

# FEDERAL RESERVE statistical release



G-3 (402)

For Immediate release

## CAPACITY UTILIZATION

Manufacturing, Mining, Utilities, and Industrial Materials

June 18, 1984

Capacity utilization in manufacturing, mining, and utilities rose 0.2 percentage point in May to 81.7 percent, following a revised increase of 0.6 percentage point in April. The April rise previously had been estimated to be 0.9 percentage point. These estimates reflect both the April revisions to output and, to a lesser extent, revisions to manufacturing capacity back to December 1983.

Capacity utilization in manufacturing edged up 0.1 percentage point to 81.9 percent in May. This is the highest reading since March 1980, and about equals the 1967-1982 average rate. The rate for mining rose 1.3 percentage points to 75.4 percent in May, regaining the January level after 3 months of decline. Utilities operated at 83.8 percent of capacity, up 0.2 percentage point from the April level.

The utilization rate for industrial materials rose 0.4 percentage point in May to 83.3 percent of capacity. The rate for producers of metal materials rose more than a percentage point to 74.4 percent continuing the strong gains recorded so far this year and in 1983. Output of paper and pulp continued to press against capacity levels as it has since last fall. Capacity utilization rates for chemicals and energy materials rose in May but remained significantly below their respective 1967-1982 averages.

### Capacity Utilization: Summary

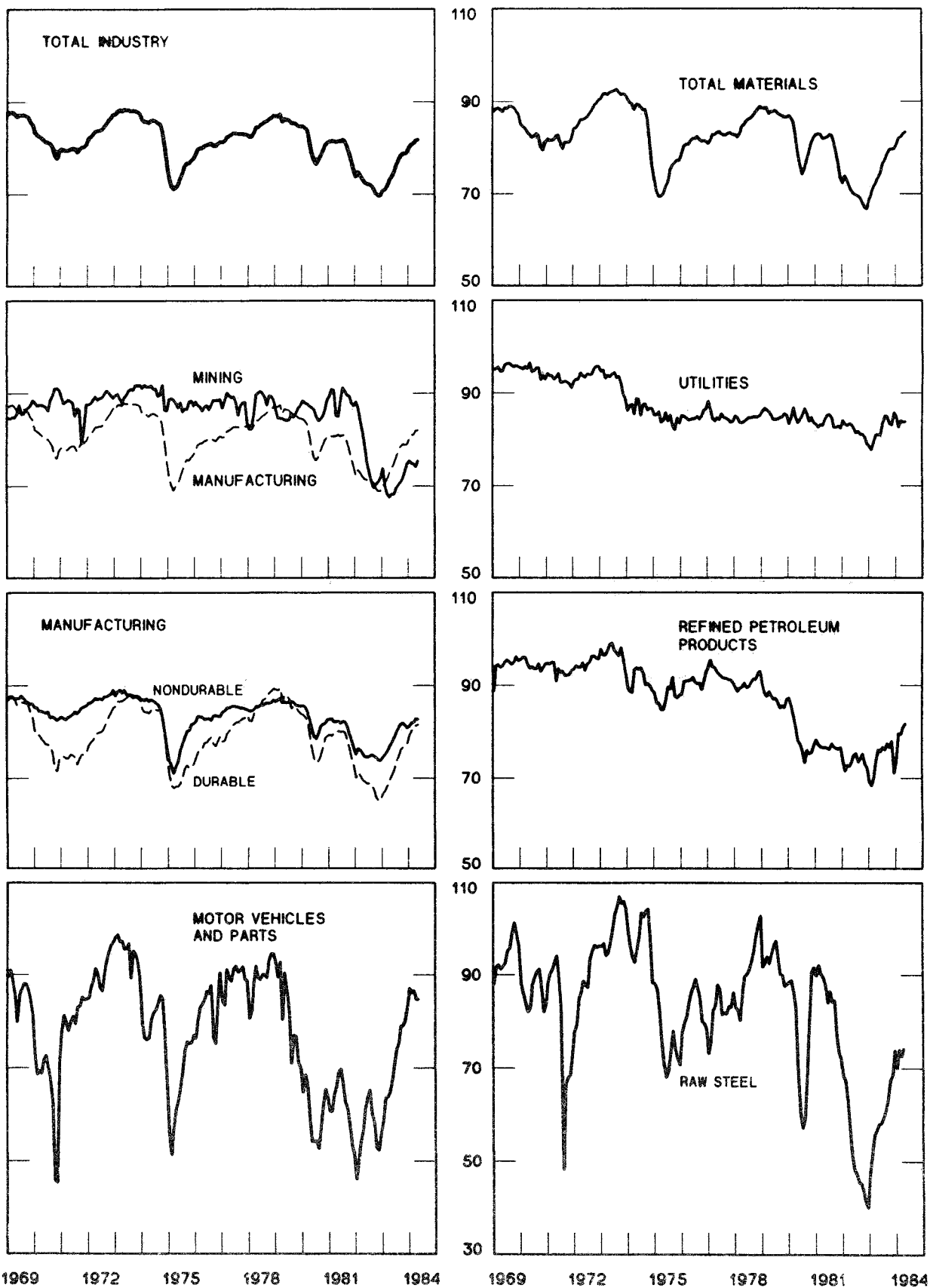
Percent of capacity, seasonally adjusted

Series	1973 HIGH	1975 LOW	1978 -80 HIGH	1982 LOW	1967 -82 AVER.	1984			
						FEB	MAR	APR	MAY
<b>Total Industry</b>	88.4	71.1	87.3	69.6	82.4.	80.7	80.9	81.5	81.7
Manufacturing	87.9	69.0	87.5	68.8	81.8.	80.9	81.0	81.8	81.9
Durable	87.9	67.6	89.4	64.8	80.5.	80.1	80.3	81.2	81.4
Nondurable	89.1	71.0	87.2	73.8	83.9.	81.8	81.9	82.7	82.6
Mining	91.8	86.0	90.4	69.6	86.5.	74.9	74.7	74.1	75.4
Utilities	94.9	82.0	86.8	79.0	88.6.	82.5	84.0	83.6	83.8
<b>Industrial Materials</b>	92.6	69.3	88.9	66.6	83.3.	81.9	82.2	82.9	83.3

# CAPACITY UTILIZATION

MAY DATA

SEASONALLY ADJUSTED, PERCENT



# MANUFACTURING, MINING AND UTILITIES

Table 1

## Capacity Utilization

Monthly, seasonally adjusted, percent of capacity

Series	1973 HIGH	1975 LOW	1978 -80 HIGH	1982 LOW	1967 -82 AYER.	YEAR AGO MONTH	1983				1984				
							SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
Total Industry	88.4	71.1	87.3	69.6	82.4	73.9	78.2	78.7	78.7	79.0	80.1	80.7	80.9	81.5	81.7
Manufacturing	87.9	69.0	87.5	68.8	81.8	73.8	78.4	78.9	78.8	78.9	80.1	80.9	81.0	81.8	81.9
Primary processing	93.7	68.2	91.4	66.2	84.0	74.6	79.7	80.4	80.0	79.2	80.6	82.2	82.2	82.9	83.3
Advanced processing	85.5	69.4	85.9	70.0	80.6	73.4	77.8	77.9	78.0	78.6	80.0	80.4	80.4	81.2	81.2
Durable manufacturing	87.9	67.6	89.4	64.8	80.5	70.7	76.0	76.5	76.8	77.4	79.2	80.1	80.3	81.2	81.4
Stone, clay and glass products	88.0	64.0	90.4	63.0	78.4	69.5	75.3	75.3	75.6	76.0	77.9	79.0	78.7	79.2	
Iron and steel, subtotal	103.3	69.2	97.5	38.8	82.3	57.8	65.1	70.2	66.0	61.9	67.6	72.3	71.3	73.8	
Nonferrous metals, subtotal	99.0	60.8	98.2	62.1	83.8	75.7	76.0	77.5	77.7	80.5	77.8	81.2	81.6	83.2	
Fabricated metal products	86.3	65.7	90.0	60.7	79.6	65.0	71.3	71.0	71.7	72.0	73.4	73.9	74.9	75.8	75.9
Nonelectrical machinery	88.3	71.8	83.1	61.6	79.8	64.0	68.8	69.1	70.0	71.0	73.2	73.7	74.0	75.5	75.8
Electrical machinery	88.7	62.3	90.6	74.7	80.0	80.4	86.5	87.5	88.0	88.2	89.9	91.1	90.9	91.9	92.0
Motor vehicles and parts	98.7	51.3	94.5	46.1	78.6	67.7	78.9	79.0	80.2	83.3	87.1	86.1	86.6	84.7	84.7
Autos	NA	NA	91.6	35.8	NA	64.0	80.5	77.2	77.1	81.7	83.6	83.3	84.1	79.2	77.9
Aerospace and misc. trans. eqp.	76.0	68.0	93.9	69.1	78.1	68.0	68.7	69.6	70.6	71.1	71.7	73.1	72.4	73.7	73.8
Instruments	89.6	73.7	92.3	73.1	83.5	72.9	75.9	75.5	75.4	76.0	77.4	77.7	78.0	79.0	79.3
Nondurable manufacturing	89.1	71.0	87.2	73.8	83.9	77.7	81.5	81.8	81.3	80.7	81.1	81.8	81.9	82.7	82.6
Foods	85.7	77.2	85.2	76.5	83.3	78.3	78.8	78.3	77.9	78.0	78.7	78.8	79.1		
Textile mill products	95.4	61.3	91.3	73.0	86.2	85.4	91.2	91.2	89.4	88.8	88.0	86.9	87.4	88.0	
Paper and products	96.7	69.1	95.1	84.2	89.6	91.6	96.3	96.8	97.0	95.7	96.7	99.0	97.5	97.5	
Chemicals and products	86.2	65.9	83.6	64.0	78.7	68.8	72.2	73.4	72.3	70.7	70.7	71.6	71.8	72.6	
Petroleum products	99.1	84.6	93.0	71.5	89.6	76.0	77.3	76.5	77.8	71.1	73.9	79.5	79.3	80.9	81.6
Rubber and plastics products	97.4	62.1	91.5	74.0	88.3	85.5	92.0	91.9	91.3	92.5	93.0	93.1	94.0	94.8	
Mining	91.8	86.0	90.4	69.6	86.5	68.2	70.8	71.5	73.2	74.7	75.4	74.9	74.7	74.1	75.4
Utilities	94.9	82.0	86.8	79.0	88.6	80.9	84.8	83.3	83.0	85.7	84.8	82.5	84.0	83.6	83.8
Electric utilities	97.6	82.1	87.0	77.9	89.8	80.0	83.9	82.1	81.7	84.7	84.0	81.0	82.7	82.2	82.5

Table 2

## Output, Capacity, and Capacity Utilization

Quarterly, seasonally adjusted

Series	OUTPUT					CAPACITY					UTILIZATION				
	1983				1984	1983				1984	1983				1984
	I	II	III	IV	I	I	II	III	IV	I	I	II	III	IV	I
Total Industry	138.5	144.5	151.8	155.5	159.8	194.6	195.5	196.4	197.3	198.4	71.2	73.9	77.3	78.8	80.5
Manufacturing	138.4	145.2	152.8	156.5	161.0	195.7	196.6	197.5	198.4	199.5	70.7	73.8	77.4	78.9	80.7
Primary processing	137.0	145.2	152.8	156.4	160.5	194.3	194.8	195.3	195.8	196.5	70.5	74.6	78.3	79.9	81.7
Advanced processing	139.7	145.1	152.8	156.1	161.6	196.5	197.6	198.6	199.7	201.1	71.1	73.5	76.9	78.2	80.3
Durable manufacturing	124.2	131.1	139.1	143.8	150.1	184.7	185.4	186.1	186.8	187.8	67.2	70.7	74.7	76.9	79.9
Stone, clay and glass products	131.8	139.7	148.5	152.8	159.5	199.6	200.4	201.1	201.9	203.0	66.0	69.7	73.8	75.7	78.5
Iron and steel, subtotal	63.4	69.2	75.0	79.2	83.7	120.1	120.1	120.1	120.1	119.0	52.8	57.6	62.5	66.0	70.4
Nonferrous metals, subtotal	102.3	111.2	110.9	116.6	119.0	148.4	148.4	148.4	148.4	148.4	68.9	74.9	74.7	78.6	80.2
Fabricated metal products	110.6	116.4	125.4	128.2	133.1	176.9	177.6	178.3	179.0	179.8	62.5	65.5	70.3	71.6	74.0
Nonelectrical machinery	137.6	146.2	156.6	161.8	170.7	226.7	228.1	229.6	231.0	232.0	60.7	64.1	68.2	70.0	73.6
Electrical machinery	170.7	179.9	191.1	200.0	209.0	222.4	224.1	225.7	227.4	230.4	76.8	80.3	84.7	87.9	90.6
Motor vehicles and parts	120.0	130.7	145.8	154.2	165.5	193.7	192.7	191.7	190.7	190.9	62.0	67.8	76.1	80.8	86.6
Autos	101.4	109.5	132.3	132.1	141.2	167.8	167.8	167.8	167.8	168.7	60.4	65.2	78.8	78.7	83.6
Aerospace and misc. trans. eqp.	97.9	98.1	99.2	103.0	106.6	143.1	144.2	145.2	146.3	147.2	68.4	68.0	68.3	70.4	72.4
Instruments	154.0	155.7	161.5	163.5	168.7	213.0	214.1	215.1	216.2	217.1	72.3	72.8	75.1	75.7	77.7
Nondurable manufacturing	159.0	165.5	172.7	174.8	176.7	211.7	212.8	213.9	215.0	216.5	75.1	77.8	80.7	81.3	81.6
Foods	153.1	155.7	159.1	157.5	160.2	197.2	198.7	200.2	201.7	203.1	77.6	78.3	79.5	78.1	78.9
Textile mill products	129.5	139.3	147.6	146.5	143.2	163.6	163.4	163.2	163.0	163.7	79.1	85.3	90.4	89.8	87.5
Paper and products	156.9	160.5	168.0	171.2	174.5	175.9	176.4	176.9	177.4	178.5	89.2	91.0	95.0	96.5	97.7
Chemicals and products	201.9	211.4	220.9	225.0	224.0	304.1	306.8	309.4	312.1	314.0	66.4	68.9	71.4	72.1	71.4
Petroleum products	113.3	122.5	124.2	121.1	124.5	163.8	163.0	162.1	161.3	160.4	69.2	75.2	76.6	75.1	77.6
Rubber and plastics products	264.1	288.3	304.6	311.4	319.8	336.0	336.8	337.7	338.5	342.3	78.6	85.6	90.2	91.9	93.4
Mining	116.7	112.3	116.1	121.0	124.2	165.2	165.3	165.4	165.5	165.7	70.6	67.9	70.2	73.1	75.0
Utilities	163.6	169.6	178.2	178.4	179.2	208.5	209.8	211.1	212.4	213.8	78.5	80.8	84.4	84.0	83.8
Electric utilities	185.2	192.5	203.6	203.0	203.8	239.2	241.1	243.0	244.9	246.9	77.4	79.8	83.8	82.8	82.5

# INDUSTRIAL MATERIALS

Table 3

## Capacity Utilization

Monthly, seasonally adjusted, percent of capacity

Series	1973 HIGH	1975 LOW	1978 -80 HIGH	1982 LOW	1967 -82 AVER.	YEAR AGO MONTH	1983				1984				
							SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
Industrial Materials	92.6	69.3	88.9	66.6	83.3	73.5	78.6	79.5	79.6	79.6	80.6	81.9	82.2	82.9	83.3
Durable goods materials	91.4	63.5	88.4	59.8	79.7	68.9	75.2	76.1	76.5	77.0	78.5	80.5	80.8	82.0	82.2
Metal materials	97.8	68.0	95.4	46.2	82.2	61.0	65.5	68.0	66.8	66.8	67.3	71.1	71.8	73.2	74.4
Raw steel	107.1	68.0	102.9	40.2	84.8	58.0	63.3	67.5	68.6	73.8	70.0	74.0	72.6	74.5	
Aluminum	96.8	73.4	97.9	57.9	90.6	63.0	73.6	75.1	76.0	79.0	58.9	82.0	84.3	85.7	
Nondurable goods materials	94.4	67.4	91.7	70.7	86.5	78.7	82.9	84.1	83.8	81.6	81.9	83.0	83.6	84.1	84.5
Textile, paper, and chemical materials	95.1	65.4	92.3	68.6	86.5	78.1	82.6	84.1	83.7	81.2	81.5	82.8	83.1	83.6	84.0
Paper materials	99.4	72.4	97.9	86.3	93.4	92.9	99.0	99.4	101.3	98.8	99.3	99.0	96.7	100.8	
Chemical materials	95.5	64.2	91.3	64.0	85.1	74.0	77.8	79.7	79.0	76.2	76.7	78.6	79.4	79.4	
Energy materials	94.5	84.4	88.9	78.5	88.5	78.5	81.6	81.4	81.8	83.6	84.4	84.1	84.1	83.8	84.1

Table 4

## Output, Capacity, and Capacity Utilization

Quarterly, seasonally adjusted

Series	OUTPUT					CAPACITY					UTILIZATION				
	1983 I	II	III	IV	1984 I	1983 I	II	III	IV	1984 I	1983 I	II	III	IV	1984 I
Industrial Materials	134.8	141.7	149.9	154.3	158.8	192.3	192.9	193.4	194.0	194.7	70.1	73.5	77.5	79.6	81.6
Durable goods materials	125.2	134.7	144.2	150.3	157.6	195.2	195.6	196.0	196.5	197.1	64.2	68.9	73.6	76.5	79.9
Metal materials	78.6	84.9	89.3	93.8	97.5	140.2	139.9	139.8	139.6	139.1	56.1	60.7	63.9	67.2	70.1
Raw steel	61.9	68.7	72.7	82.8	84.5	119.4	119.1	118.8	118.5	117.1	51.9	57.7	61.2	69.9	72.2
Aluminum	99.0	105.1	119.0	128.6	125.9	167.7	167.7	167.7	167.7	167.7	59.0	62.7	70.9	76.7	75.0
Nondurable goods materials	163.7	171.7	179.1	183.5	183.7	217.8	218.8	219.6	220.6	221.8	75.2	78.5	81.5	83.2	82.8
Textile, paper and chemical materials	169.3	179.6	188.0	193.2	193.2	229.4	230.7	231.6	232.7	234.2	73.8	77.9	81.2	83.0	82.5
Paper materials	149.9	153.4	162.8	167.4	165.7	165.3	166.1	166.9	167.7	168.5	90.7	92.3	97.5	99.8	98.3
Chemical materials	204.7	219.4	227.8	235.0	236.5	294.8	296.6	298.3	300.1	302.3	69.4	74.0	76.4	78.3	78.2
Energy materials	122.2	121.5	127.4	127.8	131.2	153.9	154.3	154.7	155.3	155.8	79.5	78.7	82.3	82.3	84.2

**Definition.** This release contains estimates of output, capacity, and capacity utilization for the nation's factories, mines, and electric and gas utilities. Estimates of actual output and capacity output are expressed as percentages of 1967 actual output. Estimates of capacity utilization are calculated as ratios, in percent, of the Federal Reserve's seasonally adjusted indexes of industrial production to the indexes of capacity. The capacity indexes are based on a variety of data, including capacity data in physical units, surveys of capacity growth and utilization rates, and estimates of capital stock growth. Instead of a formal definition of capacity the concept of practical capacity is applied, which is the greatest level of output that a plant can maintain within the framework of a realistic work pattern, taking account of normal downtime, and assuming sufficient availability of inputs to operate machinery and equipment in place. When the capacity indexes for individual industries are aggregated—for example to total manufacturing—no explicit account is taken of possible general equilibrium constraints such as emerging industry bottlenecks.

**Groupings.** Estimates of capacity and industrial production for manufacturing industries are aggregated to primary processing and advanced processing industries, to durable and nondurable manufacturing industries, and to total manufacturing. The mining, manufacturing, and utilities estimates aggregate to the total index. Industrial materials are items produced and used as inputs by manufacturing plants, mines, and utilities. Industrial materials include many of the items included in the primary processing grouping of manufacturing, as well as some of the output of the advanced processing industries, mines, and utilities—such as iron ore, crude oil, semiconductors, and electricity sold to industry.

**Perspective.** The historical highs and lows in capacity utilization shown in the tables above are specific to each series and did not all occur in the same month. 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 mining, manufacturing, and utilities as a whole, and for total manufacturing, utilization rates as high as 90 percent have been exceeded only in wartime.

**Revisions.** The first estimates for a month are published about the 17th of the following month. These estimates may revise in each of the next three months as new data become available. After the fourth month no further revisions are undertaken until an annual or benchmark revision. The median of the revisions in the total manufacturing utilization rate between the first and fourth estimate is 0.3 of a percentage point; that is, in about half of the cases, the absolute value of the revision from the first to the fourth estimate is less than 0.3 of a percentage point.

**Sources.** The methodology used to estimate the series is discussed in *New Federal Reserve Measures of Capacity and Capacity Utilization*, Federal Reserve Bulletin, July 1983. Revised data from 1967–82 are included in the statistical supplement to the July 1983 capacity utilization release, which may be obtained from Publications Services, Board of Governors of the Federal Reserve System, Washington, D.C. 20551.

**Rounding.** The rounding algorithms applied to the capacity, output, and utilization rate series are independent. Aggregates are derived from unrounded detailed components.

**Release schedule for 1984.** Approximately 11 a.m. on February 16, March 16, April 16, May 16, June 18, July 16, August 16, September 17, October 17, November 16, and December 17.