FEDERAL RESERVE statistical release



G.17 (419)

INDUSTRIAL PRODUCTION AND CAPACITY UTILIZATION

Industrial production decreased 0.1 percent in October, and its gain in September was revised down to 0.1 percent. Manufacturing output edged up 0.1 percent in October, and its increases in July, August, and September were all lower than previously reported. In October, the index for mining stepped down 0.4 percent,

(over)

Industrial Production and Capacity Utilization: Summary

Seasonally adjusted

			2017=	100						Percent	change		
	2022						2022						Oct. '21 to
Industrial production	May ^r	June ^r	July ^r	Aug."	Sept. ^r	Oct. ^p	May ^r	June ^r	July ^r	Aug."	Sept. ^r	Oct. ^p	Oct. '22
Total index	104.2	104.1	104.8	104.7	104.8	104.7	1	1	.7	1	.1	1	3.3
Previous estimates	104.2	104.1	104.9	104.7	104.0	104.7	1	1	.7	1	.1	1	5.5
	10.112	10 111	10 112	10.110	10012				• •				
Major market groups													
Final Products	104.8	104.3	104.9	105.3	105.4	105.8	6	5	.6	.4	.2	.4	4.5
Consumer goods	105.2	104.4	104.9	104.9	104.8	105.0	8	8	.4	.0	1	.1	2.6
Business equipment	97.0	96.8	97.4	98.4	99.2	100.0	3	2	.6	1.0	.8	.8	7.7
Nonindustrial supplies	102.7	101.9	102.3	102.1	102.0	101.7	2	8	.4	3	1	2	1.3
Construction	105.1	104.0	104.5	104.2	104.8	104.1	.2	-1.1	.6	3	.6	7	.8
Materials	104.0	104.5	105.3	104.9	105.1	104.7	.3	.5	.8	4	.2	4	3.0
Major industry groups	101.0	101.2	101.0	101.0	102.1	100.0	_		_				2.4
Manufacturing (see note below)	101.9	101.3	101.8	101.9	102.1	102.3	5	6	.5	.1	.2	.1	2.4
Previous estimates	101.9	101.3	102.0	102.3	102.8	117.4	4	6	.6	.4	.4	4	6.0
Mining	113.6	115.6	117.2	117.0	117.9	117.4	1.1	1.7 .3	1.4	2	.7	4	6.9
Utilities	107.0	107.3	107.8	106.3	104.6	103.0	.3	.3	.4	-1.3	-1.7	-1.5	2.5
													Capacity
					Perce	nt of cap	acity						growth
	Average	1988-	1990-	1994-									8
	1972-	89	91	95	2009	2021	2022						Oct. '21 to
Capacity utilization	2021	high	low	high	low	Oct.	May ^r	June ^r	July ^r	Aug."	Sept. ^r	Oct. ^p	Oct. '22
	-0.6					-0.6							
Total industry	79.6	85.2	78.8	85.0	66.6	78.6	80.0	79.8	80.2	80.0	80.1	79.9	1.6
Previous estimates							80.0	79.8	80.3	80.1	80.3		
Manufacturing (see note below)	78.2	85.6	77.3	84.7	63.4	78.3	79.6	79.0	79.3	79.3	79.5	79.5	.9
Previous estimates	/0.2	05.0	11.5	04.7	05.4	70.5	79.6	79.0	79.5	79.3	80.0	19.5	.9
Mining	86.3	86.2	84.3	88.6	78.9	85.7	86.7	87.9	88.9	88.5	88.9	88.4	3.6
Utilities	84.7	92.9	84.5	92.9	78.0	72.1	75.7	75.7	75.9	74.7	73.3	72.1	2.6
ounies	07.7	, ,2.9	04.5	12.9	/0.0	12.1	15.1	15.1	15.9	/ /	15.5	12.1	2.0
Stage-of-process groups													
Crude	85.5	87.9	84.8	90.0	76.9	84.7	85.8	86.9	87.6	87.0	87.2	86.7	2.6
Primary and semifinished	80.1	86.5	78.0	87.8	63.5	77.4	79.1	78.4	78.8	78.3	78.2	77.7	1.0
Finished	76.7	83.3	77.5	80.7	66.4	77.3	78.8	78.4	78.7	79.0	79.2	79.5	1.6
r Revised n Preliminary		1	1	1									

r Revised. p Preliminary.

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

For release at 9:15 a.m. (EST) November 16, 2022

and the index for utilities fell 1.5 percent. At 104.7 percent of its 2017 average, total industrial production in October was 3.3 percent above its year-earlier reading. Capacity utilization decreased 0.2 percentage point in October to 79.9 percent, a rate that is 0.3 percentage point above its long-run (1972–2021) average.

Market Groups

The major market groups recorded mixed results in October. Gains were registered by consumer goods, business equipment, and defense and space equipment, while losses were posted by construction supplies and materials. The index for business supplies was unchanged. Within consumer goods, the largest increases were in automotive products and in appliances, furniture, and carpeting products; the rise in business equipment was broad based. The cutback in materials resulted from widespread decreases among nondurable materials and from a drop in energy materials concentrated in oil and natural gas extraction and in electricity generation; the output of durable materials moved up modestly.

Industry Groups

Manufacturing output moved up 0.1 percent in October and was 2.4 percent above its year-earlier level. The index for durable manufacturing rose 0.5 percent, the index for nondurable manufacturing fell 0.3 percent, and the index for other manufacturing (publishing and logging) was unchanged. Within durables, increases of at least 1.5 percent were recorded by electrical equipment, appliances, and components; aerospace and miscellaneous transporation equipment; and motor vehicles and parts. Within nondurables, gains for printing and support, plastics and rubber products, and apparel and leather products were outweighed by losses elsewhere, especially for petroleum and coal products, textile and product mills, and paper.

Mining output declined 0.4 percent in October: A drop in oil and gas extraction outweighed improvements in oil and gas well drilling and in coal mining. The output for utilities fell 1.5 percent, as a decrease for electric utilities more than offset an increase for natural gas utilities.

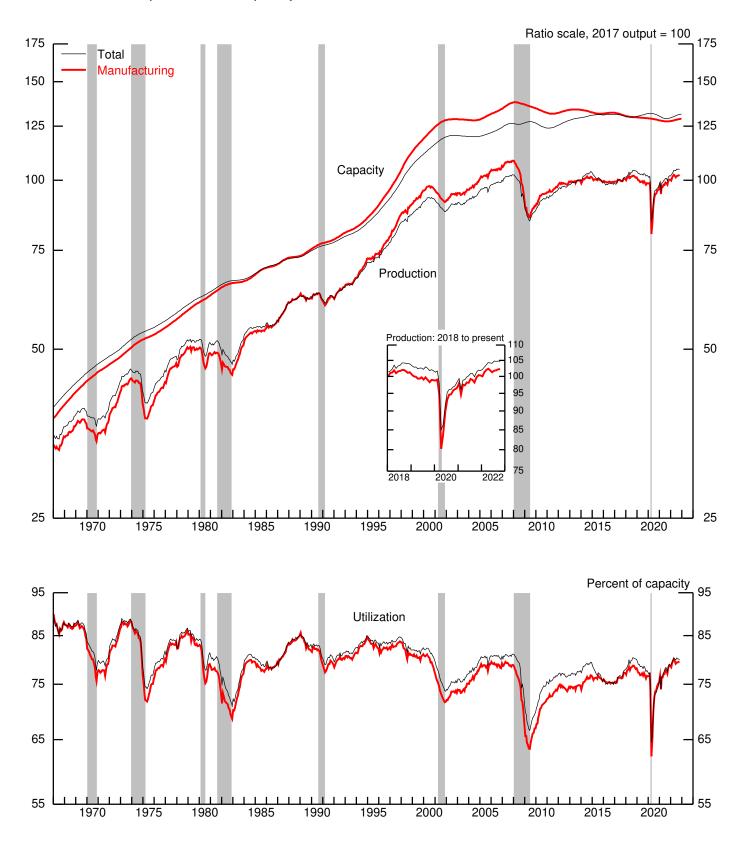
Capacity utilization for manufacturing was unchanged in October at 79.5 percent, a rate that is 1.3 percentage points above its long-run average. The operating rate for mining fell 0.5 percentage point to 88.4 percent, while the operating rate for utilities declined 1.2 percentage points to 72.1 percent. Capacity utilization for mining was 2.1 percentage points above its long-run average, but the rate for utilities remained substantially below its long-run average of 84.7 percent.

Tables

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- 2. Industrial Production: Special Aggregates and Selected Detail; percent change
- 3. Motor Vehicle Assemblies
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- 14. Historical Statistics: Manufacturing Excluding Selected High-Technology Industries
- 15. Industrial Production: Reliability Estimates

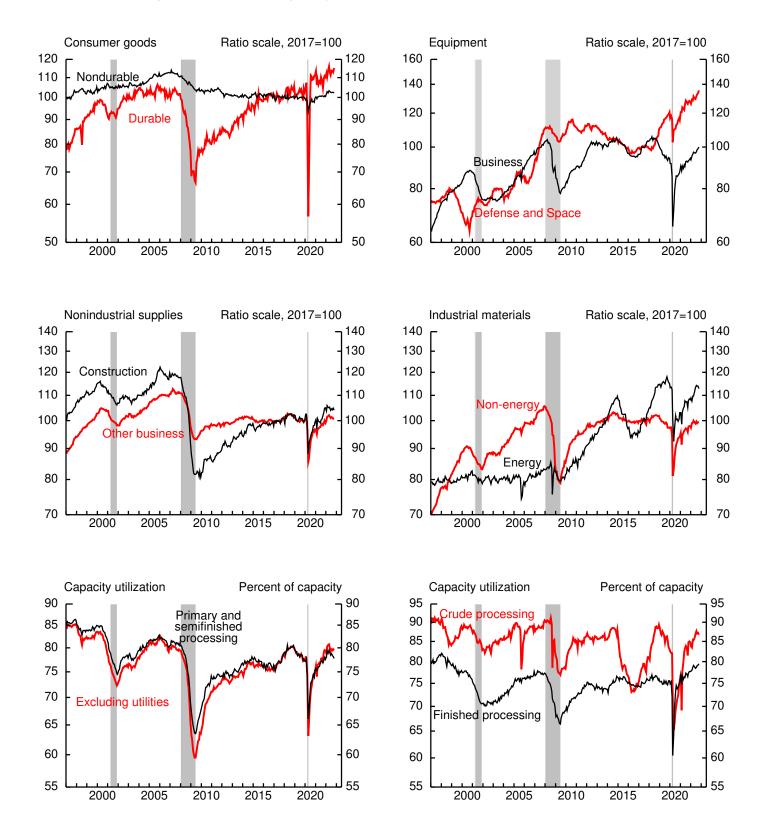
Further detail is available on the Board's website (www.federalreserve.gov/releases/G17/).

1. Industrial production, capacity, and utilization



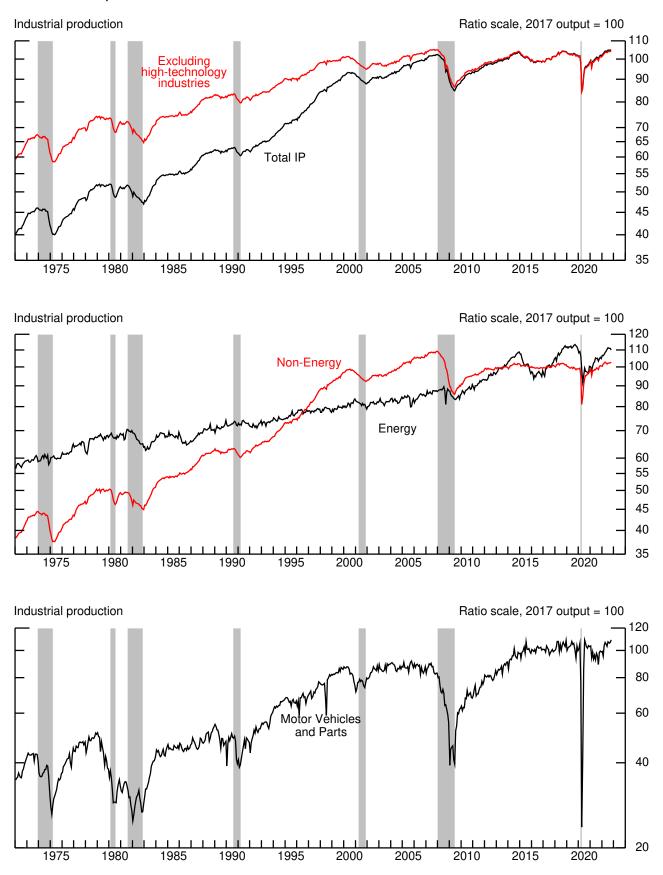
Note: The shaded areas are periods of business recession as defined by the National Bureau of Economic Research (NBER).

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 of selected 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 represent periods of business recession as defined by the NBER.

Table 1 INDUSTRIAL PRODUCTION: MARKET AND INDUSTRY GROUP SUMMARY

Percent change, seasonally adjusted

proportionjong vortionjong				1	th quart irth quar			nnual rat	te			Month	nly rate			Oct. '2
MARPT GROUPS 53.0 6.7 2.9 6.7 7.0 <	Item			2019	2020	2021	2022 Q1	Q2r	Q3 ^r	2022 May ^r	June ^r	July ^r	Aug. ^r	Sept. ^r	Oct. ^p	to Oct. '2
Find point s and main large is a point of a set of a	Total IP		100.00	-2.0	-4.4	4.5	4.7	5.1	2.2	1	1	.7	1	.1	1	3.3
Consume prode 26.88 -5.5 6 1.4 7.2 3.0 1.4 -8.8 .4 0 -1 1.2 0 Same prode 3.30 -1.1 1.26 8.5 7.4 2.20 7.5 7.8 2.00 1.01 3.01 1.01 3.01 1.01 3.01 1.01 3.01 1.01 3.01 1.01 3.01 1.01 3.01 1.01 3.01 1.01 3.01 1.01 3.01 1.01 3.01 1.01 1.01 1.0 3.01 1.01	MARKET GROUPS															
Durabi 6.18 2.1 8.2 1.4 6.2 8.2 2.3 2.4 1.4 2.3 2.4 2.4 2.3 2.4 <th2.4<< td=""><td>• •</td><td>es</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></th2.4<<>	• •	es														
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Bone electronics appella 1.4 2.2 1.4 1.2 2.7 2.7 1.8 3.5 1.1 1.4 2.3 -3 1.8 Appliance, further, carpeting 7 4.5 1.3 8.3 3.4 1.2 2.1 2.5 4.5 1.4 1.4 2.3 2.6 1.4 1.4 2.3 2.4 1.4 1.4 2.4 2.3 2.5 1.4 1.4 1.4 2.4 2.3 2.6 1.4 1.4 2.4 2.1 2.3 2.6 1.4 2.4 1.4 2.7 2.6 1.1 1.4 2.3 2.7 2.6 1.1 1.4 2.3 2.7 2.6 1.1 1.4 2.3 2.7 1.6 1.5 2.4 1.3 3.4 3.3 1.4 3.4 3.7 7.6 7.1 3.4 3.3 3.4 3.4 3.7 7.4 1.4 1.4 3.4 3.7 1.4 1.4 3.4 3.7 1.4 <td></td> <td>5.0</td>																5.0
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Clohning																
Chemical products 55.09 2.1 7.7 6.4 -3.8 4.0 3.4 1.3 2.0 -6 -5.8 1.6 4 -1.8 3.5 Energy -3.80 -7.2 -2.3 2.4 1.5 3.0 2.0 -6.8 3.6 6.8 3.7 -7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.7 7.1 7.8 3.0 7.6 8.7 7.6 8.7 7.6 8.7 7.6 8.7 7.6 8.7 7.6 8.7 7.7 7.1 8.7 7.7 7.1 8.7 7.7 7.6 8.7 7.7 7.6 7.7 7.6 8.7 7.7 </td <td></td>																
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Transit Information processing Is8 Is8 Is2 Is8 Is3 Is8 Is8 Is3 Is3 <this3< th=""> Is3<td>Energy</td><td></td><td>4.00</td><td>-4.9</td><td>-0.0</td><td>5.1</td><td>22.2</td><td>0.0</td><td>-5.4</td><td>-1.0</td><td>0</td><td>.0</td><td>0</td><td>1</td><td>-1.4</td><td>5.0</td></this3<>	Energy		4.00	-4.9	-0.0	5.1	22.2	0.0	-5.4	-1.0	0	.0	0	1	-1.4	5.0
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INDUSTRY GROUPS 74.31 -2.6 -2.6 4.2 3.7 3.1 3. -5. -6. 5 .1 2.2 1.2 2.4 Manufacturing (MACS) 31-33 72.60 -2.6 -2.6 4.2 3.7 3.5 6. -4 -6 5 .1 2.2 2.4 2.2 2.2 2.6 2.2 2.6 2.2 2.6 2.2 2.6 3.2 2.5 3.2 2.2 2.0 2.1 2.2 2.6 3.2 2.2 2.6 2.0 1.4 1.0 5.7 Pandiceting poduets 333 5.24 <td>Chemical</td> <td></td> <td>5.62</td> <td>-5.1</td> <td>.3</td> <td>6.2</td> <td>.4</td> <td>6</td> <td>2.0</td> <td>1</td> <td>6</td> <td>1.0</td> <td>.1</td> <td>3</td> <td>5</td> <td>1</td>	Chemical		5.62	-5.1	.3	6.2	.4	6	2.0	1	6	1.0	.1	3	5	1
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Manufacturing (NAICS) 31-33 72.60 -2.6 -2.6 4.5 3.7 3.5 6 -4 -6 5 1 2 2 2.7 Durable manufacturing 37.34 4.3 -3.1 5.1 5.5 5.1 1.7 -9 6 1.0 0 .3 5.5 5.4 Wood products 327 2.08 3 -1.0 -1.1 1.5 -2 -3 -6 -2.1 -2.1 -2.5 -5.5 Primary metals 331 3.28 -7.6 -4.6 7.8 -11.7 7.6 -4.4 -7.7 -6 -2.1 -2.1 -2.2 -5.7 -5 1.0 1.1 4.0 7.7 -3 -1.9 -1.5 2.0 -5 1.0 1.1 4.0 2.0 -2.4 -3 1.5 -2.2 8 -7.7 9 1 2.2 8 -7.7 9 1 2.2 1.0 3.5 1.1 1			74.21	26	26	10	27	2.1	2		6	F	1	2	1	2.4
Durable manufacturing37.344.3-3.15.15.55.11.7-9-61.0035.54.4Wood products3212.00-23.01.69.9-11.5-2-3-6-2.1-2.1-2.55.3Nonmetalite mineral products3272.08-3-1.0-1.115.6-2.14.00.12.1-1.28.1Primary metals3313.28-7.6-4.67.8+1.77.6-4.4.7-4.66-2.2-6-2.1-4.0Machinery3335.24-7.4-6.710.315.7-4.7-4-3.3-1.962.01.41.05.7Computer and electronic products3344.661.3-1.09.0-2.4-31.5-2.2.8-7.79.12.28Motor vehicles and parts3351.89-3.2-5.55.810.24.86.5-1.71.4-1.6-861.010.7Aerospace and miscellaneous336-3.799-21.91.21.01.11.12.8-3.8-7.6-1.0-1.7-5-7.71.2-51.1Miscellaneous3371.09-6.6-8.34.812.8-3.8-7.6-1.0-1.7-5-7.71.2-51.1Miscellaneous3392		21 22														
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Aerospace and miscellaneous transportation equipment $3364-9$ 3.71 4.0 -7.8 7.0 7.0 15.5 11.7 7 $.5$ 2.1 $.9$ 2 1.9 11.3 Furniture and related products 337 1.09 -6.6 -8.3 4.8 12.8 -3.8 -7.6 -1.0 -1.7 -5 7 1.2 -5 1.1 Miscellaneous 339 2.59 -5.2 -1 7.5 10.0 3.5 8.3 $.5$ $.5$ $.7$ 1.9 -1.4 $.3$ 6.5 Nondurable manufacturing Food, beverage, and tobacco products $311,4$ $.63$ -4.0 -3.6 4.8 -3.3 -10.5 -1.1 6 0 $.2$ $.1$ 3 3.1 Textile and product mills $313,4$ $.63$ -4.0 -3.6 4.8 -3.3 -10.5 -1.1 5 -5.5 -2.8 2.3 10.0 Apparel and leather $315,6$ $.19$ -1.3 -9.4 6.7 -9.3 12.5 17.4 3 5.8 1.5 -2.8 2.3 10.0 4.6 Paper 322 2.39 -1.1 -4.6 $.5$ 5.4 3.8 1.5 -2.6 -1.9 -3.2 -6.6 -8.4 Printing and support 323 1.12 -2.0 -3.1 -3.4 4.5 -3.4 -3.5 -6.6 -1.7 -1.6 -1.9 -5.6 -1.7 -1.6															2.0	10.7
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Food, beverage, and tobacco products 311,2 11.99 2.6 .7 .0 6.5 2 1.7 4 4 .1 3 .3 3 1.2 Textile and product mills 313,4 .63 -4.0 -3.6 4.8 -3.3 -10.5 -11.9 5 -3.5 .6 -1.7 2 8 -7.4 Apparel and leather 315,6 .19 -1.3 -9.4 6.7 -9.3 12.5 17.4 3 5.8 1.5 -2.8 2.3 1.0 4.6 Paper 322 2.39 -1.1 -4.6 .5 5.4 3.8 -17.4 5 6 -1.9 2 6 8 4 .4 Printing and support 323 1.12 -2.0 -8.1 3.4 -2.2 6.1 -5.6 1 1 -1.3 .9 -1.9 6 Chemicals 325 12.16 -1.5 1 5.9 9 2.9 2.6 .4 1 .0 .8 .1 1 1.6					_											
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Paper322 2.39 -1.1 -4.6 $.5$ 5.4 3.8 $-1.7.4$ 5 6 -1.9 -3.2 6 8 -4.8 Printing and support323 1.12 -2.0 -8.1 3.4 -2.2 6.1 -5.6 1 1 -1.3 $.9$ -1.9 1.9 $.4$ Petroleum and coal products 324 3.15 -4.5 -16.4 18.7 -7.3 1 4.8 1.5 -2.6 $.0$ 2.8 1.7 -1.9 6 Chemicals 325 12.16 -1.5 1 5.9 9 2.9 2.6 $.4$ 1 $.0$ $.8$ 1 1 1.6 Plastics and rubber products 326 3.63 -3.3 -1.3 2.3 5.1 5.1 1.4 3 9 1.2 1 $.0$ $.8$ 1 1 1.6 Plastics and rubber products 326 3.63 -3.3 -1.3 2.3 5.1 5.1 1.4 3 9 1.2 1 $.0$ $.3$ 3.6 Other manufacturing (non-NAICS) $1133,5111$ 1.71 -3.5 -2.9 -5.6 3.1 -11.4 -11.9 -2.6 7 -1.7 2 2 $.0$ -7.2 Wining 21 15.54 1.7 -1.80 10.9 9 15.4 13.0 11.1 1.7 1.4 2 $.7$ 4 6.9 <																
Printing and support 323 1.12 -2.0 -8.1 3.4 -2.2 6.1 1 1 1 1 9 9 1.9 .4 Petroleum and coal products 324 3.15 -4.5 -16.4 18.7 -7.3 1 4.8 1.5 -2.6 .0 2.8 1.7 -1.9 6 Chemicals 325 12.16 -1.5 1 5.9 9 2.9 2.6 .4 1 .0 .8 1 1 1.6 Plastics and rubber products 326 3.63 -3.3 -1.3 2.3 5.1 5.1 1.4 3 9 1.2 1 .0 .8 1 1 1.6 Plastics and rubber products 326 3.63 -3.3 -1.3 2.3 5.1 5.1 1.4 3 9 1.2 1 .0 .3 3.6 Other manufacturing (non-NAICS) 1133,5111 1.71 -3.5 -2.9 -5.6 3.1 -11.4 -11.9 -2.6 7 -1.																
Petroleum and coal products 324 3.15 -4.5 -16.4 18.7 -7.3 1 4.8 1.5 -2.6 .0 2.8 1.7 -1.9 6 Chemicals 325 325 12.16 -1.5 1 5.9 9 2.9 2.6 .4 1 .0 .8 1 1 1.6 Plastics and rubber products 326 3.63 -3.3 -1.3 2.3 5.1 5.1 1.4 3 9 1.2 1 .0 .8 1 1 1.6 Other manufacturing (non-NAICS) 1133,5111 1.71 -3.5 -2.9 -5.6 3.1 -11.4 -11.9 -2.6 7 -1.7 2 2 .0 .3 3.6 Other manufacturing (non-NAICS) 1133,5111 1.71 -3.5 -2.9 -5.6 3.1 -11.4 -11.9 -2.6 7 -1.7 2 2 .0 .7 Vilning 21 15.54 1.7 -1.8 10.9 9 15.4 13.0 <																
Chemicals 325 12.16 -1.5 1 5.9 9 2.9 2.6 .4 1 .0 .8 1 1 1.6 Plastics and rubber products 326 3.63 -3.3 -1.3 2.3 5.1 5.1 1.4 3 9 1.2 1 .0 .3 3.6 Other manufacturing (non-NAICS) 1133,5111 1.71 -3.5 -2.9 -5.6 3.1 -11.4 -11.9 -2.6 7 -1.7 2 2 .0 .3 3.6 Other manufacturing (non-NAICS) 1133,5111 1.71 -3.5 -2.9 -5.6 3.1 -11.4 -11.9 -2.6 7 -1.7 2 2 .0 .72 Mining 21 15.54 1.7 -18.0 10.9 9 15.4 13.0 1.1 1.7 1.4 2 .7 4 6.9 Utilities 2211,2 10.15 -1.7 -2.5 3 23.2 2.7 -3.0 .3 .3 .4 -1.3																
Plastics and rubber products 326 3.63 -3.3 -1.3 2.3 5.1 5.1 1.4 3 9 1.2 1 .0 .3 3.6 Other manufacturing (non-NAICS) 1133,5111 1.71 -3.5 -2.9 -5.6 3.1 -11.4 -11.9 -2.6 7 -1.7 2 2 .0 .72 Mining 21 15.54 1.7 -18.0 10.9 9 15.4 13.0 1.1 1.7 1.4 2 .7 2 .2 .0 .72 Wining 21 15.54 1.7 -18.0 10.9 9 15.4 13.0 1.1 1.7 1.4 2 .7 4 6.9 Utilities 2211,2 10.15 -1.7 -2.5 3 23.2 2.7 -3.0 .3 .3 .4 -1.3 -1.7 -1.5 2.5 Electric 2211 8.66 -1.2 -1.6 .4 16.4 2.1 -1.9 2.5 .0 .2 -1.2 -2.4 <td></td>																
Other manufacturing (non-NAICS) 1133,5111 1.71 -3.5 -2.9 -5.6 3.1 -11.4 -11.9 -2.6 7 -1.7 2 2 .0 -7.2 Mining 21 15.54 1.7 -18.0 10.9 9 15.4 13.0 1.1 1.7 1.4 2 .7 2 .9 6.9 Utilities 2211,2 10.15 -1.7 -2.5 3 23.2 2.7 -3.0 .3 .4 -1.3 -1.7 -1.5 2.5 Electric 2211 8.66 -1.2 -1.6 .4 16.4 2.1 -1.9 2.5 .0 .2 -1.2 -2.4 -2.4 3																
Mining 21 15.54 1.7 -18.0 10.9 9 15.4 13.0 1.1 1.7 1.4 2 .7 4 6.9 Utilities 2211,2 10.15 -1.7 -2.5 3 23.2 2.7 -3.0 .3 .4 -1.3 -1.7 -1.5 2.5 Electric 2211 8.66 -1.2 -1.6 .4 16.4 2.1 -1.9 2.5 .0 .2 -1.2 -2.4 -2.4 3	·															
Utilities 2211,2 10.15 -1.7 -2.5 3 23.2 2.7 -3.0 .3 .4 -1.3 -1.7 -1.5 2.5 Electric 2211 8.66 -1.2 -1.6 .4 16.4 2.1 -1.9 2.5 .0 .2 -1.2 -2.4 3 3		,														
Electric 2211 8.66 -1.2 -1.6 .4 16.4 2.1 -1.9 2.5 .0 .2 -1.2 -2.4 -2.43																
	Natural gas	2211	1.49	-4.7	-1.0	.4 -4.6	72.7	6.1	-1.9	-10.5	.0 1.7	.2 1.4	-1.2	-2.4	-2.4	5

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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.

Note. Under the industry groups, the figures to the right of the series descriptions are 2017 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/G17/20221116/default_sup.htm). Under market groups, in the products category, miscellaneous consumer nondurables, oil and gas well drilling, and manufactured homes are not shown separately; in the nondurable materials category, containers and miscellaneous nondurable materials are not shown separately.

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

ercent change, seasonally adjusted				rth quart			1				Maria	1			0.4.221
Iterre		2021	for	urth quar	ter		nual rat	ie	2022		Month	ly rate			Oct. '21
Item		2021 proportion	2019	2020	2021	2022 Q1	Q2 ^r	Q3 ^r	2022 May ^r	June ^r	July ^r	Aug. ^r	Sept. ^r	Oct. ^p	to Oct. '22
Total industry		100.00	-2.0	-4.4	4.5	4.7	5.1	2.2	1	1	.7	1	.1	1	3.3
Energy		26.73	2	-12.3	7.2	7.1	10.0	6.7	.9	1.1	.8	3	.0	9	5.2
Consumer products		4.80	-4.9	-8.0	3.1	22.2	6.6	-5.4	-1.6	6	.0	6	1	-1.4	3.8
Commercial products		2.46	.7	-7.7	7.0	13.0	6.1	-3.2	6	-1.5	1.3	-1.2	3	.1	3.5
Oil and gas well drilling	213111	.44	-11.5	-50.2	73.1	46.5	69.4	52.0	6.8	4.3	3.5	2.7	1.0	.8	44.8
Converted fuel		5.07	-2.5	-3.9	3.1	13.9	3.0	4.4	2.3	.8	.6	8	7	1	3.5
Primary energy		13.96	3.2	-16.5	8.8	-1.7	12.4	11.6	1.2	2.0	1.0	.0	.2	-1.2	5.0
Non-energy		73.27	-2.6	-2.0	3.8	3.8	3.2	.3	5	6	.6	.0	.2	.2	2.5
Selected high-technology industries		2.12	5.3	6.3	11.1	1.5	1.0	7.6	.1	2.1	.6	2	.0	6	2.6
Computers and peripheral equipment	3341	.23	8.9	13.7	20.8	9.3	11.2	16.2	1.3	3.2	4	1.4	2.1	.6	13.8
Communications equipment	3342	.44	2.1	6.2	14.1	-18.0	35.2	53.7	2.1	5.5	4.2	2.8	1.7	.9	17.9
Semiconductors and related															
electronic components	3344	1.45	5.9	5.1	8.6	6.9	-8.9	-5.6	7	.8	4	-1.5	-1.1	-1.4	-3.8
Excluding selected high-technology industries		71.15	-2.8	-2.2	3.6	3.9	3.3	.1	5	7	.6	.0	.2	.2	2.5
Motor vehicles and parts	3361-3	4.98	-6.0	3.9	-4.0	2.5	25.0	6.2	-1.3	-1.8	3.8	-1.1	.4	2.0	10.7
Motor vehicles	3361	2.32	-4.0	9.2	-4.0	-2.7	47.4	20.5	-1.5	-1.6	5.8 6.4	-1.1	.4	4.0	20.6
Motor vehicle parts	3363	2.32	-4.0	-2.3	-0.0	2.6	21.4	10.3	-1.3	-1.0	3.3	8	1.1	4.0	10.5
Excluding motor vehicles and parts		66.18	-2.5	-2.8	4.3	4.0	1.8	3	4	6	.3	.1	.2	.1	1.9
Consumer goods		19.14	.6	.4	2.6	3.4	-1.0	-1.1	6	6	.1	.3	.1	.0	.9
Business equipment		7.21	-8.5	-7.8	7.7	11.0	7.3	4.3	2	2	.3	1.2	.4	1.1	8.1
Construction supplies		5.19	-2.1	-1.2	5.9	2.2	-1.0	8	.2	-1.1	.6	3	.5	7	.7
Business supplies Materials		7.19 25.27	-2.9 -4.1	-2.7 -4.0	1.6 4.6	4.9 2.7	1.1 2.6	-1.7 -1.0	4 5	5 6	.0 .5	.2 5	4 .3	.1 1	1.1 1.1
Measures excluding selected high-technology industries															
Total industry		97.88	-2.2	-4.7	4.3	4.8	5.2	2.1	1	1	.7	1	.1	1	3.3
Manufacturing ¹		72.19	-2.9	-2.8	4.0	3.7	3.2	.1	5	7	.5	.1	.2	.2	2.4
Durable		35.40	-4.8	-3.6	4.7	5.9	5.3	1.6	9	7	1.1	.0	.3	.6	4.5
Measures excluding motor vehicles and parts															
Total industry		95.02	-1.7	-5.0	5.1	4.8	4.2	2.0	.0	.0	.5	.0	.1	2	2.9
Manufacturing ¹		69.33	-2.3	-3.1	5.0	3.8	1.7	1	4	5	.2	.2	.2	.0	1.9
Durable		32.54	-3.9	-4.3	6.8	6.2	2.2	1.3	8	4	.6	.2	.3	.3	3.5
Measures excluding selected high-technology industries and motor vehicles and parts															
		02.00	-1.9	-5.2	4.9	4.9	12	1.9	.0	.0	5	.0	1	2	2.9
Total industry Manufacturing ¹		92.90 67.21	-1.9	-3.2	4.9	3.8	4.3 1.7	4	4	.0 6	.5 .2	.0	.1 .2	2 .0	1.8
Stage-of-process components of non-energy materials,															
measures of the input to		9.17	-5.6	-6.2	5.3	3.5	4.5	-1.2	-1.3	6	.5	2	.4	.4	2.6
Finished processors															
Finished processors Primary and semifinished processors		18.56	-3.6	-2.2	3.8	2.6	3.0	-1.2	-1.3	4	.8	7	.3	3	1.3

r Revised. p Preliminary. 1. The composition of manufacturing is specified in a note for the summary table.

Table 3 MOTOR VEHICLE ASSEMBLIES

Millions of units, seasonally adjusted annual rate

withous of units, seasonarry adjusted annual rate	2021	2021	2022			2022					
Item	-	Q4	Q1	Q2	Q3	May	June	July	Ang	Sant	Oct.
itelli	average	Q4	QI	Q2	Q3	Iviay	Julie	July	Aug.	Sept.	001.
Total	9.16	9.23	9.19	10.36	10.63	10.31	10.31	10.44	10.74	10.71	11.07
Autos	1.56	1.54	1.62	1.79	1.86	1.75	1.83	1.83	1.91	1.85	1.84
Trucks	7.59	7.69	7.56	8.56	8.77	8.56	8.48	8.62	8.83	8.86	9.23
Light	7.31	7.37	7.28	8.24	8.43	8.25	8.15	8.29	8.52	8.49	8.89
Medium and heavy	.29	.32	.28	.32	.34	.32	.32	.33	.31	.37	.34
Memo											
Autos and light trucks	8.87	8.90	8.91	10.04	10.29	10.00	9.99	10.11	10.43	10.34	10.73

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 2017 = 100, seasonally adjusted

017 = 100, seasonally adjusted											
Item		2021 proportion	2022 Feb.	Mar.	Apr.	May ^r	June ^r	July ^r	Aug. ^r	Sept. ^r	Oct. ^p
Total IP		100.00	102.9	103.6	104.3	104.2	104.1	104.8	104.7	104.8	104.7
MARKET GROUPS											
Final products and nonindustrial supplies		53.24	103.4	103.7	104.7	104.2	103.6	104.1	104.3	104.4	104.6
Consumer goods		26.88	103.4	103.7	104.7	104.2	103.0	104.1	104.9	104.4	104.0
Durable		6.18	110.3	113.5	116.0	113.3	111.4	113.8	113.6	112.9	115.2
Automotive products		3.39	108.2	116.3	119.7	118.9	116.5	120.9	119.5	117.9	121.5
Home electronics		.14	167.9	168.2	172.0	173.4	183.0	185.1	187.7	188.3	187.8
Appliances, furniture, carpeting		.97	105.8	98.9	104.0	91.6	87.9	86.2	90.3	92.2	93.8
Miscellaneous goods		1.68	112.4	112.4	111.4	110.8	110.4	111.5	110.8	110.2	110.4
Nondurable		20.70	102.8	102.2	103.3	103.0	102.5	102.4	102.5	102.6	102.1
Non-energy		15.90	102.5	103.0	102.9	103.0	102.6	102.5	102.8	103.0	102.9
Foods and tobacco		9.47	102.4	102.8	102.7	102.3	101.8	101.9	101.6	101.6	101.5
Clothing		.18	89.4	90.3	89.8	89.6	95.0	96.1	93.5	96.0	97.2
Chemical products		5.09	106.5	107.3	107.6	108.9	108.5	108.0	109.6	110.1	110.0
Paper products		.78	80.9	81.5	79.9	78.3	77.8	76.4	76.0	76.3	76.0
Energy		4.80	103.1	99.0	103.6	101.9	101.3	101.3	100.7	100.6	99.2
Business equipment		8.41	95.3	96.4	97.3	97.0	96.8	97.4	98.4	99.2	100.0
Transit		1.79	66.3	69.2	71.3	71.1	70.3	71.7	71.7	72.6	73.3
Information processing		1.82	112.4	111.8	112.7	112.8	113.4	112.5	114.5	115.3	116.4
Industrial and other		4.80 2.14	105.3 128.9	106.0 128.4	106.2 131.2	105.8 129.8	105.6 129.4	106.3 131.4	107.6 132.6	108.3 133.4	109.0 135.5
Defense and space equipment		2.14	128.9	128.4	131.2	129.8	129.4	131.4	132.0	155.4	155.5
Construction supplies		5.20	105.8	105.2	105.0	105.1	104.0	104.5	104.2	104.8	104.1
Business supplies		10.09	101.4	101.7	102.1	101.6	101.0	101.3	101.1	100.7	100.7
Materials		46.76	102.3	103.4	103.7	104.0	104.5	105.3	104.9	105.1	104.7
Non-energy		27.72	99.0	99.3	99.9	99.3	98.9	99.6	99.0	99.4	99.3
Durable		16.66	97.5	98.0	99.2	98.3	97.8	99.0	98.5	99.1	99.4
Consumer parts		2.69	85.9	88.1	90.7	88.3	87.0	89.1	89.0	90.9	91.1
Equipment parts		4.53	103.3	103.8	104.3	103.2	102.8	103.1	104.2	104.1	105.2
Other		9.44	98.4	98.3	99.3	99.1	98.7	100.0	98.8	99.3	99.2
Nondurable		11.07	101.2	101.3	101.2	100.9	100.6	100.5	99.8	99.8	99.3
Textile Paper		.36 1.59	93.2 93.3	91.0 92.9	92.2 94.6	91.0 94.5	90.0 94.7	90.1 92.9	87.7 90.0	88.5 89.0	86.7 88.6
Chemical		5.62	100.3	100.7	100.1	100.0	94.7	100.4	100.5	100.1	99.6
Energy		19.03	100.3	100.7	100.1	111.3	113.2	114.2	114.0	114.0	112.9
INDUSTRY GROUPS Manufacturing		74.31	101.2	102.0	102.4	101.9	101.3	101.8	101.9	102.1	102.3
Manufacturing (NAICS)	31-33	72.60	101.7	102.4	102.9	102.5	101.9	102.4	102.5	102.8	102.9
Durable manufacturing		37.34	102.3	103.1	104.2	103.3	102.7	103.7	103.7	104.1	104.7
Wood products	321	2.00	104.8	105.9	103.9	103.8	103.4	102.8	100.6	98.5	96.0
Nonmetallic mineral products	327	2.08	104.7	103.7	102.1	103.7	104.0	104.0	104.1	106.4	105.1
Primary metals	331	3.28	97.0	95.4	97.1	97.8	97.4	97.9	95.8	95.3	95.1
Fabricated metal products	332	5.83	100.3	100.7	101.3	100.3	98.8	100.8	100.3	101.3	101.4
Machinery	333	5.24	105.7	104.8	106.9	103.3	101.3	101.9	104.0	105.4	106.5
Computer and electronic products											
	334	4.66	115.3	115.1	114.7	114.5	115.4	114.6	115.6	115.7	116.0
Electrical equip., appliances,									115.6	115.7	116.0
Electrical equip., appliances, and components	335	1.89	107.9	108.4	109.3	107.4	108.9	107.1	115.6	115.7 106.9	116.0 109.0
Electrical equip., appliances, and components Motor vehicles and parts									115.6	115.7	116.0
Electrical equip., appliances, and components Motor vehicles and parts Aerospace and miscellaneous	335 3361–3	1.89 4.98	107.9 95.3	108.4 103.9	109.3 106.8	107.4 105.3	108.9 103.4	107.1 107.4	115.6 106.2 106.2	115.7 106.9 106.7	116.0 109.0 108.9
Electrical equip., appliances, and components Motor vehicles and parts Aerospace and miscellaneous transportation equipment	335 3361–3 3364–9	1.89 4.98 3.71	107.9 95.3 92.9	108.4 103.9 92.9	109.3 106.8 96.0	107.4 105.3 95.3	108.9 103.4 95.8	107.1 107.4 97.8	115.6 106.2 106.2 98.7	115.7 106.9 106.7 98.5	116.0 109.0 108.9 100.4
Electrical equip., appliances, and components Motor vehicles and parts Aerospace and miscellaneous	335 3361–3	1.89 4.98	107.9 95.3	108.4 103.9	109.3 106.8	107.4 105.3	108.9 103.4	107.1 107.4	115.6 106.2 106.2	115.7 106.9 106.7	116.0 109.0 108.9
Electrical equip., appliances, and components Motor vehicles and parts Aerospace and miscellaneous transportation equipment Furniture and related products Miscellaneous	335 3361–3 3364–9 337	1.89 4.98 3.71 1.09 2.59	107.9 95.3 92.9 94.5 108.7	108.4 103.9 92.9 93.3 108.7	109.3 106.8 96.0 92.9 108.8	107.4 105.3 95.3 92.0 109.3	108.9 103.4 95.8 90.4 109.8	107.1 107.4 97.8 90.0 110.6	115.6 106.2 106.2 98.7 89.4 112.7	115.7 106.9 106.7 98.5 90.5 111.2	116.0 109.0 108.9 100.4 90.0 111.6
Electrical equip., appliances, and components Motor vehicles and parts Aerospace and miscellaneous transportation equipment Furniture and related products Miscellaneous Nondurable manufacturing	335 3361-3 3364-9 337 339	1.89 4.98 3.71 1.09 2.59 35.26	107.9 95.3 92.9 94.5 108.7 101.1	108.4 103.9 92.9 93.3 108.7 101.7	109.3 106.8 96.0 92.9 108.8 101.5	107.4 105.3 95.3 92.0 109.3 101.6	108.9 103.4 95.8 90.4 109.8 101.0	107.1 107.4 97.8 90.0 110.6 101.0	115.6 106.2 106.2 98.7 89.4 112.7 101.2	115.7 106.9 106.7 98.5 90.5 111.2 101.3	116.0 109.0 108.9 100.4 90.0 111.6 101.1
Electrical equip., appliances, and components Motor vehicles and parts Aerospace and miscellaneous transportation equipment Furniture and related products Miscellaneous Nondurable manufacturing Food, beverage, and tobacco products	335 3361-3 3364-9 337 339 311,2	1.89 4.98 3.71 1.09 2.59 35.26 11.99	107.9 95.3 92.9 94.5 108.7 101.1 103.6	108.4 103.9 92.9 93.3 108.7 101.7 103.9	109.3 106.8 96.0 92.9 108.8 101.5 103.8	107.4 105.3 95.3 92.0 109.3 101.6 103.3	108.9 103.4 95.8 90.4 109.8 101.0 102.9	107.1 107.4 97.8 90.0 110.6 101.0 103.0	115.6 106.2 106.2 98.7 89.4 112.7 101.2 102.7	115.7 106.9 106.7 98.5 90.5 111.2 101.3 103.0	116.0 109.0 108.9 100.4 90.0 111.6 101.1 102.7
Electrical equip., appliances, and components Motor vehicles and parts Aerospace and miscellaneous transportation equipment Furniture and related products Miscellaneous Nondurable manufacturing Food, beverage, and tobacco products Textile and product mills	335 3361-3 3364-9 337 339 311,2 313,4	1.89 4.98 3.71 1.09 2.59 35.26 11.99 .63	107.9 95.3 92.9 94.5 108.7 101.1 103.6 96.2	108.4 103.9 92.9 93.3 108.7 101.7 103.9 93.7	109.3 106.8 96.0 92.9 108.8 101.5 103.8 93.6	107.4 105.3 95.3 92.0 109.3 101.6 103.3 93.1	108.9 103.4 95.8 90.4 109.8 101.0 102.9 89.9	107.1 107.4 97.8 90.0 110.6 101.0 103.0 90.4	115.6 106.2 106.2 98.7 89.4 112.7 101.2 102.7 88.9	115.7 106.9 106.7 98.5 90.5 111.2 101.3 103.0 88.7	116.0 109.0 108.9 100.4 90.0 111.6 101.1 102.7 88.0
Electrical equip., appliances, and components Motor vehicles and parts Aerospace and miscellaneous transportation equipment Furniture and related products Miscellaneous Nondurable manufacturing Food, beverage, and tobacco products Textile and product mills Apparel and leather	335 3361–3 3364–9 337 339 311,2 313,4 315,6	1.89 4.98 3.71 1.09 2.59 35.26 11.99 .63 .19	107.9 95.3 92.9 94.5 108.7 101.1 103.6 96.2 89.8	108.4 103.9 92.9 93.3 108.7 101.7 103.9 93.7 91.0	109.3 106.8 96.0 92.9 108.8 101.5 103.8 93.6 90.6	107.4 105.3 95.3 92.0 109.3 101.6 103.3 93.1 90.4	108.9 103.4 95.8 90.4 109.8 101.0 102.9 89.9 95.6	107.1 107.4 97.8 90.0 110.6 101.0 103.0 90.4 97.1	115.6 106.2 106.2 98.7 89.4 112.7 101.2 102.7 88.9 94.4	115.7 106.9 106.7 98.5 90.5 111.2 101.3 103.0 88.7 96.5	116.0 109.0 108.9 100.4 90.0 111.6 101.1 102.7 88.0 97.5
Electrical equip., appliances, and components Motor vehicles and parts Aerospace and miscellaneous transportation equipment Furniture and related products Miscellaneous Nondurable manufacturing Food, beverage, and tobacco products Textile and product mills Apparel and leather Paper	335 3361–3 3364–9 337 339 311,2 313,4 315,6 322	1.89 4.98 3.71 1.09 2.59 35.26 11.99 .63 .19 2.39	107.9 95.3 92.9 94.5 108.7 101.1 103.6 96.2 89.8 97.1	108.4 103.9 92.9 93.3 108.7 101.7 103.9 93.7 91.0 97.3	109.3 106.8 96.0 92.9 108.8 101.5 103.8 93.6 90.6 97.8	107.4 105.3 95.3 92.0 109.3 101.6 103.3 93.1 90.4 97.4	108.9 103.4 95.8 90.4 109.8 101.0 102.9 89.9 95.6 96.8	107.1 107.4 97.8 90.0 110.6 101.0 103.0 90.4	115.6 106.2 106.2 98.7 89.4 112.7 101.2 102.7 88.9 94.4 92.0	115.7 106.9 106.7 98.5 90.5 111.2 101.3 103.0 88.7 96.5 91.4	116.0 109.0 108.9 100.4 90.0 111.6 101.1 102.7 88.0 97.5 90.7
Electrical equip., appliances, and components Motor vehicles and parts Aerospace and miscellaneous transportation equipment Furniture and related products Miscellaneous Nondurable manufacturing Food, beverage, and tobacco products Textile and product mills Apparel and leather	335 3361–3 3364–9 337 339 311,2 313,4 315,6	1.89 4.98 3.71 1.09 2.59 35.26 11.99 .63 .19	107.9 95.3 92.9 94.5 108.7 101.1 103.6 96.2 89.8	108.4 103.9 92.9 93.3 108.7 101.7 103.9 93.7 91.0	109.3 106.8 96.0 92.9 108.8 101.5 103.8 93.6 90.6	107.4 105.3 95.3 92.0 109.3 101.6 103.3 93.1 90.4	108.9 103.4 95.8 90.4 109.8 101.0 102.9 89.9 95.6	107.1 107.4 97.8 90.0 110.6 101.0 103.0 90.4 97.1 95.0	115.6 106.2 106.2 98.7 89.4 112.7 101.2 102.7 88.9 94.4	115.7 106.9 106.7 98.5 90.5 111.2 101.3 103.0 88.7 96.5	116.0 109.0 108.9 100.4 90.0 111.6 101.1 102.7 88.0 97.5
Electrical equip., appliances, and components Motor vehicles and parts Aerospace and miscellaneous transportation equipment Furniture and related products Miscellaneous Nondurable manufacturing Food, beverage, and tobacco products Textile and product mills Apparel and leather Paper Printing and support	335 3361-3 3364-9 337 339 311,2 313,4 315,6 322 323	1.89 4.98 3.71 1.09 2.59 35.26 11.99 .63 .19 2.39 1.12	107.9 95.3 92.9 94.5 108.7 101.1 103.6 96.2 89.8 97.1 92.4	108.4 103.9 92.9 93.3 108.7 101.7 103.9 93.7 91.0 97.3 92.5	109.3 106.8 96.0 92.9 108.8 101.5 103.8 93.6 90.6 97.8 92.9	107.4 105.3 95.3 92.0 109.3 101.6 103.3 93.1 90.4 97.4 92.9	108.9 103.4 95.8 90.4 109.8 101.0 102.9 89.9 95.6 96.8 92.8	107.1 107.4 97.8 90.0 110.6 101.0 103.0 90.4 97.1 95.0 91.6	115.6 106.2 106.2 98.7 89.4 112.7 101.2 102.7 88.9 94.4 92.0 92.4	115.7 106.9 106.7 98.5 90.5 111.2 101.3 103.0 88.7 96.5 91.4 90.6	116.0 109.0 108.9 100.4 90.0 111.6 101.1 102.7 88.0 97.5 90.7 92.3
Electrical equip., appliances, and components Motor vehicles and parts Aerospace and miscellaneous transportation equipment Furniture and related products Miscellaneous Nondurable manufacturing Food, beverage, and tobacco products Textile and product mills Apparel and leather Paper Printing and support Petroleum and coal products	335 3361-3 3364-9 337 339 311,2 313,4 315,6 322 323 324	1.89 4.98 3.71 1.09 2.59 35.26 11.99 .63 .19 2.39 1.12 3.15	107.9 95.3 92.9 94.5 108.7 101.1 103.6 96.2 89.8 97.1 92.4 94.4	108.4 103.9 92.9 93.3 108.7 101.7 103.9 93.7 91.0 97.3 92.5 95.5	109.3 106.8 96.0 92.9 108.8 101.5 103.8 93.6 90.6 97.8 92.9 94.1	107.4 105.3 95.3 92.0 109.3 101.6 103.3 93.1 90.4 97.4 92.9 95.5	108.9 103.4 95.8 90.4 109.8 101.0 102.9 89.9 95.6 96.8 92.8 93.0	107.1 107.4 97.8 90.0 110.6 101.0 103.0 90.4 97.1 95.0 91.6 93.0	115.6 106.2 106.2 98.7 89.4 112.7 101.2 102.7 88.9 94.4 92.0 92.4 95.6	115.7 106.9 106.7 98.5 90.5 111.2 101.3 103.0 88.7 96.5 91.4 90.6 97.2	116.0 109.0 108.9 100.4 90.0 111.6 101.1 102.7 88.0 97.5 90.7 92.3 95.4
Electrical equip., appliances, and components Motor vehicles and parts Aerospace and miscellaneous transportation equipment Furniture and related products Miscellaneous Nondurable manufacturing Food, beverage, and tobacco products Textile and product mills Apparel and leather Paper Printing and support Petroleum and coal products Chemicals	335 3361-3 3364-9 337 339 311.2 313,4 315,6 322 323 324 325	1.89 4.98 3.71 1.09 2.59 35.26 11.99 .63 .19 2.39 1.12 3.15 12.16	107.9 95.3 92.9 94.5 108.7 101.1 103.6 96.2 89.8 97.1 92.4 94.4 102.2	108.4 103.9 92.9 93.3 108.7 101.7 103.9 93.7 91.0 97.3 92.5 95.5 103.1	109.3 106.8 96.0 92.9 108.8 101.5 103.8 93.6 90.6 97.8 92.9 94.1 102.9	107.4 105.3 95.3 92.0 109.3 101.6 103.3 93.1 90.4 97.4 92.9 95.5 103.3	108.9 103.4 95.8 90.4 109.8 101.0 102.9 89.9 95.6 96.8 92.8 93.0 103.2	107.1 107.4 97.8 90.0 110.6 101.0 103.0 90.4 97.1 95.0 91.6 93.0 103.3	115.6 106.2 106.2 98.7 89.4 112.7 101.2 102.7 88.9 94.4 92.0 92.4 95.6 104.1	115.7 106.9 106.7 98.5 90.5 111.2 101.3 103.0 88.7 96.5 91.4 90.6 97.2 104.0	116.0 109.0 108.9 100.4 90.0 111.6 101.1 102.7 88.0 97.5 90.7 92.3 95.4 103.9
Electrical equip., appliances, and components Motor vehicles and parts Aerospace and miscellaneous transportation equipment Furniture and related products Miscellaneous Nondurable manufacturing Food, beverage, and tobacco products Textile and product mills Apparel and leather Paper Printing and support Petroleum and coal products Chemicals Plastics and rubber products Other manufacturing (non-NAICS)	335 3361–3 3364–9 337 339 311,2 313,4 315,6 322 323 324 325 326 1133,5111	1.89 4.98 3.71 1.09 2.59 35.26 11.99 .63 .19 2.39 1.12 3.15 12.16 3.63 1.71	107.9 95.3 92.9 94.5 108.7 101.1 103.6 96.2 89.8 97.1 92.4 94.4 102.2 103.6 84.4	108.4 103.9 92.9 93.3 108.7 101.7 103.9 93.7 91.0 97.3 92.5 95.5 103.1 103.8 86.7	109.3 106.8 96.0 92.9 108.8 101.5 103.8 93.6 90.6 97.8 92.9 94.1 102.9 104.4 83.8	107.4 105.3 95.3 92.0 109.3 101.6 103.3 93.1 90.4 97.4 92.9 95.5 103.3 104.1 81.6	108.9 103.4 95.8 90.4 109.8 101.0 102.9 89.9 95.6 96.8 92.8 93.0 103.2 103.1 81.1	107.1 107.4 97.8 90.0 110.6 101.0 103.0 90.4 97.1 95.0 91.6 93.0 103.3 104.3 79.7	115.6 106.2 106.2 98.7 89.4 112.7 101.2 102.7 88.9 94.4 92.0 92.4 95.6 104.1 104.2 79.6	115.7 106.9 106.7 98.5 90.5 111.2 101.3 103.0 88.7 96.5 91.4 90.6 97.2 104.0 104.2 79.5	116.0 109.0 108.9 100.4 90.0 111.6 101.1 102.7 88.0 97.5 90.7 92.3 95.4 103.9 104.5 79.5
Electrical equip., appliances, and components Motor vehicles and parts Aerospace and miscellaneous transportation equipment Furniture and related products Miscellaneous Nondurable manufacturing Food, beverage, and tobacco products Textile and product mills Apparel and leather Paper Printing and support Petroleum and coal products Chemicals Plastics and rubber products Other manufacturing (non-NAICS)	335 3361–3 3364–9 337 339 311,2 313,4 315,6 322 323 324 325 326 1133,5111 21	1.89 4.98 $3.71 1.09 2.59 35.26 11.99 .63 .19 2.39 1.12 3.15 12.16 3.63 1.71 15.54 $	107.9 95.3 92.9 94.5 108.7 101.1 103.6 96.2 89.8 97.1 92.4 94.4 102.2 103.6 84.4 108.5	108.4 103.9 92.9 93.3 108.7 101.7 103.9 93.7 91.0 97.3 92.5 95.5 103.1 103.8 86.7 111.9	109.3 106.8 96.0 92.9 108.8 101.5 103.8 93.6 90.6 97.8 92.9 94.1 102.9 104.4 83.8 112.3	107.4 105.3 95.3 92.0 109.3 101.6 103.3 93.1 90.4 97.4 92.9 95.5 103.3 104.1 81.6 113.6	108.9 103.4 95.8 90.4 109.8 101.0 102.9 89.9 95.6 96.8 92.8 93.0 103.2 103.1 81.1 115.6	107.1 107.4 97.8 90.0 110.6 101.0 103.0 90.4 97.1 95.0 91.6 93.0 103.3 104.3 79.7 117.2	115.6 106.2 106.2 98.7 89.4 112.7 101.2 102.7 88.9 94.4 92.0 92.4 95.6 104.1 104.2 79.6 117.0	115.7 106.9 106.7 98.5 90.5 111.2 101.3 103.0 88.7 96.5 91.4 90.6 97.2 104.0 104.2 79.5 117.9	116.0 109.0 108.9 100.4 90.0 111.6 101.1 102.7 88.0 97.5 90.7 92.3 95.4 103.9 104.5 79.5 117.4
Electrical equip., appliances, and components Motor vehicles and parts Aerospace and miscellaneous transportation equipment Furniture and related products Miscellaneous Nondurable manufacturing Food, beverage, and tobacco products Textile and product mills Apparel and leather Paper Printing and support Petroleum and coal products Chemicals Plastics and rubber products Other manufacturing (non-NAICS)	335 3361–3 3364–9 337 339 311,2 313,4 315,6 322 323 324 325 326 1133,5111	1.89 4.98 3.71 1.09 2.59 35.26 11.99 .63 .19 2.39 1.12 3.15 12.16 3.63 1.71	107.9 95.3 92.9 94.5 108.7 101.1 103.6 96.2 89.8 97.1 92.4 94.4 102.2 103.6 84.4	108.4 103.9 92.9 93.3 108.7 101.7 103.9 93.7 91.0 97.3 92.5 95.5 103.1 103.8 86.7	109.3 106.8 96.0 92.9 108.8 101.5 103.8 93.6 90.6 97.8 92.9 94.1 102.9 104.4 83.8	107.4 105.3 95.3 92.0 109.3 101.6 103.3 93.1 90.4 97.4 92.9 95.5 103.3 104.1 81.6	108.9 103.4 95.8 90.4 109.8 101.0 102.9 89.9 95.6 96.8 92.8 93.0 103.2 103.1 81.1	107.1 107.4 97.8 90.0 110.6 101.0 103.0 90.4 97.1 95.0 91.6 93.0 103.3 104.3 79.7	115.6 106.2 106.2 98.7 89.4 112.7 101.2 102.7 88.9 94.4 92.0 92.4 95.6 104.1 104.2 79.6	115.7 106.9 106.7 98.5 90.5 111.2 101.3 103.0 88.7 96.5 91.4 90.6 97.2 104.0 104.2 79.5	116.0 109.0 108.9 100.4 90.0 111.6 101.1 102.7 88.0 97.5 90.7 92.3 95.4 103.9 104.5 79.5

r Revised. p Preliminary. Note. Refer to the notes for table 1.

Table 5 INDUSTRIAL PRODUCTION INDEXES: SPECIAL AGGREGATES 2017 = 100, seasonally adjusted

2021 2022 Oct.^p Item proportion Feb Mar. Apr. May June July^r Aug." Sept." **Total industry** 100.00 102.9 103.6 104.3 104.2 104.1 104.8 104.7 104.8 104.7 106.4 107.2 108.3 109.2 110.0 Energy 2673 110.4 1113 1110 1110 Consumer products 4.80 103.1 99.0 103.6 101.9 101.3 101.3 100.7 100.6 99.2 Commercial products 2.46 106.2 105.8 109.0 108.4 106.8 108.2 106.9 106.5 106.6 149.0 Oil and gas well drilling 213111 .44 115.2 120.2 124.6 133.1 138.8 143.7 147.6 150.2 109.6 108.5 Converted fuel 5.07 106.6 105.8 106.4108.8 110.3 109.4 108.6 Primary energy 13.96 107.9 111.0 110.7 112.0 114.3 115.4 115.4 115.6 114.273.27 101.5 102.2 102.7 102.2 101.6 102.2 102.2 102.4 102.6 Non-energy 137.3 139.9 Selected high-technology industries 2.12 138.4 1393 1374 140.3 141 1 140.8 140.8 3341 194 9 193 5 192.9 1954 200.9 2037 208.1 209.4Computers and peripheral equipment 23 2017 Communications equipment 3342 .44 142.1 145.2 151.2 154.4 162.8 169.7 174.4 177.4 179.0 Semiconductors and related electronic components 3344 1.45 128.8 129.3 125.2 124.3 125.3 124.8 122.9 121.6 120.0 Excluding selected high-technology industries 71.15 100.5 101.1 101.7 101.2 100.6 101.1 101.1 101.3 101.6 Motor vehicles and parts 3361-3 4.98 95.3 103.9 106.8 105.3 103.4 107.4 106.2 106.7 108.9 2.32 119.1 123.9 Motor vehicles 3361 96.6 110.8114.4114.1112.3119.5 118.5 3363 98.2 Motor vehicle parts 2.0788.6 93.8 96.6 95.3 951 97.3 98.4 99.2 Excluding motor vehicles and parts 66.18 100.9 101.0 101.4 100.9 100.4 100.7 100.8 101.0 101.1 19.14 103.4 102.5 102.6 102.9 103.1 Consumer goods 103.5 103.8 103.2 103.1 934 971 Business equipment 7.21 93.8 94 6 944 943 94.6 957 96.1 Construction supplies 5.19 105.7 105.1 104.8 105.0 103.8 104.4 104.0 104.6 103.9 Business supplies 7.19 98.4 98.9 98.5 98.2 97.7 97.7 97.9 97.5 97.6 25.27 99.1 99.0 98.6 99.1 98.8 Materials 99.6 99.1 98.6 98.9 Measures excluding selected high-technology industries Total industry 97.88 102.2 102.8 103.6 103.5 103.3 104.0 103.9 104.0 103.9 Manufacturing 72.19 100.2 101.0 101.4 100.9 100.2 100.7 100.8 101.1 101.2 Durable 35.40 100.3 101.2 102.4 101.4 100.7 101.8 101.8 102.1 102.7 Measures excluding motor vehicles and parts 95.02 103.4 103.6 104.2 104.2 104.2 104.7 104.6 104.8 104.5 Total industry Manufacturing 69.33 101.7 101.9 102.1 101.7 101.2 101.4 101.6 101.8 101.8 Durable 32.54 103.5 103.2 103.9 103.1 102.7 103.3 103.5 103.8 104.1 Measures excluding selected high-technology industries and motor vehicles and parts 92.90 102.6 102.8 103.4 103.9 103.8 104.0 103.4 103.4 103.7 Total industry 100.6 Manufacturing 67.21 100.8 101.0 100.6 100.0 100.2 100.4 100.7 100.7 Stage-of-process components of non-energy materials, measures of the input to Finished processors 9.17 96.0 96.7 98.1 96.8 96.2 96.7 96.6 97.0 97.4 101.2 100.5 Primary and semifinished processors 18.56 100.7 100.8 101.1 100.9 100.4 100.5 100.8

r Revised. p Preliminary.

1. The composition of manufacturing is specified in a note for the summary table.

Table 6 DIFFUSION INDEXES OF INDUSTRIAL PRODUCTION

Percent												
Item	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
One month earlier												
2020	57.1	56.1	28.0	12.5	58.4	73.6	72.6	67.2	57.8	64.5	60.8	57.8
2021	65.2	30.4	76.0	51.0	60.5	53.7	59.8	54.1	50.7	69.6	59.8	47.6
2022	47.3	66.6	57.4	57.3	43.9	51.4	60.5	41.2	56.1			
Three months earlier												
2020	59.5	55.7	33.1	13.2	11.1	26.7	75.7	82.8	80.4	73.0	63.5	63.9
2021	68.2	48.0	63.9	52.4	69.3	54.1	61.1	58.8	56.4	61.8	67.2	65.2
2022	52.7	61.5	70.3	71.3	54.4	54.7	51.7	52.4	57.1			
Six months earlier												
2020	50.7	50.0	31.4	15.2	15.5	20.9	30.1	32.1	48.3	80.4	86.5	83.1
2021	76.0	57.1	69.9	63.5	63.5	61.8	54.4	69.3	55.1	63.9	65.2	65.9
2022	58.4	65.2	72.6	68.9	63.9	62.5	62.8	53.0	56.1			
	1											

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		2021	2021	95	2009	2022			2022					
		proportion	ave.	high	low	Q1	Q2 ^r	Q3 ^r	May ^r	June ^r	July ^r	Aug. ^r	Sept. ^r	Oct
Fotal industry		100.00	79.6	85.0	66.6	79.4	80.0	80.1	80.0	79.8	80.2	80.0	80.1	79.
Manufacturing ¹		76.08	78.2	84.7	63.4	79.1	79.5	79.4	79.6	79.0	79.3	79.3	79.5	79.
Manufacturing (NAICS)	31-33	74.16	78.1	84.8	63.3	79.2	79.6	79.5	79.7	79.1	79.5	79.5	79.6	79.
Durable manufacturing		39.49	76.8	83.8	58.1	77.3	78.0	78.0	77.9	77.4	78.0	77.9	78.1	78.
Wood products	321	1.88	76.7	86.6	48.3	82.8	82.2	79.6	82.3	81.9	81.4	79.6	77.9	75.
Nonmetallic mineral products	327	2.19	73.4	82.4	43.8	80.0	80.1	80.9	80.4	80.6	80.4	80.4	82.0	80
Primary metals	331	3.43	77.9	95.2	49.4	73.1	74.3	73.1	74.6	74.1	74.4	72.6	72.1	71
Fabricated metal products	332	5.96	77.6	84.2	62.6	78.8	79.3	80.0	79.5	78.3	79.9	79.6	80.4	80
Machinery	333	5.15	77.8	87.5	58.7	85.3	84.1	83.9	83.7	82.0	82.4	84.0	85.2	86
Computer and electronic products	334	5.10	77.3	84.5	70.0	73.6	72.4	71.5	72.1	72.3	71.4	71.6	71.4	71
Electrical equip., appliances,														
and components	335	1.87	81.5	92.7	66.7	82.8	83.6	82.1	82.8	83.8	82.4	81.7	82.1	83.
Motor vehicles and parts	3361-3	5.89	75.0	87.5	33.1	70.7	74.7	75.6	74.8	73.4	76.1	75.3	75.6	77.
Aerospace and miscellaneous														
transportation equipment	3364–9	4.47	73.9	71.6	72.4	69.4	72.0	74.0	71.7	72.0	73.6	74.2	74.1	75
Furniture and related products	337	1.09	77.3	82.7	53.9	82.0	80.8	78.8	81.0	79.5	79.0	78.3	79.1	78
Miscellaneous	339	2.47	76.8	81.0	68.2	87.3	87.0	87.6	87.0	87.0	87.3	88.6	87.0	87
Nondurable manufacturing		34.67	80.0	86.1	68.8	81.3	81.5	81.2	81.7	81.2	81.1	81.2	81.3	81
Food, beverage, and tobacco products	311,2	11.90	80.3	85.3	75.2	80.2	80.0	79.5	80.0	79.6	79.6	79.4	79.5	79
Textile and product mills	313,4	.69	78.4	91.7	54.1	73.0	71.2	69.1	71.9	69.4	69.9	68.7	68.6	68
Apparel and leather	315,6	.21	75.8	87.4	58.6	72.6	74.8	77.9	73.3	77.6	78.8	76.6	78.4	79
Paper	322	2.16	86.6	92.7	72.8	87.3	88.2	84.2	88.2	87.8	86.2	83.5	83.0	82
Printing and support	323	1.24	79.4	85.4	58.7	77.6	79.1	78.3	79.1	79.1	78.2	79.0	77.6	79
Petroleum and coal products	324	2.81	85.4	91.1	75.9	84.0	83.3	83.6	84.4	82.0	81.8	83.9	85.1	83
Chemicals	325	12.30	76.6	82.1	65.2	80.4	80.9	81.3	81.1	81.0	81.0	81.6	81.5	81
Plastics and rubber products	326	3.36	82.1	93.2	57.0	86.4	87.3	87.3	87.5	86.6	87.5	87.3	87.2	87
Other manufacturing (non-NAICS)	1133,5111	1.92	79.5	83.3	65.0	76.1	75.1	73.9	74.6	74.5	73.6	73.9	74.2	74.
Mining	21	13.08	86.3	88.6	78.9	84.9	86.9	88.8	86.7	87.9	88.9	88.5	88.9	88.
Utilities	2211,2	10.85	84.7	92.9	78.0	75.7	75.7	74.6	75.7	75.7	75.9	74.7	73.3	72.
Selected high-technology industries		2.16	77.5	86.4	71.3	79.8	77.8	77.1	77.3	78.2	77.9	77.1	76.4	75.
Computers and peripheral equipment	3341	.22	77.7	86.9	82.9	94.5	95.6	97.5	95.0	97.5	96.5	97.3	98.8	98
Communications equipment	3342	.57	75.6	86.6	77.7	60.0	62.4	67.0	61.8	64.3	66.2	67.3	67.6	67
Semiconductors and related														
electronic components	3344	1.37	79.1	92.2	63.0	85.7	81.5	78.3	81.1	81.0	80.0	78.1	76.7	75
Measures excluding selected high-technology industries														
Total industry		97.84	79.7	84.9	66.3	79.4	80.1	80.2	80.1	79.8	80.3	80.1	80.1	80
Manufacturing ¹		73.91	78.2	84.5	63.0	79.1	79.6	79.4	79.6	79.0	79.3	79.4	79.5	79.
STAGE-OF-PROCESS GROUPS														
Crude		16.97	85.5	90.0	76.9	84.2	86.0	87.3	85.8	86.9	87.6	87.0	87.2	86
Primary and semifinished		45.31	80.1	87.8	63.5	78.9	79.0	78.4	79.1	78.4	78.8	78.3	78.2	77.
Finished		37.71	76.7	80.7	66.4	78.1	78.7	79.0	78.8	78.4	78.7	79.0	79.2	79
1 moneu		57.71	, 0.7	00.7	00.4	/0.1	/0./	12.0	,0.0	/0.4	/0./	19.0	19.4	19

 Table 7

 CAPACITY UTILIZATION

 Percent of capacity, seasonally adjusted

r Revised. p Preliminary. 1. The composition of manufacturing is specified in a note for the summary table.

Table 8 INDUSTRIAL CAPACITY Percent change

		Average a	nnual rate		Fourth	quarter to	o fourth c	uarter		Annua	l rate		Monthly rate
Item	1972-	1980-	1989-	1995-		1			2022				2022
	79	88	94	2022	2019	2020	2021	2022	Q1	Q2	Q3	Q4	Oct.
Total industry	3.1	1.9	2.3	1.6	1.1	7	-1.1	1.6	1.5	1.9	1.8	1.4	.1
Manufacturing ¹	3.3	2.2	2.6	1.5	4	8	5	1.0	.8	1.0	1.1	1.0	.1
Mining	.7	.1	7	1.1	8.9	-3.3	-7.3	3.5	3.6	4.8	3.9	1.9	.2
Utilities	4.3	2.2	1.8	1.7	1.5	2.5	2.4	2.6	2.6	2.6	2.6	2.5	.2
Selected high-technology industries	18.6	16.7	16.0	16.3	8.0	2.3	7.7	11.5	11.4	11.6	11.6	11.4	.9
Manufacturing ¹ ex. selected high-technology industries	2.6	1.2	1.6	.4	6	9	7	.7	.5	.8	.8	.7	.1
STAGE-OF-PROCESS GROUPS													
Crude	1.5	.5	5	.9	5.7	-2.8	-6.0	2.6	2.5	3.6	2.9	1.4	.1
Primary and semifinished	3.0	1.3	2.5	1.7	3	1	3	1.0	.8	1.1	1.2	1.1	.1
Finished	3.9	3.2	2.8	1.5	.3	5	.4	1.6	1.5	1.7	1.6	1.6	.1

1. The composition of manufacturing is specified in a note for the summary table.

Table 9 GROSS VALUE OF FINAL PRODUCTS AND NONINDUSTRIAL SUPPLIES Billions of 2012 dollars at annual rate, seasonally adjusted 2022

mons of 2012 donars at annual rate, seasor	any adjusted										
			2022			2022					
Item	2012	2021	Q1	Q2 ^r	Q3 ^r	May ^r	June ^r	July ^r	Aug. ^r	Sept. ^r	Oct. ^p
Final products and nonindustrial supplies	4,006.0	4,118.2	4,241.0	4,295.2	4,297.6	4,300.8	4,270.0	4,292.5	4,297.3	4,303.0	4,306.7
Final products	2,985.7	3,056.8	3,139.5	3,186.3	3,198.5	3,186.8	3,169.3	3,187.8	3,199.4	3,208.3	3,215.0
Consumer goods	2,188.9	2,334.8	2,386.6	2,413.6	2,412.4	2,414.4	2,397.8	2,408.6	2,413.2	2,415.3	2,415.5
Durable	428.6	553.6	571.5	589.5	593.9	588.8	579.7	596.8	594.8	590.0	604.8
Automotive products	282.2	390.6	402.5	427.7	435.0	429.2	422.2	439.8	435.3	429.7	443.7
Other durable goods	146.4	162.8	168.9	162.6	160.0	160.5	158.4	158.3	160.6	161.2	162.3
Nondurable	1,760.4	1,774.9	1,809.9	1,818.7	1,813.3	1,820.3	1,812.7	1,806.7	1,813.2	1,820.1	1,805.5
Equipment, total	796.8	731.7	762.2	782.1	795.8	781.8	780.9	788.8	795.8	802.7	809.2
Business and defense	761.5	710.5	735.7	752.2	763.4	751.8	749.5	756.9	763.2	770.2	776.5
Business	632.8	567.1	588.8	602.5	611.1	602.5	600.7	605.8	610.7	616.7	620.8
Defense and space	128.8	144.0	147.3	150.1	152.9	149.7	149.3	151.6	153.1	153.9	156.3
Nonindustrial supplies	1,020.3	1,061.6	1,101.8	1,109.4	1,099.9	1,114.3	1,101.2	1,105.2	1,098.8	1,095.7	1,092.9
Construction supplies	243.9	271.2	281.5	280.8	279.0	282.2	278.6	279.9	278.5	278.6	276.6
Business supplies	776.4	788.0	817.9	827.0	819.2	830.6	821.1	823.8	818.6	815.1	814.8
Commercial energy products	274.9	298.7	316.2	325.2	318.5	329.4	320.7	322.8	316.9	316.0	316.2

r Revised. p Preliminary.

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

Percent change, seasonally adjusted

			rth quart urth quar			Annual r	ate			Mont	hly rate			Oct. '21
Item	2021	10	urtii quai		2022	innuar i	ate	2022		WIOIIL	iny rate			to
	gross value1	2019	2020	2021	Q1	Q2 ^r	Q3 ^r	May ^r	June ^r	July ^r	Aug. ^r	Sept. ^r	Oct. ^p	Oct. '22
Finished	2,339.7	-1.0	1	2.9	5.9	7.3	3.6	3	3	.8	.4	.2	.7	5.7
Semifinished	1,941.7	-2.9	-2.9	3.6	7.4	3.5	5	8	9	.8	2	.2	2	2.8
Primary	1,786.1	-5.1	-9.0	7.4	3.1	2.1	-3.0	.6	-1.0	2	4	.4	-1.3	9
Crude	875.2	-1.7	-9.2	4.4	6	8.1	5.5	.4	1.2	.9	8	.1	2	3.0

r Revised. p Preliminary.

1. Billions of 2012 dollars.

easonally adjusted Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
	built	100.			intaj	build	vary	1145.	septi		11011			<u> </u>	<u><u> </u></u>	X .	
IP (percent change) ¹																	
2000	1	.4	.4	.6	.3	.1	2	3	.4	3	.0	3	4.1	5.0	4	-1.1	3.9
2000	5	7	3	3	6	6	6	1	5	3	6	.0	-5.1	-5.0	-5.5	-4.3	-3.1
2002	.7	.0	.8	.5	.4	.8	.0	1	.1	3	.5	5	2.9	6.4	2.5	2	.3
2003	.8	.1	3	6	.0	.1	.5	2	.7	.1	.7	.1	2.5	-3.0	2.7	3.9	1.3
2004	.2	.6	4	.4	.7	8	.7	.1	.1	.9	.2	.8	2.9	2.3	2.2	5.7	2.7
2005	.4	.7	1	.2	.1	.4	3	.3	-1.9	1.2	1.1	.5	5.7	2.3	-1.6	3.7	3.3
2005	.4	.0	.2	.2	.0	.4	1	.3	-1.9	1	1	1.0	3.9	2.3	-1.0	.8	2.3
2007	4	1.0	.2	.7	.1	.0	1	.2	.2	3	.6	.0	4.0	4.9	.6	1.3	2.5
2008	1	4	4	7	6	2	4	-1.6	-4.4	1.0	-1.3	-2.8	-1.3	-5.8	-12.3	-16.0	-3.5
2009	-2.5	6	-1.6	8	-1.0	3	1.2	1.1	.8	.2	.4	.4	-20.7	-10.7	6.6	6.3	-11.4
2010	1.1		7		1.4	2			2	2		1.0		0.1	5 4	1.6	~ ~
2010 2011	1.1 2	.4 4	.7 1.0	.4 3	1.4 .1	.2 .3	.4 .5	.4 .6	.3 1	3 .7	.1 .0	1.0 .5	8.0 2.2	8.1 1.6	5.4 4.7	1.6 4.2	5.5 3.2
2012	2	4	5	3	.1	.0	.2	4	1	.7	.0	.3	4.0	2.5	.0	2.0	3.0
2012	.0	.5	.4	1	.1	.1	3	.6	.5	1	.2	.2	3.1	1.8	1.5	2.0	2.0
2014	4	.8	1.0	.1	.4	.3	.3	2	.3	.0	.6	.0	2.8	5.5	2.5	2.2	3.0
2015	8	6	3	6	5	3	.7	2	3	5	8	5	-4.3	-5.5	.2	-5.4	-1.4
2016 2017	.6 2	5 3	8 .7	.3 1.0	2 .1	.5 .2	.2 2	1 5	1 .1	.1 1.3	4 .2	.6 .2	-2.6	-1.5 5.9	1.2 -1.2	4 5.5	-2.2 1.4
2017	2	5	.7	1.0	9	.2	2	3	.0	1	1	1	2.2	5.1	3.5	.1	3.2
2019	6	4	.1	5	.2	.0	4	.7	3	8	.3	3	-3.7	-1.8	.2	-2.6	7
2020	5	.4	-3.8	-13.2	1.6	6.3	3.8	.9	.0	.8	.3	1.1	-6.1	-41.6	42.6	6.6	-7.0
2021	1.1	-3.1	2.7	.2 .7	.8	.4	.7	.0	-1.0	1.5	.6	2	3.1	6.5	3.5	4.8	4.9
2022	.4	.7	.7	./	1	1	.7	1	.1	1			4.7	5.1	2.2		
IP (2017=100)																	
2020	101.3	101.7	97.9	85.0	86.3	91.8	95.2	96.1	96.1	96.8	97.1	98.1	100.3	87.7	95.8	97.4	95.3
2021	99.3	96.2	98.9	99.0	99.8	100.2	100.9	100.8	99.8	101.4	102.0	101.8	98.1	99.7	100.5	101.7	100.0
2022	102.1	102.9	103.6	104.3	104.2	104.1	104.8	104.7	104.8	104.7			102.9	104.2	104.7		
Capacity																	
(percent of																	
2017 output)																	
2020	131.6	131.7	131.7	131.7	131.6	131.5	131.4	131.2	131.0	130.8	130.5	130.2	131.6	131.6	131.2	130.5	131.2
2021	130.0	129.7	129.5	129.3	129.1	129.0	128.9	128.9	128.9	129.0	129.1	129.2	129.8	129.2	128.9	129.1	129.2
2022	129.4	129.6	129.8	130.0	130.2	130.4	130.6	130.7	130.9	131.1			129.6	130.2	130.7		
Utilization																	
(percent)																	
2000	82.1	82.1	82.1	82.3	82.3	82.1	81.7	81.2	81.2	80.7	80.4	79.9	82.1	82.2	81.3	80.3	81.5
2001	79.2	78.4	78.0	77.5	76.9	76.2	75.6	75.3	74.7	74.3	73.8	73.6	78.5	76.9	75.2	73.9	76.1
2002	74.0	73.9	74.3	74.6	74.9	75.5	75.4	75.3	75.4	75.2	75.6	75.3	74.1	75.0	75.4	75.4	75.0
2003	75.9	76.0	75.8	75.4	75.4	75.5	75.9	75.8	76.3	76.4	76.9	77.0	75.9	75.4	76.0	76.8	76.0
2004	77.1	77.6	77.3	77.7	78.2	77.6	78.2	78.3	78.4	79.0	79.2	79.8	77.4	77.8	78.3	79.3	78.2
2005	80.0	80.5	80.3	80.4	80.4	80.6	80.3	80.4	78.8	79.6	80.4	80.6	80.3	80.5	79.8	80.2	80.2
2006	80.7	80.6	80.7	80.8	80.7	80.8	80.6	80.8	80.4	80.1	79.9	80.5	80.6	80.7	80.6	80.2	80.5
2007	80.0	80.6	80.6	81.0	80.9	80.8	80.6	80.7	80.8	80.5	81.0	81.0	80.4	80.9	80.7	80.9	80.7
2008	81.0	80.7	80.5	80.0	79.5	79.4	79.0	77.7	74.3	74.9	73.9	71.7	80.7	79.6	77.0	73.5	77.7
2009	69.8	69.3	68.1	67.5	66.8	66.6	67.3	68.1	68.7	69.0	69.3	69.7	69.1	67.0	68.1	69.3	68.4
2010	70.6	71.0	71.7	72.1	73.2	73.5	74.0	74.4	74.7	74.6	74.7	75.5	71.1	72.9	74.3	74.9	73.3
2010	75.3	75.0	75.8	75.5	75.6	75.7	76.0	76.4	76.3	76.7	76.5	76.8	75.4	75.6	76.2	76.7	76.0
2012	77.1	77.2	76.6	77.1	77.1	76.9	77.0	76.5	76.4	76.5	76.7	76.8	77.0	77.0	76.6	76.6	76.8
2013	76.7	76.9	77.2	77.0	77.0	77.0	76.7	77.1	77.5	77.3	77.5	77.6	76.9	77.0	77.1	77.5	77.1
2014	77.3	77.8	78.5	78.5	78.7	79.0	79.1	78.9	79.0	79.0	79.4	79.3	77.9	78.7	79.0	79.2	78.7
2015	78.6	78.1	77.8	77.3	77.0	76.7	77.2	77.1	76.9	76.5	75.9	75.5	78.2	77.0	77.0	76.0	77.1
2015	76.0	75.6	75.0	75.2	75.0	75.3	75.4	75.3	75.2	75.3	73.9	75.4	75.5	75.2	75.3	75.2	75.3
2017	75.3	75.0	75.6	76.4	76.5	76.7	76.6	76.3	76.5	77.5	77.8	78.0	75.3	76.5	76.5	77.8	76.5
2018	78.0	78.3	78.8	79.7	79.0	79.6	79.8	80.3	80.3	80.1	80.0	79.9	78.4	79.5	80.1	80.0	79.5
2019	79.4	78.9	78.9	78.5	78.5	78.5	78.1	78.5	78.2	77.5	77.7	77.4	79.1	78.5	78.3	77.5	78.3
		77.0	74.0	(15	(= ((0.0	70 5	72.2	72.2	74.0	74.4	75.0	76.0		72.0	74.6	70 (
2020			74.3	64.5	65.6	69.8	72.5	73.3	73.3	74.0	74.4	75.3	76.2	66.6	73.0	74.6	72.6
2020	77.0	77.3					70 2	70 2	77 4	796	70.0	707		77.2		70 0	77 4
2020 2021 2022	77.0 76.4 78.9	74.2 79.4	76.3 79.8	76.6 80.2	77.3 80.0	77.7 79.8	78.2 80.2	78.2 80.0	77.4 80.1	78.6 79.9	79.0	78.7	75.6 79.4	77.2 80.0	78.0 80.1	78.8	77.4

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

1. Quarterly percentage changes are at annual rates. Annual percentage 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									~- <u>r</u>								
$change)^2$	0	2	6	6	0	2		7	Ę	4	2	6	4.5	4.0	4	-2.7	4.1
2000 2001	.0 5	.3 7	.6 2	.6	.0 6	.2	.1 5	7 5	.5 4	4 4	3 4	6 .2	-5.9	4.9 -5.3	4 -5.9	-4.0	4.1
2002 2003	.6 .8	.0 1	.7 .1	.3 8	.5 .0	1.0 .5	1 .3	.1 5	.1 .9	3 .1	.5 .9	6 .0	3.6 2.1	5.8 -2.3	3.2 2.5	4 4.4	.4
2004	1	.8	.0	.4	.7	7	.9	.5	.0	.9	.0	.8	2.7	3.3	4.0	5.4	3.1
2005	.6	.9	5	.4	.3	.2	3	.5	-1.1	1.4	.9	.1	6.4	2.6	5	6.1	4.1
2006 2007	.8 4	3 .3	.0 .8	.4 .6	3 .0	.3 .3	3 .0	.7 3	.0 .3	5 2	.1 .5	1.5 .1	4.0 4.6	.8 5.7	.9 .5	1.5 1.3	2.6 2.8
2008 2009	2 -3.2	7 1	5 -1.8	-1.0 7	6 -1.1	7 2	-1.0 1.6	-1.3 1.1	-3.4 1.0	7 .0	-2.5 1.0	-3.3	-2.5 -24.7	-8.3 -10.4	-13.7 8.7	-22.0 7.0	-4.8 -13.8
2010	1.0	1	1.3	.8	1.3	.0	.5	.1	.1	.1	.1	.5	6.9	10.5	4.3	1.5	5.9
2011	.1	.2	.6	6	.0	.1	.6	.5	.3	.5	2	.6	3.0	2	4.4	3.9	2.9
2012 2013	.9 3	.4 .4	5 1	.5 3	3 .3	.2 .1	2 8	1 .9	2 .1	2 .1	.6 .0	.7 2	5.4 2.7	.5 .1	-1.2	1.1 1.6	2.6 .9
2014	-1.1	.9	.9	.0	.3	.3	.5	6	.0	1	.7	2	-1.1	4.7	1.7	.1	1.1
2015 2016	6 .4	7 3	.4 1	.0 2	.0 1	4 .2	.8 .1	4 4	3 .2	1 .2	3 1	3 .0	-3.4 5	7 -1.2	.7 .1	-2.8 .3	5 8
2017 2018	.2	.0 1.0	3	1.1 .7	2 9	.0	3 .1	2 .3	0. 0.	1.1 4	.0	3 .1	.1	3.2	-1.9 1.6	3.8 -2.2	.6
2018 2019	4	4	1	6	9	.0	.1 6	.3	7	4	4	.1 1	-4.6	-2.7	8	-2.2	-2.0
2020	1	.3	-4.3	-15.3	4.3	7.4	3.6	1.6	.1	1.1	.5	.3	-4.6	-43.3	53.2	8.7	-6.3
2021 2022	1.6 3	-3.5 1.2	3.1 .7	1 .4	.9 5	1 6	1.1 .5	2 .1	7 .2	1.7 .1	.5	1	2.4 3.7	5.1 3.1	3.6 .3	5.8	5.7
IP (2017=100)																	
2020 2021	98.7 98.0	99.0 94.6	94.7 97.5	80.2 97.3	83.7 98.2	89.9 98.1	93.1 99.2	94.6 98.9	94.7 98.2	95.7 99.8	96.2 100.4	96.5 100.3	97.5 96.7	84.6 97.9	94.1 98.8	96.1 100.1	93.1 98.4
2021	100.0	101.2	102.0	102.4	101.9	101.3	101.8	101.9	102.1	102.3	100.4	100.5	101.1	101.8	101.9	100.1	<i>9</i> 0. 4
Capacity (percent of 2017 output)																	
2020	129.0	129.0	128.9	128.8	128.8	128.7	128.6	128.5	128.4	128.2	128.1	128.0	129.0	128.8	128.5	128.1	128.6
2021 2022	127.9 127.6	127.8 127.7	127.7 127.8	127.6 127.9	127.5 128.1	127.4 128.2	127.4 128.3	127.4 128.4	127.4 128.5	127.4 128.6	127.5	127.5	127.8 127.7	127.5 128.1	127.4 128.4	127.5	127.5
Utilization																	
(percent) 2000	80.7	80.6	80.8														
2001 2002	76.9		80.8	80.9	80.6	80.4	80.2	79.3	79.4	78.8	78.3	77.5	80.7	80.7	79.6	78.2	79.8
2003		76.1 71.9	75.6	75.1	74.5	73.8	73.3	72.8	72.4	71.9	71.6	71.6	76.2	74.5	72.8	71.7	73.8
2004	72.0 73.9	71.9 73.8	75.6 72.4 73.9	75.1 72.6 73.3	74.5 72.9 73.4	73.8 73.6 73.7	73.3 73.5 74.0	72.8 73.6 73.7	72.4 73.6 74.3	71.9 73.4 74.4	71.6 73.7 75.1	71.6 73.3 75.1	76.2 72.1 73.9	74.5 73.0 73.5	72.8 73.6 74.0	71.7 73.5 74.9	73.8 73.0 74.1
	73.9 75.0	71.9 73.8 75.6	75.6 72.4 73.9 75.6	75.1 72.6 73.3 75.9	74.5 72.9 73.4 76.5	73.8 73.6 73.7 76.0	73.3 73.5 74.0 76.7	72.8 73.6 73.7 77.0	72.4 73.6 74.3 77.0	71.9 73.4 74.4 77.6	71.6 73.7 75.1 77.5	71.6 73.3 75.1 78.0	76.2 72.1 73.9 75.4	74.5 73.0 73.5 76.1	72.8 73.6 74.0 76.9	71.7 73.5 74.9 77.7	73.8 73.0 74.1 76.5
2005 2006	73.9	71.9 73.8	75.6 72.4 73.9	75.1 72.6 73.3	74.5 72.9 73.4	73.8 73.6 73.7	73.3 73.5 74.0	72.8 73.6 73.7	72.4 73.6 74.3	71.9 73.4 74.4	71.6 73.7 75.1	71.6 73.3 75.1	76.2 72.1 73.9	74.5 73.0 73.5	72.8 73.6 74.0	71.7 73.5 74.9	73.8 73.0 74.1
2006 2007	73.9 75.0 78.4 79.5 78.6	71.9 73.8 75.6 79.0 79.1 78.7	75.6 72.4 73.9 75.6 78.5 79.0 79.1	75.1 72.6 73.3 75.9 78.7 79.2 79.4	74.5 72.9 73.4 76.5 78.8 78.8 79.2	73.8 73.6 73.7 76.0 78.7 78.9 79.2	73.3 73.5 74.0 76.7 78.3 78.5 79.0	72.8 73.6 73.7 77.0 78.6 78.9 78.6	72.4 73.6 74.3 77.0 77.6 78.8 78.7	71.9 73.4 74.4 77.6 78.5 78.2 78.5	71.6 73.7 75.1 77.5 79.0 78.1 78.8	71.6 73.3 75.1 78.0 79.0 79.1 78.8	76.2 72.1 73.9 75.4 78.6 79.2 78.8	74.5 73.0 73.5 76.1 78.7 79.0 79.3	72.8 73.6 74.0 76.9 78.1 78.7 78.8	71.7 73.5 74.9 77.7 78.8 78.5 78.7	73.8 73.0 74.1 76.5 78.6 78.8 78.9
2006	73.9 75.0 78.4 79.5	71.9 73.8 75.6 79.0 79.1	75.6 72.4 73.9 75.6 78.5 79.0	75.1 72.6 73.3 75.9 78.7 79.2	74.5 72.9 73.4 76.5 78.8 78.8	73.8 73.6 73.7 76.0 78.7 78.9	73.3 73.5 74.0 76.7 78.3 78.5	72.8 73.6 73.7 77.0 78.6 78.9	72.4 73.6 74.3 77.0 77.6 78.8	71.9 73.4 74.4 77.6 78.5 78.2	71.6 73.7 75.1 77.5 79.0 78.1	71.6 73.3 75.1 78.0 79.0 79.1	76.2 72.1 73.9 75.4 78.6 79.2	74.5 73.0 73.5 76.1 78.7 79.0	72.8 73.6 74.0 76.9 78.1 78.7	71.7 73.5 74.9 77.7 78.8 78.5	73.8 73.0 74.1 76.5 78.6 78.8
2006 2007 2008 2009 2010	73.9 75.0 78.4 79.5 78.6 78.6 65.6 67.7	71.9 73.8 75.6 79.0 79.1 78.7 78.0 65.6 67.7	75.6 72.4 73.9 75.6 78.5 79.0 79.1 77.6 64.5 68.7	75.1 72.6 73.3 75.9 78.7 79.2 79.4 76.9 64.1 69.4	74.5 72.9 73.4 76.5 78.8 78.8 79.2 76.5 63.5 70.4	73.8 73.6 73.7 76.0 78.7 78.9 79.2 76.1 63.4 70.5	73.3 73.5 74.0 76.7 78.3 78.5 79.0 75.3 64.5 71.0	72.8 73.6 73.7 77.0 78.6 78.9 78.6 74.5 65.3 71.2	72.4 73.6 74.3 77.0 77.6 78.8 78.7 72.0 66.0 71.4	71.9 73.4 74.4 77.6 78.5 78.2 78.5 71.6 66.1 71.5	71.6 73.7 75.1 77.5 79.0 78.1 78.8 69.9 66.9 71.7	71.6 73.3 75.1 78.0 79.0 79.1 78.8 67.7 66.9 72.1	76.2 72.1 73.9 75.4 78.6 79.2 78.8 78.1 65.2 68.0	74.5 73.0 73.5 76.1 78.7 79.0 79.3 76.5 63.7 70.1	72.8 73.6 74.0 76.9 78.1 78.7 78.8 73.9 65.3 71.2	71.7 73.5 74.9 77.7 78.8 78.5 78.7 69.7 66.6 71.8	73.8 73.0 74.1 76.5 78.6 78.8 78.9 74.6 65.2 70.3
2006 2007 2008 2009 2010 2011 2012	73.9 75.0 78.4 79.5 78.6 78.6 65.6 67.7 72.3 74.7	71.9 73.8 75.6 79.0 79.1 78.7 78.0 65.6 67.7 72.5 74.9	75.6 72.4 73.9 75.6 78.5 79.0 79.1 77.6 64.5 68.7 73.0 74.4	75.1 72.6 73.3 75.9 78.7 79.2 79.4 76.9 64.1 69.4 72.6 74.7	74.5 72.9 73.4 76.5 78.8 78.8 79.2 76.5 63.5 70.4 72.6 74.4	73.8 73.6 73.7 76.0 78.7 78.9 79.2 76.1 63.4 70.5 72.7 74.5	73.3 73.5 74.0 76.7 78.3 78.5 79.0 75.3 64.5 71.0 73.1 74.3	72.8 73.6 73.7 77.0 78.6 78.9 78.6 74.5 65.3 71.2 73.5 74.1	72.4 73.6 74.3 77.0 77.6 78.8 78.7 72.0 66.0 71.4 73.6 73.8	71.9 73.4 74.4 77.6 78.5 78.2 78.5 71.6 66.1 71.5 74.0 73.6	71.6 73.7 75.1 77.5 79.0 78.1 78.8 69.9 66.9 71.7 73.8 74.0	71.6 73.3 75.1 78.0 79.0 79.1 78.8 67.7 66.9 72.1 74.2 74.5	76.2 72.1 73.9 75.4 78.6 79.2 78.8 78.1 65.2 68.0 72.6 74.7	74.5 73.0 73.5 76.1 78.7 79.0 79.3 76.5 63.7 70.1 72.6 74.5	72.8 73.6 74.0 76.9 78.1 78.7 78.8 73.9 65.3 71.2 73.4 74.1	71.7 73.5 74.9 77.7 78.8 78.5 78.7 69.7 66.6 71.8 74.0 74.1	73.8 73.0 74.1 76.5 78.6 78.8 78.9 74.6 65.2 70.3 73.1 74.3
2006 2007 2008 2009 2010 2011	73.9 75.0 78.4 79.5 78.6 78.6 65.6 67.7 72.3	71.9 73.8 75.6 79.0 79.1 78.7 78.0 65.6 67.7 72.5	75.6 72.4 73.9 75.6 78.5 79.0 79.1 77.6 64.5 68.7 73.0	75.1 72.6 73.3 75.9 78.7 79.2 79.4 76.9 64.1 69.4 72.6	74.5 72.9 73.4 76.5 78.8 78.8 79.2 76.5 63.5 70.4 72.6	73.8 73.6 73.7 76.0 78.7 78.9 79.2 76.1 63.4 70.5 72.7	73.3 73.5 74.0 76.7 78.3 78.5 79.0 75.3 64.5 71.0 73.1	72.8 73.6 73.7 77.0 78.6 78.9 78.6 74.5 65.3 71.2 73.5	72.4 73.6 74.3 77.0 77.6 78.8 78.7 72.0 66.0 71.4 73.6	71.9 73.4 74.4 77.6 78.5 78.2 78.5 71.6 66.1 71.5 74.0	71.6 73.7 75.1 77.5 79.0 78.1 78.8 69.9 66.9 71.7 73.8	71.6 73.3 75.1 78.0 79.0 79.1 78.8 67.7 66.9 72.1 74.2	76.2 72.1 73.9 75.4 78.6 79.2 78.8 78.1 65.2 68.0 72.6	74.5 73.0 73.5 76.1 78.7 79.0 79.3 76.5 63.7 70.1 72.6	72.8 73.6 74.0 76.9 78.1 78.7 78.8 73.9 65.3 71.2 73.4	71.7 73.5 74.9 77.7 78.8 78.5 78.7 69.7 66.6 71.8 74.0	73.8 73.0 74.1 76.5 78.6 78.8 78.9 74.6 65.2 70.3 73.1
2006 2007 2008 2009 2010 2011 2012 2013	73.9 75.0 78.4 79.5 78.6 65.6 65.6 67.7 72.3 74.7 74.3	71.9 73.8 75.6 79.0 79.1 78.7 78.0 65.6 67.7 72.5 74.9 74.5 74.7	75.6 72.4 73.9 75.6 78.5 79.0 79.1 77.6 64.5 68.7 73.0 74.4 74.4	75.1 72.6 73.3 75.9 78.7 79.2 79.4 76.9 64.1 69.4 72.6 74.7 74.2	$\begin{array}{c} 74.5\\ 72.9\\ 73.4\\ 76.5\\ 78.8\\ 78.8\\ 79.2\\ 76.5\\ 63.5\\ 70.4\\ 72.6\\ 74.4\\ 74.4\\ \end{array}$	73.8 73.6 73.7 76.0 78.7 78.9 79.2 76.1 63.4 70.5 72.7 74.5 74.5	73.3 73.5 74.0 76.7 78.3 78.5 79.0 75.3 64.5 71.0 73.1 74.3 73.9	72.8 73.6 73.7 77.0 78.6 78.9 78.6 74.5 65.3 71.2 73.5 74.1 74.6	72.4 73.6 74.3 77.0 77.6 78.8 78.7 72.0 66.0 71.4 73.6 73.8 74.7	71.9 73.4 74.4 77.6 78.5 78.2 78.5 71.6 66.1 71.5 74.0 73.6 74.8	71.6 73.7 75.1 77.5 79.0 78.1 78.8 69.9 66.9 71.7 73.8 74.0 74.8	71.6 73.3 75.1 78.0 79.0 79.1 78.8 67.7 66.9 72.1 74.2 74.5 74.7	76.2 72.1 73.9 75.4 78.6 79.2 78.8 78.1 65.2 68.0 72.6 74.7 74.4	74.5 73.0 73.5 76.1 78.7 79.0 79.3 76.5 63.7 70.1 72.6 74.5 74.4	72.8 73.6 74.0 76.9 78.1 78.7 78.8 73.9 65.3 71.2 73.4 74.1 74.4	71.7 73.5 74.9 77.7 78.8 78.5 78.7 69.7 66.6 71.8 74.0 74.1 74.8	73.8 73.0 74.1 76.5 78.6 78.8 78.9 74.6 65.2 70.3 73.1 74.3 74.5
2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016	73.9 75.0 78.4 79.5 78.6 78.6 65.6 67.7 72.3 74.7 74.3 73.9 76.3 75.9	71.9 73.8 75.6 79.0 79.1 78.7 78.0 65.6 67.7 72.5 74.9 74.5 74.7 75.8 75.6	75.6 72.4 73.9 75.6 78.5 79.0 79.1 77.6 64.5 68.7 73.0 74.4 74.4 75.4 76.1 75.5	75.1 72.6 73.3 75.9 78.7 79.2 79.4 76.9 64.1 69.4 72.6 74.7 74.2 75.4 76.2 75.3	74.5 72.9 73.4 76.5 78.8 78.8 79.2 76.5 63.5 70.4 72.6 74.4 72.6 74.4 74.4 75.7 76.3 75.2	73.8 73.6 73.7 76.0 78.7 78.9 79.2 76.1 63.4 70.5 72.7 74.5 74.5 76.0 76.0 75.3	73.3 73.5 74.0 76.7 78.3 78.5 79.0 75.3 64.5 71.0 73.1 74.3 73.9 76.4 76.6 75.4	72.8 73.6 73.7 77.0 78.6 78.9 78.6 74.5 65.3 71.2 73.5 74.1 74.6 76.0 76.4 75.1	72.4 73.6 74.3 77.0 77.6 78.8 78.7 72.0 66.0 71.4 73.6 73.8 74.7 76.1 76.2 75.2	71.9 73.4 74.4 77.6 78.5 78.2 78.5 71.6 66.1 71.5 74.0 73.6 74.8 76.1 76.1 75.3	71.6 73.7 75.1 77.5 79.0 78.1 78.8 69.9 66.9 71.7 73.8 74.0 74.8 76.7 75.9 75.2	71.6 73.3 75.1 78.0 79.0 79.1 78.8 67.7 66.9 72.1 74.2 74.5 74.7 76.6 75.6 75.6	76.2 72.1 73.9 75.4 78.6 79.2 78.8 78.1 65.2 68.0 72.6 74.7 74.4 74.7 76.1 75.7	74.5 73.0 73.5 76.1 78.7 79.0 79.3 76.5 63.7 70.1 72.6 74.5 74.4 75.7 76.2 75.3	72.8 73.6 74.0 76.9 78.1 78.7 78.8 73.9 65.3 71.2 73.4 74.1 74.4 76.2 76.4 75.2	71.7 73.5 74.9 77.7 78.8 78.5 78.7 69.7 66.6 71.8 74.0 74.1 74.8 76.5 75.9 75.9 75.3	73.8 73.0 74.1 76.5 78.6 78.8 78.9 74.6 65.2 70.3 73.1 74.3 74.5 75.8 76.1 75.4
2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018	73.9 75.0 78.4 79.5 78.6 65.6 67.7 72.3 74.7 74.3 73.9 76.3 75.9 75.4 76.9	71.9 73.8 75.6 79.0 79.1 78.7 78.0 65.6 67.7 72.5 74.9 74.5 74.7 75.8 75.6 75.5 77.7	75.6 72.4 73.9 75.6 78.5 79.0 79.1 77.6 64.5 68.7 73.0 74.4 74.4 75.4 76.1 75.5 75.3 77.8	75.1 72.6 73.3 75.9 78.7 79.2 79.4 76.9 64.1 69.4 72.6 74.7 74.2 75.4 76.2 75.3 76.2 78.4	74.5 72.9 73.4 76.5 78.8 79.2 76.5 63.5 70.4 72.6 74.4 74.4 75.7 76.3 75.2 76.2 77.8	73.8 73.6 73.7 76.0 78.7 78.9 79.2 76.1 63.4 70.5 72.7 74.5 74.5 74.5 76.0 76.0 76.0 76.3 76.3 78.3	73.3 73.5 74.0 76.7 78.3 78.5 79.0 75.3 64.5 71.0 73.1 74.3 73.9 76.4 76.6 75.4 76.6 75.4 76.2 78.4	72.8 73.6 73.7 77.0 78.6 74.5 65.3 71.2 73.5 74.1 74.6 76.0 76.4 76.1 78.6	72.4 73.6 74.3 77.0 77.6 78.8 78.7 72.0 66.0 71.4 73.6 73.8 74.7 76.1 76.2 75.2 76.2 78.6	71.9 73.4 74.4 77.6 78.5 78.2 78.5 71.6 66.1 71.5 74.0 73.6 74.8 76.1 76.1 75.3 77.2 78.3	71.6 73.7 75.1 77.5 79.0 78.1 78.8 69.9 66.9 71.7 73.8 74.0 74.8 76.7 75.9 75.2 77.2 78.0	71.6 73.3 75.1 78.0 79.0 79.1 78.8 67.7 66.9 72.1 74.2 74.5 74.7 76.6 75.6 75.6 75.2 77.1 78.1	76.2 72.1 73.9 75.4 78.6 79.2 78.8 78.1 65.2 68.0 72.6 74.7 74.4 74.7 76.1 75.7 75.4 77.5	74.5 73.0 73.5 76.1 78.7 79.0 79.3 76.5 63.7 70.1 72.6 74.5 74.4 75.7 76.2 75.3 76.2 78.1	72.8 73.6 74.0 76.9 78.1 78.7 78.8 73.9 65.3 71.2 73.4 74.1 74.4 76.2 76.4 76.4 76.2 76.2 78.5	71.7 73.5 74.9 77.7 78.8 78.5 78.7 69.7 66.6 71.8 74.0 74.1 74.8 76.5 75.9 75.3 77.2 78.2	73.8 73.0 74.1 76.5 78.6 78.8 78.9 74.6 65.2 70.3 73.1 74.3 74.5 75.8 76.1 75.4 76.2 78.1
2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017	73.9 75.0 78.4 79.5 78.6 78.6 65.6 67.7 72.3 74.7 74.3 73.9 76.3 75.9 75.4	71.9 73.8 75.6 79.0 79.1 78.7 78.0 65.6 67.7 72.5 74.9 74.5 74.7 75.8 75.6 75.5	75.6 72.4 73.9 75.6 78.5 79.0 79.1 77.6 64.5 68.7 73.0 74.4 74.4 75.4 76.1 75.5 75.3	75.1 72.6 73.3 75.9 78.7 79.2 79.4 76.9 64.1 69.4 72.6 74.7 74.2 75.4 76.2 75.3 76.2	74.5 72.9 73.4 76.5 78.8 79.2 76.5 63.5 70.4 72.6 74.4 74.4 75.7 76.3 75.2 76.2	73.8 73.6 73.7 76.0 78.7 78.9 79.2 76.1 63.4 70.5 72.7 74.5 74.5 74.5 76.0 76.0 75.3 76.3	73.3 73.5 74.0 76.7 78.3 78.5 79.0 75.3 64.5 71.0 73.1 74.3 73.9 76.4 76.6 75.4 76.6	72.8 73.6 73.7 77.0 78.6 78.9 78.6 74.5 65.3 71.2 73.5 74.1 74.6 76.0 76.4 75.1 76.1	72.4 73.6 74.3 77.0 77.6 78.8 78.7 72.0 66.0 71.4 73.6 73.8 74.7 76.1 76.2 75.2 76.2	71.9 73.4 74.4 77.6 78.5 78.2 78.5 71.6 66.1 71.5 74.0 73.6 74.8 76.1 76.1 75.3 77.2	71.6 73.7 75.1 77.5 79.0 78.1 78.8 69.9 66.9 71.7 73.8 74.0 74.8 76.7 75.9 75.2 77.2	71.6 73.3 75.1 78.0 79.0 79.1 78.8 67.7 66.9 72.1 74.2 74.5 74.7 76.6 75.6 75.6 75.2 77.1	76.2 72.1 73.9 75.4 78.6 79.2 78.8 78.1 65.2 68.0 72.6 74.7 74.4 74.7 74.4 74.7 76.1 75.7 75.4	74.5 73.0 73.5 76.1 78.7 79.0 79.3 76.5 63.7 70.1 72.6 74.5 74.4 75.7 76.2 75.3 76.2	72.8 73.6 74.0 76.9 78.1 78.7 78.8 73.9 65.3 71.2 73.4 74.1 74.4 76.2 76.4 75.2 76.2	71.7 73.5 74.9 77.7 78.8 78.5 78.7 69.7 66.6 71.8 74.0 74.1 74.8 76.5 75.9 75.3 77.2	73.8 73.0 74.1 76.5 78.6 78.8 78.9 74.6 65.2 70.3 73.1 74.3 74.5 75.8 76.1 75.4 76.2
2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020	73.9 75.0 78.4 79.5 78.6 78.6 65.6 67.7 72.3 74.7 74.3 73.9 76.3 75.9 75.4 76.9 77.5 76.5	71.9 73.8 75.6 79.0 79.1 78.7 78.0 65.6 67.7 72.5 74.9 74.5 74.7 75.8 75.6 75.5 77.7 77.2 76.8	75.6 72.4 73.9 75.6 78.5 79.0 79.1 77.6 64.5 68.7 73.0 74.4 75.4 76.1 75.5 75.3 77.8 77.2 73.5	75.1 72.6 73.3 75.9 78.7 79.2 79.4 76.9 64.1 69.4 72.6 74.7 74.2 75.4 76.2 75.3 76.2 78.4 76.7 62.3	74.5 72.9 73.4 76.5 78.8 79.2 76.5 63.5 70.4 72.6 74.4 72.6 74.4 75.7 76.3 75.2 76.2 77.8 76.8 65.0	73.8 73.6 73.7 76.0 78.7 78.9 79.2 76.1 63.4 70.5 72.7 74.5 74.5 74.5 76.0 76.0 75.3 76.3 78.3 77.1 69.8	73.3 73.5 74.0 76.7 78.3 78.5 79.0 75.3 64.5 71.0 73.1 74.3 73.9 76.4 76.6 75.4 76.6 75.4 76.6 75.4 76.6 72.4	72.8 73.6 73.7 77.0 78.6 78.9 78.6 74.5 65.3 71.2 73.5 74.1 74.6 76.0 76.4 75.1 76.1 78.6 77.2 73.6	72.4 73.6 74.3 77.0 77.6 78.8 78.7 72.0 66.0 71.4 73.6 73.8 74.7 76.1 76.2 75.2 76.2 78.6 76.6 73.7	71.9 73.4 74.4 77.6 78.5 78.2 78.5 71.6 66.1 71.5 74.0 73.6 74.8 76.1 75.3 77.2 78.3 76.1 74.6	71.6 73.7 75.1 77.5 79.0 78.1 78.8 69.9 66.9 71.7 73.8 74.0 74.8 76.7 75.9 75.2 77.2 78.0 76.6 75.1	71.6 73.3 75.1 78.0 79.0 79.1 78.8 67.7 66.9 72.1 74.2 74.5 74.7 76.6 75.6 75.6 75.2 77.1 78.1 76.5 75.4	76.2 72.1 73.9 75.4 78.6 79.2 78.8 78.1 65.2 68.0 72.6 74.7 74.4 74.7 76.1 75.7 75.4 77.5 77.3 75.6	74.5 73.0 73.5 76.1 78.7 79.0 79.3 76.5 63.7 70.1 72.6 74.5 74.4 75.7 76.2 75.3 76.2 75.3 76.2 78.1 76.9 65.7	72.8 73.6 74.0 76.9 78.1 78.7 78.8 73.9 65.3 71.2 73.4 74.1 74.4 76.2 76.4 75.2 76.2 78.5 76.8 73.3	71.7 73.5 74.9 77.7 78.8 78.5 78.7 69.7 66.6 71.8 74.0 74.1 74.8 76.5 75.9 75.3 77.2 78.2 76.4 75.0	73.8 73.0 74.1 76.5 78.6 78.8 78.9 74.6 65.2 70.3 73.1 74.3 74.5 75.8 76.1 75.4 76.2 78.1 76.9 72.4
2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019	73.9 75.0 78.4 79.5 78.6 65.6 67.7 72.3 74.7 74.3 73.9 76.3 75.9 75.4 76.9 77.5	71.9 73.8 75.6 79.0 79.1 78.7 78.0 65.6 67.7 72.5 74.9 74.5 74.7 75.8 75.6 75.5 77.7 77.2	75.6 72.4 73.9 75.6 78.5 79.0 79.1 77.6 64.5 68.7 73.0 74.4 74.4 75.4 76.1 75.5 75.3 77.8 77.2	75.1 72.6 73.3 75.9 78.7 79.2 79.4 76.9 64.1 69.4 72.6 74.7 74.2 75.4 76.2 75.4 76.2 75.3 76.2 78.4 76.7	74.5 72.9 73.4 76.5 78.8 79.2 76.5 63.5 70.4 72.6 74.4 72.6 74.4 75.7 76.3 75.2 76.2 77.8 76.8	73.8 73.6 73.7 76.0 78.7 78.9 79.2 76.1 63.4 70.5 72.7 74.5 76.0 76.0 76.0 75.3 76.3 78.3 77.1	73.3 73.5 74.0 76.7 78.3 78.5 79.0 75.3 64.5 71.0 73.1 74.3 73.9 76.4 76.6 75.4 76.6 75.4 76.2 78.4 76.6	72.8 73.6 73.7 77.0 78.6 78.9 78.6 74.5 65.3 71.2 73.5 74.1 74.6 76.0 76.4 75.1 76.1 78.6 77.2	72.4 73.6 74.3 77.0 77.6 78.8 78.7 72.0 66.0 71.4 73.6 73.8 74.7 76.1 76.2 75.2 76.2 78.6 76.6	71.9 73.4 74.4 77.6 78.5 78.2 78.5 71.6 66.1 71.5 74.0 73.6 74.8 76.1 76.1 75.3 77.2 78.3 76.1	71.6 73.7 75.1 77.5 79.0 78.1 78.8 69.9 66.9 71.7 73.8 74.0 74.8 76.7 75.9 75.2 77.2 78.0 76.6	71.6 73.3 75.1 78.0 79.0 79.1 78.8 67.7 66.9 72.1 74.2 74.5 74.7 76.6 75.6 75.6 75.2 77.1 78.1 78.1 76.5	76.2 72.1 73.9 75.4 78.6 79.2 78.8 78.1 65.2 68.0 72.6 74.7 74.4 74.7 76.1 75.7 75.4 77.5 77.3	74.5 73.0 73.5 76.1 78.7 79.0 79.3 76.5 63.7 70.1 72.6 74.5 74.4 75.7 76.2 75.3 76.2 78.1 76.9	72.8 73.6 74.0 76.9 78.1 78.7 78.8 73.9 65.3 71.2 73.4 74.1 74.4 76.2 76.4 75.2 76.2 78.5 76.8	71.7 73.5 74.9 77.7 78.8 78.5 78.7 69.7 66.6 71.8 74.0 74.1 74.8 76.5 75.9 75.3 77.2 78.2 76.4	73.8 73.0 74.1 76.5 78.6 78.8 78.9 74.6 65.2 70.3 73.1 74.3 74.5 75.8 76.1 75.4 76.2 78.1 76.9

Table 12 HISTORICAL STATISTICS FOR INDUSTRIAL PRODUCTION, CAPACITY, AND UTILIZATION: Manufacturing¹ Seasonally adjusted New June July Aug Sept. Oct. Nov. Dec. Q1 Q2

 1. The composition of manufacturing is specified in a note for the summary table.

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

Seasonally adjusted	8,																
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
IP (percent																	
change) ²																	
2000	4	.1	.1	.4	.0	1	5	4	.3	5	2	5	.6	1.5	-3.2	-2.8	1.0
2001	6	6	3	2	5	5	4	1	6	3	5	2	-5.7	-4.3	-4.3	-4.5	-3.9
2002	.8	1	.7	.5	.4	.8	1	2	.1	3	.5	6	2.7	6.1	1.9	8	.3
2003	.8	1	4	8	2	0.	.4	4	.6	0.	.6	.0	1.5	-4.7	.8	2.5	.2
2004	.1	.6	5	.4	.7	8	.8	.0	.0	.9	.2	.7	2.0	2.2	2.0	5.3	1.8
2005	.2	.6	2	.1	.0	.4	4	.2	-2.2	1.1	1.1	.4	4.7	1.3	-2.9	2.5	2.6
2005	.1	.0	.2	.3	1	.3	1	.2	3	1	1	1.0	3.4	1.8	.7	.1	1.4
2007	5	.9	.0	.5	.1	.1	1	.1	.1	5	.4	1	3.2	3.9	.5	4	1.8
2008	2	5	5	8	7	3	4	-1.6	-4.5	1.2	-1.1	-2.7	-2.5	-6.9	-12.5	-14.9	-4.3
2009	-2.5	7	-1.7	9	-1.1	3	1.2	1.1	.8	.2	.4	.3	-20.5	-11.6	6.5	5.8	-11.4
2010	1.0	2	(2	1.4	2	2	2	2	2	0	0	60	7.4	5 1	1.0	1.0
2010 2011	1.0	.2 4	.6 1.1	.3 3	1.4 .1	.2 .3	.3 .5	.3 .6	.3 1	3 .7	0. 0.	.9 .5	6.9 1.6	7.4 1.7	5.1 4.6	1.0 4.2	4.9 2.8
2012	.6		6	.7	.2	1	.2	4	1	.3	.0	.2	3.6	2.0	2	1.7	2.8
2012	.0	.5	.0	2	.1	.1	4	.6	.5	1	.2	.2	3.0	1.4	1.2	2.5	1.7
2014	4	.7	1.0	.0	.4	.3	.3	2	.3	.0	.6	.0	2.6	5.3	2.4	2.2	2.8
2015	8	6	4	6	5	3	.7	2	3	5	8	6	-4.4	-5.8	.3	-5.6	-1.5
2016	.5	5	8	.3	3	.5	.1	1	2	.0	4	.6	-2.8	-1.7	.9	8	-2.4
2017 2018	2	3 .4	.7 .6	.9 1.1	.1	.2 .7	2 .2	5 .7	.1	1.2 1	.2	.1 1	.4 2.1	5.7 5.0	-1.3 3.2	5.2 .2	1.2 3.0
2018	6	.4 5	.0	5	-1.0	.7	4	.7	3	1	1	1	-3.8	-1.9	.0	-2.8	8
					.2	.0		.,		.0	.0		2.0		.0	2.0	.0
2020	4	.4	-3.9	-13.5	1.7	6.4	3.8	.9	1	.7	.3	1.1	-6.3	-42.2	43.3	6.3	-7.3
2021	1.2	-3.2	2.8	.1	.7	.4	.7	.0	-1.0	1.5	.6	2	3.0	6.2	3.5	4.5	4.8
2022	.4	.7	.7	.7	1	1	.7	1	.1	1			4.8	5.2	2.1		
IP (2017=100)																	
IF (2017=100) 2020	100.9	101.4	97.5	84.3	85.8	91.3	94.8	95.7	95.6	96.3	96.6	97.6	99.9	87.1	95.3	96.8	94.8
2020	98.7	95.6	98.2	98.4	99.1	99.5	100.2	100.2	99.1	100.6	101.2	101.0	97.5	99.0	99.8	100.9	99.3
2022	101.4	102.2	102.8	103.6	103.5	103.3	104.0	103.9	104.0	103.9			102.1	103.4	104.0		
Capacity (percent of 2017 output)	121.1	121.0	121.0	121.0	121.1	121.0	120.0	120 7	120.5	120.2	120.0	100.7	121.0	121.1	120.7	120.0	120 7
2020 2021	131.1 129.4	131.2 129.1	131.2 128.9	131.2 128.6	131.1 128.4	131.0 128.3	130.9 128.2	130.7 128.1	130.5 128.1	130.2 128.2	129.9 128.3	129.7 128.4	131.2 129.1	131.1 128.5	130.7 128.2	129.9 128.3	130.7 128.5
2021	129.4	129.1	128.9	128.0	128.4	128.3	128.2	128.1	128.1	128.2	120.3	120.4	129.1	128.5	128.2	120.5	120.5
2022	12010	12017	1200	12010	12/12	12/11	12/10	12/1/	12/1/	10010			12017	12/12	12/1/		
Utilization																	
(percent)																	
2000	81.6	81.5	81.5	81.7	81.6	81.4	80.9	80.5	80.6	80.1	79.9	79.4	81.6	81.6	80.7	79.8	80.9
2001 2002	78.9 75.3	78.3 75.1	78.0 75.6	77.7 75.9	77.2 76.2	76.8 76.8	76.4 76.8	76.3 76.6	75.7 76.7	75.4 76.5	74.9 77.0	74.7 76.6	78.4 75.3	77.3 76.3	76.1 76.7	75.0 76.7	76.7 76.3
2002	77.2	77.2	77.0	76.5	76.4	76.4	76.7	76.5	76.9	77.0	77.5	77.5	77.2	76.4	76.7	77.3	76.9
2004	77.6	78.0	77.7	78.1	78.7	78.1	78.7	78.8	78.8	79.6	79.7	80.3	77.8	78.3	78.8	79.9	78.7
2005	80.5	81.0	80.8	80.9	80.8	81.1	80.7	80.8	79.0	79.8	80.5	80.8	80.8	80.9	80.1	80.4	80.6
2006	80.8	80.6	80.7	80.8	80.6	80.7	80.5	80.6	80.2	80.0	79.8	80.5	80.7	80.7	80.4	80.1	80.5
2007 2008	80.0 81.1	80.6 80.8	80.5 80.5	80.9 79.9	80.9 79.4	81.0 79.1	80.9 78.8	81.0 77.5	81.2 73.9	80.8 74.7	81.3 73.7	81.2 71.7	80.4 80.8	80.9 79.5	81.0 76.7	81.1 73.4	80.9 77.6
	01.1		67.9	67.3	66.5	66.3	67.1	67.9	68.5	68.8	69.2	69.5	69.0	66.7	67.8	69.2	68.2
2009	69.7	69.2			00.5	00.5	07.1	01.9	00.5	00.0	09.2	09.5	09.0	00.7	07.0	09.2	00.2
2009	69.7	69.2	07.9	07.5													
2009 2010	69.7 70.4	69.2 70.7	71.4	71.8	73.0	73.3	73.7	74.1	74.5	74.3	74.4	75.2	70.8	72.7	74.1	74.7	73.1
2010 2011	70.4 75.1	70.7 74.8	71.4 75.7	71.8 75.4	73.0 75.5	75.7	73.7 76.0	74.1 76.4	74.5 76.3	76.8	76.7	76.9	75.2	75.5	76.2	74.7 76.8	75.9
2010 2011 2012	70.4 75.1 77.3	70.7 74.8 77.3	71.4 75.7 76.8	71.8 75.4 77.2	73.0 75.5 77.2	75.7 77.0	76.0 77.1	76.4 76.7	76.3 76.5	76.8 76.6	76.7 76.9	76.9 77.0	75.2 77.1	75.5 77.1	76.2 76.8	76.8 76.8	75.9 77.0
2010 2011 2012 2013	70.4 75.1 77.3 76.9	70.7 74.8 77.3 77.2	71.4 75.7 76.8 77.4	71.8 75.4 77.2 77.2	73.0 75.5 77.2 77.2	75.7 77.0 77.3	76.0 77.1 77.0	76.4 76.7 77.4	76.3 76.5 77.7	76.8 76.6 77.6	76.7 76.9 77.7	76.9 77.0 77.9	75.2 77.1 77.2	75.5 77.1 77.3	76.2 76.8 77.4	76.8 76.8 77.7	75.9 77.0 77.4
2010 2011 2012	70.4 75.1 77.3	70.7 74.8 77.3	71.4 75.7 76.8	71.8 75.4 77.2	73.0 75.5 77.2	75.7 77.0	76.0 77.1	76.4 76.7	76.3 76.5	76.8 76.6	76.7 76.9	76.9 77.0	75.2 77.1	75.5 77.1	76.2 76.8	76.8 76.8	75.9 77.0
2010 2011 2012 2013 2014	70.4 75.1 77.3 76.9 77.5	70.7 74.8 77.3 77.2 78.1	71.4 75.7 76.8 77.4 78.8	71.8 75.4 77.2 77.2 78.7	73.0 75.5 77.2 77.2 79.0	75.7 77.0 77.3 79.2	76.0 77.1 77.0 79.3	76.4 76.7 77.4 79.1	76.3 76.5 77.7 79.2	76.8 76.6 77.6 79.1	76.7 76.9 77.7 79.6	76.9 77.0 77.9 79.5	75.2 77.1 77.2 78.1	75.5 77.1 77.3 79.0	76.2 76.8 77.4 79.2	76.8 76.8 77.7 79.4	75.9 77.0 77.4 78.9
2010 2011 2012 2013 2014 2015	70.4 75.1 77.3 76.9 77.5 78.8	70.7 74.8 77.3 77.2 78.1 78.3	71.4 75.7 76.8 77.4 78.8 77.9	71.8 75.4 77.2 77.2 78.7 77.4	73.0 75.5 77.2 77.2 79.0 77.1	75.7 77.0 77.3 79.2 76.8	76.0 77.1 77.0 79.3 77.3	76.4 76.7 77.4 79.1 77.2	76.3 76.5 77.7 79.2 77.0	76.8 76.6 77.6 79.1 76.6	76.7 76.9 77.7 79.6 76.1	76.9 77.0 77.9 79.5 75.7	75.2 77.1 77.2 78.1 78.3	75.5 77.1 77.3 79.0 77.1	76.2 76.8 77.4 79.2 77.2	76.8 76.8 77.7 79.4 76.1	75.9 77.0 77.4 78.9 77.2
2010 2011 2012 2013 2014	70.4 75.1 77.3 76.9 77.5	70.7 74.8 77.3 77.2 78.1	71.4 75.7 76.8 77.4 78.8	71.8 75.4 77.2 77.2 78.7	73.0 75.5 77.2 77.2 79.0	75.7 77.0 77.3 79.2	76.0 77.1 77.0 79.3	76.4 76.7 77.4 79.1	76.3 76.5 77.7 79.2	76.8 76.6 77.6 79.1	76.7 76.9 77.7 79.6	76.9 77.0 77.9 79.5	75.2 77.1 77.2 78.1	75.5 77.1 77.3 79.0	76.2 76.8 77.4 79.2	76.8 76.8 77.7 79.4	75.9 77.0 77.4 78.9
2010 2011 2012 2013 2014 2015 2016	70.4 75.1 77.3 76.9 77.5 78.8 76.1	70.7 74.8 77.3 77.2 78.1 78.3 75.7	71.4 75.7 76.8 77.4 78.8 77.9 75.1	71.8 75.4 77.2 77.2 78.7 77.4 75.3	73.0 75.5 77.2 77.2 79.0 77.1 75.1	75.7 77.0 77.3 79.2 76.8 75.5	76.0 77.1 77.0 79.3 77.3 75.6	76.4 76.7 77.4 79.1 77.2 75.5	76.3 76.5 77.7 79.2 77.0 75.4	76.8 76.6 77.6 79.1 76.6 75.4	76.7 76.9 77.7 79.6 76.1 75.0	76.9 77.0 77.9 79.5 75.7 75.5	75.2 77.1 77.2 78.1 78.3 75.6	75.5 77.1 77.3 79.0 77.1 75.3	76.2 76.8 77.4 79.2 77.2 75.5	76.8 76.8 77.7 79.4 76.1 75.3	75.9 77.0 77.4 78.9 77.2 75.4
2010 2011 2012 2013 2014 2015 2016 2017	70.4 75.1 77.3 76.9 77.5 78.8 76.1 75.4	70.7 74.8 77.3 77.2 78.1 78.3 75.7 75.2	71.4 75.7 76.8 77.4 78.8 77.9 75.1 75.7	71.8 75.4 77.2 78.7 77.4 75.3 76.4	73.0 75.5 77.2 77.2 79.0 77.1 75.1 76.5	75.7 77.0 77.3 79.2 76.8 75.5 76.7	76.0 77.1 77.0 79.3 77.3 75.6 76.7	76.4 76.7 77.4 79.1 77.2 75.5 76.4	76.3 76.5 77.7 79.2 77.0 75.4 76.5	76.8 76.6 77.6 79.1 76.6 75.4 77.5	76.7 76.9 77.7 79.6 76.1 75.0 77.7	76.9 77.0 77.9 79.5 75.7 75.5 77.9	75.2 77.1 77.2 78.1 78.3 75.6 75.4	75.5 77.1 77.3 79.0 77.1 75.3 76.6	76.2 76.8 77.4 79.2 77.2 75.5 76.5	76.8 76.8 77.7 79.4 76.1 75.3 77.7	75.9 77.0 77.4 78.9 77.2 75.4 76.6
2010 2011 2012 2013 2014 2015 2016 2017 2018 2019	70.4 75.1 77.3 76.9 77.5 78.8 76.1 75.4 78.0 79.4	70.7 74.8 77.3 77.2 78.1 78.3 75.7 75.2 78.3 79.0	71.4 75.7 76.8 77.4 78.8 77.9 75.1 75.7 78.8 79.0	71.8 75.4 77.2 78.7 77.4 75.3 76.4 79.7 78.5	73.0 75.5 77.2 79.0 77.1 75.1 76.5 79.0 78.6	75.7 77.0 77.3 79.2 76.8 75.5 76.7 79.6 78.5	76.0 77.1 77.0 79.3 77.3 75.6 76.7 79.7 78.1	76.4 76.7 77.4 79.1 77.2 75.5 76.4 80.3 78.6	76.3 76.5 77.7 79.2 77.0 75.4 76.5 80.3 78.3	76.8 76.6 77.6 79.1 76.6 75.4 77.5 80.1 77.6	76.7 76.9 77.7 79.6 76.1 75.0 77.7 80.1 77.7	76.9 77.0 77.9 79.5 75.7 75.5 77.9 80.0 77.4	75.2 77.1 77.2 78.1 78.3 75.6 75.4 78.4 79.1	75.5 77.1 77.3 79.0 77.1 75.3 76.6 79.4 78.6	76.2 76.8 77.4 79.2 77.2 75.5 76.5 80.1 78.3	76.8 76.8 77.7 79.4 76.1 75.3 77.7 80.1 77.6	75.9 77.0 77.4 78.9 77.2 75.4 76.6 79.5 78.4
2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020	70.4 75.1 77.3 76.9 77.5 78.8 76.1 75.4 78.0 79.4 77.0	70.7 74.8 77.3 77.2 78.1 78.3 75.7 75.2 78.3 79.0 77.3	71.4 75.7 76.8 77.4 78.8 77.9 75.1 75.7 78.8 79.0 74.3	71.8 75.4 77.2 78.7 77.4 75.3 76.4 79.7 78.5 64.3	73.0 75.5 77.2 77.2 79.0 77.1 75.1 76.5 79.0 78.6 65.4	75.7 77.0 77.3 79.2 76.8 75.5 76.7 79.6 78.5 69.7	76.0 77.1 77.0 79.3 77.3 75.6 76.7 79.7 78.1 72.4	76.4 76.7 77.4 79.1 77.2 75.5 76.4 80.3 78.6 73.2	76.3 76.5 77.7 79.2 77.0 75.4 76.5 80.3 78.3 73.2	76.8 76.6 77.6 79.1 76.6 75.4 77.5 80.1 77.6 73.9	76.7 76.9 77.7 79.6 76.1 75.0 77.7 80.1 77.7 74.3	76.9 77.0 77.9 79.5 75.7 75.5 77.9 80.0 77.4 75.3	75.2 77.1 77.2 78.1 78.3 75.6 75.4 78.4 79.1 76.2	75.5 77.1 77.3 79.0 77.1 75.3 76.6 79.4 78.6 66.5	76.2 76.8 77.4 79.2 77.2 75.5 76.5 80.1 78.3 73.0	76.8 76.8 77.7 79.4 76.1 75.3 77.7 80.1 77.6 74.5	75.9 77.0 77.4 78.9 77.2 75.4 76.6 79.5 78.4 72.5
2010 2011 2012 2013 2014 2015 2016 2017 2018 2019	70.4 75.1 77.3 76.9 77.5 78.8 76.1 75.4 78.0 79.4	70.7 74.8 77.3 77.2 78.1 78.3 75.7 75.2 78.3 79.0	71.4 75.7 76.8 77.4 78.8 77.9 75.1 75.7 78.8 79.0	71.8 75.4 77.2 78.7 77.4 75.3 76.4 79.7 78.5	73.0 75.5 77.2 79.0 77.1 75.1 76.5 79.0 78.6	75.7 77.0 77.3 79.2 76.8 75.5 76.7 79.6 78.5	76.0 77.1 77.0 79.3 77.3 75.6 76.7 79.7 78.1	76.4 76.7 77.4 79.1 77.2 75.5 76.4 80.3 78.6	76.3 76.5 77.7 79.2 77.0 75.4 76.5 80.3 78.3	76.8 76.6 77.6 79.1 76.6 75.4 77.5 80.1 77.6	76.7 76.9 77.7 79.6 76.1 75.0 77.7 80.1 77.7	76.9 77.0 77.9 79.5 75.7 75.5 77.9 80.0 77.4	75.2 77.1 77.2 78.1 78.3 75.6 75.4 78.4 79.1	75.5 77.1 77.3 79.0 77.1 75.3 76.6 79.4 78.6	76.2 76.8 77.4 79.2 77.2 75.5 76.5 80.1 78.3	76.8 76.8 77.7 79.4 76.1 75.3 77.7 80.1 77.6	75.9 77.0 77.4 78.9 77.2 75.4 76.6 79.5 78.4

Table 13
HISTORICAL STATISTICS FOR INDUSTRIAL PRODUCTION, CAPACITY, AND UTILIZATION: Total Industry Excluding SelectedHigh-Technology Industries!
Seasonally adjustedVarIanLanFebMar.Apr.MayJuneJuneJulyAug.Sept.Oct.Nov.Dec.Q1Q2Q3Q4Annual

Selected high-technology industries are computers, communications equipment, and semiconductors and related electronic components.
 Quarterly percentage changes are at annual rates. Annual percentage changes are calculated from annual averages.

Year Image No. No.<	Seasonally adjusted		F 1							<u> </u>	0.1			01	0.2			
change?	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
2000 A -1 -3 -3 -4 -5 -5 -5 -5 -5 -7 -7 -8 -8 -8 -8 -8 -8 -8 -8 -8 -8 -8 -4 -4 -7 2001 -2 -7 -1 -3 -7 -7 -9 -1 -1 -7 -8 -9 -1 -7 -8 -9 -1 -7 -8 -9 -7 -7 -9 -1 -7 -1 -9 -1 -7 1 -9 -1 -7 -1 -4 -4 -2 -4 -4 -3 -1 -7 -4 -4 -2 -4 -4 -3 -4 -2 -2 -4 -4 -3 -1 -0 -4 -2 -2 -4 -4 -5 -1 -1 -2 -2 -4 -4 -5 -1 -1 -2 <t< td=""><td>IP (percent</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<>	IP (percent																	
1010 .5 .7 .3 .2 .4 .4 .5 .3 .1 .6 .4 .4 .5 .3 .1 .4 .4 .5 .3 .5 .5 .4 .1 .3 .5 .5 .4 .1 .3 .3 .5 .4 .3 .2 .1 .1 .3 .3 .4 .1 .1 .3 .3 .4 .4 .3 .3 .4 .4 .5 .4 .1 .3 .3 .4 .4 .5 .4 .1 .3 .4 .4 .5 .4 .3 .4 .4 .5 .4 .1 .3 .4 .4 .5 .4 .1 .3 .4 .4 .5 .4 .3 .4 .3 .4 .4 .3 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .				2	2		0	2		2	-		0	-	0	2.0	1.0	
2002 8 -4 2 7 7 3 5 10 -2 7 7 1 8 -4 0 0 -4 4 -7 7 1 8 -45 2 2 10 0 2005 5 8 -4 3 1 -7 7 1 15 13 20 15 14 4 15 14 15 14 15 14 15 16 14 15 14 15 14 15 14 15 14 15 14 15 14 15 14 15 14 15 14 15 14 15 14 15 15 14 16 14 15 15 14 15 15 14 15 15 14 15 15 16 15 15 14 14 14 14 14 14 15 15 1																		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$																		
1000 8 -4 -1 3 -4 2 -4 -6 -1 -5 0 15 22 -2 -1 -6 1.1 2007 -3 -9 -6 -1 -7 -10 1.1 -1.2 -3 3.2 -2 -3 -4 -3 -4 -3 -4 -3 -4 -4 -3 -4 -4 -4 -3 -4 -4 -3 -4 -4 -3 -4 -2 -4 -4 -2 -4 -3 -3 -7 -4 -3 -3 -3 -5 -4 -5 1 -5 -4 -5 -3 -7 -4 -3 -1 -7 -4 4 -1 -5 -5 -4 -5 -1 -7 -3 1 -3 -3 -5 -5 -7 -7 -1 -4 -4 -1 -7 -7 -1 -	2004	2	.7	1	.4	.7	7	.9	.4	1	.9	1	.7	1.5	3.2	3.8	4.8	2.0
1000 8 -4 -1 3 -4 2 -4 0 -1 -5 0 15 2 2 -1 6 15 2007 -3 -9 -6 -11 -7 -7 -10 -13 -3 3 2 -3 2 -4 -4 3 -3 2 -3 14 -4 3 -3 2 -3 -4 3 -10 -4 23 -3 2 -4 3 -1 -4 1 -4 3 -1 -1 -4 3 -1 -1 -4 -3 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -3 <	2005	5	0	6	2	2	1	5	4	1.2	1.2	0	0	5 1	1.4	2.0	47	2.1
2007 -5 2 6 4 0 5 0 -4 1 -4 3 0 3.5 4.4 3.5 1.4 3.5 1.4 3.5 1.4 3.5 1.4 1.0 1.5 1.1 1.0 1.0 1.5 2.4 1.0 1.0 1.0 2.2 2.4 1.1 9.9 1.4 3.5 1.4 0.0 0.0 3.5 3.4 9.0 4.3 3.5 1.4 0.0 0.0 3.5 3.4 9.0 3.5 4.7 0.1 1.7 4.4 3.5 4.6 2.2 2.4 3.5 4.7 0.7 2.4 4.4 3.1 0.8 3.5 <td></td>																		
2009 3.3 -2 2.0 -8 -1.2 -3 1.6 1.1 1.0 0.0 1.0 -2 2.46 11.6 8.6 6.4 11.9 2010 9 -3 1.2 8 1.3 0 5 1 0 0 0 3.3 5.3 9.6 2.3 2.5 5.1 2011 3 3 -6 5 -2 2.7 3 5 7.7 0 -1 7.5 2.4 3.4 3.5 2.7 0 -1 7.5 2.4 3 5 7.7 0 -1 7.5 2.4 3 5 7.7 0 -1 7.5 7.5 1.6 0 1.1 0 -3 -2 2.7 -2.1 1.1 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4 <td< td=""><td></td><td></td><td>.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>4.4</td><td></td><td></td><td></td></td<>			.2												4.4			
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$																		
101 0 2 7 -6 5 -4 2 -2 -2 -3 -3 -3 7 7 4 3 -3	2009	-3.3	2	-2.0	8	-1.2	3	1.6	1.1	1.0	.0	1.0	2	-24.6	-11.6	8.6	6.4	-13.9
2012 9 3 -6 5 -4 2 -2 -1 -3 -3 7 7 49 -2 2.5 6 2.3 2014 -1.1 9 -8 -1 2 3 5 -7 0 -1 7 -2 -1.4 4.3 1.5 0.5 3 5 7 0 -1 7 -2 -1.4 4.3 1.5 0 3 2 3.4 1.5 0.5 1.1 4.6 -3 -2 0 1.1 0 -3 -2 3.4 1.0 2.3 2.4 1.1 1.0 -3 -2 2.3 2.1 3.4 1.0 2.1 3.4 1.0 2.1 3.4 1.0 2.1 3.4 1.0 2.1 1.1 1.1 -3 3.4 1.1 2.2 2.2 1.2 4.4 3.5 5.5 5 5 1.2 2.2 1.2 4.4	2010	.9	3	1.2	.8	1.3	.0	.5	.1	.0	.0	.0	.3	5.3	9.6	3.8	.7	5.1
2014 -1.1 9 8 1 2.2 3 5 7 0 1 7 2 -1.4 4.3 1.5 0 8 2015 6 8 1 2 1 2.1 2.1 4.1 1.1 1 3 3.2 2.8 -2.1 3.4 3.3 3 3 2.2 2.8 -2.1 3.4 3.3 3 3 3 3 3 3 2 2.8 1 2 1.1 3 3 3 3 3 3 3 3 3 3 3 3 4 4 8.4 4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .5 .7 .5 .1 .2 .2 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 <td></td>																		
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$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$			5	1				7	.6	7	8		1	-4.8	-2.8			
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	2020	0	2	_1 5	-157	15	76	27	1.6	0	1.0	5	2	_1 8	-44.2	547	Q /	-6.6
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$																		
2020 98.2 98.2 98.1 99.3 92.4 93.9 93.9 93.9 93.7 96.6 83.8 93.4 95.7 96.9 83.8 93.4 95.1 95.7 96.9 83.8 93.4 95.1 95.8 97.0 97.8 99.1 97.4 97.4 97.4 97.4 97.8 99.1 97.4 97.4 97.4 97.8 99.1 97.4 17.7 127.3 127.3 127.3 127.3 127.3 127.3 127.3 127.3 127.3 127.3 127.3 127.3 <th127.3< th=""> <th127.3< th=""> <th127.3< th=""></th127.3<></th127.3<></th127.3<>																		
2020 98.2 98.2 98.1 99.3 92.4 93.9 93.9 93.9 93.7 96.6 83.8 93.4 95.7 96.9 83.8 93.4 95.1 95.7 96.9 83.8 93.4 95.1 95.8 97.0 97.8 99.1 97.4 97.4 97.4 97.4 97.8 99.1 97.4 97.4 97.4 97.8 99.1 97.4 17.7 127.3 127.3 127.3 127.3 127.3 127.3 127.3 127.3 127.3 127.3 127.3 127.3 <th127.3< th=""> <th127.3< th=""> <th127.3< th=""></th127.3<></th127.3<></th127.3<>	ID $(2017 - 100)$																ſ	
2021 97.2 93.7 96.6 96.4 97.2 98.8 97.2 98.8 99.3 99.2 95.8 97.0 97.8 99.1 97.4 2022 99.0 100.2 101.0 101.4 100.9 100.2 100.7 100.8 101.1 101.2 100.1 100.8 100.9 99.1 97.4 (precent) of 2017 output) 128.3 128.2 128.1 128.0 127.9 127.8 127.0 126.6 126.7 126.5 126.6 126.7 126.5 126.6 126.7 126.5 126.6 126.7 126.5 126.6 126.7 126.5 126.8 126.9 127.0 127.1 127.1 127.2 126.8 126.6 126.4 126.5 126.8 126.9 127.0 127.1 127.4 126.3 126.6 126.4 126.5 126.8 126.9 127.0 127.1 127.5 126.5 126.8 126.9 127.0 127.1 127.5 126.5 126.5 </td <td>· · · · · ·</td> <td>98.2</td> <td>98.5</td> <td>94 1</td> <td>793</td> <td>82.9</td> <td>89.2</td> <td>92.4</td> <td>93.9</td> <td>93.9</td> <td>94 9</td> <td>954</td> <td>957</td> <td>96.9</td> <td>83.8</td> <td>93.4</td> <td>953</td> <td>92.4</td>	· · · · · ·	98.2	98.5	94 1	793	82.9	89.2	92.4	93.9	93.9	94 9	954	957	96.9	83.8	93.4	953	92.4
Capacity (pr:cent) of 2017 output) Figure 128.3 128.2 128.1 128.0 127.9 127.8 127.7 127.6 127.4 127.3 127.2 128.2 128.0 127.7 127.8 127.7 127.6 127.4 127.3 127.2 128.2 128.0 127.7 127.8 127.7 127.6 126.4 <td></td>																		
(prement of 2017 output) (prement of 2017 output) (premen	2022	99.0	100.2	101.0	101.4	100.9	100.2	100.7	100.8	101.1	101.2			100.1	100.8	100.9		
(prement of 2017 output) (prement of 2017 output) (premen																		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Capacity																	
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2022 126.4 126.5 126.6 126.7 126.8 126.9 127.0 127.1 127.2 126.5 126.8 127.0 127.1 127.2 126.5 126.8 127.0 127.1 127.2 126.5 126.8 127.0 127.1 127.2 127.1 127.2 127.1 127.2 126.5 126.8 127.0 127.1 127.2 126.5 126.8 127.0 127.1 127.2 126.5 126.8 127.0 127.0 127.1 127.2 126.5 126.8 127.0 126.5 126.8 127.0 127.1 127.2 127.1 127.2 127.5 127.5 126.5 126.8 127.0 127.1 127.2 127.5 126.5 126.8 127.0 126.5 126.8 127.0 126.5 126.8 127.0 126.5 126.8 127.0 126.5 126.8 127.0 127.1 127.5 127.5 127.5 126.7 126.8 127.0 126.7 126.8 127.0	(percent of 2017 output)	100.0	120.2	120.2	120.1	120.0	127.0	107.0	107.7	107.(107.4	107.2	107.0	120.2	120.0	107.7	107.0	107.0
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	(percent of 2017 output) 2020																	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	(percent of 2017 output) 2020 2021	127.0	126.9	126.8	126.7	126.5	126.5	126.4	126.4	126.3	126.3			126.9	126.6	126.4		
2000 80.0 79.8 79.9 80.1 79.6 79.5 79.1 78.3 78.5 78.0 77.4 76.7 79.9 79.7 78.6 77.4 78.9 2001 73.3 73.2 73.7 73.7 73.7 73.3 73.0 72.7 72.8 75.8 74.4 75.0 74.8 75.2 74.8 75.2 74.4 75.0 74.8 75.2 74.8 75.2 74.7 73.4 74.4 75.4 74.7 74.8 75.0 75.0 75.0 75.0 75.0 75.2 74.5 74.7 75.4 74.4 74.7 74.8 75.0 75.0 75.0 75.2 74.5 74.7 74.8 74.3 77.0 77.6 75.2 74.5 74.7 75.4 76.0 76.0 76.0 76.4 77.2 77.5 77.5 78.2 78.1 78.6 78.4 78.9 79.2 78.4 78.0 78.4 78.0 79.1 78	(percent of 2017 output) 2020 2021 2022	127.0	126.9	126.8	126.7	126.5	126.5	126.4	126.4	126.3	126.3			126.9	126.6	126.4		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	(percent of 2017 output) 2020 2021 2022 Utilization	127.0	126.9	126.8	126.7	126.5	126.5	126.4	126.4	126.3	126.3			126.9	126.6	126.4		
200375.375.175.174.574.474.774.874.375.075.075.675.575.274.574.775.474.9200475.476.076.076.376.976.477.277.577.578.278.178.675.876.677.478.377.0200579.079.579.079.179.279.279.279.278.778.977.778.679.279.079.278.479.078.9200679.579.178.979.178.678.778.278.678.477.977.878.978.979.278.479.078.9200678.575.575.675.576.676.175.574.873.978.978.978.679.379.178.878.7200778.478.578.979.279.179.479.479.079.178.778.978.978.679.379.178.874.774.874.2200965.365.364.063.663.063.064.164.965.765.866.566.664.963.264.963.364.8201067.367.368.268.969.970.170.570.770.971.171.271.667.669.670.771.369.8201171.875.074.675.0 <td>(percent of 2017 output) 2020 2021 2022 Utilization (percent)</td> <td>127.0 126.4</td> <td>126.9 126.5</td> <td>126.8 126.6</td> <td>126.7 126.7</td> <td>126.5 126.8</td> <td>126.5 126.8</td> <td>126.4 126.9</td> <td>126.4 127.0</td> <td>126.3 127.1</td> <td>126.3 127.2</td> <td>126.4</td> <td>126.4</td> <td>126.9 126.5</td> <td>126.6 126.8</td> <td>126.4 127.0</td> <td>126.4</td> <td>126.5</td>	(percent of 2017 output) 2020 2021 2022 Utilization (percent)	127.0 126.4	126.9 126.5	126.8 126.6	126.7 126.7	126.5 126.8	126.5 126.8	126.4 126.9	126.4 127.0	126.3 127.1	126.3 127.2	126.4	126.4	126.9 126.5	126.6 126.8	126.4 127.0	126.4	126.5
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001	127.0 126.4 80.0 76.2	126.9 126.5 79.8 75.7	126.8 126.6 79.9 75.4	126.7 126.7 80.1 75.1	126.5 126.8 79.6 74.7	126.5 126.8 79.5 74.3	126.4 126.9 79.1 74.0	126.4 127.0 78.3 73.7	126.3 127.1 78.5 73.3	126.3 127.2 78.0 73.0	126.4 77.4 72.7	126.4 76.7 72.8	126.9 126.5 79.9 75.8	126.6 126.8 79.7 74.7	126.4 127.0 78.6 73.7	126.4 77.4 72.8	126.5 78.9 74.2
2005 79.0 79.5 79.0 79.1 79.2 78.7 78.9 77.7 78.6 79.2 79.2 78.4 78.9 78.7 78.9 77.7 78.6 78.9 79.2 78.8 78.4 78.9 79.1 78.6 78.7 78.2 78.6 78.4 77.7 78.6 78.9 79.2 78.8 78.4 78.2 78.6 78.4 77.7 78.6 78.9 79.2 78.8 78.4 78.2 78.7 78.9 78.9 79.2 78.8 78.4 78.2 78.7 78.9 78.9 79.2 78.6 79.3 79.1 78.8 78.7 78.9 78.9 78.6 79.3 79.1 78.8 78.7 78.9 78.9 78.6 79.3 79.1 78.8 78.9 79.2 78.8 78.8 78.9 78.9 78.9 78.9 78.9 78.9 78.9 78.9 78.9 78.9 78.9 78.9 78.9 78.9 <th< td=""><td>(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2002</td><td>127.0 126.4 80.0 76.2 73.3</td><td>126.9 126.5 79.8 75.7 73.2</td><td>126.8 126.6 79.9 75.4 73.7</td><td>126.7 126.7 80.1 75.1 73.9</td><td>126.5 126.8 79.6 74.7 74.3</td><td>126.5 126.8 79.5 74.3 75.0</td><td>126.4 126.9 79.1 74.0 74.9</td><td>126.4 127.0 78.3 73.7 75.0</td><td>126.3 127.1 78.5 73.3 75.0</td><td>126.3 127.2 78.0 73.0 74.8</td><td>126.4 77.4 72.7 75.2</td><td>126.4 76.7 72.8 74.7</td><td>126.9 126.5 79.9 75.8 73.4</td><td>126.6 126.8 79.7 74.7 74.4</td><td>126.4 127.0 78.6 73.7 75.0</td><td>126.4 77.4 72.8 74.9</td><td>126.5 78.9 74.2 74.4</td></th<>	(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2002	127.0 126.4 80.0 76.2 73.3	126.9 126.5 79.8 75.7 73.2	126.8 126.6 79.9 75.4 73.7	126.7 126.7 80.1 75.1 73.9	126.5 126.8 79.6 74.7 74.3	126.5 126.8 79.5 74.3 75.0	126.4 126.9 79.1 74.0 74.9	126.4 127.0 78.3 73.7 75.0	126.3 127.1 78.5 73.3 75.0	126.3 127.2 78.0 73.0 74.8	126.4 77.4 72.7 75.2	126.4 76.7 72.8 74.7	126.9 126.5 79.9 75.8 73.4	126.6 126.8 79.7 74.7 74.4	126.4 127.0 78.6 73.7 75.0	126.4 77.4 72.8 74.9	126.5 78.9 74.2 74.4
2006 79.5 79.1 78.9 79.1 78.6 78.7 78.2 78.6 78.4 77.9 77.8 78.9 79.2 78.8 78.4 78.5 78.9 79.2 79.1 78.4 78.7 78.9 78.9 78.6 79.3 79.1 78.8 79.0 79.1 78.7 78.9 78.9 78.6 79.3 79.1 78.8 79.0 2008 78.6 77.9 77.4 76.6 76.1 75.5 74.8 73.9 71.4 71.1 69.6 67.4 78.0 76.1 73.4 69.4 74.2 2009 65.3 64.0 63.6 63.0 63.0 64.1 64.9 65.7 65.8 66.5 66.6 64.9 63.2 64.9 66.3 64.8 2010 67.3 68.2 68.9 69.9 70.1 70.5 70.7 70.9 71.1 71.2 71.6 67.6 64.7 73.3 74.0 73.0 <td>(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2000 2001 2002 2003</td> <td>127.0 126.4 80.0 76.2 73.3 75.3</td> <td>126.9 126.5 79.8 75.7 73.2 75.1</td> <td>126.8 126.6 79.9 75.4 73.7 75.1</td> <td>126.7 126.7 80.1 75.1 73.9 74.5</td> <td>126.5 126.8 79.6 74.7 74.3 74.4</td> <td>126.5 126.8 79.5 74.3 75.0 74.7</td> <td>126.4 126.9 79.1 74.0 74.9 74.8</td> <td>126.4 127.0 78.3 73.7 75.0 74.3</td> <td>126.3 127.1 78.5 73.3 75.0 75.0</td> <td>126.3 127.2 78.0 73.0 74.8 75.0</td> <td>77.4 72.7 75.2 75.6</td> <td>76.7 72.8 74.7 75.5</td> <td>126.9 126.5 79.9 75.8 73.4 75.2</td> <td>126.6 126.8 79.7 74.7 74.4 74.5</td> <td>126.4 127.0 78.6 73.7 75.0 74.7</td> <td>77.4 72.8 74.9 75.4</td> <td>78.9 74.2 74.4 74.9</td>	(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2000 2001 2002 2003	127.0 126.4 80.0 76.2 73.3 75.3	126.9 126.5 79.8 75.7 73.2 75.1	126.8 126.6 79.9 75.4 73.7 75.1	126.7 126.7 80.1 75.1 73.9 74.5	126.5 126.8 79.6 74.7 74.3 74.4	126.5 126.8 79.5 74.3 75.0 74.7	126.4 126.9 79.1 74.0 74.9 74.8	126.4 127.0 78.3 73.7 75.0 74.3	126.3 127.1 78.5 73.3 75.0 75.0	126.3 127.2 78.0 73.0 74.8 75.0	77.4 72.7 75.2 75.6	76.7 72.8 74.7 75.5	126.9 126.5 79.9 75.8 73.4 75.2	126.6 126.8 79.7 74.7 74.4 74.5	126.4 127.0 78.6 73.7 75.0 74.7	77.4 72.8 74.9 75.4	78.9 74.2 74.4 74.9
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2002 2003 2004	127.0 126.4 80.0 76.2 73.3 75.3 75.4	126.9 126.5 79.8 75.7 73.2 75.1 76.0	126.8 126.6 79.9 75.4 73.7 75.1 76.0	126.7 126.7 80.1 75.1 73.9 74.5 76.3	126.5 126.8 79.6 74.7 74.3 74.4 76.9	126.5 126.8 79.5 74.3 75.0 74.7 76.4	126.4 126.9 79.1 74.0 74.9 74.8 77.2	126.4 127.0 78.3 73.7 75.0 74.3 77.5	126.3 127.1 78.5 73.3 75.0 75.0 77.5	126.3 127.2 78.0 73.0 74.8 75.0 78.2	77.4 72.7 75.2 75.6 78.1	76.7 72.8 74.7 75.5 78.6	126.9 126.5 79.9 75.8 73.4 75.2 75.8	126.6 126.8 79.7 74.7 74.4 74.5 76.6	126.4 127.0 78.6 73.7 75.0 74.7 77.4	77.4 72.8 74.9 75.4 78.3	78.9 74.2 74.4 74.9 77.0
2008 78.6 77.9 77.4 76.6 76.1 75.5 74.8 73.9 71.4 71.1 69.6 67.4 78.0 76.1 73.4 69.4 74.2 2009 65.3 65.3 65.3 64.0 63.6 63.0 64.1 64.9 65.7 65.8 66.5 66.6 64.9 63.2 64.9 66.3 64.8 2010 67.3 67.3 68.2 68.9 69.9 70.1 70.5 70.7 70.9 71.1 71.2 71.6 67.6 69.6 70.7 71.3 69.8 2011 71.8 72.0 72.6 72.3 72.4 72.5 73.0 73.3 73.5 74.0 73.8 74.2 74.2 74.4 73.0 73.0 73.3 73.7 74.2 74.7 74.8 74.6 74.2 74.2 74.4 74.3 74.2 73.9 75.0 75.0 75.0 74.6 74.6 74.6 75.0 <td>(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2002 2003 2004 2005</td> <td>127.0 126.4 80.0 76.2 73.3 75.3 75.4 79.0</td> <td>126.9 126.5 79.8 75.7 73.2 75.1 76.0 79.5</td> <td>126.8 126.6 79.9 75.4 73.7 75.1 76.0 79.0</td> <td>126.7 126.7 80.1 75.1 73.9 74.5 76.3 79.1</td> <td>126.5 126.8 79.6 74.7 74.3 74.4 76.9 79.2</td> <td>126.5 126.8 79.5 74.3 75.0 74.7 76.4 79.2</td> <td>126.4 126.9 79.1 74.0 74.9 74.8 77.2 78.7</td> <td>126.4 127.0 78.3 73.7 75.0 74.3 77.5 78.9</td> <td>126.3 127.1 78.5 73.3 75.0 75.0 77.5 77.7</td> <td>126.3 127.2 78.0 73.0 74.8 75.0 78.2 78.6</td> <td>77.4 72.7 75.2 75.6 78.1 79.2</td> <td>76.7 72.8 74.7 75.5 78.6 79.0</td> <td>126.9 126.5 79.9 75.8 73.4 75.2 75.8 79.2</td> <td>126.6 126.8 79.7 74.7 74.4 74.5 76.6 79.2</td> <td>126.4 127.0 78.6 73.7 75.0 74.7 77.4 78.4</td> <td>126.4 77.4 72.8 74.9 75.4 78.3 79.0</td> <td>126.5 78.9 74.2 74.4 74.9 77.0 78.9</td>	(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2002 2003 2004 2005	127.0 126.4 80.0 76.2 73.3 75.3 75.4 79.0	126.9 126.5 79.8 75.7 73.2 75.1 76.0 79.5	126.8 126.6 79.9 75.4 73.7 75.1 76.0 79.0	126.7 126.7 80.1 75.1 73.9 74.5 76.3 79.1	126.5 126.8 79.6 74.7 74.3 74.4 76.9 79.2	126.5 126.8 79.5 74.3 75.0 74.7 76.4 79.2	126.4 126.9 79.1 74.0 74.9 74.8 77.2 78.7	126.4 127.0 78.3 73.7 75.0 74.3 77.5 78.9	126.3 127.1 78.5 73.3 75.0 75.0 77.5 77.7	126.3 127.2 78.0 73.0 74.8 75.0 78.2 78.6	77.4 72.7 75.2 75.6 78.1 79.2	76.7 72.8 74.7 75.5 78.6 79.0	126.9 126.5 79.9 75.8 73.4 75.2 75.8 79.2	126.6 126.8 79.7 74.7 74.4 74.5 76.6 79.2	126.4 127.0 78.6 73.7 75.0 74.7 77.4 78.4	126.4 77.4 72.8 74.9 75.4 78.3 79.0	126.5 78.9 74.2 74.4 74.9 77.0 78.9
2010 67.3 67.3 68.2 68.9 69.9 70.1 70.5 70.7 70.9 71.1 71.2 71.6 67.6 69.6 70.7 71.3 69.8 2011 71.8 72.0 72.6 72.3 72.4 72.5 73.0 73.3 73.5 74.0 73.8 74.2 72.1 72.4 73.3 74.0 73.8 74.2 72.1 72.4 73.3 74.0 73.0 73.0 73.3 73.5 74.0 73.8 74.2 72.1 72.4 73.3 74.0 73.0 2012 74.8 75.0 74.5 74.8 74.4 74.5 74.3 74.2 73.9 73.7 74.2 74.7 74.8 74.6 74.6 74.6 74.6 74.6 74.6 75.0 75.0 75.0 75.0 75.0 75.9 76.4 76.6 75.9 76.3 76.5 76.3 76.3 76.3 76.3 76.5 76.0 75.8<	(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2002 2003 2004 2005 2006	127.0 126.4 80.0 76.2 73.3 75.3 75.4 79.0 79.5	126.9 126.5 79.8 75.7 73.2 75.1 76.0 79.5 79.1	126.8 126.6 79.9 75.4 73.7 75.1 76.0 79.0 78.9	126.7 126.7 80.1 75.1 73.9 74.5 76.3 79.1 79.1	126.5 126.8 79.6 74.7 74.3 74.4 76.9 79.2 78.6	126.5 126.8 79.5 74.3 75.0 74.7 76.4 79.2 78.7	126.4 126.9 79.1 74.0 74.9 74.8 77.2 78.7 78.2	126.4 127.0 78.3 73.7 75.0 74.3 77.5 78.9 78.9 78.6	126.3 127.1 78.5 73.3 75.0 75.0 77.5 77.7 78.4	126.3 127.2 78.0 73.0 74.8 75.0 78.2 78.6 77.9	77.4 72.7 75.2 75.6 78.1 79.2 77.8	76.7 72.8 74.7 75.5 78.6 79.0 78.9	126.9 126.5 79.9 75.8 73.4 75.2 75.8 79.2 79.2	126.6 126.8 79.7 74.7 74.4 74.5 76.6 79.2 78.8	126.4 127.0 78.6 73.7 75.0 74.7 77.4 78.4 78.4	77.4 72.8 74.9 75.4 78.3 79.0 78.2	126.5 78.9 74.2 74.4 74.9 77.0 78.9 78.7
2011 71.8 72.0 72.6 72.3 72.4 72.5 73.0 73.3 73.5 74.0 73.8 74.2 72.1 72.4 73.3 74.0 73.0 2012 74.8 75.0 74.5 74.8 74.4 74.5 74.3 74.2 73.9 73.7 74.2 74.7 74.8 74.6 74.2 74.4 2013 74.4 74.8 74.7 74.4 74.6 74.8 74.1 74.8 74.9 75.0 75.0 75.0 75.0 74.6 74.6 74.6 75.0 75.9 2014 74.2 74.9 75.6 75.6 75.9 76.2 76.3 76.3 76.8 76.8 76.8 74.9 75.9 76.4 76.6 75.9 2015 76.4 75.9 76.3 76.4 76.1 76.8 76.5 76.3 76.2 76.3 76.5 76.0 75.8 75.5 75.4 75.6 75.5 75.4 75.6 75.5 75.4 75.6 75.5 75.4 75.6 <td< td=""><td>(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2002 2003 2004 2005 2006 2007</td><td>127.0 126.4 80.0 76.2 73.3 75.3 75.4 79.0 79.5 78.4</td><td>126.9 126.5 79.8 75.7 73.2 75.1 76.0 79.5 79.1 78.5</td><td>126.8 126.6 79.9 75.4 73.7 75.1 76.0 79.0 78.9 78.9</td><td>126.7 126.7 80.1 75.1 73.9 74.5 76.3 79.1 79.1 79.2</td><td>126.5 126.8 79.6 74.7 74.3 74.4 76.9 79.2 78.6 79.1</td><td>126.5 126.8 79.5 74.3 75.0 74.7 76.4 79.2 78.7 79.4</td><td>126.4 126.9 79.1 74.0 74.9 74.8 77.2 78.7 78.2 79.4</td><td>126.4 127.0 78.3 73.7 75.0 74.3 77.5 78.9 78.9 78.6 79.0</td><td>126.3 127.1 78.5 73.3 75.0 75.0 77.5 77.7 78.4 79.1</td><td>126.3 127.2 78.0 73.0 74.8 75.0 78.2 78.6 77.9 78.7</td><td>126.4 77.4 72.7 75.2 75.6 78.1 79.2 77.8 78.9</td><td>76.7 72.8 74.7 75.5 78.6 79.0 78.9 78.9</td><td>126.9 126.5 79.9 75.8 73.4 75.2 75.8 79.2 79.2 78.6</td><td>126.6 126.8 79.7 74.7 74.7 74.4 74.5 76.6 79.2 78.8 79.3</td><td>126.4 127.0 78.6 73.7 75.0 74.7 77.4 78.4 78.4 78.4 79.1</td><td>77.4 72.8 74.9 75.4 78.3 79.0 78.2 78.8</td><td>126.5 78.9 74.2 74.4 74.9 77.0 78.9 78.7 79.0</td></td<>	(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2002 2003 2004 2005 2006 2007	127.0 126.4 80.0 76.2 73.3 75.3 75.4 79.0 79.5 78.4	126.9 126.5 79.8 75.7 73.2 75.1 76.0 79.5 79.1 78.5	126.8 126.6 79.9 75.4 73.7 75.1 76.0 79.0 78.9 78.9	126.7 126.7 80.1 75.1 73.9 74.5 76.3 79.1 79.1 79.2	126.5 126.8 79.6 74.7 74.3 74.4 76.9 79.2 78.6 79.1	126.5 126.8 79.5 74.3 75.0 74.7 76.4 79.2 78.7 79.4	126.4 126.9 79.1 74.0 74.9 74.8 77.2 78.7 78.2 79.4	126.4 127.0 78.3 73.7 75.0 74.3 77.5 78.9 78.9 78.6 79.0	126.3 127.1 78.5 73.3 75.0 75.0 77.5 77.7 78.4 79.1	126.3 127.2 78.0 73.0 74.8 75.0 78.2 78.6 77.9 78.7	126.4 77.4 72.7 75.2 75.6 78.1 79.2 77.8 78.9	76.7 72.8 74.7 75.5 78.6 79.0 78.9 78.9	126.9 126.5 79.9 75.8 73.4 75.2 75.8 79.2 79.2 78.6	126.6 126.8 79.7 74.7 74.7 74.4 74.5 76.6 79.2 78.8 79.3	126.4 127.0 78.6 73.7 75.0 74.7 77.4 78.4 78.4 78.4 79.1	77.4 72.8 74.9 75.4 78.3 79.0 78.2 78.8	126.5 78.9 74.2 74.4 74.9 77.0 78.9 78.7 79.0
2011 71.8 72.0 72.6 72.3 72.4 72.5 73.0 73.3 73.5 74.0 73.8 74.2 72.1 72.4 73.3 74.0 73.0 2012 74.8 75.0 74.5 74.8 74.4 74.5 74.3 74.2 73.9 73.7 74.2 74.7 74.8 74.6 74.2 74.4 2013 74.4 74.8 74.7 74.4 74.6 74.8 74.1 74.8 74.9 75.0 75.0 75.0 75.0 74.6 74.6 74.6 75.0 75.9 2014 74.2 74.9 75.6 75.6 75.9 76.2 76.3 76.3 76.8 76.8 76.8 74.9 75.9 76.4 76.6 75.9 2015 76.4 75.9 76.3 76.4 76.1 76.8 76.5 76.3 76.2 76.3 76.5 76.0 75.8 75.5 75.4 75.6 75.5 75.4 75.6 75.5 75.4 75.6 75.5 75.4 75.6 <td< td=""><td>(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2002 2003 2004 2005 2006 2007 2008</td><td>127.0 126.4 80.0 76.2 73.3 75.3 75.4 79.0 79.5 78.4 78.6</td><td>126.9 126.5 79.8 75.7 73.2 75.1 76.0 79.5 79.1 78.5 77.9</td><td>126.8 126.6 79.9 75.4 73.7 75.1 76.0 79.0 78.9 78.9 77.4</td><td>126.7 126.7 80.1 75.1 73.9 74.5 76.3 79.1 79.1 79.2 76.6</td><td>126.5 126.8 79.6 74.7 74.3 74.4 76.9 79.2 78.6 79.1 76.1</td><td>126.5 126.8 79.5 74.3 75.0 74.7 76.4 79.2 78.7 79.4 75.5</td><td>126.4 126.9 79.1 74.0 74.9 74.8 77.2 78.7 78.2 79.4 74.8</td><td>126.4 127.0 78.3 73.7 75.0 74.3 77.5 78.9 78.6 79.0 73.9</td><td>126.3 127.1 78.5 73.3 75.0 75.0 77.5 77.7 78.4 79.1 71.4</td><td>126.3 127.2 78.0 73.0 74.8 75.0 78.2 78.6 77.9 78.7 71.1</td><td>126.4 77.4 72.7 75.2 75.6 78.1 79.2 77.8 78.9 69.6</td><td>76.7 72.8 74.7 75.5 78.6 79.0 78.9 67.4</td><td>126.9 126.5 79.9 75.8 73.4 75.2 75.8 79.2 79.2 78.6 78.0</td><td>126.6 126.8 79.7 74.7 74.4 74.5 76.6 79.2 78.8 79.3 76.1</td><td>126.4 127.0 78.6 73.7 75.0 74.7 77.4 78.4 78.4 78.4 79.1 73.4</td><td>126.4 77.4 72.8 74.9 75.4 78.3 79.0 78.2 78.8 69.4</td><td>126.5 78.9 74.2 74.4 74.9 77.0 78.9 78.7 79.0 74.2</td></td<>	(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2002 2003 2004 2005 2006 2007 2008	127.0 126.4 80.0 76.2 73.3 75.3 75.4 79.0 79.5 78.4 78.6	126.9 126.5 79.8 75.7 73.2 75.1 76.0 79.5 79.1 78.5 77.9	126.8 126.6 79.9 75.4 73.7 75.1 76.0 79.0 78.9 78.9 77.4	126.7 126.7 80.1 75.1 73.9 74.5 76.3 79.1 79.1 79.2 76.6	126.5 126.8 79.6 74.7 74.3 74.4 76.9 79.2 78.6 79.1 76.1	126.5 126.8 79.5 74.3 75.0 74.7 76.4 79.2 78.7 79.4 75.5	126.4 126.9 79.1 74.0 74.9 74.8 77.2 78.7 78.2 79.4 74.8	126.4 127.0 78.3 73.7 75.0 74.3 77.5 78.9 78.6 79.0 73.9	126.3 127.1 78.5 73.3 75.0 75.0 77.5 77.7 78.4 79.1 71.4	126.3 127.2 78.0 73.0 74.8 75.0 78.2 78.6 77.9 78.7 71.1	126.4 77.4 72.7 75.2 75.6 78.1 79.2 77.8 78.9 69.6	76.7 72.8 74.7 75.5 78.6 79.0 78.9 67.4	126.9 126.5 79.9 75.8 73.4 75.2 75.8 79.2 79.2 78.6 78.0	126.6 126.8 79.7 74.7 74.4 74.5 76.6 79.2 78.8 79.3 76.1	126.4 127.0 78.6 73.7 75.0 74.7 77.4 78.4 78.4 78.4 79.1 73.4	126.4 77.4 72.8 74.9 75.4 78.3 79.0 78.2 78.8 69.4	126.5 78.9 74.2 74.4 74.9 77.0 78.9 78.7 79.0 74.2
2012 74.8 75.0 74.5 74.8 74.4 74.5 74.3 74.2 73.9 73.7 74.2 74.7 74.8 74.6 74.2 74.2 74.4 2013 74.4 74.8 74.7 74.4 74.6 74.8 74.1 74.8 74.9 75.0 75.0 75.0 75.0 74.6 74.6 74.6 75.0 74.7 2014 74.2 74.9 75.6 75.6 75.9 76.2 76.6 76.2 76.3 76.3 76.8 76.8 74.9 75.9 76.4 75.9 75.4 75.6 75.6 75.6 75.6 75.6 75.6 75.6 75.6 75.3 75.4 75.5 75.4 75.6 75.5 75.4 75.6 75.5 75.4 75.6 75.5 75.4 75.6 75.5 75.4 75.6 75.5 75.4 75.6 75.5 75.4 75.6 75.5 75.4 75.5 75.4 75.5 75.4 75.5 75.4 75.5 75.4 75.5 75.4 75.5 <	(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009	127.0 126.4 80.0 76.2 73.3 75.3 75.4 79.0 79.5 78.4 78.6 65.3	126.9 126.5 79.8 75.7 73.2 75.1 76.0 79.5 79.1 78.5 77.9 65.3	126.8 126.6 79.9 75.4 73.7 75.1 76.0 79.0 78.9 78.9 77.4 64.0	126.7 126.7 80.1 75.1 73.9 74.5 76.3 79.1 79.1 79.2 76.6 63.6	126.5 126.8 79.6 74.7 74.3 74.4 76.9 79.2 78.6 79.1 76.1 63.0	126.5 126.8 79.5 74.3 75.0 74.7 76.4 79.2 78.7 79.4 75.5 63.0	126.4 126.9 79.1 74.0 74.9 74.8 77.2 78.7 78.2 79.4 74.8 64.1	126.4 127.0 78.3 73.7 75.0 74.3 77.5 78.9 78.6 79.0 73.9 64.9	126.3 127.1 78.5 73.3 75.0 77.5 77.7 78.4 79.1 71.4 65.7	126.3 127.2 78.0 73.0 74.8 75.0 78.2 78.6 77.9 78.7 71.1 65.8	126.4 77.4 72.7 75.2 75.6 78.1 79.2 77.8 78.9 69.6 66.5	76.7 72.8 74.7 75.5 78.6 79.0 78.9 67.4 66.6	126.9 126.5 79.9 75.8 73.4 75.2 75.8 79.2 79.2 78.6 78.0 64.9	126.6 126.8 79.7 74.7 74.4 74.5 76.6 79.2 78.8 79.3 76.1 63.2	126.4 127.0 78.6 73.7 75.0 74.7 77.4 78.4 78.4 78.4 78.4 79.1 73.4 64.9	77.4 72.8 74.9 75.4 78.3 79.0 78.2 78.8 69.4 66.3	126.5 78.9 74.2 74.4 74.9 77.0 78.9 78.7 79.0 74.2 64.8
2014 74.2 74.9 75.6 75.6 75.9 76.2 76.6 76.2 76.3 76.3 76.8 74.9 75.9 76.4 76.6 75.9 2015 76.4 75.9 76.3 76.4 76.1 76.8 76.5 76.0 75.8 76.2 76.3 76.2 76.0 75.8 76.2 76.3 76.5 76.0 75.8 76.2 76.3 76.5 76.0 75.8 76.5 76.0 75.8 75.5 75.4 75.5 75.4 75.6 75.5 75.4 75.5 76.3	(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010	127.0 126.4 80.0 76.2 73.3 75.3 75.4 79.0 79.5 78.4 78.6 65.3 67.3	126.9 126.5 79.8 75.7 73.2 75.1 76.0 79.5 79.1 78.5 77.9 65.3 67.3	126.8 126.6 79.9 75.4 73.7 75.1 76.0 79.0 78.9 77.4 64.0 68.2	126.7 126.7 80.1 75.1 73.9 74.5 76.3 79.1 79.1 79.2 76.6 63.6 63.6 68.9	126.5 126.8 79.6 74.7 74.3 74.4 76.9 79.2 78.6 79.1 76.1 63.0 69.9	126.5 126.8 79.5 74.3 75.0 74.7 76.4 79.2 78.7 79.4 75.5 63.0 70.1	126.4 126.9 79.1 74.0 74.9 74.8 77.2 78.7 78.2 79.4 74.8 64.1 70.5	126.4 127.0 78.3 73.7 75.0 74.3 77.5 78.9 78.6 79.0 73.9 64.9 70.7	126.3 127.1 78.5 73.3 75.0 77.5 77.7 78.4 79.1 71.4 65.7 70.9	126.3 127.2 78.0 73.0 74.8 75.0 78.2 78.6 77.9 78.7 71.1 65.8 71.1	126.4 77.4 72.7 75.2 75.6 78.1 79.2 77.8 78.9 69.6 66.5 71.2	76.7 72.8 74.7 75.5 78.6 79.0 78.9 67.4 66.6 71.6	126.9 126.5 79.9 75.8 73.4 75.2 75.8 79.2 79.2 78.6 78.0 64.9 67.6	126.6 126.8 79.7 74.7 74.4 74.5 76.6 79.2 78.8 79.3 76.1 63.2 69.6	126.4 127.0 78.6 73.7 75.0 74.7 77.4 78.4 78.4 78.4 78.4 78.4 78.4	77.4 72.8 74.9 75.4 78.3 79.0 78.2 78.8 69.4 66.3 71.3	126.5 78.9 74.2 74.4 74.9 77.0 78.9 78.7 79.0 74.2 64.8 69.8
2015 76.4 75.9 76.3 76.3 76.4 76.1 76.8 76.5 76.3 76.2 76.0 75.8 76.2 76.3 76.5 76.0 76.3 2016 76.1 75.8 75.7 75.5 75.4 75.6 75.3 75.4 75.5 76.3 76	(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012	127.0 126.4 80.0 76.2 73.3 75.3 75.4 79.0 79.5 78.4 78.6 65.3 67.3 71.8 74.8	126.9 126.5 79.8 75.7 73.2 75.1 76.0 79.5 79.1 78.5 77.9 65.3 67.3 72.0 75.0	126.8 126.6 79.9 75.4 73.7 75.1 76.0 79.0 78.9 78.9 77.4 64.0 68.2 72.6 74.5	126.7 126.7 80.1 75.1 73.9 74.5 76.3 79.1 79.1 79.2 76.6 63.6 63.6 68.9 72.3 74.8	126.5 126.8 79.6 74.7 74.3 74.4 76.9 79.2 78.6 79.1 76.1 63.0 69.9 72.4 74.4	126.5 126.8 79.5 74.3 75.0 74.7 76.4 79.2 78.7 79.4 75.5 63.0 70.1 72.5 74.5	126.4 126.9 79.1 74.0 74.9 74.8 77.2 78.7 78.2 79.4 74.8 64.1 70.5 73.0 74.3	126.4 127.0 78.3 73.7 75.0 74.3 77.5 78.9 78.6 79.0 73.9 64.9 70.7 73.3 74.2	126.3 127.1 78.5 73.3 75.0 75.0 77.5 77.7 78.4 79.1 71.4 65.7 70.9 73.5 73.9	126.3 127.2 78.0 73.0 74.8 75.0 78.2 78.6 77.9 78.7 71.1 65.8 71.1 74.0 73.7	126.4 77.4 72.7 75.2 75.6 78.1 79.2 77.8 78.9 69.6 66.5 71.2 73.8 74.2	76.7 72.8 74.7 75.5 78.6 79.0 78.9 67.4 66.6 71.6 74.2 74.7	126.9 126.5 79.9 75.8 73.4 75.2 75.8 79.2 79.2 78.6 78.0 64.9 67.6 72.1 74.8	126.6 126.8 79.7 74.7 74.4 74.5 76.6 79.2 78.8 79.3 76.1 63.2 69.6 72.4 74.6	126.4 127.0 78.6 73.7 75.0 74.7 77.4 78.4 78.4 78.4 79.1 73.4 64.9 70.7 73.3 74.2	126.4 77.4 72.8 74.9 75.4 78.3 79.0 78.2 78.8 69.4 66.3 71.3 74.0 74.2	126.5 78.9 74.2 74.4 74.9 77.0 78.9 78.7 79.0 74.2 64.8 69.8 73.0 74.4
2016 76.1 75.8 75.7 75.5 75.4 75.6 75.3 75.4 75.5 75.4 75.6 75.5 75.4 75.4 75.5 75.4 75.5 75.4 75.5 75.4 75.4 75.5 75.4 75.4 75.5 75.4 75.4 75.5 76.3 76.2 77.1 76.3 76.2 77.1 76.3 76.2	(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2010 2011 2012 2013	127.0 126.4 80.0 76.2 73.3 75.3 75.4 79.0 79.5 78.4 78.6 65.3 67.3 71.8 74.8 74.4	126.9 126.5 79.8 75.7 73.2 75.1 76.0 79.5 79.1 78.5 77.9 65.3 67.3 72.0 75.0 74.8	126.8 126.6 79.9 75.4 73.7 75.1 76.0 79.0 78.9 77.4 64.0 68.2 72.6 74.5 74.7	126.7 126.7 126.7 80.1 75.1 73.9 74.5 76.3 79.1 79.1 79.1 79.2 76.6 63.6 68.9 72.3 74.8 74.4	126.5 126.8 79.6 74.7 74.3 74.4 76.9 79.2 78.6 79.1 76.1 63.0 69.9 72.4 74.4 74.4 74.6	126.5 126.8 79.5 74.3 75.0 74.7 76.4 79.2 78.7 79.4 75.5 63.0 70.1 72.5 74.5 74.8	126.4 126.9 79.1 74.0 74.9 74.8 77.2 78.7 78.2 79.4 74.8 64.1 70.5 73.0 74.3 74.1	126.4 127.0 78.3 73.7 75.0 74.3 77.5 78.9 78.6 79.0 73.9 64.9 70.7 73.3 74.2 74.8	126.3 127.1 78.5 73.3 75.0 75.0 77.5 77.7 78.4 79.1 71.4 65.7 70.9 73.5 73.9 74.9	126.3 127.2 78.0 73.0 74.8 75.0 78.2 78.6 77.9 78.7 71.1 65.8 71.1 74.0 73.7 75.0	126.4 77.4 72.7 75.2 75.6 78.1 79.2 77.8 78.9 69.6 66.5 71.2 73.8 74.2 75.0	126.4 76.7 72.8 74.7 75.5 78.6 79.0 78.9 67.4 66.6 71.6 74.2 74.7 75.0	126.9 126.5 79.9 75.8 73.4 75.2 75.8 79.2 79.2 78.6 78.0 64.9 67.6 72.1 74.8 74.6	126.6 126.8 79.7 74.7 74.4 74.5 76.6 79.2 78.8 79.3 76.1 63.2 69.6 72.4 74.6 74.6	126.4 127.0 78.6 73.7 75.0 74.7 77.4 78.4 78.4 78.4 79.1 73.4 64.9 70.7 73.3 74.2 74.6	126.4 77.4 72.8 74.9 75.4 78.3 79.0 78.2 78.8 69.4 66.3 71.3 74.0 74.2 75.0	126.5 78.9 74.2 74.4 74.9 77.0 78.9 78.7 79.0 74.2 64.8 69.8 73.0 74.4 74.7
2017 75.6 75.6 75.5 76.3 76.3 76.4 76.2 76.1 76.2 77.1 77.2 77.0 75.6 76.3 76.2 77.1 76.2 77.1 77.2 77.0 75.6 76.3 76.2 77.1 76.2 77.1 77.2 77.0 75.6 76.3 76.2 77.1 76.3 2018 76.8 77.7 77.8 78.4 77.7 78.2 78.3 78.5 78.6 78.3 78.0 78.2 77.4 78.1 78.5 78.0 2019 77.6 77.2 77.2 76.8 76.3 76.7 76.1 76.6 76.5 77.3 76.9 76.8 76.4 76.9 2020 76.5 76.8 73.4 61.9 64.7 69.7 72.3 73.5 73.6 74.5 74.9 75.2 75.6 65.4 73.2 74.9 72.3 2021 76.5 73.8 76.2 76.1	(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2010 2011 2012 2013	127.0 126.4 80.0 76.2 73.3 75.3 75.4 79.0 79.5 78.4 78.6 65.3 67.3 71.8 74.8 74.4	126.9 126.5 79.8 75.7 73.2 75.1 76.0 79.5 79.1 78.5 77.9 65.3 67.3 72.0 75.0 74.8	126.8 126.6 79.9 75.4 73.7 75.1 76.0 79.0 78.9 77.4 64.0 68.2 72.6 74.5 74.7	126.7 126.7 126.7 80.1 75.1 73.9 74.5 76.3 79.1 79.1 79.1 79.2 76.6 63.6 68.9 72.3 74.8 74.4	126.5 126.8 79.6 74.7 74.3 74.4 76.9 79.2 78.6 79.1 76.1 63.0 69.9 72.4 74.4 74.4 74.6	126.5 126.8 79.5 74.3 75.0 74.7 76.4 79.2 78.7 79.4 75.5 63.0 70.1 72.5 74.5 74.8	126.4 126.9 79.1 74.0 74.9 74.8 77.2 78.7 78.2 79.4 74.8 64.1 70.5 73.0 74.3 74.1	126.4 127.0 78.3 73.7 75.0 74.3 77.5 78.9 78.6 79.0 73.9 64.9 70.7 73.3 74.2 74.8	126.3 127.1 78.5 73.3 75.0 75.0 77.5 77.7 78.4 79.1 71.4 65.7 70.9 73.5 73.9 74.9	126.3 127.2 78.0 73.0 74.8 75.0 78.2 78.6 77.9 78.7 71.1 65.8 71.1 74.0 73.7 75.0	126.4 77.4 72.7 75.2 75.6 78.1 79.2 77.8 78.9 69.6 66.5 71.2 73.8 74.2 75.0	126.4 76.7 72.8 74.7 75.5 78.6 79.0 78.9 67.4 66.6 71.6 74.2 74.7 75.0	126.9 126.5 79.9 75.8 73.4 75.2 75.8 79.2 79.2 78.6 78.0 64.9 67.6 72.1 74.8 74.6	126.6 126.8 79.7 74.7 74.4 74.5 76.6 79.2 78.8 79.3 76.1 63.2 69.6 72.4 74.6 74.6	126.4 127.0 78.6 73.7 75.0 74.7 77.4 78.4 78.4 78.4 79.1 73.4 64.9 70.7 73.3 74.2 74.6	126.4 77.4 72.8 74.9 75.4 78.3 79.0 78.2 78.8 69.4 66.3 71.3 74.0 74.2 75.0	126.5 78.9 74.2 74.4 74.9 77.0 78.9 78.7 79.0 74.2 64.8 69.8 73.0 74.4 74.7
2018 76.8 77.7 77.8 78.4 77.7 78.2 78.3 78.5 78.6 78.3 78.0 78.2 77.4 78.1 78.5 78.2 78.0 2019 77.6 77.2 77.2 76.8 76.8 77.1 76.7 77.2 76.7 76.7 76.1 76.6 76.5 77.3 76.9 76.8 76.4 76.9 2020 76.5 76.8 73.4 61.9 64.7 69.7 72.3 73.5 73.6 74.5 74.9 75.2 75.6 65.4 73.2 74.9 72.3 2021 76.5 73.8 76.2 76.1 76.8 77.7 77.6 76.9 78.2 75.5 76.6 77.4 78.1 78.2 76.9 2020 76.5 76.8 73.4 61.9 64.7 69.7 72.3 73.5 73.6 74.5 74.9 75.2 75.6 65.4 73.2 74.9 72.3	(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015	127.0 126.4 80.0 76.2 73.3 75.3 75.4 79.0 79.5 78.4 78.6 65.3 67.3 71.8 74.8 74.4 74.2	126.9 126.5 79.8 75.7 73.2 75.1 76.0 79.5 79.1 78.5 77.9 65.3 67.3 72.0 75.0 74.8 74.9	126.8 126.6 79.9 75.4 73.7 75.1 76.0 79.0 78.9 77.4 64.0 68.2 72.6 74.5 74.7 75.6 76.3	126.7 126.7 126.7 80.1 75.1 73.9 74.5 76.3 79.1 79.1 79.2 76.6 63.6 63.6 68.9 72.3 74.8 74.4 75.6	126.5 126.8 79.6 74.7 74.3 74.4 76.9 79.2 78.6 79.1 76.1 63.0 69.9 72.4 74.4 74.6 75.9 76.4	126.5 126.8 79.5 74.3 75.0 74.7 76.4 79.2 78.7 79.4 75.5 63.0 70.1 72.5 74.5 74.8 76.2	126.4 126.9 79.1 74.0 74.9 74.8 77.2 78.7 78.2 79.4 74.8 64.1 70.5 73.0 74.3 74.1 76.6	126.4 127.0 78.3 73.7 75.0 74.3 77.5 78.9 78.6 79.0 73.9 64.9 70.7 73.3 74.2 74.8 76.2	126.3 127.1 78.5 73.3 75.0 77.5 77.7 78.4 79.1 71.4 65.7 70.9 73.5 73.9 74.9 76.3	126.3 127.2 78.0 73.0 74.8 75.0 78.2 78.6 77.9 78.7 71.1 65.8 71.1 74.0 73.7 75.0 76.3	126.4 77.4 72.7 75.2 75.6 78.1 79.2 77.8 78.9 69.6 66.5 71.2 73.8 74.2 75.0 76.8	76.7 72.8 74.7 75.5 78.6 79.0 78.9 67.4 66.6 71.6 74.7 75.0 76.8	126.9 126.5 79.9 75.8 73.4 75.2 75.8 79.2 79.2 78.6 78.0 64.9 67.6 72.1 74.8 74.6 74.9 76.2	126.6 126.8 79.7 74.7 74.4 74.5 76.6 79.2 78.8 79.3 76.1 63.2 69.6 72.4 74.6 74.6 75.9	126.4 127.0 78.6 73.7 75.0 74.7 77.4 78.4 78.4 78.4 78.4 78.4 78.4	77.4 72.8 74.9 75.4 78.3 79.0 78.2 78.8 69.4 66.3 71.3 74.0 74.2 75.0 76.6	126.5 78.9 74.2 74.4 74.9 77.0 78.9 78.7 79.0 74.2 64.8 69.8 73.0 74.4 74.7 75.9
2019 77.6 77.2 77.2 76.8 76.8 77.1 76.7 77.2 76.1 76.6 76.5 77.3 76.9 76.8 76.4 76.9 2020 76.5 76.8 73.4 61.9 64.7 69.7 72.3 73.5 73.6 74.5 74.9 75.2 75.6 65.4 73.2 74.9 72.3 2021 76.5 73.8 76.2 76.1 76.8 76.7 77.7 77.6 76.9 78.2 78.6 78.5 75.5 76.6 77.4 78.5 77.0 2021 76.5 73.8 76.2 76.1 76.8 76.8 77.7 77.6 76.9 78.2 78.6 78.5 75.5 76.6 77.4 78.5 77.0	(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2010 2011 2012 2013 2014 2015 2016	127.0 126.4 80.0 76.2 73.3 75.3 75.4 79.0 79.5 78.4 78.6 65.3 67.3 71.8 74.8 74.4 74.2 76.4 76.1	126.9 126.5 79.8 75.7 73.2 75.1 76.0 79.5 79.1 78.5 77.9 65.3 67.3 72.0 75.0 74.8 74.9 75.9 75.8	126.8 126.6 79.9 75.4 73.7 75.1 76.0 79.0 78.9 77.4 64.0 68.2 72.6 74.5 74.7 75.6 76.3 75.7	126.7 126.7 126.7 80.1 75.1 73.9 74.5 76.3 79.1 79.1 79.2 76.6 63.6 63.6 68.9 72.3 74.8 74.4 75.6 76.3 75.5	126.5 126.8 79.6 74.7 74.3 74.4 76.9 79.2 78.6 79.1 76.1 63.0 69.9 72.4 74.4 74.6 75.9 76.4 75.4	126.5 126.8 79.5 74.3 75.0 74.7 76.4 79.2 78.7 79.4 75.5 63.0 70.1 72.5 74.5 74.5 74.8 76.2 76.1 75.6	126.4 126.9 79.1 74.0 74.9 74.8 77.2 78.7 78.2 79.4 74.8 64.1 70.5 73.0 74.3 74.1 76.6 76.8 75.6	126.4 127.0 78.3 73.7 75.0 74.3 77.5 78.9 78.6 79.0 73.9 64.9 70.7 73.3 74.2 74.8 76.2 76.5 75.3	126.3 127.1 78.5 73.3 75.0 75.0 77.5 77.7 78.4 79.1 71.4 65.7 70.9 73.5 73.9 74.9 76.3 76.3 75.4	126.3 127.2 78.0 73.0 74.8 75.0 78.2 78.6 77.9 78.7 71.1 65.8 71.1 74.0 73.7 75.0 76.3 76.2 75.5	126.4 77.4 72.7 75.2 75.6 78.1 79.2 77.8 78.9 69.6 66.5 71.2 73.8 74.2 75.0 76.8 76.0 75.4	126.4 76.7 72.8 74.7 75.5 78.6 79.0 78.9 67.4 66.6 71.6 74.7 75.0 76.8 75.4	126.9 126.5 79.9 75.8 73.4 75.2 75.8 79.2 79.2 78.6 78.0 64.9 67.6 72.1 74.8 74.6 74.9 76.2 75.8	126.6 126.8 79.7 74.7 74.4 74.5 76.6 79.2 78.8 79.3 76.1 63.2 69.6 72.4 74.6 72.4 74.6 74.6 75.9 76.3 75.5	126.4 127.0 78.6 73.7 75.0 74.7 77.4 78.4 78.4 78.4 78.4 78.4 78.4	126.4 77.4 72.8 74.9 75.4 78.3 79.0 78.2 78.8 69.4 66.3 71.3 74.0 74.2 75.0 76.6 76.0 75.4	126.5 78.9 74.2 74.4 74.9 77.0 78.9 78.7 79.0 74.2 64.8 69.8 73.0 74.4 74.7 75.9 76.3 75.5
2020 76.5 76.8 73.4 61.9 64.7 69.7 72.3 73.5 73.6 74.5 74.9 75.2 75.6 65.4 73.2 74.9 72.3 2021 76.5 73.8 76.2 76.1 76.8 76.8 77.7 77.6 76.9 78.2 78.6 78.5 75.5 76.6 77.4 78.5 77.0	(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2002 2003 2004 2005 2006 2007 2008 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017	127.0 126.4 80.0 76.2 73.3 75.3 75.4 79.0 79.5 78.4 78.6 65.3 67.3 71.8 74.8 74.4 74.2 76.4 76.1 75.6	126.9 126.5 79.8 75.7 73.2 75.1 76.0 79.5 79.1 78.5 77.9 65.3 67.3 72.0 75.0 74.8 74.9 75.9 75.8 75.6	126.8 126.6 79.9 75.4 73.7 75.1 76.0 79.0 78.9 78.9 77.4 64.0 68.2 72.6 74.5 74.7 75.6 76.3 75.7 75.5	126.7 126.7 126.7 80.1 75.1 73.9 74.5 76.3 79.1 79.1 79.2 76.6 63.6 63.6 68.9 72.3 74.8 74.4 75.6 76.3 75.5 76.3	126.5 126.8 79.6 74.7 74.3 74.4 76.9 79.2 78.6 79.1 76.1 63.0 69.9 72.4 74.4 74.6 75.9 76.4 75.4 75.4 76.3	126.5 126.8 79.5 74.3 75.0 74.7 76.4 79.2 78.7 79.4 75.5 63.0 70.1 72.5 74.5 74.8 76.2 76.1 75.6 76.4	126.4 126.9 79.1 74.0 74.9 74.8 77.2 78.7 78.2 79.4 74.8 64.1 70.5 73.0 74.3 74.1 76.6 76.8 75.6 76.2	126.4 127.0 78.3 73.7 75.0 74.3 77.5 78.9 78.6 79.0 73.9 64.9 70.7 73.3 74.2 74.8 76.2 76.5 75.3 76.1	126.3 127.1 78.5 73.3 75.0 75.0 77.5 77.7 78.4 79.1 71.4 65.7 70.9 73.5 73.9 74.9 76.3 76.3 75.4 76.2	126.3 127.2 78.0 73.0 74.8 75.0 78.2 78.6 77.9 78.7 71.1 65.8 71.1 74.0 73.7 75.0 76.3 76.2 75.5 77.1	126.4 77.4 72.7 75.2 75.6 78.1 79.2 77.8 78.9 69.6 66.5 71.2 73.8 74.2 75.0 76.8 76.0 75.4 77.2	126.4 76.7 72.8 74.7 75.5 78.6 79.0 78.9 67.4 66.6 71.6 74.7 75.0 76.8 75.4 77.0	126.9 126.5 79.9 75.8 73.4 75.2 75.8 79.2 78.6 78.0 64.9 67.6 72.1 74.8 74.6 74.9 76.2 75.8 75.6	126.6 126.8 79.7 74.7 74.4 74.5 76.6 79.2 78.8 79.3 76.1 63.2 69.6 72.4 74.6 74.6 75.9 76.3 75.5 76.3	126.4 127.0 78.6 73.7 75.0 74.7 77.4 78.4 78.4 78.4 79.1 73.4 64.9 70.7 73.3 74.2 74.6 76.4 76.5 75.4 76.5	126.4 77.4 72.8 74.9 75.4 78.3 79.0 78.2 78.8 69.4 66.3 71.3 74.0 74.2 75.0 76.6 76.0 75.4 77.1	126.5 78.9 74.2 74.4 74.9 77.0 78.9 78.7 79.0 74.2 64.8 69.8 73.0 74.4 74.7 75.9 76.3 75.5 76.3
2021 76.5 73.8 76.2 76.1 76.8 76.8 77.7 77.6 76.9 78.2 78.6 78.5 76.6 77.4 78.5 77.0	(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2010 2011 2012 2013 2014 2015 2016 2017 2018	127.0 126.4 80.0 76.2 73.3 75.3 75.4 79.0 79.5 78.4 78.6 65.3 67.3 71.8 74.8 74.4 74.4 74.4 76.4 76.4 75.6 76.8	126.9 126.5 79.8 75.7 73.2 75.1 76.0 79.5 79.1 78.5 77.9 65.3 67.3 72.0 75.0 75.0 75.0 75.4 74.8 74.9 75.9 75.8 75.6 77.7	126.8 126.6 79.9 75.4 73.7 75.1 76.0 79.0 78.9 77.4 64.0 68.2 72.6 74.5 74.5 74.7 75.6 76.3 75.7 75.5 77.8	126.7 126.7 126.7 75.1 73.9 74.5 76.3 79.1 79.1 79.2 76.6 63.6 63.6 63.6 68.9 72.3 74.4 75.5 76.3 75.5 76.3 75.5 76.3 78.4	126.5 126.8 79.6 74.7 74.3 74.4 76.9 79.2 78.6 79.1 76.1 63.0 69.9 72.4 74.4 74.6 75.9 76.4 75.4 76.3 77.7	126.5 126.8 79.5 74.3 75.0 74.7 76.4 79.2 78.7 79.4 75.5 63.0 70.1 72.5 74.5 74.5 74.8 76.2 76.1 75.6 76.4 78.2	126.4 126.9 79.1 74.0 74.9 74.8 77.2 78.7 78.2 79.4 74.8 64.1 70.5 73.0 74.3 74.1 76.6 76.8 75.6 76.2 78.3	126.4 127.0 78.3 73.7 75.0 74.3 77.5 78.9 78.6 79.0 73.9 64.9 70.7 73.3 74.8 76.2 76.5 75.3 76.1 78.5	126.3 127.1 78.5 73.3 75.0 77.5 77.7 78.4 79.1 71.4 65.7 70.9 73.5 73.9 74.9 76.3 76.3 75.4 76.2 78.6	126.3 127.2 78.0 73.0 74.8 75.0 78.2 78.6 77.9 78.7 78.7 78.7 71.1 65.8 71.1 74.0 73.7 75.0 76.3 76.2 75.5 77.1 78.3	126.4 77.4 72.7 75.2 75.6 78.1 79.2 77.8 78.9 69.6 66.5 71.2 73.8 74.2 75.0 76.8 76.0 75.4 77.2 78.0	126.4 76.7 72.8 74.7 75.5 78.6 79.0 78.9 67.4 66.6 71.6 74.2 74.7 75.0 76.8 75.8 75.4 77.0 78.2	126.9 126.5 79.9 75.8 73.4 75.2 75.8 79.2 79.2 78.6 78.0 64.9 67.6 72.1 74.6 74.9 76.2 75.8 75.6 77.4	126.6 126.8 79.7 74.7 74.4 74.5 76.6 79.2 78.8 79.3 76.1 63.2 69.6 72.4 74.6 73.6 74.6 74.6 75.9 76.3 75.5 76.3 78.1	126.4 127.0 78.6 73.7 75.0 74.7 77.4 78.4 78.4 78.4 78.4 78.4 78.4	126.4 77.4 72.8 74.9 75.4 78.3 79.0 78.2 78.8 69.4 66.3 71.3 74.0 75.0 76.6 76.0 75.4 78.2	126.5 78.9 74.2 74.4 74.9 77.0 78.9 78.7 79.0 74.2 64.8 69.8 73.0 74.4 75.9 76.3 75.5 76.3 78.0
	(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019	127.0 126.4 80.0 76.2 73.3 75.3 75.4 79.0 79.5 78.4 78.6 65.3 67.3 71.8 74.8 74.4 74.2 76.4 76.1 75.6 76.8 77.6	126.9 126.5 79.8 75.7 73.2 75.1 76.0 79.5 79.1 78.5 77.9 65.3 67.3 72.0 75.0 74.8 74.9 75.9 75.8 75.6 77.7 77.2	126.8 126.6 79.9 75.4 73.7 75.1 76.0 79.0 78.9 77.4 64.0 68.2 72.6 74.5 74.7 75.6 76.3 75.7 75.5 77.8 8 77.2	126.7 126.7 126.7 80.1 75.1 73.9 74.5 76.3 79.1 79.1 79.2 76.6 63.6 63.6 68.9 72.3 74.8 74.4 75.6 76.3 75.5 76.3 78.4 76.8	126.5 126.8 79.6 74.7 74.3 74.4 76.9 79.2 78.6 79.1 76.1 63.0 69.9 72.4 74.6 75.9 76.4 75.4 76.3 77.7 76.8	126.5 126.8 79.5 74.3 75.0 74.7 76.4 79.2 78.7 79.4 75.5 63.0 70.1 72.5 74.5 74.8 76.2 76.1 75.6 76.4 78.2 77.1	126.4 126.9 79.1 74.0 74.9 74.8 77.2 78.7 78.2 79.4 74.8 64.1 70.5 73.0 74.3 74.1 76.6 76.8 75.6 76.2 78.3 76.7	126.4 127.0 78.3 73.7 75.0 74.3 77.5 78.9 78.6 79.0 73.9 64.9 70.7 73.3 74.2 74.8 76.2 76.5 75.3 76.1 78.5 77.2	126.3 127.1 78.5 73.3 75.0 77.5 77.7 78.4 79.1 71.4 65.7 70.9 73.5 73.9 74.9 76.3 76.3 75.4 76.2 78.6 76.7	126.3 127.2 78.0 73.0 74.8 75.0 78.2 78.6 77.9 78.7 71.1 65.8 71.1 74.0 73.7 75.0 76.3 76.3 76.2 75.5 77.1 78.3 76.1	126.4 77.4 72.7 75.6 78.1 79.2 77.8 78.9 69.6 66.5 71.2 73.8 74.2 75.0 76.8 76.0 75.4 77.2 78.0 76.6	126.4 76.7 72.8 74.7 75.5 78.6 79.0 78.9 67.4 66.6 71.6 74.7 75.0 76.8 75.8 75.4 77.0 78.2 76.5	126.9 126.5 79.9 75.8 73.4 75.2 75.8 79.2 79.2 78.6 78.0 64.9 67.6 72.1 74.8 74.6 74.9 67.6 74.9 76.2 75.8 75.6 77.4 77.3	126.6 126.8 79.7 74.7 74.4 74.5 76.6 79.2 78.8 79.3 76.1 63.2 69.6 72.4 74.6 74.6 74.6 75.9 76.3 75.5 76.3 78.1 76.9	126.4 127.0 78.6 73.7 75.0 74.7 77.4 78.4 78.4 78.4 78.4 78.4 78.4	126.4 77.4 72.8 74.9 75.4 78.3 79.0 78.2 78.8 69.4 66.3 71.3 74.0 74.2 75.0 76.6 76.0 75.4 77.1 78.2 76.4	126.5 78.9 74.2 74.4 74.9 77.0 78.9 78.7 79.0 74.2 64.8 69.8 73.0 74.4 74.7 75.9 76.3 75.5 76.3 78.0 76.9
	(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020	127.0 126.4 80.0 76.2 73.3 75.3 75.4 79.0 79.5 78.4 78.6 65.3 67.3 71.8 74.8 74.4 74.4 74.2 76.4 76.1 75.6 76.8 77.6 76.5	126.9 126.5 79.8 75.7 73.2 75.1 76.0 79.5 79.1 78.5 77.9 65.3 67.3 72.0 75.0 75.0 74.8 74.9 75.9 75.8 75.6 77.7 77.2 76.8	126.8 126.6 79.9 75.4 73.7 75.1 76.0 79.0 78.9 77.4 64.0 68.2 72.6 74.5 74.7 75.6 76.3 75.7 75.5 77.8 77.2 73.4	126.7 126.7 126.7 80.1 75.1 73.9 74.5 76.3 79.1 79.1 79.2 76.6 63.6 63.6 68.9 72.3 74.8 74.4 75.6 76.3 75.5 76.3 78.4 76.8 61.9	126.5 126.8 79.6 74.7 74.3 74.4 76.9 79.2 78.6 79.1 76.1 63.0 69.9 72.4 74.4 74.6 75.9 76.4 75.4 76.3 77.7 76.8 64.7	126.5 126.8 79.5 74.3 75.0 74.7 76.4 79.2 78.7 79.4 75.5 63.0 70.1 72.5 74.8 76.2 76.1 75.6 76.1 75.6 76.1 75.6 76.1 75.6 76.1 75.6 76.1 75.6 76.1 75.6 76.1 75.6 76.1 75.6 76.1 75.6 76.1 75.6 76.1 75.6 76.1 75.6 76.1 75.6 76.1 75.6 77.1 69.7	126.4 126.9 79.1 74.0 74.9 74.8 77.2 78.7 78.2 79.4 74.8 64.1 70.5 73.0 74.3 74.1 76.6 76.2 78.3 76.7 72.3	126.4 127.0 78.3 73.7 75.0 74.3 77.5 78.9 78.6 79.0 73.9 64.9 70.7 73.3 74.2 74.8 76.2 76.5 75.3 76.1 78.5 73.5	126.3 127.1 78.5 73.3 75.0 77.5 77.7 78.4 79.1 71.4 65.7 70.9 73.5 73.9 74.9 76.3 76.3 75.4 76.2 78.6 76.7 73.6	126.3 127.2 78.0 73.0 74.8 75.0 78.6 77.9 78.7 71.1 65.8 71.1 75.0 76.3 76.2 75.5 77.1 78.3 76.1 74.5	126.4 77.4 72.7 75.6 78.1 79.2 77.8 78.9 69.6 66.5 71.2 73.8 74.2 75.0 76.8 76.0 75.4 77.2 78.0 76.6 74.9	126.4 76.7 72.8 74.7 75.5 78.6 79.0 78.9 67.4 66.6 71.6 74.7 75.0 76.8 75.4 75.7 76.5 75.2	126.9 126.5 79.9 75.8 73.4 75.2 75.8 79.2 79.2 78.6 78.0 64.9 67.6 72.1 74.8 74.6 74.9 76.2 75.8 75.6 77.4 77.3 75.6	126.6 126.8 79.7 74.7 74.4 74.5 76.6 79.2 78.8 79.3 76.1 63.2 69.6 72.4 74.6 72.4 74.6 74.6 75.9 76.3 75.5 76.3 78.1 76.9 65.4	126.4 127.0 78.6 73.7 75.0 74.7 77.4 78.4 78.4 78.4 78.4 78.4 78.4	126.4 77.4 72.8 74.9 75.4 78.3 79.0 78.2 78.8 69.4 66.3 71.3 74.0 74.2 75.0 76.6 76.0 75.4 77.1 78.2 76.4 74.9	126.5 78.9 74.2 74.4 74.9 77.0 78.9 78.7 79.0 74.2 64.8 69.8 73.0 74.4 74.7 75.9 76.3 75.5 76.3 75.9 76.3 76.9 72.3
	(percent of 2017 output) 2020 2021 2022 Utilization (percent) 2000 2001 2002 2003 2004 2005 2006 2007 2008 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2020	127.0 126.4 80.0 76.2 73.3 75.3 75.4 79.0 79.5 78.4 78.6 65.3 67.3 71.8 74.8 74.4 74.2 76.4 76.1 75.6 76.5 76.5 76.5	126.9 126.5 79.8 75.7 73.2 75.1 76.0 79.5 79.1 78.5 77.9 65.3 67.3 72.0 75.0 75.0 74.8 74.9 75.9 75.8 75.6 77.7 75.2 76.8 73.8	126.8 126.6 79.9 75.4 73.7 75.1 76.0 79.0 78.9 78.9 77.4 64.0 68.2 72.6 74.5 74.7 75.6 76.3 75.7 75.5 77.8 77.2 73.4 76.2	126.7 126.7 126.7 80.1 75.1 73.9 74.5 76.3 79.1 79.1 79.2 76.6 63.6 63.6 68.9 72.3 74.8 74.4 75.6 76.3 75.5 76.3 75.5 76.3 78.4 76.8 61.9 76.1	126.5 126.8 79.6 74.7 74.3 74.4 76.9 79.2 78.6 79.1 76.1 63.0 69.9 72.4 74.4 74.6 75.9 76.4 75.4 76.3 77.7 76.8 64.7 76.8	126.5 126.8 79.5 74.3 75.0 74.7 76.4 79.2 78.7 79.4 75.5 63.0 70.1 72.5 74.5 74.5 74.8 76.2 76.1 75.6 76.4 78.2 77.1 69.7 76.8	126.4 126.9 79.1 74.0 74.9 74.8 77.2 78.7 78.2 79.4 74.8 64.1 70.5 73.0 74.3 74.1 76.6 76.8 75.6 76.7 72.3 77.7	126.4 127.0 78.3 73.7 75.0 74.3 77.5 78.9 78.6 79.0 73.9 64.9 70.7 73.3 74.2 74.8 76.2 76.5 75.3 76.1 78.5 77.6	126.3 127.1 78.5 73.3 75.0 75.0 77.5 77.7 78.4 79.1 71.4 65.7 70.9 73.5 73.9 74.9 76.3 76.3 75.4 76.2 78.6 76.7 73.6 76.9	126.3 127.2 78.0 73.0 74.8 75.0 78.2 78.6 77.9 78.7 71.1 65.8 71.1 74.0 73.7 75.0 76.3 76.2 75.5 77.1 78.3 76.1 74.5 78.2	126.4 77.4 72.7 75.6 78.1 79.2 77.8 78.9 69.6 66.5 71.2 73.8 74.2 75.0 76.8 76.0 75.4 77.2 78.0 76.6 74.9	126.4 76.7 72.8 74.7 75.5 78.6 79.0 78.9 67.4 66.6 71.6 74.7 75.0 76.8 75.4 75.7 76.5 75.2	126.9 126.5 79.9 75.8 73.4 75.2 75.8 79.2 79.2 78.6 78.0 64.9 67.6 72.1 74.8 74.6 74.9 76.2 75.8 75.6 77.4 77.3 75.6 75.5	126.6 126.8 79.7 74.7 74.4 74.5 76.6 79.2 78.8 79.3 76.1 63.2 69.6 72.4 74.6 72.4 74.6 74.6 75.9 76.3 75.5 76.3 78.1 76.9 65.4 76.6	126.4 127.0 78.6 73.7 75.0 74.7 77.4 78.4 78.4 78.4 78.4 78.4 78.4	126.4 77.4 72.8 74.9 75.4 78.3 79.0 78.2 78.8 69.4 66.3 71.3 74.0 74.2 75.0 76.6 76.0 75.4 77.1 78.2 76.4 74.9	126.5 78.9 74.2 74.4 74.9 77.0 78.9 78.7 79.0 74.2 64.8 69.8 73.0 74.4 74.7 75.9 76.3 75.5 76.3 75.9 76.3 76.9 72.3

Table 14 HISTORICAL STATISTICS FOR INDUSTRIAL PRODUCTION, CAPACITY, AND UTILIZATION: Manufacturing¹ Excluding Selected High-Technology Industries² Seasonally adjusted

The composition of manufacturing is specified in a note for the summary table.
 Selected high-technology industries are computers, communications equipment, and semiconductors and related electronic components.
 Quarterly percentage changes are at annual rates. Annual percentage changes are calculated from annual averages.

Table 15 INDUSTRIAL PRODUCTION: RELIABILITY ESTIMATES Seasonally adjusted

		alized									_			
		nge	2017=100						Percent change					
	2022		2022						2022					
Item	Q2	Q3	May	June	July	Aug.	Sept.	Oct.	May	June	July	Aug.	Sept.	Oct.
Total index														
85th percentile	5.22	3.00	104.16	104.13	104.87	104.86	105.16	105.11	10	03	.75	.07	.46	.25
Current estimate	5.15	2.20	104.16	104.08	104.76	104.65	104.80	104.69	10	08	.65	10	.14	11
15th percentile	5.08	1.50	104.16	104.03	104.65	104.48	104.49	104.25	10	13	.56	21	10	49
Manufacturing (SIC)														
85th percentile	3.22	.96	101.89	101.35	101.91	102.08	102.41	102.67	46	53	.58	.22	.42	.44
Current estimate	3.14	.29	101.89	101.28	101.77	101.87	102.11	102.26	46	59	.48	.10	.24	.15
15th percentile	3.07	47	101.89	101.23	101.65	101.65	101.80	101.77	46	65	.38	03	.08	17
Mining														
85th percentile	15.52	15.17	113.62	115.71	117.55	117.54	119.11	118.85	1.14	1.84	1.71	.27	1.62	.55
Current estimate	15.35	12.96	113.62	115.57	117.23	117.00	117.87	117.39	1.14	1.72	1.44	20	.74	40
15th percentile	15.15	10.70	113.62	115.40	116.88	116.37	116.59	115.58	1.14	1.57	1.14	60	07	-1.39
Electric and gas utilities														
85th percentile	2.72	.51	107.03	107.35	107.83	106.96	106.58	105.08	.30	.30	.46	74	.14	.51
Current estimate	2.70	-2.96	107.03	107.34	107.77	106.34	104.55	102.98	.30	.29	.40	-1.33	-1.68	-1.50
15th percentile	2.68	-4.91	107.03	107.32	107.68	106.09	103.27	101.74	.30	.27	.31	-1.56	-3.13	-3.28

Note. 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#reliability

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 2017. 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 2012, the total IP index has been constructed from 296 individual series based on the 2017 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 5 percent. If output in this industry increased 10 percent in a month, then this gain would boost growth in total IP by 5/10 percentage point (0.05 x 10% = 0.5%). To assist users with calculations, the Federal Reserve's website provides supplemental monthly statistics that represent the exact proportionate contribution of a monthly change in a component index to the monthly change in the total index (**www.federalreserve.gov/releases/G17/ipdisk/ipweightssa.txt**).

Timing. The first estimate of output for a month is published around the 15th of the following month. The estimate is preliminary (denoted by the superscript "p" in tables) and subject to revision in each of the subsequent five months as new source data become available. (Revised estimates are denoted by the superscript "r" in tables.) For the first estimate of output for a given month, about 74 percent of the source data (in value-added terms) are available; the fraction of available source data increases to 83 percent for estimates in the second month that the estimate is published, 92 percent in the third month, 94 percent in the fourth month, 96 percent in the fifth month, and 97 percent in the sixth month. Data availability by data type in 2021 is summarized in the table below:

Availability of Monthly IP Data in Publication Window (Percent of value added in 2021; the numbers may not sum because of

rounding.)	521, the humbers may not sum because of
	Month of estimate

	Month of estimate								
Type of data	1st	2nd	3rd	4th	5th	6th			
Physical product	31	40	49	51	53	54			
Production-worker hours	43	43	43	43	43	43			
IP data received	74	83	92	94	96	97			
IP data estimated	26	17	8	6	4	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 (31 percent out of a total of 54 percent). Of the 31 percent, about three-quarters (26 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 2022; for other series, the factors were estimated with data through at least December 2021. 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

0.29 percent during the 1987–2021 period. The average revision to the *percent change* in total IP, without regard to sign, from the first to the fourth estimates was 0.23 percentage point during the 1987-2021 period. In most cases (about 86 percent), the direction of the change in output indicated by the first estimate for a given month is the same as that shown by the fourth estimate.

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

CAPACITY UTILIZATION

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

Coverage. 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 24 percent of total industrial capacity. When physical product data are unavailable for manufacturing industries, capacity indexes are based on responses to the Bureau of the Census's Quarterly Survey of Plant Capacity (QSPC); these industries account for about 67 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 1972–2021 period, the average total industry utilization rate was 79.6 percent; for manufacturing, the average factory operating rate was 78.2 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 June 28, 2022, 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

The G.17 release on Industrial Production and Capacity Utilization is published at 9:15 a.m. on:

2022: January 14, February 16, March 17, April 15, May 17, June 17, July 15, August 16, September 15, October 18, November 16, December 15

2023: January 18, February 15, March 17, April 14, May 16, June 15, July 18, August 16, September 15, October 17, November 16, December 15

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