FEDERAL RESERVE statistical release



G.17 (419)

For release at 9:15 a.m. (EDT) **September 17, 2024**

Percent change

INDUSTRIAL PRODUCTION AND CAPACITY UTILIZATION

In August, industrial production rose 0.8 percent after falling 0.9 percent in July. Similarly, the output of manufacturing increased 0.9 percent in August after decreasing 0.7 percent during the previous month. This pattern was due in part to a recovery in the index of motor vehicles and parts, which jumped nearly 10 percent in

(over)

Industrial Production and Capacity Utilization: Summary

Seasonally adjusted

			2017=	100			2021			reicein	change		
	2024						2024						Aug. '23 to
Industrial production	Mar. ^r	Apr. ^r	May ^r	June	July	Aug. ^p	Mar. ^r	Apr. ^r	May	June	July	Aug. ^p	Aug. '24
T-4-1 ' - 1	102.5	102.4	102.2	102.2	100.2	102.1		1	7	1	0	0	
Total index	102.5	102.4	103.2	103.3	102.3	103.1	2	1	.7	.1	9	.8	.0
Previous estimates	102.5	102.5	103.3	103.5	102.9		2	.0	.8	.3	6		
Major market groups													
Final Products	100.6	100.7	101.0	101.1	100.0	100.8	3	.2	.3	.0	-1.1	.9	5
Consumer goods	101.4	100.7	102.2	102.3	100.0	100.8	5	.4	.3	.1	-1.1	.7	3
Business equipment	94.9	94.2	94.4	94.1	93.1	94.4	.0	7	.3	4	-1.0	1.4	-1.4
Nonindustrial supplies	100.9	100.3	101.2	101.8	101.1	101.4	3	<i>1</i> 5	.9	.6	-1.0 7	.3	.5
Construction	100.9	99.6	101.2	101.8	99.8	101.4	2	<i>3</i> -1.7	.8	.3	7	1.4	.9
Materials					104.7	101.2	2	-1.7 1	.o 1.1	.s 1	o 9	.9	.3
Materiais	104.7	104.6	105.8	105.7	104.7	105.7	1	1	1.1	1	9	.9	3
Major industry groups													
Manufacturing (see note below)	99.5	98.9	99.6	99.4	98.7	99.6	.2	6	.8	2	7	.9	.2
Previous estimates	99.5	99.0	99.8	99.8	99.5	,,,,	.2	5	.8	.0	3	.,	
Mining	119.6	119.9	119.3	119.6	119.1	120.1	6	.2	5	.3	4	.8	.1
Utilities	101.0	104.7	107.0	108.6	105.4	105.3	-2.4	3.6	2.2	1.6	-3.0	.0	9
Clindes	101.0	101.7	107.0	100.0	103.1	103.3	2.1	5.0	2.2	1.0	3.0	.0	.,
							l						Capacity
					Perce	nt of cap	acity						growth
	Average	1988-	1990-	1994-									
	1972-	89	91	95	2009	2023	2024						Aug. '23 to
Capacity utilization	2023	high	low	high	low	Aug.	Mar. ^r	Apr. ^r	May ^r	June ^r	July	Aug. ^p	Aug. '24
Total in desertion	79.7	85.2	78.7	84.8	66.6	78.9	77.8	77.7	78.2	78.2	77.4	78.0	1.2
Total industry	/9.7	85.2	/8./	84.8	0.00	/8.9						78.0	1.2
Previous estimates							77.8	77.8	78.3	78.4	77.8		
Manufacturing (see note below)	78.3	85.5	77.1	84.4	63.5	78.1	77.5	76.9	77.5	77.2	76.6	77.2	1.3
Previous estimates	70.5	05.5	,,,,	0 1.1	05.5	, 0.1	77.5	77.0	77.6	77.5	77.2	,,,_	1.5
Mining	86.5	86.3	84.3	88.6	78.9	89.5	89.2	89.6	89.2	89.6	89.2	90.0	5
Utilities	84.5	93.2	84.7	93.2	78.1	73.6	68.6	70.8	72.2	73.1	70.7	70.5	3.5
Cunties	07.5	75.2	07.7	75.2	/ 0.1	75.0	00.0	70.0	12.2	73.1	70.7	10.5	3.5
Stage-of-process groups													
Crude	85.6	87.9	84.9	90.0	77.0	87.5	86.9	86.8	87.2	87.8	87.1	87.8	3
Primary and semifinished	80.2	86.5	77.6	87.5	63.7	77.4	76.1	76.1	77.0	76.9	76.0	76.4	1.6
Finished	76.8	83.3	77.6	80.4	66.2	77.1	76.2	75.8	76.0	75.7	74.9	75.5	1.8

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.

August after dropping roughly 9 percent in July. The index for manufacturing excluding motor vehicles and parts moved up 0.3 percent in August. The index for mining climbed 0.8 percent, while the index for utilities was flat. At 103.1 percent of its 2017 average, total industrial production in August was the same as its year-earlier level. Capacity utilization moved up to 78.0 percent in August, a rate that is 1.7 percentage points below its long-run (1972–2023) average.

Market Groups

Most major market groups posted gains in August, with the jump in the output of motor vehicles and parts contributing to the strength recorded across a variety of categories. The index for consumer goods rose 0.7 percent, as a 10.5 percent increase in the index for automotive products more than offset a small decline in the index for nondurable consumer goods. Similarly, the index for business equipment stepped up 1.4 percent in August, supported by a 6.6 percent gain in the index for transit equipment. The index for materials grew 0.9 percent in August, with gains in all its subcomponents, including the index for durable goods materials, which rose 1.6 percent and was bolstered by the output of motor vehicle parts. Beyond the influence of motor vehicles and parts, defense and space equipment posted a gain of 0.5 percent and was 3.2 percent above its year-earlier level. Business supplies recorded the sole decline among major market groups, edging down 0.2 percent in August after decreasing 0.7 percent in July.

Industry Groups

Manufacturing output moved up 0.9 percent in August and was 0.2 percent above its year-earlier level. The index for durable manufacturing increased 2.1 percent in August after decreasing 1.5 percent in July, while the index for nondurable manufacturing moved down 0.2 percent in August. The output of other manufacturing (publishing and logging) increased 0.3 percent.

Apart from the large August jump in the output of motor vehicles and parts, gains of more than 1 percent within durable manufacturing were recorded in primary metals (3.2 percent), in electrical equipment, appliances, and components (2.0 percent), and in aerospace and miscellaneous transportation equipment (1.2 percent). The only decline among the durable manufacturing indexes was posted by miscellaneous durable manufacturing, which decreased 0.9 percent. Within nondurable manufacturing, declines in the indexes for printing and support (1.4 percent) and petroleum and coal products (2.3 percent) were partially offset by gains in the indexes for chemicals (0.4 percent) and paper (0.4 percent).

Mining output moved up 0.8 percent in August following a decline of 0.4 percent in July. The index for utilities moved sideways in August and was 0.9 percent below year-earlier levels.

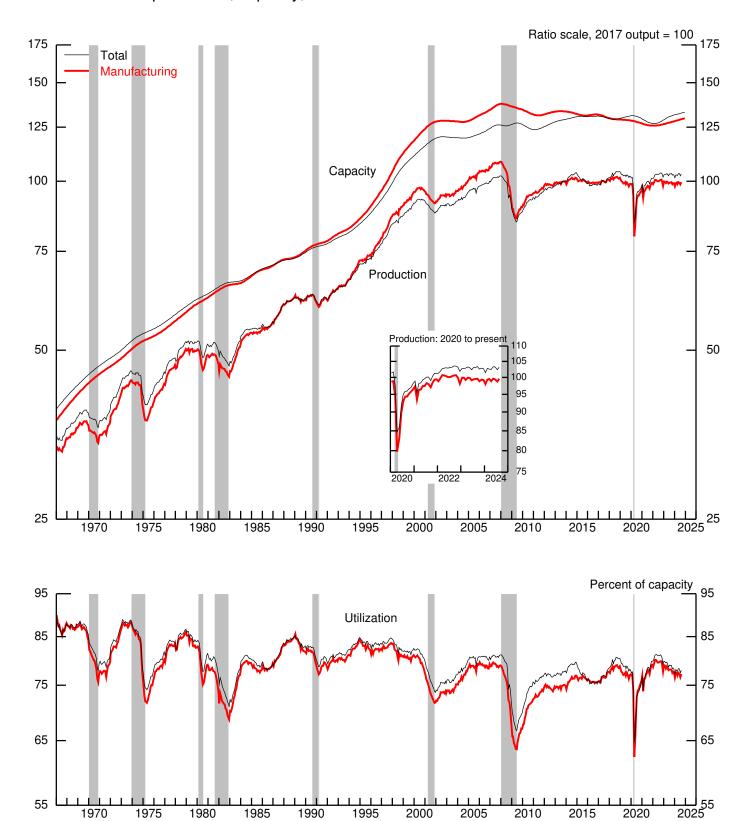
Capacity utilization for manufacturing increased 0.6 percentage point to 77.2 percent in August, a rate that is 1.1 percentage points below its long-run (1972–2023) average. The operating rate for mining rose 0.8 percentage point to 90.0 percent, a rate that is 3.5 percentage points above its long-run average. The operating rate for utilities stepped down 0.2 percentage point to 70.5, well below its long-run average.

Tables

- 1. Industrial Production: Market and Industry Group Summary; percent change
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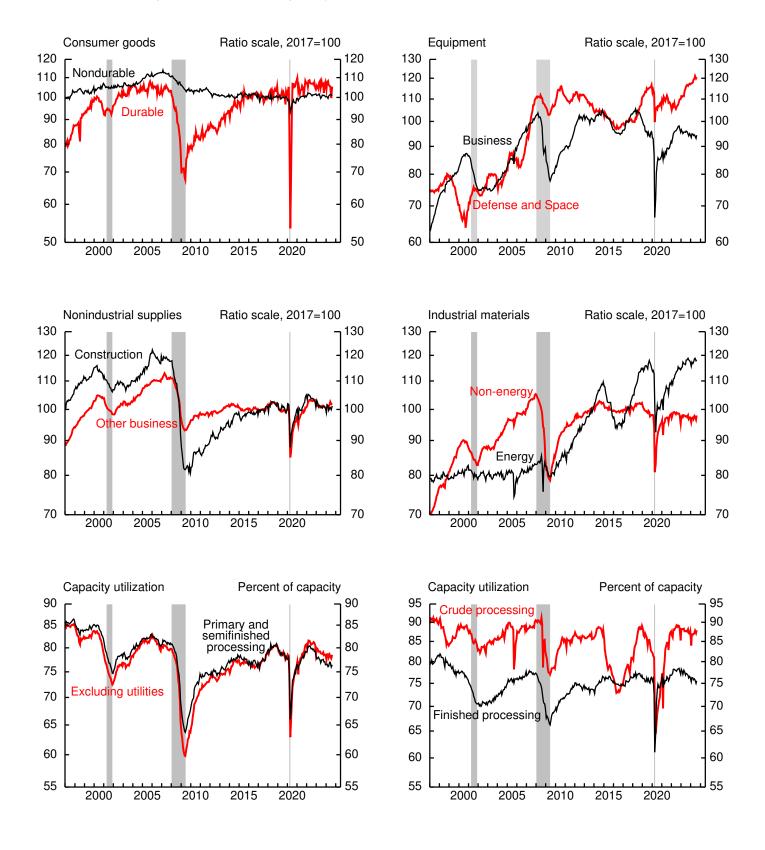
Further detail is available on the Board's website (www.federalreserve.gov/releases/G17/).

1. Industrial production, capacity, and utilization



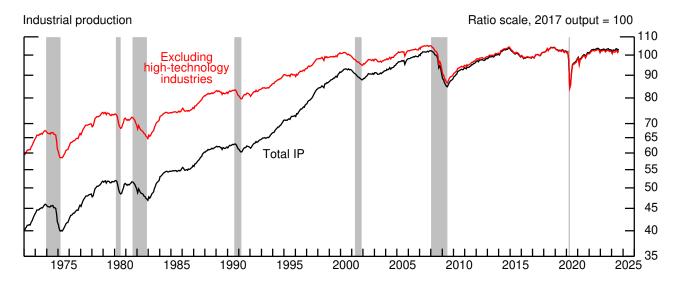
Note: The shaded areas are periods of business recession as defined by the National Bureau of Economic Research (NBER).

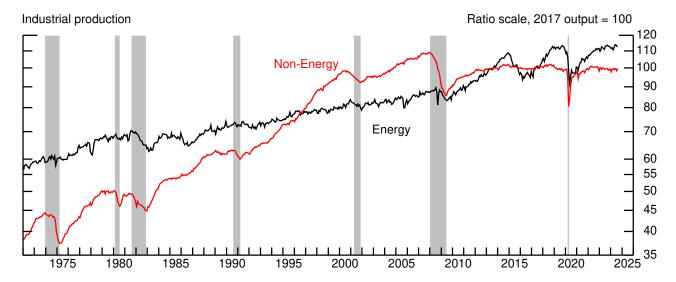
2. Industrial production and capacity utilization

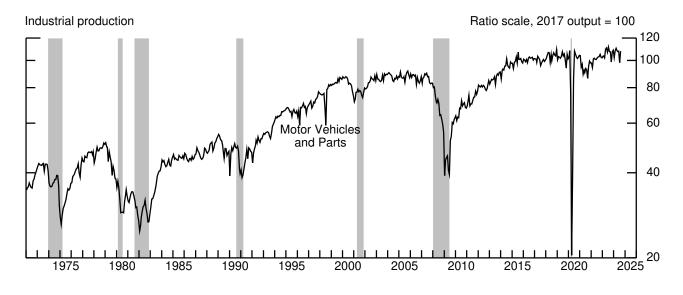


Note: The shaded areas are periods of business recession as defined by the National Bureau of Economic Research (NBER).

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

		6056		th quart ırth quar			nnual rat	e	200		Month	ly rate			Aug. '23
Item		2023 proportion ¹	2021	2022	2023	2023 Q4	2024 Q1 ^r	Q2 ^r	2024 Mar. ^r	Apr.r	May ^r	June ^r	July ^r	Aug. ^p	to Aug. '24
Total IP		100.00	3.8	1.8	1	-1.8	-1.8	2.9	2	1	.7	.1	9	.8	.0
MARKET GROUPS															
Final products and nonindustrial supplie	es	54.57	3.3	1.9	-1.0	-1.5	9	1.9	3	.0	.5	.2	-1.0	.7	2
Consumer goods		27.65	1.6	.6	6	9	-1.2	2.4	5	.4	.3	.1	-1.1	.7	3
Durable		6.08	2	-1.3	.2	-4.7	3.6	-3.1	.5	-1.8	4	3	-5.4	5.8	6
Automotive products		3.35	-5.1	.6	1.6	-9.0	3.4	2	1.9	-2.5	7	.4	-9.1	10.5	.2
Home electronics		.14	9.4	4	20.1	12.0	8.5	2.7	2.2	7	.9	-1.9	9	1.8	5.4
Appliances, furniture, carpeting		.91	1.7	-9.0	-4.6	5.8	-1.0	-16.6	-5.5	6	-1.3	-1.0	-1.5	2.5	-3.7
Miscellaneous goods		1.69	9.1	-1.0	-1.3	-2.4	6.1	-1.6	.8	-1.3	.6	-1.2	3	8	9
Nondurable		21.57	2.2	1.2	8	.2	-2.5	4.0	8	1.1	.6	.2	.0	6	2
Non-energy		16.08	1.3	.6	3	1.6	8	1.5	1	2	.6	1	.4	3	.5
Foods and tobacco		9.74	2	4	-1.4	2.2	-4.2	6	.0	6	.3	.3	3	3	-1.4
Clothing		.17	5.2	7	-10.0	-16.0	-13.1	6.2	-1.6	2.2	.2	2.1	-2.0	-1.8	-8.0
Chemical products		4.99	3.8	3.2	3.1	1.7	6.8	7.0	1	.5	1.2	8	2.0	4	5.1
Paper products		.78	.1	-4.2	-6.0	-1.5	1	-4.4	6	-1.2	.5	.5	7	3	-1.6
Energy		5.49	6.2	2.5	-2.0	-3.8	-7.3	11.8	-3.0	5.4	.5	1.0	-1.0	-1.4	-2.0
Business equipment		8.77	5.9	6.8	-2.4	-4.1	6	7	.0	7	.3	4	-1.0	1.4	-1.4
Transit		1.75	-3.1	19.1	4	-8.2	1	1.0	1.9	-1.9	-1.2	2.2	-5.5	6.6	.2
Information processing		1.77	9.5	-1.0	.7	1.2	2.1	2.3	.3	.0	.5	1	1.6	6	2.2
Industrial and other		5.25	7.2	6.1	-4.1	-4.5	-1.7	-2.3	7	6	.7	-1.4	4	.4	-3.2
Defense and space equipment		1.74	.2	1.7	6.8	2.3	2.2	8.6	.4	1.1	.5	1.1	-1.1	.5	3.2
Construction supplies Business supplies		5.19 10.55	5.4 3.9	-1.7 2.2	-1.4 -1.6	4 -1.2	2 8	-1.4 4.4	2 3	-1.7 .0	.8 1.0	.3 .8	8 7	1.4 2	.9 .4
Materials		45.42	4.4	1.0	1.0	2.1		4.2	1	1	1.1		0		
		45.43	4.4	1.8	1.0	-2.1	-2.8	4.2	1	1	1.1	1	9	.9	.3
Non-energy		27.35	3.1	9	1	-2.3 -3.3	-1.9	3.0 2.8	.2	5	1.1	4	9	1.4	.5
Durable		16.83 2.93	2.8	1.5	4 3.9	-6.2	-1.3	.2	.3	1	1.0	-1.1	-1.1 -5.2	1.6 4.9	.0 -1.7
Consumer parts		4.64	-5.6 6.9	3.0		-0.2	.7 -2.3	9.0	.5	6 1.3	.3 1.2	6 4		1.4	3.3
Equipment parts Other		9.26	3.6	.1	1 -1.9	-3.5	-2.3 -1.4	.7	.1	1.3 7	1.2	-1.6	.6 7	.8	-1.2
Nondurable		10.53	3.5	-4.4	-1.9	8	-2.9	3.3	.1	-1.0	1.1	-1.0	6	1.0	1.4
Textile		.30	1.7	-7.9	-6.9	-12.3	1.8	14.1	2.5	8	2.5	1.1	2.2	1.4	6.4
Paper		1.47	1.7	-4.7	-5.2	6.1	6.6	2.9	.3	8	-1.0	.6	1.3	.1	5.5
Chemical		5.44	6.5	-6.3	3.5	-2.9	-8.2	7.2	.3	-1.4	2.5	1.1	-1.8	1.2	.1
Energy		18.08	7.3	5.3	2.7	-1.8	-4.2	5.9	5	.5	1.1	.3	9	.3	.1
INDUSTRY GROUPS															
Manufacturing		75.05	3.4	.5	4	-1.4	9	1.6	.2	6	.8	2	7	.9	.2
Manufacturing (NAICS)	31-33	73.46	3.5	.6	3	-1.4	9	1.7	.2	6	.8	2	7	1.0	.2
Durable manufacturing		37.33	3.3	2.3	4	-3.0	.0	.6	.1	6	.6	6	-1.5	2.1	1
Wood products	321	1.63	.4	-4.5	-1.4	1.0	-2.8	8	-1.2	-1.7	2.3	6	-1.9	.1	-1.6
Nonmetallic mineral products	327	2.35	2.6	4.4	-3.0	-1.3	-12.8	-2.5	-1.5	.0	7	1.6	1	.5	-3.2
Primary metals	331	2.74	5.9	-5.2	1.9	-2.2	-2.7	-1.4	1.1	-2.3	3.7	-4.4	1.2	3.2	1.8
Fabricated metal products	332	6.10	6.1	1.9	-1.8	-1.6	2.4	-1.3	4	6	1.2	-1.0	-1.3	.9	6
Machinery	333	5.67	8.3	3.4	-3.6	-4.3	-1.2	-2.6	-1.3	5	.7	-1.4	.1	.8	-2.3
Computer and electronic products	334	4.40	5.8	.6	2.9	3.5	2.2	6.8	.3	1.3	.7	6	1.3	.2	4.4
Electrical equip., appliances,															
		_	_	_		_		_						_	_
and components	335	2.13	3.7	2.7	-1.2	2.2	-1.8	2.7	1.6	-1.3	.9	1.6	7	2.0	3.2
Motor vehicles and parts	335 3361–3	2.13 5.49	3.7 -5.1	2.7 5.8	-1.2 1.6	2.2	-1.8 8.3	2.7 3.4	1.6 2.1	-1.3 -2.0	.9 5	1.6	7 -8.9	2.0 9.8	3.2
Motor vehicles and parts Aerospace and miscellaneous	3361–3	5.49	-5.1	5.8	1.6	-13.7	8.3	3.4	2.1	-2.0	5	.1	-8.9	9.8	.3
Motor vehicles and parts Aerospace and miscellaneous transportation equipment	3361–3 3364–9	5.49 3.15	-5.1 -1.4	5.8 9.7	3.0	-13.7	8.3 -3.1	3.4 6.7	2.1	-2.0 1.2	5 .5	1.0	-8.9 8	9.8	1.6
Motor vehicles and parts Aerospace and miscellaneous transportation equipment Furniture and related products	3361–3 3364–9 337	3.15 1.01	-5.1 -1.4 2.7	5.8 9.7 -3.5	3.0 -10.5	-13.7 .0 -11.4	-3.1 -5.2	3.4 6.7 1.2	2.1 .2 9	-2.0 1.2 1.1	5 .5 -1.8	1.0 1.6	-8.9 8 -1.6	9.8 1.2 .8	1.6 -5.0
Motor vehicles and parts Aerospace and miscellaneous transportation equipment	3361–3 3364–9	5.49 3.15	-5.1 -1.4	5.8 9.7	3.0	-13.7	8.3 -3.1	3.4 6.7	2.1	-2.0 1.2	5 .5	1.0	-8.9 8	9.8	1.6
Motor vehicles and parts Aerospace and miscellaneous transportation equipment Furniture and related products	3361–3 3364–9 337	3.15 1.01	-5.1 -1.4 2.7	5.8 9.7 -3.5	3.0 -10.5	-13.7 .0 -11.4	-3.1 -5.2	3.4 6.7 1.2	2.1 .2 9	-2.0 1.2 1.1	5 .5 -1.8	1.0 1.6	-8.9 8 -1.6	9.8 1.2 .8 9	1.6 -5.0
Motor vehicles and parts Aerospace and miscellaneous transportation equipment Furniture and related products Miscellaneous	3361–3 3364–9 337	5.49 3.15 1.01 2.65	-5.1 -1.4 2.7 7.7	5.8 9.7 -3.5 3.6	3.0 -10.5 .7	-13.7 .0 -11.4 .4	-3.1 -5.2 6	3.4 6.7 1.2 -7.2	2.1 .2 9 .0	-2.0 1.2 1.1 -1.2	5 -5 -1.8 9	1.0 1.6 -1.9	-8.9 8 -1.6 .2	9.8 1.2 .8	.3 1.6 -5.0 -4.0
Motor vehicles and parts Aerospace and miscellaneous transportation equipment Furniture and related products Miscellaneous Nondurable manufacturing	3361–3 3364–9 337 339	5.49 3.15 1.01 2.65 36.14	-5.1 -1.4 2.7 7.7 3.8	5.8 9.7 -3.5 3.6	3.0 -10.5 .7	-13.7 .0 -11.4 .4	8.3 -3.1 -5.2 6 -1.7	3.4 6.7 1.2 -7.2 2.8	2.1 .2 9 .0	-2.0 1.2 1.1 -1.2	5 -1.8 9	.1 1.0 1.6 -1.9	-8.9 8 -1.6 .2	9.8 1.2 .8 9	.3 1.6 -5.0 -4.0
Motor vehicles and parts Aerospace and miscellaneous transportation equipment Furniture and related products Miscellaneous Nondurable manufacturing Food, beverage, and tobacco products	3361–3 3364–9 337 339	5.49 3.15 1.01 2.65 36.14 12.17	-5.1 -1.4 2.7 7.7 3.8 1	5.8 9.7 -3.5 3.6 -1.1	3.0 -10.5 .7 -1.4	-13.7 .0 -11.4 .4 .3 2.0	8.3 -3.1 -5.2 6 -1.7 -3.7	3.4 6.7 1.2 -7.2 2.8 6	2.1 .2 9 .0	-2.0 1.2 1.1 -1.2 7 7	5 -1.8 9 1.0 .5	.1 1.0 1.6 -1.9	-8.9 8 -1.6 .2 .1 3	9.8 1.2 .8 9 2 2	.3 1.6 -5.0 -4.0 .5 -1.1
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	3361–3 3364–9 337 339 311,2 313,4	3.15 1.01 2.65 36.14 12.17	-5.1 -1.4 2.7 7.7 3.8 1 3.6	5.8 9.7 -3.5 3.6 -1.1 .0 -9.6	3.0 -10.5 .7 -1.4 -6.5	-13.7 .0 -11.4 .4 .3 2.0 -12.8	8.3 -3.1 -5.2 6 -1.7 -3.7 -3.1	3.4 6.7 1.2 -7.2 2.8 6 7.4 6.2 .5	2.1 .2 9 .0	-2.0 1.2 1.1 -1.2 7 7	5 -1.8 9 1.0 .5 2.5	.1 1.0 1.6 -1.9 .1 .3 .4	-8.98 -1.6236 -2.0 1.2	9.8 1.2 .8 9 2 2	.3 1.6 -5.0 -4.0 .5 -1.1
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	3361–3 3364–9 337 339 311,2 313,4 315,6 322 323	5.49 3.15 1.01 2.65 36.14 12.17 .53 .19 2.19 1.30	-5.1 -1.4 2.7 7.7 3.8 1 3.6 5.8	5.8 9.7 -3.5 3.6 -1.1 .0 -9.6 .2	3.0 -10.5 .7 -1.4 -6.5 -8.8	-13.7 .0 -11.4 .4 .3 2.0 -12.8 -15.0 6.5 -8.1	8.3 -3.1 -5.2 6 -1.7 -3.7 -3.1 -12.4 1.9 10.4	3.4 6.7 1.2 -7.2 2.8 6 7.4 6.2 .5	2.1 .2 9 .0 .3 .0 .0 -1.4 .0 .9	-2.0 1.2 1.1 -1.2 7 6 1.8 .0 1.0	5 -1.8 9 1.0 .5 2.5 .4 4	.1 1.0 1.6 -1.9 .1 .3 .4 2.5	-8.98 -1.6 .2 .136 -2.0 1.2 .3	9.8 1.2 .89 2 .7 -1.6	.3 1.6 -5.0 -4.0 .5 -1.1 3 -7.0 3.7 1.4
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	3361–3 3364–9 337 339 311,2 313,4 315,6 322 323 324	5.49 3.15 1.01 2.65 36.14 12.17 .53 .19 2.19 1.30 4.00	-5.1 -1.4 2.7 7.7 3.8 1 3.6 5.8 -1.0 3.5 17.8	5.8 9.7 -3.5 3.6 -1.1 .0 -9.6 .2 -6.0 1.2 -2.6	1.6 3.0 -10.5 .7 1 -1.4 -6.5 -8.8 -3.3 -10.2 3.9	-13.7 .0 -11.4 .4 .3 2.0 -12.8 -15.0 6.5 -8.1 8.3	8.3 -3.1 -5.2 6 -1.7 -3.7 -3.1 -12.4 1.9 10.4 .2	3.4 6.7 1.2 -7.2 2.8 6 7.4 6.2 .5 9.7 -2.3	2.1 .2 9 .0 .3 .0 .0 -1.4 .0 .9 2.0	-2.0 1.2 1.1 -1.2 76 1.8 .0 1.0 -3.9	5 -1.89 -1.05 -2.5 -4459	.1 1.0 1.6 -1.9 .1 .3 .4 2.5 .0 1.7 8	-8.98 -1.6236 -2.0 1.2 .3 2.6	9.8 1.2 .8922 .7 -1.6 .4 -1.4 -2.3	.3 1.6 -5.0 -4.0 .5 -1.1 -3 -7.0 3.7 1.4 2.0
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	3361–3 3364–9 337 339 311,2 313,4 315,6 322 323 324 325	5.49 3.15 1.01 2.65 36.14 12.17 53 .19 2.19 1.30 4.00 12.01	-5.1 -1.4 2.7 7.7 3.8 -1.1 3.6 5.8 -1.0 3.5 17.8 5.7	5.8 9.7 -3.5 3.6 -1.1 .0 -9.6 .2 -6.0 1.2 -2.6 -1.3	1.6 3.0 -10.5 .7 1 -1.4 -6.5 -8.8 -3.3 -10.2 3.9 2.1	-13.7 .0 -11.4 .4 .3 2.0 -12.8 -15.0 6.5 -8.1 8.3 -2.3	8.3 -3.1 -5.2 6 -1.7 -3.7 -3.1 -12.4 1.9 10.4 .2 -1.6	3.4 6.7 1.2 -7.2 2.8 6 7.4 6.2 .5 9.7 -2.3 8.0	2.1 .2 9 .0 .3 .0 .0 -1.4 .0 .9 2.0 .2	-2.0 1.2 1.1 -1.2 76 1.8 .0 1.0 -3.91	5 -1.89 -1.05 -2.5 -4459 -1.6	.1 1.0 1.6 -1.9 .1 .3 .4 2.5 .0 1.78 .1	-8.98 -1.6 .2 .136 -2.0 1.2 .3 2.61	9.8 1.2 .8922 .7 -1.6 .4 -1.4 -2.3 .4	.3 1.6 -5.0 -4.0 .5 -1.13 -7.0 3.7 1.4 2.0 1.8
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	3361–3 3364–9 337 339 311,2 313,4 315,6 322 323 324 325 326	5.49 3.15 1.01 2.65 36.14 12.17 .53 .19 2.19 1.30 4.00 12.01 3.73	-5.1 -1.4 2.7 7.7 3.8 -1.1 3.6 5.8 -1.0 3.5 17.8 5.7 3.0	5.8 9.7 -3.5 3.6 -1.1 .0 -9.6 .2 -6.0 1.2 -2.6 -1.3 .2	1.6 3.0 -10.5 .7 -1.1 -6.5 -8.8 -3.3 -10.2 3.9 2.1 .3	-13.7 .0 -11.4 .4 .3 2.0 -12.8 -15.0 6.5 -8.1 8.3 -2.3 -2.1	8.3 -3.1 -5.2 6 -1.7 -3.7 -3.1 -12.4 1.9 10.4 .2 -1.6 -2.9	3.4 6.7 1.2 -7.2 2.8 6 7.4 6.2 .5 9.7 -2.3 8.0	2.1 .2 9 .0 .3 .0 .0 -1.4 .0 .9 2.0 .2	-2.0 1.2 1.1 -1.2 76 1.8 .0 1.0 -3.91	5 -1.89 -1.05 -2.5 -445 -2.9 1.63	.1 1.0 1.6 -1.9 .1 .3 .4 2.5 .0 1.78 .12	-8.9 -1.6 -2 -1 -3 -6 -2.0 1.2 -3 2.6 -19	9.8 1.2 .892 .7 -1.6 .4 -1.4 -2.3 .41	.3 1.6 -5.0 -4.0 .5 -1.13 -7.0 3.7 1.4 2.0 1.8 -1.9
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)	3361–3 3364–9 337 339 311,2 313,4 315,6 322 323 324 325 326 1133,5111	5.49 3.15 1.01 2.65 36.14 12.17 .53 .19 2.19 1.30 4.00 12.01 3.73	-5.1 -1.4 2.7 7.7 3.8 1 3.6 5.8 -1.0 3.5 17.8 5.7 3.0	5.8 9.7 -3.5 3.6 -1.1 .0 -9.6 .2 -6.0 1.2 -2.6 -1.3 .2 -1.6	1.6 3.0 -10.5 .71 -1.4 -6.5 -8.8 -3.3 -10.2 3.9 2.1 .3 -8.1	-13.7 .0 -11.4 .3 2.0 -12.8 -15.0 6.5 -8.1 8.3 -2.3 -2.1	8.3 -3.1 -5.2 6 -1.7 -3.7 -3.1 -12.4 1.9 10.4 .2 -1.6 -2.9	3.4 6.7 1.2 -7.2 2.8 6 7.4 6.2 .5 9.7 -2.3 8.0 .9	2.1 .2 9 .0 .3 .0 .0 .1.4 .0 .9 2.0 .2 .3 -1.8	-2.0 1.2 1.1 -1.2 76 1.8 .0 1.0 -3.91 .2	5 -1.89 1.0 .5 2.5 .445 2.9 1.63	.1 1.0 1.6 -1.9 .1 .3 .4 2.5 .0 1.78 .12	-8.98 -1.62136 -2.0 1.23 2.619	9.8 1.2 .8927 -1.6 .4 -1.4 -2.3 .41	.3 1.6 -5.0 -4.0 .5 -1.13 -7.0 3.7 1.4 2.0 1.8 -1.9
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) Mining	3361–3 3364–9 337 339 311,2 313,4 315,6 322 323 324 325 326 1133,5111	5.49 3.15 1.01 2.65 36.14 12.17 .53 .19 2.19 1.30 4.00 12.01 3.73 1.59	-5.1 -1.4 2.7 7.7 3.8 1 3.6 5.8 -1.0 3.5 17.8 5.7 3.0 3	5.8 9.7 -3.5 3.6 -1.1 .0 -9.6 .2 -6.0 1.2 -2.6 -1.3 .2 -1.6 6.2	1.6 3.0 -10.5 .7 1 -1.4 -6.5 -8.8 -3.3 -10.2 3.9 2.1 .3 -8.1 2.6	-13.7 .0 -11.4 .4 .3 2.0 -12.8 -15.0 6.5 -8.1 8.3 -2.3 -2.1 -4.4	8.3 -3.1 -5.2 6 -1.7 -3.7 -3.1 -12.4 1.9 10.4 .2 -1.6 -2.9 -1.6	3.4 6.7 1.2 -7.2 2.8 6 7.4 6.2 .5 9.7 -2.3 8.0 .9 -1.8	2.1 2.29 .0 3.0 .0 -1.4 .0 9 2.0 .2 .38	-2.0 1.2 1.1 -1.2 -7 -7 -6 1.8 .0 1.0 -3.9 -1 .2 -1.3	5 .5 -1.89 1.0 .5 2.5 .445 2.9 1.63 1.1	.1 1.0 1.6 -1.9 .1 .3 .4 2.5 .0 1.78 .12 1.6 .3	-8.98 -1.6236 -2.0 1.23 2.619 -1.6	9.8 1.2 .89227 -1.6 -1.4 -2.3 .41 .3	.3 1.6 -5.0 -4.0 .5 -1.13 -7.0 3.7 1.4 2.0 1.8 -1.9 -1.4
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)	3361–3 3364–9 337 339 311,2 313,4 315,6 322 323 324 325 326 1133,5111	5.49 3.15 1.01 2.65 36.14 12.17 .53 .19 2.19 1.30 4.00 12.01 3.73	-5.1 -1.4 2.7 7.7 3.8 1 3.6 5.8 -1.0 3.5 17.8 5.7 3.0	5.8 9.7 -3.5 3.6 -1.1 .0 -9.6 .2 -6.0 1.2 -2.6 -1.3 .2 -1.6	1.6 3.0 -10.5 .71 -1.4 -6.5 -8.8 -3.3 -10.2 3.9 2.1 .3 -8.1	-13.7 .0 -11.4 .3 2.0 -12.8 -15.0 6.5 -8.1 8.3 -2.3 -2.1	8.3 -3.1 -5.2 6 -1.7 -3.7 -3.1 -12.4 1.9 10.4 .2 -1.6 -2.9	3.4 6.7 1.2 -7.2 2.8 6 7.4 6.2 .5 9.7 -2.3 8.0 .9	2.1 .2 9 .0 .3 .0 .0 .1.4 .0 .9 2.0 .2 .3 -1.8	-2.0 1.2 1.1 -1.2 76 1.8 .0 1.0 -3.91 .2	5 -1.89 1.0 .5 2.5 .445 2.9 1.63	.1 1.0 1.6 -1.9 .1 .3 .4 2.5 .0 1.78 .12	-8.98 -1.62136 -2.0 1.23 2.619	9.8 1.2 .8927 -1.6 .4 -1.4 -2.3 .41	.3 1.6 -5.0 -4.0 .5 -1.13 -7.0 3.7 1.4 2.0 1.8 -1.9

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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/G17/20240917/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
Fourth quarter to

Percent change, seasonally adjusted			1	rth quart urth quar		Δ	nnual rat	re.			Month	nly rate			Aug. '23
Item		2023	2021			2023	2024	Q2 ^r	2024 Mon ^r	A 1211 T			Inder.	A u a P	to
		proportion		2022	2023	Q4	Q1 ^r		Mar. ^r	Apr.r	May ^r	June ^r	July ^r	Aug. ^p	Aug. '24
Total industry		100.00	3.8	1.8	1	-1.8	-1.8	2.9	2	1	.7	.1	9	.8	.0
Energy		26.94	7.7	5.1	1.3	-2.3	-4.4	6.7	-1.1	1.4	1.0	.6	9	1	4
Consumer products		5.49	6.2	2.5	-2.0	-3.8	-7.3	11.8	-3.0	5.4	.5	1.0	-1.0	-1.4	-2.0
Commercial products Oil and gas well drilling	213111	2.76	6.1 59.2	6.3	.4 -7.9	.2	.6 -9.1	7.3	-1.9 .9	1.3 -3.5	1.5 -2.0	2.0	-1.1 3	4 .3	2.1 -9.0
Converted fuel	213111	5.15	4.1	3.3	2.4	-2.4	.2	4.5	4	-5.5	4.0	8	-3.8	1.3	-9.0
Primary energy		12.93	8.7	6.0	2.9	-1.5	-6.0	6.5	5	.4	1	.8	.3	1	.5
Non-energy		73.06	2.8	.5	6	-1.6	8	1.6	.1	6	.7	1	-1.0	1.2	.2
Selected high-technology industries		1.89	5.1	6.5	7.8	9.1	2.3	15.6	.6	3.1	1.0	-1.3	.9	1.7	9.1
Computers and peripheral equipment	3341	.23	18.4	8.2	6.9	-4.0	-2.3	8.2	2.6	5	2.0	-1.7	3	3.1	2.1
Communications equipment	3342	.40	18.0	10.4	14.3	25.2	10.7	4.9	.6	.3	.3	.3	.2	.4	11.0
Semiconductors and related	55.2	.10	10.0	1011	15	20.2	10.7							- '	11.0
electronic components	3344	1.26	5	5.0	5.9	6.7	.4	20.8	.3	4.8	1.1	-1.7	1.3	1.9	9.8
Excluding selected high-technology															
industries		71.17	2.7	.3	8	-1.9	9	1.2	.1	7	.7	1	-1.0	1.2	1
Motor vehicles and parts	3361-3	5.49	-5.1	5.8	1.6	-13.7	8.3	3.4	2.1	-2.0	5	.1	-8.9	9.8	.3
Motor vehicles	3361	2.62	-10.1	11.0	1.3	-17.6	16.3	.7	3.1	-3.8	-1.3	.9	-13.0	16.6	2.7
Motor vehicle parts	3363	2.31	-4.1	7.3	2.7	-10.6	7.7	5.3	.9	5	.2	1	-5.4	4.3	4
Excluding motor vehicles and parts		65.69	3.5	1	-1.0	8	-1.6	1.0	1	6	.8	1	3	.5	1
Consumer goods		19.27	2.0	1	6	1.4	5	.4	2	4	.5	.0	.0	1	.1
Business equipment		7.49	5.2	6.0	-3.0	-2.7	-2.6	-2.3	6	4	.4	-1.0	.2	.3	-2.3
Construction supplies		5.18	5.4	-1.8	-1.5	5	2	-1.4	2	-1.7	.8	.3	8	1.4	.8
Business supplies Materials		7.41 24.59	3.4 4.1	.7 -1.9	-2.8 6	-2.3 -1.9	-1.6 -2.8	2.7 2.0	.3	6 7	.7 1.1	.5 3	7 5	2 1.0	8 .2
Measures excluding selected high-technology industries															
Total industry		98.11	3.8	1.7	3	-2.0	-1.9	2.7	2	1	.7	.1	-1.0	.8	1
Manufacturing ¹		73.17	3.4	.4	6	-1.7	-1.0	1.2	.2	7	.8	2	8	.9	1
Durable		35.58	3.1	2.0	9	-3.7	3	2	.1	8	.6	5	-1.7	2.1	7
Measures excluding motor vehicles and parts															
Total industry		94.51	4.5	1.6	2	-1.0	-2.3	2.9	3	.1	.8	.1	5	.3	.0
Manufacturing ¹		69.57	4.2	.1	6	4	-1.6	1.4	.0	5	.9	2	1	.3	.2
Durable		31.98	4.9	1.7	8	-1.0	-1.5	.1	3	3	.8	7	2	.9	2
Measures excluding selected high-technology industries															
and motor vehicles and parts		00.00			_		2.1	2 1						_	
Total industry		92.63	4.5	1.5	3	-1.3	-2.4	2.6	4	.0	.8	.1	5	.3	2
Manufacturing ¹		67.68	4.2	1	8	7	-1.7	1.0	.0	6	.9	2	1	.2	1
Stage-of-process components of non-energy materials, measures of the input to Finished processors		9.34	1.7	1.5	.1	-2.0	.2	5.3	.5	.5	.6	3	-1.0	2.2	2.2
Primary and semifinished processors		18.02	3.9	-2.0	2	-2.5	-3.0	1.8	.1	-1.0	1.3	4	8	.9	4
J and semi-mission processors		10.02	3.7	2.0		2.0	5.0	1.0		1.0	1.0			.,	.,

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

2023	2023		2024		2024					
average	Q3	Q4	Q1	Q2	Mar.	Apr.	May	June	July	Aug.
10.64	11.02	10.42	10.92	10.90	11.49	10.91	10.82	10.97	9.40	11.03
1.74	1.77	1.70	1.57	1.40	1.66	1.32	1.44	1.44	1.40	1.53
8.90	9.25	8.72	9.34	9.50	9.83	9.59	9.38	9.53	8.00	9.50
8.57	8.90	8.40	8.98	9.15	9.43	9.25	9.07	9.14	7.67	9.17
.33	.35	.32	.36	.35	.40	.34	.31	.39	.33	.32
10.31	10.67	10.10	10.56	10.55	11.08	10.57	10.51	10.58	9.07	10.71
	10.64 1.74 8.90 8.57 .33	average Q3 10.64 11.02 1.74 1.77 8.90 9.25 8.57 8.90 .33 .35	average Q3 Q4 10.64 11.02 10.42 1.74 1.77 1.70 8.90 9.25 8.72 8.57 8.90 8.40 .33 .35 .32	average Q3 Q4 Q1 10.64 11.02 10.42 10.92 1.74 1.77 1.70 1.57 8.90 9.25 8.72 9.34 8.57 8.90 8.40 8.98 .33 .35 .32 .36	average Q3 Q4 Q1 Q2 10.64 11.02 10.42 10.92 10.90 1.74 1.77 1.70 1.57 1.40 8.90 9.25 8.72 9.34 9.50 8.57 8.90 8.40 8.98 9.15 .33 .35 .32 .36 .35	average Q3 Q4 Q1 Q2 Mar. 10.64 11.02 10.42 10.92 10.90 11.49 1.74 1.77 1.70 1.57 1.40 1.66 8.90 9.25 8.72 9.34 9.50 9.83 8.57 8.90 8.40 8.98 9.15 9.43 .33 .35 .32 .36 .35 .40	average Q3 Q4 Q1 Q2 Mar. Apr. 10.64 11.02 10.42 10.92 10.90 11.49 10.91 1.74 1.77 1.70 1.57 1.40 1.66 1.32 8.90 9.25 8.72 9.34 9.50 9.83 9.59 8.57 8.90 8.40 8.98 9.15 9.43 9.25 .33 .35 .32 .36 .35 .40 .34	average Q3 Q4 Q1 Q2 Mar. Apr. May 10.64 11.02 10.42 10.92 10.90 11.49 10.91 10.82 1.74 1.77 1.70 1.57 1.40 1.66 1.32 1.44 8.90 9.25 8.72 9.34 9.50 9.83 9.59 9.38 8.57 8.90 8.40 8.98 9.15 9.43 9.25 9.07 .33 .35 .32 .36 .35 .40 .34 .31	average Q3 Q4 Q1 Q2 Mar. Apr. May June 10.64 11.02 10.42 10.92 10.90 11.49 10.91 10.82 10.97 1.74 1.77 1.70 1.57 1.40 1.66 1.32 1.44 1.44 8.90 9.25 8.72 9.34 9.50 9.83 9.59 9.38 9.53 8.57 8.90 8.40 8.98 9.15 9.43 9.25 9.07 9.14 .33 .35 .32 .36 .35 .40 .34 .31 .39	average Q3 Q4 Q1 Q2 Mar. Apr. May June July 10.64 11.02 10.42 10.92 10.90 11.49 10.91 10.82 10.97 9.40 1.74 1.77 1.70 1.57 1.40 1.66 1.32 1.44 1.44 1.40 8.90 9.25 8.72 9.34 9.50 9.83 9.59 9.38 9.53 8.00 8.57 8.90 8.40 8.98 9.15 9.43 9.25 9.07 9.14 7.67 .33 .35 .32 .36 .35 .40 .34 .31 .39 .33

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

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

Table 4 INDUSTRIAL PRODUCTION INDEXES: MARKET AND INDUSTRY GROUP SUMMARY 2017 = 100, seasonally adjusted

2017 = 1	100,	seasonally	adi	usted

117 = 100, seasonally adjusted											
Item		2023 proportion	2023 Dec.	2024 Jan.	Feb.	Mar. ^r	Apr.r	May ^r	June ^r	July ^r	Aug. ^p
Total IP		100.00	102.6	101.5	102.7	102.5	102.4	103.2	103.3	102.3	103.1
Market Groups											
Final products and nonindustrial supplies		54.57	100.7	99.9	101.0	100.6	100.6	101.1	101.3	100.3	101.0
Consumer goods		27.65	102.0	101.3	101.9	101.4	101.9	102.2	102.3	101.1	101.9
Durable		6.08	107.8	103.9	107.6	108.1	106.1	105.7	105.3	99.7	105.4
Automotive products		3.35	112.1	104.8	110.0	112.1	109.3	108.5	108.9	99.0	109.5
Home electronics		.14	192.7	195.2	194.6	198.9	197.6	199.5	195.7	194.0	197.4
Appliances, furniture, carpeting		.91	84.8	85.1	87.8	83.0	82.5	81.5	80.6	79.4	81.4
Miscellaneous goods		1.69	107.6	107.6	108.8	109.7	108.3	108.9	107.6	107.3	106.4
Nondurable		21.57	100.4	100.5	100.4	99.6	100.7	101.2	101.5	101.5	100.9
Non-energy		16.08	100.6	100.1	101.1	101.0	100.7	101.3	101.2	101.6	101.3
Foods and tobacco		9.74	98.6	97.6	98.0	98.0	97.4	97.7	98.0	97.7	97.4
Clothing		.17 4.99	80.7	80.4	79.3	78.1	79.8	80.0	81.6	80.0	78.5
Chemical products Paper products		.78	109.7 76.6	109.8 78.2	112.4 78.2	112.3 77.7	112.8 76.8	114.2 77.2	113.2 77.6	115.5 77.0	115.1 76.8
Energy		5.49	99.0	100.9	97.6	94.7	99.8	100.4	101.4	100.4	98.9
Business equipment		8.77	94.5	93.4	94.9	94.9	94.2	94.4	94.1	93.1	94.4
Transit		1.75	74.0	70.9	73.1	74.5	73.0	72.2	73.8	69.7	74.4
Information processing		1.77	109.1	110.0	110.1	110.4	110.4	111.0	110.9	112.6	112.0
Industrial and other		5.25	101.0	100.2	101.8	101.0	100.5	101.1	99.7	99.3	99.8
Defense and space equipment		1.74	116.9	117.4	117.5	118.0	119.3	119.9	121.2	119.8	120.5
Construction supplies		5.19	100.3	98.8	101.5	101.3	99.6	100.3	100.6	99.8	101.2
Business supplies		10.55	100.3	100.0	101.0	100.7	100.7	101.7	102.5	101.8	101.6
Materials		45.43	104.9	103.3	104.8	104.7	104.6	105.8	105.7	104.7	105.7
Non-energy		27.35	97.3	95.7	97.0	97.3	96.8	97.8	97.5	96.6	97.9
Durable		16.83	98.0	96.8	97.7	98.0	97.9	98.9	97.8	96.7	98.3
Consumer parts		2.93	95.4	92.8	93.5	94.0	93.5	93.8	93.2	88.4	92.7
Equipment parts		4.64	104.1	104.0	103.7	104.2	105.5	106.8	106.3	107.0	108.4
Other		9.26	96.0	94.6	96.2	96.3	95.6	96.8	95.3	94.6	95.3
Nondurable		10.53	96.1	94.0	96.0	96.2	95.2	96.3	97.0	96.5	97.4
Textile		.30	74.9	75.3	76.4	78.3	77.7	79.6	80.5	82.2	83.4
Paper Chemical		1.47 5.44	81.2 98.7	81.4 94.6	82.9 97.5	83.2 97.7	83.5 96.4	82.7 98.7	83.2 99.8	84.3 98.0	84.3 99.2
Energy		18.08	117.3	115.7	117.3	116.7	117.2	118.5	118.9	117.9	118.2
INDUSTRY GROUPS											
Manufacturing		75.05	99.2	97.9	99.3	99.5	98.9	99.6	99.4	98.7	99.6
Manufacturing (NAICS)	31-33	73.46	99.8	98.4	99.8	100.1	99.4	100.2	100.0	99.2	100.2
Durable manufacturing		37.33	100.6	99.4	100.9	101.0	100.3	100.9	100.4	98.8	100.9
Wood products	321	1.63	93.2	92.2	95.0	93.8	92.2	94.3	93.8	92.1	92.1
Nonmetallic mineral products	327	2.35	103.8	100.5	101.6	100.0	100.0	99.3	100.9	100.7	101.2
Primary metals	331	2.74	94.9	92.9	93.6	94.6	92.5	95.9	91.7	92.8	95.8
Fabricated metal products	332	6.10	98.7	99.4	100.0	99.5	98.9	100.0	99.0	97.8	98.7
Machinery Computer and electronic products	333 334	5.67 4.40	98.8	98.1	100.1	98.8	98.3	99.0	97.6	97.7	98.5
Computer and electronic products	334	4.40	115.8	116.6	116.4	116.8	118.3	119.1	118.4	119.9	120.2
Electrical equip., appliances, and components	335	2.13	103.7	103.4	102.6	104.2	102.9	103.8	105.5	104.8	106.9
Motor vehicles and parts	3361–3	5.49	103.7	103.4	102.0	110.4	102.9	103.6	103.3	98.2	100.9
Aerospace and miscellaneous	5501-5	3.79	100.7	104.3	100.2	110.7	100.2	107.0	107.0	70.2	107.0
transportation equipment	3364–9	3.15	88.6	89.0	88.1	88.3	89.3	89.7	90.6	89.9	91.0
Furniture and related products	337	1.01	77.4	76.6	77.6	77.0	77.8	76.5	77.7	76.4	77.0
Miscellaneous	339	2.65	107.8	107.2	109.2	109.1	107.8	106.8	104.8	105.0	104.1
Nondurable manufacturing		36.14	99.1	97.6	98.9	99.2	98.5	99.5	99.6	99.7	99.5
Food, beverage, and tobacco products	311,2	12.17	100.1	99.1	99.5	99.5	98.8	99.3	99.5	99.2	99.1
Textile and product mills	313,4	.53	77.4	77.4	78.7	78.7	78.3	80.2	80.5	80.0	80.6
Apparel and leather	315,6	.19	82.6	82.3	81.3	80.2	81.6	82.0	84.0	82.3	80.9
Paper	322	2.19	86.1	85.8	87.0	86.9	86.9	86.5	86.5	87.6	87.9
Printing and support	323	1.30	80.6	81.7	82.8	83.6	84.4	84.0	85.5	85.7	84.5
Petroleum and coal products	324	4.00	93.7	91.6	92.7	94.6	90.9	93.6	92.8	95.3	93.1
Chemicals Plastics and rubber products	325 326	12.01 3.73	103.7 103.4	101.2 101.9	103.8 102.3	104.0 102.6	103.9 102.8	105.5 102.5	105.7 102.3	105.6 101.3	106.0 101.3
Other manufacturing (non-NAICS)	1133,5111	1.59	78.0	80.0	80.3	79.7	78.6	79.5	80.8	79.5	79.8
<u> </u>	ŕ	14.22	120.5	115.3	120.3	119.6	119.9	119.3	119.6	119.1	120.1
Mining		14 /./.	140.3	113.3	120.5						
Mining Utilities	21 2211,2	10.73	103.1	107.5	103.6	101.0	104.7	107.0	108.6	105.4	105.3
Mining Utilities Electric			103.1 103.1	107.5 107.1	103.6 103.8	101.0 101.7	104.7 104.7	107.0 107.8	108.6 108.3	105.4 105.1	105.3 105.0 106.9

 $\label{eq:continuous_preliminary} \overline{r \mbox{ Revised. p Preliminary.}}$ Note. Refer to the notes for table 1.

Table 5
INDUSTRIAL PRODUCTION INDEXES: SPECIAL AGGREGATES

2017 = 100, seasonally adjusted

2017 = 100, scasonarry adjusted											
Item		2023 proportion	2023 Dec.	2024 Jan.	Feb.	Mar. ^r	Apr.r	May ^r	June ^r	July ^r	Aug. ^p
		1 1									
Total industry		100.00	102.6	101.5	102.7	102.5	102.4	103.2	103.3	102.3	103.1
Energy		26.94	112.0	111.5	111.8	110.6	112.2	113.3	114.0	113.0	112.8
Consumer products		5.49	99.0	100.9	97.6	94.7	99.8	100.4	101.4	100.4	98.9
Commercial products		2.76	108.7	109.5	110.0	107.9	109.3	110.9	113.1	111.9	111.4
Oil and gas well drilling	213111	.61	109.3	108.5	108.1	109.1	105.3	103.1	103.8	103.5	103.7
Converted fuel		5.15	110.6	115.2	110.1	109.6	110.2	114.7	113.7	109.4	110.9
Primary energy		12.93	119.6	115.2	119.7	119.1	119.6	119.5	120.5	120.9	120.7
Non-energy		73.06	99.2	97.8	99.4	99.5	98.9	99.5	99.4	98.4	99.6
Selected high-technology industries		1.89	147.8	148.1	147.6	148.5	153.2	154.7	152.7	154.1	156.8
Computers and peripheral equipment	3341	.23	157.5	155.7	156.1	160.1	159.3	162.4	159.6	159.1	164.0
Communications equipment	3342	.40	191.0	192.3	193.2	194.4	195.0	195.6	196.2	196.6	197.5
Semiconductors and related	3342	.+0	171.0	1/2.3	175.2	1,77.7	175.0	175.0	170.2	170.0	177.3
electronic components	3344	1.26	134.4	134.7	133.8	134.1	140.5	142.0	139.6	141.5	144.2
Excluding selected high-technology											
industries		71.17	98.0	96.6	98.2	98.3	97.6	98.2	98.1	97.1	98.2
Motor vehicles and parts	3361-3	5.49	108.7	102.3	108.2	110.4	108.2	107.6	107.8	98.2	107.8
Motor vehicles	3361	2.62	121.1	111.2	120.4	124.1	119.4	117.9	119.0	103.5	120.7
Motor vehicle parts	3363	2.31	100.6	98.3	101.6	102.5	102.0	102.2	102.1	96.5	100.7
Excluding motor vehicles and parts		65.69	97.1	96.2	97.4	97.3	96.8	97.5	97.4	97.0	97.5
Consumer goods		19.27	100.5	99.9	101.1	100.9	100.4	100.9	100.9	100.8	100.7
Business equipment		7.49	90.1	89.8	90.5	89.9	89.6	90.0	89.1	89.3	89.5
Construction supplies		5.18	100.1	98.6	101.4	101.1	99.4	100.2	100.4	99.6	101.0
Business supplies		7.41	96.1	95.2	96.5	96.8	96.2	96.9	97.3	96.7	96.5
Materials		24.59	95.4	93.9	95.1	95.2	94.6	95.7	95.4	94.9	95.8
Measures excluding selected high-technology											
industries											
Total industry		98.11	101.8	100.6	101.9	101.7	101.5	102.3	102.4	101.4	102.2
Manufacturing ¹		73.17	98.0	96.7	98.1	98.3	97.6	98.3	98.2	97.4	98.3
Durable		35.58	98.2	96.9	98.4	98.5	97.7	98.3	97.7	96.1	98.2
Measures excluding motor vehicles and parts											
Total industry		94.51	102.3	101.5	102.5	102.1	102.2	103.0	103.1	102.6	102.9
Manufacturing ¹		69.57	98.6	97.7	98.7	98.7	98.2	99.1	98.8	98.8	99.1
Durable		31.98	99.3	98.8	99.6	99.4	99.0	99.8	99.1	98.9	99.8
Measures excluding selected high-technology											
industries and motor vehicles and parts											
Total industry		92.63	101.4	100.6	101.6	101.2	101.2	102.0	102.1	101.6	101.9
Manufacturing ¹		67.68	97.3	96.3	97.4	97.4	96.8	97.7	97.5	97.4	97.6
Stage of process components of new analysis											
Stage-of-process components of non-energy materials, measures of the input to											
		9.34	06.2	05.5	05.0	06.4	06.0	07.5	07.2	06.2	00.2
Finished processors		18.02	96.3 97.9	95.5 95.9	95.9 97.8	96.4 97.9	96.9 96.9	97.5 98.2	97.2 97.8	96.2 97.0	98.3 97.9
Primary and semifinished processors		16.02	97.9	93.9	97.8	97.9	90.9	98.2	97.8	97.0	97.9
			1								

r Revised. p Preliminary.

Table 6 DIFFUSION INDEXES OF INDUSTRIAL PRODUCTION

Percent												
Item	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
One month earlier												
2022	41.8	65.7	60.6	52.5	43.8	51.5	56.6	42.8	57.9	49.2	43.4	33.0
2023	68.7	46.5	42.4	57.2	52.9	41.8	53.5	52.2	52.9	46.5	47.1	49.2
2024	38.4	62.0	60.3	43.8	63.6	46.1	40.4					
Three months earlier												
2022	53.9	56.5	63.6	64.0	55.2	49.5	51.2	50.5	56.2	52.9	49.5	32.0
2023	45.5	48.1	53.2	48.8	51.9	50.2	52.2	46.8	53.5	46.1	45.8	48.8
2024	41.1	50.8	56.6	57.9	56.6	51.9	51.5					
Six months earlier												
2022	62.0	67.3	67.7	63.3	59.9	56.1	62.6	50.8	51.2	50.2	47.5	41.4
2023	42.8	43.4	40.4	46.1	48.1	51.5	46.8	47.5	53.2	46.1	42.4	47.8
2024	35.7	49.5	50.2	50.2	56.6	55.6	55.9					

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

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

Table 7 CAPACITY UTILIZATION Percent of capacity, seasonally adjusted

Total industry	ercent of capacity, seasonally adjusted			1972-	1994-										
Total industry 100,00 79, 7 8-8 8-66 78,3 77,7 78,1 77,8 77,7 78,2 78,2 78,2 78,2 77,7 78,1 77,8 78,2 78,2 78,2 78,2 78,3 78,3 84,4 63,5 77,6 77,1 77,5 76,9 77,5 77,2 76,7 77,	Item		2023	2023	95	2009	2023	2024		2024					
Manufacturing' 75.87 78.3 84.4 63.5 77.6 77.1 77.2 77.5 76.9 77.5 77.2 76.5 Manufacturing (NAICS) 31–33 74.31 78.2 84.6 63.4 77.5 77.1 77.1 77.1 77.5 76.9 77.4 77.1 76.5 76.9 Durable manufacturing 38.31 76.9 83.5 88.3 76.1 78.8 75.6 76.1 75.5 75.9 77.4 77.1 76.0 76.7 86.5 84.5 76.4 75.8 75.6 76.1 75.6 75.9 75.4 74.7 76.0 76.7 86.5 84.5 76.4 75.8 75.6 76.1 75.6 75.9 75.4 74.7 76.0 76.7 86.5 84.5 76.4 75.8 75.6 76.1 75.6 75.9 75.4 74.7 76.0 76.0 76.7 86.5 84.5 76.4 75.8 75.6 76.2 75.7 74.1 76.0 76.7 86.5 84.5 76.4 75.8 75.5 75.8 74.5 76.2 75.7 74.1 76.0 76.7 86.5 84.5 76.4 75.8 75.5 75.8 74.5 76.2 75.7 74.1 76.0 76.7 86.5 84.5 76.2 75.7 74.1 76.1 76.1 76.1 76.1 76.1 76.1 76.1 76			proportion	ave.	high	low	Q4	Q1 ^r	Q2 ^r	Mar. ^r	Apr.r	May ^r	June ^r	July ^r	Aug.F
Manufacturing (NAICS) 31-33 74.31 78.2 84.6 63.4 77.5 77.1 77.1 77.5 76.9 77.4 77.1 77.5	Total industry		100.00	79.7	84.8	66.6	78.3	77.7	78.1	77.8	77.7	78.2	78.2	77.4	78.0
Manufacturing (NAICS) 31–33 74.31 78.2 84.6 63.4 77.5 77.1 77.1 77.5 76.9 77.4 77.1 76.5	Manufacturing ¹		75.87	78.3	84.4	63.5	77.6	77.1	77.2	77.5	76.9	77.5	77.2	76.6	77.2
Wood products		31–33												76.5	77.1
Nonnetallic mineral products 327 2.23 73.7 82.4 43.9 80.9 78.2 77.7 77.7 77.7 77.2 78.4 78.5														74.1	75.6
Primary metals	*														74.3
Fabricated metal products 332 6.22 78.4 83.3 64.4 76.5 76.9 76.7 76.8 76.4 77.3 76.5 75. Machinery 333 5.31 77.8 87.4 58.6 81.9 81.6 80.9 81.4 81.0 81.5 80.2 80.1 Computer and electronic products 3.4 4.57 77.4 83.7 69.7 76.0 75.4 75.5 75.1 75.7 75.8 75.0 75.0 Fabrical components 336 2.07 81.9 9.23 66.4 80.1 79.6 79.9 80.1 79.0 79.7 80.9 80. Motor vehicles and parts 3361-3 5.91 75.0 87.3 33.1 71.7 72.8 73.0 75.0 75.0 75.4 72.9 72.8 66.2 Acrospace and miscellaneous 3364-9 3.58 73.8 72.1 72.0 70.6 70.0 70.0 70.0 71.1 60.8 70.7 71.0 71.7 71.1 Framiture and related products 337 1.11 77.4 82.7 52.3 69.5 69.0 69.8 69.1 70.1 69.0 70.3 69.0 Miscellaneous 339 2.51 77.1 80.9 68.1 82.0 80.7 78.1 80.8 79.5 78.3 76.5 76.0 Nondurable manufacturing 360.0 80.1 86.1 68.9 79.0 78.4 78.9 78.3 78.9 79.0 79.0 79.0 79.0 79.0 79.0 79.0 79															78.7
Machinery 333 5.31 77.8 87.4 58.6 81.9 81.6 80.9 81.4 81.0 81.5 80.2 80.0										1					71.1
Computer and electronic products 334 4.57 77.4 83.7 69.7 76.0 75.4 75.5 75.1 75.7 75.8 75.0 75.8 relaterical equip, appliances, and components 335 2.07 81.9 92.3 66.4 80.1 79.6 79.9 80.1 79.0 79.7 80.9 80.2 Motor vehicles and parts 3361-3 5.91 75.0 87.3 33.1 71.7 72.8 73.0 75.0 73.4 72.9 72.8 66.4 Acrospace and miscellaneous transportation equipment 3364-9 3.58 73.8 72.1 72.0 70.6 70.0 71.1 69.8 70.7 71.0 71.7 71.7 71.7 72.8 73.0 75.0 75.8 75.0 75.8 75.0 75.8 75.0 75.8 75.0 75.8 75.0 75.8 75.0 75.8 75.0 75.8 75.0 75.8 75.0 75.0 75.8 75.0 75.0 75.0 75.0 75.0 75.0 75.0 75.0															76.3
Electrical equip,, appliances, and components 335 2.07 81.9 92.3 66.4 80.1 79.6 79.9 80.1 79.0 77. 80.9 80.0 80.															80.
and components 335 2.07 81,9 92,3 66.4 80.1 79,6 79,9 80.1 79,0 79,7 80,9 80.1 Notor vehicles and parts 3361–3 5.91 75.0 87.3 33.1 71.7 72.8 73.0 75.0 73.4 72.9 72.8 66.2 Acrospace and miscellaneous transportation equipment 3364–9 3.58 73.8 73.8 72.1 72.0 70.6 70.0 71.1 69.8 70.7 71.0 71.7 71. Furniture and related products 337 1.11 77.4 82.7 52.3 69.5 69.0 69.8 69.1 70.1 69.0 70.3 69.2 Miscellaneous 339 2.51 77.1 80.9 68.1 82.0 80.7 78.1 80.8 79.5 78.3 76.5 76.5 76.5 76.5 76.5 76.2 78.9 80.0 79.0 78.4 78.7 78.9 78.9 78.9 79.0 79.0 78.4 78.7 78.9 78.9 78.9 79.0 79.0 78.4 78.7 78.9 78.9 78.9 79.0 79.0 78.4 78.7 78.9 78.9 78.9 79.0 79.0 78.4 78.7 78.9 78.9 78.9 79.0 79.0 78.4 78.7 78.9 78.9 78.9 79.0 79.0 78.4 78.9 78.9 78.9 78.9 78.9 78.9 78.9 78.9		334	4.57	77.4	83.7	69.7	76.0	75.4	75.5	75.1	75.7	75.8	75.0	75.6	75
Motor vehicles and parts 3361-3 5.91 75.0 87.3 33.1 71.7 72.8 73.0 75.0 73.4 72.9 72.8 66.2 Acrospace and miscellaneous transportation equipment 3364-9 3.58 73.8 72.1 72.0 70.6 70.0 71.1 69.8 70.7 71.0 71.7 71. Furniture and related products 337 1.11 77.4 82.7 52.3 69.5 69.0 69.8 69.1 70.1 69.0 70.3 69.9 70.5 76															
Aerospace and miscellaneous transportation equipment 3364–9 a. 3.58 73.8 72.1 72.0 70.6 70.0 71.1 69.8 70.7 71.0 71.7 71. Furniture and related products 337 1.11 77.4 82.7 52.3 69.5 69.0 69.8 69.1 70.1 69.0 70.3 69.2 Miscellaneous 339 2.51 77.1 80.9 68.1 82.0 80.7 78.1 80.8 79.5 78.3 76.5 76.5 76.5 Mondurable manufacturing 36.00 80.1 86.1 68.9 79.0 78.4 78.7 78.9 78.3 78.9 79.0 79.4 79.8 76.0 76.0 49.2 78.1 80.0 80.3 85.3 75.3 80.5 79.8 79.8 80.0 79.4 79.8 80.0 79.4 79.8 76.0 79.4 79.8 76.0 79.4 79.8 79.0 79.0 79.4 79.8 79.0 79.0 79.4 79.8 79.0 79.0 79.4 79.8 79.0 79.0 79.4 79.8 79.0 79.0 79.4 79.8 79.0 79.0 79.4 79.8 79.0 79.0 79.4 79.0 79.0 79.0 79.0 79.0 79.0 79.0 79.0														80.3	81.
transportation equipment 3364-9 3.58 73.8 72.1 72.0 70.6 70.0 71.1 69.8 70.7 71.0 71.7 71. Furniture and related products 337 1.11 77.4 82.7 52.3 69.5 69.0 69.8 69.1 70.1 69.0 70.3 69.2 Miscellaneous 339 2.51 77.1 80.9 68.1 82.0 80.7 78.1 80.8 79.5 78.3 76.5 76.5 76.5 76.5 76.5 76.5 76.5 76.5		3361-3	5.91	75.0	87.3	33.1	71.7	72.8	73.0	75.0	73.4	72.9	72.8	66.2	72.
Furniture and related products 337															
Miscellaneous 339 2.51 77.1 80.9 68.1 82.0 80.7 78.1 80.8 79.5 78.3 76.5 76.5	transportation equipment	3364-9	3.58	73.8	72.1	72.0	70.6	70.0	71.1	69.8	70.7	71.0	71.7	71.1	71.
Nondurable manufacturing	Furniture and related products	337	1.11	77.4	82.7	52.3	69.5	69.0	69.8	69.1	70.1	69.0	70.3	69.4	70.
Food, beverage, and tobacco products	Miscellaneous	339	2.51	77.1	80.9	68.1	82.0	80.7	78.1	80.8	79.5	78.3	76.5	76.2	75.
Textile and product mills 313,4 6.1 78.1 91.5 54.1 68.1 69.9 68.7 68.5 70.4 70.9 70.4 Apparel and leather 315.6 2.1 75.5 87.3 58.6 65.6 63.5 64.6 62.7 63.8 64.1 65.8 64.1 68.1 69.9 Paper 322 2.16 86.5 92.7 72.8 81.5 82.0 82.2 82.4 82.4 82.1 82.1 83.2 Printing and support 323 1.35 79.2 85.3 58.6 72.2 73.9 75.4 74.6 75.3 74.9 76.1 76.2 Petroleum and coal products 324 3.65 85.4 91.1 75.9 90.6 90.4 89.8 91.9 88.3 90.9 90.3 92.7 Chemicals 325 12.42 77.0 82.4 65.4 76.1 75.2 76.0 75.7 75.4 76.4 76.3 76.1 76.3 76.1 76.2 76.2 76.2 76.2 76.2 76.2 76.2 76.2	Nondurable manufacturing		36.00	80.1	86.1	68.9	79.0	78.4	78.7	78.9	78.3	78.9	79.0	79.0	78.
Apparel and leather 315,6 21 75.5 87.3 58.6 65.6 63.5 64.6 62.7 63.8 64.1 65.8 64.0 Paper 322 2.16 86.5 92.7 72.8 81.5 82.0 82.2 82.4 82.4 82.4 82.1 82.1 83. Printing and support 323 1.35 79.2 85.3 58.6 72.2 73.9 75.4 74.6 75.3 74.9 76.1 76.2 Petroleum and coal products 324 3.65 85.4 91.1 75.9 90.6 90.4 89.8 91.9 88.3 90.9 90.3 92.7 Chemicals 325 12.42 77.0 82.4 65.4 76.1 75.2 76.0 75.7 75.4 76.4 76.3 76.3 76.8 Plastics and rubber products 326 3.79 81.9 93.1 56.8 77.0 75.7 75.2 75.7 75.6 75.2 74.9 74.1 75.9 90.6 90.6 90.4 89.8 91.9 88.3 90.9 90.3 92.7 Plastics and rubber products 326 3.79 81.9 93.1 56.8 77.0 75.7 75.2 75.7 75.6 75.2 74.9 74.1 75.9 90.6 90.6 90.4 89.8 91.9 88.3 90.9 90.3 92.7 Plastics and rubber products 326 3.79 81.9 93.1 56.8 77.0 75.7 75.2 75.7 75.6 75.2 74.9 74.1 75.9 90.6 90.6 90.4 89.8 90.9 90.3 92.7 91.0 Plastics and rubber products 326 3.79 81.9 93.1 56.8 77.0 75.7 75.2 75.7 75.6 75.2 74.9 74.1 75.9 90.6 90.6 90.4 89.8 90.2 90.3 92.7 91.0 Plastics and rubber products 326 3.79 81.9 93.1 56.8 77.0 75.7 75.2 75.7 75.6 75.2 74.9 74.1 75.2 75.0 75.2 75.7 75.6 75.2 74.9 74.1 70.0 Plastics and rubber products 326 3.79 81.9 93.1 56.8 77.0 75.7 75.2 75.7 75.6 75.2 74.9 74.1 70.0 Plastics and rubber products 326 3.79 81.9 93.1 56.8 70.0 Plastics 3211.2 12.46 86.5 88.6 78.9 89.4 88.3 89.4 89.2 89.6 89.2 89.6 89.2 Plastics 3211.2 11.67 84.5 93.2 78.1 72.0 70.8 72.0 70.0 70.8 72.0 70.0 70.8 72.0 70.0 70.0 70.0 70.0 70.0 70.0 70.0	Food, beverage, and tobacco products	311,2	11.81	80.3	85.3	75.3	80.5	79.8	79.8	80.0	79.4	79.8	80.0	79.8	79.
Paper 322 2.16 86.5 92.7 72.8 81.5 82.0 82.2 82.4 82.4 82.1 82.1 83. Printing and support 323 1.35 79.2 85.3 58.6 72.2 73.9 75.4 74.6 75.3 74.9 76.1 76.1 76.1 76.1 76.1 76.1 76.1 76.1	Textile and product mills	313,4	.61	78.1	91.5	54.1	68.1	68.1	69.9	68.7	68.5	70.4	70.9	70.6	71.
Printing and support 323 1.35 79.2 85.3 58.6 72.2 73.9 75.4 74.6 75.3 74.9 76.1 76.2 Petroleum and coal products 324 3.65 85.4 91.1 75.9 90.6 90.4 89.8 91.9 88.3 90.9 90.3 92.5 12.42 77.0 82.4 65.4 76.1 75.2 76.0 75.7 75.4 76.4 76.3 76.4 76.3 76.4 Plastics and rubber products 326 3.79 81.9 93.1 56.8 77.0 75.7 75.2 75.7 75.6 75.2 74.9 74.9 74.9 Other manufacturing (non-NAICS) 1133,5111 1.56 78.4 82.1 63.7 79.6 80.2 80.8 80.2 79.5 80.6 82.2 81.5 Mining 21 12.46 86.5 88.6 78.9 89.4 88.3 89.4 89.2 89.6 89.2 89.6 89.2 Utilities 2211,2 11.67 84.5 93.2 78.1 72.0 70.8 72.0 68.6 70.8 72.2 73.1 70.5 Selected high-technology industries 2211,2 11.67 84.5 93.2 78.1 70.7 80.6 78.8 79.4 78.3 80.0 80.0 78.2 78.1 70.0 Computers and peripheral equipment 3341 2.5 76.5 84.2 80.3 76.3 75.4 76.5 76.6 76.1 77.5 76.0 75.5 77.0 75.0 75.5 77.1 77.1 77.5 76.0 76.0 75.5 77.0 76.0 75.5 77.0 76.0 75.5 77.0 76.0 75.5 77.0 76.0 75.5 77.0 76.0 75.5 77.0 77.0 77.0 77.0 77.0 77.0 77	Apparel and leather	315,6	.21	75.5	87.3	58.6	65.6	63.5	64.6	62.7	63.8	64.1	65.8	64.6	63.
Petroleum and coal products 324 3.65 85.4 91.1 75.9 90.6 90.4 89.8 91.9 88.3 90.9 90.3 92.7 Chemicals 325 12.42 77.0 82.4 65.4 76.1 75.2 76.0 75.7 75.4 76.4 76.3 76.1 Plastics and rubber products 326 3.79 81.9 93.1 56.8 77.0 75.7 75.2 75.7 75.6 75.2 74.9 74.0 Other manufacturing (non-NAICS) 1133,5111 1.56 78.4 82.1 63.7 79.6 80.2 80.8 80.2 79.5 80.6 82.2 81.3 Mining 21 12.46 86.5 88.6 78.9 89.4 88.3 89.4 89.2 89.6 89.2 89.6 89.2 Utilities 2211,2 11.67 84.5 93.2 78.1 72.0 70.8 72.0 68.6 70.8 72.2 73.1 70.	Paper	322	2.16	86.5	92.7	72.8	81.5	82.0	82.2	82.4	82.4	82.1	82.1	83.1	83.
Chemicals 325 12.42 77.0 82.4 65.4 76.1 75.2 76.0 75.7 75.4 76.4 76.3 76.8 Plastics and rubber products 326 3.79 81.9 93.1 56.8 77.0 75.7 75.2 75.7 75.6 75.2 74.9 74.6 Other manufacturing (non-NAICS) 1133,5111 1.56 78.4 82.1 63.7 79.6 80.2 80.8 80.2 79.5 80.6 82.2 81.3 Mining 21 12.46 86.5 88.6 78.9 89.4 88.3 89.4 89.2 89.6 89.2 89.6 89.2 Utilities 2211,2 11.67 84.5 93.2 78.1 72.0 70.8 72.0 68.6 70.8 72.2 73.1 70.7 Selected high-technology industries 1.89 77.5 85.3 70.7 80.6 78.8 79.4 78.3 80.0 80.0 78.2 73.1 70.7 Selected high-technology industries 3341 .25 76.5 84.2 80.3 76.3 75.4 76.5 76.6 76.1 77.5 76.0 75.5 Semiconductors and peripheral equipment 3341 .25 76.5 84.2 80.3 76.3 75.4 76.5 76.6 76.1 77.5 76.0 75.2 Semiconductors and related electronic components 3344 1.19 79.3 92.8 63.2 83.5 80.8 81.9 79.9 82.7 82.7 80.3 80.3 80.3 80.3 80.3 80.3 80.3 80.3	Printing and support	323	1.35	79.2	85.3	58.6	72.2	73.9	75.4	74.6	75.3	74.9	76.1	76.2	75.
Plastics and rubber products 326 3.79 81.9 93.1 56.8 77.0 75.7 75.2 75.7 75.6 75.2 74.9 74.0 Other manufacturing (non-NAICS) 1133,5111 1.56 78.4 82.1 63.7 79.6 80.2 80.8 80.2 79.5 80.6 82.2 81.3 Mining 21 12.46 86.5 88.6 78.9 89.4 88.3 89.4 89.2 89.6 89.2 89.6 89.2 Utilities 2211,2 11.67 84.5 93.2 78.1 72.0 70.8 72.0 68.6 70.8 72.2 73.1 70. Selected high-technology industries 1.89 77.5 85.3 70.7 80.6 78.8 79.4 78.3 80.0 80.0 78.2 73.1 70. Computers and peripheral equipment 3341 .25 76.5 84.2 80.3 76.3 75.4 76.5 76.6 76.1 77.5 76.0 75.2 74.9 74.7 73.5 74.4 73.9 73.5 73.0 72.3 85.1 76.7 74.9 74.7 73.5 74.4 73.9 73.5 73.0 72.3 80.6 80.2 80.8 81.9 79.9 82.7 82.7 80.3 80.3 80.3 80.3 80.3 80.3 80.3 80.3	Petroleum and coal products	324	3.65	85.4	91.1	75.9	90.6	90.4	89.8	91.9	88.3	90.9	90.3	92.7	90.
Other manufacturing (non-NAICS) 1133,5111 1.56 78.4 82.1 63.7 79.6 80.2 80.8 80.2 79.5 80.6 82.2 81.3 Mining 21 12.46 86.5 88.6 78.9 89.4 88.3 89.4 89.2 89.6 89.2 89.6 89.2 89.6 89.2 89.6 89.2 89.6 89.2 89.6 89.2 89.6 89.2 77.5 85.3 70.7 78.1 72.0 70.8 72.0 68.6 70.8 72.2 73.1 70.7 Selected high-technology industries 1.89 77.5 85.3 70.7 80.6 78.8 79.4 78.3 80.0 80.0 78.2 78.2 Computers and peripheral equipment 3341 .25 76.5 84.2 80.3 76.3 75.4 76.5 76.6 76.1 77.5 76.0 75.2 Semiconductors and related electronic components 3344 1.19 79.3 92.8 63.2 </td <td>Chemicals</td> <td>325</td> <td>12.42</td> <td>77.0</td> <td>82.4</td> <td>65.4</td> <td>76.1</td> <td>75.2</td> <td>76.0</td> <td>75.7</td> <td>75.4</td> <td>76.4</td> <td>76.3</td> <td>76.0</td> <td>76.</td>	Chemicals	325	12.42	77.0	82.4	65.4	76.1	75.2	76.0	75.7	75.4	76.4	76.3	76.0	76.
Mining 21 12.46 86.5 88.6 78.9 89.4 88.3 89.4 89.2 89.6 89.2 89.6 89.2 Utilities 2211,2 11.67 84.5 93.2 78.1 72.0 70.8 72.0 68.6 70.8 72.2 73.1 70.1 70.1 77.5 76.8 72.2 73.1 70.1 77.2 76.2 73.1 70.2 76.2 73.1 70.2 76.3 74.9 74.7 73.5 74.4 73.9 73.5 74.4 73.9 73.5 73.0 72.2 73.1 70.2 76.2 74.9 74.7 73.5 74.4 73.9 73.5 73.0 72.2 73.1 70.2 76.2 74.9 74.7 73.5 74.4 73.9 73.5 73.0 72.2 73.1 70.2 76.2 74.9 74.7 73.5 74.4 73.9 73.5 73.0 72.2 73.1 70.2 74.9 74.7 73.5 74.4 73.9 73.5 73.0 72.2 73.1 70.2 74.9 74.7 73.5 74.4 73.9 73.5 73.0 72.2 73.1 70.2 74.9 74.7 73.5 74.4 73.9 73.5 73.0 72.2 73.1 70.2 74.9 74.7 73.5 74.4 73.9 73.5 73.0 72.2 73.1 74.1 75.2 74.4 73.9 73.5 73.0 73.0 73.0 73.0 73.0 73.0 73.0 73.0	Plastics and rubber products	326	3.79	81.9	93.1	56.8	77.0	75.7	75.2	75.7	75.6	75.2	74.9	74.0	73.
Utilities 2211,2 11.67 84.5 93.2 78.1 72.0 70.8 72.0 68.6 70.8 72.2 73.1 70.7 Selected high-technology industries 1.89 77.5 85.3 70.7 80.6 78.8 79.4 78.3 80.0 80.0 78.2 78.2 Computers and peripheral equipment 3341 .25 76.5 84.2 80.3 76.3 75.4 76.5 76.6 76.1 77.5 76.0 75.5 Communications equipment 3342 .45 75.3 85.1 76.7 74.9 74.7 73.5 74.4 73.9 73.5 73.0 72.3 Semiconductors and related electronic components 3344 1.19 79.3 92.8 63.2 83.5 80.8 81.9 79.9 82.7 82.7 80.3 80.3 Measures excluding selected high-technology industries 73.99 78.3 84.8 66.4 78.2 77.7 78.0 77.8 77.7 78.0 <td>Other manufacturing (non-NAICS)</td> <td>1133,5111</td> <td>1.56</td> <td>78.4</td> <td>82.1</td> <td>63.7</td> <td>79.6</td> <td>80.2</td> <td>80.8</td> <td>80.2</td> <td>79.5</td> <td>80.6</td> <td>82.2</td> <td>81.3</td> <td>81.</td>	Other manufacturing (non-NAICS)	1133,5111	1.56	78.4	82.1	63.7	79.6	80.2	80.8	80.2	79.5	80.6	82.2	81.3	81.
Selected high-technology industries 1.89 77.5 85.3 70.7 80.6 78.8 79.4 78.3 80.0 80.0 78.2 78.2 Computers and peripheral equipment 3341 .25 76.5 84.2 80.3 76.3 75.4 76.5 76.6 76.1 77.5 76.0 75.7 Communications equipment 3342 .45 75.3 85.1 76.7 74.9 74.7 73.5 74.4 73.9 73.5 73.0 72.3 Semiconductors and related electronic components 3344 1.19 79.3 92.8 63.2 83.5 80.8 81.9 79.9 82.7 82.7 80.3 80.3 Measures excluding selected high-technology industries Total industry 98.11 79.8 84.8 66.4 78.2 77.7 78.0 77.8 77.7 78.2 78.2 77.4 Manufacturing 1 73.99 78.3 84.3 63.0 77.5 77.1 77.1 77.5 76.8 77.4 77.2 76.5 STAGE-OF-PROCESS GROUPS Crude 16.48 85.6 90.0 77.0 87.2 85.8 87.3 86.9 86.8 87.2 87.8 87. Primary and semifinished 46.64 80.2 87.5 63.7 76.8 76.4 76.7 76.1 76.1 77.0 76.9 76.0	Mining	21	12.46	86.5	88.6	78.9	89.4	88.3	89.4	89.2	89.6	89.2	89.6	89.2	90.
Computers and peripheral equipment 3341 2.5 76.5 84.2 80.3 76.3 75.4 76.5 76.6 76.1 77.5 76.0 75.7 Communications equipment 3342 .45 75.3 85.1 76.7 74.9 74.7 73.5 74.4 73.9 73.5 73.0 72.5 Semiconductors and related electronic components 3344 1.19 79.3 92.8 63.2 83.5 80.8 81.9 79.9 82.7 82.7 80.3 80.3 80.5 Measures excluding selected high-technology industries Total industry 98.11 79.8 84.8 66.4 78.2 77.7 78.0 77.8 77.7 78.2 78.2 77.2 76.5 Manufacturing 73.99 78.3 84.3 63.0 77.5 77.1 77.1 77.5 76.8 77.4 77.2 76.5 STAGE-OF-PROCESS GROUPS Crude 16.48 85.6 90.0 77.0 87.2 85.8 87.3 86.9 86.8 87.2 87.8 87.8 Primary and semifinished 46.64 80.2 87.5 63.7 76.8 76.4 76.7 76.1 76.1 77.0 76.9 76.8	Utilities	2211,2	11.67	84.5	93.2	78.1	72.0	70.8	72.0	68.6	70.8	72.2	73.1	70.7	70.
Computers and peripheral equipment 3341 2.5 76.5 84.2 80.3 76.3 75.4 76.5 76.6 76.1 77.5 76.0 75.7 Communications equipment 3342 .45 75.3 85.1 76.7 74.9 74.7 73.5 74.4 73.9 73.5 73.0 72.5 Semiconductors and related electronic components 3344 1.19 79.3 92.8 63.2 83.5 80.8 81.9 79.9 82.7 82.7 80.3 80.3 80.5 Measures excluding selected high-technology industries Total industry 98.11 79.8 84.8 66.4 78.2 77.7 78.0 77.8 77.7 78.2 78.2 77.2 76.5 Manufacturing 73.99 78.3 84.3 63.0 77.5 77.1 77.1 77.5 76.8 77.4 77.2 76.5 STAGE-OF-PROCESS GROUPS Crude 16.48 85.6 90.0 77.0 87.2 85.8 87.3 86.9 86.8 87.2 87.8 87.8 Primary and semifinished 46.64 80.2 87.5 63.7 76.8 76.4 76.7 76.1 76.1 77.0 76.9 76.8	Salacted high-technology industries		1.80	77.5	85.3	70.7	80.6	78.8	70 /	78.3	80.0	80.0	78.2	78.2	78.
Communications equipment 3342 .45 75.3 85.1 76.7 74.9 74.7 73.5 74.4 73.9 73.5 73.0 72.: Semiconductors and related electronic components 3344 1.19 79.3 92.8 63.2 83.5 80.8 81.9 79.9 82.7 82.7 80.3 80.: Measures excluding selected high-technology industries Total industry 98.11 79.8 84.8 66.4 78.2 77.7 78.0 77.8 77.7 78.2 78.2 77.2 76.: Manufacturing 73.99 78.3 84.3 63.0 77.5 77.1 77.1 77.5 76.8 77.4 77.2 76.: STAGE-OF-PROCESS GROUPS Crude 16.48 85.6 90.0 77.0 87.2 85.8 87.3 86.9 86.8 87.2 87.8 87. Primary and semifinished 46.64 80.2 87.5 63.7 76.8 76.4 76.7 76.1 76.1 77.0 76.9 76.0		3341													78.
Semiconductors and related electronic components 3344 1.19 79.3 92.8 63.2 83.5 80.8 81.9 79.9 82.7 82.7 80.3 80.3 80.5 Measures excluding selected high-technology industries Total industry 98.11 79.8 84.8 66.4 78.2 77.7 78.0 77.8 77.7 78.2 78.2 77.4 Manufacturing 73.99 78.3 84.3 63.0 77.5 77.1 77.1 77.5 76.8 77.4 77.2 76.5 STAGE-OF-PROCESS GROUPS Crude 16.48 85.6 90.0 77.0 87.2 85.8 87.3 86.9 86.8 87.2 87.8 87.8 Primary and semifinished 46.64 80.2 87.5 63.7 76.8 76.4 76.7 76.1 76.1 77.0 76.9 76.8															73.
electronic components 3344 1.19 79.3 92.8 63.2 83.5 80.8 81.9 79.9 82.7 82.7 80.3 80.3 80.3 Measures excluding selected high-technology industries Total industry 98.11 79.8 84.8 66.4 78.2 77.7 78.0 77.8 77.7 78.2 78.2 77.4 77.2 76.3 77.9 78.3 84.3 63.0 77.5 77.1 77.1 77.5 76.8 77.4 77.2 76.3 77.2 76.3 77.4 77.2 77.2 77.2 77.2 77.2 77.2 77.2		3372		13.3	03.1	70.7	17.9	//	13.3	, , , , ,	13.7	13.3	13.0	14.3	12.
high-technology industries Total industry 98.11 79.8 84.8 66.4 78.2 77.7 78.0 77.8 77.7 78.2 78.2 77.4 78.0 Manufacturing 73.99 78.3 84.3 63.0 77.5 77.1 77.1 77.5 76.8 77.4 77.2 76.5 76.8 77.4 77.2 76.5 77.2 77.2 77.2 77.2 77.2 77.2 77.2 77		3344	1.19	79.3	92.8	63.2	83.5	80.8	81.9	79.9	82.7	82.7	80.3	80.5	81.
Total industry 98.11 79.8 84.8 66.4 78.2 77.7 78.0 77.8 77.7 78.2 78.2 77.4 Manufacturing 73.99 78.3 84.3 63.0 77.5 77.1 77.1 77.5 76.8 77.4 77.2 76.5 STAGE-OF-PROCESS GROUPS Crude 16.48 85.6 90.0 77.0 87.2 85.8 87.3 86.9 86.8 87.2 87.8 87. Primary and semifinished 46.64 80.2 87.5 63.7 76.8 76.4 76.7 76.1 76.1 77.0 76.9 76.0															
Manufacturing ¹ 73.99 78.3 84.3 63.0 77.5 77.1 77.1 77.5 76.8 77.4 77.2 76.5 STAGE-OF-PROCESS GROUPS Crude 16.48 85.6 90.0 77.0 87.2 85.8 87.3 86.9 86.8 87.2 87.8 87. Primary and semifinished 46.64 80.2 87.5 63.7 76.8 76.4 76.7 76.1 76.1 77.0 76.9 76.9			00 11	70.0	0.4.0	66 A	70.2	77 7	79.0	77.0	77 7	79.3	70.3	77.4	77
STAGE-OF-PROCESS GROUPS Crude 16.48 85.6 90.0 77.0 87.2 85.8 87.3 86.9 86.8 87.2 87.8 87. Primary and semifinished 46.64 80.2 87.5 63.7 76.8 76.4 76.7 76.1 76.1 77.0 76.9 76.9															77.
Crude 16.48 85.6 90.0 77.0 87.2 85.8 87.3 86.9 86.8 87.2 87.8 87. Primary and semifinished 46.64 80.2 87.5 63.7 76.8 76.4 76.7 76.1 76.1 77.0 76.9 76.0	Manufacturing'		/3.99	78.3	84.3	63.0	77.5	77.1	77.1	77.5	76.8	77.4	77.2	76.5	77.
Crude 16.48 85.6 90.0 77.0 87.2 85.8 87.3 86.9 86.8 87.2 87.8 87. Primary and semifinished 46.64 80.2 87.5 63.7 76.8 76.4 76.7 76.1 76.1 77.0 76.9 76.0	STAGE-OF-PROCESS GROUPS														
Primary and semifinished 46.64 80.2 87.5 63.7 76.8 76.4 76.7 76.1 76.1 77.0 76.9 76.0			16.48	85.6	90.0	77.0	87.2	85.8	87 3	86.9	86.8	87.2	87.8	87.1	87.
														76.0	76.
1 Informed 50.07 70.0 00.7 00.2 70.7 73.0 70.2 73.0 70.0 73.1 74.3	3														75.:
			30.09	, 0.0	оот	00.2	, 0.4	, 5.7	, 5.0	, 0.2	, 5.0	, 0.0	, 5.1	, 4.7	13.

r Revised. p Preliminary.

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

Table 8 INDUSTRIAL CAPACITY

Percent change

													Monthly
		Average aı	nnual rate		Fourth	quarter to	o fourth o	quarter		Annua	l rate		rate
Item	1972-	1980-	1989-	1995-					2023	2024			2024
	79	88	94	2024	2021	2022	2023	2024	Q4	Q1	Q2	Q3	Aug.
Total industry	3.1	1.9	2.3	1.6	-2.1	1.0	2.3	1.2	1.6	1.2	1.0	1.2	.1
Manufacturing ¹	3.3	2.2	2.6	1.4	-1.0	.4	1.2	1.3	1.2	1.3	1.3	1.3	.1
Mining Utilities	.7 4.4	.1 2.2	7 1.8	1.0 1.8	-9.8 1.3	3.5 2.3	3.4 3.6	8 3.6	.8 3.5	4 3.4	-1.1 3.5	-1.1 3.6	1 .3
Selected high-technology industries	18.6	16.6	16.2	15.6	.1	4.4	9.8	12.0	11.4	11.9	12.1	12.1	.9
Manufacturing ¹ ex. selected high-technology industries	2.6	1.2	1.7	.4	-1.1	.3	1.0	1.0	1.0	1.0	1.0	1.0	.1
STAGE-OF-PROCESS GROUPS Crude	1.5	.5	5	.8	-8.1	2.5	2.7	5	.6	3	8	7	.0
Primary and semifinished	3.0	1.3	2.6	1.6	-1.0	.6	1.7	1.6	1.6	1.6	1.5	1.5	.1
Finished	3.9	3.2	2.8	1.4	.1	.9	1.6	1.8	1.7	1.7	1.8	1.9	.2

^{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

illions of 2012 dollars at allitual rate, seaso	nany adjusted										
			2023	2024		2024					
Item	2017	2023	Q4	Q1 ^r	Q2 ^r	Mar. ^r	Apr.r	May ^r	June ^r	July ^r	Aug. ^p
Final mandrate and manindrataial											
Final products and nonindustrial	2 042 6	3,985.8	3,979.0	2 070 1	3,990.7	3,980.3	3,974.1	2 006 0	4,002.0	2.054.2	3,992.1
supplies	3,942.6	3,903.0	3,979.0	3,970.1	3,990.7	3,960.3	3,974.1	3,996.0	4,002.0	3,954.2	3,992.1
Final products	2,946.4	2,973.3	2,967.3	2,958.5	2,971.7	2,964.7	2,965.9	2,975.1	2,974.1	2,933.1	2,969.5
Consumer goods	2,153.2	2,187.4	2,186.2	2,176.3	2,188.3	2,175.9	2,183.6	2,191.7	2,189.4	2,162.2	2,184.2
Durable	530.6	569.5	565.5	568.5	563.0	579.3	564.9	563.4	560.7	524.8	565.1
Automotive products	375.2	413.2	408.7	410.3	408.1	422.4	409.1	407.8	407.2	370.7	412.2
Other durable goods	155.5	157.6	157.9	159.2	156.2	158.5	157.0	156.7	154.8	153.9	154.5
Nondurable	1,622.6	1,619.4	1,622.1	1,609.8	1,626.5	1,599.6	1,620.2	1,629.5	1,629.7	1,635.6	1,620.7
Equipment, total	793.2	791.5	786.4	787.7	788.7	794.7	787.5	788.6	790.0	776.0	790.8
Business and defense	770.0	766.4	762.2	763.9	765.8	770.8	764.3	765.8	767.2	752.9	767.8
Business	651.2	629.9	623.0	624.0	623.3	630.4	622.7	623.5	623.7	611.2	624.7
Defense and space	118.8	136.1	139.4	140.2	143.2	140.5	142.2	143.0	144.4	142.8	143.8
Nonindustrial supplies	996.2	1,012.8	1,011.9	1,011.8	1,019.2	1,015.8	1,008.6	1,021.0	1,027.9	1,020.9	1,022.7
Construction supplies	276.8	279.6	278.5	278.8	278.1	281.1	275.5	278.9	279.9	277.5	281.3
Business supplies	719.4	733.6	734.0	733.6	742.0	735.0	734.0	743.0	749.1	744.6	742.0
Commercial energy products	240.5	258.3	261.5	263.2	267.9	261.7	263.3	267.9	272.6	271.3	269.0

r Revised. p Preliminary.

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

Percent change, seasonally adjusted														
		Fou	rth quarte	er to										
		fourth quarter Annual rate Monthly rate						Aug. '23						
Item	2023				2023	2024		2024						to
	gross value1	2021	2022	2023	Q4	Q1 ^r	Q2 ^r	Mar.r	Apr.r	May ^r	June ^r	July ^r	Aug. ^p	Aug. '24
Finished	2,533.9	1.2	3.2	2	-2.7	2	.2	.1	8	.3	2	-1.5	1.8	5
Semifinished	1,980.2	2.6	1.7	-1.0	-1.4	1.6	4.1	8	.6	1.0	.1	-1.6	1.4	1.4
Primary	1,456.8	7.4	7	.3	-1.5	-3.0	2.4	.2	5	1.7	.1	.0	5	6
Crude	745.3	6.0	.2	2.5	-1.0	-6.7	5.9	.4	7	.9	.6	-1.0	.9	.6

r Revised. p Preliminary.

^{1.} Billions of 2012 dollars.

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

asonally adjusted Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annua
P (percent																	
change) ¹																	
2002	.7	.0	.8	.5	.4	.8	.0	1	.1	3	.5	6	2.9	6.3	2.5	2	
2003	.8	.1	3	6	.0	.1	.5	2	.6	.1	.7	.1	2.5	-2.9	2.7	3.9	1.
2004	.2	.6	4	.4	.7	8	.7	.1	.1	.9	.2	.8	2.9	2.3	2.3	5.8	2.
2005 2006	.4	.7	1 .2	.2	.1	.4	3 1	.3 .4	-1.9 2	1.2 1	1.1	.5 1.0	5.7 3.9	2.3 2.4	-1.7 1.6	3.7 1.0	3. 2.
007	4	1.0	.2	.7	.1	.0	2	.2	.2	3	.6	.1	4.1	4.7	.4	1.3	2.
008	1	4	3	7	6	3	5	-1.6	-4.4	1.0	-1.3	-2.8	-1.0	-5.9	-12.6	-16.0	-3.
009	-2.5	6	-1.6	8	-1.0	3	1.2	1.1	.9	.2	.4	.3	-20.7	-10.6	6.9	6.4	-11
010 011	1.1	.4 4	.7 1.0	.4 3	1.4	.2	.4	.4	.3 1	3 .7	.1	1.0	7.9 2.2	8.0 1.6	5.4 4.5	1.7 4.2	5
012 013	.6 .0	.3 .5	5 .4	.7 1	.2 .1	.0 .2	.2 3	4 .6	1 .5	.3 1	.4 .3	.3 .2	4.0 3.1	2.5 1.8	.0 1.6	2.0 2.7	3 2
014	4	.8	1.0	.1	.4	.3	.2	2	.3	.0	.6	.0	2.7	5.6	2.3	2.4	3
015	8	6	3	6	5	3	.6	2	3	5	7	5	-4.4	-5.4	.2	-5.3	-1
2016	.5	5	8	.3	2	.5	.1	1	1	.1	4	.7	-2.7	-1.4	1.1	2	-2
017	2	4	.6	1.0	.1	.2	2	5	.1	1.2	.3	.2	.3	5.8	-1.4	5.8	1
.018 .019	.0 7	.2 5	.5 .0	1.1 5	9 .1	.8 .1	.1 5	.7 .8	.0 3	2 9	.1 .6	.0 2	2.2 -3.7	4.7 -2.3	3.4	.6 -2.0	3
020	6	.3	-4.0	-13.2	1.6	6.6	3.6	1.0	.0	.7	.4	1.3	-6.5	-42.0	42.8	6.9	-7
021	.6	-3.3	2.8	.1	.9	.5	.4	.0	-1.0	1.4	.9	1	1.1	6.5	2.6	5.1	4
022	.0	.6	.8	.2	.1	1	.2	.1	.4	1	3	-1.2	3.9	3.9	1.4	-1.8	3
023	.9	.1	.0	.4	2	6	.7	.0	.2	7	.3	2	.0	.3	1.2	-1.8	
024	-1.1	1.2	2	1	.7	.1	9	.8					-1.8	2.9			
P (2017=100)																	
022	101.2	101.8	102.7	102.9	103.0	102.8	103.1	103.2	103.5	103.4	103.1	101.8	101.9	102.9	103.3	102.8	102
023 024	102.7 101.5	102.8 102.7	102.8 102.5	103.2 102.4	103.0 103.2	102.4 103.3	103.1 102.3	103.1 103.1	103.3	102.6	102.9	102.6	102.8 102.2	102.9 103.0	103.2	102.7	102
Capacity percent of 017 output) 022 023 024	126.8 128.8 131.5	126.7 129.1 131.6	126.8 129.4 131.7	126.8 129.7 131.8	126.9 130.0 131.9	127.0 130.3 132.0	127.2 130.5 132.2	127.4 130.7 132.3	127.7 130.9	127.9 131.1	128.2 131.2	128.5 131.3	126.8 129.1 131.6	126.9 130.0 131.9	127.4 130.7	128.2 131.2	127 130
Utilization	131.3	131.0	131./	131.6	131.9	132.0	132.2	132.3					131.0	131.9			
percent)																	
2002	74.0	73.9	74.4	74.7	74.9	75.5	75.5	75.4	75.5	75.3	75.7	75.3	74.1	75.1	75.4	75.4	75
003 004	76.0 77.2	76.1 77.7	75.9 77.4	75.5 77.7	75.5 78.3	75.6 77.7	76.0 78.3	75.9 78.4	76.4 78.5	76.5 79.1	77.0 79.3	77.1 79.9	76.0 77.4	75.5 77.9	76.1 78.4	76.9 79.4	76 78
005	80.1	80.6	80.4	80.5	80.5	80.7	80.4	80.5	78.8	79.7	80.4	80.7	80.4	80.6	79.9	80.3	80
006	80.7	80.6	80.7	80.8	80.7	80.8	80.6	80.8	80.5	80.2	80.0	80.6	80.7	80.8	80.6	80.3	80
007	80.1	80.7	80.7	81.0	80.9	80.8	80.6	80.7	80.8	80.6	81.0	81.1	80.5	80.9	80.7	80.9	80
008	81.1	80.8	80.7	80.2	79.7	79.5	79.2	77.9	74.4	75.0	74.0	71.8	80.9	79.8	77.1	73.6	77
009	69.9	69.4	68.2	67.6	66.9	66.6	67.4	68.2	68.9	69.1	69.5	69.8	69.2	67.0	68.2	69.5	68
010 011	70.7 75.5	71.1 75.2	71.8 76.0	72.2 75.7	73.3 75.7	73.6 75.9	74.1 76.2	74.5 76.6	74.8 76.4	74.7 76.8	74.8 76.7	75.6 76.9	71.2 75.6	73.1 75.8	74.5 76.4	75.0 76.8	7.
012	77.2	77.3	76.8	77.2	77.2	77.1	77.1	76.7	76.5	76.7	76.8	77.0	77.1	77.2	76.8	76.8	7
013	76.8	77.1	77.3	77.2	77.2	77.1	76.9	77.3	77.7	77.5	77.7	77.8	77.1	77.2	77.3	77.7	7
014	77.5	78.0	78.7	78.7	79.0	79.1	79.2	79.0	79.2	79.1	79.6	79.5	78.0	78.9	79.2	79.4	73
)15	78.8	78.3	78.0	77.5	77.2	76.9	77.4	77.3	77.1	76.8	76.2	75.8	78.4	77.2	77.3	76.3	7
)16	76.2	75.8	75.2	75.5	75.3	75.6	75.7	75.6	75.5	75.5	75.2	75.8	75.8	75.5	75.6	75.5	7:
017	75.6	75.3	75.8	76.6	76.8	77.0	76.9	76.6	76.8	77.8	78.1	78.4	75.6	76.8	76.8	78.1	7
	78.5	78.7	79.1	80.0	79.3	80.0	80.1	80.6	80.6	80.4	80.4	80.4	78.8	79.8	80.4	80.4	7
	79.8 77.4	79.3 77.7	79.2 74.6	78.7 64.7	78.7 65.7	78.8 70.1	78.3 72.8	78.8 73.6	78.5 73.7	77.7 74.3	78.1 74.7	77.9 75.9	79.4 76.5	78.7 66.9	78.5 73.3	77.9 75.0	73
)19	//.4	74.1	76.3	76.6	77.4	78.0	78.4	78.5	77.8	79.0	79.8	79.8	75.6	77.3	78.3	79.5	7
019 020	76.5	/ 1.1											İ				I
019 020 021	76.5		81.0	81.1	81.1	80.9	81.0	81.0	81.1	80.9	80.4	79.2	80.4	81.1	81.0	80.2	20
018 019 020 021 022 023		80.4	81.0 79.4	81.1 79.6	81.1 79.2	80.9 78.6	81.0 79.0	81.0 78.9	81.1 78.9	80.9 78.3	80.4 78.4	79.2 78.1	80.4 79.6	81.1 79.1	81.0 78.9	80.2 78.3	80

^{1.} Quarterly percentage changes are at annual rates. Annual percentage changes are calculated from annual averages.

Table 12 HISTORICAL STATISTICS FOR INDUSTRIAL PRODUCTION, CAPACITY, AND UTILIZATION: Manufacturing ¹ Seasonally adjusted

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
IP (percent change) ²																	
2002	.7	.0	.7	.3	.5	1.0	1	.1	.1	3	.5	6	3.6	5.8	3.2	5	.5
2002	.8	1	.1	8	.0	.5	.3	5	.8	.1	.9	1	2.1	-2.2	2.5	4.4	1.4
2003	1	.8	.0	.3	.7	7	.9	5	.0	.9	.0	.8	2.7	3.3	4.0	5.5	3.1
2004	.6	.9	5	.4	.3	.2	3	.5	-1.1	1.4	.9	.1	6.4	2.6	6	6.1	4.1
2005	.8	3	.0	.3	2	.3	3	.7	.1	5	.1	1.5	3.9	.7	1.1	1.7	2.6
2007 2008	4	.3 7	.8 4	.6 -1.0	1 6	.3 7	1 -1.1	3 -1.3	.3 -3.4	2 6	.5 -2.5	.2 -3.4	4.7 -2.0	5.5 -8.4	.1 -14.1	1.3 -22.0	2.8
2009	-3.2	1	-1.8	7	-1.0	2	1.6	1.1	1.0	.1	1.0	1	-24.7	-10.3	9.1	7.2	-13.8
2010	1.0	1	1.3	.8	1.3	.0	.5	.1	.1	.1	.1	.5	6.7	10.4	4.3	1.6	6.0
2011	.0	.2	.6	5	.0	.1	.6	.4	.3	.5	2	.7	3.0	2	4.2	3.8	2.9
2012	.8	.4	5	.5	3	.3	2	1	2	2	.6	.7	5.4	.5	-1.2	1.1	2.6
2013	3	.4	1	3	.3	.2	8	.9	.1	.1	.0	2	2.7	.2	.2	1.7	.9
2014	-1.1	.9	.9	.0	.3	.3	.4	6	.0	1	.7	2	-1.1	4.7	1.4	.3	1.1
2015	6	8	.4	.0	.0	4	.7	3	3	1	2	3	-3.4	6	.8	-2.6	5
2016	.4	3	1	1	1	.2	.1	4	.2	.1	1	.0	6	-1.1	.0	.5	8
2017	.2	1	4	1.1	2	.1	4	2	.0	1.1	.1	2	.0	3.1	-2.2	4.1	.6
2018	3	.8	1	.7	8	.7	.0	.3	.0	5	3	.3	.4	2.3	1.6	-1.7	1.3
2019	9	5	2	7	.1	.5	7	.7	7	9	.9	.1	-4.7	-3.1	8	-2.1	-2.0
2020	3	.2	-4.6	-15.4	4.4	7.8	3.5	1.5	.0	.9	.6	.7	-5.2	-43.7	54.0	8.4	-6.5
2021	.9	-4.0	3.1	.0	1.1	.1	.8	3	9	1.4	.9	.1	4	5.8	3.0	5.3	4.9
2022	6	.9	.9	.0	2	3	.1	.2	.2	.1	7	-1.8	2.7	2.5	.0	-3.0	2.7
2023	1.8	1	6	.7	1	6	.3	.1	.1	7	.5	1	.3	2	4	-1.4	5
2024	-1.3	1.4	.2	6	.8	2	7	.9					9	1.6			
IP (2017=100)																	
2022	98.8	99.7	100.6	100.6	100.4	100.0	100.1	100.3	100.6	100.7	99.9	98.1	99.7	100.3	100.3	99.6	100.0
2023	99.9	99.8	99.2	99.9	99.8	99.2	99.4	99.5	99.6	98.9	99.3	99.2	99.7	99.6	99.5	99.1	99.5
2024	97.9	99.3	99.5	98.9	99.6	99.4	98.7	99.6					98.9	99.3			
Capacity (percent of 2017 output)	125.7	105.7	105.7	105.7	125.0	125.0	125.0	126.0	126.1	126.2	126.2	126.4	105.7	125.0	126.0	126.2	125.0
2022	125.7	125.7	125.7	125.7	125.8	125.8	125.9	126.0	126.1	126.2	126.3 127.8	126.4 128.0	125.7	125.8	126.0	126.3	125.9
2023		106.6						127.4	127.6	127.7	1//8	1/8/0	10//	107.0	107.4	107.0	1070
2024	126.5 128.1	126.6 128.2	126.8 128.4	126.9 128.5	127.0 128.6	127.2 128.8	127.3 128.9	129.1	127.10		127.0	120.0	126.6 128.2	127.0 128.6	127.4	127.8	127.2
Utilization	1								127.0		127.0	120.0			127.4	127.8	127.2
Utilization (percent)	128.1	128.2	128.4	128.5	128.6	128.8	128.9	129.1					128.2	128.6			
Utilization (percent) 2002	72.1	72.0	72.4	128.5 72.6	73.0	73.7	73.6	73.6	73.7	73.4	73.8	73.4	72.2	73.1	73.6	73.6	73.1
Utilization (percent) 2002 2003	72.1 74.0	72.0 73.9	72.4 74.0	72.6 73.4	73.0 73.5	73.7 73.8	73.6 74.1	73.6 73.8	73.7 74.4	73.4 74.5	73.8 75.2	73.4 75.2	72.2 74.0	73.1 73.6	73.6 74.1	73.6 75.0	73.1 74.1
Utilization (percent) 2002 2003 2004	72.1 74.0 75.1	72.0 73.9 75.7	72.4 74.0 75.7	72.6 73.4 76.0	73.0 73.5 76.6	73.7 73.8 76.1	73.6 74.1 76.8	73.6 73.8 77.1	73.7 74.4 77.1	73.4 74.5 77.7	73.8 75.2 77.7	73.4 75.2 78.2	72.2 74.0 75.5	73.1 73.6 76.2	73.6 74.1 77.0	73.6 75.0 77.9	73.1 74.1 76.6
Utilization (percent) 2002 2003 2004 2005	72.1 74.0	72.0 73.9	72.4 74.0	72.6 73.4	73.0 73.5	73.7 73.8	73.6 74.1	73.6 73.8	73.7 74.4	73.4 74.5	73.8 75.2	73.4 75.2	72.2 74.0	73.1 73.6	73.6 74.1	73.6 75.0	73.1 74.1 76.6
Utilization (percent) 2002 2003 2004 2005 2006	72.1 74.0 75.1 78.6 79.5	72.0 73.9 75.7 79.1 79.2	72.4 74.0 75.7 78.6 79.0	72.6 73.4 76.0 78.8 79.2	73.0 73.5 76.6 78.9 78.9	73.7 73.8 76.1 78.9 78.9	73.6 74.1 76.8 78.4 78.5	73.6 73.8 77.1 78.7 78.9	73.7 74.4 77.1 77.7 78.8	73.4 74.5 77.7 78.6 78.3	73.8 75.2 77.7 79.2 78.2	73.4 75.2 78.2 79.1 79.2	72.2 74.0 75.5 78.8 79.3	73.1 73.6 76.2 78.9 79.0	73.6 74.1 77.0 78.3 78.8	73.6 75.0 77.9 78.9 78.6	73.1 74.1 76.6 78.7 78.9
Utilization (percent) 2002 2003 2004 2005 2006 2007	72.1 74.0 75.1 78.6 79.5 78.7	72.0 73.9 75.7 79.1 79.2 78.8	72.4 74.0 75.7 78.6 79.0	72.6 73.4 76.0 78.8 79.2 79.5	73.0 73.5 76.6 78.9 79.2	73.7 73.8 76.1 78.9 78.9	73.6 74.1 76.8 78.4 78.5	73.6 73.8 77.1 78.7 78.9 78.7	73.7 74.4 77.1 77.7 78.8 78.8	73.4 74.5 77.7 78.6 78.3 78.5	73.8 75.2 77.7 79.2 78.2	73.4 75.2 78.2 79.1 79.2 78.9	72.2 74.0 75.5 78.8 79.3 78.9	73.1 73.6 76.2 78.9 79.0	73.6 74.1 77.0 78.3 78.8	73.6 75.0 77.9 78.9 78.6	73.1 74.1 76.6 78.7 78.9
Utilization (percent) 2002 2003 2004 2005 2006 2007 2008	72.1 74.0 75.1 78.6 79.5	72.0 73.9 75.7 79.1 79.2	72.4 74.0 75.7 78.6 79.0 79.2 77.9	72.6 73.4 76.0 78.8 79.2 79.5 77.1	73.0 73.5 76.6 78.9 78.9 79.2 76.7	73.7 73.8 76.1 78.9 78.9 79.3 76.2	73.6 74.1 76.8 78.4 78.5 79.1 75.5	73.6 73.8 77.1 78.7 78.9 78.7 74.6	73.7 74.4 77.1 77.7 78.8 78.8 72.1	73.4 74.5 77.7 78.6 78.3 78.5 71.8	73.8 75.2 77.7 79.2 78.2 78.8 70.1	73.4 75.2 78.2 79.1 79.2	72.2 74.0 75.5 78.8 79.3	73.1 73.6 76.2 78.9 79.0 79.3 76.7	73.6 74.1 77.0 78.3 78.8 78.8	73.6 75.0 77.9 78.9 78.6 78.7	73.1 74.1 76.6 78.7 78.9 79.0 74.7
Utilization (percent) 2002 2002 2003 2004 2005 2006 2007 2008 2009	72.1 74.0 75.1 78.6 79.5 78.7 78.7	72.0 73.9 75.7 79.1 79.2 78.8 78.2	72.4 74.0 75.7 78.6 79.0	72.6 73.4 76.0 78.8 79.2 79.5	73.0 73.5 76.6 78.9 79.2	73.7 73.8 76.1 78.9 78.9	73.6 74.1 76.8 78.4 78.5	73.6 73.8 77.1 78.7 78.9 78.7	73.7 74.4 77.1 77.7 78.8 78.8	73.4 74.5 77.7 78.6 78.3 78.5	73.8 75.2 77.7 79.2 78.2	73.4 75.2 78.2 79.1 79.2 78.9 67.8	72.2 74.0 75.5 78.8 79.3 78.9 78.3	73.1 73.6 76.2 78.9 79.0	73.6 74.1 77.0 78.3 78.8	73.6 75.0 77.9 78.9 78.6	73.1 74.1 76.6 78.7 78.9 79.0 74.7 65.3
Utilization (percent) 2002 2003 2004 2005 2006 2007 2008 2009 2010	72.1 74.0 75.1 78.6 79.5 78.7 78.7 65.7	72.0 73.9 75.7 79.1 79.2 78.8 78.2 65.7	72.4 74.0 75.7 78.6 79.0 79.2 77.9 64.6	72.6 73.4 76.0 78.8 79.2 79.5 77.1 64.2	73.0 73.5 76.6 78.9 78.9 79.2 76.7 63.6	73.7 73.8 76.1 78.9 78.9 79.3 76.2 63.5	73.6 74.1 76.8 78.4 78.5 79.1 75.5 64.6	73.6 73.8 77.1 78.7 78.9 78.7 74.6 65.4	73.7 74.4 77.1 77.7 78.8 78.8 72.1 66.2	73.4 74.5 77.7 78.6 78.3 78.5 71.8 66.3	73.8 75.2 77.7 79.2 78.2 78.8 70.1 67.0	73.4 75.2 78.2 79.1 79.2 78.9 67.8 67.0	72.2 74.0 75.5 78.8 79.3 78.9 78.3 65.3	73.1 73.6 76.2 78.9 79.0 79.3 76.7 63.8	73.6 74.1 77.0 78.3 78.8 78.8 74.1 65.4	73.6 75.0 77.9 78.9 78.6 78.7 69.9 66.8	73.1 74.1 76.6 78.7 78.9 79.0 74.7 65.3 70.4
Utilization (percent) 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011	72.1 74.0 75.1 78.6 79.5 78.7 78.7 65.7 67.8 72.4	72.0 73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8 72.6	72.4 74.0 75.7 78.6 79.0 79.2 77.9 64.6 68.8 73.1	72.6 73.4 76.0 78.8 79.2 79.5 77.1 64.2 69.5 72.8	73.0 73.5 76.6 78.9 78.9 79.2 76.7 63.6 70.5 72.8	73.7 73.8 76.1 78.9 78.9 79.3 76.2 63.5 70.6 72.9	73.6 74.1 76.8 78.4 78.5 79.1 75.5 64.6 71.1 73.3	73.6 73.8 77.1 78.7 78.9 78.7 74.6 65.4 71.3 73.6	73.7 74.4 77.1 77.7 78.8 78.8 72.1 66.2 71.5 73.8	73.4 74.5 77.7 78.6 78.3 78.5 71.8 66.3 71.7 74.1	73.8 75.2 77.7 79.2 78.2 78.8 70.1 67.0 71.8 73.9	73.4 75.2 78.2 79.1 79.2 78.9 67.8 67.0 72.3 74.3	72.2 74.0 75.5 78.8 79.3 78.9 78.3 65.3 68.2 72.7	73.1 73.6 76.2 78.9 79.0 79.3 76.7 63.8 70.2 72.8	73.6 74.1 77.0 78.3 78.8 74.1 65.4 71.3 73.6	73.6 75.0 77.9 78.9 78.6 78.7 69.9 66.8 71.9 74.1	73.1 74.1 76.6 78.7 78.9 79.0 74.7 65.3 70.4 73.3
Utilization (percent) 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012	72.1 74.0 75.1 78.6 79.5 78.7 78.7 65.7 67.8	72.0 73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8	72.4 74.0 75.7 78.6 79.0 79.2 77.9 64.6 68.8	72.6 73.4 76.0 78.8 79.2 79.5 77.1 64.2 69.5	73.0 73.5 76.6 78.9 78.9 79.2 76.7 63.6 70.5	73.7 73.8 76.1 78.9 78.9 79.3 76.2 63.5 70.6	73.6 74.1 76.8 78.4 78.5 79.1 75.5 64.6 71.1	73.6 73.8 77.1 78.7 78.9 78.7 74.6 65.4 71.3	73.7 74.4 77.1 77.7 78.8 78.8 72.1 66.2 71.5	73.4 74.5 77.7 78.6 78.3 78.5 71.8 66.3 71.7	73.8 75.2 77.7 79.2 78.2 78.8 70.1 67.0 71.8	73.4 75.2 78.2 79.1 79.2 78.9 67.8 67.0 72.3	72.2 74.0 75.5 78.8 79.3 78.9 78.3 65.3 68.2	73.1 73.6 76.2 78.9 79.0 79.3 76.7 63.8 70.2	73.6 74.1 77.0 78.3 78.8 74.1 65.4 71.3	73.6 75.0 77.9 78.9 78.6 78.7 69.9 66.8 71.9	73.1 74.1 76.6 78.7 78.9 79.0 74.7 65.3 70.4 73.3
Utilization (percent) 2002 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013	72.1 74.0 75.1 78.6 79.5 78.7 78.7 65.7 67.8 72.4	72.0 73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8 72.6	72.4 74.0 75.7 78.6 79.0 79.2 77.9 64.6 68.8 73.1	72.6 73.4 76.0 78.8 79.2 79.5 77.1 64.2 69.5 72.8	73.0 73.5 76.6 78.9 78.9 79.2 76.7 63.6 70.5 72.8	73.7 73.8 76.1 78.9 78.9 79.3 76.2 63.5 70.6 72.9	73.6 74.1 76.8 78.4 78.5 79.1 75.5 64.6 71.1 73.3	73.6 73.8 77.1 78.7 78.9 78.7 74.6 65.4 71.3 73.6	73.7 74.4 77.1 77.7 78.8 78.8 72.1 66.2 71.5 73.8	73.4 74.5 77.7 78.6 78.3 78.5 71.8 66.3 71.7 74.1	73.8 75.2 77.7 79.2 78.2 78.8 70.1 67.0 71.8 73.9	73.4 75.2 78.2 79.1 79.2 78.9 67.8 67.0 72.3 74.3	72.2 74.0 75.5 78.8 79.3 78.9 78.3 65.3 68.2 72.7	73.1 73.6 76.2 78.9 79.0 79.3 76.7 63.8 70.2 72.8	73.6 74.1 77.0 78.3 78.8 74.1 65.4 71.3 73.6	73.6 75.0 77.9 78.9 78.6 78.7 69.9 66.8 71.9 74.1	73.1 74.1 76.6 78.7 78.9 79.0 74.7 65.3 70.4 73.3
Utilization percent) 2002 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013	72.1 74.0 75.1 78.6 79.5 78.7 65.7 67.8 72.4 74.9	72.0 73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8 72.6	72.4 74.0 75.7 78.6 79.0 79.2 77.9 64.6 68.8 73.1 74.6 74.6	72.6 73.4 76.0 78.8 79.2 79.5 77.1 64.2 69.5 72.8 74.9	73.0 73.5 76.6 78.9 78.9 79.2 76.7 63.6 70.5 72.8 74.5 74.6	73.7 73.8 76.1 78.9 78.9 79.3 76.2 63.5 70.6 72.9 74.7 74.8	73.6 74.1 76.8 78.4 78.5 79.1 75.5 64.6 71.1 73.3 74.4 74.2	73.6 73.8 77.1 78.7 78.9 78.7 74.6 65.4 71.3 73.6	73.7 74.4 77.1 77.7 78.8 78.8 72.1 66.2 71.5 73.8 74.0 74.9	73.4 74.5 77.7 78.6 78.3 78.5 71.8 66.3 71.7 74.1	73.8 75.2 77.7 79.2 78.2 78.8 70.1 67.0 71.8 73.9	73.4 75.2 78.2 79.1 79.2 78.9 67.8 67.0 72.3 74.3	72.2 74.0 75.5 78.8 79.3 78.9 78.3 65.3 68.2 72.7 74.8 74.6	73.1 73.6 76.2 78.9 79.0 79.3 76.7 63.8 70.2 72.8	73.6 74.1 77.0 78.3 78.8 74.1 65.4 71.3 73.6	73.6 75.0 77.9 78.9 78.6 78.7 69.9 66.8 71.9 74.1 74.3	73.1 74.1 76.6 78.7 78.9 79.0 74.7 65.3 70.4 73.3 74.5 74.7
Utilization (percent) 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015	72.1 74.0 75.1 78.6 79.5 78.7 65.7 67.8 72.4 74.9 74.5 74.2	72.0 73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8 72.6 75.1 74.7	72.4 74.0 75.7 78.6 79.0 79.2 77.9 64.6 68.8 73.1 74.6 74.6	72.6 73.4 76.0 78.8 79.2 79.5 77.1 64.2 69.5 72.8 74.9 74.4	73.0 73.5 76.6 78.9 78.9 79.2 76.7 63.6 70.5 72.8 74.5 74.6	73.7 73.8 76.1 78.9 78.9 79.3 76.2 63.5 70.6 72.9 74.7 74.8 76.2	73.6 74.1 76.8 78.4 78.5 79.1 75.5 64.6 71.1 73.3 74.4 74.2	73.6 73.8 77.1 78.7 78.9 78.7 74.6 65.4 71.3 73.6 74.3 74.8	73.7 74.4 77.1 77.7 78.8 78.8 72.1 66.2 71.5 73.8 74.0 74.9	73.4 74.5 77.7 78.6 78.3 78.5 71.8 66.3 71.7 74.1 73.8 75.0	73.8 75.2 77.7 79.2 78.2 78.8 70.1 67.0 71.8 73.9 74.2 75.0	73.4 75.2 78.2 79.1 79.2 78.9 67.8 67.0 72.3 74.3 74.7 74.9	72.2 74.0 75.5 78.8 79.3 78.9 78.3 65.3 68.2 72.7 74.8 74.6 74.9	73.1 73.6 76.2 78.9 79.0 79.3 76.7 63.8 70.2 72.8 74.7 74.6	73.6 74.1 77.0 78.3 78.8 74.1 65.4 71.3 73.6 74.2 74.6	73.6 75.0 77.9 78.9 78.6 78.7 69.9 66.8 71.9 74.1 74.3 75.0	73.1 74.1 76.6 78.7 78.9 79.0 74.7 65.3 70.4 73.3 74.5 74.7 76.0 76.4
Utilization (percent) 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016	72.1 74.0 75.1 78.6 79.5 78.7 65.7 67.8 72.4 74.9 74.5 74.2	72.0 73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8 72.6 75.1 74.7 74.9	72.4 74.0 75.7 78.6 79.0 79.2 77.9 64.6 68.8 73.1 74.6 75.6 76.3	72.6 73.4 76.0 78.8 79.2 79.5 77.1 64.2 69.5 72.8 74.9 74.4 75.6 76.4	73.0 73.5 76.6 78.9 78.9 79.2 76.7 63.6 70.5 72.8 74.5 74.6 75.9 76.5	73.7 73.8 76.1 78.9 78.9 79.3 76.2 63.5 70.6 72.9 74.7 74.8 76.2 76.2	73.6 74.1 76.8 78.4 78.5 79.1 75.5 64.6 71.1 73.3 74.4 74.2 76.6 76.9	73.6 73.8 77.1 78.7 78.9 78.7 74.6 65.4 71.3 73.6 74.3 74.8 76.2 76.6	73.7 74.4 77.1 77.7 78.8 78.8 72.1 66.2 71.5 73.8 74.0 74.9 76.3 76.4	73.4 74.5 77.7 78.6 78.3 78.5 71.8 66.3 71.7 74.1 73.8 75.0 76.3 76.3	73.8 75.2 77.7 79.2 78.2 78.8 70.1 67.0 71.8 73.9 74.2 75.0 76.9 76.1	73.4 75.2 78.2 79.1 79.2 78.9 67.8 67.0 72.3 74.3 74.7 74.9 76.8 75.9	72.2 74.0 75.5 78.8 79.3 78.9 78.3 65.3 68.2 72.7 74.8 74.6 74.9	73.1 73.6 76.2 78.9 79.0 79.3 76.7 63.8 70.2 72.8 74.7 74.6 75.9 76.4	73.6 74.1 77.0 78.3 78.8 74.1 65.4 71.3 73.6 74.2 74.6 76.4 76.6	73.6 75.0 77.9 78.9 78.6 78.7 69.9 66.8 71.9 74.1 74.3 75.0 76.7 76.1	73.1 74.1 76.6 78.7 78.9 79.0 74.7 65.3 70.4 73.3 74.5 74.7 76.0 76.4 75.7
Utilization (percent) 2002 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017	72.1 74.0 75.1 78.6 79.5 78.7 78.7 65.7 67.8 72.4 74.9 74.5 76.5 76.2	72.0 73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8 72.6 75.1 74.7 74.9 76.0 75.9	72.4 74.0 75.7 78.6 79.0 79.2 77.9 64.6 68.8 73.1 74.6 76.3 75.8	72.6 73.4 76.0 78.8 79.2 79.5 77.1 64.2 69.5 72.8 74.9 74.4 75.6	73.0 73.5 76.6 78.9 78.9 79.2 76.7 63.6 70.5 72.8 74.5 74.6 75.5	73.7 73.8 76.1 78.9 78.9 79.3 76.2 63.5 70.6 72.9 74.7 74.8 76.2 76.2 75.7	73.6 74.1 76.8 78.4 78.5 79.1 75.5 64.6 71.1 73.3 74.4 74.2 76.6 76.9 75.7	73.6 73.8 77.1 78.7 78.9 78.7 74.6 65.4 71.3 73.6 74.3 74.8 76.2 76.6 75.4	73.7 74.4 77.1 77.7 78.8 78.8 72.1 66.2 71.5 73.8 74.0 74.9 76.3 76.4 75.5	73.4 74.5 77.7 78.6 78.3 78.5 71.8 66.3 71.7 74.1 73.8 75.0 76.3 75.6	73.8 75.2 77.7 79.2 78.2 78.8 70.1 67.0 71.8 73.9 74.2 75.0 76.1 75.6	73.4 75.2 78.2 79.1 79.2 78.9 67.8 67.0 72.3 74.3 74.7 74.9 75.8 75.9	72.2 74.0 75.5 78.8 79.3 78.9 78.3 65.3 68.2 72.7 74.8 74.6 74.9 76.3 75.9	73.1 73.6 76.2 78.9 79.0 79.3 76.7 63.8 70.2 72.8 74.7 74.6 75.9 76.4 75.6	73.6 74.1 77.0 78.3 78.8 74.1 65.4 71.3 73.6 74.2 74.6 76.6 75.5	73.6 75.0 77.9 78.9 78.6 78.7 69.9 66.8 71.9 74.1 74.3 75.0 76.7 76.1	73.1 74.1 76.6 78.7 78.9 79.0 74.7 65.3 70.4 73.3 74.5 74.7 76.0 76.4 75.7
Utilization (percent) 2002 2002 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018	72.1 74.0 75.1 78.6 79.5 78.7 65.7 67.8 72.4 74.9 74.5 76.5 76.2	72.0 73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8 72.6 75.1 74.7 74.9 76.0 75.9	72.4 74.0 75.7 78.6 79.0 79.2 77.9 64.6 68.8 73.1 74.6 74.6 75.6 76.3 75.8	72.6 73.4 76.0 78.8 79.2 79.5 77.1 64.2 69.5 72.8 74.9 74.4 75.6 76.4 75.6	73.0 73.5 76.6 78.9 78.9 79.2 76.7 63.6 70.5 72.8 74.5 74.6 75.9 76.5 75.5	73.7 73.8 76.1 78.9 78.9 79.3 76.2 63.5 70.6 72.9 74.7 74.8 76.2 76.2 75.7	73.6 74.1 76.8 78.4 78.5 79.1 75.5 64.6 71.1 73.3 74.4 74.2 76.6 76.9 75.7	73.6 73.8 77.1 78.7 78.9 78.7 74.6 65.4 71.3 73.6 74.3 74.8 76.2 76.6 75.4	73.7 74.4 77.1 77.7 78.8 78.8 72.1 66.2 71.5 73.8 74.0 74.9 76.3 76.4 75.5	73.4 74.5 77.7 78.6 78.3 78.5 71.8 66.3 71.7 74.1 73.8 75.0 76.3 75.6	73.8 75.2 77.7 79.2 78.2 78.8 70.1 67.0 71.8 73.9 74.2 75.0 76.9 76.1 75.6	73.4 75.2 78.2 79.1 79.2 78.9 67.8 67.0 72.3 74.3 74.7 74.9 75.6	72.2 74.0 75.5 78.8 79.3 78.9 78.3 65.3 68.2 72.7 74.8 74.6 74.9 76.3 75.9	73.1 73.6 76.2 78.9 79.0 79.3 76.7 63.8 70.2 72.8 74.7 74.6 75.9 76.4 75.6	73.6 74.1 77.0 78.3 78.8 74.1 65.4 71.3 73.6 74.2 74.6 75.5	73.6 75.0 77.9 78.9 78.6 78.7 69.9 66.8 71.9 74.1 74.3 75.0 76.7 76.1 75.6	73.1 74.1 76.6 78.7 78.9 79.0 74.7 65.3 70.4 73.3 74.5 74.7 76.0 76.4 75.7
Utilization (percent) 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019	72.1 74.0 75.1 78.6 79.5 78.7 65.7 67.8 72.4 74.9 74.5 76.5 76.2	72.0 73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8 72.6 75.1 74.7 74.9 76.0 75.9	72.4 74.0 75.7 78.6 79.0 79.2 77.9 64.6 68.8 73.1 74.6 75.6 76.3 75.8	72.6 73.4 76.0 78.8 79.2 79.5 77.1 64.2 69.5 72.8 74.9 74.4 75.6 76.4 75.6 76.5 78.7	73.0 73.5 76.6 78.9 78.9 79.2 76.7 63.6 70.5 72.8 74.5 74.6 75.9 76.5 75.5	73.7 73.8 76.1 78.9 78.9 79.3 76.2 63.5 70.6 72.9 74.7 74.8 76.2 75.7 76.6 78.6	73.6 74.1 76.8 78.4 78.5 79.1 75.5 64.6 71.1 73.3 74.4 74.2 76.6 76.9 75.7	73.6 73.8 77.1 78.7 78.9 78.7 74.6 65.4 71.3 73.6 74.8 76.2 76.6 75.4	73.7 74.4 77.1 77.7 78.8 78.8 72.1 66.2 71.5 73.8 74.0 74.9 76.3 76.4 75.5 76.5 79.0	73.4 74.5 77.7 78.6 78.3 78.5 71.8 66.3 71.7 74.1 73.8 75.0 76.3 75.6	73.8 75.2 77.7 79.2 78.2 78.8 70.1 67.0 71.8 73.9 74.2 75.0 76.9 76.1 75.6	73.4 75.2 78.2 79.1 79.2 78.9 67.8 67.0 72.3 74.3 74.7 74.9 76.8 75.9 75.6	72.2 74.0 75.5 78.8 79.3 78.9 78.3 65.3 68.2 72.7 74.8 74.6 74.9 76.3 75.9	73.1 73.6 76.2 78.9 79.0 79.3 76.7 63.8 70.2 72.8 74.7 74.6 75.9 76.4 75.6	73.6 74.1 77.0 78.3 78.8 74.1 65.4 71.3 73.6 74.2 74.6 76.4 76.6 75.5	73.6 75.0 77.9 78.9 78.6 78.7 69.9 66.8 71.9 74.1 74.3 75.0 76.7 76.1 75.6	73.1 74.1 76.6 78.7 78.9 79.0 74.7 65.3 70.4 73.3 74.5 76.0 76.4 75.7
Utilization percent) 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020	72.1 74.0 75.1 78.6 79.5 78.7 65.7 67.8 72.4 74.9 74.5 76.5 76.2	72.0 73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8 72.6 75.1 74.7 74.9 76.0 75.9	72.4 74.0 75.7 78.6 79.0 79.2 77.9 64.6 68.8 73.1 74.6 75.6 76.3 75.8	72.6 73.4 76.0 78.8 79.2 79.5 77.1 64.2 69.5 72.8 74.9 74.4 75.6 76.4 75.6 76.5 78.7	73.0 73.5 76.6 78.9 78.9 79.2 76.7 63.6 70.5 72.8 74.5 74.6 75.9 76.5 75.5	73.7 73.8 76.1 78.9 78.9 79.3 76.2 63.5 70.6 72.9 74.7 74.8 76.2 76.2 75.7	73.6 74.1 76.8 78.4 78.5 79.1 75.5 64.6 71.1 73.3 74.4 74.2 76.6 76.9 75.7	73.6 73.8 77.1 78.7 78.9 78.7 74.6 65.4 71.3 73.6 74.3 74.8 76.2 76.6 75.4 76.4 78.9 77.4	73.7 74.4 77.1 77.7 78.8 78.8 72.1 66.2 71.5 73.8 74.0 74.9 76.3 76.4 75.5 76.5 79.0 76.9	73.4 74.5 77.7 78.6 78.3 78.5 71.8 66.3 71.7 74.1 73.8 75.0 76.3 75.6 77.4 78.6 76.3	73.8 75.2 77.7 79.2 78.2 78.8 70.1 67.0 71.8 73.9 74.2 75.0 76.9 76.1 75.6 77.6 78.4 76.9	73.4 75.2 78.2 79.1 79.2 78.9 67.8 67.0 72.3 74.3 74.7 74.9 76.8 75.9 75.6	72.2 74.0 75.5 78.8 79.3 78.9 78.3 65.3 68.2 72.7 74.8 74.6 74.9 76.3 75.9	73.1 73.6 76.2 78.9 79.0 79.3 76.7 63.8 70.2 72.8 74.7 74.6 75.9 76.4 75.6	73.6 74.1 77.0 78.3 78.8 74.1 65.4 71.3 73.6 74.2 74.6 76.4 76.6 75.5	73.6 75.0 77.9 78.9 78.6 78.7 69.9 66.8 71.9 74.1 74.3 75.0 76.7 76.1 75.6 77.5	73.1 74.1 76.6 78.7 78.9 79.0 74.7 65.3 70.4 73.3 74.5 74.7 76.0 76.4 75.7
Utilization (percent) 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021	72.1 74.0 75.1 78.6 79.5 78.7 65.7 67.8 72.4 74.9 74.5 76.5 76.2 75.8 77.4 78.9 76.9	72.0 73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8 72.6 75.1 74.7 74.9 76.0 75.9	72.4 74.0 75.7 78.6 79.0 79.2 77.9 64.6 68.8 73.1 74.6 76.3 75.8 75.6 78.1 77.4 73.6	72.6 73.4 76.0 78.8 79.2 79.5 77.1 64.2 69.5 72.8 74.9 74.4 75.6 76.4 75.6 76.5 78.7 77.0 62.3	73.0 73.5 76.6 78.9 78.9 79.2 76.7 63.6 70.5 72.8 74.5 74.6 75.9 76.5 75.5	73.7 73.8 76.1 78.9 78.9 79.3 76.2 63.5 70.6 72.9 74.7 74.8 76.2 76.2 75.7 76.6 78.6 77.4 70.2	73.6 74.1 76.8 78.4 78.5 79.1 75.5 64.6 71.1 73.3 74.4 74.2 76.6 76.9 75.7 76.5 78.7 76.5 78.7 76.8	73.6 73.8 77.1 78.7 78.9 78.7 74.6 65.4 71.3 73.6 74.8 76.2 76.6 75.4 76.4 78.9 77.4 74.0	73.7 74.4 77.1 77.7 78.8 78.8 72.1 66.2 71.5 73.8 74.0 74.9 76.3 76.4 75.5 76.5 79.0 76.9	73.4 74.5 77.7 78.6 78.3 78.5 71.8 66.3 71.7 74.1 73.8 75.0 76.3 75.6 77.4 78.6 76.3 74.8	73.8 75.2 77.7 79.2 78.2 78.8 70.1 67.0 71.8 73.9 74.2 75.0 76.9 76.1 75.6 77.6 78.4 76.9 75.4 79.0	73.4 75.2 78.2 79.1 79.2 78.9 67.8 67.0 72.3 74.3 74.7 74.9 75.6 77.5 78.7 77.1	72.2 74.0 75.5 78.8 79.3 78.9 78.3 65.3 68.2 72.7 74.8 74.6 74.9 76.3 75.9	73.1 73.6 76.2 78.9 79.0 79.3 76.7 63.8 70.2 72.8 74.7 74.6 75.9 76.4 75.6	73.6 74.1 77.0 78.3 78.8 74.1 65.4 71.3 73.6 74.2 74.6 75.5 76.5 78.9 77.1 73.6 77.7	73.6 75.0 77.9 78.9 78.6 78.7 69.9 66.8 71.9 74.1 74.3 75.0 76.7 76.1 75.6 77.5 78.6 76.8	73.1 74.1 76.6 78.7 78.9 79.0 74.7 65.3 70.4 73.3 74.5 74.7 76.0 76.4 75.7 76.6 78.4 77.2 72.7 77.2
Utilization (percent) 2002 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022	72.1 74.0 75.1 78.6 79.5 78.7 65.7 67.8 72.4 74.9 74.5 76.2 75.8 77.4 78.0 76.9	72.0 73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8 72.6 75.1 74.7 74.9 76.0 75.9 75.8 78.1 77.6 77.1	72.4 74.0 75.7 78.6 79.0 79.2 77.9 64.6 68.8 73.1 74.6 75.6 76.3 75.8	72.6 73.4 76.0 78.8 79.2 79.5 77.1 64.2 69.5 72.8 74.9 74.4 75.6 76.4 75.6 76.5 78.7 77.0 62.3 76.3	73.0 73.5 76.6 78.9 78.9 79.2 76.7 63.6 70.5 72.8 74.5 74.6 75.9 76.5 75.5 76.5 77.0 65.1 77.2	73.7 73.8 76.1 78.9 79.3 76.2 63.5 70.6 72.9 74.7 74.8 76.2 75.7 76.6 78.6 77.4 70.2 77.3 79.5	73.6 74.1 76.8 78.4 78.5 79.1 75.5 64.6 71.1 73.3 74.4 74.2 76.6 76.9 75.7	73.6 73.8 77.1 78.7 78.9 78.7 74.6 65.4 71.3 73.6 74.3 74.8 76.2 76.6 75.4 76.4 78.9 77.8	73.7 74.4 77.1 77.7 78.8 78.8 72.1 66.2 71.5 73.8 74.0 74.9 76.3 76.4 75.5 76.5 79.0 76.9 74.1 77.1	73.4 74.5 77.7 78.6 78.3 78.5 71.8 66.3 71.7 74.1 73.8 75.0 76.3 76.3 75.6 77.4 78.6 76.3 74.8	73.8 75.2 77.7 79.2 78.2 78.8 70.1 67.0 71.8 73.9 74.2 75.0 76.9 76.1 75.6 77.6 78.4 76.9 75.4	73.4 75.2 78.2 79.1 79.2 78.9 67.8 67.0 72.3 74.3 74.7 74.9 75.6 75.9 75.6 77.5 78.7 77.1 76.0 79.1	72.2 74.0 75.5 78.8 79.3 78.9 78.3 65.3 68.2 72.7 74.8 74.6 74.9 76.3 75.9 75.7 77.9 77.7 75.9	73.1 73.6 76.2 78.9 79.0 79.3 76.7 63.8 70.2 72.8 74.7 74.6 75.9 76.4 75.6 76.6 78.5 77.1 65.9 76.9	73.6 74.1 77.0 78.3 78.8 74.1 65.4 71.3 73.6 74.2 74.6 76.4 76.6 75.5	73.6 75.0 77.9 78.9 78.6 78.7 69.9 66.8 71.9 74.1 74.3 75.0 76.7 76.1 75.6 77.5 78.6 77.5 78.8	73.1 74.1 76.6 78.7 78.9 79.0 74.7 65.3 70.4 73.3 74.5 74.7 76.0 76.4
2024 Utilization (percent) 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024	72.1 74.0 75.1 78.6 79.5 78.7 65.7 67.8 72.4 74.9 74.5 76.2 75.8 77.4 78.0 76.9 76.8	72.0 73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8 72.6 75.1 74.7 74.9 76.0 75.9 75.8 78.1 77.6 77.1 73.8	72.4 74.0 75.7 78.6 79.0 79.2 77.9 64.6 68.8 73.1 74.6 75.6 76.3 75.8 75.6 78.1 77.4 73.6 76.2	72.6 73.4 76.0 78.8 79.2 79.5 77.1 64.2 69.5 72.8 74.4 75.6 76.4 75.6 76.5 78.7 77.0 62.3 76.3 80.0	73.0 73.5 76.6 78.9 78.9 79.2 76.7 63.6 70.5 72.8 74.5 74.6 75.9 76.5 75.5 76.5 78.1 77.0 65.1	73.7 73.8 76.1 78.9 78.9 79.3 76.2 63.5 70.6 72.9 74.7 74.8 76.2 76.2 75.7 76.6 78.6 77.4 70.2	73.6 74.1 76.8 78.4 78.5 79.1 75.5 64.6 71.1 73.3 74.4 74.2 76.6 76.9 75.7 76.5 78.7 76.9 72.8 78.0	73.6 73.8 77.1 78.7 78.9 78.7 74.6 65.4 71.3 73.6 74.8 76.2 76.6 75.4 76.4 78.9 77.4 74.0 77.8	73.7 74.4 77.1 77.7 78.8 78.8 72.1 66.2 71.5 73.8 74.0 74.9 76.3 76.4 75.5 76.5 79.0 76.9 74.1 77.1	73.4 74.5 77.7 78.6 78.3 78.5 71.8 66.3 71.7 74.1 73.8 75.0 76.3 75.6 77.4 78.6 76.3 74.8 78.3	73.8 75.2 77.7 79.2 78.2 78.8 70.1 67.0 71.8 73.9 74.2 75.0 76.9 76.1 75.6 77.6 78.4 76.9 75.4 79.0	73.4 75.2 78.2 79.1 79.2 78.9 67.8 67.0 72.3 74.3 74.7 74.9 75.6 75.9 75.6 77.5 78.7 77.1 76.0 79.1	72.2 74.0 75.5 78.8 79.3 78.9 78.3 65.3 68.2 72.7 74.8 74.6 74.9 76.3 75.9 75.7 77.9 77.7 75.9	73.1 73.6 76.2 78.9 79.0 79.3 76.7 63.8 70.2 72.8 74.7 74.6 75.9 76.4 75.6 76.6 78.5 77.1 65.9 76.9	73.6 74.1 77.0 78.3 78.8 74.1 65.4 71.3 73.6 74.2 74.6 75.5 76.5 78.9 77.1 73.6 77.7	73.6 75.0 77.9 78.9 78.6 78.7 69.9 66.8 71.9 74.1 74.3 75.0 76.7 76.1 75.6 77.5 78.6 76.8 75.4 78.8	73.1 74.1 76.6 78.7 78.9 79.0 74.7 65.3 70.4 73.3 74.5 74.7 76.0 76.4 75.7 76.6 78.4 77.2 77.2

The composition of manufacturing is specified in a note for the summary table.
 Quarterly percentage changes are at annual rates. Annual percentage changes are calculated from annual averages.

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

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
IP (percent																	
change) ²																	
2002	.8	2	.8	.5	.4	.8	1	2	.1	3	.5	6	2.7	6.0	1.9	8	.3
2003	.8	.0	4	8	2	.0	.3	4	.6	.0	.6	.0	1.5	-4.7	.8	2.6	.2
2004	.0	.6	4	.4	.7	8	.8	.0	.0	.9	.2	.7	1.9	2.2	2.0	5.4	1.8
2005	.2	.6	2	.1	.0	.4	4	.2	-2.2	1.2	1.1	.4	4.7	1.3	-2.9	2.5	2.6
2006	.1	.0	.2	.3	1	.3	1	.3	3	2	1	1.0	3.3	1.8	.8	.2	1.4
2007	4	.9	.0	.5	.1	.1	2	.1	.1	5	.4	1	3.3	3.8	.3	4	1.8
2008	2	5	5	8	7	3	4	-1.6	-4.5	1.3	-1.1	-2.7	-2.3	-6.9	-12.5	-14.9	-4.3
2009	-2.5	7	-1.7	9	-1.1	4	1.2	1.1	.8	.2	.3	.3	-20.6	-11.5	6.7	5.8	-11.4
2010	1.0	.2	.6	.3	1.4	.2	.3	.3	.3	3	.0	.9	6.7	7.3	5.1	1.1	4.9
2011	3	4	1.1	3	.1	.3	.5	.6	1	.7	.0	.5	1.6	1.6	4.5	4.2	2.8
2012	.6	.3	6	.7	.2	.0	.2	4	1	.3	.4	.3	3.6	2.1	2	1.7	2.8
2013	1	.5	.4	2	.1	.2	4	.6	.5	2	.2	.2	2.9	1.5	1.2	2.5	1.7
2014	4	.7	1.0	.1	.4	.3	.2	2	.3	.0	.6	.0	2.6	5.3	2.1	2.3	2.8
2015	8	7	4	6	5	3	.7	2	3	5	7	5	-4.5	-5.7	.3	-5.5	-1.5
2016	.5	5	8	.3	3	.5	.1	1	1	.0	4	.7	-2.9	-1.6	.8	6	-2.4
2017	2	4	.6	1.0	.1	.2	2	5	.1	1.2	.2	.2	.3	5.6	-1.4	5.6	1.1
2018	.0	.3	.5	1.1	-1.0	.8	.1	.7	.1	2	.1	.0	2.1	4.7	3.1	.7	3.0
2019	7	6	.0	6	.1	.1	5	.8	3	9	.5	2	-4.0	-2.4	1	-2.1	8
2020	6	.4	-4.1	-13.5	1.6	6.7	3.7	1.0	1	.6	.4	1.3	-6.6	-42.6	43.7	6.5	-7.3
2021	.6	-3.4	2.8	.1	.9	.5	.5	.0	-1.1	1.4	.9	1	1.0	6.4	3.0	4.9	4.3
2022	.0	.6	.8	.2	.0	2	.2	.1	.3	1	3	-1.2	3.8	3.9	1.2	-1.8	3.4
2023	.9	.0	.0	.4	3	6	.7	.0	.2	8	.3	3	.0	.0	1.0	-2.0	.1
2024	-1.1	1.3	2	1	.7	.1	-1.0	.8					-1.9	2.7			
IP (2017=100)																	
2022	100.6	101.2	102.0	102.3	102.3	102.2	102.4	102.5	102.8	102.8	102.4	101.2	101.3	102.3	102.6	102.1	102.1
2023	102.1	102.1	102.1	102.5	102.2	101.6	102.3	102.3	102.5	101.8	102.0	101.8	102.1	102.1	102.4	101.9	102.1
2024	100.6	101.9	101.7	101.5	102.3	102.4	101.4	102.2					101.4	102.1			
Capacity (percent of 2017 output)																	
2022	126.1	126.0	126.0	126.1	126.2	126.3	126.5	126.7	126.9	127.2	127.4	127.7	126.0	126.2	126.7	127.4	126.6
2023	128.0	128.3	128.6	128.9	120.2	129.4	129.6	129.8	129.9	130.1	130.2	130.3	128.3	129.1	129.8	130.2	120.0
2024	130.4	130.5	130.6		130.8	130.9	131.0	131.1	129.9	130.1	150.2	130.3			122.0		
		130.3	150.0	130.7									130.5	130.8		150.2	
Utilization		130.3	130.0	130.7									130.5	130.8		100.2	
Utilization (percent)																	
(percent) 2002	75.4	75.2	75.7	76.1	76.4	77.0	76.9	76.8	76.8	76.7	77.1	76.7	75.4	76.5	76.8	76.8	
(percent) 2002 2003	77.3	75.2 77.3	75.7 77.1	76.1 76.5	76.4 76.5	77.0 76.5	76.8	76.5	77.0	77.0	77.5	77.6	75.4 77.2	76.5 76.5	76.8	76.8 77.4	77.0
(percent) 2002 2003 2004	77.3 77.6	75.2 77.3 78.1	75.7 77.1 77.8	76.1 76.5 78.2	76.4 76.5 78.8	77.0 76.5 78.2	76.8 78.8	76.5 78.9	77.0 79.0	77.0 79.7	77.5 79.9	77.6 80.5	75.4 77.2 77.9	76.5 76.5 78.4	76.8 78.9	76.8 77.4 80.0	77.0 78.8
(percent) 2002 2003 2004 2005	77.3 77.6 80.7	75.2 77.3 78.1 81.2	75.7 77.1 77.8 81.0	76.1 76.5 78.2 81.0	76.4 76.5 78.8 81.0	77.0 76.5 78.2 81.3	76.8 78.8 80.8	76.5 78.9 80.9	77.0 79.0 79.1	77.0 79.7 79.9	77.5 79.9 80.7	77.6 80.5 80.9	75.4 77.2 77.9 80.9	76.5 76.5 78.4 81.1	76.8 78.9 80.3	76.8 77.4 80.0 80.5	77.0 78.8 80.7
(percent) 2002 2003 2004	77.3 77.6	75.2 77.3 78.1	75.7 77.1 77.8	76.1 76.5 78.2	76.4 76.5 78.8	77.0 76.5 78.2	76.8 78.8	76.5 78.9	77.0 79.0	77.0 79.7	77.5 79.9	77.6 80.5	75.4 77.2 77.9	76.5 76.5 78.4	76.8 78.9	76.8 77.4 80.0	77.0 78.8
(percent) 2002 2003 2004 2005 2006	77.3 77.6 80.7 80.9	75.2 77.3 78.1 81.2 80.8	75.7 77.1 77.8 81.0 80.8	76.1 76.5 78.2 81.0 80.9	76.4 76.5 78.8 81.0 80.7	77.0 76.5 78.2 81.3 80.8	76.8 78.8 80.8 80.6 81.1	76.5 78.9 80.9 80.8 81.2	77.0 79.0 79.1 80.4 81.4	77.0 79.7 79.9 80.1 81.0	77.5 79.9 80.7 79.9 81.4	77.6 80.5 80.9 80.6 81.4	75.4 77.2 77.9 80.9 80.8 80.6	76.5 76.5 78.4 81.1 80.8	76.8 78.9 80.3 80.6	76.8 77.4 80.0 80.5 80.2	77.0 78.8 80.7 80.6
(percent) 2002 2003 2004 2005 2006 2007	77.3 77.6 80.7 80.9 80.2 81.4	75.2 77.3 78.1 81.2 80.8 80.8 81.0	75.7 77.1 77.8 81.0 80.8 80.7 80.7	76.1 76.5 78.2 81.0 80.9 81.1 80.1	76.4 76.5 78.8 81.0 80.7 81.1 79.6	77.0 76.5 78.2 81.3 80.8 81.2 79.3	76.8 78.8 80.8 80.6 81.1 79.0	76.5 78.9 80.9 80.8 81.2 77.6	77.0 79.0 79.1 80.4 81.4 74.0	77.0 79.7 79.9 80.1 81.0 74.8	77.5 79.9 80.7 79.9 81.4 73.9	77.6 80.5 80.9 80.6 81.4 71.8	75.4 77.2 77.9 80.9 80.8 80.6 81.0	76.5 76.5 78.4 81.1 80.8 81.2 79.7	76.8 78.9 80.3 80.6 81.2 76.9	76.8 77.4 80.0 80.5 80.2 81.3 73.5	77.0 78.8 80.7 80.6 81.1 77.8
(percent) 2002 2003 2004 2005 2006 2007 2008 2009	77.3 77.6 80.7 80.9 80.2 81.4 69.8	75.2 77.3 78.1 81.2 80.8 80.8 81.0 69.3	75.7 77.1 77.8 81.0 80.8 80.7 80.7 68.0	76.1 76.5 78.2 81.0 80.9 81.1 80.1 67.4	76.4 76.5 78.8 81.0 80.7 81.1 79.6 66.6	77.0 76.5 78.2 81.3 80.8 81.2 79.3 66.4	76.8 78.8 80.8 80.6 81.1 79.0 67.2	76.5 78.9 80.9 80.8 81.2 77.6 68.0	77.0 79.0 79.1 80.4 81.4 74.0 68.7	77.0 79.7 79.9 80.1 81.0 74.8 68.9	77.5 79.9 80.7 79.9 81.4 73.9 69.3	77.6 80.5 80.9 80.6 81.4 71.8 69.6	75.4 77.2 77.9 80.9 80.8 80.6 81.0 69.1	76.5 76.5 78.4 81.1 80.8 81.2 79.7 66.8	76.8 78.9 80.3 80.6 81.2 76.9 68.0	76.8 77.4 80.0 80.5 80.2 81.3 73.5 69.3	77.0 78.8 80.7 80.6 81.1 77.8 68.3
(percent) 2002 2003 2004 2005 2006 2007 2008 2009 2010	77.3 77.6 80.7 80.9 80.2 81.4 69.8 70.5	75.2 77.3 78.1 81.2 80.8 80.8 81.0 69.3 70.8	75.7 77.1 77.8 81.0 80.8 80.7 80.7 68.0 71.5	76.1 76.5 78.2 81.0 80.9 81.1 80.1 67.4 71.9	76.4 76.5 78.8 81.0 80.7 81.1 79.6 66.6 73.0	77.0 76.5 78.2 81.3 80.8 81.2 79.3 66.4 73.4	76.8 78.8 80.8 80.6 81.1 79.0 67.2 73.8	76.5 78.9 80.9 80.8 81.2 77.6 68.0 74.2	77.0 79.0 79.1 80.4 81.4 74.0 68.7 74.5	77.0 79.7 79.9 80.1 81.0 74.8 68.9 74.4	77.5 79.9 80.7 79.9 81.4 73.9 69.3 74.5	77.6 80.5 80.9 80.6 81.4 71.8 69.6 75.3	75.4 77.2 77.9 80.9 80.8 80.6 81.0 69.1 70.9	76.5 76.5 78.4 81.1 80.8 81.2 79.7 66.8 72.8	76.8 78.9 80.3 80.6 81.2 76.9 68.0 74.2	76.8 77.4 80.0 80.5 80.2 81.3 73.5 69.3 74.8	77.0 78.8 80.7 80.6 81.1 77.8 68.3 73.2
(percent) 2002 2003 2004 2005 2006 2007 2008 2009	77.3 77.6 80.7 80.9 80.2 81.4 69.8	75.2 77.3 78.1 81.2 80.8 80.8 81.0 69.3	75.7 77.1 77.8 81.0 80.8 80.7 80.7 68.0	76.1 76.5 78.2 81.0 80.9 81.1 80.1 67.4	76.4 76.5 78.8 81.0 80.7 81.1 79.6 66.6	77.0 76.5 78.2 81.3 80.8 81.2 79.3 66.4	76.8 78.8 80.8 80.6 81.1 79.0 67.2	76.5 78.9 80.9 80.8 81.2 77.6 68.0	77.0 79.0 79.1 80.4 81.4 74.0 68.7	77.0 79.7 79.9 80.1 81.0 74.8 68.9	77.5 79.9 80.7 79.9 81.4 73.9 69.3	77.6 80.5 80.9 80.6 81.4 71.8 69.6	75.4 77.2 77.9 80.9 80.8 80.6 81.0 69.1	76.5 76.5 78.4 81.1 80.8 81.2 79.7 66.8	76.8 78.9 80.3 80.6 81.2 76.9 68.0	76.8 77.4 80.0 80.5 80.2 81.3 73.5 69.3	77.0 78.8 80.7 80.6 81.1 77.8 68.3 73.2
(percent) 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011	77.3 77.6 80.7 80.9 80.2 81.4 69.8 70.5 75.2	75.2 77.3 78.1 81.2 80.8 80.8 81.0 69.3 70.8 74.9	75.7 77.1 77.8 81.0 80.8 80.7 80.7 68.0 71.5 75.8	76.1 76.5 78.2 81.0 80.9 81.1 80.1 67.4 71.9 75.5	76.4 76.5 78.8 81.0 80.7 81.1 79.6 66.6 73.0 75.6	77.0 76.5 78.2 81.3 80.8 81.2 79.3 66.4 73.4 75.8	76.8 78.8 80.8 80.6 81.1 79.0 67.2 73.8 76.1	76.5 78.9 80.9 80.8 81.2 77.6 68.0 74.2 76.5	77.0 79.0 79.1 80.4 81.4 74.0 68.7 74.5 76.4	77.0 79.7 79.9 80.1 81.0 74.8 68.9 74.4 76.9	77.5 79.9 80.7 79.9 81.4 73.9 69.3 74.5 76.8	77.6 80.5 80.9 80.6 81.4 71.8 69.6 75.3 77.1	75.4 77.2 77.9 80.9 80.8 80.6 81.0 69.1 70.9 75.3	76.5 76.5 78.4 81.1 80.8 81.2 79.7 66.8 72.8 75.6	76.8 78.9 80.3 80.6 81.2 76.9 68.0 74.2 76.3	76.8 77.4 80.0 80.5 80.2 81.3 73.5 69.3 74.8 76.9	77.0 78.8 80.7 80.6 81.1 77.8 68.3 73.2 76.0
(percent) 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013	77.3 77.6 80.7 80.9 80.2 81.4 69.8 70.5 75.2 77.4 77.1	75.2 77.3 78.1 81.2 80.8 80.8 81.0 69.3 70.8 74.9	75.7 77.1 77.8 81.0 80.8 80.7 80.7 68.0 71.5 75.8	76.1 76.5 78.2 81.0 80.9 81.1 80.1 67.4 71.9 75.5	76.4 76.5 78.8 81.0 80.7 81.1 79.6 66.6 73.0 75.6	77.0 76.5 78.2 81.3 80.8 81.2 79.3 66.4 73.4 75.8 77.5	76.8 78.8 80.8 80.6 81.1 79.0 67.2 73.8 76.1	76.5 78.9 80.9 80.8 81.2 77.6 68.0 74.2 76.5	77.0 79.0 79.1 80.4 81.4 74.0 68.7 74.5 76.4 76.7 78.0	77.0 79.7 79.9 80.1 81.0 74.8 68.9 74.4 76.9	77.5 79.9 80.7 79.9 81.4 73.9 69.3 74.5 76.8	77.6 80.5 80.9 80.6 81.4 71.8 69.6 75.3 77.1 77.2 78.1	75.4 77.2 77.9 80.9 80.8 80.6 81.0 69.1 70.9 75.3 77.3	76.5 76.5 78.4 81.1 80.8 81.2 79.7 66.8 72.8 75.6	76.8 78.9 80.3 80.6 81.2 76.9 68.0 74.2 76.3	76.8 77.4 80.0 80.5 80.2 81.3 73.5 69.3 74.8 76.9	78.8 80.7 80.6 81.1 77.8 68.3 73.2 76.0
(percent) 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014	77.3 77.6 80.7 80.9 80.2 81.4 69.8 70.5 75.2 77.4 77.1	75.2 77.3 78.1 81.2 80.8 80.8 81.0 69.3 70.8 74.9 77.5 77.4	75.7 77.1 77.8 81.0 80.8 80.7 80.7 68.0 71.5 75.8 76.9 77.6	76.1 76.5 78.2 81.0 80.9 81.1 80.1 67.4 71.9 75.5 77.4 77.5	76.4 76.5 78.8 81.0 80.7 81.1 79.6 66.6 73.0 75.6 77.4 77.4	77.0 76.5 78.2 81.3 80.8 81.2 79.3 66.4 73.4 75.8 77.3 77.5	76.8 78.8 80.8 80.6 81.1 79.0 67.2 73.8 76.1 77.3 77.2	76.5 78.9 80.9 80.8 81.2 77.6 68.0 74.2 76.5 76.9 77.6	77.0 79.0 79.1 80.4 81.4 74.0 68.7 74.5 76.4 76.7 78.0 79.4	77.0 79.7 79.9 80.1 81.0 74.8 68.9 74.4 76.9 76.8 77.8 79.3	77.5 79.9 80.7 79.9 81.4 73.9 69.3 74.5 76.8 77.1 78.0 79.8	77.6 80.5 80.9 80.6 81.4 71.8 69.6 75.3 77.1 77.2 78.1 79.7	75.4 77.2 77.9 80.9 80.8 80.6 81.0 69.1 70.9 75.3 77.3 77.4 78.3	76.5 76.5 78.4 81.1 80.8 81.2 79.7 66.8 72.8 75.6 77.3 77.5	76.8 78.9 80.3 80.6 81.2 76.9 68.0 74.2 76.3 77.0 77.6	76.8 77.4 80.0 80.5 80.2 81.3 73.5 69.3 74.8 76.9 77.0 78.0	77.0 78.8 80.7 80.6 81.1 77.8 68.3 73.2 76.0 77.2 77.6
(percent) 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015	77.3 77.6 80.7 80.9 80.2 81.4 69.8 70.5 75.2 77.4 77.1 77.7	75.2 77.3 78.1 81.2 80.8 80.8 81.0 69.3 70.8 74.9 77.5 77.4 78.3 78.5	75.7 77.1 77.8 81.0 80.8 80.7 80.7 68.0 71.5 75.8 76.9 77.6 79.0	76.1 76.5 78.2 81.0 80.9 81.1 80.1 67.4 71.9 75.5 77.4 77.5 79.0	76.4 76.5 78.8 81.0 80.7 81.1 79.6 66.6 73.0 75.6 77.4 77.4 79.2 77.3	77.0 76.5 78.2 81.3 80.8 81.2 79.3 66.4 73.4 75.8 77.5 79.4 77.1	76.8 78.8 80.8 80.6 81.1 79.0 67.2 73.8 76.1 77.3 77.2 79.5	76.5 78.9 80.9 80.8 81.2 77.6 68.0 74.2 76.5 76.9 77.6 79.2	77.0 79.0 79.1 80.4 81.4 74.0 68.7 74.5 76.4 76.7 78.0 79.4 77.3	77.0 79.7 79.9 80.1 81.0 74.8 68.9 74.4 76.9 76.8 77.8 79.3 76.9	77.5 79.9 80.7 79.9 81.4 73.9 69.3 74.5 76.8 77.1 78.0 79.8 76.4	77.6 80.5 80.9 80.6 81.4 71.8 69.6 75.3 77.1 77.2 78.1 79.7	75.4 77.2 77.9 80.9 80.8 80.6 81.0 69.1 70.9 75.3 77.4 78.3 78.5	76.5 76.5 78.4 81.1 80.8 81.2 79.7 66.8 72.8 75.6 77.3 77.5 79.2 77.3	76.8 78.9 80.3 80.6 81.2 76.9 68.0 74.2 76.3 77.0 77.6 79.4	76.8 77.4 80.0 80.5 80.2 81.3 73.5 69.3 74.8 76.9 77.0 78.0 79.6	77.0 78.8 80.7 80.6 81.1 77.8 68.3 73.2 76.0 77.2 77.6 79.1
(percent) 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016	77.3 77.6 80.7 80.9 80.2 81.4 69.8 70.5 75.2 77.4 77.1 77.7 79.0 76.4	75.2 77.3 78.1 81.2 80.8 80.8 81.0 69.3 70.8 74.9 77.5 77.4 78.3 78.5 76.0	75.7 77.1 77.8 81.0 80.8 80.7 80.7 68.0 71.5 75.8 76.9 77.6 79.0 78.2 75.4	76.1 76.5 78.2 81.0 80.9 81.1 80.1 67.4 71.9 75.5 77.4 77.5 79.0 77.7	76.4 76.5 78.8 81.0 80.7 81.1 79.6 66.6 73.0 75.6 77.4 79.2 77.3 75.4	77.0 76.5 78.2 81.3 80.8 81.2 79.3 66.4 73.4 75.8 77.3 77.5 79.4 77.1 75.8	76.8 78.8 80.8 80.6 81.1 79.0 67.2 73.8 76.1 77.3 77.2 79.5 77.6 75.9	76.5 78.9 80.9 80.8 81.2 77.6 68.0 74.2 76.5 76.9 77.6 79.2 77.5 75.8	77.0 79.0 79.1 80.4 81.4 74.0 68.7 74.5 76.4 76.7 78.0 79.4 77.3 75.6	77.0 79.7 79.9 80.1 81.0 74.8 68.9 74.4 76.9 76.8 77.8 79.3 76.9 75.6	77.5 79.9 80.7 79.9 81.4 73.9 69.3 74.5 76.8 77.1 78.0 79.8 76.4 75.3	77.6 80.5 80.9 80.6 81.4 71.8 69.6 75.3 77.1 77.2 78.1 79.7 76.0 75.9	75.4 77.2 77.9 80.9 80.8 80.6 81.0 69.1 70.9 75.3 77.4 78.3 78.5 75.9	76.5 76.5 78.4 81.1 80.8 81.2 79.7 66.8 72.8 75.6 77.3 77.5 79.2 77.3 75.6	76.8 78.9 80.3 80.6 81.2 76.9 68.0 74.2 76.3 77.6 79.4 77.4 77.4	76.8 77.4 80.0 80.5 80.2 81.3 73.5 69.3 74.8 76.9 77.0 78.0 79.6 76.4 75.6	77.0 78.8 80.7 80.6 81.1 77.8 68.3 73.2 76.0 77.2 77.6 79.1 77.4 75.7
(percent) 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016	77.3 77.6 80.7 80.9 80.2 81.4 69.8 70.5 75.2 77.4 77.1 77.7 79.0 76.4	75.2 77.3 78.1 81.2 80.8 80.8 81.0 69.3 70.8 74.9 77.5 77.4 78.3 78.5 76.0	75.7 77.1 77.8 81.0 80.8 80.7 68.0 71.5 75.8 76.9 77.6 79.0 78.2 75.4	76.1 76.5 78.2 81.0 80.9 81.1 80.1 67.4 71.9 75.5 77.4 77.5 79.0 77.7 75.6	76.4 76.5 78.8 81.0 80.7 81.1 79.6 66.6 73.0 75.6 77.4 77.4 79.2 77.3 75.4	77.0 76.5 78.2 81.3 80.8 81.2 79.3 66.4 73.4 75.8 77.5 79.4 77.1 75.8	76.8 78.8 80.8 80.6 81.1 79.0 67.2 73.8 76.1 77.3 77.2 79.5 77.6 75.9	76.5 78.9 80.9 80.8 81.2 77.6 68.0 74.2 76.5 76.9 77.6 79.2 77.5 75.8	77.0 79.0 79.1 80.4 81.4 74.0 68.7 74.5 76.4 76.7 78.0 79.4 77.3 75.6	77.0 79.7 79.9 80.1 81.0 74.8 68.9 74.4 76.9 76.8 77.8 79.3 76.9 75.6	77.5 79.9 80.7 79.9 81.4 73.9 69.3 74.5 76.8 77.1 78.0 79.8 76.4 75.3	77.6 80.5 80.9 80.6 81.4 71.8 69.6 75.3 77.1 77.2 78.1 79.7 76.0 75.9	75.4 77.2 77.9 80.9 80.8 80.6 81.0 69.1 70.9 75.3 77.4 78.3 78.5 75.9	76.5 76.5 78.4 81.1 80.8 81.2 79.7 66.8 72.8 75.6 77.3 77.5 79.2 77.3 75.6	76.8 78.9 80.3 80.6 81.2 76.9 68.0 74.2 76.3 77.0 77.6 79.4 77.4 75.8	76.8 77.4 80.0 80.5 80.2 81.3 73.5 69.3 74.8 76.9 77.0 78.0 79.6 76.4 75.6	77.0 78.8 80.7 80.6 81.1 77.8 68.3 73.2 76.0 77.2 77.6 79.1 77.4 75.7
(percent) 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018	77.3 77.6 80.7 80.9 80.2 81.4 69.8 70.5 75.2 77.4 77.1 77.7 79.0 76.4	75.2 77.3 78.1 81.2 80.8 80.8 81.0 69.3 70.8 74.9 77.5 77.4 78.3 78.5 76.0	75.7 77.1 77.8 81.0 80.8 80.7 68.0 71.5 75.8 76.9 77.6 79.0 78.2 75.4	76.1 76.5 78.2 81.0 80.9 81.1 80.1 67.4 71.9 75.5 77.4 77.5 79.0 77.7 75.6	76.4 76.5 78.8 81.0 80.7 81.1 79.6 66.6 73.0 75.6 77.4 79.2 77.3 75.4 76.8 79.3	77.0 76.5 78.2 81.3 80.8 81.2 79.3 66.4 73.4 75.8 77.5 79.4 77.1 75.8	76.8 78.8 80.8 80.6 81.1 79.0 67.2 73.8 76.1 77.3 77.2 79.5 77.6 75.9	76.5 78.9 80.9 80.8 81.2 77.6 68.0 74.2 76.5 76.9 77.6 79.2 77.5 75.8	77.0 79.0 79.1 80.4 81.4 74.0 68.7 74.5 76.4 76.7 78.0 79.4 77.3 75.6 76.8 80.6	77.0 79.7 79.9 80.1 81.0 74.8 68.9 74.4 76.9 76.8 77.8 79.3 76.9 75.6	77.5 79.9 80.7 79.9 81.4 73.9 69.3 74.5 76.8 77.1 78.0 79.8 76.4 75.3	77.6 80.5 80.9 80.6 81.4 71.8 69.6 75.3 77.1 77.2 78.1 79.7 76.0 75.9	75.4 77.2 77.9 80.9 80.8 80.6 81.0 69.1 70.9 75.3 77.4 78.3 78.5 75.9	76.5 76.5 78.4 81.1 80.8 81.2 79.7 66.8 72.8 75.6 77.3 77.5 79.2 77.3 75.6	76.8 78.9 80.3 80.6 81.2 76.9 68.0 74.2 76.3 77.6 79.4 77.4 75.8 80.4	76.8 77.4 80.0 80.5 80.2 81.3 73.5 69.3 74.8 76.9 77.0 78.0 79.6 76.4 75.6	77.0 78.8 80.7 80.6 81.1 77.8 68.3 73.2 76.0 77.2 77.6 79.1 77.4 75.7
(percent) 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019	77.3 77.6 80.7 80.9 80.2 81.4 69.8 70.5 75.2 77.4 77.1 77.7 79.0 76.4 75.7 78.4 79.8	75.2 77.3 78.1 81.2 80.8 80.8 81.0 69.3 70.8 74.9 77.5 77.4 78.3 78.5 76.0	75.7 77.1 77.8 81.0 80.8 80.7 80.7 68.0 71.5 75.8 76.9 77.6 79.0 78.2 75.4	76.1 76.5 78.2 81.0 80.9 81.1 80.1 67.4 71.9 75.5 77.4 77.5 79.0 77.7 75.6	76.4 76.5 78.8 81.0 80.7 81.1 79.6 66.6 73.0 75.6 77.4 79.2 77.3 75.4 76.8 79.3 78.8	77.0 76.5 78.2 81.3 80.8 81.2 79.3 66.4 73.4 75.8 77.5 79.4 77.1 75.8 77.0 80.0 78.8	76.8 78.8 80.8 80.6 81.1 79.0 67.2 73.8 76.1 77.3 77.2 79.5 77.6 75.9	76.5 78.9 80.9 80.8 81.2 77.6 68.0 74.2 76.5 76.9 77.6 79.2 77.5 75.8	77.0 79.0 79.1 80.4 81.4 74.0 68.7 74.5 76.4 76.7 78.0 79.4 77.3 75.6 76.8 80.6 78.5	77.0 79.7 79.9 80.1 81.0 74.8 68.9 74.4 76.9 76.8 77.8 79.3 76.9 75.6	77.5 79.9 80.7 79.9 81.4 73.9 69.3 74.5 76.8 77.1 78.0 79.8 76.4 75.3 78.1 80.5 78.2	77.6 80.5 80.9 80.6 81.4 71.8 69.6 75.3 77.1 77.2 78.1 79.7 76.0 75.9	75.4 77.2 77.9 80.9 80.8 80.6 81.0 69.1 70.9 75.3 77.4 78.3 78.5 75.9	76.5 76.5 78.4 81.1 80.8 81.2 79.7 66.8 72.8 75.6 77.3 77.5 79.2 77.3 75.6	76.8 78.9 80.3 80.6 81.2 76.9 68.0 74.2 76.3 77.0 77.6 79.4 77.4 75.8 80.4 78.5	76.8 77.4 80.0 80.5 80.2 81.3 73.5 69.3 74.8 76.9 77.0 78.0 79.6 76.4 75.6	77.0 78.8 80.7 80.6 81.1 77.8 68.3 73.2 76.0 77.2 77.6 79.1 77.4 75.7 76.9 79.8 78.7
(percent) 2002 2003 2004 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020	77.3 77.6 80.7 80.9 80.2 81.4 69.8 70.5 75.2 77.4 77.1 77.7 79.0 76.4 75.7 78.4 79.8 77.4	75.2 77.3 78.1 81.2 80.8 80.8 81.0 69.3 70.8 74.9 77.5 77.4 78.3 78.5 76.0	75.7 77.1 77.8 81.0 80.8 80.7 68.0 71.5 75.8 76.9 77.6 79.0 78.2 75.4	76.1 76.5 78.2 81.0 80.9 81.1 80.1 67.4 71.9 75.5 77.4 77.5 79.0 77.7 75.6	76.4 76.5 78.8 81.0 80.7 81.1 79.6 66.6 73.0 75.6 77.4 79.2 77.3 75.4 76.8 79.3 78.8 65.6	77.0 76.5 78.2 81.3 80.8 81.2 79.3 66.4 73.4 75.8 77.5 79.4 77.1 75.8 77.0 80.0 78.8 70.1	76.8 78.8 80.8 80.6 81.1 79.0 67.2 73.8 76.1 77.3 77.2 79.5 77.6 75.9 80.0 78.3 72.8	76.5 78.9 80.9 80.8 81.2 77.6 68.0 74.2 76.5 76.9 77.6 79.2 77.5 75.8 76.6 80.6 78.8 73.6	77.0 79.0 79.1 80.4 81.4 74.0 68.7 74.5 76.4 76.7 78.0 79.4 77.3 75.6 76.8 80.6 78.5 73.6	77.0 79.7 79.9 80.1 81.0 74.8 68.9 74.4 76.9 76.8 77.8 79.3 76.9 75.6 77.8 80.4 77.8	77.5 79.9 80.7 79.9 81.4 73.9 69.3 74.5 76.8 77.1 78.0 79.8 76.4 75.3 78.1 80.5 78.2	77.6 80.5 80.9 80.6 81.4 71.8 69.6 75.3 77.1 77.2 78.1 79.7 76.0 75.9 78.3 80.4 77.9 75.8	75.4 77.2 77.9 80.9 80.8 80.6 81.0 69.1 70.9 75.3 77.4 78.3 78.5 75.9	76.5 76.5 78.4 81.1 80.8 81.2 79.7 66.8 72.8 75.6 77.3 77.5 79.2 77.3 75.6	76.8 78.9 80.3 80.6 81.2 76.9 68.0 74.2 76.3 77.6 79.4 77.4 75.8 80.4 78.5 73.3	76.8 77.4 80.0 80.5 80.2 81.3 73.5 69.3 74.8 76.9 77.0 78.0 79.6 76.4 75.6	77.0 78.8 80.7 80.6 81.1 77.8 68.3 73.2 76.0 77.2 77.6 79.1 77.4 75.7
(percent) 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019	77.3 77.6 80.7 80.9 80.2 81.4 69.8 70.5 75.2 77.4 77.1 77.7 79.0 76.4 75.7 78.4 79.8	75.2 77.3 78.1 81.2 80.8 80.8 81.0 69.3 70.8 74.9 77.5 77.4 78.3 78.5 76.0	75.7 77.1 77.8 81.0 80.8 80.7 80.7 68.0 71.5 75.8 76.9 77.6 79.0 78.2 75.4	76.1 76.5 78.2 81.0 80.9 81.1 80.1 67.4 71.9 75.5 77.4 77.5 79.0 77.7 75.6	76.4 76.5 78.8 81.0 80.7 81.1 79.6 66.6 73.0 75.6 77.4 79.2 77.3 75.4 76.8 79.3 78.8	77.0 76.5 78.2 81.3 80.8 81.2 79.3 66.4 73.4 75.8 77.5 79.4 77.1 75.8 77.0 80.0 78.8	76.8 78.8 80.8 80.6 81.1 79.0 67.2 73.8 76.1 77.3 77.2 79.5 77.6 75.9	76.5 78.9 80.9 80.8 81.2 77.6 68.0 74.2 76.5 76.9 77.6 79.2 77.5 75.8	77.0 79.0 79.1 80.4 81.4 74.0 68.7 74.5 76.4 76.7 78.0 79.4 77.3 75.6 76.8 80.6 78.5	77.0 79.7 79.9 80.1 81.0 74.8 68.9 74.4 76.9 76.8 77.8 79.3 76.9 75.6	77.5 79.9 80.7 79.9 81.4 73.9 69.3 74.5 76.8 77.1 78.0 79.8 76.4 75.3 78.1 80.5 78.2	77.6 80.5 80.9 80.6 81.4 71.8 69.6 75.3 77.1 77.2 78.1 79.7 76.0 75.9	75.4 77.2 77.9 80.9 80.8 80.6 81.0 69.1 70.9 75.3 77.4 78.3 78.5 75.9	76.5 76.5 78.4 81.1 80.8 81.2 79.7 66.8 72.8 75.6 77.3 77.5 79.2 77.3 75.6	76.8 78.9 80.3 80.6 81.2 76.9 68.0 74.2 76.3 77.0 77.6 79.4 77.4 75.8 80.4 78.5	76.8 77.4 80.0 80.5 80.2 81.3 73.5 69.3 74.8 76.9 77.0 78.0 79.6 76.4 75.6	77.0 78.8 80.7 80.6 81.1 77.8 68.3 73.2 76.0 77.2 77.6 79.1 77.4 75.7 76.9 79.8 78.7
(percent) 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021	77.3 77.6 80.7 80.9 80.2 81.4 69.8 70.5 75.2 77.4 77.1 77.7 79.0 76.4 75.7 78.4 79.8 77.4 76.5	75.2 77.3 78.1 81.2 80.8 80.8 81.0 69.3 70.8 74.9 77.5 77.4 78.3 78.5 76.0 75.4 78.7 79.3 77.7 74.0	75.7 77.1 77.8 81.0 80.8 80.7 68.0 71.5 75.8 76.9 77.6 79.0 78.2 75.4 75.9 79.1 79.2 74.6 76.3	76.1 76.5 78.2 81.0 80.9 81.1 80.1 67.4 71.9 75.5 77.4 77.5 79.0 77.7 75.6 76.7 80.1 78.7 64.5 76.5	76.4 76.5 78.8 81.0 80.7 81.1 79.6 66.6 73.0 75.6 77.4 79.2 77.3 75.4 76.8 79.3 78.8 65.6 77.4 81.1	77.0 76.5 78.2 81.3 80.8 81.2 79.3 66.4 73.4 75.8 77.5 79.4 77.1 75.8 77.0 80.0 78.8 70.1 77.9 80.9	76.8 78.8 80.8 80.6 81.1 79.0 67.2 73.8 76.1 77.3 77.2 79.5 77.6 75.9 80.0 78.3 72.8 78.4	76.5 78.9 80.9 80.8 81.2 77.6 68.0 74.2 76.5 76.9 77.6 79.2 77.5 75.8 76.6 80.6 78.8 73.6 78.6	77.0 79.0 79.1 80.4 81.4 74.0 68.7 74.5 76.4 76.7 78.0 79.4 77.3 75.6 76.8 80.6 78.5 73.6 77.8	77.0 79.7 79.9 80.1 81.0 74.8 68.9 74.4 76.9 76.8 77.8 79.3 76.9 75.6 77.8 80.4 77.8 74.2 79.0	77.5 79.9 80.7 79.9 81.4 73.9 69.3 74.5 76.8 77.1 78.0 79.8 76.4 75.3 78.1 80.5 78.2 74.7 79.8	77.6 80.5 80.9 80.6 81.4 71.8 69.6 75.3 77.1 77.2 78.1 79.7 76.0 75.9 78.3 80.4 77.9 75.8 79.8	75.4 77.2 77.9 80.9 80.8 80.6 81.0 69.1 70.9 75.3 77.4 78.3 78.5 75.9 75.7 78.7 79.5 76.6 75.6	76.5 76.5 78.4 81.1 80.8 81.2 79.7 66.8 72.8 75.6 77.3 77.5 79.2 77.3 75.6 76.8 79.8 78.8 66.7 77.3 81.0	76.8 78.9 80.3 80.6 81.2 76.9 68.0 74.2 76.3 77.0 77.6 79.4 77.4 75.8 80.4 78.5 73.3 78.3	76.8 77.4 80.0 80.5 80.2 81.3 73.5 69.3 74.8 76.9 77.0 78.0 79.6 76.4 75.6 78.1 80.4 78.0 74.9 79.5	77.0 78.8 80.7 80.6 81.1 77.8 68.3 73.2 76.0 77.2 77.6 79.1 77.4 75.7 76.9 79.8 78.7 72.9 77.7 80.6
(percent) 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021	77.3 77.6 80.7 80.9 80.2 81.4 69.8 70.5 75.2 77.4 77.1 77.7 79.0 76.4 75.7 78.4 79.8 77.4 76.5	75.2 77.3 78.1 81.2 80.8 80.8 81.0 69.3 70.8 74.9 77.5 77.4 78.3 78.5 76.0	75.7 77.1 77.8 81.0 80.8 80.7 68.0 71.5 75.8 76.9 77.6 79.0 78.2 75.4 75.9 79.1 79.2 74.6 76.3	76.1 76.5 78.2 81.0 80.9 81.1 80.1 67.4 71.9 75.5 77.4 77.5 79.0 77.7 75.6	76.4 76.5 78.8 81.0 80.7 81.1 79.6 66.6 73.0 75.6 77.4 79.2 77.3 75.4 76.8 79.3 78.8 65.6 77.4	77.0 76.5 78.2 81.3 80.8 81.2 79.3 66.4 73.4 75.8 77.5 79.4 77.1 75.8 77.0 80.0 78.8 70.1	76.8 78.8 80.8 80.6 81.1 79.0 67.2 73.8 76.1 77.3 77.2 79.5 77.6 75.9 80.0 78.3 72.8 78.4	76.5 78.9 80.9 80.8 81.2 77.6 68.0 74.2 76.5 76.9 77.6 79.2 77.5 80.6 78.8 73.6	77.0 79.0 79.1 80.4 81.4 74.0 68.7 74.5 76.4 76.7 78.0 79.4 77.3 75.6 76.8 80.6 78.5 73.6 77.8	77.0 79.7 79.9 80.1 81.0 74.8 68.9 74.4 76.9 76.8 77.8 79.3 76.9 75.6 77.8 80.4 77.8 74.9	77.5 79.9 80.7 79.9 81.4 73.9 69.3 74.5 76.8 77.1 78.0 79.8 76.4 75.3 78.1 80.5 78.2 74.7	77.6 80.5 80.9 80.6 81.4 71.8 69.6 75.3 77.1 77.2 78.1 79.7 76.0 75.9 78.3 80.4 77.9 75.8 79.8	75.4 77.2 77.9 80.9 80.8 80.6 81.0 69.1 70.9 75.3 77.4 78.3 77.4 78.5 75.9 75.7 78.7 79.5 76.6	76.5 76.5 78.4 81.1 80.8 81.2 79.7 66.8 72.8 75.6 77.3 77.5 79.2 77.3 75.6 76.8 79.8 78.8 66.7 77.3	76.8 78.9 80.3 80.6 81.2 76.9 68.0 74.2 76.3 77.0 77.6 79.4 77.4 75.8 80.4 78.3 78.3	76.8 77.4 80.0 80.5 80.2 81.3 73.5 69.3 74.8 76.9 77.0 78.0 79.6 76.4 75.6 78.1 80.4 78.0 74.9	77.0 78.8 80.7 80.6 81.1 77.8 68.3 73.2 76.0 77.2 77.6 79.1 77.4 75.7 76.9 79.8 78.7 72.9 77.7

^{1.} Selected high-technology industries are computers, communications equipment, and semiconductors and related electronic components.

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

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

Seasonally adjusted Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
IP (percent change) ³ 2002	.8	2	.7	.2	.5	1.0	2	.0	.0	4	.4	7	3.3	5.4	2.6	-1.1	.4
2003	.7	3 .7	.0	9	1	.3 7	.1	7	.7	1	.8	2 .7	.8	-4.2 3.2	.2 3.8	2.7	.0
2004 2005	2 .5	.7	1 6	.4	.7	/	.9 5	.4	1 -1.4	.9 1.4	1 .9	.0	1.5	1.4	-2.1	4.9	2.0
2006	.8	4	1	.3	4	.2	4	.6	1	5	.1	1.5	3.2	2	.0	.6	1.5
2007	4	.2	.6	.4	.0	.5	1	4	.1	4	.3	.0	3.7	4.4	.1	-1.0	1.8
2008 2009	3 -3.3	9 1	6 -2.0	-1.2 8	7 -1.1	8 3	-1.0 1.6	-1.3 1.1	-3.5 1.0	4 .0	-2.3 .9	-3.2 2	-3.9 -24.8	-9.9 -11.5	-14.1 8.8	-20.8 6.5	-5.9 -13.9
2010	.9	3	1.2	.8	1.3	.0	.5	.1	.0	.0	.0	.4	5.1	9.6	3.8	.9	5.1
2011	.0	.1	.7	6	.0	.1	.6	.4	.3	.6	2	.6	2.2	3	4.1	3.9	2.5
2012	.8	.3	6	.4	4	.2	2	1	3	3	.6	.7	4.9	1	-1.5	.6	2.3
2013 2014	3 -1.1	.4 .9	1 .8	4 1	.3	.2	9 .4	.9 6	.1	.1 1	.0	2 2	2.5	4 4.3	4 1.2	1.4	.5
2015	6	8	.4	1	.0	4	.8	3	3	2	2	3	-3.6	8	.8	-2.8	7
2016	.4	4	1	2	1	.2	.0	4	.1	.1	1	.0	9	-1.4	4	1	-1.0
2017 2018	.2 4	1 .9	4 1	1.1	2 9	.1 .6	4 .0	2 .2	.0	1.1 5	.0 2	3 .3	.0	2.7 2.2	-2.2 1.2	3.8 -1.7	.3 1.1
2019	-1.0	6	3	7	.1	.5	8	.7	7	9	.8	.1	-5.1	-3.3	9	-2.2	-2.2
2020	3	.2	-4.8	-15.8	4.6	8.0	3.6	1.6	.0	.8	.6	.7	-5.4	-44.5	55.6	7.9	-6.8
2021	1.0	-4.1	3.2	.0	1.1	.1	.9	3	-1.0	1.4	.9	.0	7	5.6	3.5	5.1	4.8
2022 2023	6 1.9	.9 1	1.0	.0	3 1	4 6	.0	.2	.2	.1 8	7 .5	-1.8 1	2.5	2.4	3 6	-3.0 -1.7	2.6
2023	-1.3	1.4	.2	7	.8	2	8	.9	.1	0	.5	1	-1.0	1.2	0	-1./	/
IP (2017=100)																	
2022	98.0	98.8	99.8	99.7	99.5	99.1	99.1	99.4	99.6	99.7	99.0	97.2	98.9	99.5	99.4	98.6	99.1
2023 2024	99.0 96.7	98.9 98.1	98.2 98.3	98.9 97.6	98.7 98.3	98.1 98.2	98.3 97.4	98.4 98.3	98.5	97.7	98.2	98.0	98.7 97.7	98.5 98.0	98.4	98.0	98.4
Capacity (percent of 2017 output)																	
2022 2023 2024	124.7 125.4 126.7	124.7 125.5 126.8	124.7 125.6 126.9	124.8 125.7 127.0	124.8 125.8 127.1	124.8 125.9 127.2	124.9 126.0 127.3	124.9 126.1 127.4	125.0 126.2	125.1 126.4	125.2 126.5	125.3 126.6	124.7 125.5 126.8	124.8 125.8 127.1	124.9 126.1	125.2 126.5	124.9 126.0
Utilization (percent)																	
2002	73.5	73.3	73.8	74.0	74.4	75.2	75.1	75.1	75.1	74.9	75.3	74.8	73.5	74.5	75.1	75.0	74.5
2003 2004	75.4 75.5	75.2 76.1	75.2 76.1	74.6 76.4	74.5 77.0	74.7 76.5	74.9 77.3	74.4 77.6	75.0 77.6	75.0 78.3	75.7 78.3	75.6 78.8	75.3 75.9	74.6 76.7	74.8 77.5	75.4 78.5	75.0 77.1
2005	79.2	79.7	79.2	79.3	79.4	79.4	78.9	79.1	77.9	78.8	79.4	79.2	79.3	79.4	78.6	79.1	79.1
2006	79.7	79.3	79.1	79.2	78.8	78.8	78.4	78.8	78.6	78.1	78.1	79.1	79.4	78.9	78.6	78.4	78.8
2007	78.7	78.8	79.2	79.5	79.4	79.7	79.6	79.2	79.3	78.9	79.2	79.1	78.9	79.5	79.4	79.1	79.2
2008 2009	78.9 65.4	78.2 65.4	77.7 64.2	76.8 63.7	76.3 63.1	75.8 63.0	75.0 64.2	74.1 65.0	71.5 65.8	71.3 65.9	69.7 66.7	67.6 66.7	78.3 65.0	76.3 63.3	73.6 65.0	69.5 66.4	74.4 64.9
2010	67.4	67.3	68.3	69.0	70.0	70.1	70.6	70.8	71.0	71.2	71.4	71.8	67.7	69.7	70.8	71.4	69.9
2011	71.9	72.1	72.7	72.4	72.5	72.6	73.1	73.4	73.6	74.1	73.9	74.4	72.2	72.5	73.4	74.1	73.1
2012	74.9	75.2	74.7	75.0	74.6	74.8	74.5	74.4	74.2	74.0	74.4	74.9	74.9	74.8	74.4	74.4	74.6
2013 2014	74.7 74.4	75.0 75.2	74.9 75.8	74.6 75.9	74.9 76.1	75.0 76.4	74.4 76.8	75.1 76.4	75.2 76.5	75.3 76.5	75.3 77.1	75.2 77.0	74.9 75.1	74.9 76.1	74.9 76.6	75.3 76.8	75.0 76.2
2015	76.6	76.1	76.5	76.5	76.6	76.4	77.0	76.8	76.6	76.5	76.4	76.1	76.4	76.5	76.8	76.3	76.5
2016	76.4	76.1	76.0	75.8	75.7	75.9	75.9	75.6	75.7	75.7	75.7	75.8	76.1	75.8	75.7	75.7	75.8
2017	75.9	75.9	75.7	76.6	76.5	76.7	76.5	76.4	76.5	77.4	77.6	77.5	75.9	76.6	76.5	77.5	76.6
2018 2019	77.3 78.0	78.1 77.6	78.1 77.4	78.7 77.0	78.0 77.0	78.6 77.4	78.6 76.9	78.9 77.4	78.9 76.9	78.6 76.3	78.4 77.0	78.8 77.1	77.8 77.7	78.4 77.1	78.8 77.1	78.6 76.8	78.4 77.2
2020	77.0	77.2	73.6	62.0	64.9	70.2	72.8	74.0	74.1	74.8	75.3	76.0	75.9	65.7	73.7	75.4	72.7
2021	76.8	73.7	76.1	76.1	77.0	77.2	78.0	77.8	77.1	78.2	79.0	79.0	75.5	76.8	77.6	78.7	77.2
2022	78.5	79.2	80.0	80.0	79.7	79.4	79.4 78.0	79.5	79.7	79.7	79.1	77.6	79.3	79.7	79.5	78.8	79.3
2023 2024	78.9 76.4	78.8 77.4	78.2 77.5	78.6 76.8	78.5 77.4	77.9 77.2	78.0 76.5	78.0 77.1	78.0	77.3	77.6	77.5	78.7 77.1	78.3 77.1	78.0	77.5	78.1

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 Annualized

		alized			201-	100								
	cha	nge			2017:	=100					Percent	t change	;	
	2024		2024						2024					
Item	Q1	Q2	Mar.	Apr.	May	June	July	Aug.	Mar.	Apr.	May	June	July	Aug.
Total index														
85th percentile	-1.76	3.34	102.52	102.50	103.33	103.47	102.65	103.53	20	02	.85	.22	64	1.13
Current estimate	-1.76	2.92	102.52	102.45	103.22	103.28	102.31	103.14	20	07	.75	.06	94	.81
15th percentile	-1.76	2.49	102.52	102.40	103.11	103.10	102.02	102.71	20	12	.65	06	-1.19	.43
Manufacturing (SIC)														
85th percentile	89	2.07	99.51	98.93	99.76	99.64	98.99	100.02	.19	58	.87	08	54	1.22
Current estimate	89	1.59	99.51	98.87	99.64	99.43	98.71	99.64	.19	64	.78	21	73	.94
15th percentile	89	1.07	99.51	98.81	99.52	99.22	98.41	99.11	.19	70	.67	35	91	.62
Mining														
85th percentile	-5.48	5.04	119.60	120.04	119.58	120.18	120.42	121.61	58	.37	26	.75	.49	1.76
Current estimate	-5.48	4.11	119.60	119.90	119.26	119.64	119.11	120.08	58	.25	54	.32	45	.82
15th percentile	-5.48	3.12	119.60	119.74	118.88	119.08	117.83	118.37	58	.12	82	05	-1.19	17
Electric and gas utilities														
85th percentile	-3.00	12.11	101.03	104.68	107.04	109.19	107.22	107.29	-2.45	3.62	2.27	2.13	-1.22	1.85
Current estimate	-3.00	10.94	101.03	104.67	106.97	108.63	105.38	105.33	-2.45	3.60	2.20	1.55	-3.00	04
15th percentile	-3.00	10.51	101.03	104.66	106.89	108.42	104.17	104.12	-2.45	3.59	2.10	1.32	-4.52	-1.81

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

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 77 percent of the source data (in value-added terms) are available; the fraction of available source data increases to 85 percent for estimates in the second month that the estimate is published, 94 percent in the third month, 98 percent in the fourth month, 99 percent in the fifth month, and 99 percent in the sixth month. Data availability by data type in 2023 is summarized in the table below:

Availability of Monthly IP Data in Publication Window (Percent of value added in 2023; the numbers may not sum because of rounding.)

	Month of estimate											
Type of data	1st	2nd	3rd	4th	5th	6th						
Physical product	33	41	51	54	55	55						
Production-worker hours	44	44	44	44	44	44						
IP data received	77	85	94	98	99	99						
IP data estimated	23	15	6	2	1	1						

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 (33 percent out of a total of 55 percent). Of the 33 percent, about two-thirds (23 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 March 2024; for other series, the factors were estimated with data through March 2024, where available. 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 0.30 percent during the 1987–2023 period. The average revision to the percent change in total IP, without regard to sign, from the first to the fourth estimates was 0.24 percentage point during the 1987–2023 period. In most cases (about 85 percent), the direction of the change in output indicated by the first estimate for a given month is the same as that shown by the fourth estimate.

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

CAPACITY UTILIZATION

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

Coverage. Capacity indexes are constructed for 89 detailed industries (71 in manufacturing, 16 in mining, and 2 in utilities), which mostly correspond to industries at the three- and four-digit North American Industry Classification System, or NAICS, level. Estimates of capacity and utilization are available for a variety of groups, including durable and nondurable manufacturing, total manufacturing, mining, utilities, and total industry. Manufacturing consists of those industries included in the NAICS definition of manufacturing plus those industries—logging and newspaper, periodical, book, and directory publishing—that have traditionally been considered to be manufacturing and included in the industrial sector. Also, special aggregates are available, such as high-technology industries and manufacturing excluding high-technology industries.

Source Data. The monthly rates of capacity utilization are designed to be consistent with both the monthly data on production and the periodically available data on capacity and utilization. Because there is no direct monthly information on overall industrial capacity or utilization rates, the Federal Reserve first estimates annual capacity indexes from the source data. Capacity data reported in physical units from government sources (primarily from the U.S. Geological Survey and the Department of Energy's Energy Information Administration) and trade sources are available for portions of several industries in manufacturing (for example, paper, industrial chemicals, petroleum refining, motor vehicles), as well as for electric utilities and mining; these industries represent about 26 percent of total industrial capacity. When physical product data are unavailable for manufacturing industries, capacity indexes are based on responses to the Bureau of the Census's Quarterly Survey of Plant Capacity (QSPC); these industries account for about 64 percent of total industry capacity. In the absence of utilization data for a few mining and petroleum series, capacity is based on trends through peaks in production (roughly 10 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 1972–2023 period, the average total industry utilization rate was 79.7 percent; for manufacturing, the average factory operating rate was 78.3 percent. Industrial plants usually operate at capacity utilization rates that are well below 100 percent: none of the broad aggregates has ever reached 100 percent. For total manufacturing, utilization rates have exceeded 90 percent only in wartime. The highs and lows in capacity utilization are specific to each series and do not all occur in the same month.

REFERENCES AND RELEASE DATES

References. The release for the annual revision that was published on June 28, 2024, 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 will be issued on the following dates. The monthly releases are issued at 9:15 a.m. The annual revision is issued at noon.

2024: January 17, February 15, March 15, April 16, May 16, June 18, June 28 (annual revision), July 17, August 15, September 17, October 17, November 15, December 17.

2025: January 17, February 14, March 18, April 16, May 15, June 17, July 16, August 15, September 16, October 17, November 18, and December 16.

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