016 Jan.[r]	Feb.[p]	Feb. '15 to Feb. '16
Total industry	80.0	85.2	78.8	85.0	66.9	78.4	77.8	77.6	77.0	76.5	77.1	76.7	1.3
Previous estimates							77.9	77.7	77.0	76.4	77.1		
Manufacturing (see note below)	78.5	85.6	77.3	84.6	63.9	75.7	76.0	76.2	76.0	75.7	76.1	76.1	1.2
Previous estimates							76.1	76.3	76.0	75.8	76.1		
Mining	87.4	86.2	83.8	88.7	79.0	87.9	83.0	81.6	80.1	78.6	78.5	77.5	2.2
Utilities	85.8	92.9	84.3	93.3	78.5	83.0	80.2	78.7	75.8	74.9	78.0	74.8	.7
Stage-of-process groups													
Crude	86.3	87.6	84.3	89.8	76.9	86.0	82.6	81.6	80.4	79.2	79.4	78.6	1.7
Primary and semifinished	80.6	86.5	78.1	87.8	64.2	77.2	76.4	76.5	75.6	75.3	75.9	75.3	1.0
Finished	77.0	83.4	77.4	80.7	66.7	75.7	76.4	76.2	76.0	75.6	76.3	76.2	1.5

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.

for heating. Mining production fell 1.4 percent and has decreased nearly 1.3 percent per month, on average, over the past six months. At 106.3 percent of its 2012 average, total industrial production in February was 1.0 percent below its year-earlier level. Capacity utilization for the industrial sector decreased 0.4 percentage point in February to 76.7 percent, a rate that is 3.3 percentage points below its long-run (1972–2015) average.

Market Groups

The drop in utilities output for February contributed substantially to declines in the indexes for consumer goods, business supplies, and materials through their energy components. The market groups unaffected by the drop in utilities recorded mixed results. The production of consumer durables rose 0.3 percent; the output of consumer non-energy nondurables decreased 0.5 percent after jumping 1.1 percent in January. In February, the production of business equipment advanced 0.6 percent, with a decrease for transit equipment but sizable increases for information processing equipment and for industrial and other equipment. The indexes for construction supplies, for defense and space equipment, and for general business supplies (non-energy) each rose 0.5 percent or less. The output of durable materials moved up 0.2 percent; the output of nondurable materials moved down a similar amount, primarily because of a drop of 1.5 percent for textiles and a decrease of 0.3 percent for chemicals.

Industry Groups

Manufacturing output rose 0.2 percent in February, as an increase of 0.4 percent for durable manufacturing more than offset a decrease of 0.1 percent for nondurable manufacturing; the output of other manufacturing (publishing and logging) was unchanged. The indexes for most major durable goods industries either advanced or were little changed: Machinery, primary metals, and miscellaneous manufacturing registered the largest gains, nearly 1 percent each, while wood products recorded the only notable decrease, 1.2 percent. Within nondurables, decreases for food, beverage, and tobacco products; for textile and product mills; and for chemicals slightly outweighed gains of 2½ percent or more for apparel and leather manufacturing and for petroleum and coal products, as well as smaller increases for other industries.

The large drop in mining in February resulted from decreases in crude oil extraction, coal mining, and oil and gas well drilling and servicing. Since late 2014, the index for oil and gas well drilling and servicing has fallen more than 60 percent.

Capacity utilization for manufacturing was unchanged in February at 76.1 percent, a rate that is 2.4 percentage points below its long-run average. The operating rate for durables edged up, while the rate for nondurables edged down; the utilization rate for other manufacturing (publishing and logging) was unchanged. The operating rate for mining moved down 1.0 percentage point, and the rate for utilities dropped more than 3 percentage points; the rates for both sectors were below their long-run averages by nearly 10 percentage points or more.

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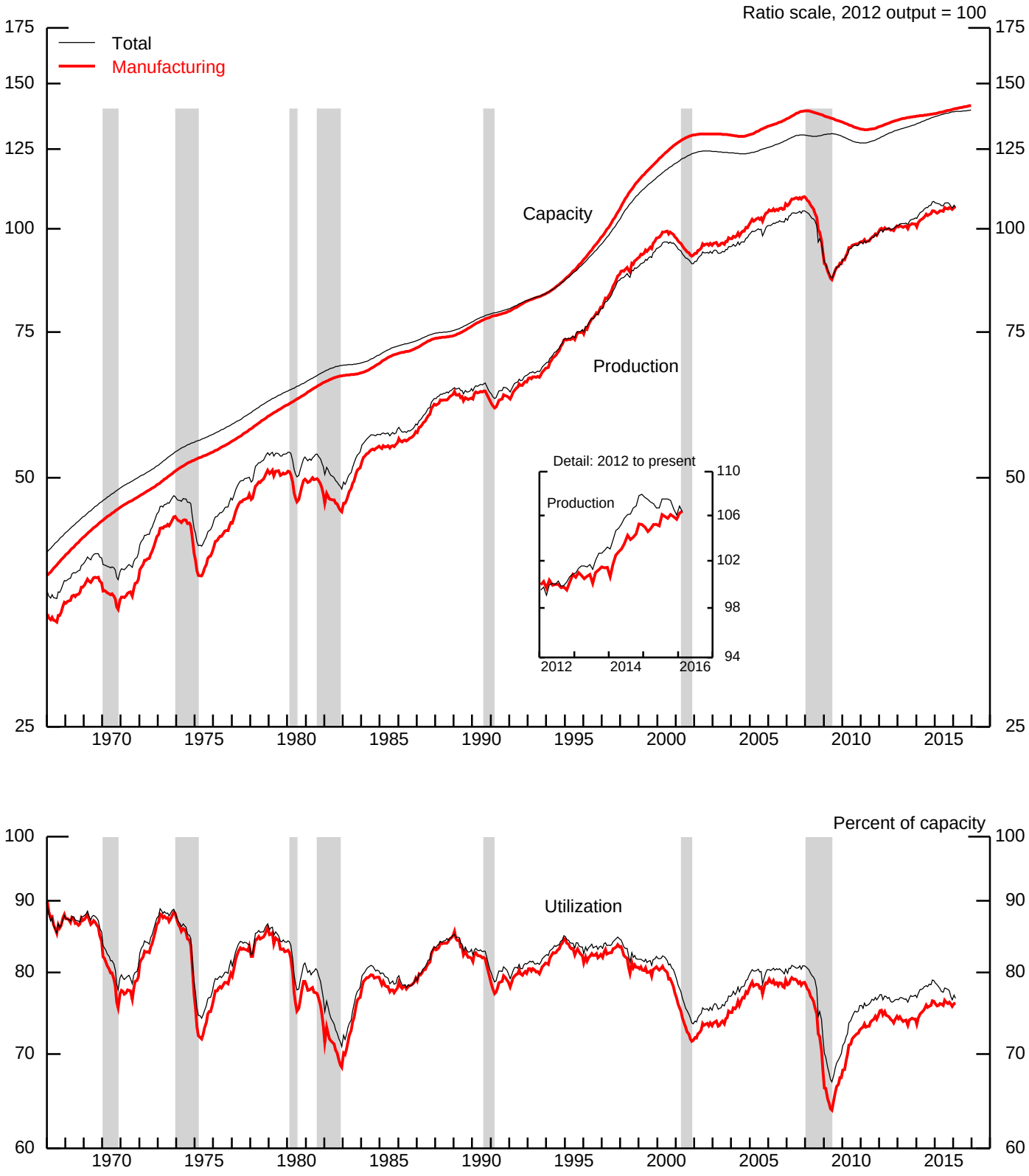
Further detail is available on the Board's website (**www.federalreserve.gov/releases/G17/**).

Revision of Industrial Production and Capacity Utilization

The Federal Reserve Board plans to issue its annual revision to the index of industrial production (IP) and the related measures of capacity utilization on April 1, 2016, at 12:00 noon EDT. New annual benchmark data for 2014 for manufacturing will be incorporated, as well as other annual data, including information on the mining of metallic and nonmetallic minerals (except fuels). The updated IP indexes will include revisions to monthly indicators (either product data or input data) and to seasonal factors for each industry. In addition, the estimation methods for some series may be changed. Any modifications to the methods for estimating the output of an industry will affect the index from 1972 to the present.

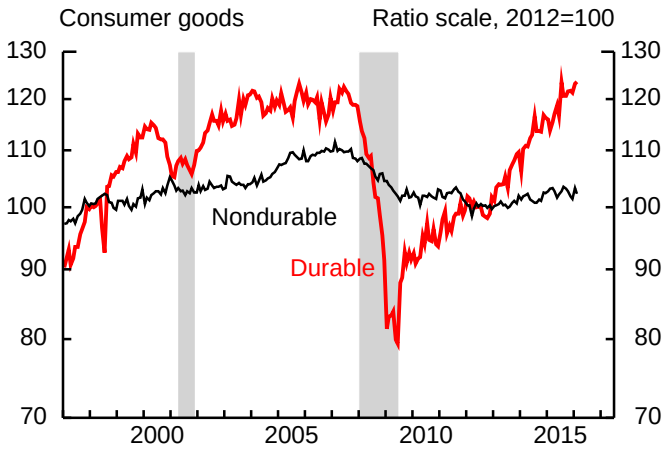
Capacity and capacity utilization will be revised to incorporate data through the fourth quarter of 2015 from the U.S. Census Bureau's Quarterly Survey of Plant Capacity along with new data on capacity from the U.S. Geological Survey, the U.S. Department of Energy, and other organizations.

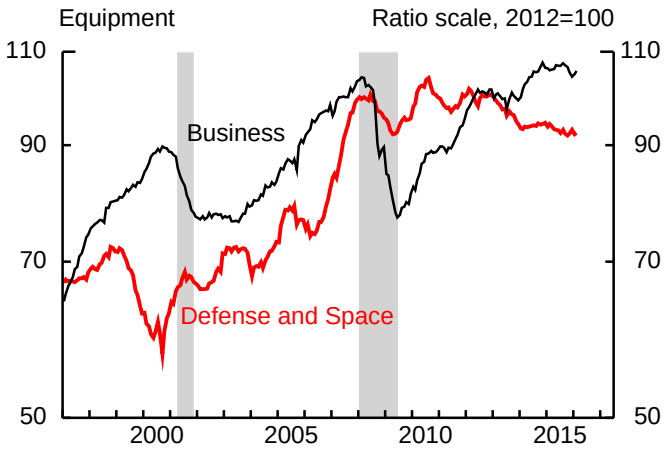
1. Industrial production, capacity, and utilization

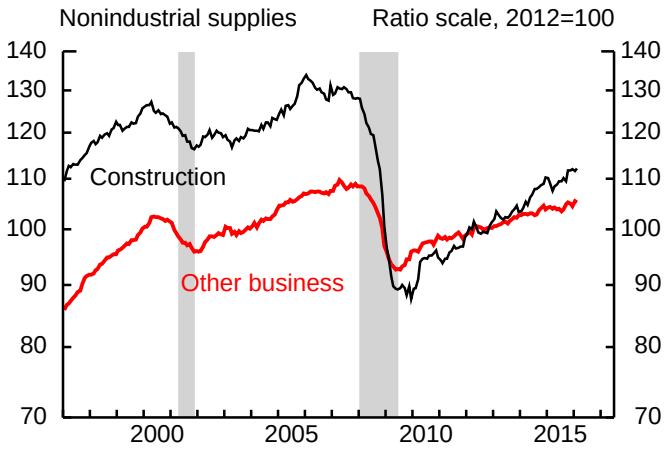


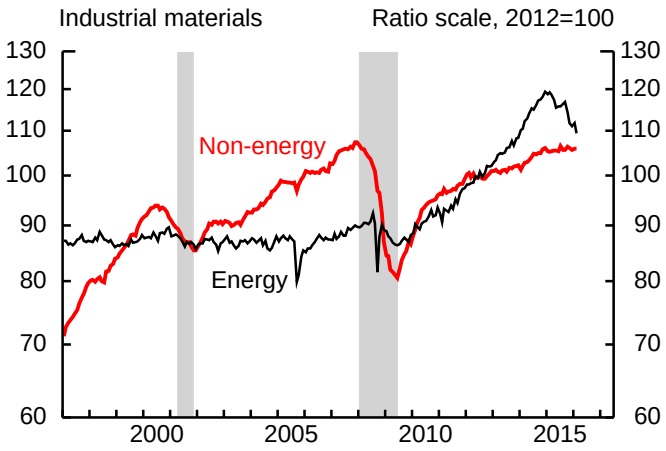
Note: The shaded areas are periods of business recession as defined by the National Bureau of Economic Research (NBER).

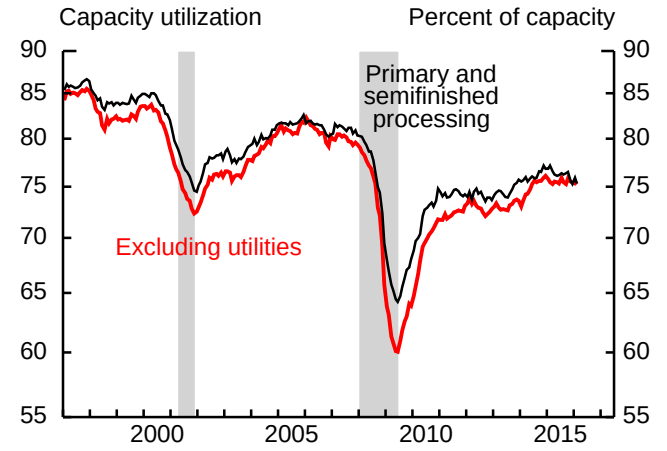
2. Industrial production and capacity utilization

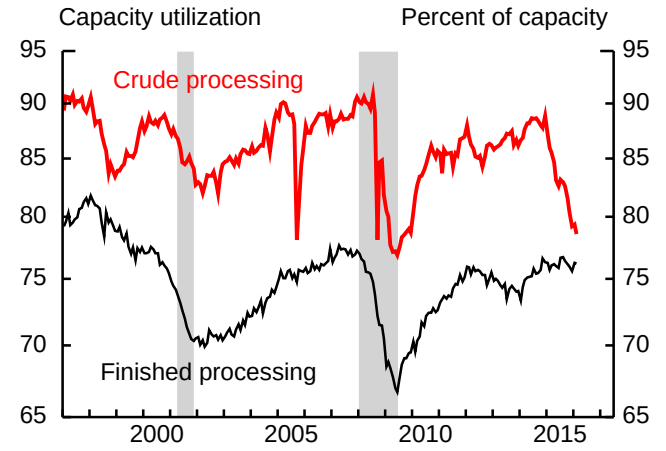






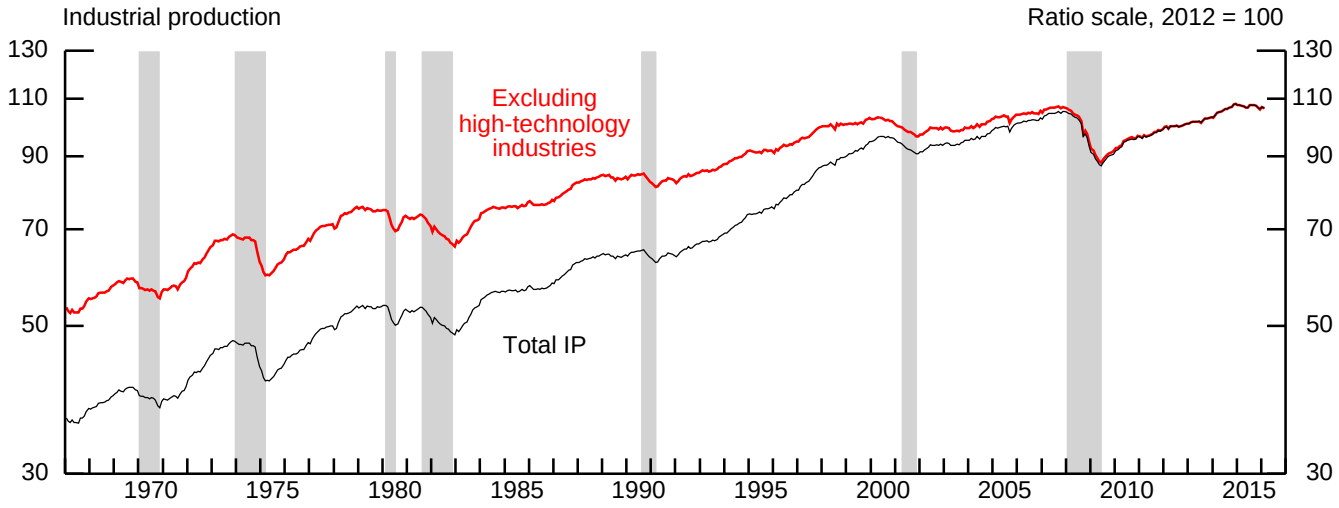


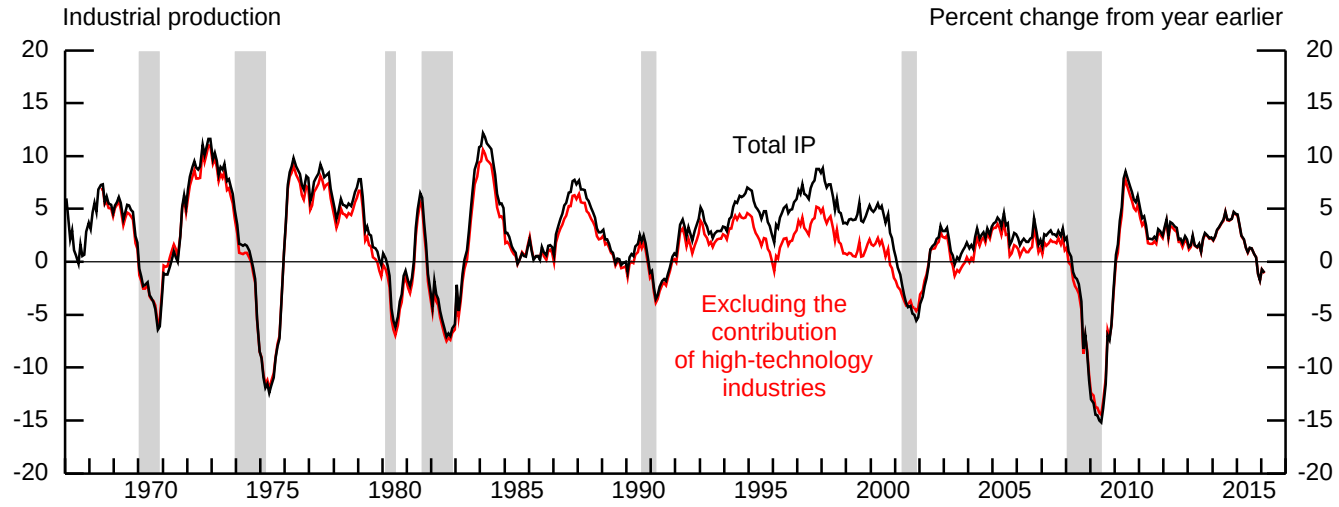


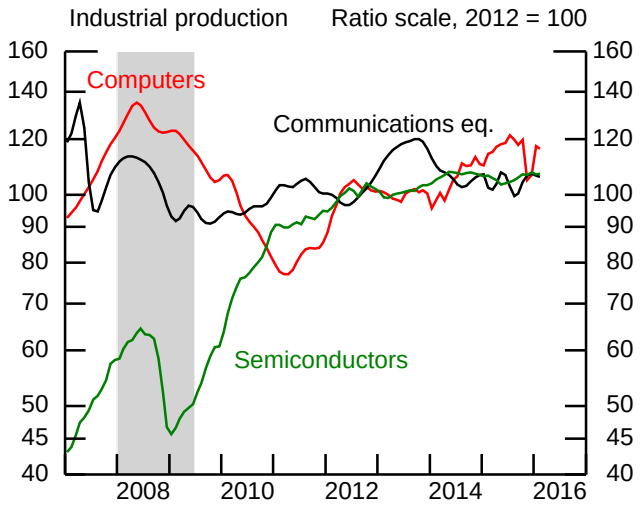


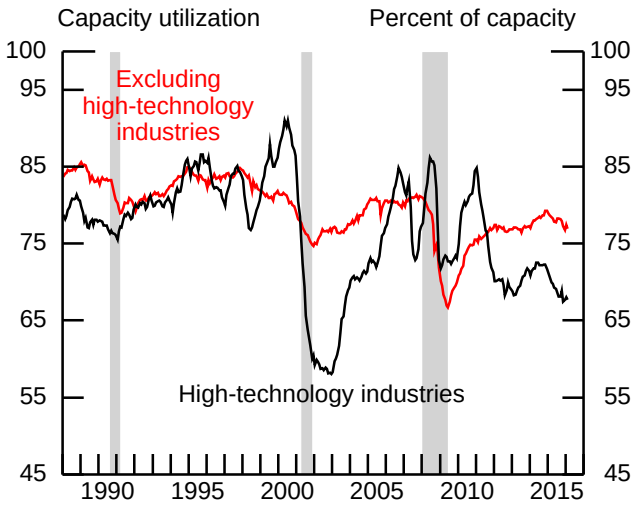
Note: The shaded areas are periods of business recession as defined by the National Bureau of Economic Research (NBER).

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









Notes: High-technology industries are defined as semiconductors and related electronic components (NAICS 3344), 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

Item	2015 proportion[1]	Fourth quarter to fourth quarter			Annual rate			Monthly rate						Feb. '15 to Feb. '16
		2013	2014	2015	2015 Q2	Q3[r]	Q4[r]	2015 Sept.[r]	Oct.[r]	Nov.[r]	Dec.[r]	2016 Jan.[r]	Feb.[p]	
Total IP	100.00	2.3	4.5	-.8	-2.3	2.6	-3.1	.0	-.1	-.7	-.5	.8	-.5	-1.0
MARKET GROUPS														
Final products and nonindustrial supplies	55.70	1.6	3.0	-.2	-1.8	3.5	-2.0	-.1	.1	-.6	-.5	1.1	-.3	.2
Consumer goods	27.45	2.9	1.8	1.2	-1.0	6.4	-3.5	-.2	-.2	-.6	-.4	1.8	-.7	1.1
Durable	6.08	9.5	5.9	5.2	8.8	14.6	-.2	.0	.8	.1	-.3	1.5	.3	8.5
Automotive products	3.04	15.5	6.8	7.9	15.5	23.2	-4.2	-.7	1.5	.2	-2.0	3.8	.4	13.5
Home electronics	.17	2.4	3.4	5.4	11.2	9.0	-.1	2.5	2.1	-4.8	.2	2.9	1.1	7.9
Appliances, furniture, carpeting	.88	5.6	7.6	2.8	3.1	8.8	3.9	1.2	.6	-1.1	1.7	.0	.0	4.5
Miscellaneous goods	1.99	3.8	4.2	2.2	1.5	5.1	4.7	.3	-.2	.8	1.3	-1.4	.1	2.9
Nondurable	21.37	1.3	.8	.0	-3.6	4.1	-4.4	-.3	-.5	-.8	-.5	1.8	-1.0	-.9
Non-energy	16.43	-.9	1.8	1.0	.1	3.8	-1.4	-.7	-.3	.4	.0	1.1	-.5	1.7
Foods and tobacco	8.95	1.1	.4	1.0	1.3	4.6	-1.9	-.7	-.7	.2	.1	1.1	-.7	2.2
Clothing	.25	-1.5	.1	-4.2	-9.5	3.8	-11.1	-.5	-2.4	-.3	.4	-3.8	3.1	-3.9
Chemical products	5.42	-4.9	6.3	1.8	-3.4	2.3	.6	-.3	.2	.7	-.4	1.2	-.4	.5
Paper products	1.29	-.5	-5.6	-1.3	7.6	4.5	-7.1	-2.6	.0	1.0	.4	.3	-.4	1.8
Energy	4.94	7.3	-1.8	-3.3	-14.2	5.1	-14.2	1.1	-1.0	-5.0	-2.0	4.6	-2.6	-8.9
Business equipment	10.58	-1.5	7.3	-1.4	2.4	1.6	-6.1	-.4	-.3	-1.2	-.9	.6	.6	-.2
Transit	2.71	1.4	11.8	-.1	6.4	3.7	-9.7	-1.0	-.5	-.7	-1.5	1.4	-.4	.1
Information processing	2.27	-.2	3.4	.9	1.0	.6	-.5	-.6	-.2	.0	1.0	-.3	.9	1.5
Industrial and other	5.60	-3.3	6.9	-2.9	1.1	1.1	-6.5	.0	-.3	-2.0	-1.5	.7	.9	-1.1
Defense and space equipment	2.19	-5.2	-.8	-2.0	-3.6	-2.1	-.7	-.8	-.4	.3	.9	-1.0	.2	-2.0
Construction supplies	4.74	3.4	5.2	2.3	-.2	3.1	7.9	-.6	2.0	.0	.2	-.3	.5	2.8
Business supplies	10.30	2.2	1.7	.7	-.5	.1	3.2	1.0	.4	-.3	-.5	1.0	-.3	.8
Materials	44.30	3.2	6.1	-1.6	-3.0	1.4	-4.6	.1	-.4	-.9	-.5	.4	-.7	-2.6
Non-energy	27.68	1.6	3.4	.4	.6	1.9	.4	.0	.6	-.2	-.4	.2	.0	.7
Durable	16.98	2.4	4.8	-.2	-.8	3.7	-1.8	-.6	.8	-.7	-.6	-.1	.2	-.3
Consumer parts	3.15	4.0	9.0	4.8	10.2	15.3	-6.2	.5	.8	-2.4	-.9	1.1	-.1	4.5
Equipment parts	5.61	.8	4.0	-.9	-2.3	.3	1.0	-.1	.5	-.3	-.2	-.8	.6	-.8
Other	8.23	3.0	3.8	-1.7	-3.6	1.8	-1.8	-1.3	1.1	-.3	-.7	-.1	.0	-1.7
Nondurable	10.70	.4	1.1	1.5	3.0	-.9	3.9	1.0	.3	.6	.0	.6	-.2	2.3
Textile	.42	6.7	1.5	2.5	2.4	-9.4	11.2	.9	2.0	-.1	.9	1.2	-1.5	1.4
Paper	1.92	-1.4	-1.8	-1.9	.0	-4.1	-1.4	.8	.4	-1.7	-.2	1.3	.3	.2
Chemical	5.19	.0	2.4	3.1	5.1	-1.0	8.2	1.3	.8	1.2	.3	.7	-.3	3.8
Energy	16.62	5.6	9.9	-5.0	-8.7	.6	-13.0	.4	-2.2	-2.2	-.7	.7	-2.1	-8.2
INDUSTRY GROUPS														
Manufacturing	75.92	1.3	3.4	.9	1.5	3.0	-.2	-.1	.3	-.2	-.2	.5	.2	1.8
Manufacturing (NAICS) **31–33**	73.41	1.4	3.9	1.0	1.3	3.1	.0	-.1	.3	-.2	-.2	.6	.2	1.8
Durable manufacturing	39.42	2.0	5.1	.4	1.4	3.9	-1.2	-.3	.5	-.6	-.2	.4	.4	1.6
Wood products 321	1.18	5.3	4.2	1.0	-4.6	10.1	7.1	.7	.8	-.4	1.8	.9	-1.2	3.9
Nonmetallic mineral products 327	1.98	3.6	5.2	4.8	-.7	4.6	13.1	-.4	1.9	1.1	1.3	-1.2	-.2	3.7
Primary metals 331	2.33	5.5	1.2	-6.4	-2.5	.3	-5.1	-1.9	2.1	-1.2	-1.7	-.5	.8	-3.6
Fabricated metal products 332	5.58	2.9	2.4	-1.7	-.6	-2.8	-3.6	-.1	-.5	-.3	.8	-.1	-.1	-1.3
Machinery 333	6.06	-3.6	8.2	-4.5	-.4	1.7	-9.0	.0	-.3	-3.0	-2.2	-.3	.8	-4.4
Computer and electronic products 334	5.78	-.5	3.6	.7	-1.9	2.5	2.0	.0	.2	-.1	.8	-.3	.7	1.5
Electrical equip., appliances, and components 335	1.90	-.7	2.6	6.7	8.0	4.8	9.9	-1.4	3.1	-1.2	2.0	-.2	.7	7.4
Motor vehicles and parts 3361–3	5.63	10.2	9.8	6.1	14.0	18.7	-7.6	-.4	1.3	-.7	-2.4	3.4	-.1	9.1
Aerospace and miscellaneous transportation equipment 3364–9	4.63	-1.1	3.0	.7	1.3	.3	-1.0	-.4	-.6	.2	.7	-.7	.5	.2
Furniture and related products 337	1.22	3.2	9.3	2.6	-5.3	7.2	8.6	1.2	1.0	.9	-1.9	2.3	.0	3.6
Miscellaneous 339	3.14	5.6	5.8	1.2	-.2	2.1	6.3	-.1	.4	.8	.8	1.2	.9	5.8
Nondurable manufacturing	34.00	.7	2.6	1.6	1.2	2.2	1.5	.2	.1	.2	-.2	.7	-.1	2.1
Food, beverage, and tobacco products 311,2	10.72	1.4	.7	1.3	1.4	5.1	-1.7	-.5	-.8	.3	.1	1.0	-.7	2.2
Textile and product mills 313,4	.69	5.5	1.7	1.6	4.8	-5.0	7.3	.5	1.4	-.2	.3	1.2	-1.3	1.8
Apparel and leather 315,6	.27	-.7	.4	-4.3	-8.7	3.3	-11.8	-.5	-2.4	-.6	.6	-3.5	3.0	-3.8
Paper 322	2.63	-2.0	-.9	-2.3	-.4	-4.7	-.8	.9	.0	-.7	-.4	.7	.4	-.2
Printing and support 323	1.47	3.0	.2	2.4	.4	4.3	3.8	-.1	.5	.3	-.1	.1	.4	3.0
Petroleum and coal products 324	2.76	5.6	.1	3.0	3.5	1.6	2.3	.6	1.2	-.6	-1.8	.6	2.5	2.9
Chemicals 325	11.97	-1.9	4.5	2.3	1.1	.3	4.6	.7	.7	.7	-.1	.9	-.3	2.2
Plastics and rubber products 326	3.48	2.1	9.7	2.3	.2	6.0	1.0	-.2	.2	-.2	.1	.1	.6	2.3
Other manufacturing (non-NAICS) **1133,5111**	2.50	-1.6	-8.6	-1.5	8.0	-1.6	-6.0	-1.7	.3	.1	-.3	-.1	.0	-.3
Mining **21**	13.21	5.8	12.3	-8.0	-14.0	.7	-13.4	-.8	-1.5	-1.6	-1.6	-.7	-1.4	-9.9
Utilities **2211,2**	10.88	4.6	-1.0	-3.7	-12.3	2.4	-11.5	1.7	-1.8	-3.6	-1.2	4.2	-4.0	-9.3
Electric 2211	9.66	3.7	-.6	-2.7	-9.9	2.6	-9.3	2.2	-2.2	-2.9	-1.0	3.1	-3.9	-7.9
Natural gas 2212	1.22	11.0	-3.2	-11.4	-28.7	.3	-27.7	-2.8	1.5	-9.5	-2.6	13.7	-5.2	-19.0

r Revised. p Preliminary.

NOTE. Under the industry groups, the figures to the right of the series descriptions are 2012 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 website (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 the relative weights for the rates of change for each series in the computation of the change in total industrial production in the following year.

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

Item		2015 proportion	Fourth quarter to fourth quarter			Annual rate			Monthly rate						Feb. '15 to Feb. '16
			2013	2014	2015	2015 Q2	Q3[r]	Q4[r]	2015 Sept.[r]	Oct.[r]	Nov.[r]	Dec.[r]	2016 Jan.[r]	Feb.[p]	
Total industry		100.00	2.3	4.5	-.8	-2.3	2.6	-3.1	.0	-.1	-.7	-.5	.8	-.5	-1.0
Energy		25.03	5.6	6.6	-5.6	-12.2	1.2	-11.9	.7	-1.7	-2.6	-1.2	1.6	-2.3	-8.7
Consumer products		4.94	7.3	-1.8	-3.3	-14.2	5.1	-14.2	1.1	-1.0	-5.0	-2.0	4.6	-2.6	-8.9
Commercial products		3.08	4.7	1.3	-.2	-5.9	.5	1.4	2.2	-.3	-.4	-1.4	2.5	-1.9	-2.5
Oil and gas well drilling	213111	.38	-1.3	7.3	-59.4	-83.3	-17.9	-39.1	-4.0	-5.0	-4.0	-7.4	-5.9	-15.6	-59.7
Converted fuel		3.88	.9	.8	-.9	-4.0	5.0	-11.4	2.6	-2.1	-3.3	-1.5	4.1	-2.8	-6.0
Primary energy		12.74	6.8	12.2	-6.3	-10.2	-.7	-13.6	-.4	-2.2	-1.9	-.5	-.4	-1.8	-9.0
Non-energy		74.97	1.1	3.6	.8	1.3	3.1	-.2	-.2	.4	-.2	-.3	.5	.1	1.6
Selected high-technology industries		2.79	2.6	1.6	.0	-1.2	-.2	4.7	.5	1.6	-1.4	.8	.7	-.1	1.4
Computers and peripheral equipment	3341	.39	-.9	10.3	-.7	17.6	6.1	-27.2	-1.7	1.9	-12.4	1.7	9.9	-.8	1.8
Communications equipment	3342	.52	13.6	-10.7	.3	9.2	-17.6	21.5	.8	3.7	2.2	.7	-.8	-.3	3.7
Semiconductors and related electronic components	3344	1.88	.2	4.1	-.1	-7.5	3.7	8.3	.9	1.0	-.1	.7	-.6	.2	.7
Excluding selected high-technology industries		72.18	1.0	3.6	.8	1.4	3.2	-.4	-.3	.3	-.1	-.3	.5	.1	1.6
Motor vehicles and parts	**3361–3**	5.63	10.2	9.8	6.1	14.0	18.7	-7.6	-.4	1.3	-.7	-2.4	3.4	-.1	9.1
Motor vehicles	3361	2.63	14.6	8.1	4.7	20.6	25.5	-17.5	-2.3	1.5	-.9	-3.9	5.4	-.3	11.1
Motor vehicle parts	3363	2.56	5.4	11.6	6.7	11.3	13.1	-2.9	.9	.8	-1.0	-1.0	1.6	.3	6.9
Excluding motor vehicles and parts		66.55	.4	3.2	.4	.5	1.9	.3	-.2	.2	-.1	-.1	.3	.1	1.0
Consumer goods		19.79	-.1	2.4	1.3	.5	4.3	-.5	-.5	-.3	.4	.2	.8	-.4	2.1
Business equipment		9.01	-2.4	7.3	-1.6	1.0	1.3	-4.8	-.2	-.5	-1.1	-.7	.1	1.0	-.5
Construction supplies		4.72	3.4	5.3	2.3	-.2	3.2	7.8	-.6	2.0	.0	.2	-.3	.5	2.8
Business supplies		6.70	1.1	1.5	1.2	2.7	-.2	3.5	.4	.6	-.2	-.2	.4	.4	2.3
Materials		24.14	1.5	2.7	.0	.2	.9	.5	-.1	.5	-.1	-.3	.1	.0	.2
Measures excluding selected high-technology industries															
Total industry		97.21	2.3	4.5	-.9	-2.3	2.7	-3.4	.0	-.2	-.7	-.5	.8	-.5	-1.1
Manufacturing[1]		73.12	1.2	3.5	.9	1.6	3.1	-.4	-.2	.3	-.2	-.3	.5	.2	1.8
Durable		36.78	2.0	5.3	.4	1.6	4.3	-1.7	-.3	.4	-.6	-.3	.4	.4	1.6
Measures excluding motor vehicles and parts															
Total industry		94.37	2.0	4.2	-1.2	-3.2	1.7	-2.8	.0	-.2	-.7	-.4	.6	-.5	-1.6
Manufacturing[1]		70.29	.7	3.0	.5	.6	1.8	.5	-.1	.2	-.2	.0	.3	.2	1.2
Durable		33.95	.9	4.3	-.5	-.5	1.7	-.1	-.3	.3	-.6	.1	-.1	.4	.4
Measures excluding selected high-technology industries and motor vehicles and parts															
Total industry		91.58	2.0	4.3	-1.3	-3.2	1.7	-3.1	.0	-.3	-.7	-.4	.6	-.5	-1.7
Manufacturing[1]		67.50	.6	3.0	.5	.7	1.8	.3	-.1	.2	-.1	-.1	.3	.2	1.2
Stage-of-process components of non-energy materials, measures of the input to															
Finished processors		11.10	1.4	4.2	.6	1.6	3.2	-1.2	.2	.6	-1.1	-.4	.2	.3	.9
Primary and semifinished processors		16.58	1.8	2.8	.3	.0	1.1	1.4	-.2	.6	.4	-.4	.2	-.1	.6

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1. Refer to note on cover page.

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

Item	2015 average	2015 Q1	Q2	Q3	Q4	2015 Sept.	Oct.	Nov.	Dec.	2016 Jan.	Feb.
Total	12.10	11.56	12.16	12.67	12.02	12.30	12.35	12.01	11.70	12.20	12.10
Autos	4.16	4.09	4.34	4.28	3.93	4.08	4.04	3.89	3.85	4.05	4.02
Trucks	7.94	7.47	7.83	8.39	8.09	8.22	8.31	8.12	7.85	8.15	8.08
Light	7.62	7.15	7.50	8.06	7.78	7.88	7.98	7.81	7.55	7.82	7.77
Medium and heavy	.32	.32	.32	.33	.31	.34	.32	.31	.30	.33	.30
Memo											
Autos and light trucks	11.78	11.24	11.84	12.34	11.71	11.96	12.02	11.71	11.40	11.86	11.80

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

Table 4
Industrial Production Indexes: Market and Industry Group Summary

2012 = 100, seasonally adjusted

Item		2015 proportion	2015 June	July	Aug.	Sept.[r]	Oct.[r]	Nov.[r]	Dec.[r]	2016 Jan.[r]	Feb.[p]
Total IP		100.00	106.7	107.5	107.5	107.5	107.3	106.5	106.0	106.9	106.3
Market Groups											
Final products and nonindustrial supplies		55.70	104.1	104.9	105.2	105.1	105.1	104.5	104.0	105.1	104.8
Consumer goods		27.45	105.0	106.8	106.9	106.6	106.4	105.8	105.3	107.1	106.4
Durable		6.08	116.7	123.4	120.7	120.6	121.6	121.7	121.3	123.1	123.5
Automotive products		3.04	123.8	137.5	131.4	130.5	132.4	132.7	130.1	135.1	135.6
Home electronics		.17	112.9	114.0	112.4	115.1	117.5	111.8	112.0	115.3	116.6
Appliances, furniture, carpeting		.88	113.5	115.2	114.5	115.9	116.6	115.2	117.2	117.2	117.2
Miscellaneous goods		1.99	109.0	108.9	109.6	109.9	109.7	110.5	112.0	110.4	110.6
Nondurable		21.37	102.1	102.7	103.5	103.2	102.7	101.8	101.4	103.2	102.2
Non-energy		16.43	100.4	101.3	101.7	101.0	100.7	101.1	101.1	102.2	101.7
Foods and tobacco		8.95	101.0	102.4	104.0	103.3	102.6	102.8	102.9	104.0	103.3
Clothing		.25	92.0	93.7	93.3	92.8	90.6	90.3	90.7	87.2	90.0
Chemical products		5.42	100.0	100.1	99.4	99.1	99.3	100.0	99.7	100.9	100.4
Paper products		1.29	94.4	95.9	93.4	90.9	91.0	91.9	92.2	92.4	92.1
Energy		4.94	106.7	106.5	108.4	109.5	108.4	103.0	100.9	105.5	102.7
Business equipment		10.58	106.7	106.8	107.3	106.9	106.5	105.2	104.2	104.9	105.5
Transit		2.71	118.7	123.0	121.4	120.2	119.6	118.8	117.0	118.7	118.2
Information processing		2.27	105.7	104.8	105.1	104.4	104.3	104.3	105.3	105.0	105.9
Industrial and other		5.60	102.3	101.0	102.5	102.5	102.1	100.1	98.7	99.3	100.3
Defense and space equipment		2.19	92.9	92.4	92.9	92.2	91.9	92.2	93.0	92.1	92.3
Construction supplies		4.74	109.4	109.5	110.1	109.5	111.7	111.7	112.0	111.6	112.2
Business supplies		10.30	103.9	103.5	103.8	104.8	105.2	104.9	104.4	105.5	105.1
Materials		44.30	109.7	110.4	110.1	110.3	109.9	108.8	108.3	108.7	107.9
Non-energy		27.68	105.2	106.4	105.6	105.6	106.3	106.0	105.6	105.8	105.9
Durable		16.98	106.9	108.7	108.0	107.4	108.3	107.5	106.9	106.8	106.9
Consumer parts		3.15	116.8	124.1	121.2	121.8	122.8	119.8	118.7	120.0	119.9
Equipment parts		5.61	102.9	102.9	103.3	103.2	103.6	103.3	103.1	102.3	102.9
Other		8.23	106.3	107.4	106.7	105.4	106.5	106.1	105.4	105.3	105.3
Nondurable		10.70	102.7	103.0	102.0	103.0	103.3	103.9	103.8	104.5	104.3
Textile		.42	108.8	106.4	106.0	106.9	109.0	108.9	109.9	111.3	109.6
Paper		1.92	95.5	95.3	95.3	96.0	96.4	94.7	94.5	95.8	96.0
Chemical		5.19	105.1	105.1	103.5	104.8	105.6	106.9	107.2	108.0	107.6
Energy		16.62	115.7	115.7	116.4	116.8	114.3	111.8	110.9	111.7	109.4
Industry Groups											
Manufacturing		75.92	105.1	106.1	105.9	105.8	106.1	105.9	105.6	106.2	106.4
Manufacturing (NAICS)	**31–33**	73.41	105.7	106.8	106.6	106.5	106.9	106.7	106.4	107.0	107.2
Durable manufacturing		39.42	107.4	108.7	108.4	108.1	108.6	107.9	107.7	108.1	108.5
Wood products	321	1.18	108.9	111.2	111.7	112.4	113.3	112.9	114.9	116.0	114.6
Nonmetallic mineral products	327	1.98	111.2	111.7	112.9	112.5	114.5	115.8	117.3	115.9	115.7
Primary metals	331	2.33	102.6	102.1	100.1	98.2	100.2	99.0	97.3	96.8	97.6
Fabricated metal products	332	5.58	104.8	104.9	103.7	103.6	103.1	102.7	103.6	103.5	103.5
Machinery	333	6.06	99.6	98.9	101.1	101.1	100.8	97.7	95.6	95.3	96.1
Computer and electronic products	334	5.78	104.4	104.1	104.4	104.4	104.7	104.5	105.4	105.0	105.8
Electrical equip., appliances, and components	335	1.90	106.3	106.4	107.7	106.2	109.5	108.2	110.3	110.1	110.8
Motor vehicles and parts	3361–3	5.63	123.5	136.6	129.8	129.2	130.9	130.0	126.9	131.3	131.2
Aerospace and miscellaneous transportation equipment	3364–9	4.63	105.2	105.2	106.0	105.6	105.0	105.1	105.9	105.2	105.7
Furniture and related products	337	1.22	112.6	112.9	114.0	115.3	116.5	117.5	115.3	117.9	117.8
Miscellaneous	339	3.14	113.2	110.5	111.9	111.8	112.2	113.1	114.0	115.3	116.3
Nondurable manufacturing		34.00	103.8	104.6	104.7	104.9	105.0	105.3	105.1	105.9	105.8
Food, beverage, and tobacco products	311,2	10.72	101.9	103.5	104.9	104.4	103.6	103.9	104.0	105.0	104.2
Textile and product mills	313,4	.69	107.2	105.8	105.9	106.4	107.9	107.8	108.0	109.4	107.9
Apparel and leather	315,6	.27	93.3	95.0	94.5	94.0	91.7	91.2	91.7	88.5	91.1
Paper	322	2.63	96.3	96.0	95.4	96.3	96.3	95.6	95.3	96.0	96.3
Printing and support	323	1.47	102.6	103.1	104.0	104.0	104.5	104.8	104.7	104.8	105.2
Petroleum and coal products	324	2.76	107.6	109.1	109.1	109.7	111.0	110.4	108.4	109.0	111.7
Chemicals	325	11.97	103.8	103.8	102.5	103.2	103.9	104.6	104.5	105.5	105.2
Plastics and rubber products	326	3.48	113.4	114.7	115.8	115.6	115.8	115.6	115.6	115.7	116.3
Other manufacturing (non-NAICS)	**1133,5111**	2.50	88.4	89.1	87.4	85.9	86.2	86.3	86.0	85.9	85.8
Mining	**21**	13.21	115.1	116.5	116.7	115.8	114.0	112.2	110.4	109.7	108.1
Utilities	**2211,2**	10.88	103.1	101.7	103.2	104.9	103.0	99.3	98.2	102.3	98.2
Electric	2211	9.66	101.9	100.4	102.2	104.4	102.2	99.2	98.2	101.3	97.3
Natural gas	2212	1.22	111.9	111.8	110.8	107.7	109.3	99.0	96.4	109.6	103.9

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NOTE. Refer to notes on table 1.

Table 5
Industrial Production Indexes: Special Aggregates

2012 = 100, seasonally adjusted

Item		2015 proportion	2015 June	July	Aug.	Sept.[r]	Oct.[r]	Nov.[r]	Dec.[r]	2016 Jan.[r]	Feb.[p]
Total industry		100.00	106.7	107.5	107.5	107.5	107.3	106.5	106.0	106.9	106.3
Energy		25.03	110.7	110.7	111.5	112.3	110.3	107.5	106.2	108.0	105.5
Consumer products		4.94	106.7	106.5	108.4	109.5	108.4	103.0	100.9	105.5	102.7
Commercial products		3.08	105.5	105.4	105.3	107.6	107.3	106.9	105.4	108.0	106.0
Oil and gas well drilling	213111	.38	45.6	46.2	46.9	45.1	42.8	41.1	38.1	35.8	30.3
Converted fuel		3.88	105.1	103.1	103.7	106.3	104.0	100.6	99.1	103.2	100.3
Primary energy		12.74	118.2	119.0	119.7	119.3	116.7	114.5	113.9	113.5	111.5
Non-energy		74.97	104.9	105.9	105.7	105.5	105.9	105.7	105.4	106.0	106.0
Selected high-technology industries		2.79	106.1	105.9	105.6	106.2	107.9	106.3	107.2	108.0	107.9
Computers and peripheral equipment	3341	.39	118.4	121.4	119.7	117.6	119.8	104.9	106.7	117.3	116.3
Communications equipment	3342	.52	106.7	102.7	99.6	100.4	104.1	106.4	107.2	106.4	106.0
Semiconductors and related electronic components	3344	1.88	103.8	104.1	104.9	105.8	106.9	106.7	107.5	106.9	107.1
Excluding selected high-technology industries		72.18	104.8	105.9	105.7	105.4	105.7	105.6	105.3	105.8	105.9
Motor vehicles and parts	**3361–3**	5.63	123.5	136.6	129.8	129.2	130.9	130.0	126.9	131.3	131.2
Motor vehicles	3361	2.63	124.4	144.3	132.9	129.8	131.7	130.6	125.5	132.3	131.9
Motor vehicle parts	3363	2.56	123.3	131.3	126.8	128.0	129.0	127.8	126.4	128.5	128.8
Excluding motor vehicles and parts		66.55	103.5	103.8	104.0	103.8	104.0	103.9	103.8	104.1	104.2
Consumer goods		19.79	101.9	102.8	103.3	102.8	102.5	102.9	103.1	103.9	103.5
Business equipment		9.01	105.6	104.6	105.8	105.6	105.0	103.9	103.1	103.2	104.2
Construction supplies		4.72	109.4	109.6	110.2	109.5	111.8	111.8	112.0	111.7	112.2
Business supplies		6.70	103.0	102.3	102.8	103.3	103.9	103.7	103.5	104.0	104.4
Materials		24.14	104.0	104.6	104.1	104.0	104.5	104.5	104.1	104.2	104.2
Measures excluding selected high-technology industries											
Total industry		97.21	106.7	107.5	107.5	107.5	107.3	106.5	106.0	106.8	106.3
Manufacturing[1]		73.12	105.0	106.1	105.9	105.7	106.0	105.8	105.5	106.1	106.3
Durable		36.78	107.4	108.9	108.5	108.2	108.6	108.0	107.6	108.0	108.4
Measures excluding motor vehicles and parts											
Total industry		94.37	105.9	106.1	106.4	106.4	106.2	105.4	105.0	105.7	105.1
Manufacturing[1]		70.29	103.9	104.1	104.3	104.2	104.5	104.3	104.3	104.6	104.8
Durable		33.95	105.2	104.9	105.4	105.2	105.5	104.9	105.0	104.9	105.4
Measures excluding selected high-technology industries and motor vehicles and parts											
Total industry		91.58	105.8	106.0	106.4	106.4	106.1	105.4	104.9	105.6	105.0
Manufacturing[1]		67.50	103.7	104.0	104.2	104.1	104.3	104.2	104.1	104.4	104.6
Stage-of-process components of non-energy materials, measures of the input to											
Finished processors		11.10	105.3	107.0	106.5	106.7	107.4	106.1	105.7	105.9	106.2
Primary and semifinished processors		16.58	105.2	106.0	105.1	104.9	105.5	105.9	105.6	105.8	105.6

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1. Refer to note on cover page.

Table 6
Diffusion Indexes of Industrial Production

Percent

Item	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
One month earlier												
2014	40.8	63.5	66.6	49.5	60.9	57.2	63.9	46.5	61.2	56.2	63.2	54.5
2015	49.2	46.5	52.8	53.5	54.2	48.2	61.2	50.5	44.1	56.9	50.2	51.2
2016	53.2											
Three months earlier												
2014	47.8	57.9	64.2	69.6	68.9	58.9	64.2	62.5	62.9	57.5	64.9	65.9
2015	59.5	43.8	47.5	50.8	55.2	51.2	57.9	62.9	57.5	55.2	51.2	50.5
2016	52.2											
Six months earlier												
2014	53.5	56.2	64.9	63.2	62.2	67.2	69.6	68.9	64.2	63.9	69.2	68.6
2015	60.9	57.9	59.2	58.9	50.8	47.5	53.5	59.5	57.5	56.2	54.2	55.9
2016	50.8											

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 7
CAPACITY UTILIZATION
Percent of capacity, seasonally adjusted

Item		2015 proportion	1972-2015 ave.	1994-95 high	2009 low	2015 Q2	Q3[r]	Q4[r]	2015 Sept.[r]	Oct.[r]	Nov.[r]	Dec.[r]	2016 Jan.[r]	Feb.[p]
Total industry		100.00	80.0	85.0	66.9	77.7	77.9	77.0	77.8	77.6	77.0	76.5	77.1	76.7
Manufacturing[1]		77.43	78.5	84.6	63.9	75.9	76.2	76.0	76.0	76.2	76.0	75.7	76.1	76.1
Manufacturing (NAICS)	**31–33**	74.16	78.4	84.7	63.6	76.6	77.0	76.7	76.8	76.9	76.7	76.4	76.8	76.8
Durable manufacturing		40.12	76.9	83.8	58.3	76.0	76.4	75.8	76.0	76.3	75.7	75.4	75.6	75.7
Wood products	321	1.29	76.3	86.6	49.0	68.8	70.1	70.9	70.3	70.8	70.3	71.5	71.9	70.8
Nonmetallic mineral products	327	2.38	73.9	82.7	44.4	62.8	63.5	65.5	63.6	64.8	65.5	66.3	65.5	65.3
Primary metals	331	2.51	78.9	94.4	49.1	73.6	73.3	71.8	71.7	73.0	71.9	70.5	70.2	70.7
Fabricated metal products	332	5.33	77.7	84.9	62.3	81.6	81.1	80.4	80.7	80.3	80.1	80.8	80.7	80.7
Machinery	333	6.21	77.8	87.6	58.6	75.5	75.6	73.6	76.1	75.7	73.4	71.7	71.4	71.9
Computer and electronic products	334	6.25	77.7	84.5	70.3	72.0	71.5	70.9	71.3	71.1	70.7	71.0	70.6	70.8
Electrical equip., appliances, and components	335	1.70	82.3	92.3	66.3	85.6	86.7	88.9	86.3	89.0	88.0	89.7	89.1	89.5
Motor vehicles and parts	3361–3	5.57	74.9	87.8	33.8	78.0	80.8	78.6	78.9	79.8	79.0	76.9	79.3	79.0
Aerospace and miscellaneous transportation equipment	3364–9	4.54	73.9	70.6	72.5	78.8	78.7	78.4	78.7	78.2	78.3	78.8	78.3	78.6
Furniture and related products	337	1.19	76.5	82.5	57.2	77.9	79.3	80.9	80.1	80.9	81.7	80.1	81.8	81.7
Miscellaneous	339	3.15	76.3	80.7	69.2	77.0	76.8	77.4	76.9	77.0	77.4	77.8	78.5	79.0
Nondurable manufacturing		34.04	80.4	86.0	69.3	77.3	77.6	77.7	77.6	77.7	77.8	77.6	78.1	78.0
Food, beverage, and tobacco products	311,2	10.44	80.8	85.3	74.8	79.1	79.9	79.4	80.0	79.3	79.5	79.5	80.1	79.5
Textile and product mills	313,4	.73	79.3	91.8	53.8	74.2	73.2	74.5	73.5	74.5	74.4	74.6	75.3	74.2
Apparel and leather	315,6	.31	76.7	87.4	57.8	65.1	66.1	64.4	65.9	64.4	64.1	64.6	62.5	64.5
Paper	322	2.45	86.6	92.7	72.9	83.1	82.1	81.9	82.4	82.4	81.9	81.6	82.2	82.5
Printing and support	323	1.80	79.6	85.0	58.7	63.1	63.4	63.7	63.5	63.7	63.8	63.6	63.9	64.2
Petroleum and coal products	324	2.65	85.4	91.0	75.9	84.9	84.8	84.9	85.0	85.9	85.2	83.6	83.9	85.8
Chemicals	325	12.36	77.1	81.8	66.1	74.2	74.1	74.8	74.1	74.5	75.0	74.8	75.6	75.3
Plastics and rubber products	326	3.30	82.0	93.3	58.8	80.6	81.7	81.8	81.8	81.9	81.8	81.8	81.6	82.0
Other manufacturing (non-NAICS)	**1133,5111**	3.26	80.8	83.4	69.4	59.4	59.5	58.9	58.5	58.8	58.9	58.9	58.8	58.8
Mining	**21**	12.00	87.4	88.7	79.0	84.1	83.7	80.1	83.0	81.6	80.1	78.6	78.5	77.5
Utilities	**2211,2**	10.57	85.8	93.3	78.5	78.6	79.0	76.5	80.2	78.7	75.8	74.9	78.0	74.8
Selected high-technology industries		3.20	77.5	86.6	71.8	69.4	68.3	68.0	68.1	68.8	67.5	67.7	68.0	67.7
Computers and peripheral equipment	3341	.48	77.5	87.8	82.2	68.1	68.2	62.2	66.8	67.8	59.1	59.8	66.0	65.5
Communications equipment	3342	.59	76.7	84.3	77.0	72.4	68.0	70.4	67.4	69.6	70.8	70.9	70.3	69.8
Semiconductors and related electronic components	3344	2.13	78.8	91.8	63.0	69.0	68.5	68.8	68.7	69.0	68.6	68.7	68.0	67.8
Measures excluding selected high-technology industries														
Total industry		96.80	80.1	84.9	66.7	77.9	78.2	77.3	78.1	77.9	77.3	76.8	77.4	77.0
Manufacturing[1]		74.23	78.5	84.5	63.4	76.2	76.6	76.4	76.4	76.6	76.4	76.1	76.5	76.5
STAGE-OF-PROCESS GROUPS														
Crude		15.97	86.3	89.8	76.9	83.5	82.9	80.4	82.6	81.6	80.4	79.2	79.4	78.6
Primary and semifinished		45.52	80.6	87.8	64.2	76.1	76.3	75.8	76.4	76.5	75.6	75.3	75.9	75.3
Finished		38.50	77.0	80.7	66.7	76.0	76.6	75.9	76.4	76.2	76.0	75.6	76.3	76.2

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

Table 8
INDUSTRIAL CAPACITY
Percent change

Item	Average annual rate				Fourth quarter to fourth quarter				Annual rate				Monthly rate
	1972-79	1980-88	1989-94	1995-2016	2013	2014	2015	2016	2015 Q2	Q3	Q4	2016 Q1	2016 Feb.
Total industry	3.0	1.9	2.3	2.2	1.6	2.1	1.5	.5	1.5	1.4	1.4	.7	.0
Manufacturing[1]	3.2	2.2	2.6	2.2	1.1	.7	1.2	1.1	1.2	1.3	1.3	1.2	.1
Mining	.7	.1	-.6	1.2	6.4	9.3	4.2	-3.2	4.3	3.1	3.1	-1.7	-.2
Utilities	4.2	2.1	1.8	1.8	.3	1.2	.8	.8	.8	.7	.7	.7	.1
Selected high-technology industries	18.6	16.8	16.0	17.8	-.5	.9	5.9	3.6	5.9	6.4	6.4	4.9	.4
Manufacturing[1] ex. selected high-technology industries	2.6	1.3	1.6	1.0	1.3	.7	.9	1.0	.9	1.0	1.1	1.0	.1
STAGE-OF-PROCESS GROUPS													
Crude	1.5	.5	-.5	1.1	4.4	7.0	3.3	-2.5	3.4	2.4	2.4	-1.4	-.2
Primary and semifinished	3.0	1.3	2.5	2.4	.7	.5	1.0	1.1	.9	1.0	1.1	1.1	.1
Finished	3.9	3.3	2.7	2.1	1.6	1.3	1.5	1.2	1.4	1.5	1.6	1.3	.1

1. Refer to note on cover page.

Table 9
GROSS VALUE OF FINAL PRODUCTS AND NONINDUSTRIAL SUPPLIES
Billions of 2009 dollars at annual rate, seasonally adjusted

Item	2009	2015	2015 Q2	Q3[r]	Q4[r]	2015 Sept.[r]	Oct.[r]	Nov.[r]	Dec.[r]	2016 Jan.[r]	Feb.[p]
Final products and nonindustrial supplies	3,259.8	3,775.5	3,761.5	3,801.3	3,777.5	3,802.4	3,802.7	3,779.0	3,750.8	3,798.0	3,796.2
Final products	2,413.4	2,800.7	2,791.3	2,828.3	2,790.2	2,824.2	2,813.2	2,791.4	2,766.1	2,808.1	2,808.0
Consumer goods	1,796.1	2,009.3	1,997.2	2,032.2	2,010.2	2,031.1	2,023.7	2,012.0	1,994.9	2,030.9	2,030.3
Durable	354.5	519.9	514.8	535.9	532.4	527.8	534.3	533.9	528.9	541.8	544.1
Automotive products	200.5	343.4	339.8	358.3	353.1	349.3	355.5	355.8	348.0	362.5	364.5
Other durable goods	154.0	176.6	175.1	177.9	179.4	178.7	179.0	178.3	180.9	179.6	179.9
Nondurable	1,441.6	1,505.5	1,498.5	1,513.8	1,495.5	1,520.2	1,507.0	1,495.9	1,483.6	1,507.3	1,504.7
Equipment, total	617.3	798.9	801.7	803.7	787.3	800.5	796.9	786.7	778.3	784.2	784.7
Business and defense	600.0	785.2	789.8	792.0	776.6	789.2	786.0	775.9	767.9	774.2	776.2
Business	483.2	671.3	675.5	678.6	663.7	676.3	673.5	663.2	654.3	661.7	663.3
Defense and space	116.8	114.6	114.9	114.1	113.6	113.6	113.1	113.3	114.2	113.1	113.5
Nonindustrial supplies	846.4	974.7	970.3	972.6	988.1	978.1	990.1	988.4	985.9	990.6	988.9
Construction supplies	232.2	282.6	280.8	282.6	287.9	282.6	287.9	287.8	288.0	288.2	288.9
Business supplies	614.2	692.4	689.9	690.5	700.6	696.0	702.5	701.0	698.2	702.9	700.3
Commercial energy products	232.5	252.7	251.0	250.4	255.3	253.5	256.6	255.9	253.3	257.0	253.8

r Revised. p Preliminary.

Table 10
GROSS-VALUE-WEIGHTED INDUSTRIAL PRODUCTION: STAGE-OF-PROCESS GROUPS
Percent change, seasonally adjusted

Item	2015 gross value[1]	Fourth quarter to fourth quarter			Annual rate			Monthly rate						Feb. '15 to Feb. '16
		2013	2014	2015	2015 Q2	Q3[r]	Q4[r]	2015 Sept.[r]	Oct.[r]	Nov.[r]	Dec.[r]	2016 Jan.[r]	Feb.[p]	
Finished	2,202.9	.9	4.5	.2	1.3	5.5	-3.6	-.2	-.2	-.2	-.7	1.4	-.1	2.1
Semifinished	1,969.7	2.5	4.3	1.3	-.2	3.6	.3	.3	.6	-1.0	-.3	.8	-.7	.4
Primary	1,454.6	5.4	-.2	-1.1	-2.6	1.3	-5.2	.5	-.4	-1.2	-.8	1.1	.5	-1.8
Crude	774.1	3.3	5.9	-3.2	-4.3	-.9	-4.7	.0	-.3	-.8	-.9	.0	-1.2	-4.3

r Revised. p Preliminary.
1. Billions of 2009 dollars.

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]																	
1994	.4	.0	1.0	.5	.5	.7	.2	.6	.4	.9	.6	1.1	5.0	7.5	5.3	8.6	5.3
1995	.2	-.1	.2	.0	.3	.4	-.4	1.3	.4	-.1	.3	.4	4.5	1.4	3.8	3.5	4.8
1996	-.7	1.6	-.1	.9	.7	.8	-.2	.6	.7	-.1	.9	.7	2.7	8.7	5.1	5.7	4.5
1997	.1	1.2	.7	.1	.6	.5	.8	1.1	.9	.9	.9	.3	7.9	6.3	9.7	10.8	7.3
1998	.5	.1	.1	.4	.6	-.6	-.4	2.0	-.2	.8	-.1	.4	4.7	2.7	2.8	5.7	5.9
1999	.5	.5	.2	.2	.7	-.2	.6	.4	-.4	1.3	.5	.8	4.3	3.9	3.8	7.5	4.3
2000	.0	.3	.4	.8	.2	.1	-.1	-.4	.4	-.3	.0	-.3	4.4	5.4	-.3	-1.1	4.1
2001	-.7	-.6	-.3	-.3	-.7	-.7	-.5	-.2	-.3	-.5	-.5	.0	-5.5	-5.4	-5.7	-4.4	-3.3
2002	.6	.0	.8	.4	.4	1.0	-.2	.0	.1	-.3	.5	-.5	2.9	6.4	2.4	-.2	.3
2003	.7	.3	-.2	-.8	.0	.1	.4	-.2	.6	.1	.8	-.1	2.6	-2.9	2.4	3.8	1.3
2004	.2	.6	-.5	.4	.8	-.8	.8	.1	.1	.9	.2	.7	2.3	1.8	2.2	5.7	2.4
2005	.5	.7	-.1	.1	.2	.4	-.3	.2	-1.9	1.3	1.0	.6	5.8	2.1	-1.9	3.8	3.3
2006	.1	.0	.3	.4	-.1	.4	.0	.3	-.1	.0	-.1	1.0	3.7	2.4	1.5	1.0	2.2
2007	-.5	1.1	.1	.7	.0	.0	.0	.2	.4	-.5	.6	.0	3.7	5.0	.9	.6	2.5
2008	-.3	-.3	-.3	-.7	-.5	-.2	-.5	-1.5	-4.3	.9	-1.2	-2.9	-1.4	-5.4	-12.1	-15.9	-3.4
2009	-2.3	-.6	-1.5	-.8	-1.0	-.4	1.1	1.1	.8	.4	.3	.4	-20.3	-11.0	5.9	6.6	-11.3
2010	1.2	.3	.7	.4	1.5	.2	.5	.3	.2	-.2	.0	.9	8.0	8.3	6.0	1.5	5.6
2011	.0	-.5	.9	-.4	.3	.2	.4	.6	.0	.7	-.1	.5	2.2	.9	4.4	3.9	3.0
2012	.7	.2	-.7	.8	.1	-.1	.3	-.4	.1	.3	.5	.2	3.9	2.2	.1	2.2	2.8
2013	.1	.4	.2	.0	-.1	.2	-.4	.8	.6	.0	.3	.3	2.9	1.1	1.7	3.7	1.9
2014	-.2	.8	.8	.2	.4	.4	.3	.0	.5	.2	.9	.1	3.6	5.7	3.9	4.7	3.7
2015	-.3	-.2	-.2	-.2	-.4	.0	.8	.0	.0	-.1	-.7	-.5	-.3	-2.3	2.6	-3.1	1.3
2016	.8	-.5															
IP (*2012=100*)																	
2014	103.0	103.8	104.7	104.9	105.2	105.7	106.1	106.1	106.7	106.8	107.8	107.9	103.8	105.3	106.3	107.5	105.7
2015	107.6	107.4	107.2	107.1	106.7	106.7	107.5	107.5	107.5	107.3	106.5	106.0	107.4	106.8	107.5	106.6	107.1
2016	106.9	106.3															
Capacity (*percent of 2012 output*)																	
2014	134.1	134.3	134.5	134.8	135.0	135.2	135.5	135.7	136.0	136.2	136.4	136.6	134.3	135.0	135.7	136.4	135.3
2015	136.8	137.0	137.1	137.3	137.5	137.6	137.8	138.0	138.1	138.3	138.4	138.6	137.0	137.5	138.0	138.4	137.7
2016	138.6	138.7															
Utilization (*percent*)																	
1994	82.4	82.3	82.9	83.1	83.3	83.6	83.5	83.7	83.7	84.2	84.4	85.0	82.5	83.4	83.7	84.5	83.5
1995	84.9	84.5	84.3	84.0	84.0	83.9	83.3	84.0	84.0	83.6	83.5	83.4	84.6	84.0	83.8	83.5	84.0
1996	82.5	83.4	83.0	83.3	83.5	83.8	83.3	83.4	83.6	83.1	83.4	83.6	83.0	83.6	83.4	83.4	83.3
1997	83.3	83.9	84.0	83.6	83.7	83.6	83.8	84.2	84.4	84.6	84.8	84.5	83.7	83.7	84.1	84.7	84.0
1998	84.4	83.9	83.5	83.2	83.2	82.2	81.4	82.6	82.0	82.3	81.8	81.8	83.9	82.9	82.0	82.0	82.7
1999	81.8	81.8	81.6	81.5	81.8	81.3	81.5	81.6	81.0	81.7	81.8	82.2	81.7	81.5	81.3	81.9	81.6
2000	81.9	81.9	81.9	82.2	82.1	81.9	81.6	81.0	81.1	80.6	80.4	79.9	81.9	82.1	81.3	80.3	81.4
2001	79.1	78.4	78.0	77.5	76.8	76.1	75.5	75.1	74.7	74.2	73.7	73.6	78.5	76.8	75.1	73.8	76.1
2002	73.9	73.8	74.3	74.6	74.8	75.5	75.3	75.3	75.4	75.2	75.6	75.2	74.0	75.0	75.3	75.3	74.9
2003	75.8	76.0	75.9	75.4	75.4	75.5	75.9	75.8	76.3	76.4	77.0	76.9	75.9	75.5	76.0	76.8	76.0
2004	77.1	77.6	77.2	77.5	78.1	77.5	78.1	78.2	78.2	79.0	79.1	79.6	77.3	77.7	78.2	79.2	78.1
2005	79.9	80.4	80.2	80.2	80.2	80.4	80.1	80.1	78.5	79.4	80.0	80.4	80.2	80.3	79.6	79.9	80.0
2006	80.4	80.3	80.4	80.6	80.4	80.6	80.4	80.5	80.3	80.1	79.8	80.5	80.4	80.5	80.4	80.1	80.3
2007	79.9	80.6	80.5	81.0	80.9	80.7	80.6	80.7	80.9	80.4	80.9	80.9	80.4	80.8	80.7	80.8	80.7
2008	80.7	80.6	80.4	79.9	79.6	79.4	79.0	77.8	74.5	75.1	74.1	71.9	80.6	79.6	77.1	73.7	77.7
2009	70.1	69.6	68.5	67.9	67.2	66.9	67.6	68.4	69.0	69.4	69.7	70.0	69.4	67.3	68.4	69.7	68.7
2010	71.0	71.4	72.0	72.4	73.6	73.9	74.4	74.8	75.1	75.0	75.1	75.8	71.4	73.3	74.8	75.3	73.7
2011	75.8	75.5	76.1	75.7	75.9	76.0	76.2	76.6	76.4	76.8	76.5	76.8	75.8	75.9	76.4	76.7	76.2
2012	77.2	77.2	76.5	77.0	76.9	76.7	76.8	76.3	76.2	76.3	76.5	76.6	77.0	76.9	76.4	76.5	76.7
2013	76.5	76.7	76.8	76.7	76.6	76.6	76.2	76.7	77.0	76.9	77.0	77.1	76.7	76.6	76.7	77.0	76.7
2014	76.8	77.3	77.8	77.8	78.0	78.2	78.3	78.2	78.5	78.5	79.0	79.0	77.3	78.0	78.3	78.8	78.1
2015	78.7	78.4	78.2	78.0	77.6	77.5	78.0	77.9	77.8	77.6	77.0	76.5	78.4	77.7	77.9	77.0	77.8
2016	77.1	76.7															

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[1]
Seasonally adjusted

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
IP (*percent change*)[2]																	
1994	.2	.1	1.3	.8	.7	.3	.4	.8	.5	1.0	.8	1.1	4.8	9.5	6.2	10.4	5.9
1995	.2	-.2	.3	-.1	.1	.5	-.6	1.1	.9	-.1	.1	.4	4.7	.9	3.1	4.4	5.3
1996	-.8	1.6	-.2	1.1	.8	1.0	.2	.5	.8	-.2	.9	.9	1.9	9.9	7.5	5.9	4.9
1997	.1	1.4	1.1	-.2	.8	.7	.7	1.3	.9	.9	1.1	.4	9.4	7.5	10.8	11.7	8.5
1998	.9	.1	-.1	.5	.5	-.8	-.4	2.4	-.2	1.0	.2	.5	6.3	2.2	3.1	7.9	6.8
1999	.3	.8	-.1	.4	.9	-.3	.5	.6	-.4	1.5	.6	.7	4.9	4.4	3.4	9.0	5.0
2000	.1	.2	.7	.8	-.1	.2	.1	-.7	.4	-.3	-.3	-.6	4.8	5.2	-.4	-2.6	4.3
2001	-.6	-.6	-.3	-.3	-.8	-.7	-.5	-.5	-.2	-.6	-.3	.3	-6.4	-5.6	-6.2	-4.1	-3.9
2002	.5	.0	.8	.2	.5	1.1	-.3	.2	.1	-.4	.5	-.5	3.5	5.8	3.2	-.3	.3
2003	.5	.1	.1	-.9	.1	.5	.2	-.5	.8	.1	1.0	-.2	1.8	-1.9	2.0	4.3	1.3
2004	-.1	.7	-.2	.4	.8	-.7	.9	.4	.0	1.0	-.1	.7	1.9	3.0	3.8	5.4	2.8
2005	.8	.8	-.5	.3	.4	.2	-.3	.4	-1.0	1.5	.8	.1	6.5	2.4	-.6	6.4	4.0
2006	.8	-.3	-.1	.6	-.4	.3	-.3	.6	.1	-.3	.1	1.5	3.8	.9	.8	1.7	2.6
2007	-.5	.4	.8	.7	-.1	.3	.1	-.3	.4	-.4	.5	.1	4.2	5.8	.7	.5	2.7
2008	-.4	-.6	-.3	-1.1	-.5	-.5	-1.1	-1.2	-3.4	-.6	-2.4	-3.4	-2.7	-7.6	-13.4	-21.4	-4.7
2009	-3.0	-.2	-1.9	-.8	-1.1	-.4	1.4	1.1	.8	.2	.9	-.2	-24.2	-11.3	7.7	7.2	-13.7
2010	1.1	-.1	1.2	.9	1.4	-.1	.7	.2	.1	.1	.0	.4	6.8	10.9	5.0	1.5	5.9
2011	.3	.0	.5	-.6	.2	.0	.7	.3	.4	.6	-.3	.7	2.9	-.4	4.6	3.8	3.0
2012	1.0	.3	-.6	.7	-.5	.1	.0	-.3	.0	-.2	.7	.7	5.5	.5	-1.0	1.3	2.7
2013	-.2	.4	-.3	-.3	.2	.2	-.8	.9	.2	.2	-.1	.0	2.5	-.5	.5	2.7	.9
2014	-.8	1.1	.7	.3	.2	.4	.7	-.4	.2	.3	.9	.0	.7	5.9	3.8	3.4	2.5
2015	-.3	-.4	.2	.4	.0	-.1	1.0	-.2	-.1	.3	-.2	-.2	-.7	1.5	3.0	-.2	1.9
2016	.5	.2															
IP (*2012=100*)																	
2014	100.6	101.7	102.5	102.8	103.0	103.5	104.2	103.9	104.1	104.3	105.2	105.2	101.6	103.1	104.1	104.9	103.4
2015	104.9	104.5	104.8	105.2	105.2	105.1	106.1	105.9	105.8	106.1	105.9	105.6	104.7	105.1	105.9	105.9	105.4
2016	106.2	106.4															
Capacity (*percent of 2012 output*)																	
2014	136.9	137.0	137.1	137.1	137.2	137.3	137.4	137.4	137.5	137.6	137.7	137.8	137.0	137.2	137.4	137.7	137.3
2015	137.9	138.1	138.2	138.3	138.5	138.6	138.8	138.9	139.1	139.2	139.4	139.5	138.1	138.5	138.9	139.4	138.7
2016	139.6	139.8															
Utilization (*percent*)																	
1994	81.2	81.1	81.9	82.4	82.7	82.6	82.7	83.0	83.2	83.7	84.0	84.6	81.4	82.6	83.0	84.1	82.8
1995	84.5	83.9	83.8	83.4	83.2	83.2	82.3	82.9	83.2	82.8	82.4	82.3	84.1	83.2	82.8	82.5	83.2
1996	81.3	82.1	81.5	82.0	82.2	82.5	82.3	82.3	82.5	81.9	82.2	82.4	81.6	82.2	82.4	82.2	82.1
1997	82.0	82.7	83.1	82.5	82.6	82.7	82.7	83.2	83.3	83.5	83.7	83.5	82.6	82.6	83.1	83.6	83.0
1998	83.5	83.0	82.3	82.1	81.9	80.7	79.9	81.3	80.7	81.0	80.7	80.7	82.9	81.6	80.6	80.8	81.5
1999	80.5	80.8	80.3	80.3	80.7	80.0	80.0	80.2	79.6	80.4	80.6	80.8	80.6	80.3	79.9	80.6	80.3
2000	80.5	80.4	80.6	80.8	80.4	80.3	80.1	79.2	79.2	78.7	78.2	77.4	80.5	80.5	79.5	78.1	79.6
2001	76.7	76.0	75.5	75.1	74.3	73.6	73.1	72.6	72.3	71.8	71.5	71.6	76.1	74.4	72.7	71.6	73.7
2002	71.9	71.9	72.4	72.5	72.8	73.6	73.4	73.5	73.6	73.3	73.7	73.3	72.0	73.0	73.5	73.5	73.0
2003	73.7	73.8	73.9	73.3	73.4	73.8	73.9	73.6	74.2	74.3	75.1	75.0	73.8	73.5	73.9	74.8	74.0
2004	74.9	75.5	75.4	75.7	76.3	75.8	76.5	76.8	76.8	77.5	77.4	77.8	75.3	76.0	76.7	77.6	76.4
2005	78.3	78.8	78.3	78.4	78.5	78.5	78.0	78.1	77.2	78.3	78.7	78.6	78.5	78.4	77.8	78.5	78.3
2006	79.2	78.8	78.6	79.0	78.5	78.7	78.3	78.7	78.6	78.2	78.1	79.0	78.9	78.7	78.5	78.4	78.6
2007	78.4	78.6	79.0	79.4	79.1	79.1	79.0	78.6	78.8	78.4	78.7	78.7	78.7	79.2	78.8	78.6	78.8
2008	78.4	77.9	77.7	76.9	76.7	76.3	75.6	74.8	72.4	72.0	70.5	68.1	78.0	76.7	74.2	70.2	74.8
2009	66.2	66.2	65.0	64.6	64.0	63.9	64.9	65.7	66.4	66.6	67.4	67.4	65.8	64.2	65.7	67.1	65.7
2010	68.2	68.3	69.2	69.9	71.1	71.1	71.7	72.0	72.1	72.4	72.4	72.8	68.6	70.7	72.0	72.5	70.9
2011	73.1	73.2	73.6	73.2	73.3	73.3	73.8	73.9	74.1	74.5	74.1	74.5	73.3	73.3	73.9	74.4	73.7
2012	75.1	75.2	74.7	75.0	74.6	74.5	74.4	74.1	74.0	73.7	74.1	74.5	75.0	74.7	74.2	74.1	74.5
2013	74.2	74.4	74.1	73.9	73.9	74.0	73.4	74.0	74.1	74.2	74.2	74.1	74.3	73.9	73.8	74.2	74.1
2014	73.5	74.3	74.8	75.0	75.1	75.4	75.9	75.6	75.7	75.8	76.4	76.3	74.2	75.1	75.7	76.2	75.3
2015	76.1	75.7	75.8	76.1	76.0	75.8	76.5	76.2	76.0	76.2	76.0	75.7	75.9	75.9	76.2	76.0	76.0
2016	76.1	76.1															

1. Refer to note on cover page.
2. Quarterly changes are at annual rates. Annual changes are calculated from annual averages.

Table 13
HISTORICAL STATISTICS FOR INDUSTRIAL PRODUCTION, CAPACITY, AND UTILIZATION: Total Industry Excluding Selected High-Technology Industries[1]
Seasonally adjusted

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
IP (*percent change*)[2]																	
1994	.3	.0	.9	.3	.4	.6	.0	.3	.1	.6	.4	.9	4.2	5.4	3.1	5.7	4.0
1995	.1	-.2	-.1	-.3	.1	.2	-.5	1.1	.1	-.4	.1	.1	2.8	-1.2	1.3	.4	2.4
1996	-1.0	1.3	-.3	.8	.5	.6	-.5	.3	.5	-.4	.8	.5	-.5	6.6	2.0	3.0	1.7
1997	-.1	.9	.4	-.2	.3	.2	.5	.8	.7	.7	.6	.1	5.2	2.5	6.3	7.7	4.2
1998	.3	.0	.0	.2	.6	-1.0	-.7	1.9	-.6	.6	-.3	.1	2.1	.7	-.4	2.4	3.1
1999	.1	.2	-.1	-.1	.5	-.5	.3	.4	-.5	1.2	.2	.5	.6	.3	.9	5.5	1.1
2000	-.3	.0	.1	.5	-.1	-.1	-.4	-.5	.3	-.4	-.1	-.5	.5	1.8	-3.1	-2.6	1.0
2001	-.7	-.6	-.3	-.1	-.6	-.5	-.3	-.2	-.4	-.5	-.5	-.1	-5.8	-4.4	-4.4	-4.5	-3.9
2002	.7	-.1	.8	.4	.4	.9	-.3	-.1	.1	-.3	.5	-.6	2.7	6.3	1.9	-.7	.3
2003	.6	.1	-.3	-.9	-.1	-.1	.3	-.3	.5	.0	.8	-.1	1.5	-4.6	.7	2.8	.2
2004	.1	.6	-.6	.4	.8	-.8	.8	.0	.0	.9	.2	.7	1.9	2.0	2.1	5.2	1.7
2005	.4	.6	-.2	.0	.1	.4	-.4	.1	-2.1	1.2	1.0	.6	4.8	1.3	-3.1	2.5	2.5
2006	.1	-.1	.2	.4	-.2	.3	-.1	.3	-.3	-.1	-.2	1.0	3.2	1.8	.6	.3	1.4
2007	-.5	1.0	-.1	.6	.1	.1	.0	.1	.3	-.7	.4	-.1	3.0	4.0	1.0	-1.0	1.8
2008	-.3	-.4	-.4	-.8	-.5	-.2	-.5	-1.5	-4.4	1.2	-1.0	-2.7	-2.6	-6.4	-12.3	-14.7	-4.2
2009	-2.3	-.7	-1.7	-.9	-1.1	-.4	1.1	1.1	.7	.4	.2	.3	-20.0	-11.9	5.7	6.1	-11.3
2010	1.1	.2	.6	.3	1.5	.2	.5	.3	.2	-.3	.0	.8	7.0	7.7	5.8	.8	5.0
2011	-.1	-.5	.9	-.4	.2	.2	.4	.6	.0	.7	-.2	.5	1.5	.9	4.2	3.9	2.7
2012	.8	.2	-.7	.8	.1	-.1	.3	-.4	.0	.2	.5	.2	3.6	1.7	.0	2.0	2.6
2013	.1	.4	.2	.0	-.1	.2	-.4	.8	.6	.0	.3	.3	3.1	1.0	1.6	3.7	1.9
2014	-.2	.8	.8	.2	.3	.5	.4	.0	.5	.1	.9	.1	3.8	5.7	4.0	4.7	3.8
2015	-.3	-.1	-.2	-.2	-.4	.0	.8	.0	.0	-.2	-.7	-.5	-.3	-2.3	2.7	-3.4	1.3
2016	.8	-.5															
IP (*2012=100*)																	
2014	103.0	103.8	104.6	104.8	105.2	105.7	106.1	106.1	106.7	106.8	107.8	107.9	103.8	105.2	106.3	107.5	105.7
2015	107.6	107.4	107.3	107.1	106.7	106.7	107.5	107.5	107.5	107.3	106.5	106.0	107.4	106.8	107.5	106.6	107.1
2016	106.8	106.3															
Capacity (*percent of 2012 output*)																	
2014	133.7	133.9	134.2	134.4	134.7	134.9	135.2	135.4	135.6	135.8	136.0	136.2	133.9	134.7	135.4	136.0	135.0
2015	136.4	136.6	136.7	136.9	137.0	137.2	137.3	137.4	137.6	137.7	137.9	138.0	136.6	137.0	137.4	137.9	137.2
2016	138.0	138.1															
Utilization (*percent*)																	
1994	82.6	82.5	83.1	83.2	83.4	83.8	83.6	83.8	83.7	84.1	84.3	84.9	82.7	83.5	83.7	84.5	83.6
1995	84.9	84.5	84.3	83.9	83.8	83.8	83.2	83.9	83.9	83.4	83.3	83.2	84.6	83.8	83.7	83.3	83.8
1996	82.3	83.2	82.8	83.3	83.6	84.0	83.4	83.5	83.7	83.2	83.7	83.9	82.8	83.6	83.6	83.6	83.4
1997	83.6	84.1	84.2	83.7	83.7	83.6	83.8	84.1	84.3	84.6	84.8	84.6	84.0	83.7	84.1	84.7	84.1
1998	84.5	84.2	83.8	83.6	83.8	82.7	81.8	83.1	82.4	82.6	82.1	81.9	84.1	83.4	82.4	82.2	83.0
1999	81.8	81.7	81.4	81.2	81.4	80.9	80.9	81.1	80.6	81.4	81.5	81.8	81.6	81.2	80.9	81.6	81.3
2000	81.4	81.3	81.3	81.6	81.4	81.2	80.8	80.3	80.5	80.0	79.8	79.4	81.3	81.4	80.5	79.7	80.8
2001	78.7	78.2	77.9	77.7	77.1	76.6	76.3	76.1	75.7	75.2	74.8	74.6	78.3	77.2	76.0	74.9	76.6
2002	75.1	75.0	75.5	75.8	76.1	76.8	76.6	76.6	76.7	76.5	76.9	76.5	75.2	76.3	76.6	76.6	76.2
2003	77.0	77.2	77.0	76.4	76.4	76.4	76.6	76.4	76.9	76.9	77.5	77.4	77.1	76.4	76.6	77.3	76.8
2004	77.5	78.0	77.6	78.0	78.6	78.0	78.6	78.7	78.7	79.4	79.6	80.1	77.7	78.2	78.7	79.7	78.6
2005	80.4	80.8	80.6	80.6	80.7	80.9	80.5	80.5	78.7	79.6	80.2	80.6	80.6	80.7	79.9	80.1	80.3
2006	80.5	80.4	80.4	80.6	80.3	80.5	80.3	80.4	80.1	79.9	79.7	80.4	80.4	80.5	80.3	80.0	80.3
2007	79.8	80.6	80.5	80.9	80.9	81.0	80.9	81.1	81.3	80.8	81.2	81.1	80.3	80.9	81.1	81.0	80.8
2008	80.9	80.7	80.4	79.8	79.3	79.1	78.7	77.5	74.0	74.8	73.9	71.8	80.7	79.4	76.7	73.5	77.6
2009	70.1	69.5	68.3	67.7	66.9	66.7	67.4	68.3	68.9	69.2	69.5	69.9	69.3	67.1	68.2	69.6	68.5
2010	70.9	71.1	71.7	72.1	73.4	73.7	74.2	74.6	74.9	74.8	74.8	75.5	71.2	73.1	74.6	75.0	73.5
2011	75.5	75.2	75.9	75.6	75.8	75.9	76.2	76.6	76.5	77.0	76.7	77.0	75.5	75.7	76.4	76.9	76.1
2012	77.5	77.5	76.8	77.3	77.2	77.0	77.1	76.6	76.5	76.6	76.8	76.9	77.2	77.1	76.7	76.7	77.0
2013	76.8	77.1	77.1	77.0	76.8	76.9	76.4	76.9	77.2	77.1	77.2	77.3	77.0	76.9	76.9	77.2	77.0
2014	77.0	77.5	78.0	78.0	78.1	78.3	78.5	78.4	78.7	78.7	79.2	79.2	77.5	78.2	78.5	79.0	78.3
2015	78.9	78.7	78.4	78.2	77.9	77.8	78.3	78.2	78.1	77.9	77.3	76.8	78.7	77.9	78.2	77.3	78.0
2016	77.4	77.0															

1. 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.

Table 14
HISTORICAL STATISTICS FOR INDUSTRIAL PRODUCTION, CAPACITY, AND UTILIZATION: Manufacturing[1] Excluding Selected High-Technology Industries[2]
Seasonally adjusted

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
IP (*percent change*)[3]																	
1994	.1	.1	1.1	.6	.5	.1	.2	.5	.2	.7	.6	.9	3.9	7.1	3.7	7.0	4.4
1995	.1	-.4	-.1	-.4	-.1	.3	-.8	.8	.6	-.4	-.1	.0	2.7	-2.3	.2	.8	2.5
1996	-1.2	1.3	-.5	1.0	.5	.8	-.1	.2	.6	-.5	.7	.7	-2.0	7.4	3.9	2.8	1.5
1997	-.2	1.1	.8	-.6	.4	.4	.4	1.0	.6	.7	.8	.1	6.2	3.0	6.9	8.2	4.9
1998	.6	.0	-.3	.3	.4	-1.2	-.8	2.3	-.6	.7	-.1	.2	3.4	-.2	-.6	4.2	3.5
1999	-.1	.5	-.4	.0	.7	-.7	.0	.6	-.5	1.4	.4	.4	.7	.3	.0	6.7	1.3
2000	-.3	-.2	.3	.4	-.6	.0	-.2	-1.0	.3	-.4	-.5	-.8	.3	.9	-3.8	-4.6	.7
2001	-.6	-.6	-.3	-.1	-.7	-.6	-.2	-.5	-.2	-.7	-.2	.1	-6.9	-4.4	-4.6	-4.2	-4.7
2002	.6	-.2	.8	.2	.6	1.1	-.4	.1	.1	-.4	.4	-.6	3.2	5.6	2.6	-1.0	.4
2003	.4	-.1	.1	-1.0	-.1	.3	.0	-.6	.7	-.1	1.0	-.3	.5	-3.9	-.1	3.1	.0
2004	-.2	.7	-.2	.4	.8	-.8	1.0	.4	-.1	1.0	-.1	.6	1.3	3.3	3.7	4.8	2.0
2005	.6	.7	-.6	.2	.3	.1	-.5	.2	-1.2	1.5	.7	.0	5.2	1.4	-2.2	4.9	3.1
2006	.8	-.4	-.1	.5	-.6	.2	-.3	.5	.0	-.4	.0	1.5	3.1	.0	-.3	.8	1.5
2007	-.6	.3	.6	.5	.0	.5	.1	-.4	.3	-.6	.3	.0	3.2	4.7	.8	-1.7	1.8
2008	-.5	-.8	-.4	-1.2	-.6	-.6	-1.1	-1.2	-3.5	-.4	-2.1	-3.3	-4.3	-9.1	-13.6	-20.2	-5.8
2009	-3.1	-.2	-2.1	-.9	-1.2	-.4	1.4	1.2	.8	.2	.9	-.2	-24.1	-12.4	7.5	6.6	-13.8
2010	1.0	-.3	1.1	.8	1.5	-.1	.6	.1	.0	.1	-.1	.3	5.4	10.2	4.7	.6	5.1
2011	.2	.0	.6	-.6	.1	.0	.7	.2	.4	.7	-.4	.7	2.1	-.4	4.3	3.9	2.5
2012	1.0	.2	-.7	.6	-.5	.1	.0	-.2	-.1	-.3	.7	.7	5.2	-.3	-1.2	1.0	2.4
2013	-.2	.4	-.3	-.3	.2	.2	-.8	1.0	.3	.2	-.1	.1	2.8	-.7	.3	2.7	.8
2014	-.8	1.1	.8	.3	.2	.4	.8	-.4	.2	.2	.9	.0	.9	6.0	3.9	3.4	2.5
2015	-.3	-.4	.2	.4	.0	-.1	1.0	-.2	-.2	.3	-.2	-.3	-.6	1.6	3.1	-.4	1.9
2016	.5	.2															
IP (*2012=100*)																	
2014	100.5	101.6	102.4	102.7	102.9	103.3	104.1	103.7	104.0	104.2	105.1	105.1	101.5	103.0	103.9	104.8	103.3
2015	104.8	104.4	104.7	105.1	105.1	105.0	106.1	105.9	105.7	106.0	105.8	105.5	104.6	105.1	105.9	105.8	105.3
2016	106.1	106.3															
Capacity (*percent of 2012 output*)																	
2014	136.5	136.6	136.7	136.7	136.8	136.9	137.0	137.0	137.1	137.2	137.2	137.3	136.6	136.8	137.0	137.2	136.9
2015	137.4	137.5	137.6	137.7	137.8	137.9	138.1	138.2	138.3	138.4	138.5	138.7	137.5	137.8	138.2	138.5	138.0
2016	138.8	138.9															
Utilization (*percent*)																	
1994	81.3	81.2	82.1	82.4	82.7	82.7	82.8	83.1	83.1	83.5	83.9	84.5	81.5	82.6	83.0	84.0	82.8
1995	84.4	83.9	83.7	83.2	82.9	83.0	82.1	82.6	82.9	82.4	82.1	82.0	84.0	83.0	82.5	82.2	82.9
1996	80.9	81.7	81.2	81.9	82.1	82.6	82.3	82.3	82.6	82.0	82.3	82.7	81.3	82.2	82.4	82.3	82.0
1997	82.3	82.9	83.2	82.5	82.5	82.5	82.5	83.0	83.1	83.3	83.7	83.4	82.8	82.5	82.9	83.5	82.9
1998	83.5	83.1	82.6	82.4	82.4	81.1	80.2	81.7	80.9	81.2	80.8	80.8	83.1	82.0	80.9	80.9	81.7
1999	80.4	80.6	80.0	79.8	80.2	79.4	79.2	79.5	79.0	79.9	80.0	80.2	80.3	79.8	79.2	80.1	79.9
2000	79.8	79.6	79.7	79.9	79.4	79.3	79.0	78.1	78.2	77.8	77.3	76.6	79.7	79.5	78.4	77.2	78.7
2001	76.0	75.5	75.2	75.1	74.5	74.1	73.9	73.5	73.3	72.8	72.6	72.7	75.6	74.6	73.6	72.7	74.1
2002	73.1	73.0	73.6	73.7	74.1	75.0	74.7	74.9	75.0	74.7	75.0	74.6	73.3	74.3	74.9	74.8	74.3
2003	75.0	75.0	75.1	74.3	74.3	74.6	74.6	74.2	74.8	74.8	75.6	75.4	75.0	74.4	74.5	75.3	74.8
2004	75.3	75.9	75.8	76.1	76.8	76.2	77.0	77.3	77.2	78.0	77.8	78.3	75.6	76.4	77.1	78.0	76.8
2005	78.7	79.2	78.7	78.8	78.9	78.9	78.4	78.5	77.4	78.4	78.9	78.7	78.9	78.9	78.1	78.7	78.6
2006	79.3	78.8	78.6	78.9	78.4	78.4	78.1	78.3	78.2	77.8	77.7	78.8	78.9	78.6	78.2	78.1	78.4
2007	78.3	78.4	78.8	79.2	79.1	79.4	79.4	79.0	79.2	78.7	78.9	78.8	78.5	79.2	79.2	78.8	78.9
2008	78.5	77.8	77.5	76.6	76.2	75.8	75.0	74.2	71.7	71.5	70.1	67.9	77.9	76.2	73.6	69.8	74.4
2009	65.9	65.9	64.6	64.2	63.5	63.4	64.5	65.4	66.1	66.3	67.1	67.1	65.5	63.7	65.3	66.8	65.3
2010	67.9	67.8	68.7	69.5	70.6	70.7	71.3	71.5	71.7	71.9	72.0	72.3	68.1	70.3	71.5	72.1	70.5
2011	72.5	72.7	73.2	72.8	73.0	73.1	73.6	73.8	74.1	74.6	74.2	74.7	72.8	73.0	73.8	74.5	73.5
2012	75.4	75.5	74.9	75.3	74.8	74.8	74.7	74.4	74.2	73.9	74.3	74.7	75.3	74.9	74.4	74.3	74.7
2013	74.5	74.7	74.4	74.1	74.2	74.2	73.5	74.2	74.3	74.4	74.3	74.3	74.5	74.2	74.0	74.3	74.2
2014	73.6	74.4	74.9	75.1	75.2	75.5	76.0	75.7	75.8	76.0	76.6	76.5	74.3	75.3	75.9	76.4	75.4
2015	76.3	75.9	76.1	76.3	76.3	76.1	76.8	76.6	76.4	76.6	76.4	76.1	76.1	76.2	76.6	76.4	76.3
2016	76.5	76.5															

1. Refer to note on cover page.
2. Selected high-technology industries are computers, communications equipment, and semiconductors and related electronic components.
3. 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 on the Board's website at **www.federalreserve.gov/releases/G17/About.htm**. 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 from the Data Download Program on the Board's website. Instructions for searching for and downloading specific series are provided as well.

Industrial Production

Coverage. The industrial production (IP) index measures the real output of all manufacturing, mining, and electric and gas utility establishments located in the United States, regardless of their ownership, but not those located in U.S. territories; the reference period for the index is 2012. Manufacturing consists of those industries included in the North American Industry Classification System (NAICS) definition of manufacturing *plus* those industries—newspaper, periodical, book, and directory publishing plus logging—that have traditionally been considered to be manufacturing. For the period since 2012, the total IP index has been constructed from 299 individual series based on the 2012 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 website (**www.federalreserve.gov/releases/G17/About.htm**).

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 and unit values or sales) 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 direct measures of 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 the *Federal Reserve Bulletins* of 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 shown below. An output index for month *m* is denoted by I_m^A for aggregate A and I_m for each of its components. The monthly price measure in the formula (p_m) is interpolated from an annual series of value added divided by the average annual IP index.

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

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 $5/10$ percentage point (0.05 x 10% = 0.5%). To assist users with calculations, the Federal Reserve's website 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/ipweightssa.txt**).

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 five 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 73 percent of the source data (in value-added terms) are available; the fraction of available source data increases to 83 percent for estimates in the second month that the estimate is published, 94 percent in the third month, 96 percent in the fourth month, 97 percent in the fifth month, and 98 percent in the sixth month. Data availability by data type in early 2015 is summarized in the table below:

Availability of Monthly IP Data in Publication Window
(Percent of value added in 2014)

	Month of estimate					
Type of data	1st	2nd	3rd	4th	5th	6th
Physical product	34	44	55	57	58	59
Production-worker hours	39	39	39	39	39	39
IP data received	73	83	94	95	97	97
IP data estimated	27	17	6	5	3	3

The physical product group includes series based on either monthly or quarterly data. As can be seen in the first row 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 (34 percent out of a total of 59 percent). Of the 34 percent, about two-thirds (22 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 fourth estimate of industrial production. Specifically, quarterly data are available for the third estimate of the last month of a quarter, the fourth estimate of the second month of a quarter, and the fifth estimate of the first month of a quarter.

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 May 2015; for other series, the factors were estimated with data through at least March 2015. Series are pre-adjusted for the effects of holidays or business cycles 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 1987–2014 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 1987–2014 period. In most cases (about 86 percent), the direction of the 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. The capacity indexes cover all facilities located in the United States, regardless of their ownership, but not those located in U.S. territories. Capacity indexes are constructed for 88 detailed industries (70 in manufacturing, 16 in mining, and 2 in utilities), which mostly correspond to industries at the three- and four-digit North American Industry Classification System (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 NAICS definition of manufacturing *plus* those industries— newspaper, periodical, book, and directory publishing plus logging—that have traditionally been considered to be manufacturing. Also, special aggregates are available, such as high-technology industries and manufacturing excluding high-technology 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 25 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 *Quarterly Survey of Plant Capacity* (QSPC); these industries account for a bit less than 70 percent of total industry capacity. In the absence of utilization data for a few mining and petroleum series, capacity is based on trends through peaks in production (roughly 5 percent of total industry capacity). A detailed description of the methodology used to construct the capacity indexes is available on the Board's website (**www.federalreserve.gov/releases/G17/Meth/MethCap.htm**).

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 the annual capacity aggregate 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 Census Bureau's annual *Survey of Plant Capacity* (the predecessor to the QSPC) 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 QSPC.

Perspective. Over the 1972–2014 period, the average total industry utilization rate is 80.1 percent; for manufacturing, the average factory operating rate has been 78.5 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 are specific to each series and do not all occur in the same month.

References and Release Dates

References. The release for the annual revision that was published on July 21, 2015, is available on the Board's website (**www.federalreserve.gov/releases/g17/revisions/Current/DefaultRev.htm**). A summary of the annual revision that incorporated back to 1972 production and capacity indexes reclassified according to the North American Industry Classification System is available in an article in the *Federal Reserve Bulletin*, vol. 89 (April 2003), pp. 151–176. 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/CapitalStockDocLatest.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, March 2006, May 2007, August 2008, August 2009) or in online staff studies (www.federalreserve.gov/releases/g17/articles/rev2010/industrial10.pdf, www.federalreserve.gov/releases/g17/articles/rev2012/industrial12.pdf, www.federalreserve.gov/releases/g17/articles/rev2013/industrial13.pdf).

Release Schedule

At 9:15 a.m. on

2016: January 15, February 17, March 16, April 15, May 17, June 15, July 15, August 16, September 15, October 17, November 16, and December 14.