FEDERAL RESERVE statistical release



G.17 (419)

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INDUSTRIAL PRODUCTION AND CAPACITY UTILIZATION

Industrial production (IP) fell 0.2 percent in May after increasing 0.1 percent in April. Manufacturing output ticked up 0.1 percent in May, driven by a gain of 4.9 percent in the index for motor vehicles and parts; the index for manufacturing excluding motor vehicles and parts fell 0.3 percent. The index for mining increased

(over)

Industrial Production and Capacity Utilization: Summary

Seasonally adjusted

	2024	2025					2024	2025					May '24 to
Industrial production	Dec.	Jan. ^r	Feb. ^r	Mar. ^r	Apr.r	May ^p	Dec.	Jan. ^r	Feb. ^r	Mar. ^r	Apr.r	May ^p	May '25
Total index	103.0	102.9	104.0	103.7	103.8	103.6	1.1	1	1.0	2	.1	2	.6
Previous estimates	103.1	103.2	104.1	103.9	103.9		1.1	.1	.9	3	.0		
Major market groups													
Final Products	99.9	100.2	101.5	101.3	101.0	101.0	1.1	.2	1.3	2	2	.0	.2
Consumer goods	101.7	101.6	102.8	101.8	101.5	101.3	.8	.0	1.1	9	3	2	5
Business equipment	91.4	92.5	94.5	96.1	96.2	97.0	2.2	1.2	2.1	1.7	.2	.8	2.7
Nonindustrial supplies	101.7	101.9	102.6	102.7	102.3	101.6	1.0	.2	.7	.1	4	7	.5
Construction	101.5	101.0	102.6	103.8	102.6	101.8	1.3	5	1.6	1.2	-1.2	7	1.6
Materials	106.2	105.6	106.6	106.2	106.7	106.5	1.1	5	.9	3	.5	2	.9
Major industry groups													
Manufacturing (see note below)	98.9	98.6	99.8	100.4	99.9	100.0	.4	4	1.2	.6	5	.1	.5
Previous estimates	98.9	98.9	100.0	100.4	100.0		.4	.0	1.1	.4	4		
Mining	120.7	117.9	119.7	121.9	121.5	121.7	1.9	-2.3	1.6	1.8	3	.1	2.9
Utilities	108.8	113.7	112.8	103.4	108.5	105.3	4.6	4.5	9	-8.3	4.9	-2.9	-1.6
					D		٠,						Capacity
	A	1988-	1990-	1994-	Perce	nt of capa	acity						growth
	Average		1990-		2000	2024	2024	2025					M 2044-
Cittiliti	1972-	89		95	2009	2024	2024	2025	E-1-1	M I	Α Γ	N / D	May '24 to
Capacity utilization	2024	high	low	high	low	May	Dec.	Jan. ^r	Feb. ^r	Mar. ^r	Apr. ^r	May ^p	May '25
Total industry	79.6	85.2	78.7	84.8	66.6	78.1	77.5	77.3	78.0	77.7	77.7	77.4	1.4
Previous estimates	79.0	03.2	70.7	04.0	00.0	70.1	77.5	77.5	78.1	77.8	77.7	77.4	1.4
1 revious estimates							11.5	11.5	70.1	77.0	//./		
Manufacturing (see note below)	78.2	85.5	77.1	84.4	63.5	77.3	76.3	76.0	76.8	77.2	76.7	76.7	1.3
Previous estimates	70.2	03.3	77.1	01.1	03.3	17.5	76.3	76.2	77.0	77.2	76.8	70.7	1.5
Mining	86.5	86.3	84.3	88.6	78.9	88.5	90.6	88.5	89.8	91.4	91.0	91.1	1
Utilities	84.2	93.2	84.7	93.2	78.1	72.2	71.9	74.9	74.0	67.7	70.8	68.5	3.7
omics	04.2	75.2	04.7	75.2	70.1	12.2	/1./	77.7	74.0	07.7	70.0	00.5	3.7
Stage-of-process groups													
Crude	85.6	87.9	84.9	90.0	77.0	86.7	88.9	87.0	87.7	88.5	88.6	88.5	.2
CIGGO													
Primary and semifinished													
Primary and semifinished Finished	80.1 76.7	86.5 83.3	77.6 77.6	87.5 80.4	63.7 66.2	76.9 75.8	76.3 74.1	76.6 74.1	76.9 75.2	75.6 75.8	76.0 75.2	75.1 75.6	1.6 1.7

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.

0.1 percent, and the index for utilities decreased 2.9 percent. At 103.6 percent of its 2017 average, total IP in May was 0.6 percent above its year-earlier level. Capacity utilization moved down to 77.4 percent, a rate that is 2.2 percentage points below its long-run (1972–2024) average.

Market Groups

The major market groups posted mixed results in May. Most durable consumer goods categories experienced growth, including a 3.9 percent increase in the index for automotive products. The index for nondurable consumer goods fell 0.8 percent, in large part because of a 3.2 percent decline in the index for energy nondurable consumer goods; the index for non-energy nondurable consumer goods edged up. The index for business equipment rose 0.8 percent, supported by a 6.4 percent increase in the output of transit equipment, while the indexes for industrial and other equipment and for information processing equipment both moved down. Declines were posted by defense and space equipment, construction supplies, business supplies, and materials.

Industry Groups

Manufacturing output ticked up 0.1 percent in May after falling 0.5 percent in April. In May, durable goods production gained 0.4 percent, with mixed results among its subcategories. The output of motor vehicles and parts increased 4.9 percent, and the output of aerospace and miscellaneous transportation equipment increased 1.1 percent. Fabricated metal products, machinery, and nonmetallic mineral products all posted declines of at least 1 percent. The production of nondurable manufacturing moved down 0.2 percent, with declines in the indexes for printing and support, for petroleum and coal products, and for food, beverage, and tobacco products. The output of other manufacturing (publishing and logging) fell 0.8 percent.

Mining output inched up 0.1 percent in May after declining 0.3 percent in April. In May, the index for utilities fell 2.9 percent, with a 3.6 percent drop in electric utilities output more than offsetting a 2.7 percent rise in the output of natural gas utilities.

Capacity utilization for manufacturing was unchanged in May at 76.7 percent, a rate that is 1.5 percentage points below its long-run (1972–2024) average. The operating rate for mining ticked up 0.1 percentage point to 91.1 percent, and the operating rate for utilities declined 2.3 percentage points to 68.5 percent. The rate for mining was 4.6 percentage points above its long-run average, while the rate for utilities remained substantially below its long-run average.

Tables

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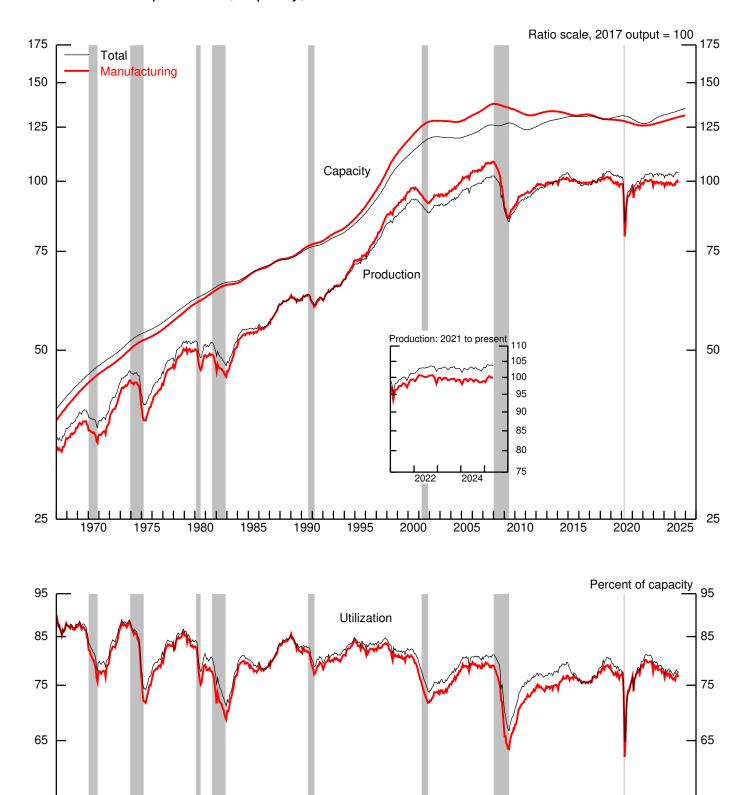
Further detail is available on the Board's website (www.federalreserve.gov/releases/G17/).

Revision of Industrial Production and Capacity Utilization

The Federal Reserve Board tentatively plans to issue its annual revision to the indexes of industrial production (IP) and the related measures of capacity utilization in the fourth quarter of 2025. Series will be newly benchmarked using information from the 2022 Economic Census. The weights for market-group splits of the industry-level indexes will be updated with information from the 2017 benchmark input-output accounts from the U.S. Bureau of Economic Analysis. Other annual data, including information on the mining of metallic and nonmetallic minerals (except fuels), will be incorporated. The updated IP indexes will include revisions to the monthly indicator (either product data or input data) and to seasonal factors for each industry. In addition, the estimation methods for some series may be changed. Any modifications to the methods for estimating the output of an industry will affect the index from 1972 to the present.

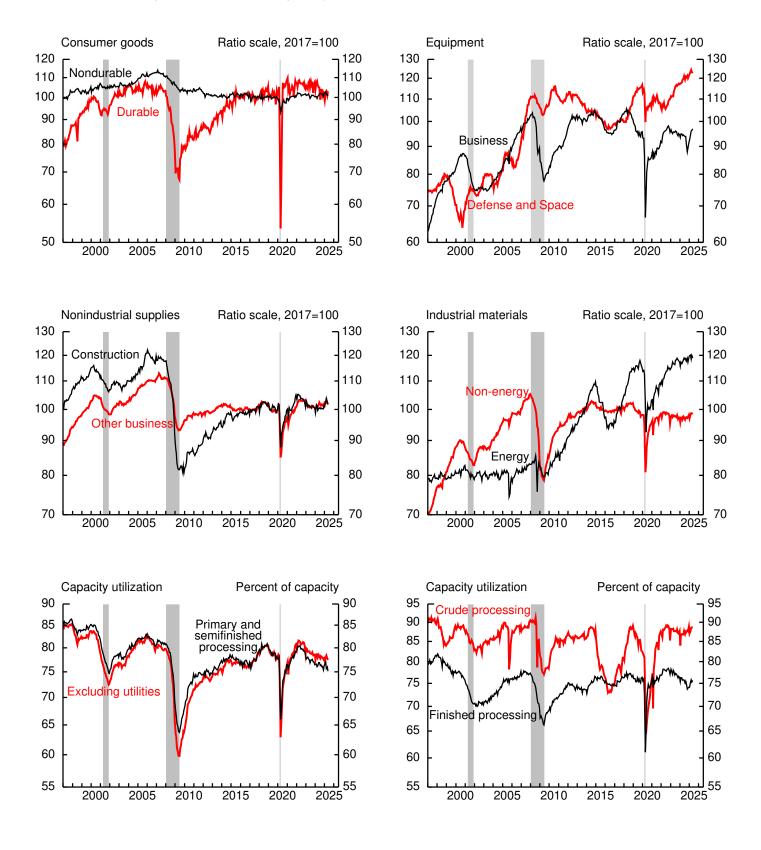
Capacity and capacity utilization will be revised to incorporate data for manufacturing through the fourth quarter of 2024 from the U.S. Census Bureau's Quarterly Survey of Plant Capacity Utilization, along with new data on capacity from the U.S. Geological Survey, the U.S. Department of Energy, and other organizations.

1. Industrial production, capacity, and utilization



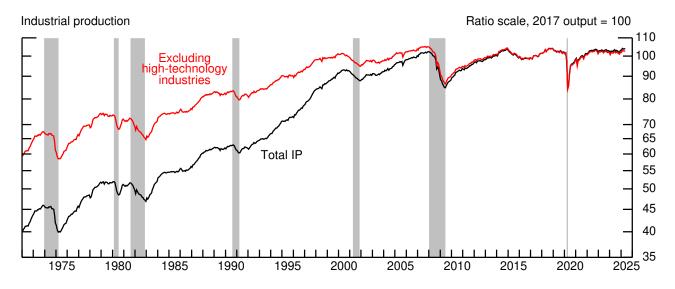
Note: The shaded areas are periods of business recession as defined by the National Bureau of Economic Research (NBER).

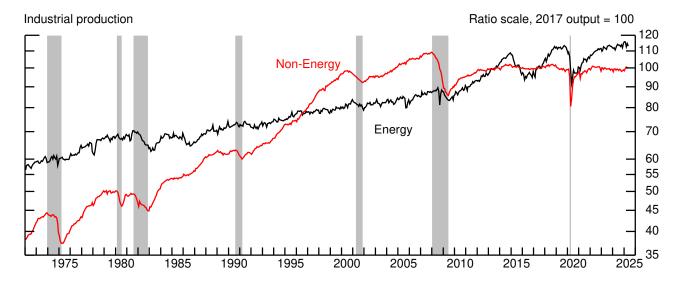
2. Industrial production and capacity utilization

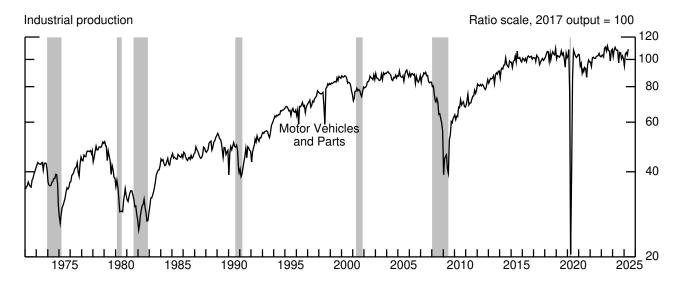


Note: The shaded areas are periods of business recession as defined by the National Bureau of Economic Research (NBER).

3. Industrial production 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

Percent change, seasonally adjusted				rth quart ırth quai			nnual ra	to			Month	ıly rate			May '24
Item		2024	100	ırııı quai	iei	2024	IIIIuai ia	2025	2024	2025	MOHI	ny rate			to
		proportion ¹	2022	2023	2024	Q3	Q4 ^r	Q1 ^r	Dec. ^r	Jan. ^r	Feb. ^r	Mar. ^r	Apr.r	May ^p	May '25
Total IP		100.00	1.8	1	3	6	-1.2	4.6	1.1	1	1.0	2	.1	2	.6
MARKET GROUPS															
Final products and nonindustrial supplie	s	54.44	1.9	-1.0	9	9	-3.3	6.5	1.1	.2	1.2	2	3	2	.3
Consumer goods		27.76	.6	6	5	2	-2.3	2.9	.8	.0	1.1	9	3	2	5
Durable Automotive products		5.97 3.21	-1.3	.2 1.6	-4.1 -6.6	-11.5 -17.9	-3.6 -8.5	.8 2.1	-1.5 -2.9	-2.1 -4.5	4.2 9.1	.4 1.5	-2.0 -2.9	2.0	-1.9 -1.4
Home electronics		.14	4	20.1	6.2	4.1	7.4	6.8	2.6	1.7	7	-1.4	.6	2.1	5.0
Appliances, furniture, carpeting		.94	-9.0	-4.6	-2.5	2.6	9.3	-6.6	.7	.5	-3.5	-3.2	5	.8	5
Miscellaneous goods		1.68	-1.0	-1.3	-1.1	-6.6	-1.7	2.5	6	.5	.5	.4	-1.5	8	-3.9
Nondurable		21.79	1.2	8	.5	3.2	-1.9	3.5	1.5	.5	.3	-1.3	.2	8	1
Non-energy		16.19	.6	3	.3	4.3	-2.6	2.0	3	1	.9	.7	8	.1	.9
Foods and tobacco		9.69	4	-1.4	-2.1	7	-2.9	.9	.6	8	.8	.4	7	3	-1.1
Clothing Chemical products		.15 5.20	3.2	-10.0 3.1	-9.5 6.5	-13.0 17.3	-16.6 -1.7	11.8 4.9	.9 -1.7	2.1 1.3	.4 1.2	1.1 1.3	-2.8 8	2.1	-4.4 6.1
Paper products		.76	-4.2	-6.0	-4.3	-4.5	-5.9	-1.3	-1.7	1.0	1.4	.6	-2.6	3	-5.1
Energy		5.60	2.5	-2.0	1.1	.0	.1	8.1	6.7	2.1	-1.3	-6.7	3.2	-3.2	-3.0
Ellergy		5.00	2.0	2.0				0.1	0.7		1.0	0.7	J.2	5.2	5.0
Business equipment		8.55	6.8	-2.4	-5.2	-5.7	-13.3	22.8	2.2	1.2	2.1	1.7	.2	.8	2.7
Transit		1.61	19.1	4	-22.7	-23.5	-53.7	156.5	11.9	7.2	9.3	4.7	.2	6.4	11.6
Information processing		1.78	-1.0	.7	3.5	5.5	4.0	6.1	.8	.5	.1	1.4	-1.5	4	2.7
Industrial and other		5.16	6.1	-4.1	-2.3	-2.8	-2.5	4.1	.3	3	.6	.8	.8	7	2
Defense and space equipment		1.77	1.7	6.8	3.4	.6	2.3	8.1	1.0	.6	1.2	.7	9	4	2.4
Construction supplies		5.23	-1.7	-1.4	.1	.5	1.6	7.3	1.3	5	1.6	1.2	-1.2	7	1.6
Business supplies		10.51	2.2	-1.6	.6	1	7	4.1	.8	.6	.3	5	.0	6	1
Materials		45.56	1.8	1.0	.5	2	1.4	2.4	1.1	5	.9	3	.5	2	.9
Non-energy Durable		27.21 16.74	9 1.5	1 4	.4 5	4 -1.3	1.9 6	1.6 3.9	.7 .6	-1.2 8	1.3 1.7	.4 .6	1 .2	.2 .2	1.3 1.2
Consumer parts		2.88	3.6	3.9	-4.1	-11.2	-4.2	-3.0	-2.2	-2.8	4.7	.0	-1.6	2.7	-2.8
Equipment parts		4.68	3.2	1	3.8	7.5	1.0	8.8	1.4	.7	.8	.4	.9	4	4.7
Other		9.19	.1	-1.9	-1.4	-2.3	3	3.6	1.2	-1.1	1.4	.9	.4	3	.7
Nondurable		10.47	-4.4	.4	1.8	1.0	5.9	-2.0	.8	-1.8	.6	.2	5	.3	1.3
Textile		.30	-7.9	-6.9	2.9	9.1	-10.8	4.5	.9	.3	1.0	2	9	1	9
Paper		1.49	-4.7	-5.2	2.7	.8	.5	1.5	.9	1	.0	.3	-1.2	.3	.5
Chemical Energy		5.41 18.35	-6.3 5.3	3.5 2.7	3.2	.5	14.1 .7	-5.1 3.5	.8 1.6	-3.6 .5	1.4	.5 -1.5	8 1.3	.3 9	2.1
INDUSTRY GROUPS															
Manufacturing		74.78	.5	4	5	8	-1.7	3.9	.4	4	1.2	.6	5	.1	.5
Manufacturing (NAICS)	31–33	73.29	.6	3	4	7	-1.4	3.9	.5	4	1.2	.6	5	.1	.6
Durable manufacturing	221	36.99	2.3	4	-1.6	-3.1	-3.7	7.8	.5	1	1.7	.7	4	.4	.9
Wood products Nonmetallic mineral products	321 327	1.63 2.30	-4.5 4.4	-1.4 -3.0	1.8 -2.6	4.5	7.0 4.2	1 6.9	-2.4	6 1.3	2.7	-1.2 .9	.7 -2.0	.9 -1.6	4.1
Primary metals	331	2.69	-5.2	1.9	-2.0	.6	-5.2	8.3	2.4	.6	3	.7	6	.2	-1.5
Fabricated metal products	332	6.14	1.9	-1.8	-1.6	-5.4	-2.4	.1	1.1	8	.3	.5	1.1	-1.2	-2.2
Machinery	333	5.69	3.4	-3.6	6	2.4	5	6.7	4	.8	.0	1.0	1	-1.0	1.0
Computer and electronic products	334	4.43	.6	2.9	4.6	5.1	4.3	9.9	.8	1.6	.2	.7	.2	2	4.8
Electrical equip., appliances,	225	2.10	2.7	1.2	26	12.5	2.1	1.0	1 1	0	1.2	1.0	1.0	0	2.4
and components Motor vehicles and parts	335 3361–3	2.19 5.36	2.7	-1.2 1.6	2.6 -3.5	12.5	-3.1 -6.2	1.0	1.1	8 -5.5	1.3	-1.0 1.4	-1.0 -2.3	.9 4.9	2.4
Aerospace and miscellaneous	3301–3	3.30	3.0	1.0	-3.3	-17.3	-0.2	2.1	-2.0	-5.5	10.1	1.4	-2.3	4.7	.9
transportation equipment	3364–9	3.01	9.7	3.0	-9.9	-7.9	-29.2	65.6	8.0	6.0	1.6	1.9	.4	1.1	5.7
Furniture and related products	337	.96	-3.5	-10.5	-3.6	-4.7	-5.6	-2.9	-1.0	.6	-1.3	6	1.1	.9	-1.2
Miscellaneous	339	2.59	3.6	.7	-4.5	-9.0	.8	-1.1	.0	6	.1	.3	-1.2	4	-3.9
Nondymoble manufacturing		26.20	1 1	1	0	1.0	0	2	4	7		=	6	2	4
Nondurable manufacturing Food, beverage, and tobacco products	311,2	36.29 12.06	-1.1	1 -1.4	.9 -1.8	1.9 7	.9 -2.4	.2 1.1	.4 .7	7 5	.6 .3	.5 .3	6 5	2 3	.4 9
Textile and product mills	313,4	.52	-9.6	-6.5	6	-2.7	-3.9	1.1	1	.0	.7	-1.1	.3	3	-1.6
Apparel and leather	315,6	.17	.2	-8.8	-8.6	-11.7	-15.2	11.1	1.2	1.4	.8	1.1	-3.0	2.2	-3.7
Paper	322	2.21	-6.0	-3.3	1.4	2.0	1.3	-3.1	5	.5	9	3	8	.6	5
Printing and support	323	1.35	1.2	-10.2	3.9	2.9	-6.0	5.1	1.4	.7	.3	-1.0	.3	-1.7	9
Petroleum and coal products	324	4.20	-2.6	3.9	1.9	3.7	6.5	-5.2	2.4	-1.7	1	.0	-1.2	-1.4	-2.7
Chemicals Plastics and rubber products	325 326	12.11 3.67	-1.3	2.1	4.8 -4.2	6.9	6.6 -8.0	1.0	1 8	-1.0 -1.1	1.2 1.6	1.0	6 5	.1	4.1 -2.4
							-13.2		-2.3	1.9					
Other manufacturing (non-NAICS)	1133,5111	1.50	-1.6	-8.1	-6.0	-4.3		3.4			3.1	7	-3.5	8	-7.4
Mining Utilities	21 2211,2	14.37 10.85	6.2	2.6 -1.2	5 1.4	.9 -1.4	.9 6	.9 14.5	1.9	-2.3 4.5	1.6 9	1.8 -8.3	3 4.9	.1 -2.9	2.9
Electric	2211,2	9.54	2.6	-1.2	2.0	-4.6	3.0	11.9	2.9	4.5	9	-6.7	4.9	-3.6	-2.3
Natural gas	2212	1.31	13.3	-8.7	-2.6	25.3	-23.2	35.1	18.1	4.7	6	-18.7	5.5	2.7	4.1

r Revised. p Preliminary.

^{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/G17/20250617/default.sup.htm). Under market groups, in the products category, miscellaneous consumer nondurables, oil and gas well drilling, and manufactured homes are not shown separately; in the nondurable materials category, containers and miscellaneous nondurable materials are not shown separately.

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

ercent change, seasonally adjusted				rth quart urth quai		Δ	nnual rat	·e			Month	nly rate			May '24
Item		2024				2024		2025	2024	2025					to
		proportion	2022	2023	2024	Q3	Q4 ^r	Q1 ^r	Dec. ^r	Jan. ^r	Feb. ^r	Mar. ^r	Apr.r	May ^p	May '25
Total industry		100.00	1.8	1	3	6	-1.2	4.6	1.1	1	1.0	2	.1	2	.6
Energy		27.31	5.1	1.3	.8	.5	.7	4.1	2.6	.8	2	-2.7	1.8	-1.4	2
Consumer products		5.60	2.5	-2.0	1.1	.0	.1	8.1	6.7	2.1	-1.3	-6.7	3.2	-3.2	-3.0
Commercial products	010111	2.82	6.3	.4	3.6	3.4	3.8	2.3	2.2	.9	-1.0	-2.9	2.6	5	2.5
Oil and gas well drilling Converted fuel	213111	.54	21.4	-7.9	-9.2	.1	-11.5	-6.6	3	-1.0	.6	.9	-1.7	-2.6	-7.2
Primary energy		5.30 13.05	3.3 6.0	2.4 2.9	1.8	.8 .0	1.9 .3	8.9 1.3	2.2 1.4	3.8 9	.5 .2	-8.4 1.5	5.2 2	-2.1 4	-1.5 1.3
Non-energy		72.69	.5	6	7	-1.0	-1.9	4.8	.5	5	1.5	.7	6	.2	.9
30															
Selected high-technology industries		1.89	6.5	7.8	7.5	5.8	6.9	17.3	1.2	3.4	.7	5	2.8	.4	9.8
Computers and peripheral equipment	3341	.23	8.2	6.9	8.4	9.9	17.7	17.1	4.4	1.8	.7	-1.3	4	2.6	11.0
Communications equipment	3342	.41	10.4	14.3	6.5	4.3	6.1	5.2	.3	.7	.5	.5	.6	.4	5.3
Semiconductors and related electronic components	3344	1.26	5.0	5.9	7.7	5.6	5.4	21.4	.8	4.5	.8	7	4.0	.1	11.0
•															
Excluding selected high-technology industries		70.79	.3	8	9	-1.2	-2.1	4.5	.5	6	1.5	.7	6	.2	.7
Motor vehicles and parts	3361-3	5.36	5.8	1.6	-3.5	-17.3	-6.2	2.1	-2.6	-5.5	10.1	1.4	-2.3	4.9	.9
Motor vehicles	3361	2.54	11.0	1.3	-4.1	-21.3	-8.4	2.7	-4.1	-8.0	15.5	1.9	-3.4	7.7	3.1
Motor vehicle parts	3363	2.30	7.3	2.7	6	-12.0	-2.1	-3.8	-2.1	-3.9	5.9	.2	-1.2	3.5	5
Excluding motor vehicles and parts		65.43	1	-1.0	7	.3	-1.8	4.7	.7	2	.9	.7	5	2	.6
Consumer goods		19.37	1	6	2	2.5	-2.1	1.6	3	.0	.7	.5	9	.0	.3
Business equipment		7.28	6.0	-3.0	-6.4	-4.7	-15.5	24.1	2.6	2.2	.9	1.6	.4	.1	1.4
Construction supplies		5.22	-1.8	-1.5	.1	.5	1.6	7.3	1.3	5	1.6	1.2	-1.2	7	1.6
Business supplies Materials		7.31 24.45	.7 -1.9	-2.8 6	9 .2	-1.8 .7	-2.7 2.0	4.1 1.4	.3 1.0	.3 -1.2	.7 .9	.5 .5	-1.2 1	7 1	-1.6 1.1
Measures excluding selected															
high-technology industries Total industry		98.11	1.7	3	4	7	-1.4	4.4	1.1	2	1.0	2	.0	2	.4
Manufacturing ¹		72.89	.4	6	7	9	-1.9	3.6	.4	5	1.2	.6	6	.1	.2
Durable		35.23	2.0	9	-2.2	-3.7	-4.2	7.2	.5	2	1.8	.7	5	.4	.4
Measures excluding motor vehicles and parts															
Total industry		94.64	1.6	2	1	.5	9	4.7	1.3	.2	.6	3	.2	5	.6
Manufacturing ¹		69.42	.1	6	3	.7	-1.3	4.1	.6	.0	.6	.5	4	3	.5
Durable		31.76	1.7	8	-1.4	6	-3.2	8.7	1.1	.8	.5	.5	.0	3	.9
Measures excluding selected high-technology industries															
and motor vehicles and parts															
Total industry		92.74	1.5	3	3	.4	-1.1	4.5	1.3	.1	.6	3	.1	5	.4
Manufacturing ¹		67.53	1	8	5	.5	-1.6	3.7	.6	1	.6	.6	5	3	.2
Stage-of-process components															
of non-energy materials,															
measures of the input to		0.24	1 5	1	1.1	4	1.0	2.0	2	=	1.0	2	2	6	1.5
measures of the input to Finished processors Primary and semifinished processors		9.34 17.87	1.5	.1 2	1.1 .1	.4	-1.0 3.4	3.9	.2	5 -1.6	1.8 1.1	.2	3 .0	.6 .0	1.5 1.1

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

willions of units, seasonally adjusted aimual rate											
	2024	2024			2025	2024	2025				
Item	average	Q2	Q3	Q4	Q1	Dec.	Jan.	Feb.	Mar.	Apr.	May
Total	10.53	10.90	10.22	10.27	10.07	10.11	9.24	10.48	10.49	10.44	11.19
Autos	1.42	1.40	1.37	1.34	1.26	1.20	1.16	1.25	1.35	1.34	1.35
Trucks	9.11	9.50	8.84	8.93	8.81	8.91	8.07	9.22	9.14	9.10	9.84
Light	8.78	9.15	8.53	8.63	8.53	8.57	7.79	8.94	8.87	8.84	9.58
Medium and heavy	.33	.35	.31	.30	.28	.34	.28	.28	.28	.27	.27
Memo Autos and light trucks	10.20	10.55	9.90	9.97	9.79	9.77	8.96	10.19	10.22	10.18	10.92

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	adi	iusted

017 = 100, seasonally adjusted											
Item		2024 proportion	2024 Sept.	Oct.	Nov.	Dec. ^r	2025 Jan. ^r	Feb. ^r	Mar. ^r	Apr.r	May ^p
Total IP		100.00	102.6	102.2	102.0	103.0	102.9	104.0	103.7	103.8	103.6
MARKET GROUPS											
Final products and nonindustrial supplies		54.44	100.4	99.6	99.4	100.4	100.7	101.8	101.7	101.4	101.2
Consumer goods		27.76	100.4	101.5	100.8	100.4	101.6	102.8	101.7	101.4	101.2
Durable		5.97	103.8	100.8	102.2	100.7	98.6	102.7	103.1	101.0	103.0
Automotive products		3.21	105.9	100.6	102.6	99.6	95.1	103.8	105.4	102.4	106.3
Home electronics		.14	205.8	205.4	200.9	206.1	209.5	208.0	205.0	206.3	210.6
Appliances, furniture, carpeting		.94	82.9	81.9	83.8	84.4	84.8	81.8	79.2	78.8	79.5
Miscellaneous goods		1.68	105.9	106.0	106.3	105.7	106.2	106.7	107.1	105.5	104.7
Nondurable		21.79	101.6	101.6	100.4	101.9	102.4	102.7	101.4	101.6	100.8
Non-energy		16.19	102.2	101.6	101.2	101.0	100.9	101.9	102.6	101.7	101.8
Foods and tobacco		9.69	98.1	96.7	96.7	97.3	96.5	97.2	97.6	96.9	96.6
Clothing		.15	75.2	74.8	73.7	74.4	75.9	76.2	77.1	75.0	76.5
Chemical products		5.20	117.0	117.9	117.2	115.2	116.7	118.1	119.7	118.7	119.5
Paper products		.76 5.60	76.2 99.2	76.7 101.1	74.5 97.3	72.9 103.8	73.6 106.0	74.6 104.6	75.1 97.6	73.2	73.0 97.4
Energy		3.60	99.2	101.1	97.3	103.8	100.0	104.0	97.0	100.7	97.4
Business equipment Transit		8.55 1.61	90.8 62.3	88.0 52.3	89.4 55.1	91.4 61.6	92.5 66.1	94.5 72.2	96.1 75.6	96.2 75.8	97.0 80.6
Information processing		1.78	111.6	113.2	113.0	113.9	114.5	114.6	116.1	114.4	114.0
Industrial and other		5.16	99.0	98.1	99.5	99.7	99.4	100.0	100.9	101.7	100.9
Defense and space equipment		1.77	120.5	121.4	120.1	121.3	122.1	123.5	124.3	123.2	122.7
Construction supplies		5.23	100.1	100.3	100.2	101.5	101.0	102.6	103.8	102.6	101.8
Business supplies		10.51	101.7	101.4	101.0	101.8	102.4	102.7	102.2	102.2	101.6
Materials		45.56	105.2	105.3	105.1	106.2	105.6	106.6	106.2	106.7	106.5
Non-energy		27.21	97.4	97.0	97.4	98.1	96.9	98.2	98.6	98.5	98.8
Durable		16.74	97.8	97.1	97.2	97.8	97.0	98.7	99.3	99.4	99.6
Consumer parts		2.88	91.9	89.2	90.6	88.6	86.1	90.1	90.2	88.7	91.1
Equipment parts		4.68	108.4	108.3	107.9	109.3	110.1	111.0	111.4	112.4	111.9
Other		9.19	94.7	94.3	94.3	95.4	94.4	95.7	96.5	96.9	96.6
Nondurable		10.47	96.9	97.1	97.9	98.7	96.9	97.5	97.7	97.2	97.5
Textile Paper		.30 1.49	78.3 83.7	79.0 83.4	77.9 83.0	78.7 83.7	78.9 83.6	79.7 83.6	79.6 83.8	78.9 82.8	78.8 83.1
Chemical		5.41	99.0	100.2	102.3	103.1	99.4	100.8	101.3	100.6	100.9
Energy		18.35	117.7	118.8	117.4	119.2	119.8	120.2	118.4	120.0	118.9
INDUSTRY GROUPS											
Manufacturing		74.78	99.0	98.4	98.5	98.9	98.6	99.8	100.4	99.9	100.0
Manufacturing (NAICS)	31–33	73.29	99.6	99.0	99.2	99.6	99.2	100.4	101.0	100.6	100.7
Durable manufacturing		36.99	99.6	98.2	98.8	99.3	99.2	101.0	101.6	101.3	101.7
Wood products	321	1.63	95.8	95.2	97.6	95.3	94.7	97.3	96.1	96.8	97.7
Nonmetallic mineral products	327 331	2.30 2.69	100.7 94.2	101.8 92.2	101.6 91.5	101.0 93.7	102.3 94.3	103.1 94.0	104.0 94.7	102.0 94.1	100.3 94.2
Primary metals Fabricated metal products	332	6.14	94.2	97.6	96.8	97.9	97.1	97.4	94.7	94.1	97.8
Machinery	333	5.69	98.6	97.0	99.5	99.1	99.9	99.9	100.9	100.8	99.8
Computer and electronic products	334	4.43	119.8	121.4	120.8	121.8	123.8	124.0	124.9	125.1	124.8
Electrical equip., appliances,	331	1.15	117.0	121.1	120.0	121.0	123.0	121.0	121.7	123.1	121.0
and components	335	2.19	107.0	106.7	105.8	107.0	106.2	107.6	106.6	105.5	106.4
Motor vehicles and parts	3361–3	5.36	105.6	100.3	103.0	100.3	94.9	104.5	105.9	103.5	108.6
Aerospace and miscellaneous											
transportation equipment	3364-9	3.01	83.3	78.3	78.2	84.5	89.6	91.1	92.8	93.2	94.3
Furniture and related products	337	.96	75.4	75.0	75.9	75.1	75.6	74.6	74.1	74.9	75.6
Miscellaneous	339	2.59	104.0	103.7	103.9	103.9	103.3	103.5	103.8	102.6	102.2
Nondurable manufacturing	211.0	36.29	99.7	99.9	99.7	100.1	99.3	99.9	100.5	99.9	99.7
Food, beverage, and tobacco products	311,2	12.06	99.6	98.4	98.2	98.9	98.4	98.7	99.1	98.6	98.4
Textile and product mills	313,4	.52	77.0 77.4	78.0 77.3	78.6 76.1	78.5 77.0	78.5 78.2	79.0 78.8	78.2 79.7	78.4 77.3	79.0 79.0
Apparel and leather Paper	315,6 322	2.21	87.6	88.0	76.1 87.3	86.9	87.3	78.8 86.5	86.3	85.6	86.1
Printing and support	322	1.35	84.8	88.0	87.3	86.9	84.9	85.2	86.3	85.6	83.2
Petroleum and coal products	324	4.20	93.0	96.1	93.0	95.2	93.6	93.5	93.5	92.4	91.1
Chemicals	325	12.11	106.7	107.8	108.7	108.5	107.4	108.7	109.8	109.1	109.3
Plastics and rubber products	326	3.67	99.9	98.8	99.1	98.3	97.2	98.7	100.4	99.8	99.9
Other manufacturing (non-NAICS)	1133,5111	1.50	78.7	77.9	75.1	73.4	74.8	77.1	76.5	73.8	73.2
Mining	21	14.37	119.0	119.5	118.5	120.7	117.9	119.7	121.9	121.5	121.7
			105.7	106.1	104.0	108.8	113.7	112.8	103.4	108.5	105.3
Utilities	2211,2	10.85									
Utilities Electric Natural gas	2211,2 2211 2212	9.54 1.31	103.7 104.9 110.6	106.9	104.9	108.0	112.8 119.5	111.8 118.8	104.3	109.3 101.9	105.3 104.6

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

Table 5
INDUSTRIAL PRODUCTION INDEXES: SPECIAL AGGREGATES

2017 = 100, seasonally adjusted

Ritem	Apr. ^r 103.8 114.5 100.7 113.8 98.2 115.3 121.4	May ^p 103.6 112.9 97.4 113.3 95.7
Total industry	103.8 114.5 100.7 113.8 98.2 115.3	103.6 112.9 97.4 113.3
Primary energy 27.31 112.6 113.8 111.8 114.8 115.8 115.6 112.5	114.5 100.7 113.8 98.2 115.3	112.9 97.4 113.3
Consumer products	100.7 113.8 98.2 115.3	97.4 113.3
Commercial products	113.8 98.2 115.3	113.3
Oil and gas well drilling 213111 .54 105.1 103.3 99.9 99.6 98.6 99.1 100.0 Converted fuel 5.30 113.7 114.0 112.3 114.7 119.0 119.6 109.6 Primary energy 13.05 118.8 120.2 118.9 120.5 119.5 119.6 109.6 Non-energy 72.69 98.9 98.1 98.3 98.8 98.4 99.8 121.6 Non-energy 1.89 156.7 159.0 157.1 158.9 164.3 165.5 164.6 Computers and peripheral equipment 3341 .23 170.5 171.3 167.9 175.2 178.4 179.6 177.3 Communications equipment 3342 .41 198.1 201.0 200.2 200.9 202.3 203.3 204.2 Semiconductors and related electronic components 3344 1.26 142.9 145.3 143.4 144.6 151.1 152.3 151.3 Exclu	98.2 115.3	
Converted fuel Frimary energy 13.05 113.7 114.0 112.3 114.7 119.0 119.6 109.6 118.8 120.2 118.9 120.5 119.5 119.8 121.6	115.3	95.7
Primary energy 13.05 118.8 120.2 118.9 120.5 119.5 119.8 121.6		
Non-energy 72.69 98.9 98.1 98.3 98.8 98.4 99.8 100.5	121.4	112.9
Selected high-technology industries 1.89 156.7 159.0 157.1 158.9 164.3 165.5 164.6 177.3 167.9 175.2 178.4 179.6 177.3 177.3 177.3 167.9 175.2 178.4 179.6 177.3		120.9
Computers and peripheral equipment 3341 .23 170.5 171.3 167.9 175.2 178.4 179.6 177.3 Communications equipment 3342 .41 198.1 201.0 200.2 200.9 202.3 203.3 204.2 Semiconductors and related electronic components 3344 1.26 142.9 145.3 143.4 144.6 151.1 152.3 151.3 Excluding selected high-technology industries 70.79 97.6 96.6 96.9 97.4 96.8 98.3 99.0 Motor vehicles and parts 3361-3 5.36 105.6 100.3 103.0 100.3 94.9 104.5 105.9 Motor vehicles 3361 2.54 117.1 108.1 112.5 107.9 99.2 114.6 116.8 Motor vehicle parts 3363 2.30 100.5 97.9 99.6 97.5 93.6 99.1 99.4 Excluding motor vehicles and parts 65.43 96.9 96.3 96.5 97.2	100.0	100.2
Computers and peripheral equipment 3341 .23 170.5 171.3 167.9 175.2 178.4 179.6 177.3 Communications equipment 3342 .41 198.1 201.0 200.2 200.9 202.3 203.3 204.2 Semiconductors and related electronic components 3344 1.26 142.9 145.3 143.4 144.6 151.1 152.3 151.3 Excluding selected high-technology industries 70.79 97.6 96.6 96.9 97.4 96.8 98.3 99.0 Motor vehicles and parts 3361-3 5.36 105.6 100.3 103.0 100.3 94.9 104.5 105.9 Motor vehicles 3361 2.54 117.1 108.1 112.5 107.9 99.2 114.6 116.8 Motor vehicle parts 3363 2.30 100.5 97.9 99.6 97.5 93.6 99.1 99.4 Excluding motor vehicles and parts 65.43 96.9 96.3 96.5 97.2	169.2	169.9
Communications equipment 3342 .41 198.1 201.0 200.2 200.9 202.3 203.3 204.2 Semiconductors and related electronic components 3344 1.26 142.9 145.3 143.4 144.6 151.1 152.3 151.3 Excluding selected high-technology industries 70.79 97.6 96.6 96.9 97.4 96.8 98.3 99.0 Motor vehicles and parts 3361-3 5.36 105.6 100.3 103.0 100.3 94.9 104.5 105.9 Motor vehicles 3361 2.54 117.1 108.1 112.5 107.9 99.2 114.6 116.8 Motor vehicle parts 3363 2.30 100.5 97.9 99.6 97.5 93.6 99.1 99.4 Excluding motor vehicles and parts 65.43 96.9 96.3 96.5 97.2 97.0 97.9 98.5 Consumer goods 19.37 101.3 100.7 100.6 100.3 100.3 101.0	176.5	181.2
Semiconductors and related electronic components 3344 1.26 142.9 145.3 143.4 144.6 151.1 152.3 151.3 Excluding selected high-technology industries 70.79 97.6 96.6 96.9 97.4 96.8 98.3 99.0 Motor vehicles and parts 3361–3 5.36 105.6 100.3 103.0 100.3 94.9 104.5 105.9 Motor vehicles 3361 2.54 117.1 108.1 112.5 107.9 99.2 114.6 116.8 Motor vehicle parts 3363 2.30 100.5 97.9 99.6 97.5 93.6 99.1 99.4 Excluding motor vehicles and parts 65.43 96.9 96.3 96.5 97.2 97.0 97.9 98.5 Consumer goods 19.37 101.3 100.7 100.6 100.3 100.3 101.0 101.5	205.4	206.1
Excluding selected high-technology industries 3344 1.26 142.9 145.3 143.4 144.6 151.1 152.3 151.3 Motor vehicles and parts 70.79 97.6 96.6 96.9 97.4 96.8 98.3 99.0 Motor vehicles and parts 3361-3 5.36 105.6 100.3 103.0 100.3 94.9 104.5 105.9 Motor vehicles 3361 2.54 117.1 108.1 112.5 107.9 99.2 114.6 116.8 Motor vehicle parts 3363 2.30 100.5 97.9 99.6 97.5 93.6 99.1 99.4 Excluding motor vehicles and parts 65.43 96.9 96.3 96.5 97.2 97.0 97.9 98.5 Consumer goods 19.37 101.3 100.7 100.6 100.3 100.3 101.0 101.5	203.4	200.1
Industries 70.79 97.6 96.6 96.9 97.4 96.8 98.3 99.0 Motor vehicles and parts 3361–3 5.36 105.6 100.3 103.0 100.3 94.9 104.5 105.9 Motor vehicles 3361 2.54 117.1 108.1 112.5 107.9 99.2 114.6 116.8 Motor vehicle parts 3363 2.30 100.5 97.9 99.6 97.5 93.6 99.1 99.4 Excluding motor vehicles and parts 65.43 96.9 96.3 96.5 97.2 97.0 97.9 98.5 Consumer goods 19.37 101.3 100.7 100.6 100.3 100.3 101.0 101.5	157.4	157.5
Industries 70.79 97.6 96.6 96.9 97.4 96.8 98.3 99.0 Motor vehicles and parts 3361–3 5.36 105.6 100.3 103.0 100.3 94.9 104.5 105.9 Motor vehicles 3361 2.54 117.1 108.1 112.5 107.9 99.2 114.6 116.8 Motor vehicle parts 3363 2.30 100.5 97.9 99.6 97.5 93.6 99.1 99.4 Excluding motor vehicles and parts 65.43 96.9 96.3 96.5 97.2 97.0 97.9 98.5 Consumer goods 19.37 101.3 100.7 100.6 100.3 100.3 101.0 101.5		
Motor vehicles and parts 3361–3 5.36 105.6 100.3 103.0 100.3 94.9 104.5 105.9 Motor vehicles 3361 2.54 117.1 108.1 112.5 107.9 99.2 114.6 116.8 Motor vehicle parts 3363 2.30 100.5 97.9 99.6 97.5 93.6 99.1 99.4 Excluding motor vehicles and parts 65.43 96.9 96.3 96.5 97.2 97.0 97.9 98.5 Consumer goods 19.37 101.3 100.7 100.6 100.3 100.3 101.0 101.5	09.4	00.6
Motor vehicles 3361 2.54 117.1 108.1 112.5 107.9 99.2 114.6 116.8 Motor vehicle parts 3363 2.30 100.5 97.9 99.6 97.5 93.6 99.1 99.4 Excluding motor vehicles and parts 65.43 96.9 96.3 96.5 97.2 97.0 97.9 98.5 Consumer goods 19.37 101.3 100.7 100.6 100.3 100.3 101.0 101.5	98.4	98.6
Motor vehicles 3361 2.54 117.1 108.1 112.5 107.9 99.2 114.6 116.8 Motor vehicle parts 3363 2.30 100.5 97.9 99.6 97.5 93.6 99.1 99.4 Excluding motor vehicles and parts 65.43 96.9 96.3 96.5 97.2 97.0 97.9 98.5 Consumer goods 19.37 101.3 100.7 100.6 100.3 100.3 101.0 101.5	103.5	108.6
Excluding motor vehicles and parts 65.43 96.9 96.3 96.5 97.2 97.0 97.9 98.5 Consumer goods 19.37 101.3 100.7 100.6 100.3 100.3 101.0 101.5	112.9	121.6
Consumer goods 19.37 101.3 100.7 100.6 100.3 100.3 101.0 101.5	98.2	101.7
Consumer goods 19.37 101.3 100.7 100.6 100.3 100.3 101.0 101.5	98.0	97.8
	100.6	100.6
	91.2	91.2
Construction supplies 5.22 99.9 100.1 100.0 101.3 100.8 102.4 103.6	102.4	101.6
Business supplies 7.31 96.4 95.8 95.4 95.7 96.0 96.7 97.2	96.1	95.4
Materials 24.45 95.4 95.1 95.4 96.4 95.2 96.1 96.6	96.4	96.4
Macaurus analudina salaatad hish tashualaru		
Measures excluding selected high-technology industries		
Total industry 98.11 101.6 101.2 101.0 102.0 101.9 102.9 102.7	102.7	102.5
Manufacturing ¹ 72.89 97.7 97.0 97.2 97.6 97.1 98.3 98.9	98.3	98.4
Durable 35.23 96.8 95.3 95.9 96.4 96.2 97.9 98.6	98.1	98.5
Measures excluding motor vehicles and parts		
Total industry 94.64 102.5 102.4 101.9 103.2 103.4 104.0 103.7	103.9	103.4
Manufacturing ¹ 69.42 98.6 98.3 98.2 98.9 98.9 99.5 100.0	99.6	99.3
Durable 31.76 98.6 97.8 98.0 99.1 99.9 100.3 100.9	100.9	100.5
Measures excluding selected high-technology		
industries and motor vehicles and parts	100.7	100.0
Total industry 92.74 101.4 101.3 100.9 102.2 102.3 102.9 102.6	102.7	102.2
Manufacturing ¹ 67.53 97.1 96.8 96.8 97.4 97.3 97.9 98.4	97.9	97.7
Stage-of-process components of non-energy		
materials, measures of the input to		
Finished processors 9.34 97.7 96.8 96.9 97.1 96.6 98.4 98.6		
Primary and semifinished processors 17.87 97.4 97.3 97.9 98.8 97.3 98.8 98.8	08.3	99.0
11.01 71.4 71.3 71.7 70.0 71.3 90.3 90.0	98.3 98.8	99.0 98.8

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Table 6
DIFFUSION INDEXES OF INDUSTRIAL PRODUCTION

ercent												
Item	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
One month earlier												
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	43.4	62.6	48.8	47.5	54.2	49.2	45.1	46.1	58.2
2025	51.5	64.3	55.6	42.4								
Three months earlier												
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	56.9	54.9	49.8	51.5	50.8	47.5	50.8	42.1	50.5
2025	54.9	63.6	63.3	53.9								
Six months earlier												
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	50.5	56.6	55.9	55.6	52.2	48.8	51.9	44.1	47.5
2025	52.2	52.2	54.9	57.6								

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

Item		2024	1972- 2024	1994- 95	2009	2024		2025	2024	2025				
		proportion	ave.	high	low	Q3	Q4 ^r	Q1 ^r	Dec. ^r	Jan. ^r	Feb. ^r	Mar. ^r	Apr.r	May ^p
Total industry		100.00	79.6	84.8	66.6	77.6	77.1	77.7	77.5	77.3	78.0	77.7	77.7	77.4
Manufacturing ¹		75.64	78.2	84.4	63.5	76.7	76.2	76.7	76.3	76.0	76.8	77.2	76.7	76.7
Manufacturing (NAICS)	31–33	74.16	78.2	84.6	63.4	76.7	76.1	76.6	76.3	75.9	76.7	77.1	76.7	76.7
Durable manufacturing		38.45	76.8	83.5	58.3	74.6	73.6	74.7	73.9	73.8	75.0	75.4	75.1	75
Wood products	321	1.65	76.7	86.5	48.5	76.2	77.4	77.2	76.8	76.2	78.2	77.3	77.8	78.
Nonmetallic mineral products	327	2.26	73.8	82.4	43.9	78.1	79.1	80.5	78.7	79.8	80.5	81.2	79.6	78.
Primary metals	331	2.99	77.4	95.0	49.5	69.6	68.3	69.3	69.1	69.4	69.0	69.4	68.9	68.
Fabricated metal products	332	6.20	78.3	83.3	64.4	75.8	75.4	75.3	75.7	75.1	75.3	75.6	76.4	75.
Machinery	333	5.40	77.9	87.4	58.6	81.1	80.8	81.9	81.1	81.7	81.6	82.3	82.2	81.
Computer and electronic products	334	4.70	77.3	83.7	69.7	75.2	74.8	75.6	74.7	75.6	75.4	75.6	75.4	74.
Electrical equip., appliances,	225	2.00	01.0	02.2	66.4	02.2	01.2	01.2	01.6	00.0	01.0	01.1	00.2	00
and components	335	2.09	81.8	92.3	66.4	82.2	81.3	81.3	81.6	80.9	81.9	81.1	80.2	80.
Motor vehicles and parts	3361–3	5.94	74.9	87.3	33.1	69.2	67.7	67.6	67.0	63.2	69.4	70.2	68.4	71.
Aerospace and miscellaneous	3364–9	3.50	73.7	72.1	72.0	69.2	63.5	72.0	66.8	70.8	72.0	72.2	73.6	74
transportation equipment Furniture and related products												73.3 69.0	69.9	74.
Miscellaneous	337 339	1.07 2.65	77.2 77.1	82.7 80.9	52.3 68.1	69.6 74.9	69.2 73.9	69.4 73.3	69.2 73.6	69.9 73.3	69.2 73.3	73.4	72.6	70. 72.
Miscenaneous	339	2.03	//.1	80.9	08.1	74.9	13.9	13.3	/3.0	13.3	13.3	73.4	72.0	12.
Nondurable manufacturing		35.71	80.0	86.1	68.9	78.8	78.8	78.6	78.8	78.2	78.6	78.9	78.4	78
Food, beverage, and tobacco products	311,2	11.78	80.3	85.3	75.3	79.7	79.3	79.4	79.6	79.2	79.4	79.7	79.3	79
Textile and product mills	313,4	.58	77.9	91.5	54.1	70.1	70.0	70.7	70.3	70.5	71.1	70.5	70.9	71.
Apparel and leather	315,6	.21	75.3	87.3	58.6	62.9	60.6	62.8	60.9	62.0	62.8	63.7	62.0	63.
Paper	322	2.08	86.4	92.7	72.8	82.7	83.0	82.5	82.5	83.0	82.3	82.2	81.6	82.
Printing and support	323	1.39	79.1	85.3	58.6	75.6	74.2	75.0	74.6	75.1	75.4	74.6	74.8	73.
Petroleum and coal products	324	3.41	85.5	91.1	75.9	90.8	92.5	91.2	93.0	91.3	91.1	91.1	89.9	88.
Chemicals	325	12.41	76.9	82.4	65.4	76.5	77.1	76.8	77.0	76.1	76.9	77.4	76.9	76.
Plastics and rubber products	326	3.85	81.7	93.1	56.8	73.4	71.4	71.1	70.9	70.1	71.1	72.2	71.8	71.
Other manufacturing (non-NAICS)	1133,5111	1.48	78.5	82.1	63.7	80.2	78.3	79.9	76.5	78.2	80.9	80.6	78.1	77.
Mining	21	12.40	86.5	88.6	78.9	89.4	89.8	89.9	90.6	88.5	89.8	91.4	91.0	91.
Utilities	2211,2	11.96	84.2	93.2	78.1	71.2	70.5	72.2	71.9	74.9	74.0	67.7	70.8	68.
Selected high-technology industries		1.96	77.6	85.3	70.7	78.3	77.4	78.4	76.9	78.8	78.7	77.6	79.1	78.
Computers and peripheral equipment	3341	.23	76.5	84.2	80.3	78.3	81.2	84.1	82.9	84.2	84.7	83.5	83.0	85.
Communications equipment	3342	.46	75.2	85.1	76.7	72.2	71.2	70.0	70.6	70.4	70.0	69.6	69.3	68.
Semiconductors and related														
electronic components	3344	1.27	79.4	92.8	63.2	80.2	78.6	80.1	77.8	80.6	80.5	79.1	81.5	80.
Measures excluding selected														
high-technology industries Total industry		98.04	79.7	84.8	66.4	77.6	77.1	77.7	77.5	77.3	78.0	77.7	77.7	77.
Manufacturing ¹		73.68	78.3	84.3	63.0	76.7	76.1	76.6	76.3	75.9	76.8	77.2	76.6	76.
STAGE-OF-PROCESS GROUPS														
Crude		16.07	85.6	90.0	77.0	87.2	88.1	87.7	88.9	87.0	87.7	88.5	88.6	88.
Primary and semifinished Finished		46.62	80.1	87.5	63.7	76.3	75.9	76.4	76.3	76.6	76.9	75.6	76.0	75.
		37.31	76.7	80.4	66.2	75.1	73.9	75.0	74.1	74.1	75.2	75.8	75.2	75.

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
	1	Average a	nnual rate		Fourth	quarter to	o fourth o	luarter		Annua	ıl rate		rate
Item	1972-	1980-	1989-	1995-					2024		2025		2025
	79	88	94	2025	2022	2023	2024	2025	Q3	Q4	Q1	Q2	May
Total industry	3.1	1.9	2.3	1.6	1.0	2.3	1.2	1.5	1.2	1.4	1.5	1.6	.1
Manufacturing ¹	3.3	2.2	2.6	1.4	.4	1.2	1.3	1.2	1.3	1.4	1.2	1.2	.1
Mining Utilities	.7 4.4	.1 2.2	7 1.8	1.0 1.8	3.5 2.3	3.4 3.6	8 3.6	.9 3.7	-1.1 3.6	6 3.7	.4 3.8	.9 3.7	.1 .3
Selected high-technology industries	18.6	16.6	16.2	15.4	4.4	9.8	12.0	10.9	12.1	11.9	11.2	10.9	.9
Manufacturing ¹ ex. selected high-technology industries	2.6	1.2	1.7	.4	.3	1.0	1.0	.9	1.0	1.1	1.0	.9	.1
STAGE-OF-PROCESS GROUPS Crude	1.5	.5	5	.9	2.5	2.7	5	.9	7	2	.6	1.0	.1
Primary and semifinished	3.0	1.3	2.6	1.6	.6	1.7	1.6	1.7	1.5	1.6	1.7	1.7	.1
Finished	3.9	3.2	2.8	1.4	.9	1.6	1.8	1.4	1.9	1.9	1.6	1.4	.1

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

Table 9
GROSS VALUE OF FINAL PRODUCTS AND NONINDUSTRIAL SUPPLIES

Billions of 2017 dollars at annual rate, seasonally adjusted 2024 2025 2024 2025 2017 2024 Q3 Q4^r Q1^r Dec.1 Jan.r Feb.r Mar.r May^p Apr.r Final products and nonindustrial supplies 3,942.6 3,969.7 3,965.6 3,938.1 3,987.5 3,962.0 3,958.7 4,006.0 3,997.8 3,994.0 3,985.5 **Final products** 2,946.4 2,951.5 2,945.5 2,915.2 2,955.0 2,934.8 2,928.5 2,971.8 2,964.5 2,960.5 2,958.6 2.153.2 2.178.9 2.171.7 2.171.7 2,162.2 2.164.0 2,156.0 Consumer goods 2,173.2 2,164.1 2,185.7 2,167.3 530.6 512.2 550.7 Durable 553.5 541.4 534.4 534.1 527.6 542.9 547.2 535.3 Automotive products 375.2 397.7 386.8 378.1 378.2 370.2 353.0 387.5 393.9 383.2 399.7 Other durable goods 155.5 156.6 155.0 156.1 155.9 156.7 157.5 155.8 154.2 152.7 152.6 Nondurable 1,622.6 1,625.9 1,631.4 1,628.8 1,636.4 1,642.1 1,646.5 1,642.2 1,620.6 1,627.8 1,606.6 Equipment, total 793.2 754.8 792.0 810.6 777.6 777.2 789.2 767.5 771.3 804.4 803.8 Business and defense 770.0 754.4 754.0 732.0 767.0 745.3 749.1 769.7 782.2 781.9 789.3 651.2 612.7 611.6 589.6 601.8 604.7 623.1 634.5 635.4 643.1 Business 620.8 Defense and space 142.6 144.3 145.1 146.0 148.8 147.3 146.5 118.8 143.5 147.6 147.9 Nonindustrial supplies 996.2 1,018.2 1,032.3 1,026.9 1,029.8 1,020.0 1,022.6 1,034.0 1,033.2 1,033.3 1,026.8 Construction supplies 276.8 278.9 278.9 279.9 285.7 281.7 282.4 286.2 288.6 285.7 283.1 719.4 740.1 742.0 748.2 744.3 747.8 744.2 Business supplies 743.6 746.8 746.0 748.0 Commercial energy products 240.5 268.6 269.9 273.2 270.8 274.8 274.7 272.1 265.6 272.4 272.4

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

Fourth quarter to fourth quarter Annual rate Monthly rate May '24 Item 2024 2024 2025 2024 2025 to May '25 gross value1 2022 2023 2024 Q3 $Q4^{r}$ Q1^r Dec.r Jan. r Feb.r Mar.r Apr.r Mayp Finished 2,499.2 -6.1 1,996.9 Semifinished 1.7 -1.0 1.2 -1.6 .8 6.6 1.0 .7 1.0 -.7 -.9 Primary 1,462.5 .3 1.1 1.0 -1.5 2.0 -.1 -.4 -2.4 .8 -1.1 -2.4 -.7 .3 742.9 Crude .2 2.5 1.1 .6 5.8 -2.1 1.8 -2.4.6 2.4

r Revised. p Preliminary.

r Revised. p Preliminary.

^{1.} Billions of 2017 dollars.

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

/ear	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annu
P (percent																	
hange) ¹																	
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
.005	.4	.7	1	.2	.1	.4	3	.3	-1.9	1.2	1.1	.5	5.7	2.3	-1.7	3.7	3
2006	.2	.0	.2	.3	.0	.3	1	.4	2	1	.0	1.0	3.9	2.4	1.6	1.0	2
.007	4	1.0	.2	.7	.1	.0	2	.2	.2	3	.6	.1	4.1	4.7	.4	1.3	2
2008	1 -2.5	4 6	3 -1.6	7 8	6 -1.0	3 3	5 1.2	-1.6 1.1	-4.4 .9	1.0	-1.3 .4	-2.8	-1.0 -20.7	-5.9 -10.6	-12.6 6.9	-16.0 6.4	-3 -11
2010	1.1	.4	.7	.4	1.4	.2	.4	.4	.3	3	.1	1.0	7.9	8.0	5.4	1.7	5
011	2	4	1.0	3	.1	.3	.5	.6	1	.7	.0	.5	2.2	1.6	4.5	4.2	3
012	.6	.3	5	.7	.2	.0	.2	4	1	.3	.4	.3	4.0	2.5	.0	2.0	3
013	.0	.5	.4	1	.1	.2	3	.6	.5	1	.3	.2	3.1	1.8	1.6	2.7	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
016	.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	.0	.2	.5	1.1	9	.8	.1	.7	.0	2	.1	.0	2.2	4.7	3.4	.6	3
019	7	5	.0	5	.1	.1	5	.8	3	9	.6	2	-3.7	-2.3	.0	-2.0	
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	
)24	-1.1	1.2	2	2	.6	.3	7	.5	4	4	3	1.1	-1.8	2.4	6	-1.2	
25	1	1.0	2	.1	2								4.6				
P (2017=100)																	
)23	102.7	102.8	102.8	103.2	103.0	102.4	103.1	103.1	103.3	102.6	102.9	102.6	102.8	102.9	103.2	102.7	10
024	101.5 102.9	102.7 104.0	102.5 103.7	102.4 103.8	103.0 103.6	103.3	102.5	103.0	102.6	102.2	102.0	103.0	102.2 103.6	102.9	102.7	102.4	102
Capacity Dercent of 017 output) 023 024 025	128.8 131.5 133.1	129.1 131.6 133.3	129.4 131.7 133.4	129.7 131.8 133.6	130.0 131.9 133.8	130.3 132.0	130.5 132.2	130.7 132.3	130.9 132.5	131.1 132.6	131.2 132.8	131.3 132.9	129.1 131.6 133.3	130.0 131.9	130.7 132.3	131.2 132.8	130 132
tilization	155.1	155.5	155.4	155.0	155.6								133.3				
percent)																	
003	76.0	76.1	75.9	75.5	75.5	75.6	76.0	75.9	76.4	76.5	77.0	77.1	76.0	75.5	76.1	76.9	76
004	77.2	77.7	77.4	77.7	78.3	77.7	78.3	78.4	78.5	79.1	79.3	79.9	77.4	77.9	78.4	79.4	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	8
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	8
800	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	7
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	6
010	70.7	71.1	71.8	72.2	73.3	73.6	74.1	74.5	74.8	74.7	74.8	75.6	71.2	73.1	74.5	75.0	7:
011	75.5	75.2	76.0	75.7	75.7	75.9	76.2	76.6	76.4	76.8	76.7	76.9	75.6	75.8	76.4	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
)13	76.8	77.1	77.3	77.2	77.2	77.2	76.9	77.3	77.7	77.5	77.7	77.8	77.1	77.2	77.3	77.7	7
)14)15	77.5 78.8	78.0 78.3	78.7 78.0	78.7 77.5	79.0 77.2	79.1 76.9	79.2 77.4	79.0 77.3	79.2 77.1	79.1 76.8	79.6 76.2	79.5 75.8	78.0 78.4	78.9 77.2	79.2 77.3	79.4 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′
)17	75.6	75.8 75.3	75.2 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.
018	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	79
)19	79.8	79.3	79.1	78.7	79.3	78.8	78.3	78.8	78.5	77.7	78.1	77.9	79.4	79.8	78.5	77.9	7:
	77.4	77.7	74.6	64.7	65.7	70.1	72.8	73.6	73.7	74.3	74.7	75.9	76.5	66.9	73.3	75.0	72
120	76.5	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
	79.8	80.4	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	8
021	19.0												1				l .
020 021 022		79.6	70 4	79.6	79.2	78.6	79 N	78.9	78.0	78 3	78 4	78.1	79.6	79.1	78.9	78.3	7
021	79.8 77.2	79.6 78.1	79.4 77.8	79.6 77.7	79.2 78.1	78.6 78.2	79.0 77.6	78.9 77.9	78.9 77.5	78.3 77.1	78.4 76.8	78.1 77.5	79.6 77.7	79.1 78.0	78.9 77.6	78.3 77.1	7:

^{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 Seasonally adjusted

| Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally adjusted | Seasonally

Year						·			α .			-	0.1				
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annua
IP (percent change) ²																	
2003	.8	1	.1	8	.0	.5	.3	5	.8	.1	.9	1	2.1	-2.2	2.5	4.4	1.
2004	1	.8	.0	.3	.7	7	.9	.5	.0	.9	.0	.8	2.7	3.3	4.0	5.5	3.
2005	.6	.9	5	.4	.3	.2	3	.5	-1.1	1.4	.9	.1	6.4	2.6	6	6.1	4.
006	.8	3	.0	.3	2	.3	3	.7	.1	5	.1	1.5	3.9	.7	1.1	1.7	2.
.007	4	.3	.8	.6	1	.3	1	3	.3	2	.5	.2	4.7	5.5	.1	1.3	2.
2008	2	7	4	-1.0	6	7	-1.1	-1.3	-3.4	6	-2.5	-3.4	-2.0	-8.4	-14.1	-22.0	-4.
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
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
011 012	.0	.2	.6 5	5 .5	.0 3	.1	.6 2	.4 1	.3 2	.5 2	2 .6	.7	3.0 5.4	2 .5	4.2 -1.2	3.8	2
.013	3	.4	1	3	.3	.2	8	.9	.1	.1	.0	2	2.7	.2	.2	1.7	
014	-1.1	.9	.9	.0	.3	.3	.4	6	.0	1	.7	2	-1.1	4.7	1.4	.3	1
.015	6	8	.4	.0	.0	4	.7	3	3	1	2	3	-3.4	6	.8	-2.6	-
016	.4	3	1	1	1	.2	.1	4	.2	.1	1	.0	6	-1.1	.0	.5	-
017	.2	1	4	1.1	2	.1	4	2	.0	1.1	.1	2	.0	3.1	-2.2	4.1	
2018	3	.8	1	.7	8	.7	.0	.3	.0	5	3	.3	.4	2.3	1.6	-1.7	1
2019	9	5	2	7	.1	.5	7	.7	7	9	.9	.1	-4.7	-3.1	8	-2.1	-2
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	-(
021	.9	-4.0	3.1	.0	1.1	.1	.8	3	9	1.4	.9	.1	4	5.8	3.0	5.3	4
022	6	.9	.9	.0	2	3	.1	.2	.2	.1	7	-1.8	2.7	2.5	.0	-3.0	2
023	1.8	1	6	.7	1	6	.3	.1	.1	7	.5	1	.3	2	4	-1.4	
024	-1.3	1.4	.2	7	.7	.0	7	.6	3	6	.1	.4	9	1.3	8	-1.7	
025	4	1.2	.6	5	.1								3.9				
P (2017=100)	00.0	00.0	00.2	00.0	00.0	00.2	00.1	00.7	00.	00.0	00.2	00.2	00.7	00.	00.7	00.1	
023	99.9	99.8	99.2 99.5	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
			995	98.8	99.5	99.4	98.8	99.3	99.0	98.4	98.5	98.9	98.9	99.2	99.1	98.6	99
2025	97.9 98.6	99.3 99.8	100.4	99.9	100.0								99.6				
Capacity Spercent of 2017 output) 2023	98.6	99.8 126.6	126.8	99.9	100.0	127.2	127.3	127.4	127.6	127.7	127.8	128.0	126.6	127.0	127.4	127.8	127
2024 2025 Capacity percent of 2017 output) 2023 2024 2025	98.6	99.8	100.4	99.9	100.0	127.2 128.8	127.3 128.9	127.4 129.1	127.6 129.2	127.7 129.3	127.8 129.5	128.0 129.6		127.0 128.6	127.4 129.1	127.8 129.5	127 128
Capacity percent of 2017 output) 2023 2024	98.6 126.5 128.1	99.8 126.6 128.2	126.8 128.4	99.9 126.9 128.5	100.0 127.0 128.6								126.6 128.2				
Capacity vereent of 017 output) 023 024 025 Utilization vereent)	98.6 126.5 128.1	99.8 126.6 128.2	126.8 128.4	99.9 126.9 128.5	100.0 127.0 128.6								126.6 128.2				128
(apacity overcent of 017 output) 023 024 025 (tilization overcent) 003 004	98.6 126.5 128.1 129.8 74.0 75.1	99.8 126.6 128.2 129.9 73.9 75.7	126.8 128.4 130.0 74.0 75.7	99.9 126.9 128.5 130.1 73.4 76.0	127.0 128.6 130.3 73.5 76.6	73.8 76.1	74.1 76.8	73.8 77.1	74.4 77.1	74.5 77.7	75.2 77.7	75.2 78.2	126.6 128.2 129.9 74.0 75.5	73.6 76.2	74.1 77.0	75.0 77.9	7-7-7-1
papacity percent of 017 output) 023 024 025 tilization percent) 003 004 005	98.6 126.5 128.1 129.8 74.0 75.1 78.6	99.8 126.6 128.2 129.9 73.9 75.7 79.1	126.8 128.4 130.0 74.0 75.7 78.6	99.9 126.9 128.5 130.1 73.4 76.0 78.8	127.0 128.6 130.3 73.5 76.6 78.9	73.8 76.1 78.9	74.1 76.8 78.4	73.8 77.1 78.7	74.4 77.1 77.7	74.5 77.7 78.6	75.2 77.7 79.2	75.2 78.2 79.1	126.6 128.2 129.9 74.0 75.5 78.8	73.6 76.2 78.9	74.1 77.0 78.3	75.0 77.9 78.9	7. 7. 7. 7
apacity ercent of 017 output) 123 124 125 tilization ercent) 003 1004 1005	98.6 126.5 128.1 129.8 74.0 75.1 78.6 79.5	99.8 126.6 128.2 129.9 73.9 75.7 79.1 79.2	126.8 128.4 130.0 74.0 75.7 78.6 79.0	99.9 126.9 128.5 130.1 73.4 76.0 78.8 79.2	127.0 128.6 130.3 73.5 76.6 78.9 78.9	73.8 76.1 78.9 78.9	74.1 76.8 78.4 78.5	73.8 77.1 78.7 78.9	74.4 77.1 77.7 78.8	74.5 77.7 78.6 78.3	75.2 77.7 79.2 78.2	75.2 78.2 79.1 79.2	126.6 128.2 129.9 74.0 75.5 78.8 79.3	73.6 76.2 78.9 79.0	74.1 77.0 78.3 78.8	75.0 77.9 78.9 78.6	7 7 7 7
apacity erecent of 0123 0124 0125 tilization erecent) 003 004 005 006	98.6 126.5 128.1 129.8 74.0 75.1 78.6	99.8 126.6 128.2 129.9 73.9 75.7 79.1	126.8 128.4 130.0 74.0 75.7 78.6	99.9 126.9 128.5 130.1 73.4 76.0 78.8	127.0 128.6 130.3 73.5 76.6 78.9	73.8 76.1 78.9	74.1 76.8 78.4	73.8 77.1 78.7	74.4 77.1 77.7	74.5 77.7 78.6	75.2 77.7 79.2	75.2 78.2 79.1	126.6 128.2 129.9 74.0 75.5 78.8	73.6 76.2 78.9	74.1 77.0 78.3	75.0 77.9 78.9	7 7 7 7
paragraph (a) (2) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	98.6 126.5 128.1 129.8 74.0 75.1 78.6 79.5 78.7	99.8 126.6 128.2 129.9 73.9 75.7 79.1 79.2 78.8 78.2	126.8 128.4 130.0 74.0 75.7 78.6 79.0 79.2 77.9	99.9 126.9 128.5 130.1 73.4 76.0 78.8 79.2 79.5 77.1	127.0 128.6 130.3 73.5 76.6 78.9 79.2 76.7	73.8 76.1 78.9 78.9 79.3 76.2	74.1 76.8 78.4 78.5 79.1 75.5	73.8 77.1 78.7 78.9 78.7 74.6	74.4 77.1 77.7 78.8 78.8 72.1	74.5 77.7 78.6 78.3 78.5 71.8	75.2 77.7 79.2 78.2 78.8 70.1	75.2 78.2 79.1 79.2 78.9 67.8	126.6 128.2 129.9 74.0 75.5 78.8 79.3 78.9 78.3	73.6 76.2 78.9 79.0 79.3 76.7	74.1 77.0 78.3 78.8 78.8 74.1	75.0 77.9 78.9 78.6 78.7 69.9	7. 7. 7. 7. 7.
D25 Lapacity Dercent of D17 output) D23 D24 D25 Lilization Dercent) D03 D04 D05 D06 D07 D08 D09	98.6 126.5 128.1 129.8 74.0 75.1 78.6 79.5 78.7 78.7 65.7	99.8 126.6 128.2 129.9 73.9 75.7 79.1 79.2 78.8 78.2 65.7	126.8 128.4 130.0 74.0 75.7 78.6 79.0 79.2 77.9 64.6	99.9 126.9 128.5 130.1 73.4 76.0 78.8 79.2 79.5 77.1 64.2	127.0 128.6 130.3 73.5 76.6 78.9 79.2 76.7 63.6	73.8 76.1 78.9 78.9 79.3 76.2 63.5	74.1 76.8 78.4 78.5 79.1 75.5 64.6	73.8 77.1 78.7 78.9 78.7 74.6 65.4	74.4 77.1 77.7 78.8 78.8 72.1 66.2	74.5 77.7 78.6 78.3 78.5 71.8 66.3	75.2 77.7 79.2 78.2 78.8 70.1 67.0	75.2 78.2 79.1 79.2 78.9 67.8	126.6 128.2 129.9 74.0 75.5 78.8 79.3 78.9 78.3 65.3	73.6 76.2 78.9 79.0 79.3 76.7 63.8	74.1 77.0 78.3 78.8 78.8 74.1 65.4	75.0 77.9 78.9 78.6 78.7 69.9 66.8	7. 7. 7. 7. 7. 7.
paracity percent of 017 output) 123 124 125 1tilization percent) 1003 1004 1005 1006 1007 1008 1009 1010	98.6 126.5 128.1 129.8 74.0 75.1 78.6 79.5 78.7 78.7 65.7 67.8	99.8 126.6 128.2 129.9 73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8	126.8 128.4 130.0 74.0 75.7 78.6 79.0 79.2 77.9 64.6 68.8	99.9 126.9 128.5 130.1 73.4 76.0 78.8 79.2 79.5 77.1 64.2 69.5	127.0 128.6 130.3 73.5 76.6 78.9 78.9 79.2 76.7 63.6 70.5	73.8 76.1 78.9 78.9 79.3 76.2 63.5 70.6	74.1 76.8 78.4 78.5 79.1 75.5 64.6 71.1	73.8 77.1 78.7 78.9 78.7 74.6 65.4 71.3	74.4 77.1 77.7 78.8 78.8 72.1 66.2 71.5	74.5 77.7 78.6 78.3 78.5 71.8 66.3 71.7	75.2 77.7 79.2 78.2 78.8 70.1 67.0 71.8	75.2 78.2 79.1 79.2 78.9 67.8 67.0 72.3	126.6 128.2 129.9 74.0 75.5 78.8 79.3 78.9 78.3 65.3 68.2	73.6 76.2 78.9 79.0 79.3 76.7 63.8 70.2	74.1 77.0 78.3 78.8 78.8 74.1 65.4 71.3	75.0 77.9 78.9 78.6 78.7 69.9 66.8 71.9	7. 7. 7. 7. 7. 7. 7. 7. 6.
(apacity percent of 0017 output) 023 (224 0225 (225 003 004 005 006 007 008 009 011 0 011)	98.6 126.5 128.1 129.8 74.0 75.1 78.6 79.5 78.7 78.7 65.7	99.8 126.6 128.2 129.9 73.9 75.7 79.1 79.2 78.8 78.2 65.7	126.8 128.4 130.0 74.0 75.7 78.6 79.0 79.2 77.9 64.6	99.9 126.9 128.5 130.1 73.4 76.0 78.8 79.2 79.5 77.1 64.2	127.0 128.6 130.3 73.5 76.6 78.9 79.2 76.7 63.6	73.8 76.1 78.9 78.9 79.3 76.2 63.5	74.1 76.8 78.4 78.5 79.1 75.5 64.6	73.8 77.1 78.7 78.9 78.7 74.6 65.4	74.4 77.1 77.7 78.8 78.8 72.1 66.2	74.5 77.7 78.6 78.3 78.5 71.8 66.3	75.2 77.7 79.2 78.2 78.8 70.1 67.0	75.2 78.2 79.1 79.2 78.9 67.8	126.6 128.2 129.9 74.0 75.5 78.8 79.3 78.9 78.3 65.3	73.6 76.2 78.9 79.0 79.3 76.7 63.8	74.1 77.0 78.3 78.8 78.8 74.1 65.4	75.0 77.9 78.9 78.6 78.7 69.9 66.8	7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7
(apacity percent of pl 2 poly percent pl 2 poly per	74.0 75.1 78.6 79.5 78.7 65.7 67.8 72.4 74.9	99.8 126.6 128.2 129.9 73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8 72.6 75.1	126.8 128.4 130.0 74.0 75.7 78.6 79.0 79.2 77.9 64.6 68.8 73.1 74.6	99.9 126.9 128.5 130.1 73.4 76.0 78.8 79.5 77.1 64.2 69.5 72.8 74.9	127.0 128.6 130.3 73.5 76.6 78.9 79.2 76.7 63.6 70.5 72.8 74.5	73.8 76.1 78.9 78.9 79.3 76.2 63.5 70.6 72.9 74.7	74.1 76.8 78.4 78.5 79.1 75.5 64.6 71.1 73.3 74.4	73.8 77.1 78.7 78.9 78.7 74.6 65.4 71.3 73.6 74.3	74.4 77.1 77.7 78.8 78.8 72.1 66.2 71.5 73.8 74.0	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 74.2	75.2 78.2 79.1 79.2 78.9 67.8 67.0 72.3 74.3	126.6 128.2 129.9 74.0 75.5 78.8 79.3 78.9 78.3 65.3 68.2 72.7 74.8	73.6 76.2 78.9 79.0 79.3 76.7 63.8 70.2 72.8 74.7	74.1 77.0 78.3 78.8 74.1 65.4 71.3 73.6 74.2	75.0 77.9 78.9 78.6 78.7 69.9 66.8 71.9 74.1 74.3	7. 7. 7. 6. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7.
papacity percent of 017 output) 023 024 025 tilization percent) 003 004 005 006 007 008 009 010 011 012	74.0 75.1 78.6 79.5 78.7 78.7 65.7 67.8 72.4 74.9	73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8 72.6 75.1	126.8 128.4 130.0 74.0 75.7 78.6 79.0 79.2 77.9 64.6 68.8 73.1 74.6	99.9 126.9 128.5 130.1 73.4 76.0 78.8 79.2 79.5 77.1 64.2 69.5 72.8 74.9	127.0 128.6 130.3 73.5 76.6 78.9 79.2 76.7 63.6 70.5 72.8 74.5	73.8 76.1 78.9 78.9 79.3 76.2 63.5 70.6 72.9 74.7	74.1 76.8 78.4 78.5 79.1 75.5 64.6 71.1 73.3 74.4	73.8 77.1 78.7 78.9 78.7 74.6 65.4 71.3 73.6 74.3	74.4 77.1 77.7 78.8 78.8 72.1 66.2 71.5 73.8 74.0	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 74.2	75.2 78.2 79.1 79.2 78.9 67.8 67.0 72.3 74.3 74.7	126.6 128.2 129.9 74.0 75.5 78.8 79.3 78.9 78.3 65.3 68.2 72.7 74.8	73.6 76.2 78.9 79.0 79.3 76.7 63.8 70.2 72.8 74.7	74.1 77.0 78.3 78.8 78.8 74.1 65.4 71.3 73.6 74.2	75.0 77.9 78.9 78.6 78.7 69.9 66.8 71.9 74.1 74.3	7. 7. 7. 6. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7.
page 1025 apacity percent of 017 output) 1023 1024 1025 tilization percent) 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014	74.0 75.1 78.6 79.5 78.7 76.7 67.8 72.4 74.9	73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8 72.6 75.1 74.7	126.8 128.4 130.0 74.0 75.7 78.6 79.0 79.2 77.9 64.6 68.8 73.1 74.6 75.6	73.4 76.0 78.8 79.2 79.5 77.1 64.2 69.5 72.8 74.9	127.0 128.6 130.3 73.5 76.6 78.9 79.2 76.7 63.6 70.5 72.8 74.5 74.6 75.9	73.8 76.1 78.9 78.9 79.3 76.2 63.5 70.6 72.9 74.7 74.8 76.2	74.1 76.8 78.4 78.5 79.1 75.5 64.6 71.1 73.3 74.4 74.2 76.6	73.8 77.1 78.7 78.9 78.7 74.6 65.4 71.3 73.6 74.3	74.4 77.1 77.7 78.8 78.8 72.1 66.2 71.5 73.8 74.0 74.9 76.3	74.5 77.7 78.6 78.3 78.5 71.8 66.3 71.7 74.1 73.8 75.0 76.3	75.2 77.7 79.2 78.8 70.1 67.0 71.8 73.9 74.2 75.0 76.9	75.2 78.2 79.1 79.2 78.9 67.8 67.0 72.3 74.3 74.7 74.9 76.8	126.6 128.2 129.9 74.0 75.5 78.8 79.3 78.9 78.3 65.3 68.2 72.7 74.8 74.6 74.9	73.6 76.2 78.9 79.0 79.3 76.7 63.8 70.2 72.8 74.7 74.6 75.9	74.1 77.0 78.3 78.8 78.8 74.1 65.4 71.3 73.6 74.2 74.6 76.4	75.0 77.9 78.9 78.6 78.7 69.9 66.8 71.9 74.1 74.3	7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7
apacity ercent of 017 output) 123 124 125 tilization ercent) 103 104 105 106 107 108 109 101 1012 1013 1014 1015	74.0 75.1 78.6 79.5 78.7 65.7 67.8 72.4 74.9 74.5 74.2	73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8 72.6 75.1 74.7 74.9	126.8 128.4 130.0 74.0 75.7 78.6 79.0 79.2 77.9 64.6 68.8 73.1 74.6 75.6 76.3	99.9 126.9 128.5 130.1 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	127.0 128.6 130.3 73.5 76.6 78.9 78.9 79.2 76.7 63.6 70.5 72.8 74.5 74.6 75.9	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	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	73.8 77.1 78.7 78.9 78.7 74.6 65.4 71.3 73.6 74.3 74.8 76.2	74.4 77.1 77.7 78.8 78.8 72.1 66.2 71.5 73.8 74.0 74.9 76.3	74.5 77.7 78.6 78.3 78.5 71.8 66.3 71.7 74.1 73.8 75.0 76.3	75.2 77.7 79.2 78.2 78.8 70.1 67.0 71.8 73.9 74.2 75.0 76.9	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	126.6 128.2 129.9 74.0 75.5 78.8 79.3 78.9 78.3 65.3 68.2 72.7 74.8 74.6 74.9	73.6 76.2 78.9 79.0 79.3 76.7 63.8 70.2 72.8 74.7 74.6 75.9	74.1 77.0 78.3 78.8 78.8 74.1 65.4 71.3 73.6 74.2 74.6 76.4	75.0 77.9 78.9 78.6 78.7 69.9 66.8 71.9 74.1 74.3 75.0 76.7	7.2 7.6 7.9 7.9 7.0 6.0 7.0 7.0 7.0 7.0
apacity sercent of 017 output) 023 024 025 tilization sercent) 003 004 005 006 007 008 009 0010 011 012	74.0 75.1 78.6 79.5 78.7 76.7 67.8 72.4 74.9	73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8 72.6 75.1 74.7	126.8 128.4 130.0 74.0 75.7 78.6 79.0 79.2 77.9 64.6 68.8 73.1 74.6 75.6	73.4 76.0 78.8 79.2 79.5 77.1 64.2 69.5 72.8 74.9	127.0 128.6 130.3 73.5 76.6 78.9 79.2 76.7 63.6 70.5 72.8 74.5 74.6 75.9	73.8 76.1 78.9 78.9 79.3 76.2 63.5 70.6 72.9 74.7 74.8 76.2	74.1 76.8 78.4 78.5 79.1 75.5 64.6 71.1 73.3 74.4 74.2 76.6	73.8 77.1 78.7 78.9 78.7 74.6 65.4 71.3 73.6 74.3	74.4 77.1 77.7 78.8 78.8 72.1 66.2 71.5 73.8 74.0 74.9 76.3	74.5 77.7 78.6 78.3 78.5 71.8 66.3 71.7 74.1 73.8 75.0 76.3	75.2 77.7 79.2 78.8 70.1 67.0 71.8 73.9 74.2 75.0 76.9	75.2 78.2 79.1 79.2 78.9 67.8 67.0 72.3 74.3 74.7 74.9 76.8	126.6 128.2 129.9 74.0 75.5 78.8 79.3 78.9 78.3 65.3 68.2 72.7 74.8 74.6 74.9	73.6 76.2 78.9 79.0 79.3 76.7 63.8 70.2 72.8 74.7 74.6 75.9	74.1 77.0 78.3 78.8 78.8 74.1 65.4 71.3 73.6 74.2 74.6 76.4	75.0 77.9 78.9 78.6 78.7 69.9 66.8 71.9 74.1 74.3	7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7
D25 dapacity bercent of 017 output) 023 024 025 tilization bercent) 003 004 005 006 007 008 009 010 011 012 013 014 015 016 017	74.0 75.1 78.6 79.5 78.7 65.7 67.8 72.4 74.5 74.2 76.2 75.8	99.8 126.6 128.2 129.9 73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8 72.6 75.1 74.7 74.9 75.9 75.8	126.8 128.4 130.0 74.0 75.7 78.6 79.0 79.2 77.9 64.6 68.8 73.1 74.6 74.6 75.6 75.6 75.8	99.9 126.9 128.5 130.1 73.4 76.0 78.8 79.5 77.1 64.2 69.5 72.8 74.9 74.4 75.6 76.6 76.5	127.0 128.6 130.3 73.5 76.6 78.9 79.2 76.7 63.6 70.5 72.8 74.5 74.6 75.9 76.5	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	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	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	74.4 77.1 77.7 78.8 78.8 72.1 66.2 71.5 73.8 74.0 74.9 76.3 76.5 76.5	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	75.2 77.7 79.2 78.8 70.1 67.0 71.8 73.9 74.2 75.0 76.9 76.1 75.6 77.6	75.2 78.2 79.1 79.2 78.9 67.8 67.0 72.3 74.7 74.9 76.8 75.6 77.5	126.6 128.2 129.9 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	73.6 76.2 78.9 79.0 79.3 76.7 63.8 70.2 72.8 74.7 74.6 75.9 76.6	74.1 77.0 78.3 78.8 78.8 74.1 65.4 71.3 73.6 74.2 74.6 76.4 75.5 76.5	75.0 77.9 78.9 78.6 78.7 69.9 66.8 71.9 74.1 74.3 75.0 76.7 75.6 77.5	7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7
page 1025 apacity bercent of 017 output) 023 024 025 tilization bercent) 003 004 005 006 007 008 009 010 011 012 013 014 015 016 017	74.0 75.1 78.6 79.5 78.7 78.7 65.7 67.8 72.4 74.9 74.5 74.2 76.5 76.2 75.8	73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8 72.6 75.1 74.7 74.9 75.9 75.8	126.8 128.4 130.0 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	73.4 76.0 78.8 79.2 79.5 77.1 64.2 69.5 72.8 74.9 74.4 75.6 76.5	127.0 128.6 130.3 73.5 76.6 78.9 79.2 76.7 63.6 70.5 72.8 74.5 74.6 75.9 76.5 75.5 76.5	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	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	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	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	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	75.2 77.7 79.2 78.8 70.1 67.0 71.8 73.9 74.2 75.0 76.9 76.1 75.6 77.6	75.2 78.2 79.1 79.2 78.9 67.8 67.0 72.3 74.3 74.7 74.9 76.8 75.6 77.5	126.6 128.2 129.9 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	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	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 76.5	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	7.7.7.7.7.7.7.7.7.7.7.7.7.7.7.7.7.7.7.
paracity percent of 017 output) 123 124 125 118 1200 1200 1200 1200 1200 1200 1200	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 75.8 77.4 78.0	73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8 72.6 75.1 74.7 74.9 75.8 78.1 77.6	126.8 128.4 130.0 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	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	127.0 128.6 130.3 73.5 76.6 78.9 79.2 76.7 63.6 70.5 72.8 74.5 74.6 75.9 76.5 75.5 76.5	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	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	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	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	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	75.2 77.7 79.2 78.8 70.1 67.0 71.8 73.9 74.2 75.0 76.9 76.1 75.6 77.6	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 77.5	126.6 128.2 129.9 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	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	74.1 77.0 78.3 78.8 78.8 74.1 65.4 71.3 73.6 74.2 74.6 76.4 76.6 75.5 76.5	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	7.777777777777777777777777777777777777
apacity percent of p17 output) 223 224 225 tilization percent) 203 204 205 tilization percent) 206 207 208 209 201 201 201 201 201 201 201	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	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	126.8 128.4 130.0 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	73.4 76.0 78.8 79.2 79.5 77.1 64.2 69.5 72.8 74.9 74.4 75.6 76.5 78.7 77.0 62.3	127.0 128.6 130.3 73.5 76.6 78.9 79.2 76.7 63.6 70.5 72.8 74.5 74.5 75.5 76.5 75.5 76.5	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 77.4 70.2	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 76.9 72.8	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	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	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	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	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 77.5	126.6 128.2 129.9 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	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	74.1 77.0 78.3 78.8 78.8 74.1 65.4 71.3 73.6 74.2 74.6 76.4 76.6 75.5 76.5	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	7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7
025 Capacity Descrept of 017 output) 023 024 025 Utilization Descrept) 003 004 005 006 007 008 009 0010 011 012 013 014 015 016 017 018 019 020 021	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 75.8 77.4 78.0	73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8 72.6 75.1 74.7 74.9 75.8 78.1 77.6	126.8 128.4 130.0 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	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	127.0 128.6 130.3 73.5 76.6 78.9 79.2 76.7 63.6 70.5 72.8 74.5 74.6 75.9 76.5 75.5 76.5	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	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	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	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	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	75.2 77.7 79.2 78.8 70.1 67.0 71.8 73.9 74.2 75.0 76.9 76.1 75.6 77.6	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 77.5	126.6 128.2 129.9 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	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	74.1 77.0 78.3 78.8 78.8 74.1 65.4 71.3 73.6 74.2 74.6 76.4 76.6 75.5 76.5	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	7: 7: 7: 7: 7: 7: 7: 7: 7: 7: 7: 7: 7: 7
025 Capacity overcent of 017 output) 023 024 025 Stilization overcent) 003 004 005 006 007 008 009 010 011 012 013 014 015 016 017 018 019 010 011 011 011	74.0 75.1 78.6 79.5 78.7 78.7 65.7 67.8 72.4 74.9 74.5 76.2 75.8 77.4 78.0 76.8 77.4 78.0 76.8 77.4	73.9 75.7 79.1 79.2 78.8 78.2 65.7 67.8 72.6 75.1 74.7 74.9 75.9 75.8 78.1 77.6 77.1 73.8 79.3	126.8 128.4 130.0 74.0 75.7 78.6 79.0 79.2 77.9 64.6 68.8 73.1 74.6 75.6 75.6 75.6 75.6 76.2 80.1	73.4 76.0 78.8 79.2 79.5 77.1 64.2 69.5 72.8 74.9 74.4 75.6 76.5 78.7 77.0 62.3 76.3 80.0	127.0 128.6 130.3 73.5 76.6 78.9 79.2 76.7 63.6 70.5 72.8 74.5 74.5 75.5 75.5 75.5 75.5 76.5	73.8 76.1 78.9 78.9 79.3 76.2 63.5 70.6 72.9 74.7 74.8 76.2 75.2 75.7 76.6 78.6 77.4 70.5 77.4 77.3 79.5	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 79.5	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 77.4 74.0 77.8 79.6	74.4 77.1 77.7 78.8 78.8 72.1 66.2 71.5 73.8 74.0 74.9 76.3 76.5 76.5 79.0 76.9 74.1 77.1	74.5 77.7 78.6 78.3 78.5 71.8 66.3 71.7 74.1 73.8 75.0 76.3 75.3 75.4 78.6 76.3 77.4 78.6 76.3 79.8	75.2 77.7 79.2 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 75.9 75.9 77.9	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 77.5	126.6 128.2 129.9 74.0 75.5 78.8 79.3 65.3 68.2 72.7 74.8 74.6 74.9 76.3 75.9 75.7	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 75.9 76.6 76.6 76.6 78.5 77.1 65.9 76.9 79.8	74.1 77.0 78.3 78.8 78.8 74.1 65.4 71.3 73.6 74.2 74.6 76.4 76.5 76.5 76.5	75.0 77.9 78.9 78.6 78.7 69.9 66.8 71.9 74.1 74.3 75.0 76.7 75.1 75.6 77.5	728 769 78 78 78 78 79 74 65 70 72 74 76 77 77 78
O25 Capacity vereent of 017 output) O23 O24 O25 Utilization	74.0 75.1 78.7 65.7 74.9 74.5 74.2 76.5 76.2 75.8 77.4 78.0 76.9 76.8	99.8 126.6 128.2 129.9 73.9 75.7 79.1 79.2 78.8 78.2 65.7 74.7 74.9 76.0 75.9 75.8 78.1 77.6 77.1 73.8	126.8 128.4 130.0 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	73.4 76.0 78.8 79.2 79.5 77.1 64.2 69.5 72.8 74.9 74.4 75.6 76.5 78.7 77.0 62.3 76.3	127.0 128.6 130.3 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	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	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	73.8 77.1 78.7 78.7 74.6 65.4 71.3 73.6 74.3 74.8 76.2 76.6 75.4 76.4 77.4 77.8	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	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	75.2 77.7 79.2 78.8 70.1 67.0 71.8 73.9 74.2 75.0 76.1 75.6 77.6 78.4 76.9 75.4 79.0	75.2 78.2 79.1 79.2 67.8 67.0 72.3 74.3 74.7 74.9 76.8 75.6 77.5 78.7 77.1 76.0	126.6 128.2 129.9 74.0 75.5 78.8 79.3 78.9 78.3 65.3 68.2 72.7 74.8 74.6 74.9 75.7 77.9 75.7	73.6 76.2 78.9 79.0 79.3 76.7 63.8 70.2 72.8 74.7 74.6 75.6 76.6 78.5 77.1 65.9 76.9	74.1 77.0 78.3 78.8 78.8 74.1 65.4 71.3 73.6 74.2 74.6 76.4 76.5 76.5 77.1 73.6 77.7	75.0 77.9 78.9 78.6 78.7 69.9 66.8 71.9 74.1 74.3 75.0 76.7 75.6 77.5 78.6 76.8 75.4 78.8	

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 Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
IP (percent																	
change) ²																	
2003	.8	.0	4	8	2	.0	.3	4	.6	.0	.6 .2	.0	1.5	-4.7	.8	2.6	.2
2004 2005	.0	.6 .6	4 2	.4 .1	.7 .0	8 .4	.8 4	.0 .2	.0 -2.2	.9 1.2	1.1	.7 .4	1.9 4.7	2.2 1.3	2.0 -2.9	5.4 2.5	1.8 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 2011	1.0 3	.2 4	.6 1.1	.3 3	1.4 .1	.2 .3	.3 .5	.3 .6	.3 1	3 .7	.0 .0	.9 .5	6.7 1.6	7.3 1.6	5.1 4.5	1.1 4.2	4.9 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 2017	.5 2	5 4	8 .6	.3 1.0	3 .1	.5 .2	.1 2	1 5	1 .1	.0 1.2	4 .2	.7 .2	-2.9 .3	-1.6 5.6	.8 -1.4	6 5.6	-2.4 1.1
2018 2019	7	.3 6	.5	1.1 6	-1.0 .1	.8	.1 5	.7	3	2 9	.1	.0 2	2.1 -4.0	4.7 -2.4	3.1	.7 -2.1	3.0
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 .6	2.8	.1	.9	.5	.5	.0	-1.1 .3	1.4	.9	1	1.0	6.4	3.0	4.9	4.3
2022	0.0	.0	.8	.2		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 2025	-1.1	1.3	2 2	2 .0	.6 2	.3	7	.5	4	4	2	1.1	-1.9 4.4	2.2	7	-1.4	4
IP (2017=100) 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	101.4	102.2	102.3	101.6	102.3	101.6	101.3	101.0	102.0	101.4	101.9	101.8	101.4	101.7
2025	101.9	102.9	102.7	102.7	102.5								102.5				
Capacity																	
(percent of																	
2017 output) 2023	128.0	128.3	128.6	128.9	129.1	129.4	129.6	129.8	129.9	130.1	130.2	130.3	128.3	129.1	129.8	130.2	129.4
2024	130.4	130.5	130.6	130.7	130.8	130.9	131.0	131.1	131.2	131.4	131.5	131.7	130.5	130.8	131.1	131.5	131.0
2025	131.8	132.0	132.1	132.3	132.4								132.0				
Utilization																	
(percent)	77.2	77.0	77.1	76.5	76.5	765	76.0	765	77.0	77.0	77.5	77.6	77.2	76.5	76.0	77.4	77.0
2003 2004	77.3	77.3 78.1	77.1 77.8	76.5 78.2	76.5 78.8	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	77.2	76.5 78.4	76.8 78.9	77.4 80.0	77.0
2005	80.7	81.2	81.0	81.0	81.0	81.3	80.8	80.9	79.1	79.9	80.7	80.9	80.9	81.1	80.3	80.5	80.7
2006	80.9	80.8	80.8	80.9	80.7	80.8	80.6	80.8	80.4	80.1	79.9	80.6	80.8	80.8	80.6	80.2	80.6
2007	80.2	80.8	80.7	81.1	81.1	81.2	81.1	81.2	81.4	81.0	81.4	81.4	80.6	81.2	81.2	81.3	81.1
2008	81.4	81.0	80.7	80.1	79.6	79.3	79.0	77.6	74.0	74.8	73.9	71.8	81.0	79.7	76.9	73.5	77.8
2009 2010	69.8	69.3 70.8	68.0 71.5	67.4 71.9	66.6 73.0	66.4 73.4	67.2 73.8	68.0 74.2	68.7 74.5	68.9 74.4	69.3 74.5	69.6 75.3	69.1 70.9	66.8 72.8	68.0 74.2	69.3 74.8	68.3
2011	75.2	74.9	75.8	75.5	75.6	75.8	76.1	76.5	76.4	76.9	76.8	77.1	75.3	75.6	76.3	76.9	76.0
2012	77.4	77.5	76.9	77.4	77.4	77.3	77.3	76.9	76.7	76.8	77.1	77.2	77.3	77.3	77.0	77.0	77.2
2013	77.1	77.4	77.6	77.5	77.4	77.5	77.2	77.6	78.0	77.8	78.0	78.1	77.4	77.5	77.6	78.0	77.6
2014	77.7	78.3	79.0	79.0	79.2	79.4	79.5	79.2	79.4	79.3	79.8	79.7	78.3	79.2	79.4	79.6	79.1
2015 2016	79.0 76.4	78.5 76.0	78.2 75.4	77.7 75.6	77.3 75.4	77.1 75.8	77.6 75.9	77.5 75.8	77.3 75.6	76.9 75.6	76.4 75.3	76.0 75.9	78.5 75.9	77.3 75.6	77.4 75.8	76.4 75.6	77.4
2017	75.7	75.4	75.9	76.7	76.8	77.0	76.9	76.6	76.8	77.8	78.1	78.3	75.7	76.8	76.8	78.1	76.9
	78.4	78.7	79.1	80.1	79.3	80.0	80.0	80.6	80.6	80.4	80.5	80.4	78.7	79.8	80.4	80.4	79.8
2018	79.8	79.3	79.1	78.7	78.8	78.8	78.3	78.8	78.5	77.8	78.2	77.9	79.5	78.8	78.5	78.0	78.7
		77.7	74.6	64.5	65.6	70.1	72.8	73.6	73.6	74.2	74.7	75.8	76.6	66.7	73.3	74.9	72.9
2019 2020	77.4		7/2		77.4	77.9	78.4	78.6	77.8	79.0	79.8	79.8	75.6	77.3	78.3	79.5	77.7
2019 2020 2021	76.5	74.0	76.3 81.0	76.5 81.1			81.0	80.9	81.0	80.8	80.4	79.2	80.4				80.6
2018 2019 2020 2021 2022	76.5 79.8	74.0 80.3	81.0	81.1	81.1	80.9	81.0	80.9	81.0	80.8	80.4	79.2	80.4	81.0	81.0	80.1	80.6
2019 2020 2021 2022 2023	76.5 79.8 79.8	74.0 80.3 79.6	81.0 79.4	81.1 79.5	81.1 79.2	80.9 78.5	78.9	78.8	78.9	78.2	78.4	78.1	79.6	81.0 79.1	81.0 78.9	80.1 78.2	78.9
2019 2020 2021 2022	76.5 79.8	74.0 80.3	81.0	81.1	81.1	80.9								81.0	81.0	80.1	

^{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																	
2003	.7	3	.0	9	1	.3	.1	7	.7	1	.8	2	.8	-4.2	.2	2.7	.0
2004 2005	2 .5	.7 .8	1 6	.4 .3	.7 .2	7	.9 5	.4 .4	1 -1.4	.9 1.4	1 .9	.7 .0	1.5 5.1	3.2 1.4	3.8 -2.1	4.9 4.7	2.0 3.1
2006	.8	4	0	.3	4	.1	4	.6	-1.4 1	5	.9	1.5	3.1	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	3	9	6	-1.2	7	8	-1.0	-1.3	-3.5	4	-2.3	-3.2	-3.9	-9.9	-14.1	-20.8	-5.9
2009	-3.3	1	-2.0	8	-1.1	3	1.6	1.1	1.0	.0	.9	2	-24.8	-11.5	8.8	6.5	-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 2012	.0	.1	.7 6	6 .4	.0 4	.1	.6 2	.4 1	.3 3	.6 3	2 .6	.6 .7	2.2 4.9	3 1	4.1 -1.5	3.9	2.5
2013	3	.4	1	4	.3	.2	9	.9	.1	.1	.0	2	2.5	4	4	1.4	.5
2014	-1.1	.9	.8	1	.2	.3	.4	6	.0	1	.7	2	-1.4	4.3	1.2	.2	.8
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	.2	1	4	1.1	2	.1	4	2	.0	1.1	.0	3	.0	2.7	-2.2	3.8	.3
2018	4	.9	1	.7	9	.6	.0	.2	.0	5	2	.3	.2	2.2	1.2	-1.7	1.1
2019 2020	-1.0 3	6 .2	3 -4.8	7 -15.8	.1 4.6	.5 8.0	8 3.6	.7 1.6	7 .0	9 .8	.8 .6	.1 .7	-5.1 -5.4	-3.3 -44.5	9 55.6	-2.2 7.9	-2.2 -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	6	.9	1.0	.0	3	4	.0	.2	.2	.1	7	-1.8	2.5	2.4	3	-3.0	2.6
2023	1.9	1	7	.6	1	6	.2	.1	.1	8	.5	1	.4	6	6	-1.7	7
2024	-1.3	1.4	.2	8	.7	.0	7	.5	3	7	.1	.4	-1.0	.9	9	-1.9	7
2025	5	1.2	.6	6	.1								3.6				
IP (2017=100)	20.0	00.0	00.2	00.0	00.7	00.1	00.2	00.4	00.5	07.7	20.2	00.0	00.7	00.5	00.4	00.0	00.4
2023	99.0	98.9	98.2	98.9	98.7	98.1	98.3	98.4	98.5	97.7	98.2	98.0	98.7	98.5	98.4	98.0	98.4
2024 2025	96.7 97.1	98.1 98.3	98.3 98.9	97.5 98.3	98.2 98.4	98.2	97.5	98.0	97.7	97.0	97.2	97.6	97.7 98.1	97.9	97.7	97.3	97.7
Capacity (percent of 2017 output) 2023 2024	125.4 126.7	125.5 126.8	125.6 126.9	125.7 127.0	125.8 127.1	125.9 127.2	126.0 127.3	126.1 127.4	126.2 127.5	126.4 127.6	126.5 127.8	126.6 127.9	125.5 126.8	125.8 127.1	126.1 127.4	126.5 127.8	126.0 127.3
2025 Utilization	128.0	128.1	128.2	128.3	128.4								128.1				
(percent) 2003	75.4	75.2	75.2	74.6	74.5	74.7	74.9	74.4	75.0	75.0	75.7	75.6	75.3	74.6	74.8	75.4	75.0
2004	75.5	76.1	76.1	76.4	77.0	76.5	77.3	77.6	77.6	78.3	78.3	78.8	75.9	76.7	77.5	78.5	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 79.3	78.1 78.9	78.1	79.1	79.4	78.9	78.6 79.4	78.4	78.8
2007	78.7	78.8	79.2	79.5	79.4	79.7	79.6	79.2			79.2	79.1	78.9	79.5		79.1	79.2
2008	78.9	78.2	77.7	76.8	76.3	75.8	75.0	74.1	71.5	71.3	69.7	67.6	78.3	76.3	73.6	69.5	74.4
2009 2010	65.4 67.4	65.4 67.3	64.2 68.3	63.7 69.0	63.1 70.0	63.0 70.1	64.2 70.6	65.0 70.8	65.8 71.0	65.9 71.2	66.7 71.4	66.7 71.8	65.0	63.3 69.7	65.0 70.8	66.4 71.4	64.9 69.9
2010	71.9	72.1	72.7	72.4	70.0	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	74.7	75.0	74.9	74.6	74.9	75.0	74.4	75.1	75.2	75.3	75.3	75.2	74.9	74.9	74.9	75.3	75.0
2014	74.4	75.2	75.8	75.9	76.1	76.4	76.8	76.4	76.5	76.5	77.1	77.0	75.1	76.1	76.6	76.8	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 2017	76.4 75.9	76.1 75.9	76.0 75.7	75.8 76.6	75.7 76.5	75.9 76.7	75.9 76.5	75.6 76.4	75.7 76.5	75.7 77.4	75.7 77.6	75.8 77.5	76.1 75.9	75.8 76.6	75.7 76.5	75.7 77.5	75.8 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	78.4 77.1	78.8 77.1	78.6 76.8	78.4 77.2
2019	77.0	77.0	73.6	62.0	64.9	70.2	70.9	74.0	76.9	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	79.5	79.7	79.7	79.1	77.6	79.3	79.7	79.5	78.8	79.3
2023	78.9	78.8	78.2	78.6	78.5	77.9	78.0	78.0	78.0	77.3	77.6	77.5	78.7	78.3	78.0	77.5	78.1
2024	76.4	77.4	77.5	76.8	77.2	77.2	76.6	76.9	76.6	76.0	76.1	76.3	77.1	77.1	76.7	76.1	76.7
2025	75.9	76.8	77.2	76.6	76.7								76.6				
													1				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									_					
	cha	_	2017=100							Percent change						
	2024	2025	2024	2025					2024	2025						
Item	Q4	Q1	Dec.	Jan.	Feb.	Mar.	Apr.	May	Dec.	Jan.	Feb.	Mar.	Apr.	May		
Total index																
85th percentile	-1.20	5.02	103.04	102.99	104.11	103.94	104.16	103.99	1.07	06	1.14	09	.37	.10		
Current estimate	-1.20	4.60	103.04	102.93	104.00	103.75	103.82	103.59	1.07	11	1.04	24	.07	22		
15th percentile	-1.20	4.15	103.04	102.88	103.89	103.57	103.52	103.17	1.07	16	.94	36	18	60		
Manufacturing (SIC)																
85th percentile	-1.68	4.40	98.94	98.65	99.91	100.58	100.09	100.32	.41	30	1.32	.71	34	.38		
Current estimate	-1.68	3.92	98.94	98.58	99.80	100.38	99.85	99.95	.41	36	1.23	.58	52	.10		
15th percentile	-1.68	3.40	98.94	98.53	99.67	100.16	99.55	99.39	.41	42	1.12	.44	73	26		
Mining																
85th percentile	.89	1.86	120.66	118.01	120.04	122.40	122.83	123.24	1.87	-2.20	1.85	2.22	.65	1.08		
Current estimate	.89	.93	120.66	117.87	119.71	121.86	121.51	121.69	1.87	-2.31	1.56	1.79	28	.15		
15th percentile	.89	06	120.66	117.69	119.34	121.32	120.26	119.97	1.87	-2.47	1.27	1.44	-1.02	84		
Electric and gas utilities																
85th percentile	61	15.60	108.83	113.74	112.83	104.03	110.44	107.37	4.63	4.51	78	-7.72	6.61	98		
Current estimate	61	14.46	108.83	113.73	112.75	103.44	108.46	105.33	4.63	4.50	86	-8.26	4.85	-2.88		
15th percentile	61	14.13	108.83	113.71	112.67	103.22	107.16	103.99	4.63	4.48	95	-8.47	3.40	-4.62		

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 $(0.05 \times 10\% = 0.5\%)$. 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.

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.