FEDERAL RESERVE statistical release



For release at 9:15 a.m. (EDT)

April 17, 2018

G.17 (419)

INDUSTRIAL PRODUCTION AND CAPACITY UTILIZATION

Industrial production rose 0.5 percent in March after increasing 1.0 percent in February; the index advanced 4.5 percent at an annual rate for the first quarter as a whole. After having climbed 1.5 percent in February, manufacturing production edged up 0.1 percent in March. Mining output rose 1.0 percent, mostly as a

(over)

Industrial Production and Capacity Utilization: Summary

Seasonally adjusted

			2012=]	Percent	change		
	2017			2018			2017			2018			Mar. '17 to
Industrial production	Oct. ^r	Nov. ^r	Dec. ^r	Jan. ^r	Feb. ^r	Mar. ^p	Oct. ^r	Nov. ^r	Dec. ^r	Jan. ^r	Feb. ^r	Mar. ^p	Mar. '18
Total index	104.8	105.3	105.8	105.6	106.6	107.2	1.5	.5	.5	2	1.0	.5	4.3
Previous estimates	104.8	105.3	105.7	105.5	106.5	107.2	1.6	.5	.4	2	.9		1.5
	10.00	10010	10017	10010	10010		110	10			.,		
Major market groups													
Final Products	101.3	101.2	101.6	101.9	102.3	102.9	.9	1	.4	.3	.4	.6	3.8
Consumer goods	104.7	104.6	105.3	105.6	105.8	106.4	1.2	2	.6	.3	.2	.5	3.6
Business equipment	98.8	99.0	98.7	98.8	99.4	99.9	.7	.1	2	.1	.6	.5	4.4
Nonindustrial supplies	105.5	105.9	106.7	105.8	106.9	107.0	.7	.4	.7	8	1.0	.1	2.1
Construction	111.5	112.0	112.9	110.9	114.1	113.8	.4	.5	.8	-1.7	2.8	3	3.3
Materials	107.2	108.3	108.8	108.3	109.9	110.5	2.4	1.1	.4	4	1.5	.6	5.5
Major industry groups													
Manufacturing (see note below)	102.6	102.9	103.0	102.6	104.1	104.2	1.3	.3	.1	4	1.5	.1	3.0
Previous estimates	102.7	102.9	102.9	102.7	104.1		1.4	.2	.0	2	1.3		
Mining	111.6	113.8	114.7	113.7	117.0	118.2	1.4	2.0	.8	9	2.9	1.0	10.8
Utilities	103.0	103.3	106.1	108.3	102.8	106.0	3.2	.4	2.7	2.1	-5.0	3.0	5.3
													Constant
					Dorce	nt of cap	acity						Capacity growth
	Average	1988-	1990-	1994-	Terce	In or cap	acity						giowiii
	1972-	89	91	95	2009	2017	2017			2018			Mar. '17 to
Capacity utilization	2017	high	low	high	low	Mar.	Oct. ^r	Nov. ^r	Dec. ^r	Jan. ^r	Feb. ^r	Mar. ^p	Mar. '18
	2017	mgn	10 11	mgn	10 11	ivitui.	000	1101.	Dee.	Juii.	100.	Iviui.	10101. 10
Total industry	79.8	85.2	78.8	85.0	66.7	75.5	76.8	77.1	77.3	77.1	77.7	78.0	1.0
Previous estimates							76.8	77.0	77.3	77.0	77.7		
Manufacturing (see note below)	78.3	85.6	77.3	84.6	63.7	74.3	75.2	75.3	75.3	74.9	76.0	75.9	.8
Previous estimates							75.2	75.3	75.2	75.0	75.9		
Mining	87.0	86.3	84.3	88.6	78.2	82.3	86.4	87.9	88.3	87.3	89.6	90.1	1.2
Utilities	85.3	92.9	84.4	92.9	78.3	76.4	77.4	77.6	79.6	81.1	76.8	79.0	1.9
Stage-of-process groups													
Crude	86.0	87.8	84.7	90.0	76.4	82.1	85.4	86.6	86.8	85.8	87.7	88.2	1.0
Primary and semifinished	80.4	86.5	78.1	87.7	63.8	74.8	75.5	75.9	76.4	76.3	76.2	76.7	.9
Finished r Revised p Preliminary	76.9	83.4	77.3	80.7	66.6	73.6	74.6	74.3	74.3	74.2	75.2	75.2	1.2

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.

result of gains in oil and gas extraction and in support activities for mining. The index for utilities jumped 3.0 percent after being suppressed in February by warmer-than-normal temperatures. At 107.2 percent of its 2012 average, total industrial production was 4.3 percent higher in March than it was a year earlier. Capacity utilization for the industrial sector moved up 0.3 percentage point in March to 78.0 percent, a rate that is 1.8 percentage points below its long-run (1972–2017) average.

Market Groups

The output of consumer goods advanced 0.5 percent in March. The production of durable consumer goods jumped 0.9 percent on the strength of a 2.7 percent gain for automotive products. The output of consumer nondurables moved up 0.4 percent, as a sharp increase in the index for consumer energy products was mostly offset by a drop in the index for non-energy nondurable consumer goods. Business equipment registered a gain of 0.5 percent, and all of its major categories posted increases. The index for defense and space equipment rose 0.7 percent. The output of construction supplies fell 0.3 percent after jumping 2.8 percent in February. In March, the index for business supplies recorded an increase of 0.4 percent. The production of materials moved up 0.6 percent, primarily as a result of a gain of 1.2 percent for energy materials.

Industry Groups

Manufacturing output edged up 0.1 percent in March and increased 3.1 percent at an annual rate in the first quarter. In March, a decline of 0.3 percent for nondurables was outweighed by gains of 0.4 percent for durables and 0.2 percent for other manufacturing (publishing and logging). Among durables, the index for motor vehicles and parts increased 2.7 percent; vehicle assemblies moved up to 12.0 million units at an annual rate, their highest level since December 2016.

The index for mining climbed 1.0 percent in March and was 10.8 percent higher than its year-earlier level. Mining output has increased for six consecutive quarters, but it is still about 4 percent below its peak in 2014.

Capacity utilization for manufacturing decreased 0.1 percentage point in March to 75.9 percent, a rate that is 2.4 percentage points below its long-run average. The operating rate for durables, at 75.9 percent, was 1.0 percentage point below its long-run average, whereas the rates for nondurables and for other manufacturing (publishing and logging), at 77.0 percent and 61.3 percent, respectively, were further below their long-run averages of about 80 percent for each. Utilization for mining rose 0.5 percentage point to 90.1 percent, which is 3.1 percentage points above its long-run average but 1.5 percentage points below its high in 2014. The capacity utilization rate for utilities jumped 2.2 percentage points to 79.0 percent but remained below its long-run average.

Tables

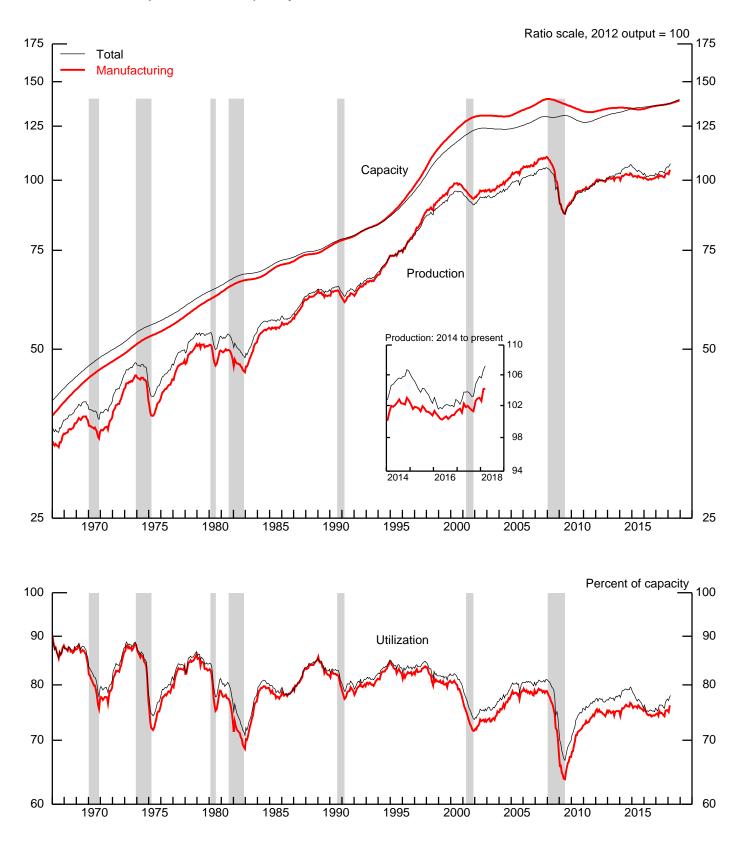
- 1. Industrial Production: Market and Industry Group Summary; percent change
- 2. Industrial Production: Special Aggregates and Selected Detail; percent change
- 3. Motor Vehicle Assemblies
- 4. Industrial Production: Market and Industry Group Summary; indexes
- 5. Industrial Production: Special Aggregates and Selected Detail; indexes
- 6. Diffusion Indexes of Industrial Production
- 7. Capacity Utilization
- 8. Industrial Capacity
- 9. Gross Value of Final Products and Nonindustrial Supplies
- 10. Gross-Value-Weighted Industrial Production: Stage-of-Process Groups
- 11. Historical Statistics: Total Industry
- 12. Historical Statistics: Manufacturing
- 13. Historical Statistics: Total Industry Excluding Selected High-Technology Industries
- 14. Historical Statistics: Manufacturing Excluding Selected High-Technology Industries
- 15. Industrial Production: Reliability Estimates

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 issued its annual revision to the index of industrial production (IP) and the related measures of capacity utilization on March 23, 2018. New annual benchmark data for 2016 for manufacturing were incorporated, as well as other annual data, including information on the mining of metallic and nonmetallic minerals (except fuels). The updated IP indexes included revisions to the monthly indicator (either product data or input data) and to seasonal factors for each industry. In addition, the estimation methods for some series were changed. Modifications to the methods for estimating the output of an industry affected the index from 1972 to the present.

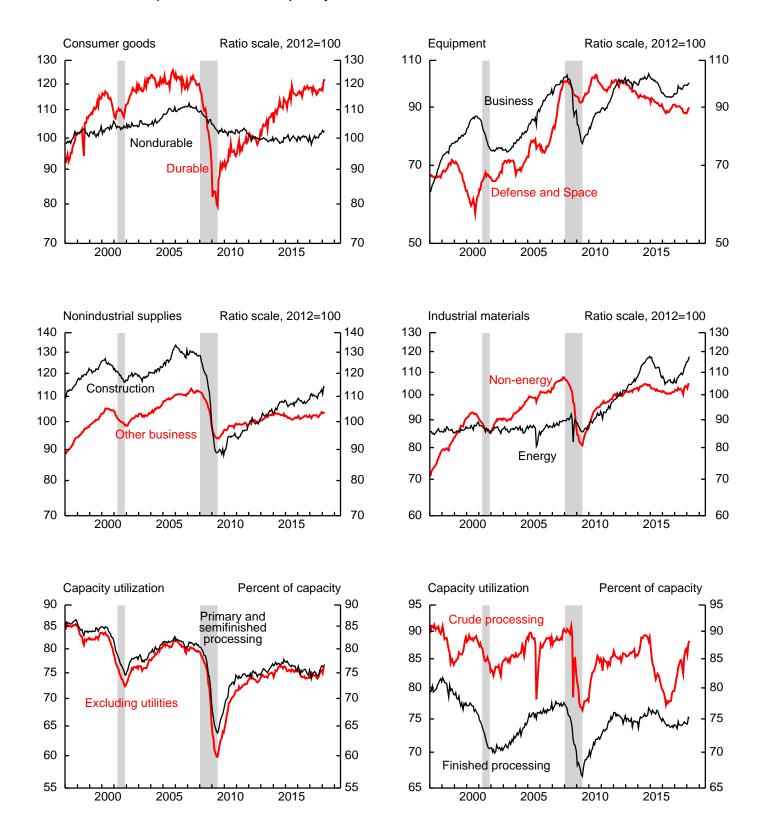
Capacity and capacity utilization were revised to incorporate data through the fourth quarter of 2017 from the U.S. Census Bureau's Quarterly Survey of Plant Capacity along with new data on capacity from the U.S. Geological Survey, the U.S. Department of Energy, and other organizations.



1. Industrial production, capacity, and utilization

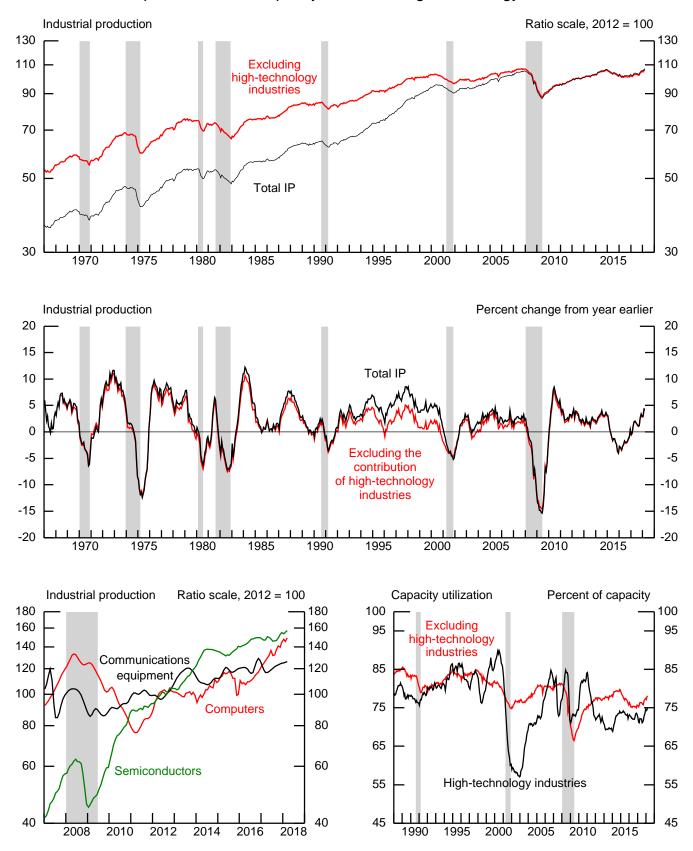
Note: The shaded areas are periods of business recession as defined by the National Bureau of Economic Research (NBER).

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

				th quart orth quar		Δπ	nual ra	te			Month	ly rate			Mar. '17
Item		2017	100	u uu yudi		2017		2018	2017		withit	2018			to
		proportion ¹	2015	2016	2017	Q3	Q4 ^r	Q1 ^p	Oct.r	Nov. ^r	Dec. ^r	Jan. ^r	Feb. ^r	Mar. ^p	Mar. '18
Fotal IP		100.00	-3.3	5	3.0	-1.5	7.8	4.5	1.5	.5	.5	2	1.0	.5	4.3
MARKET GROUPS															
Final products and nonindustrial supplies	s	54.37	-2.2	1	2.1	-1.5	4.9	3.6	.9	.0	.5	.0	.6	.5	3.3
Consumer goods		28.03	.5	.8	1.3	-1.1	5.6	4.1	1.2	2	.6	.3	.2	.5	3.6
Durable		6.34	2.6	2.5	5	-4.6	5.1	7.8	.4	3	.5	6	2.9	.9	4.6
Automotive products		3.31	3.9	4.2	8	-9.2	10.8	9.8	1.1	9	1.4	-1.5	3.5	2.7	7.3
Home electronics		.14	4.4	2.1	5.5	8.1	23.8	1.3	1.8	2.4	-2.8	-1.0	2.3	2.6	11.4
Appliances, furniture, carpeting		.88	3.4	.3	-2.1	-3.3	.6	1.5	.1	.0	1	.1	2.0	-2.8	4
Miscellaneous goods		2.02	.1	.8	.2	1.9	-2.9	7.8	7	.4	3	.6	2.2	4	1.9
Nondurable		21.68	.0	.2	1.9	.0	5.7	3.0	1.4	1	.7	.6	6	.4	3.3
Non-energy		16.70	.8	8	1.6	3.4	2.2	2.9	.4	5	.3	1	1.6	6	2.8
Foods and tobacco		9.65	1.7	.2	3.2	4.6	.3	4.6	.0	3	.2	.3	1.9	-1.3	3.1
Clothing		.20	-6.0	-2.7	-9.9	-5.2	-2.0	8.9	.5	-1.2	2.1	.6	1.2	6	-1.8
Chemical products		5.29	3	-1.9	.7	5.3	4.9	2.2	.8	5	.6	5	1.1	.4	4.4
Paper products		1.12	.9	-3.9	-3.1	-11.6	10.5	-5.1	1.9	-1.6	2	-1.7	1.3	.5	-3.5
Energy		4.98	-3.2	4.4	2.5	-10.8	18.5	3.5	4.9	1.1	2.0	2.8	-7.0	3.9	5.2
Business equipment		9.51	-6.2	-2.2	4.6	-1.8	5.6	2.2	.7	.1	2	.1	.6	.5	4.4
Transit		2.46	-2.9	-6.0	1.0	-1.8	-2.2	5.5	8	.1	9	.2	2.0	1.3	5.5
Information processing		2.14	-1.6	3.3	3.2	.5	3.6	9.0	.9	.1	2	1.6	.7	.7	4.5
Industrial and other		4.92	-9.6	-2.4	7.0	-2.7	10.7	-2.2	1.3	.1	.1	6	1	.1	3.8
Defense and space equipment		2.12	-3.1	.0	-3.3	-5.6	-5.7	6.8	6	.2	3	.6	1.4	.7	3
Construction supplies		5.12	.0	.5	3.4	-1.2	7.8	2.9	.4	.5	.8	-1.7	2.8	3	3.3
Business supplies		8.98	-1.0	.5	1.0	-1.4	4.1	1.4	.8	.3	.0	3	.0	.4	1.5
Aaterials		45.63	-4.6	-1.1	4.1	-1.6	11.2	5.6	2.4	1.1	.4	4	1.5	.6	5.5
Non-energy		27.59	-2.7	2	2.3	-5.1	9.1	2.5	2.7	.9	2	8	1.8	.1	2.9
Durable		16.31	-3.9	8	2.3	-2.3	7.1	5.1	.4	1.1	2	3	2.0	.1	3.4
Consumer parts		2.99	-2.0	2	.8	-8.4	10.7	10.0	.4	1.0	1.2	-1.8	4.3	.8	5.3
Equipment parts		4.79	-5.9	.3	1.0	-3.3	4.2	5.2	.2	.9	.3	.4	.6	2	2.2
Other		8.53	-3.4	-1.6	3.5	.5	7.5	3.3	.5	1.3	-1.0	2	1.9	.0	3.5
Nondurable		11.27	7	.7	2.3	-9.1	11.9	-1.2	6.3	.6	1	-1.5	1.5	.2	2.2
Textile		.35	-7.3	.5	-2.9	-2.7	2.2	15.0	.7	-2.3	2.5	1.3	2.8	-1.5	3.5
Paper		1.88	-2.1	.1	-3.5	-2.2	-5.0	-1.1	-1.8	1.1	.7	-1.9	1.1	.2	-2.3
Chemical		5.78	3	.2	4.2	-17.6	22.7	-4.3	12.6	.9	-1.0	-1.6	.9	.7	2.7
Energy		18.04	-7.2	-2.7	7.1	4.3	14.7	10.4	1.8	1.3	1.3	.1	1.0	1.2	9.5
INDUSTRY GROUPS		75.50	1.6	1	1.0	2.1	= =	2.1	1.2	2	1	4	15	1	2.0
Manufacturing	21 22	75.52	-1.6	1	1.9	-2.1	5.5	3.1	1.3	.3	.1	4	1.5	.1	3.0
Manufacturing (NAICS)	31–33	73.45	-1.6	.1	2.2	-1.9	5.6	3.3	1.3	.3	.1	4	1.5	.1	3.3
Durable manufacturing	221	37.58	-3.4	3	2.0	-2.3	5.5	5.5	.4	.4	.2	2	1.8	.4	3.8
Wood products	321	1.42 2.20	3.3	4.2	3.8	5.5	7.2	8.5	2	1.5 1.1	5	.1	2.7 4.3	.0	4.9
Nonmetallic mineral products	327			4	5.5	1.7	13.8	12.1			1.6	-1.5		.5	7.3
Primary metals Fabricated metal products	331 332	2.63 5.45	-8.2 -5.2	-4.0 -1.8	4.6 3.0	2.9 2.6	7.4 6.6	5.5 8.0	1 .6	1.7 .3	-1.4 .1	.1 .5	2.2 1.9	.5 2	4.1 5.0
Fabricated metal products Machinery	333	5.43	-3.2	-1.8	9.1	-1.6	12.8	-2.1	.0	.3	.1	-1.5	.2	2	5.0
	333			-2.5		-1.0	7.9		1.2	.7		-1.5	.2	4	
Computer and electronic products Electrical equip., appliances,	334	4.88	9	4.3	2.6	-1./	1.9	7.8	1.2	.0	.1	.0	.9	1.0	5.2
and components	335	1.82	-1.0	1	.9	-1.3	1	7.4	5	.0	5	2.1	1.0	-1.9	1.6
Motor vehicles and parts	3361-3	5.62	2.8	2.2	-1.2	-11.4	10.8	14.7	3	2	5	5	3.9	2.7	8.2
Aerospace and miscellaneous	5501 5	5.02	2.0	2.2	1.2	11.4	10.0	17./	.,	2	.0	5	5.7	2.1	0.2
transportation equipment	3364-9	4.32	-5.2	-3.1	-2.4	-3.9	-7.7	.2	9	.0	3	5	1.0	.2	-1.6
Furniture and related products	3304-9	1.19	3.9	-3.1	-2.4	-6.6	2.9	2.1	1.0	.0	5 .1	3 4	1.0	.2	-1.2
Miscellaneous	339	2.74	5	-1.8	-3.4	-0.0	-6.8	-4.2	1.0	-1.3	.1 9	4	2.0	-1.0	-1.2
Nondurable manufacturing	-	35.87	.4	.6	2.4	-1.4	5.8	1.1	2.4	.3	.0	5	1.2	3	2.7
Food, beverage, and tobacco products	311,2	11.71	1.8	.7	3.5	5.1	1.0	4.9	.2	2	.3	.1	2.1	-1.3	3.6
Textile and product mills	313,4	.65	-7.0	.2	-1.7	-2.8	.0	8.2	.4	-1.3	1.4	.7	1.7	-1.1	1.2
Apparel and leather	315,6	.21	-5.9	-2.5	-9.4	-4.7	-1.4	8.8	.7	-1.3	2.2	.6	1.2	6	-1.5
Paper	322	2.50	-2.3	1.0	-2.3	-2.1	-1.1	9	-1.4	1.3	.7	-2.0	1.2	.2	-1.2
Printing and support	323	1.41	1.8	1.1	-2.1	-3.6	-2.0	.2	1	.1	.9	6	.5	-1.0	-2.0
Petroleum and coal products	324	3.41	3.4	3.8	2.6	-14.4	10.9	-3.9	5.3	1	.3	.1	-2.8	1.8	1.0
Chemicals	325	12.38	9	6	3.2	-4.8	13.2	8	5.9	.3	5	9	1.3	.3	3.9
Plastics and rubber products	326	3.60	.8	1.6	2.0	3.8	2.3	.5	8	1.9	9	7	1.7	7	2.2
L.	1122 5111	2.08	.1	-5.1	-6.3	-10.4	2.0	-4.6	1.6	-2.0	.0	-1.4	1.2	.2	-4.7
Other manufacturing (non-NAICS)	1133,5111														
Other manufacturing (non-NAICS)	21	14.12	-10.2	-6.2	10.5	2.7	15.7	10.8	1.4	2.0	.8	9	2.9	1.0	10.8
Other manufacturing (non-NAICS) Mining Utilities	21 2211,2	14.12 10.36	-4.1	2.3	2.0	-2.5	13.9	6.1	3.2	.4	2.7	2.1	-5.0	3.0	5.3
<u>^</u>	21	14.12													

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 Fourth quarter to

ercent change, seasonally adjusted				rth quart urth quar			nnual rat				Month	1			Mar. '17
Item		2017				2017		2018	2017			2018			to
		proportion	2015	2016	2017	Q3	Q4 ^r	Q1 ^p	Oct.r	Nov. ^r	Dec. ^r	Jan. ^r	Feb. ^r	Mar. ^p	Mar. '18
Total industry		100.00	-3.3	5	3.0	-1.5	7.8	4.5	1.5	.5	.5	2	1.0	.5	4.3
Energy		25.91	-7.6	-1.5	6.2	.3	14.2	9.1	2.3	1.2	1.5	.7	9	1.9	8.2
Consumer products		4.98	-3.2	4.4	2.5	-10.8	18.5	3.5	4.9	1.1	2.0	2.8	-7.0	3.9	5.2
Commercial products Oil and gas well drilling	213111	2.37	.0 -45.6	2.4 -26.6	1.8 36.4	-4.0 -3.8	11.2 -19.2	6.1 32.7	1.9 9	.7 -2.7	2.8 .9	1.0 1.6	-3.6 6.7	2.6 4.1	2.9 17.0
Converted fuel	213111	4.63	-43.0	-20.0	.7	-5.8	-19.2	9.5	3.7	-2.7	3.2	1.0	-2.8	4.1	6.3
Primary energy		13.42	-8.4	-4.2	9.7	6.0	14.9	10.7	1.2	1.6	.6	3	2.4	1.0	10.7
Non-energy		74.09	-1.7	3	2.0	-2.1	5.6	2.9	1.3	.3	.1	5	1.7	.0	3.0
Selected high-technology industries		2.07	1.9	8.5	3.5	-1.9	17.0	9.0	1.7	1.4	1.6	1	.5	1.2	8.9
Computers and peripheral equipment	3341	.35	-4.1	13.2	20.8	3.1	26.8	16.9	3.0	-1.1	3.8	2.0	-1.5	2.5	17.5
Communications equipment	3342	.51	6.7	7.1	-2.8	13.5	8.4	5.0	.7	.5	.5	.4	.3	.4	7.9
Semiconductors and related															-
electronic components	3344	1.21	1.6	7.9	1.9	-8.8	17.9	8.5	1.8	2.5	1.4	9	1.2	1.2	6.9
Excluding selected high-technology industries		72.02	-1.8	6	1.9	-2.1	5.2	2.7	1.3	.3	.0	6	1.7	.0	2.8
	22(1-2														
Motor vehicles and parts	3361-3	5.62	2.8	2.2	-1.2	-11.4	10.8	14.7	.9	2	.8	5	3.9	2.7	8.2
Motor vehicles Motor vehicle parts	3361 3363	2.72 2.45	4.6	1.5 3.7	-5.2 1.5	-19.5 -8.1	11.0 10.7	22.6 11.1	1.4	6 .5	1.0 .8	3 7	5.4 3.4	4.3 1.4	9.8 6.2
× ×				5.1						.5	.8	/	3.4	1.4	
Excluding motor vehicles and parts Consumer goods		66.40 20.11	-2.2 .9	8 7	2.2 1.4	-1.3 2.9	4.8 1.9	1.8 3.1	1.3	.3 4	.0 .2	6 2	1.6 1.7	3 7	2.4 2.6
Business equipment		8.00	-8.1	-2.5	5.1	-1.5	4.9	7	.3	4	3	2	.2	7	2.0
Construction supplies		5.10	-0.1	-2.5	3.5	-1.3	7.8	2.9	.7	.1	3	-1.7	2.8	3	3.3
Business supplies		6.30	-1.4	9	.6	-1.5	1.0	4	.4	.1	1	8	1.4	5	.6
Materials		24.73	-3.1	7	2.5	-4.3	8.4	1.4	2.9	.9	3	8	1.6	1	2.5
Measures excluding selected high-technology industries															
Total industry		97.93	-3.5	8	3.0	-1.6	7.6	4.4	1.5	.5	.4	2	1.0	.5	4.2
Manufacturing ¹		73.45	-1.7	3	1.9	-2.1	5.2	2.9	1.3	.2	.0	4	1.5	.0	2.8
Durable		35.67	-3.7	9	1.8	-2.4	4.8	5.3	.3	.3	.1	3	1.9	.3	3.5
Measures excluding motor vehicles and parts															
Total industry		94.38	-3.7	7	3.3	9	7.6	3.9	1.6	.6	.4	2	.8	.4	4.1
Manufacturing ¹		69.90	-1.9	3	2.2	-1.3	5.1	2.2	1.4	.3	.0	4	1.3	1	2.6
Durable		32.12	-4.3	8	2.5	7	4.6	4.0	.3	.5	.1	2	1.5	.0	3.0
Measures excluding selected high-technology industries															
and motor vehicles and parts Total industry		02.31	-3.8	-1.0	3.3	9	7 /	3.8	1.6	5	1	_ ?	Q	Δ	4.0
Manufacturing ¹		92.31 67.83	-3.8	-1.0	2.1	-1.3	7.4 4.8	2.0	1.0	.3	.4	2	.8 1.3	.4	2.4
-															
Stage-of-process components of non-energy materials, measures of the input to															
Finished processors		10.02	-4.2	.1	.0	-4.6	4.2	5.7	1	.8	.7	7	1.9	.1	2.3
Primary and semifinished processors		17.57	-1.7	4	3.6	-5.4	11.9	.7	4.4	1.0	7	9	1.7	.1	3.3
-															

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

Table 3 MOTOR VEHICLE ASSEMBLIES

Millions of units, seasonally adjusted annual rate

2017	2017			2018	2017			2018		
average	Q2	Q3	Q4	Q1	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
11.19	11.42	10.53	10.95	11.45	10.98	10.87	10.99	10.78	11.52	12.04
3.03	3.27	2.72	2.73	2.90	2.74	2.73	2.72	2.56	2.96	3.19
8.16	8.15	7.81	8.22	8.54	8.25	8.15	8.27	8.22	8.56	8.85
7.88	7.87	7.51	7.93	8.24	7.96	7.84	7.98	7.91	8.25	8.54
.28	.28	.30	.29	.31	.29	.31	.29	.31	.31	.30
10.91	11.14	10.22	10.65	11.14	10.69	10.57	10.70	10.47	11.21	11.73
	average 11.19 3.03 8.16 7.88 .28	average Q2 11.19 11.42 3.03 3.27 8.16 8.15 7.88 7.87 .28 .28	average Q2 Q3 11.19 11.42 10.53 3.03 3.27 2.72 8.16 8.15 7.81 7.88 7.87 7.51 .28 .28 .30	average Q2 Q3 Q4 11.19 11.42 10.53 10.95 3.03 3.27 2.72 2.73 8.16 8.15 7.81 8.22 7.88 7.87 7.51 7.93 .28 .28 .30 .29	average Q2 Q3 Q4 Q1 11.19 11.42 10.53 10.95 11.45 3.03 3.27 2.72 2.73 2.90 8.16 8.15 7.81 8.22 8.54 7.88 7.87 7.51 7.93 8.24 .28 .28 .30 .29 .31	average Q2 Q3 Q4 Q1 Oct. 11.19 11.42 10.53 10.95 11.45 10.98 3.03 3.27 2.72 2.73 2.90 2.74 8.16 8.15 7.81 8.22 8.54 8.25 7.88 7.87 7.51 7.93 8.24 7.96 .28 .28 .30 .29 .31 .29	average Q2 Q3 Q4 Q1 Oct. Nov. 11.19 11.42 10.53 10.95 11.45 10.98 10.87 3.03 3.27 2.72 2.73 2.90 2.74 2.73 8.16 8.15 7.81 8.22 8.54 8.25 8.15 7.88 7.87 7.51 7.93 8.24 7.96 7.84 .28 .28 .30 .29 .31 .29 .31	average Q2 Q3 Q4 Q1 Oct. Nov. Dec. 11.19 11.42 10.53 10.95 11.45 10.98 10.87 10.99 3.03 3.27 2.72 2.73 2.90 2.74 2.73 2.72 8.16 8.15 7.81 8.22 8.54 8.25 8.15 8.27 7.88 7.87 7.51 7.93 8.24 7.96 7.84 7.98 .28 .28 .30 .29 .31 .29 .31 .29	average Q2 Q3 Q4 Q1 Oct. Nov. Dec. Jan. 11.19 11.42 10.53 10.95 11.45 10.98 10.87 10.99 10.78 3.03 3.27 2.72 2.73 2.90 2.74 2.73 2.72 2.56 8.16 8.15 7.81 8.22 8.54 8.25 8.15 8.27 8.22 7.88 7.87 7.51 7.93 8.24 7.96 7.84 7.98 7.91 .28 .28 .30 .29 .31 .29 .31 .29 .31	average Q2 Q3 Q4 Q1 Oct. Nov. Dec. Jan. Feb. 11.19 11.42 10.53 10.95 11.45 10.98 10.87 10.99 10.78 11.52 3.03 3.27 2.72 2.73 2.90 2.74 2.73 2.72 2.56 2.96 8.16 8.15 7.81 8.22 8.54 8.25 8.15 8.27 8.22 8.56 7.88 7.87 7.51 7.93 8.24 7.96 7.84 7.98 7.91 8.25 .28 .28 .30 .29 .31 .29 .31 .29 .31 .31

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

012 = 100, seasonally adjusted											
Item		2017 proportion	2017 July	Aug.	Sept.	Oct.r	Nov. ^r	Dec. ^r	2018 Jan. ^r	Feb. ^r	Mar. ^p
Total IP		100.00	103.6	103.2	103.2	104.8	105.3	105.8	105.6	106.6	107.2
MARKET GROUPS											
Final products and nonindustrial supplies		54.37	101.3	101.2	101.5	102.4	102.4	102.9	102.9	103.5	104.0
Consumer goods		28.03	101.5	101.2	101.5	102.4	102.4	102.9	102.9	105.8	104.0
Durable		6.34	115.7	116.2	117.5	118.0	117.6	118.2	117.5	120.9	122.0
Automotive products		3.31	125.6	127.1	129.4	130.9	129.7	131.5	129.5	134.1	137.7
Home electronics		.14	108.5	110.4	114.3	116.4	119.2	115.9	114.7	117.4	120.4
Appliances, furniture, carpeting		.88	108.4	107.3	108.1	108.1	108.1	108.0	108.1	110.2	107.1
Miscellaneous goods		2.02	106.4	106.0	106.0	105.2	105.6	105.3	105.9	108.3	107.8
Nondurable		21.68	100.2	100.2	100.0	101.4	101.3	102.0	102.5	102.0	102.4
Non-energy		16.70	98.8	99.0	99.5	99.9	99.4	99.7	99.5	101.1	100.4
Foods and tobacco		9.65	106.8	107.1	107.3	107.3	107.0	107.2	107.5	109.5	108.1
Clothing		.20	72.8	72.3	71.5	71.9	71.1	72.5	73.0	73.8	73.4
Chemical products		5.29	90.4	90.3	91.1	91.8	91.4	91.9	91.4	92.4	92.8
Paper products		1.12 4.98	83.6	83.8 103.5	85.9 101.0	87.5	86.2 107.1	86.0 109.2	84.5	85.7	86.1
Energy		4.98	104.5	103.5	101.0	106.0	107.1	109.2	112.3	104.4	108.5
Business equipment		9.51	97.1	97.2	98.2	98.8	99.0	98.7	98.8	99.4	99.9
Transit Information processing		2.46 2.14	110.2 102.8	111.7 103.0	111.7 102.9	110.9 103.8	110.9 103.9	109.9 103.7	110.1 105.4	112.3	113.8 106.8
Information processing Industrial and other		4.92	89.5	89.0	90.8	92.0	92.1	92.2	105.4 91.6	106.1 91.5	106.8 91.6
Defense and space equipment		2.12	89.5	89.0	88.2	87.6	92.1 87.8	92.2 87.5	88.1	89.3	89.9
Detense and space equipment		2.12		07.2	00.2	07.0	07.0	07.5	00.1	07.5	07.7
Construction supplies Business supplies		5.12 8.98	109.9 102.4	109.2 102.0	111.0 101.7	111.5 102.6	112.0 102.9	112.9 103.6	110.9 103.3	114.1 103.3	113.8 103.7
Materials		45.63	105.9	105.1	104.7	107.2	108.3	108.8	108.3	109.9	110.5
Non-energy		27.59	102.2	101.4	100.2	107.2	103.8	103.7	103.5	109.9	104.8
Durable		16.31	102.5	102.6	103.5	103.9	105.1	104.9	104.5	106.6	106.7
Consumer parts		2.99	105.3	107.7	108.2	108.6	109.8	111.1	109.0	113.7	114.6
Equipment parts		4.79	102.7	101.9	102.5	102.7	103.6	103.9	104.4	105.0	104.9
Other		8.53	101.4	101.2	102.5	103.0	104.4	103.3	103.1	105.0	105.0
Nondurable		11.27	101.6	99.6	95.3	101.3	101.9	101.8	100.3	101.8	102.0
Textile		.35	91.0	92.5	92.5	93.2	91.0	93.3	94.5	97.1	95.7
Paper		1.88	93.8	94.8	93.8	92.0	93.0	93.7	91.9	92.9	93.1
Chemical Energy		5.78 18.04	102.1 109.7	96.9 108.9	89.7 109.9	101.0 111.8	101.9 113.3	100.9 114.8	99.3 114.9	100.2 116.1	100.9 117.5
Encigy		10.04	109.7	100.7	10).)	111.0	115.5	114.0	114.9	110.1	117.5
INDUSTRY GROUPS Manufacturing		75.52	101.7	101.4	101.3	102.6	102.9	103.0	102.6	104.1	104.2
Manufacturing (NAICS)	31-33	73.45	101.7	101.4	101.5	102.0	102.9	103.0	102.0	104.1	104.2
Durable manufacturing	51-55	37.58	102.4	102.2	102.0	103.4	103.7	103.8	103.4	105.0	105.0
Wood products	321	1.42	120.8	121.9	123.4	123.1	125.0	124.4	124.6	127.9	127.8
Nonmetallic mineral products	327	2.20	113.4	111.9	115.6	115.9	117.2	119.0	117.2	122.2	122.9
Primary metals	331	2.63	92.3	93.7	94.8	94.7	96.3	94.9	95.0	97.1	97.6
Fabricated metal products	332	5.45	97.0	97.4	98.2	98.8	99.2	99.3	99.8	101.7	101.5
Machinery	333	5.30	87.3	86.4	89.0	89.5	90.1	91.1	89.7	89.9	89.6
Computer and electronic products	334	4.88	113.2	113.6	113.6	115.0	115.9	116.0	116.8	117.8	118.9
Electrical equip., appliances,											
and components	335	1.82	102.7	100.7	102.7	102.1	102.2	101.7	103.8	104.8	102.9
Motor vehicles and parts	3361-3	5.62	118.8	121.5	123.1	124.2	123.9	124.8	124.2	129.0	132.6
Aerospace and miscellaneous	2264.0	4.22	100.4	100.2	00.0	07.0	07.0	07.7	07.2	00.1	00.2
transportation equipment Furniture and related products	3364-9	4.32	100.4	100.2	98.8	97.9	97.9	97.7	97.2	98.1	98.3
Furniture and related products Miscellaneous	337 339	1.19 2.74	103.3 97.8	103.2 97.8	102.6 97.0	103.6 96.9	103.7 95.7	103.9 94.8	103.5 93.9	104.5 95.7	104.9 94.8
Nondurable manufacturing	211.2	35.87	102.5	101.7	100.4	102.8	103.1	103.1	102.6	103.7	103.5
Food, beverage, and tobacco products Textile and product mills	311,2 313,4	11.71 .65	108.2 97.5	108.8 97.6	108.6 97.5	108.9 97.9	108.6 96.7	109.0 98.0	109.1 98.7	111.4 100.4	109.9 99.3
Apparel and leather	313,4 315,6	.03	73.9	97.6 73.4	97.5 72.7	73.2	96.7 72.3	98.0 73.8	98.7 74.3	75.1	99.3 74.6
Paper	322	2.50	95.7	97.1	96.4	95.1	96.3	97.0	95.1	96.2	96.4
Printing and support	322	1.41	98.7	98.8	97.6	97.5	97.6	98.5	97.9	98.4	97.4
Petroleum and coal products	324	3.41	106.4	105.7	102.0	107.4	107.3	107.7	107.8	104.8	106.6
Chemicals	325	12.38	97.2	94.7	92.2	97.6	97.9	97.5	96.5	97.8	98.1
Plastics and rubber products	326	3.60	109.5	108.8	109.8	109.0	111.1	110.0	109.2	111.0	110.2
		2.08	80.4	79.9	80.4	81.7	80.1	80.1	78.9	79.9	80.1
Other manufacturing (non-NAICS)	1133,5111										
Other manufacturing (non-NAICS) Mining	1133,5111 21	14.12	109.3	108.7	110.1	111.6	113.8	114.7	113.7	117.0	118.2
	,		109.3 102.1	108.7 100.6	110.1 99.8	111.6 103.0	113.8 103.3	114.7 106.1	113.7 108.3	117.0 102.8	118.2 106.0
Mining	21	14.12									

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

Table 5 INDUSTRIAL PRODUCTION INDEXES: SPECIAL AGGREGATES 2012 = 100, seasonally adjusted

J12 = 100, seasonally adjusted	I	2017	2017						2018		
Item		2017 proportion	July	Aug.	Sept.	Oct.r	Nov. ^r	Dec. ^r	Jan. ^r	Feb. ^r	Mar. ^p
Fotal industry		100.00	103.6	103.2	103.2	104.8	105.3	105.8	105.6	106.6	107.2
Energy		25.91	107.5	106.7	106.7	109.2	110.4	112.1	112.9	111.9	114.1
Consumer products		4.98	104.5	103.5	101.0	106.0	107.1	109.2	112.3	104.4	108.5
Commercial products		2.37	106.7	106.5	105.6	107.6	108.4	111.4	112.5	108.5	111.3
	213111	.52	70.7	68.3	66.6	65.9	64.2	64.8	65.8	70.3	73.1
Converted fuel		4.63	98.4	96.2	94.6	98.1	98.7	101.9	103.3	100.4	102.0
Primary energy		13.42	112.4	112.2	114.2	115.5	117.3	118.0	117.7	120.5	121.8
Non-energy		74.09	101.7	101.4	101.4	102.7	103.0	103.0	102.5	104.2	104.2
Selected high-technology industries		2.07	137.2	137.8	139.0	141.4	143.4	145.7	145.6	146.3	148.1
Computers and peripheral equipment	3341	.35	131.8	132.3	137.0	141.1	139.6	144.9	147.8	145.6	149.2
Communications equipment	3342	.51	120.4	121.6	122.6	123.4	124.0	124.6	125.1	125.5	126.0
Semiconductors and related											
electronic components	3344	1.21	145.9	146.2	146.5	149.2	152.9	155.1	153.7	155.5	157.4
Excluding selected high-technology											
industries		72.02	100.5	100.2	100.1	101.4	101.7	101.7	101.1	102.9	102.8
Motor vehicles and parts	3361-3	5.62	118.8	121.5	123.1	124.2	123.9	124.8	124.2	129.0	132.6
Motor vehicles	3361	2.72	116.6	117.8	119.5	121.2	120.4	121.6	121.2	127.7	133.2
Motor vehicle parts	3363	2.45	120.2	124.0	123.9	125.1	125.8	126.8	125.9	130.1	131.8
Excluding motor vehicles and parts		66.40	99.2	98.7	98.5	99.8	100.1	100.1	99.5	101.0	100.8
Consumer goods		20.11	100.0	100.1	100.6	100.9	100.5	100.7	100.6	102.3	101.6
Business equipment		8.00	94.6	94.5	95.3	96.0	96.0	95.8	95.6	95.8	95.9
Construction supplies		5.10	109.8	109.1	111.0	111.4	111.9	112.9	110.9	114.0	113.7
Business supplies	_	6.30	97.6	97.1	97.0	97.4	97.5	97.5	96.7	98.0	97.5
Materials		24.73	99.7	98.5	97.2	100.0	100.9	100.5	99.7	101.4	101.3
Measures excluding selected high-technology											
industries											
Total industry		97.93	102.8	102.4	102.3	103.9	104.4	104.9	104.7	105.7	106.2
Manufacturing ¹		73.45	100.5	100.3	100.1	101.4	101.6	101.7	101.3	102.8	102.8
Durable		35.67	100.1	100.3	101.2	101.5	101.8	101.9	101.6	103.6	103.9
Measures excluding motor vehicles and parts											
Fotal industry		94.38	102.9	102.3	102.2	103.9	104.4	104.9	104.7	105.6	106.0
Manufacturing ¹		69.90	100.5	100.1	99.8	101.2	101.5	101.5	101.2	102.5	102.3
Durable		32.12	100.1	100.0	100.8	101.1	101.6	101.6	101.4	102.9	102.9
Measures excluding selected high-technology industries and motor vehicles and parts											
Total industry		92.31	102.1	101.5	101.3	102.9	103.5	103.9	103.7	104.6	105.0
Manufacturing ¹		67.83	99.3	98.8	98.5	99.8	105.5	103.9	99.7	104.0	105.0
Stage-of-process components of non-energy materials, measures of the input to											
Finished processors		10.02	101.2	101.7	102.0	101.9	102.7	103.5	102.8	104.7	104.9
											104.9
Primary and semifinished processors		17.57	102.7	101.1	99.1	103.4	104.4	103.7	102.8	104.6	104

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

Table 6 Diffusion Indexes of Industrial Production

ercent									~	~		
Item	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
One month earlier												
2016	53.7	45.3	45.0	42.3	50.0	47.7	52.0	45.3	54.3	60.3	52.0	58.7
2017	60.0	51.3	47.0	65.3	43.7	57.7	51.0	52.3	55.7	63.0	55.0	61.7
2018	53.3	70.0										
Three months earlier												
2016	50.7	48.3	48.7	37.3	43.3	48.7	56.3	46.7	56.0	58.3	57.0	59.3
2017	55.7	61.0	52.3	57.7	45.3	56.0	48.0	50.3	56.3	63.0	69.7	66.0
2018	60.7	69.3										
Six months earlier												
2016	47.7	41.0	39.7	38.3	43.0	48.7	44.7	45.7	52.0	58.3	54.7	58.3
2017	57.0	64.3	55.7	60.0	56.0	56.3	49.3	50.0	58.7	53.0	62.0	63.7
2018	66.0	71.7										

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.

			1972-	1994-										
Item		2017	2017	95	2009	2017		2018	2017			2018		
nem		proportion	ave.	high	low	03	O4 ^r	Q1 ^p	Oct. ^r	Nov. ^r	Dec. ^r	Jan. ^r	Feb. ^r	Mar. ^p
		FF					X ·	X ⁻						
Total industry		100.00	79.8	85.0	66.7	75.8	77.1	77.6	76.8	77.1	77.3	77.1	77.7	78.0
Manufacturing ¹		77.37	78.3	84.6	63.7	74.4	75.2	75.6	75.2	75.3	75.3	74.9	76.0	75.9
Manufacturing (NAICS)	31-33	74.76	78.2	84.7	63.5	74.9	75.7	76.1	75.6	75.8	75.8	75.4	76.5	76.4
	01 00	,, 0	, 0.2	0.117	0010	7.15	1011	/011	/010	7010	7010	/011	1010	/011
Durable manufacturing		39.10	76.9	83.8	58.3	73.8	74.6	75.3	74.4	74.6	74.7	74.4	75.7	75.9
Wood products	321	1.39	76.5	86.6	47.7	77.4	78.5	79.6	77.9	79.0	78.5	78.4	80.3	80.1
Nonmetallic mineral products	327	2.60	73.8	82.4	45.6	64.1	65.7	67.0	65.0	65.5	66.4	65.2	67.8	68.0
Primary metals	331	2.93	78.3	94.1	49.7	67.8	68.9	69.7	68.5	69.6	68.6	68.6	70.1	70.4
Fabricated metal products	332	5.42	77.5	84.9	61.9	77.4	78.7	80.1	78.5	78.7	78.8	79.2	80.6	80.4
Machinery	333	5.64	77.5	87.2	59.0	72.9	75.3	75.1	74.6	75.2	76.1	75.0	75.2	75.0
Computer and electronic products	334	5.47	77.5	84.4	70.3	69.7	70.6	71.5	70.4	70.8	70.7	71.0	71.5	72.0
Electrical equip., appliances,														
and components	335	1.82	82.2	92.7	66.8	76.7	76.3	77.3	76.5	76.4	75.9	77.4	78.0	76.4
Motor vehicles and parts	3361-3	5.59	75.2	87.7	33.7	75.8	77.2	79.4	77.3	76.9	77.3	76.8	79.6	81.7
Aerospace and miscellaneous	2001 0											. 5.0		51.7
transportation equipment	3364-9	4.36	74.2	70.4	73.0	76.9	75.4	75.5	75.4	75.5	75.3	74.9	75.7	75.8
Furniture and related products	3304-9	1.20	76.7	82.7	55.8	75.3	75.7	75.7	75.7	75.7	75.7	75.3	75.9	76.0
Miscellaneous	339	2.67	76.6	81.3	68.4	79.3	77.7	76.6	78.7	77.7	76.9	76.0	77.4	76.5
Wiscenaleous	559	2.07	/0.0	01.5	00.4	19.5	//./	70.0	/0./	//./	70.9	70.0	//.4	70.5
Nondurable manufacturing		35.66	80.1	86.0	69.0	76.1	77.0	76.9	76.9	77.1	77.0	76.5	77.3	77.0
Food, beverage, and tobacco products	311,2	11.80	80.6	85.4	75.2	76.9	76.7	77.3	76.9	76.6	76.7	76.7	78.2	77.0
Textile and product mills	313,4	.73	78.8	91.8	54.0	68.5	68.7	70.2	68.9	68.1	69.1	69.6	70.8	70.0
Apparel and leather	315,6	.25	76.3	86.9	56.4	64.5	64.9	67.1	64.8	64.2	65.8	66.4	67.5	67.3
Paper	322	2.21	86.7	92.7	72.9	86.6	86.3	86.1	85.4	86.4	87.1	85.3	86.4	86.6
Printing and support	323	1.48	79.6	84.9	58.8	73.8	73.7	73.9	73.3	73.5	74.3	73.9	74.3	73.5
Petroleum and coal products	324	3.05	85.1	91.0	76.3	77.4	79.5	78.4	79.6	79.4	79.6	79.6	77.2	78.4
Chemicals	325	12.79	76.8	82.0	65.4	72.5	74.7	74.4	74.7	74.8	74.5	73.7	74.6	74.8
Plastics and rubber products	326	3.35	82.1	93.2	57.5	82.3	82.2	81.6	81.6	83.0	82.0	81.1	82.3	81.4
Other manufacturing (non-NAICS)	1133,5111	2.61	80.0	83.2	68.3	60.2	61.0	60.8	61.6	60.6	60.7	60.1	61.0	61.3
x # · ·	21	12.20	07.0	00 (70.0	0.1.0	07.5	00.0	06.4	07.0	00.2	07.2	00 (00.1
Mining	21	12.26	87.0	88.6	78.2	84.8	87.5	89.0	86.4	87.9	88.3	87.3	89.6	90.1
Utilities	2211,2	10.37	85.3	92.9	78.3	76.0	78.2	79.0	77.4	77.6	79.6	81.1	76.8	79.0
Selected high-technology industries		2.32	77.4	86.6	71.1	71.4	73.7	74.6	72.8	73.6	74.6	74.3	74.4	75.1
Computers and peripheral equipment	3341	.30	78.0	88.0	83.0	93.4	96.4	97.1	96.8	94.8	97.5	98.4	95.9	97.2
Computers and peripheral equipment	3342	.50	76.4	86.0	77.2	65.1	65.3	65.2	65.4	65.3	65.3	65.3	65.2	65.2
Semiconductors and related	5542	.05	/0.4	00.0	11.4	05.1	05.5	03.2	03.4	05.5	05.5	05.5	05.2	05.2
electronic components	3344	1.39	78.6	91.8	62.9	69.4	72.5	73.9	70.9	72.7	73.8	73.1	73.9	74.7
Measures excluding selected high-technology industries														
Total industry		97.68	80.0	84.9	66.5	75.9	77.1	77.7	76.8	77.2	77.4	77.1	77.8	78.1
Manufacturing ¹		75.05	78.4	84.5	63.3	74.5	75.3	75.7	75.2	75.3	75.3	74.9	76.0	76.0
STAGE-OF-PROCESS GROUPS Crude		16.40	86.0	90.0	76.4	83.6	86.3	87.2	85.4	86.6	86.8	85.8	87.7	88.2
		16.40 44.89	86.0 80.4	90.0 87.7	76.4 63.8	83.6 74.5	86.3 75.9	87.2 76.4	85.4 75.5	86.6 75.9	86.8 76.4	85.8 76.3	87.7 76.2	88.2

Table 7 CAPACITY UTILIZATION Percent of capacity, seasonally adjusted

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

Table 8INDUSTRIAL CAPACITY Percent change

		Average a	nnual rate		Fourth	quarter to	o fourth c	uarter		Annua	al rate		Monthly rate
Item	1972-	1980-	1989-	1995-					2017			2018	2018
	79	88	94	2018	2015	2016	2017	2018	Q2	Q3	Q4	Q1	Mar.
Total industry	3.0	1.9	2.3	2.0	.8	.6	.6	1.9	.4	.6	1.1	1.5	.2
Manufacturing ¹	3.2	2.2	2.6	2.0	3	1.3	.7	1.3	.6	.6	.8	1.1	.1
Mining	.7	.1	7	1.1	.9	-3.1	-1.0	4.8	-2.1	5	1.7	3.6	.4
Utilities	4.4	2.2	1.8	1.7	.4	1.6	1.8	2.3	1.8	1.8	1.8	2.0	.2
Selected high-technology industries	18.6	16.7	16.0	17.8	3.3	7.4	3.2	4.4	2.9	2.5	3.0	3.8	.3
Manufacturing ¹ ex. selected high-technology industries	2.6	1.3	1.6	.8	4	1.1	.7	1.2	.6	.5	.7	1.0	.1
STAGE-OF-PROCESS GROUPS Crude	1.5	.4	5	1.1	.4	-2.4	5	3.6	-1.3	2	1.3	2.6	.3
Primary and semifinished	3.0	1.3	2.5	2.2	2	1.7	.7	1.6	.6	.6	.9	1.3	.1
Finished	3.9	3.3	2.8	1.9	.1	1.0	1.1	1.5	1.1	1.1	1.2	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 2017

Billions of 2007 donars at annual rate, season											
			2017		2018	2017			2018		
Item	2009	2017	Q3	Q4 ^r	Q1 ^p	Oct.r	Nov. ^r	Dec. ^r	Jan. ^r	Feb. ^r	Mar. ^p
Final products and nonindustrial supplies	3,235.9	3,635.0	3,619.5	3,671.8	3,707.0	3,663.5	3,667.6	3,684.3	3,690.9	3,701.9	3,728.2
Final products	2,409.2	2,698.6	2,687.5	2,725.8	2,753.6	2,722.8	2,723.4	2,731.1	2,742.2	2,748.0	2,770.7
Consumer goods	1,780.9	1,953.9	1,943.3	1,973.7	1,993.2	1,971.4	1,970.5	1,979.3	1,988.8	1,987.3	2,003.4
Durable	342.0	500.3	492.3	499.7	511.8	500.0	497.8	501.3	496.9	514.5	523.9
Automotive products	188.1	329.8	322.0	329.4	339.2	330.1	327.1	331.1	326.2	340.0	351.3
Other durable goods	153.9	170.2	170.1	170.0	172.3	169.7	170.5	169.9	170.5	174.2	172.2
Nondurable	1,438.9	1,468.7	1,465.9	1,489.0	1,497.3	1,486.5	1,487.6	1,493.1	1,506.5	1,489.0	1,496.3
Equipment, total	628.4	750.5	750.2	757.9	766.4	757.2	758.9	757.5	758.9	766.9	773.5
Business and defense	609.7	730.8	730.1	737.8	744.8	737.2	738.9	737.2	738.3	745.0	751.0
Business	492.9	621.1	621.0	630.7	635.9	630.2	631.7	630.1	630.6	636.0	641.2
Defense and space	116.8	110.4	109.9	108.0	109.7	108.0	108.2	108.0	108.6	109.9	110.6
Nonindustrial supplies	826.6	937.7	933.2	947.3	954.6	941.7	945.4	954.9	949.8	955.3	958.6
Construction supplies	232.1	287.3	285.9	290.9	293.2	289.2	290.4	293.1	288.3	295.9	295.3
Business supplies	594.5	650.1	647.0	656.1	661.0	652.1	654.7	661.4	661.5	658.7	662.9
Commercial energy products	218.3	234.5	231.4	237.4	242.6	234.7	235.6	242.0	245.3	238.2	244.2

r Revised. p Preliminary.

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

Percent change, seasonally adjusted

		Fou	rth quarte	er to										
		fo	urth quar	ter		Annual 1	ate			Month	ly rate			Mar. '17
Item	2017				2017		2018	2017			2018			to
	gross value1	2015	2016	2017	Q3	Q4 ^r	Q1 ^p	Oct.r	Nov. ^r	Dec.r	Jan. ^r	Feb. ^r	Mar. ^p	Mar. '18
Finished	2,130.9	-1.9	2	2.0	9	3.7	5.3	.5	2	.2	1	1.9	.3	4.4
Semifinished	1,906.7	-1.6	.7	1.5	-3.6	6.4	6.0	.8	.6	.5	.5	.6	.2	3.3
Primary	1,452.3	-1.9	1.9	2.3	-4.7	12.3	.4	3.4	.7	.8	.0	-1.8	1.7	2.4
Crude	734.2	-5.4	-2.0	5.7	-6.6	15.5	3.6	5.6	1.2	.1	-1.2	2.2	.5	5.9

r Revised. p Preliminary.

1. Billions of 2009 dollars.

Seasonally adjusted			-				,	-	,					5			
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
IP (percent																	
change) ¹																	
1996	7	1.6	1	.9	.7	.8	1	.6	.7	1	.9	.7	2.7	8.9	5.3	5.7	4.5
1997	.1	1.2	.7	.0	.6	.5	.8	1.0	.9	.9	.9	.3	7.9	5.9	9.5	10.5	7.2
1998	.5	.1	.1	.4	.6	6	3	2.1	2	.8	1	.4	4.6	2.7	3.0	5.9	5.8
1999 2000	.5	.5 .3	.2	.3 .7	.7	2 .1	.6 1	.4	4 .4	1.3 3	.5 .0	.8 3	4.5 4.1	3.9 5.0	3.6 4	7.3 9	4.4 3.9
2000		.5	.+	. /	.2	.1	1	5	.+	5	.0	5	7.1	5.0)	5.7
2001	6	6	3	3	6	6	6	1	4	4	5	.0	-5.1	-5.0	-5.4	-4.1	-3.1
2002	.6	.0	.8	.4	.4	1.0	2	.0	.1	3	.5	5	3.0	6.3	2.3	1	.4
2003 2004	.6	.3	2	7	0.	.2	.4	2	.6	.1 .9	.8 .2	1 .7	2.3	-2.7	2.6	4.0 5.8	1.3
2004	.3	.6 .7	5 1	.4	.8	8 .4	.8 3	.1	.1 -1.9	1.3	1.0	.7	2.8 5.9	2.3 2.0	2.3 -1.8	3.8	2.7
2000		• *		.2			10	10	117	110	110	.0	0.7	2.0	110	5.7	0.0
2006	.1	.0	.2	.4	1	.4	.0	.4	2	1	1	1.1	3.8	2.4	1.5	.9	2.3
2007	5	1.0	.2	.7	.0	.0	.0	.2	.4	4	.6	.0	3.6	5.0	1.0	1.2	2.5
2008 2009	3	3 7	2 -1.6	8 8	6 -1.0	2 4	5 1.1	-1.5 1.1	-4.3 .8	1.0	-1.3 .4	-2.9 .3	-1.4 -20.7	-5.8 -10.9	-12.6 6.2	-16.0 6.5	-3.5
2010	1.2	.4	.7	.4	1.4	.1	.4	.3	.2	3	.0	.9	8.1	8.0	5.3	1.3	5.5
2011	1	4	1.0	3	.2	.3	.5	.6	1	.7	1	.5	2.3	1.6	4.7	4.1	3.1
2012 2013	.6 .0	.3 .5	5 .4	.8 1	.2 .1	.0 .2	.3 5	4 .7	.0 .5	.2 1	.5 .3	.3 .3	4.0 3.3	2.6 1.7	.1 1.2	2.1 3.0	3.0 2.0
2013	5	.9	1.0	.1	.3	.3	.1	1	.3	.0	.8	1	3.0	5.7	2.1	2.7	3.1
2015	6	4	3	5	5	4	.5	1	4	4	6	5	-3.2	-5.0	3	-4.7	-1.0
2016	-	7	0	2	1	2	2	1	1	1	2	0	1.0	0.1	1 1	7	1.0
2016 2017	.7	7 4	8 .6	.2	1 .0	.3	.2	1 4	1	.1 1.5	2 .5	.9 .5	-1.9 1.0	-2.1 5.0	1.1 -1.5	.7 7.8	-1.9 1.6
2018	2	1.0	.0	1.0	.0	.1	1		.0	1.5		.5	4.5	5.0	-1.5	7.0	1.0
IP (2012=100)	102.0	102.2	101 5	101 7	101 (101.0	102.1	102.1	101.0	102.1	101.0	102.0	102.2	101.0	102.0	100.0	102.1
2016 2017	103.0	102.3 102.2	101.5 102.7	101.7 103.7	101.6 103.7	101.9 103.8	102.1 103.6	102.1 103.2	101.9 103.2	102.1 104.8	101.8 105.3	102.8 105.8	102.3 102.5	101.8 103.7	102.0 103.3	102.2 105.3	102.1 103.7
2017	102.5	102.2	102.7	103.7	103.7	105.8	105.0	103.2	103.2	104.0	105.5	105.8	102.5	105.7	105.5	105.5	105.7
Capacity (percent of 2012 output) 2016 2017 2018	135.1 135.9	135.2 136.0	135.2 136.0	135.3 136.0	135.4 136.1	135.5 136.1	135.5 136.2	135.6 136.3	135.7 136.4	135.8 136.5	135.8 136.6	135.9 136.8	135.2 136.0	135.4 136.1	135.6 136.3	135.8 136.6	135.5 136.2
2018 Utilization	137.0	137.2	137.4										137.2				
(<i>percent</i>) 1996	82.5	83.4	82.9	83.3	83.5	83.8	83.3	83.4	83.6	83.1	83.4	83.6	82.9	83.5	83.4	83.4	83.3
1990	83.3	83.9	84.0	83.6	83.6	83.6	83.7	84.1	84.4	84.6	84.7	84.5	83.7	83.6	84.1	84.6	83.3
1998	84.3	83.9	83.4	83.2	83.2	82.2	81.4	82.6	82.1	82.3	81.9	81.8	83.9	82.8	82.0	82.0	82.7
1999	81.8	81.9	81.7	81.6	81.8	81.4	81.6	81.6	81.0	81.8	81.9	82.2	81.8	81.6	81.4	81.9	81.7
2000	81.9	81.9	81.9	82.2	82.1	81.9	81.5	81.0	81.1	80.6	80.3	79.9	81.9	82.1	81.2	80.2	81.4
2001	79.1	78.4	77.9	77.5	76.8	76.1	75.5	75.2	74.8	74.3	73.8	73.6	78.5	76.8	75.2	73.9	76.1
2002	74.0	73.8	74.3	74.6	74.8	75.5	75.3	75.2	75.3	75.1	75.5	75.2	74.1	74.9	75.3	75.3	74.9
2003	75.6	75.9	75.8	75.3	75.3	75.5	75.8	75.7	76.2	76.3	76.9	76.8	75.8	75.3	75.9	76.7	75.9
2004 2005	77.1	77.5 80.4	77.2 80.2	77.5 80.2	78.1 80.2	77.5 80.4	78.1 80.1	78.2 80.2	78.2 78.6	78.9 79.5	79.1 80.2	79.6 80.6	77.3	77.7 80.3	78.2 79.6	79.2 80.1	78.1 80.0
2003	19.9	00.4	00.2	00.2	00.2	00.4	00.1	00.2	70.0	19.5	00.2	00.0	00.2	00.5	19.0	00.1	00.0
2006	80.5	80.4	80.5	80.7	80.5	80.7	80.5	80.7	80.3	80.1	79.9	80.5	80.5	80.6	80.5	80.2	80.4
2007	79.9	80.5	80.5	80.9	80.8	80.7	80.6	80.7	80.9	80.6	81.0	81.1	80.3	80.8	80.7	80.9	80.7
2008 2009	80.9	80.7 69.4	80.6 68.3	80.0 67.7	79.6	79.4	79.0	77.8 68.3	74.3 68.9	75.0 69.2	74.0 69.6	71.7 69.9	80.7 69.2	79.7 67.1	77.0	73.6	77.8
2009	70.0	69.4 71.3	68.3 71.9	67.7 72.3	67.0 73.5	66.7 73.8	67.5 74.2	68.3 74.6	68.9 74.9	69.2 74.8	69.6 74.9	69.9 75.6	69.2 71.3	73.2	68.2 74.6	69.6 75.1	68.5 73.6
_010		, 1.5	, 1.7	, 2.0	, 5.5	, 5.0	. 1.2	, 110		, 1.0			, 1.5	, , , , , , ,	, 110	, 0.1	, 5.0
2011	75.6	75.3	76.0	75.7	75.8	76.0	76.3	76.6	76.5	76.9	76.7	77.0	75.6	75.8	76.5	76.9	76.2
2012	77.4	77.4	76.9	77.4	77.4	77.2	77.3	76.9	76.8	76.8	77.1	77.2	77.2	77.3	77.0	77.1	77.2
2013 2014	77.1	77.4 78.2	77.6 78.9	77.5 78.9	77.4 79.1	77.5 79.2	77.1 79.2	77.6 79.1	77.9 79.2	77.7 79.1	77.9 79.6	78.1 79.4	77.4	77.5 79.1	77.5 79.2	77.9 79.4	77.6 79.0
2014 2015	77.0	78.2	78.9	78.9	79.1	79.2	79.2	79.1	76.9	79.1	79.6	79.4	78.5	79.1	79.2	79.4	79.0
_010		, 0.1	, 0.1			. 0.7			. 0.7	, 0.0	, 0.1		. 0.0	, ,	, , . 1	, 0.1	
2016	76.3	75.7	75.1	75.2	75.0	75.3	75.4	75.3	75.1	75.2	75.0	75.7	75.7	75.2	75.2	75.3	75.3
2017	75.4	75.1	75.5	76.2	76.2	76.2	76.1	75.7	75.7	76.8	77.1	77.3	75.4	76.2	75.8	77.1	76.1
2018	77.1	77.7	78.0										77.6				
1 Orrentarily abon as																	

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

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

Seasonally adjusted														U			
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
IP $(percent change)^2$																	
1996	8	1.6	2	1.1	.8	1.0	.3	.5	.8	1	.9	.9	2.0	10.0	7.7	6.0	4.9
1997 1998	.1	1.4 .1	1.0 1	2 .5	.7 .5	.7 8	.7 4	1.3 2.4	.9 2	.9 1.0	1.1 .2	.4 .5	9.4 6.1	7.1 2.1	10.4 3.3	11.5 8.0	8.4 6.7
1999	.3	.8	1	.4	.9	3	.5	.6	4	1.5	.6	.7	5.1	4.5	3.2	8.6	5.1
2000	.1	.2	.6	.8	1	.2	.1	7	.4	3	3	5	4.4	4.9	4	-2.4	4.1
2001 2002	6 .6	6 .0	2 .8	3 .2	6 .5	7 1.1	4 3	5 .2	2 .1	6 4	3 .4	.3 5	-5.9 3.7	-5.2 5.8	-5.8 3.1	-3.8	-3.6 .5
2002	.5	.0	.0	8	.1	.5	.2	4	.1	.1	1.0	2	1.8	-1.9	2.4	4.5	1.3
2004	.0	.7	2	.4	.8	7	.9	.5	.0	1.0	.0	.7	2.6	3.3	4.0	5.5	3.1
2005	.8	.8	5	.3	.3	.1	3	.5	-1.0	1.5	.8	.2	6.6	2.3	7	6.4	4.1
2006	.8	3	1	.5	4	.4	3	.6	.1	4	.0	1.5	3.8	.8	1.0	1.5	2.6
2007 2008	5 4	.4 6	.8 3	.7	1 6	.3 7	.1	3	.5 -3.4	3 6	.5 -2.4	.2 -3.5	4.1	5.9 -8.2	1.0 -14.1	1.2 -21.8	2.8 -4.8
2008	-3.1	0	-1.8	-1.1	-1.0	7	-1.2	-1.2	-3.4	0	-2.4	2	-24.4	-10.6	8.1	7.2	-4.8
2010	1.1	1	1.2	.8	1.4	1	.6	.1	.0	.1	.0	.5	6.9	10.3	4.1	1.2	5.8
2011	.2	.1	.6	6	.1	.1	.6	.4	.3	.6	3	.7	3.2	1	4.4	3.9	2.9
2012 2013	.8 3	.4 .5	5 1	.6 4	4 .3	.2 .2	1 -1.0	2 1.0	1 .1	4 .1	.7 .0	.8 .0	5.3 3.0	.5 2	-1.2 3	1.2 1.9	2.6 .9
2014	-1.2	1.1	.8	1	.2	.3	.3	4	.0	1	.8	3	6	4.2	1.3	.6	1.1
2015	5	6	.3	1	1	4	.6	3	4	.0	2	2	-2.9	-1.0	.1	-2.4	5
2016	.5	4	2	3	1	.3	.2	3	.3	.2	.0	.3	.0	-2.5	.6	1.6	8
2017 2018	.3	.1 1.5	5 .1	1.1	4	.1	3	2	1	1.3	.3	.1	1.9 3.1	2.4	-2.1	5.5	1.2
		1.5	.1										5.1				
IP (2012=100) 2016	101.3	100.9	100.7	100.3	100.2	100.5	100.6	100.3	100.6	100.8	100.8	101.1	101.0	100.3	100.5	100.9	100.7
2010	101.5	100.9	100.7	100.3	100.2	100.5	100.0	100.3	100.0	100.8	100.8	101.1	101.0	100.3	100.5	100.9	100.7
2018	102.6	104.1	104.2										103.6				
Capacity (<i>percent of</i> 2012 output) 2016 2017	134.2 135.9	134.3 136.0	134.4 136.0	134.6 136.1	134.8 136.2	135.0 136.2	135.1 136.3	135.3 136.4	135.4 136.5	135.6 136.6	135.7 136.7	135.8 136.8	134.3 136.0	134.8 136.2	135.3 136.4	135.7 136.7	135.0 136.3
2018	136.9	137.0	137.2										137.1				
Utilization																	
(percent) 1996	81.2	82.1	81.5	82.0	82.1	82.5	82.3	82.3	82.5	82.0	82.2	82.5	81.6	82.2	82.4	82.2	82.1
1997	82.1	82.8	83.1	82.5	82.6	82.7	82.7	83.1	83.3	83.4	83.7	83.4	82.7	82.6	83.0	83.5	83.0
1998 1999	83.5 80.6	83.0 80.8	82.3 80.4	82.0 80.4	81.9 80.7	80.7 80.1	79.9 80.1	81.3 80.3	80.7 79.6	81.0 80.4	80.7 80.6	80.7 80.8	82.9 80.6	81.6 80.4	80.6 80.0	80.8 80.6	81.5 80.4
2000	80.6	80.4	80.6	80.8	80.4	80.2	80.0	79.2	79.2	78.7	78.2	77.5	80.5	80.5	79.5	78.1	79.6
2001	76.7	76.0	75.6	75.1	74.4	73.7	73.2	72.7	72.4	71.9	71.6	71.7	76.1	74.4	72.8	71.7	73.8
2002	72.0	71.9	72.4	72.5	72.8	73.6	73.3	73.5	73.5	73.3	73.6	73.2	72.1	73.0	73.4	73.4	73.0
2003 2004	73.6 74.9	73.7 75.5	73.8 75.4	73.2 75.7	73.3 76.4	73.7 75.8	73.9 76.5	73.6 76.8	74.2 76.8	74.3 77.5	75.0 77.4	74.9 77.8	73.7 75.3	73.4 76.0	73.9 76.7	74.7 77.5	73.9 76.4
2004	78.3	78.8	78.3	78.4	78.5	78.5	78.0	78.2	77.3	78.3	78.8	78.8	78.5	78.5	77.9	78.6	78.4
2006	79.3	78.9	78.7	79.0	78.6	78.7	78.4	78.7	78.6	78.2	78.0	79.0	79.0	78.8	78.6	78.4	78.7
2007	78.4	78.5	79.0	79.3	79.0	79.1	79.0	78.6	78.8	78.5	78.8	78.9	78.6	79.2	78.8	78.7	78.8
2008 2009	78.5 65.8	78.0 65.8	77.8 64.7	77.0 64.4	76.6	76.2 63.7	75.4 64.8	74.6 65.6	72.1 66.3	71.7 66.5	70.1 67.3	67.8 67.2	78.1 65.5	76.6 64.0	74.0 65.5	69.9 67.0	74.6
2009 2010	68.1	68.2	64.7 69.1	69.8	63.8 70.9	03.7 70.9	04.8 71.4	03.0 71.6	71.7	66.5 71.9	72.0	72.5	63.5 68.5	64.0 70.5	63.3 71.6	67.0 72.1	65.5 70.7
2011	72.7	72.8	73.3	73.0	73.1	73.2	73.6	73.9	74.1	74.5	74.2	74.7	73.0	73.1	73.9	74.5	73.6
2012	75.3	75.5	75.0	75.3	74.9	75.0	74.8	74.6	74.5	74.2	74.6	75.2	75.2	75.1	74.6	74.7	74.9
2013	74.9	75.2	75.1	74.7	74.9	75.1	74.3	75.0	75.1	75.1	75.1	75.1	75.0	74.9	74.8	75.1	75.0
2014 2015	74.2 76.1	75.0 75.7	75.7 76.0	75.6 76.0	75.8 75.9	76.0 75.7	76.3 76.2	76.0 76.0	76.0 75.6	76.0 75.6	76.6 75.4	76.4 75.2	75.0 75.9	75.8 75.9	76.1 75.9	76.3 75.4	75.8 75.8
2016	75.5	75.2	74.9	74.5	74.4	74.5	74.5	74.1	74.3	74.3	74.3	74.5	75.2	74.4	74.3	74.4	74.6
2017	74.7	74.7	74.3	75.1	74.8	74.8	74.6	74.4	74.2	75.2	75.3	75.3	74.6	74.9	74.4	75.2	74.8
2018	74.9	76.0	75.9										75.6				

Table 12 HISTORICAL STATISTICS FOR INDUSTRIAL PRODUCTION, CAPACITY, AND UTILIZATION: Manufacturing¹ Seasonally adjusted

 1. Refer to note on cover page.

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

Seasonally adjusted Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
IP (percent																	
change) ² 1996	-1.0	1.3	3	.8	.5	.6	4	.3	.5	3	.8	.5	6	6.6	2.2	3.1	1.7
1997	-1.0	.9	.4	3	.3	.0	.5		.6	.7	.0	.1	5.2	2.2	6.3	7.6	4.2
1998	.3	.0	.0	.2	.6	9	7	1.9	5	.6	3	.1	2.2	.8	3	2.5	3.1
1999 2000	.2	.2	1 .1	1 .5	.5 2	5 1	.3 5	.4 5	5 .3	1.2 4	.2	.6 5	.6 .5	.3 1.5	.9 -3.2	5.6 -2.6	1.1
2000	5	.0	.1	.5	2	1	5	5	.5	4	2	5	.5	1.5	-3.2	-2.0	1.0
2001	7	6	3	2	6	5	4	1	4	5	5	1	-5.8	-4.3	-4.3	-4.4	-3.9
2002 2003	.7 .5	2 .2	.8 3	.4 8	.4 1	.9 .0	3 .2	1 3	.1 .5	3 .0	.5 .7	5 1	2.6 1.3	6.0 -4.4	1.8 .6	6 2.7	.3 .2
2004	.2	.6	6	.5	.8	9	.8	.0	.0	.9	.2	.7	1.9	2.1	2.0	5.3	1.7
2005	.3	.6	2	.1	.1	.4	4	.2	-2.1	1.2	1.0	.6	4.8	1.2	-3.0	2.7	2.6
2006	.1	1	.2	.4	2	.3	1	.3	3	1	2	1.1	3.2	1.8	.6	.1	1.4
2007 2008	6 3	1.0 5	.0 4	.6 8	.1 7	.1 3	1 5	.1 -1.6	.3 -4.5	6 1.2	.4 -1.0	.0 -2.8	2.9 -2.6	4.0	1.0 -12.8	5 -14.9	1.8 -4.3
2008	3	7	4	8	-1.1	3	5	-1.0	-4.3	.3	-1.0	-2.8	-20.5	-0.9	-12.8	-14.9 6.0	-4.5
2010	1.1	.2	.6	.3	1.4	.1	.4	.3	.2	3	.0	.9	7.1	7.4	5.1	.8	4.9
2011	2	5	1.1	4	.2	.2	.5	.5	.0	.7	1	.5	1.8	1.6	4.5	4.1	2.8
2012	.6	.2	5	.7	.2	1	.3	4	1	.2	.5	.3	3.7	2.1	1	1.7	2.8
2013 2014	1 5	.6 .9	.4 .9	2 .1	.0 .3	.2 .3	5 .1	.7 1	.5 .3	2 .0	.3	.3	3.3 2.9	1.4 5.4	.8 2.0	2.8 2.7	1.8 2.9
2015	6	4	3	5	5	4	.6	1	4	4	6	5	-3.3	-5.3	3	-4.9	-1.1
2016	.7	7	8	.2	2	.3	.2	1	2	.1	2	1.0	-2.1	-2.2	1.0	.4	-2.1
2017	2	4	.6	.9	.0	.1	1	4	.0	1.5	.5	.4	1.2	5.0	-1.6	7.6	1.5
2018	2	1.0	.5										4.4				
IP (2012=100)																	
2016 2017	102.4 101.7	101.7 101.4	100.8 101.9	101.0 102.9	100.9 102.9	101.2 103.0	101.4 102.8	101.3 102.4	101.1 102.3	101.2 103.9	101.0 104.4	102.0 104.9	101.6 101.7	101.0 102.9	101.3 102.5	101.4 104.4	101.3 102.9
2017	104.7	105.7	106.2	102.9	102.9	105.0	102.0	102.4	102.5	105.7	104.4	104.9	105.5	102.9	102.5	104.4	102.9
Capacity (percent of 2012 output)	124.1	124.1	124.2	124.2	124.2	124.4	124.4	124.5	124.5	124.6	124.6	104.7	124.1	124.2	124.5	124.6	124.4
2016 2017 2018	134.1	134.1	134.2	134.2	134.3	134.4	134.4 134.9	134.5 135.0	134.5	134.6 135.2	134.6 135.4	134.7 135.5	134.1 134.7	134.3	134.5	134.6	134.4 135.0
2018	134.7 135.7	134.7 135.9	134.8 136.1	134.8	134.8	134.9	151.9	155.0	135.1			155.5	135.9	134.8	135.0	135.4	155.0
Utilization				134.8	134.8	134.9	101.7	155.0	135.1			155.5		134.8	135.0	135.4	155.0
				83.3	83.6	83.9	83.4	83.5	83.7	83.3	83.7	83.9		83.6	83.5	135.4 83.6	83.4
Utilization (percent) 1996 1997	135.7 82.2 83.6	135.9 83.1 84.1	136.1 82.7 84.2	83.3 83.7	83.6 83.7	83.9 83.6	83.4 83.7	83.5 84.1	83.7 84.3	83.3 84.6	84.8	83.9 84.5	135.9 82.7 84.0	83.6 83.6	83.5 84.0	83.6 84.6	83.4 84.1
Utilization (<i>percent</i>) 1996 1997 1998	135.7 82.2 83.6 84.5	135.9 83.1	136.1 82.7	83.3	83.6	83.9	83.4	83.5	83.7	83.3	84.8 82.1	83.9 84.5 81.9	135.9 82.7	83.6	83.5	83.6 84.6 82.2	83.4 84.1 83.0
Utilization (percent) 1996 1997	135.7 82.2 83.6	135.9 83.1 84.1 84.1	136.1 82.7 84.2 83.8	83.3 83.7 83.6	83.6 83.7 83.8	83.9 83.6 82.7	83.4 83.7 81.9	83.5 84.1 83.1	83.7 84.3 82.4	83.3 84.6 82.6	84.8	83.9 84.5	135.9 82.7 84.0 84.1	83.6 83.6 83.4	83.5 84.0 82.5	83.6 84.6	83.4 84.1
Utilization (percent) 1996 1997 1998 1999	135.7 82.2 83.6 84.5 81.8	135.9 83.1 84.1 84.1 81.8	136.1 82.7 84.2 83.8 81.5	83.3 83.7 83.6 81.2	83.6 83.7 83.8 81.5	83.9 83.6 82.7 80.9	83.4 83.7 81.9 81.0	83.5 84.1 83.1 81.2	83.7 84.3 82.4 80.6	83.3 84.6 82.6 81.5	84.8 82.1 81.6	83.9 84.5 81.9 81.9	135.9 82.7 84.0 84.1 81.7	83.6 83.6 83.4 81.2	83.5 84.0 82.5 80.9	83.6 84.6 82.2 81.6	83.4 84.1 83.0 81.4
Utilization (percent) 1996 1997 1998 1999 2000 2001 2001 2002	135.7 82.2 83.6 84.5 81.8 81.5 78.8 75.2	135.9 83.1 84.1 84.1 81.8 81.4 78.2 75.0	136.1 82.7 84.2 83.8 81.5 81.4 77.9 75.6	83.3 83.7 83.6 81.2 81.7 77.7 75.8	83.6 83.7 83.8 81.5 81.4 77.2 76.1	83.9 83.6 82.7 80.9 81.3 76.7 76.8	83.4 83.7 81.9 81.0 80.8 76.3 76.6	83.5 84.1 83.1 81.2 80.3 76.2 76.6	83.7 84.3 82.4 80.6 80.5 75.8 76.7	83.3 84.6 82.6 81.5 80.0 75.3 76.5	84.8 82.1 81.6 79.8 74.9 76.9	83.9 84.5 81.9 81.9 79.4 74.7 76.5	135.9 82.7 84.0 84.1 81.7 81.4 78.3 75.3	83.6 83.6 83.4 81.2 81.5 77.2 76.3	83.5 84.0 82.5 80.9 80.5 76.1 76.6	83.6 84.6 82.2 81.6 79.7 75.0 76.6	83.4 84.1 83.0 81.4 80.8 76.6 76.2
Utilization (percent) 1996 1997 1998 1999 2000 2001 2001 2002 2003	135.7 82.2 83.6 84.5 81.8 81.5 78.8 75.2 77.0	135.9 83.1 84.1 84.1 81.8 81.4 78.2 75.0 77.1	136.1 82.7 84.2 83.8 81.5 81.4 77.9 75.6 76.9	83.3 83.7 83.6 81.2 81.7 77.7 75.8 76.4	83.6 83.7 83.8 81.5 81.4 77.2 76.1 76.3	83.9 83.6 82.7 80.9 81.3 76.7 76.8 76.3	83.4 83.7 81.9 81.0 80.8 76.3 76.6 76.6	83.5 84.1 83.1 81.2 80.3 76.2 76.6 76.4	83.7 84.3 82.4 80.6 80.5 75.8 76.7 76.8	83.3 84.6 82.6 81.5 80.0 75.3 76.5 76.9	84.8 82.1 81.6 79.8 74.9 76.9 77.4	83.9 84.5 81.9 79.4 74.7 76.5 77.4	135.9 82.7 84.0 84.1 81.7 81.4 78.3 75.3 77.0	83.6 83.6 83.4 81.2 81.5 77.2 76.3 76.3	83.5 84.0 82.5 80.9 80.5 76.1 76.6 76.6	83.6 84.6 82.2 81.6 79.7 75.0 76.6 77.2	83.4 84.1 83.0 81.4 80.8 76.6 76.2 76.8
Utilization (percent) 1996 1997 1998 1999 2000 2001 2001 2002	135.7 82.2 83.6 84.5 81.8 81.5 78.8 75.2	135.9 83.1 84.1 84.1 81.8 81.4 78.2 75.0	136.1 82.7 84.2 83.8 81.5 81.4 77.9 75.6	83.3 83.7 83.6 81.2 81.7 77.7 75.8	83.6 83.7 83.8 81.5 81.4 77.2 76.1	83.9 83.6 82.7 80.9 81.3 76.7 76.8	83.4 83.7 81.9 81.0 80.8 76.3 76.6	83.5 84.1 83.1 81.2 80.3 76.2 76.6	83.7 84.3 82.4 80.6 80.5 75.8 76.7	83.3 84.6 82.6 81.5 80.0 75.3 76.5	84.8 82.1 81.6 79.8 74.9 76.9	83.9 84.5 81.9 81.9 79.4 74.7 76.5	135.9 82.7 84.0 84.1 81.7 81.4 78.3 75.3	83.6 83.6 83.4 81.2 81.5 77.2 76.3	83.5 84.0 82.5 80.9 80.5 76.1 76.6	83.6 84.6 82.2 81.6 79.7 75.0 76.6	83.4 84.1 83.0 81.4 80.8 76.6 76.2
Utilization (percent) 1996 1997 1998 1999 2000 2000 2001 2002 2003 2004 2005	82.2 83.6 84.5 81.8 81.5 78.8 75.2 77.0 77.5	135.9 83.1 84.1 84.1 81.8 81.4 78.2 75.0 77.1 78.0	136.1 82.7 84.2 83.8 81.5 81.4 77.9 75.6 76.9 77.6	83.3 83.7 83.6 81.2 81.7 77.7 75.8 76.4 77.9	83.6 83.7 83.8 81.5 81.4 77.2 76.1 76.3 78.6 80.7	83.9 83.6 82.7 80.9 81.3 76.7 76.8 76.7 76.8 76.3 77.9 80.9	83.4 83.7 81.9 81.0 80.8 76.3 76.6 76.6 76.6 78.6 80.5	83.5 84.1 83.1 81.2 80.3 76.2 76.6 76.4 78.6	83.7 84.3 82.4 80.6 80.5 75.8 76.7 76.8 78.6	83.3 84.6 82.6 81.5 80.0 75.3 76.5 76.9 79.4	84.8 82.1 81.6 79.8 74.9 76.9 77.4 79.6	83.9 84.5 81.9 79.4 74.7 76.5 77.4 80.1	82.7 84.0 84.1 81.7 81.4 78.3 75.3 77.0 77.7	83.6 83.6 83.4 81.2 81.5 77.2 76.3 76.3 78.2	83.5 84.0 82.5 80.9 80.5 76.1 76.6 76.6 78.6 79.9	83.6 84.6 82.2 81.6 79.7 75.0 76.6 77.2 79.7	83.4 84.1 83.0 81.4 80.8 76.6 76.2 76.8 78.5
Utilization (percent) 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007	135.7 82.2 83.6 84.5 81.8 81.5 78.8 75.2 77.0 77.5 80.4 80.6 79.9	135.9 83.1 84.1 84.1 81.8 81.4 78.2 75.0 77.1 78.0 80.8 80.5 80.5	136.1 82.7 84.2 83.8 81.5 81.4 77.9 75.6 76.9 77.6 80.6 80.5 80.5	83.3 83.7 83.6 81.2 81.7 77.7 75.8 76.4 77.9 80.6 80.7 80.9	83.6 83.7 83.8 81.5 81.4 77.2 76.1 76.3 78.6 80.7 80.4 80.9	83.9 83.6 82.7 80.9 81.3 76.7 76.8 76.3 77.9 80.9 80.6 81.0	83.4 83.7 81.9 81.0 80.8 76.3 76.6 76.6 76.6 78.6 80.5 80.4 80.9	83.5 84.1 83.1 81.2 80.3 76.2 76.6 76.4 78.6 80.5 80.5 81.1	83.7 84.3 82.4 80.6 80.5 75.8 76.7 76.8 78.6 78.8 80.1 81.3	83.3 84.6 82.6 81.5 80.0 75.3 76.9 79.4 79.6 79.9 80.9	84.8 82.1 81.6 79.8 74.9 76.9 77.4 79.6 80.3 79.7 81.3	83.9 84.5 81.9 79.4 74.7 76.5 77.4 80.1 80.7 80.4 81.3	135.9 82.7 84.0 84.1 81.7 81.4 78.3 75.3 77.0 77.7 80.6 80.3	83.6 83.6 83.4 81.2 81.5 77.2 76.3 76.3 76.3 78.2 80.7 80.6 80.9	83.5 84.0 82.5 80.9 80.5 76.1 76.6 76.6 76.6 78.6 79.9 80.3 81.1	83.6 84.6 82.2 81.6 79.7 75.0 76.6 77.2 79.7 80.2 80.0 81.2	83.4 84.1 83.0 81.4 80.8 76.6 76.2 76.8 78.5 80.4 80.4 80.9
Utilization (percent) 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008	135.7 82.2 83.6 84.5 81.8 81.5 78.8 75.2 77.0 77.5 80.4 80.6 79.9 81.1	135.9 83.1 84.1 84.1 81.8 81.4 78.2 75.0 77.1 78.0 80.8 80.5 80.5 80.5	136.1 82.7 84.2 83.8 81.5 81.4 77.9 75.6 76.9 77.6 80.6 80.5 80.5 80.5 80.5	83.3 83.7 83.6 81.2 81.7 77.7 75.8 76.4 77.9 80.6 80.7 80.9 79.9	83.6 83.7 83.8 81.5 81.4 77.2 76.1 76.3 78.6 80.7 80.4 80.9 79.4	83.9 83.6 82.7 80.9 81.3 76.7 76.8 76.3 77.9 80.9 80.6 81.0 79.2	83.4 83.7 81.9 81.0 80.8 76.3 76.6 76.6 78.6 80.5 80.4 80.9 78.8	83.5 84.1 83.1 81.2 80.3 76.2 76.6 76.4 78.6 80.5 80.5 81.1 77.5	83.7 84.3 82.4 80.6 80.5 75.8 76.7 76.8 78.6 78.8 80.1 81.3 74.0	83.3 84.6 82.6 81.5 80.0 75.3 76.5 76.9 79.4 79.6 79.9 80.9 74.8	84.8 82.1 81.6 79.8 74.9 76.9 77.4 79.6 80.3 79.7 81.3 73.9	83.9 84.5 81.9 79.4 74.7 76.5 77.4 80.1 80.7 80.4 81.3 71.7	135.9 82.7 84.0 84.1 81.7 81.4 78.3 75.3 77.0 77.7 80.6 80.6 80.6 80.3 80.8	83.6 83.6 83.4 81.2 81.5 77.2 76.3 76.3 78.2 80.7 80.6 80.9 79.5	83.5 84.0 82.5 80.9 80.5 76.1 76.6 76.6 78.6 79.9 80.3 81.1 76.7	83.6 84.6 82.2 81.6 79.7 75.0 76.6 77.2 79.7 80.2 80.0 81.2 73.5	83.4 84.1 83.0 81.4 80.8 76.6 76.2 76.8 78.5 80.4 80.4 80.4 80.9 77.6
Utilization (percent) 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007	135.7 82.2 83.6 84.5 81.8 81.5 78.8 75.2 77.0 77.5 80.4 80.6 79.9	135.9 83.1 84.1 84.1 81.8 81.4 78.2 75.0 77.1 78.0 80.8 80.5 80.5	136.1 82.7 84.2 83.8 81.5 81.4 77.9 75.6 76.9 77.6 80.6 80.5 80.5	83.3 83.7 83.6 81.2 81.7 77.7 75.8 76.4 77.9 80.6 80.7 80.9	83.6 83.7 83.8 81.5 81.4 77.2 76.1 76.3 78.6 80.7 80.4 80.9	83.9 83.6 82.7 80.9 81.3 76.7 76.8 76.3 77.9 80.9 80.6 81.0	83.4 83.7 81.9 81.0 80.8 76.3 76.6 76.6 76.6 78.6 80.5 80.4 80.9	83.5 84.1 83.1 81.2 80.3 76.2 76.6 76.4 78.6 80.5 80.5 81.1	83.7 84.3 82.4 80.6 80.5 75.8 76.7 76.8 78.6 78.8 80.1 81.3	83.3 84.6 82.6 81.5 80.0 75.3 76.9 79.4 79.6 79.9 80.9	84.8 82.1 81.6 79.8 74.9 76.9 77.4 79.6 80.3 79.7 81.3	83.9 84.5 81.9 79.4 74.7 76.5 77.4 80.1 80.7 80.4 81.3	135.9 82.7 84.0 84.1 81.7 81.4 78.3 75.3 77.0 77.7 80.6 80.3	83.6 83.6 83.4 81.2 81.5 77.2 76.3 76.3 76.3 78.2 80.7 80.6 80.9	83.5 84.0 82.5 80.9 80.5 76.1 76.6 76.6 76.6 78.6 79.9 80.3 81.1	83.6 84.6 82.2 81.6 79.7 75.0 76.6 77.2 79.7 80.2 80.0 81.2	83.4 84.1 83.0 81.4 80.8 76.6 76.2 76.8 78.5 80.4 80.4 80.9
Utilization (percent) 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010	135.7 82.2 83.6 84.5 81.8 81.5 78.8 75.2 77.0 77.5 80.4 80.6 79.9 81.1 69.9 70.7	135.9 83.1 84.1 84.1 84.1 81.4 78.2 75.0 77.1 78.0 80.8 80.5 80.8 69.3 71.0	136.1 82.7 84.2 83.8 81.5 81.4 77.9 75.6 76.9 77.6 80.6 80.5 80.6 68.1 71.6	83.3 83.7 83.6 81.2 81.7 77.7 75.8 76.4 77.9 80.6 80.7 80.9 79.9 67.5 72.0	83.6 83.7 83.8 81.5 81.4 77.2 76.1 76.3 78.6 80.7 80.4 80.9 79.4 66.7 73.2	83.9 83.6 82.7 80.9 81.3 76.7 76.8 76.3 77.9 80.9 80.9 80.6 81.0 79.2 66.5 73.5	83.4 83.7 81.9 81.0 80.8 76.3 76.6 76.6 78.6 80.5 80.4 80.9 78.8 67.3 74.0	83.5 84.1 83.1 81.2 80.3 76.2 76.6 76.4 78.6 80.5 81.1 77.5 68.1 74.4	83.7 84.3 82.4 80.6 80.5 75.8 76.7 76.8 78.6 78.8 80.1 81.3 74.0 68.7 74.6	83.3 84.6 82.6 81.5 80.0 75.3 76.9 79.4 79.6 79.9 80.9 74.8 69.0 74.5	84.8 82.1 81.6 79.8 74.9 76.9 77.4 79.6 80.3 79.7 81.3 73.9 69.4 74.6	83.9 84.5 81.9 79.4 74.7 76.5 77.4 80.1 80.7 80.4 81.3 71.7 69.8 75.4	135.9 82.7 84.0 84.1 81.7 81.4 78.3 75.3 77.0 77.7 80.6 80.3 80.8 69.1 71.1	83.6 83.6 83.4 81.2 81.5 77.2 76.3 76.3 78.2 80.7 80.6 80.9 79.5 66.9 72.9	83.5 84.0 82.5 80.9 80.5 76.1 76.6 78.6 79.9 80.3 81.1 76.7 68.0 74.3	83.6 84.6 82.2 81.6 79.7 75.0 76.6 77.2 79.7 80.2 80.0 81.2 73.5 69.4 74.8	83.4 84.1 83.0 81.4 80.8 76.6 76.2 76.8 78.5 80.4 80.4 80.4 80.4 80.4 77.6 68.4 73.3
Utilization (percent) 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009	82.2 83.6 84.5 81.8 81.5 78.8 75.2 77.0 77.5 80.4 80.6 79.9 81.1 69.9	135.9 83.1 84.1 84.1 81.4 78.2 75.0 77.1 78.0 80.8 80.5 80.8 69.3	136.1 82.7 84.2 83.8 81.5 81.4 77.9 75.6 76.9 77.6 80.6 80.5 80.5 80.5 80.6 68.1	83.3 83.7 83.6 81.2 81.7 77.7 75.8 76.4 77.9 80.6 80.7 80.9 79.9 67.5	83.6 83.7 83.8 81.5 81.4 77.2 76.1 76.3 78.6 80.7 80.4 80.9 79.4 66.7	83.9 83.6 82.7 80.9 81.3 76.7 76.8 76.3 77.9 80.9 80.6 81.0 79.2 66.5	83.4 83.7 81.9 81.0 80.8 76.3 76.6 76.6 78.6 80.5 80.4 80.9 78.8 67.3	83.5 84.1 83.1 81.2 80.3 76.2 76.6 76.4 78.6 80.5 80.5 81.1 77.5 68.1	83.7 84.3 82.4 80.6 80.5 75.8 76.7 76.8 78.8 80.1 81.3 74.0 68.7	83.3 84.6 82.6 81.5 80.0 75.3 76.5 76.9 79.4 79.6 79.9 80.9 74.8 69.0	84.8 82.1 81.6 79.8 74.9 76.9 77.4 79.6 80.3 79.7 81.3 73.9 69.4	83.9 84.5 81.9 79.4 74.7 76.5 77.4 80.1 80.7 80.4 81.3 71.7 69.8	82.7 84.0 84.1 81.7 81.4 78.3 75.3 77.0 77.7 80.6 80.6 80.6 80.3 80.8 69.1	83.6 83.6 83.4 81.2 81.5 77.2 76.3 76.3 76.3 78.2 80.7 80.6 80.9 79.5 66.9	83.5 84.0 82.5 80.9 80.5 76.1 76.6 76.6 78.6 79.9 80.3 81.1 76.7 68.0	83.6 84.6 82.2 81.6 79.7 75.0 76.6 77.2 79.7 80.2 80.0 81.2 73.5 69.4	83.4 84.1 83.0 81.4 80.8 76.6 76.2 76.8 78.5 80.4 80.4 80.4 80.9 77.6 68.4
Utilization (percent) 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013	135.7 82.2 83.6 84.5 81.8 81.5 78.8 75.2 77.0 77.5 80.4 80.6 79.9 81.1 69.9 70.7 75.3 77.6 77.3	135.9 83.1 84.1 84.1 81.4 78.2 75.0 77.1 78.0 80.8 80.5 80.8 69.3 71.0 75.0 77.6 77.7	136.1 82.7 84.2 83.8 81.5 81.4 77.9 75.6 76.9 77.6 80.6 80.5 80.6 80.5 80.5 80.6 68.1 71.6 75.9 77.1 77.9	83.3 83.7 83.6 81.2 81.7 77.7 75.8 76.4 77.9 80.6 80.7 80.9 79.9 67.5 72.0 75.6 77.7	83.6 83.7 83.8 81.5 81.4 77.2 76.1 76.3 78.6 80.7 80.4 80.9 79.4 66.7 73.2 75.8 77.6 77.7	83.9 83.6 82.7 80.9 81.3 76.7 76.8 76.3 77.9 80.9 80.6 81.0 79.2 66.5 73.5 75.9 77.4 77.4 77.8	83.4 83.7 81.9 81.0 80.8 76.6 76.6 76.6 78.6 80.5 80.4 80.9 78.8 67.3 74.0 76.3 77.5 77.3	83.5 84.1 83.1 81.2 80.3 76.6 76.6 76.4 78.6 80.5 80.5 81.1 77.5 68.1 74.4 76.7 77.1 77.8	83.7 84.3 82.4 80.6 80.5 75.8 76.7 76.8 78.8 80.1 81.3 74.0 68.7 74.6 76.6 76.9 78.1	83.3 84.6 82.6 81.5 80.0 75.3 76.5 76.9 79.4 79.6 79.9 80.9 74.8 69.0 74.5 77.0 77.0 77.0 78.0	84.8 82.1 81.6 79.8 74.9 76.9 77.4 79.6 80.3 79.7 81.3 73.9 69.4 74.6 76.9 77.3 78.1	83.9 84.5 81.9 79.4 74.7 76.5 77.4 80.1 80.7 80.4 81.3 71.7 69.8 75.4 77.2 77.4 78.3	135.9 82.7 84.0 84.1 81.7 81.4 78.3 77.0 77.7 80.6 80.3 80.8 69.1 71.1 75.4 77.4 77.6	83.6 83.6 83.4 81.2 81.5 77.2 76.3 76.3 76.3 78.2 80.7 80.6 80.9 79.5 66.9 72.9 75.8 77.5 77.7	83.5 84.0 82.5 80.9 80.5 76.1 76.6 76.6 78.6 79.9 80.3 81.1 76.7 68.0 74.3 76.5 77.2 77.7	83.6 84.6 82.2 81.6 79.7 75.0 76.6 77.2 79.7 80.2 80.0 81.2 73.5 69.4 74.8 77.0 77.2 78.1	83.4 84.1 83.0 81.4 80.8 76.6 76.2 76.8 78.5 80.4 80.4 80.9 77.6 68.4 73.3 76.2 77.3 77.8
Utilization (percent) 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014	135.7 82.2 83.6 84.5 81.8 81.5 78.8 75.2 77.0 77.5 80.4 80.6 79.9 81.1 69.9 70.7 75.3 77.9	135.9 83.1 84.1 84.1 81.4 78.2 75.0 77.1 78.0 80.8 80.5 80.8 69.3 71.0 75.0 77.6 77.7 78.5	136.1 82.7 84.2 83.8 81.5 81.4 77.9 75.6 76.9 77.6 80.6 80.5 80.6 80.5 80.5 80.6 68.1 71.6 75.9 77.1 77.9 79.1	83.3 83.7 83.6 81.2 81.7 77.7 75.8 76.4 77.9 80.6 80.7 80.9 79.9 67.5 72.0 75.6 77.7 79.1	83.6 83.7 83.8 81.5 81.4 77.2 76.1 76.3 78.6 80.7 80.4 80.9 79.4 66.7 73.2 75.8 77.6 77.7 79.3	83.9 83.6 82.7 80.9 81.3 76.7 76.8 76.3 77.9 80.9 80.6 81.0 79.2 66.5 73.5 75.9 77.4 77.8 79.4	83.4 83.7 81.9 81.0 80.8 76.3 76.6 76.6 78.6 80.5 80.4 80.9 78.8 67.3 74.0 76.3 77.5 77.3 79.4	83.5 84.1 83.1 81.2 80.3 76.2 76.6 76.4 78.6 80.5 80.5 81.1 77.5 68.1 74.4 76.7 77.1 77.8 79.2	83.7 84.3 82.4 80.6 80.5 75.8 76.7 76.8 78.8 80.1 81.3 74.0 68.7 74.6 76.6 76.9 78.1 79.3	83.3 84.6 82.6 81.5 80.0 75.3 76.9 79.4 79.6 79.9 80.9 74.8 69.0 74.5 77.0 77.0 77.0 78.0 79.2	84.8 82.1 81.6 79.8 74.9 76.9 77.4 79.6 80.3 79.7 81.3 73.9 69.4 74.6 76.9 77.3 78.1 79.8	83.9 84.5 81.9 79.4 74.7 76.5 77.4 80.1 80.7 80.4 81.3 71.7 69.8 75.4 77.2 77.4 78.3 79.6	135.9 82.7 84.0 84.1 81.7 81.4 78.3 75.3 77.0 77.7 80.6 80.3 80.8 69.1 71.1 75.4 77.4 77.6 78.5	83.6 83.6 83.4 81.2 81.5 77.2 76.3 76.3 76.3 78.2 80.7 80.6 80.9 79.5 66.9 72.9 75.8 77.5 77.7 79.3	83.5 84.0 82.5 80.9 80.5 76.1 76.6 76.6 78.6 79.9 80.3 81.1 76.7 68.0 74.3 76.5 77.2 77.7 79.3	83.6 84.6 82.2 81.6 79.7 75.0 76.6 77.2 79.7 80.2 80.0 81.2 73.5 69.4 74.8 77.0 77.2 78.1 79.5	83.4 84.1 83.0 81.4 80.8 76.6 76.2 76.8 78.5 80.4 80.4 80.4 80.9 77.6 68.4 73.3 76.2 77.3 77.8 79.2
Utilization (percent) 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015	135.7 82.2 83.6 84.5 81.8 81.5 78.8 75.2 77.0 77.5 80.4 80.6 79.9 81.1 69.9 70.7 75.3 77.6 77.9 79.0	135.9 83.1 84.1 84.1 84.1 81.4 78.2 75.0 77.1 78.0 80.8 80.5 80.8 69.3 71.0 75.0 77.6 77.7 78.5 78.6	136.1 82.7 84.2 83.8 81.5 81.4 77.9 75.6 76.9 77.6 80.6 80.5 80.5 80.5 80.5 80.5 80.5 80.6 68.1 71.6 75.9 77.1 77.9 79.1 78.2	83.3 83.7 83.6 81.2 81.7 77.7 75.8 76.4 77.9 80.6 80.7 80.9 79.9 67.5 72.0 75.6 77.7 79.1 77.8	83.6 83.7 83.8 81.5 81.4 77.2 76.1 76.3 78.6 80.7 80.4 80.9 79.4 66.7 73.2 75.8 77.6 77.7 79.3 77.3	83.9 83.6 82.7 80.9 81.3 76.7 76.8 76.3 77.9 80.9 80.6 81.0 79.2 66.5 73.5 75.9 77.4 77.8 79.4 77.0	83.4 83.7 81.9 81.0 80.8 76.3 76.6 76.6 78.8 67.3 74.0 76.3 77.5 77.3 79.4 77.4	83.5 84.1 83.1 81.2 80.3 76.2 76.6 76.4 78.6 80.5 80.5 81.1 77.5 68.1 74.4 76.7 77.1 77.2 77.3	83.7 84.3 82.4 80.6 80.5 75.8 76.7 76.8 78.6 78.8 80.1 81.3 74.0 68.7 74.6 76.6 76.7 74.6 76.7 77.0	83.3 84.6 82.6 81.5 80.0 75.3 76.5 76.9 79.4 79.6 79.9 80.9 74.8 69.0 74.5 77.0 78.0 79.2 76.7	84.8 82.1 81.6 79.8 74.9 76.9 77.4 79.6 80.3 79.7 81.3 73.9 69.4 74.6 76.9 77.3 78.1 79.8 76.2	83.9 84.5 81.9 79.4 74.7 76.5 77.4 80.1 80.7 80.4 81.3 71.7 69.8 75.4 77.4 78.3 79.6 75.8	135.9 82.7 84.0 84.1 81.7 81.4 78.3 75.3 77.0 77.7 80.6 80.3 80.8 69.1 71.1 75.4 77.6 78.5 78.6	83.6 83.6 83.4 81.2 81.5 77.2 76.3 76.2 80.7 80.6 80.9 79.5 66.9 72.9 75.8 77.7 79.3 77.4	83.5 84.0 82.5 80.9 80.5 76.1 76.6 78.6 79.9 80.3 81.1 76.7 68.0 74.3 76.5 77.2 77.7 79.3 77.2	83.6 84.6 82.2 81.6 79.7 75.0 76.6 77.2 79.7 80.0 81.2 73.5 69.4 74.8 77.0 77.2 78.1 79.5 76.2	83.4 84.1 83.0 81.4 80.8 76.6 76.2 76.8 78.5 80.4 80.9 77.6 68.4 73.3 76.2 77.3 77.8 79.2 77.4
Utilization (percent) 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016	135.7 82.2 83.6 84.5 81.8 81.5 78.8 75.2 77.0 77.5 80.4 80.6 79.9 81.1 69.9 70.7 75.3 77.6 77.3 77.0 76.3	135.9 83.1 84.1 84.1 84.1 81.4 78.2 75.0 77.1 78.0 80.8 80.5 80.8 69.3 71.0 75.0 77.6 77.7 78.5 78.6 75.8	136.1 82.7 84.2 83.8 81.5 81.4 77.9 75.6 76.9 77.6 80.6 80.5 80.6 68.1 71.6 75.9 77.1 77.9 79.1 78.2 75.1	83.3 83.7 83.6 81.2 81.7 77.7 75.8 76.4 77.9 80.6 80.7 80.9 79.9 67.5 72.0 75.6 77.7 79.1 77.8 75.3	83.6 83.7 83.8 81.5 81.4 77.2 76.1 76.3 78.6 80.7 80.4 80.9 79.4 66.7 73.2 75.8 77.6 77.3 77.3 75.1	83.9 83.6 82.7 80.9 81.3 76.7 76.8 76.3 77.9 80.9 80.6 81.0 79.2 66.5 73.5 75.9 77.4 77.8 79.4 77.0 75.3	83.4 83.7 81.9 81.0 80.8 76.3 76.6 76.6 78.8 67.3 74.0 76.3 77.5 77.3 79.4 75.4	83.5 84.1 83.1 81.2 80.3 76.2 76.6 76.4 78.6 80.5 81.1 77.5 68.1 74.4 76.7 77.1 77.8 79.2 77.3 75.3	83.7 84.3 82.4 80.6 80.5 75.8 76.7 76.8 78.8 80.1 81.3 74.0 68.7 74.6 76.6 76.9 78.1 79.3 77.0 75.2	83.3 84.6 82.6 81.5 80.0 75.3 76.5 76.9 79.4 79.6 79.9 80.9 74.8 69.0 74.5 77.0 78.0 79.2 76.7 75.2	84.8 82.1 81.6 79.8 74.9 76.9 77.4 79.6 80.3 79.7 81.3 73.9 69.4 74.6 76.9 77.3 78.1 79.8 76.2 75.0	83.9 84.5 81.9 79.4 74.7 76.5 77.4 80.1 80.7 80.4 81.3 71.7 69.8 75.4 77.4 78.6 75.8 75.7	135.9 82.7 84.0 84.1 81.7 81.4 78.3 75.3 77.0 77.7 80.6 80.3 80.8 69.1 71.1 75.4 77.6 78.5 78.6 75.8	83.6 83.6 83.4 81.2 81.5 77.2 76.3 76.3 78.2 80.7 80.6 80.9 79.5 66.9 72.9 75.8 77.7 79.3 77.4 75.2	83.5 84.0 82.5 80.9 80.5 76.1 76.6 76.7 80.3 81.1 76.7 68.0 74.3 76.5 77.2 75.3	83.6 84.6 82.2 81.6 79.7 75.0 76.6 77.2 79.7 80.0 81.2 73.5 69.4 74.8 77.0 77.2 78.1 79.5 76.2 75.3	83.4 84.1 83.0 81.4 80.8 76.6 76.2 76.8 78.5 80.4 80.9 77.6 68.4 73.3 76.2 77.3 77.8 79.2 77.4 75.4
Utilization (percent) 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015	135.7 82.2 83.6 84.5 81.8 81.5 78.8 75.2 77.0 77.5 80.4 80.6 79.9 81.1 69.9 70.7 75.3 77.6 77.9 79.0	135.9 83.1 84.1 84.1 84.1 81.4 78.2 75.0 77.1 78.0 80.8 80.5 80.8 69.3 71.0 75.0 77.6 77.7 78.5 78.6	136.1 82.7 84.2 83.8 81.5 81.4 77.9 75.6 76.9 77.6 80.6 80.5 80.5 80.5 80.5 80.5 80.5 80.6 68.1 71.6 75.9 77.1 77.9 79.1 78.2	83.3 83.7 83.6 81.2 81.7 77.7 75.8 76.4 77.9 80.6 80.7 80.9 79.9 67.5 72.0 75.6 77.7 79.1 77.8	83.6 83.7 83.8 81.5 81.4 77.2 76.1 76.3 78.6 80.7 80.4 80.9 79.4 66.7 73.2 75.8 77.6 77.7 79.3 77.3	83.9 83.6 82.7 80.9 81.3 76.7 76.8 76.3 77.9 80.9 80.6 81.0 79.2 66.5 73.5 75.9 77.4 77.8 79.4 77.0	83.4 83.7 81.9 81.0 80.8 76.3 76.6 76.6 78.8 67.3 74.0 76.3 77.5 77.3 79.4 77.4	83.5 84.1 83.1 81.2 80.3 76.2 76.6 76.4 78.6 80.5 80.5 81.1 77.5 68.1 74.4 76.7 77.1 77.2 77.3	83.7 84.3 82.4 80.6 80.5 75.8 76.7 76.8 78.6 78.8 80.1 81.3 74.0 68.7 74.6 76.6 76.7 74.6 76.7 77.0	83.3 84.6 82.6 81.5 80.0 75.3 76.5 76.9 79.4 79.6 79.9 80.9 74.8 69.0 74.5 77.0 78.0 79.2 76.7	84.8 82.1 81.6 79.8 74.9 76.9 77.4 79.6 80.3 79.7 81.3 73.9 69.4 74.6 76.9 77.3 78.1 79.8 76.2	83.9 84.5 81.9 79.4 74.7 76.5 77.4 80.1 80.7 80.4 81.3 71.7 69.8 75.4 77.4 78.3 79.6 75.8	135.9 82.7 84.0 84.1 81.7 81.4 78.3 75.3 77.0 77.7 80.6 80.3 80.8 69.1 71.1 75.4 77.6 78.5 78.6	83.6 83.6 83.4 81.2 81.5 77.2 76.3 76.2 80.7 80.6 80.9 79.5 66.9 72.9 75.8 77.7 79.3 77.4	83.5 84.0 82.5 80.9 80.5 76.1 76.6 78.6 79.9 80.3 81.1 76.7 68.0 74.3 76.5 77.2 77.7 79.3 77.2	83.6 84.6 82.2 81.6 79.7 75.0 76.6 77.2 79.7 80.0 81.2 73.5 69.4 74.8 77.0 77.2 78.1 79.5 76.2	83.4 84.1 83.0 81.4 80.8 76.6 76.2 76.8 78.5 80.4 80.9 77.6 68.4 73.3 76.2 77.3 77.8 79.2 77.4

Table 13 HISTORICAL STATISTICS FOR INDUSTRIAL PRODUCTION, CAPACITY, AND UTILIZATION: Total Industry Excluding Selected High-Technology Industries¹ Seasonally adjusted

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

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

Inters Jame Jame Ang An	Seasonally adjusted	Lon	Eab	Mor	4	Mov	Juno	Inter	4.11.0	Cont	Oat	Nov	Daa	01	- 02	02	04	Annual
change?	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
1996 -12 1.3 .4 10 .5 8 -1 2 0 -5 7 7 -2 1.4 2.3 1.5 1997 -3 -4 1 2 1 1 2 1 1 2 1 1 2 3 2 3 3 4 3 2 3 <td></td>																		
1997 -2 1.1 .7 -3 4 4 10 6 7 -8 1.1 2.7 6.7 8.1 1.0 3.1 2.1 3.1 2.1 3.1 2.1 3.1 2.1 3.1		-1.2	1.3	4	1.0	.5	.8	1	.2	.6	5	.7	.7	-2.1	7.4	4.2	2.9	1.5
1999 -1 5 -4 -5 14 -4 4 4 4 4 5 3 0 5 15 2000 -6 -5 -2 -10 -5 -4 -5 -1 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -2 -4 -4 -4 -4 -2 -2 -2 -2 -2 -2 -2 -2 -2	1997	2	1.1	.7	5	.4	.4	.4	1.0		.7	.8	.1	6.3	2.7	6.7	8.2	5.0
2000 -3 -2 3 4 -6 0 -2 -1.0 3 -5 -5 -8 -3 3 8 -48 -46 7 2001 -6 -6 -3 -2 -6 -5 -2 -6 -2 -1 5 -5 -2 -4 -1 -5 -2 -1 -5 -2 -1 -5 -5 -3 -1 -3 -5 -3 -3 -1 -5 -3 1 -1 -6 1 -1 -5 3 1 -1 -5 3 1 -4 -5 1 -1 -5 3 1 -1 -5 3 1 -1 -1 1 1 -2 -2 -2 1<-1																		
200 -6 -6 -3 -2 -6 -2 -6 -2 -4 -40 -40 -40 -40 -40 -40 -40 -40 -40 -40 -40 -50 -50 -50 -20 -50 -50 -50 -20 -50 -50 -20 -50 -20 -30 -10 -11 -10 -11 -10 -11 -10 -11 -10 -11 -10 -11 -10 -11 -10 -11 -10 -11 -10 -11						6												
2002 7 -2 7 2 5 1 -4 1 1 -4 4 4 -5 5 3 3 0 2 0 2004 -1 7 -2 4 8 -8 10 -4 -1 10 -1 6 15 13 3 8 4 20 2005 6 7 -4 2 3 -4 5 -1 -4 0 15 13 1.1 2.1 2.0 6 15 11 1.1 -3 1.1 -3 1.1 -3 1.1 3 1.4 2.2 3.3 1.4 2.2 3.4 1.5 1.3 3 1.1 -3 1.4 3 1.1 -3 -3 2.2 3.3 1.1 -4 2.3 -3 3.0 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2	2001			2			-			2				6.0				
2005 -1 -7 -0 -9 -3 -5 -5.9 -0 2.9 0 2005 -6 -7 -6 1 3 -7.4 -6 1.5 -5.3 1.3 3.8 4.8 -3 2005 -6 -7 -6 1.5 5 3 -1.4																		
2005 0 7 -6 2 3 -1 -5 3 -1.4 1.4 8 1.1 5.3 1.3 -2.1 5.0 3.1 2006 -8 -4 -1 5 -5 -3 -4 -5 -1 -4 3 1 3.1 3.1 -1 -2 -6 1 1.1 -1 -2 -6 1.1 -1 -2 -6 1.1 -1 -2			1	.0		1	.3							.5	-3.9			
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$																		
2007 -6 3 -5 -1 -7 -7 -1 -1 2.2 -3 -4 -3 -5 -8 -9 -2 -3 -4 -10 -3 -5 -8 -200 -3 -3 -5 -10 -3 -5 -10 -3 -5 -5 -1 -5 0 0 -1 -3 -5 -5 -1 -2 -2 -3 -4 -1 -3 -5 -5 -1 -2 -3 -0 -3 -3 -4 -3 -1 -3 -4 -3 -3 -4 -3 <t< td=""><td>2005</td><td>.0</td><td>./</td><td>0</td><td></td><td></td><td>.1</td><td>5</td><td></td><td>-1.5</td><td>1.4</td><td>.0</td><td>.1</td><td>5.5</td><td>1.5</td><td>-2.1</td><td>5.0</td><td>5.1</td></t<>	2005	.0	./	0			.1	5		-1.5	1.4	.0	.1	5.5	1.5	-2.1	5.0	5.1
2005 -5. -8 -5. -1.3 -7. -1.1 -1.2 -3.6 -4. -2.2 -3.4 -4.4 -1.6 -3.5 -3.5 -3.6 -3.4 -4.4 -1.6 -3.5 -3.5 -3.6 -3.7 -3.5 -3.6 -3.5 -3.6 -3.5 -3.6 -3.5 -3.6 -3.5 -3.6 -3.5 -3.6 -3.5 -3.6 -3.5 -3.6 -3.5 -3.6 -3.5 -3.6 -3.5 -3.6 -3.5 -3.6 -3.5 -3.6 -3.5 -3.6 -3.5 -3.6 -3.5 -3.6 -3.5 -3.6 -3.5 -3.6 -3.6 -3.7 -3.7 -3.6 -3.6 -3.6 -3.7 -3.7 -3.6 -3.6 -3.6 -3.6 -3.7<																		
2010 1.0 3 1.1 8.8 1.4 1 5.5 0.0 3.7 1 3 5.5 9.6 3.7 5.5 1.2 2011 1.1 1.1 6 5 5 1.1 1 2 5 3.8 0.0 2.9 7 9 1.6 3.5 2013 5 6 5 1.1 4 1.0 0.1 0 0.2 2.9 7 9 1.6 3.5 2015 5 5 1.1 4 1.4 .4 .2 2.2 2.0 0.3 .3 2 .4 .1.5 .1.1 .4 .2 .2 .2 0.3 .3 .2 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>																		
Contine 1 1 6 -6 .1 0 .7 3 4 6 -3 7 1 2 2 2 2 2 2 2 2 1 -1 -2 -1 -5 3 9 4 9 4 9 4 9 4 9 4 9 4 9 4 9 4 9 4 9 4 9 4 9 1 1 1 4 7 7 3 1 -4 2 2 0 3 3 -1 1 2 1 1 2 1 2 1 1 2 1 2 2 2 1 3 1 -4 2 2 0 3 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1																		
2012 8 3 -6 5 -5 -1 -1 -2 -1 -1 0 -1 00 -1 0 1 0 -1 0 0 0 0<	2010	1.0	3	1.1	.8	1.4	1	.5	.0	.0	.1	1	.3	5.5	9.6	3.7	.5	5.1
2013 -4.4 5.5 -2. 2.2 2.1.1 1.0 0 1.0 2.9 -7.7 9 1.6 5 2014 -1.2 1.1 .8 -2.2 2.3 4.4 -7.3 4 1 2.2 3 1.0 3.7 1.2 1.1 -2.7 7.7 2016 .5 .4 .3 .1.1 .4 .2 2.2 0 .3 .3 .2.7 .4 1.3 1.10 2017 .4 1.5 .0 .2 .2 .2 1.3 .2 0.2 2.2 2.1 1.5 1.10 2016 100.3 199.9 99.7 99.3 99.4 99.5 99.4 99.6 99.6 99.0 100.0 100.3 100.3 100.0 100.3																		
2014 -1.2 1.1 3.8 -2.2 2.3 4.4 -5.5 0 -1.1 2.8 -3.1 -1.0 3.7 1.2 5.8 8 2015 -5.5 -5.6 -3 -1.1 -4 7.2 -3 -4.1 -2.2 -3 -3.3 -2.7 4.1 1.3 -1.0 2017 -4 1.5 0 -4 1.5 0 -2.2 -2.2 1.3 2.0 2.2 2.3 -2.1 5.2 1.12 2018 -4 1.5 0 -4 1.5 0 -2.9 1.3 2.0 2.2 2.3 -2.1 5.2 1.12 2016 100.3 100.5 100.0 10.1 100.6 10.0.3 10.1 10.1 10.1 10.1 10.1 10.1 10.1 10.1 10.1 10.1 10.1 10.2 10.3 10.3 10.1 10.1 10.1 10.1 10.1 10.1 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>																		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	2014	-1.2	1.1	.8	2	.2	.3	.4	5	.0	1	.8	3	-1.0	3.7	1.2	.5	.8
2017 .4 .2 .5 1.1 .4 .1 .2 .2 .2 1.3 .2 .0 2.2 2.3 2.1 5.2 1.1 1P C2012=100 100.3 99.9 99.7 99.3 99.2 99.4 99.6 99.6 99.6 99.6 100.0 99.3 99.4 99.6 100.0 100.0 99.3 99.4 99.6 100.1 100.0 100.1 100.6 100.8 100.5 100.1 101.6 100.7 100.2 102.3 100.3 100.3 100.1 100.6 100.8 100.5 100.3 100.1 101.6 100.7 102.3 10.3 101.5 113.4 13.4 <t< td=""><td>2015</td><td>5</td><td>6</td><td>.3</td><td>1</td><td>1</td><td>4</td><td>.7</td><td>3</td><td>4</td><td>1</td><td>2</td><td>3</td><td>-3.0</td><td>-1.2</td><td>.1</td><td>-2.7</td><td>7</td></t<>	2015	5	6	.3	1	1	4	.7	3	4	1	2	3	-3.0	-1.2	.1	-2.7	7
2018 4 1.5 .0 2.9 IP C012=100 2016 100.3 99.9 99.7 99.3 99.2 99.4 99.5 99.2 99.4 99.6 99.9 90.0 99.3 99.4 99.7 2017 100.3 100.5 100.0 101.1 100.6 100.8 100.5 100.1 101.4 101.6 101.7 100.2 100.8 100.3 101.6 100.7 Capacity (percent) <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>																		
IP (2012=100) 100.3 99.9 99.7 99.3 99.2 99.4 99.6 99.6 99.9 100.0 99.3 99.4 99.7 99.6 2016 100.3 102.8 102.8 102.1 100.6 100.3 100.5 100.0 100.3 100.5 100.0 100.3 100.5 100.7 102.3 100.8 100.5 100.3 100.4 101.4 101.6 101.7 102.3 100.8 100.3 100.1 101.4 101.6 101.7 102.3 100.8 100.3 100.1 101.4 101.6 101.7 102.3 100.8 100.4 101.4 101.6 101.7 102.3 100.8 100.4 101.4 101.6 101.7 102.8 133.4 133.5 133.7 133.8 133.9 134.0 134.1 134.8 134.6 134.4 134.5 134.6 134.6 134.7 134.8 134.9 134.6 134.6 134.7 134.8 134.9 134.6 134.6 <td></td> <td></td> <td></td> <td></td> <td>1.1</td> <td>4</td> <td>.1</td> <td>2</td> <td>2</td> <td>2</td> <td>1.3</td> <td>.2</td> <td>.0</td> <td></td> <td>2.3</td> <td>-2.1</td> <td>5.2</td> <td>1.2</td>					1.1	4	.1	2	2	2	1.3	.2	.0		2.3	-2.1	5.2	1.2
2016 100.3 99.9 99.7 99.3 99.4 99.6 99.6 99.6 99.7 100.3 100.4 100.5 100.0 100.5 100.0 100.6 100.8 100.5 100.0 100.7 100.2 100.2 100.3 100.1 101.4 101.6 101.7 100.2 100.3 100.3 100.1 101.4 101.6 101.7 100.2 100.3 100.3 101.6 100.7 100.2 100.3 100.3 101.6 100.7 100.2 100.3 100.4 101.6 101.7 100.2 100.3 100.4 101.6 101.7 100.2 100.3 100.4 101.6 101.7 100.2 100.3 100.4 101.6 101.7 100.2 100.3 100.4 101.6 101.7 102.3 103.8 103.0 101.1 100.4 101.4 101.4 101.4 101.4 101.4 101.4 101.4 101.4 101.4 101.4 101.4 101.4 101.4 101.4 <td>2018</td> <td>4</td> <td>1.5</td> <td>.0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>2.9</td> <td></td> <td></td> <td></td> <td></td>	2018	4	1.5	.0										2.9				
2017 100.3 100.5 100.0 101.1 100.6 100.5 100.3 101.1 101.6 101.5 101.6 101.7 102.3 100.3 100.3 101.6 100.7 102.3 100.3 100.3 101.6 100.7 102.3 100.3 100.3 101.6 101.7 102.3 100.3 100.3 101.6 101.7 102.3 100.3 100.3 101.6 101.7 102.3 100.3 100.3 101.6 101.7 102.3 100.3 101.6 101.7 102.3 100.3 101.6 101.7 102.3 102.3 101.6 102.3 101.6 102.3 102.3 101.6 102.3 102.3 101.6 102.3 102.3 101.6 102.3 102.3 101.6 102.3		100.2	00.0	00.7	00.2	00.2	00.4	00.5	00.2	00.4	00.6	00.6	00.0	100.0	00.2	00.4	00.7	00.6
2018 101.3 102.8 102.8 102.3 102.3 102.3 Capacity (percent of 2010 132.7 132.8 133.9 133.1 133.2 133.4 133.5 133.7 133.8 133.9 134.0 134.1 133.2 133.6 133.7 133.8 134.0 134.1 132.2 133.6 133.4 133.4 133.5 133.7 133.8 134.9 134.1 132.8 133.2 133.6 133.4 133.7 133.8 133.9 134.0 134.1 132.8 133.5 134.5 134.6 134.4 134.7 134.8 134.9 134.5 134.5 134.6 134.7 134.8 134.9 134.5 134.5 134.6 134.7 134.8 134.8 134.5 134.6 134.7 134.8 134																		
Concent of 2012 output) Subset Set Set Set Set Set Set Set Set Set S																		
2016 132.7 132.8 132.9 133.1 133.2 133.4 133.5 133.7 133.8 133.9 134.0 134.1 132.8 132.5 133.6 134.6 133.7 133.8 134.9 134.0 134.1 132.8 132.5 133.6 134.6 133.7 133.8 134.9 134.0 134.1 132.8 133.5 134.6 133.4 134.8 134.9 134.5 134.6 134.7 134.8 134.9 134.5 134.6 134.7 134.8 134.9 134.5 134.6 134.7 134.8 134.9 134.5 134.6 134.7 134.8 134.9 134.5 134.6 134.7 134.8 134.9 134.5 134.6 134.7 134.8 134.9 134.5 134.6 134.7 134.8 134.9 134.6 134.7 134.8 134.8 134.8 134.8 134.8 134.8 134.8 134.8 134.8 134.8 134.8 134.8 134.8 134.8																		
2016 132.7 132.8 132.7 133.4 133.2 133.7 133.8 134.0 134.1 132.2 133.6 134.0 134.1 2017 134.2 134.3 134.3 134.4 134.5 134.6 134.7 134.8 134.9 135.0 134.5 134.6 134.6 134.7 134.8 134.9 135.0 134.5 134.6 134.6 134.7 134.8 134.5 134.6 134.6 134.7 134.8 134.5 134.6 134.6 134.7 134.8 134.5 134.6 134.6 134.7 134.8 134.5 134.6 134.6 134.7 134.8 134.0 134.3 134.6 134.6 134.6 134.6 134.6 134.6 134.8 134.5 134.6 134.6 134.8 134.8 134.8 134.8 134.8 134.8 134.8 134.8 134.8 134.8 134.8 134.8 134.8 134.8 134.8 134.8 134.8 134.8 134.8	ч <i>р</i>																	
2018 135.1 135.2 135.3 135.2 135.2 135.2 135.2 Utilization (percent) 2006 80.8 81.7 81.1 81.8 82.1 82.6 82.3 82.3 82.6 82.0 82.4 82.7 81.2 82.2 82.4 82.6 82.3 82.3 83.0 83.3 83.7 83.4 82.9 82.5 82.9 83.5 82.9 83.5 82.9 83.5 82.6 82.4 82.7 81.0 81.3 80.0		132.7	132.8	132.9	133.1	133.2	133.4	133.5	133.7	133.8	133.9	134.0	134.1	132.8	133.2	133.6	134.0	133.4
Utilization (percent) Vertice Vertic Vertice Vertice <td></td> <td>1</td> <td></td> <td></td> <td>134.4</td> <td>134.5</td> <td>134.5</td> <td>134.6</td> <td>134.6</td> <td>134.7</td> <td>134.8</td> <td>134.9</td> <td>135.0</td> <td></td> <td>134.5</td> <td>134.6</td> <td>134.9</td> <td>134.6</td>		1			134.4	134.5	134.5	134.6	134.6	134.7	134.8	134.9	135.0		134.5	134.6	134.9	134.6
(percent) (percent) <t< td=""><td>2010</td><td>155.1</td><td>155.2</td><td>155.5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>133.2</td><td></td><td></td><td></td><td></td></t<>	2010	155.1	155.2	155.5										133.2				
1996 80.8 81.7 81.1 81.8 82.1 82.6 82.3 82.6 82.0 82.4 82.7 81.2 82.2 82.4 82.4 82.5 82.9 83.5 82.6 82.4 82.5 82.5 82.9 83.5 83.8 80.8 83.1 80.8 83.1 80.8 83.1 80.8 83.1 82.5 82.5 82.9 82.5 82.9 82.5 82.9 82.5 82.9 82.5 82.9 83.7 83.1 83.1 83.3 83.7 83.4 83.8 83.8 83.7 83.4 83.3 83.7 83.4 82.5 82.9 83.5 73.3 73.3 73.3 73.3 73.3 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>																		
1998 83.5 83.2 82.6 82.4 82.5 81.2 80.2 81.8 81.0 81.3 80.9 80.8 83.1 82.0 81.0 81.0 79.9 2000 79.9 79.7 79.8 80.0 79.4 79.3 79.0 78.2 78.3 77.9 77.4 76.7 79.8 79.6 78.5 77.3 78.8 2001 76.1 75.6 75.3 75.1 74.6 74.2 74.0 73.6 73.4 72.9 72.7 72.8 75.7 74.7 73.8 74.2 74.0 74.7 75.0 74.4 74.8 74.8 74.2 74.0 74.7 75.0 74.4 74.8 74.8 74.7 75.0 74.4 74.6 75.2 74.8 74.8 74.7 75.0 74.4 74.6 75.2 75.4 75.0 74.4 74.6 75.2 74.8 78.8 75.0 74.6 75.0 74.7 78.4 78.8 75.0 74.6 75.7 74.7 74.8 75.0 76.4 77.1 <		80.8	81.7	81.1	81.8	82.1	82.6	82.3	82.3	82.6	82.0	82.4	82.7	81.2	82.2	82.4	82.4	82.0
1999 80.5 80.6 80.0 79.9 80.2 79.4 79.3 79.0 78.2 78.3 77.9 77.4 76.7 79.8 79.6 78.5 77.3 78.8 2001 76.1 75.6 75.3 75.1 74.6 74.2 74.0 73.6 73.4 72.9 72.7 72.8 75.7 74.7 73.3 73.3 73.1 73.6 73.8 74.2 75.0 74.7 74.9 74.7 75.0 74.4 74.8 74.8 75.5 75.4 75.0 74.4 74.6 75.2 74.8 74.8 75.5 75.4 75.0 74.4 74.6 75.2 74.8 74.8 75.5 75.4 75.0 74.4 74.6 75.2 74.8 74.8 75.5 75.4 75.0 74.4 74.6 75.2 74.8 74.8 75.5 75.4 77.1 78.0 76.8 2004 75.3 78.7 78.9 78.4 78.5<																		
2000 79.9 79.7 79.8 80.0 79.4 79.0 78.2 78.3 77.9 77.4 76.7 79.8 79.6 78.5 77.3 78.8 2001 76.1 75.6 75.3 75.1 74.6 74.2 74.0 73.6 73.4 72.9 72.7 72.8 75.7 74.7 73.7 72.8 74.2 2002 73.3 73.1 73.6 73.8 74.2 75.0 74.7 74.9 74.9 74.7 75.0 74.4 74.8 74.3 74.4 74.6 75.0 74.4 74.6 75.2 75.4 75.0 74.4 74.6 75.2 75.4 75.0 74.4 74.6 75.2 74.8 74.8 75.5 75.4 75.0 74.4 74.6 75.2 74.8 75.7 74.4 74.6 75.2 74.8 75.7 74.8 75.7 74.8 78.7 78.9 78.1 78.8 78.9 78.9 78.1<																		
2002 73.3 73.1 73.6 73.8 74.2 75.0 74.7 74.9 74.7 75.0 74.6 73.3 74.3 74.8 74.8 74.3 74.3 74.3 74.3 74.3 74.3 74.3 74.3 74.6 74.2 74.8 74.8 75.5 75.4 75.0 74.4 74.6 75.2 75.4 75.0 74.4 74.6 75.2 75.4 75.0 74.4 74.6 75.2 75.4 75.0 74.4 74.6 75.2 75.4 75.0 74.4 74.6 75.2 75.4 75.0 74.4 74.6 75.2 75.4 75.0 74.4 74.8 74.8 75.0 75.4 75.0 74.4 74.8 76.8 75.7 76.4 77.1 78.0 78.7 78.0 78.7 78.7 78.7 78.7 78.7 79.0 78.6 78.3 78.1 78.4 78.2 78.8 78.7 79.0 79.0 78.6 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>																		
2002 73.3 73.1 73.6 73.8 74.2 75.0 74.7 74.9 74.7 75.0 74.6 73.3 74.3 74.8 74.8 74.3 74.3 74.3 74.3 74.3 74.3 74.3 74.3 74.3 74.6 74.2 74.8 75.5 75.4 75.0 74.4 74.6 75.2 75.4 75.0 74.4 74.6 75.2 75.4 75.0 74.4 74.6 75.2 75.4 75.0 74.4 74.6 75.2 75.4 75.0 74.4 74.6 75.2 75.4 75.0 74.4 74.8 74.8 2005 78.7 78.8 70.0 78.9 78.4 78.8 79.0 78.6 78.3 78.1 78.4 78.2 78.7 78.9 78.4 78.8 79.0 79.0 78.6 78.3 79.0 79.0 78.6 78.3 78.1 78.4 78.2 78.7 79.0 79.0 78.6 78	2001	76.1	75.6	75 3	75 1	74.6	74 2	74.0	73.6	73.4	72 9	72 7	72.8	757	74 7	737	72.8	74.2
2004 75.3 75.9 75.8 76.1 76.8 76.2 77.0 77.3 77.2 77.9 78.9 78.8 78.7 78.7 78.7 78.7 78.7 78.8 79.0 78.9 78.4 78.6 77.4 78.4 78.9 78.8 78.9 78.1 78.7 78.7 78.7 78.7 78.8 79.0 78.9 78.4 78.6 77.4 78.4 78.9 78.8 78.9 78.1 78.7 78.7 78.9 78.1 78.7 79.0 79.2 78.7 79.0 79.2 78.7 79.0 79.2 78.7 79.0 79.2 78.7 79.0 79.2 78.7 79.0 79.2 78.7 79.0 79.2 78.7 79.0 79.2 78.7 79.0 79.2 78.5 79.2 78.9 78.1 78.5 78.9 78.9 78.1 78.7 79.0 79.0 79.2 78.7 79.0 79.0 79.2 78.5 79.2 78.9 78.1 78.5 78.9 78.9 78.9 78.1 78.5	2002	73.3	73.1	73.6	73.8	74.2	75.0	74.7	74.9	74.9	74.7	75.0	74.6	73.3	74.3	74.8	74.8	74.3
2005 78.7 79.2 78.7 78.8 79.0 78.9 78.4 78.6 77.4 78.4 78.9 78.8 78.9 78.9 78.1 78.7 78.7 2006 79.3 78.9 78.7 78.9 78.4 78.5 78.1 78.4 78.2 77.8 77.7 78.8 79.0 79.2 78.7 79.0 79.0 78.5 78.1 78.4 78.2 77.8 77.7 78.8 79.0 79.2 78.7 79.0 79.0 78.5 78.1 78.7 79.0 79.0 78.5 78.1 78.9 78.7 79.0 79.2 78.7 79.0 79.2 78.7 79.0 79.2 78.7 79.0 79.2 78.4 78.5 78.9 78.9 78.1 78.9 78.9 78.9 78.9 78.1 78.2 73.4 79.0 79.0 78.5 79.2 73.4 69.5 74.3 2008 75.6 75.1 75.5<																		
2007 78.2 78.4 78.8 79.1 79.0 79.4 79.3 79.0 79.2 78.7 79.0 79.0 78.5 79.2 79.2 78.9 78.9 2008 78.6 78.0 77.6 76.7 76.2 75.7 74.9 74.0 71.4 71.2 69.8 67.6 78.1 76.2 73.4 69.5 74.3 2009 65.6 65.5 64.3 64.0 63.4 63.3 64.4 65.3 65.9 66.2 66.9 66.9 65.2 63.5 65.2 66.7 65.1 2010 67.7 67.7 68.6 69.3 70.4 71.0 71.1 71.3 71.5 71.6 72.0 68.0 70.0 71.1 71.7 70.2 2011 72.2 72.4 73.0 72.7 72.9 73.0 73.5 73.8 74.1 74.5 74.3 74.8 75.4 75.2 73.8 74.6 74.2 74.8 75.4 75.2 73.8 74.5 75.3 75.4 75.2 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>																		
2007 78.2 78.4 78.8 79.1 79.0 79.4 79.3 79.0 79.2 78.7 79.0 79.0 78.5 79.2 79.2 78.9 78.9 2008 78.6 78.0 77.6 76.7 76.2 75.7 74.9 74.0 71.4 71.2 69.8 67.6 78.1 76.2 73.4 69.5 74.3 2009 65.6 65.5 64.3 64.0 63.4 63.3 64.4 65.3 65.9 66.2 66.9 66.9 65.2 63.5 65.2 66.7 65.1 2010 67.7 67.7 68.6 69.3 70.4 71.0 71.1 71.3 71.5 71.6 72.0 68.0 70.0 71.1 71.7 70.2 2011 72.2 72.4 73.0 72.7 72.9 73.0 73.5 73.8 74.1 74.5 74.3 74.8 75.4 75.2 73.8 74.6 74.2 74.8 75.4 75.2 73.8 74.5 75.3 75.4 75.2 <td< td=""><td></td><td></td><td>79.0</td><td></td><td></td><td>70.4</td><td></td><td></td><td></td><td>79.2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>			79.0			70.4				79.2								
2008 78.6 78.0 77.6 76.7 76.2 75.7 74.9 74.0 71.4 71.2 69.8 67.6 78.1 76.2 73.4 69.5 74.3 2009 65.6 65.5 64.3 64.0 63.4 63.3 64.4 65.3 65.9 66.2 66.9 66.9 65.2 63.5 65.2 66.7 65.1 2010 67.7 67.7 68.6 69.3 70.4 70.4 71.0 71.1 71.3 71.5 71.6 72.0 68.0 70.0 71.1 71.7 70.2 2011 72.2 72.4 73.0 72.7 72.9 73.0 73.5 73.8 74.1 74.5 74.3 74.8 75.4 75.4 75.6 75.1 75.5 75.0 75.1 74.5 75.2 74.8 75.4 75.4 75.2 74.8 75.4 75.3 75.1 75.0 75.4 75.2 74.8 75.4 75.3 <td></td>																		
2010 67.7 67.7 68.6 69.3 70.4 71.0 71.1 71.3 71.5 71.6 72.0 68.0 70.0 71.1 71.7 70.2 2011 72.2 72.4 73.0 72.7 72.9 73.0 73.5 73.8 74.1 74.5 74.3 74.8 72.5 72.8 73.8 74.6 73.4 2012 75.4 75.6 75.1 75.5 75.0 75.1 74.9 74.8 74.6 74.2 74.8 75.4 75.2 74.8 75.4 75.2 74.8 75.4 75.3 75.0 75.1 75.3 74.5 75.2 75.3 75.4 75.3 75.0 75.1 75.3 74.5 75.2 75.3 75.4 75.3 75.0 75.1 75.3 75.2 75.3 75.4 75.3 75.1 75.0 75.1 75.3 74.5 75.2 75.3 75.4 75.3 75.1 75.0 75.4 75.2 75.0 75.4 75.2 75.3 75.4 75.3 75.4 75.3 <	2008	78.6	78.0	77.6	76.7	76.2	75.7	74.9	74.0	71.4	71.2	69.8	67.6	78.1	76.2	73.4	69.5	74.3
2011 72.2 72.4 73.0 72.7 72.9 73.0 73.5 73.8 74.1 74.5 74.3 74.8 72.5 72.8 73.8 74.6 73.4 2012 75.4 75.6 75.1 75.5 75.0 75.1 74.9 74.8 74.6 74.2 74.8 75.4 75.2 74.8 74.8 75.4 75.4 75.2 74.8 74.8 75.4 75.4 75.2 74.8 75.2 75.3 75.1 75.0 75.1 75.3 74.5 75.2 75.3 75.4 75.3 75.1 75.0 75.1 75.3 74.5 75.2 75.3 75.4 75.3 75.1 75.0 75.1 75.3 74.5 75.2 75.3 75.4 75.3 75.1 75.0 75.1 75.3 74.5 75.2 75.3 75.4 75.3 75.1 75.0 75.4 75.2 75.3 75.4 75.2 75.0 76.4 76.1 76																		
2012 75.4 75.6 75.1 75.5 75.0 75.1 74.9 74.8 74.6 74.2 74.8 75.4 75.2 74.8 74.8 75.1 2013 75.1 75.4 75.3 75.0 75.1 75.3 74.5 75.2 75.3 75.4 75.3 75.4 75.3 75.1 75.0 75.1 75.3 74.5 75.2 75.3 75.4 75.3 75.4 75.3 75.1 75.0 75.4 75.2 2014 74.5 75.3 75.9 75.7 75.9 76.2 76.4 76.1 76.1 76.0 76.7 75.5 75.2 75.9 76.2 76.4 75.9 2015 76.2 75.8 76.1 76.0 75.7 75.9 76.2 76.4 75.7 75.7 75.5 75.2 75.9 76.0 75.5 75.9 76.0 75.5 75.9 76.0 75.5 75.9 76.0 75.5 75.9 76.0 75.5 75.9 76.0 75.5 75.9 76.0 75.5 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>																		
2013 75.1 75.4 75.3 75.0 75.1 75.3 75.4 75.3 75.4 75.3 75.1 75.0 75.4 75.2 2014 74.5 75.3 75.9 75.7 75.9 76.2 76.4 76.1 76.1 76.0 76.7 76.5 75.2 75.9 76.2 76.4 75.9 2015 76.2 75.8 76.1 76.0 76.3 76.1 76.1 76.1 76.0 76.7 75.5 75.2 75.9 76.2 76.4 75.9 2016 75.6 75.2 75.0 74.6 74.4 74.5 74.6 74.2 74.3 74.4 74.3 74.5 75.3 75.4 75.3 74.4 74.4 74.6 2017 74.7 74.8 74.4 75.2 74.8 74.9 74.7 74.5 75.3 75.3 75.3 74.5 74.4 74.6 2017 74.7 74.8 74.4 75.2 74.8 74.9 74.7 74.5 75.3 75.3 74.5																		
2014 74.5 75.3 75.9 75.7 75.9 76.2 76.4 76.1 76.1 76.0 76.7 76.5 75.2 75.9 76.2 76.4 75.9 2015 76.2 75.8 76.1 76.0 75.3 76.1 76.1 75.7 75.7 75.5 75.2 75.9 76.2 76.4 75.9 2016 75.6 75.2 75.0 74.6 74.4 74.5 74.3 74.4 74.3 74.5 75.3 74.5 74.4 74.6 2017 74.7 74.8 74.4 75.2 74.8 74.9 74.7 74.5 74.3 75.2 75.3 74.5 74.4 74.6 2017 74.7 74.8 74.4 75.2 74.8 74.9 74.7 74.5 75.3 75.3 74.5 74.4 74.9																		
2016 75.6 75.2 75.0 74.6 74.4 74.5 74.6 74.2 74.3 74.4 74.5 75.3 74.5 74.4 74.6 2017 74.7 74.8 74.4 75.2 74.8 74.9 74.7 74.5 75.3 75.3 74.5 75.3 74.7 75.0 74.5 74.9																		75.9
2017 74.7 74.8 74.4 75.2 74.8 74.9 74.7 74.5 74.3 75.2 75.3 75.3 74.7 75.0 74.5 75.3 74.9	2015	/6.2	/5.8	/6.1	/6.0	/6.0	/5.8	/6.3	/6.1	15.1	15.1	15.5	/5.2	/6.0	/5.9	/6.0	15.5	/5.9
					75.2	74.8	74.9	74.7	74.5	74.3	75.2	75.3	75.3		75.0	74.5	75.3	74.9
	2018	74 9	76.0	76.0										757				

Table 14 HISTORICAL STATISTICS FOR INDUSTRIAL PRODUCTION, CAPACITY, AND UTILIZATION: Manufacturing' Excluding Selected High-Technology Industries² Seasonally adjusted

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

Table 15 INDUSTRIAL PRODUCTION: RELIABILITY ESTIMATES Seasonally adjusted

		alized									_					
	cha		2012=100							Percent change						
	2017	2018	2017			2018			2017			2018				
Item	Q4	Q1	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.		
Total index																
85th percentile	7.99	5.51	104.76	105.36	105.89	105.77	106.94	107.57	1.54	.57	.55	02	1.30	.83		
Current estimate	7.77	4.51	104.76	105.30	105.78	105.56	106.62	107.17	1.54	.51	.45	20	1.00	.51		
15th percentile	7.52	3.73	104.76	105.24	105.66	105.38	106.36	106.78	1.54	.45	.35	32	.77	.20		
Manufacturing (SIC)																
85th percentile	5.81	4.08	102.63	102.96	103.10	102.75	104.40	104.60	1.33	.32	.18	29	1.68	.35		
Current estimate	5.54	3.11	102.63	102.89	102.98	102.57	104.11	104.19	1.33	.26	.08	40	1.50	.07		
15th percentile	5.37	2.13	102.63	102.83	102.85	102.38	103.86	103.77	1.33	.20	03	52	1.35	22		
Mining																
85th percentile	16.23	13.90	111.65	114.01	115.04	114.32	118.30	119.62	1.43	2.12	1.04	35	3.79	1.96		
Current estimate	15.66	10.76	111.65	113.85	114.71	113.72	117.05	118.23	1.43	1.97	.75	86	2.92	1.01		
15th percentile	14.87	7.58	111.65	113.68	114.33	113.07	115.84	116.63	1.43	1.82	.43	-1.30	2.19	.11		
Electric and gas utilities																
85th percentile	13.99	10.87	102.96	103.36	106.17	108.92	104.64	107.73	3.20	.39	2.74	2.92	-3.26	4.82		
Current estimate	13.87	6.12	102.96	103.34	106.12	108.30	102.84	105.95	3.20	.37	2.68	2.06	-5.04	3.02		
15th percentile	13.71	4.19	102.96	103.32	106.03	107.93	101.67	104.95	3.20	.35	2.57	1.79	-6.34	1.35		

The reliability measures show the likely range of values for the IP indexes after their fifth and final monthly revision. The 15th (85th) percentile estimate is equal to the current estimate plus an amount such that the equivalent measure revised by a lower (higher) amount for only 15 percent of the months since 2008. More information is available at https://www.federalreserve.gov/releases/g17/g17_technical_qa.htm

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**. 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 the manufacturing, mining, and electric and gas utilities industries; the reference period for the index is 2012. Manufacturing consists of those industries included in the North American Industry Classification System, or NAICS, definition of manufacturing plus those industries-logging and newspaper, periodical, book, and directory publishing-that have traditionally been considered to be manufacturing and included in the industrial sector. For the period since 1997, the total IP index has been constructed from 300 individual series based on the 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 at 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 typically 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 semiconductors. When suitable data on physical product are not available, estimates of output are based on production-worker hours by industry. Data on hours worked by production workers are collected in the monthly establishment survey conducted by the Bureau of Labor Statistics. The factors used to convert inputs into estimates of production are based on historical relationships between the inputs and the comprehensive annual data used to benchmark the IP indexes; these factors also may be influenced by technological or cyclical developments. The annual data used in benchmarking the individual IP indexes are constructed from a variety of source data, such as the quinquennial Censuses of Manufactures and Mineral Industries and the Annual Survey of Manufactures, prepared by the Bureau of the Census; the Minerals Yearbook, prepared by the U.S. 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 Bulletin* February 1997 and March 2001.) In the IP index, series that measure the output of an individual industry are combined using weights derived from their proportion in the total value-added output of all industries. The IP index, which extends back to 1919, is built as a chain-type index since 1972. The current formula for the growth in monthly IP (or any of the sub-aggregates) since 1972 is the geometric mean of the change in output (*I*), and, as can be seen below, is computed using the unit value added estimate for the current month (p_m) and the estimate for previous month:

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

The IP proportions (typically shown in the first column of the relevant tables in the monthly 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 6 percent. If output in this industry increased 10 percent in a month, then this gain would boost growth in total IP by 6/10 percentage point (0.06 x 10% = 0.6%). 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 74 percent of the source data (in value-added terms) are available; the fraction of available source data increases to 85 percent for estimates in the second month that the estimate is published, 95 percent in the third month, 96 percent in the fourth month, 97 percent in the fifth month, and 97 percent in the sixth month. Data availability by data type in early 2017 is summarized in the table below:

⁽Percent of value added in 2017; the numbers may not sum because of rounding.)

	Month of estimate								
Type of data	1st	2nd	3rd	4th	5th	6th			
Physical product	32	44	54	55	56	56			
Production-worker hours	41	41	41	41	41	41			
IP data received	74	85	95	96	97	97			
IP data estimated	26	15	5	4	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 more than one-half of the series (in terms of value added) that ultimately are based on physical product data (32 percent out of a total of 56 percent). Of the 27 percent, about four-fifths (25 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-13 ARIMA. For series based on production-worker hours, the current seasonal factors were estimated with data through January 2018; for other series, the factors were estimated with data through at least December 2017. Series are pre-adjusted for the effects of holidays or the business cycle when appropriate. For the data since 1972, all seasonally adjusted aggregate indexes are calculated by aggregating the seasonally adjusted indexes of the individual series. Additional documentation and X-13 specifications can be found on the Board's website at www.federalreserve.gov/releases/G17/About.htm.

Reliability. The average revision to the *level* of the total IP index, without regard to sign, between the first and the fourth estimates was

Availability of Monthly IP Data in Publication Window

0.27 percent during the 1987–2017 period. The average revision to the *percent change* in total IP, without regard to sign, from the first to the fourth estimates was 0.22 percentage point during the 1987-2017 period. In most cases (about 85 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. Capacity indexes are constructed for 89 detailed industries (71 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, or 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-logging and newspaper, periodical, book, and directory publishing-that have traditionally been considered to be manufacturing and included in the industrial sector. Also, special aggregates are available, such as high-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 (for example, paper, industrial chemicals, petroleum refining, motor vehicles), as well as for electric utilities and mining; these industries represent about 27 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 about 64 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 9 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 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 survey of large companies reported, on average, higher utilization rates than those reported by establishments covered by the annual Survey of Plant Capacity (the primary source of factory operating rates through 2006, after which it was discontinued) for the fourteen years they overlapped. Adjustments have been made to keep the industry utilization rates currently reported by the Federal Reserve (now based on the QSPC) 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 Census utilization surveys.

Perspective. Over the 1972–2017 period, the average total industry utilization rate was 79.8 percent; for manufacturing, the average factory operating rate was 78.3 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 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 March 23, 2018, is available on the Board's website (www.federal reserve.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

In 2018, the G.17 will be published at 9:15 a.m. on:

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

This release schedule is available on the Board's website at http://www.federalreserve.gov/releases/g17.