

# FEDERAL RESERVE statistical release



G.3 (402)

For Immediate release

## CAPACITY UTILIZATION

May 16, 1985

### Manufacturing, Mining, Utilities, and Industrial Materials

Capacity utilization in manufacturing, mining, and utilities fell 0.5 percentage point in April to 80.6 percent. The decline in the manufacturing operating rate was also 0.5 percentage point, but the mining rate dropped 1.2 percentage points while the utilities operating rate remained unchanged. Revised estimates indicate that utilization for total industry held steady during the first three months of 1985 at rates near 81.1 percent.

Utilization in both durable and nondurable manufacturing decreased in April. The major contributors to the decline in durables were electrical machinery and motor vehicles and parts. The utilization rates in both, however, were still well above their 1967-82 average. Operating rates remained about the same in several industries, including aerospace and miscellaneous transportation equipment and instruments. Only petroleum products showed a substantial utilization gain in April.

Capacity utilization in materials production fell 0.6 percentage point in April. Utilization in durable and energy materials production fell, and the nondurable materials operating rate edged slightly lower. The overall materials utilization rate has now fallen 3.0 percentage points since August 1984, its high during that year.

### Capacity Utilization: Summary

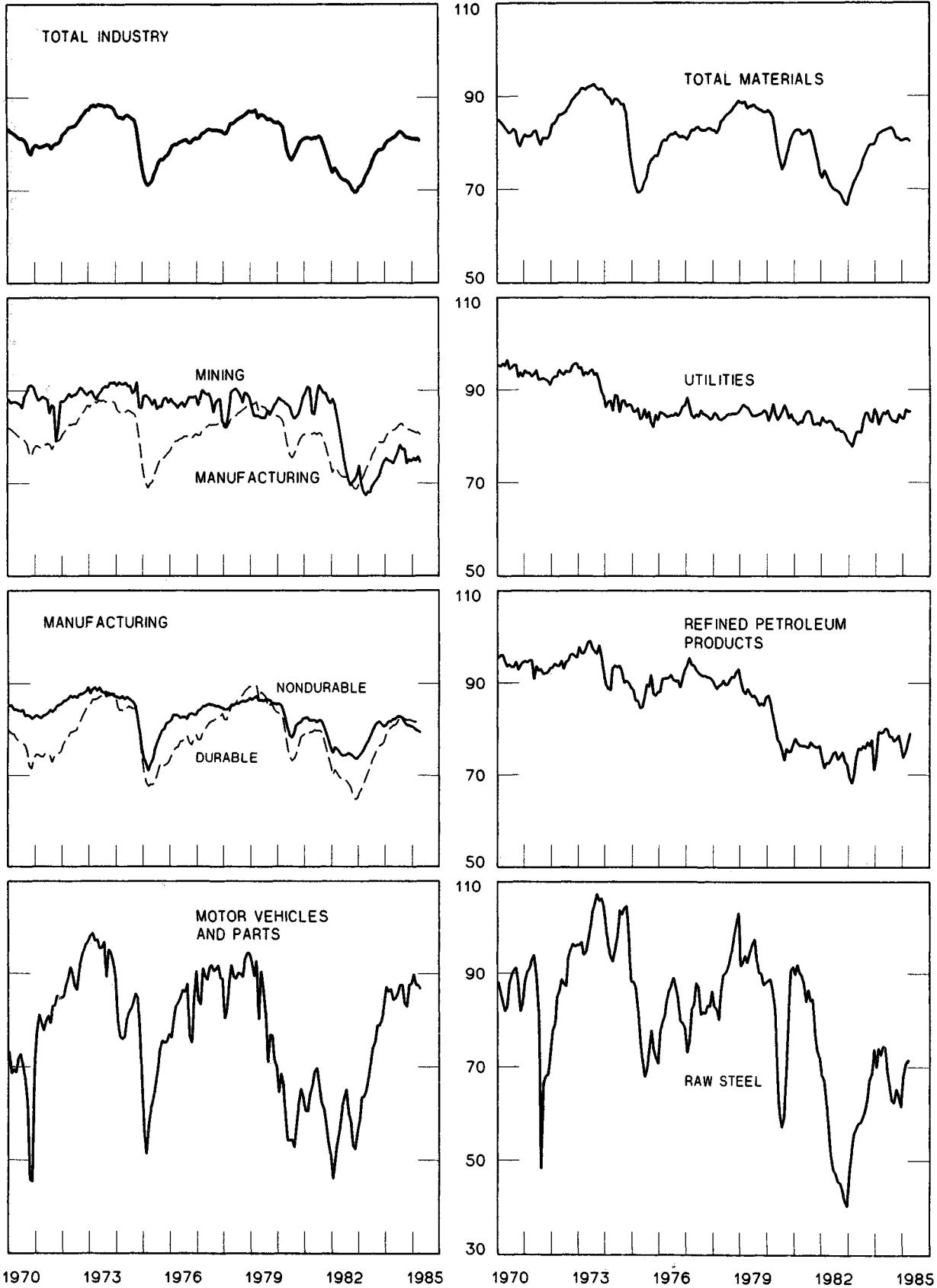
Percent of capacity, seasonally adjusted

Series	1973 HIGH	1975 LOW	1978 -80 HIGH	1982 LOW	1967 -82 AVER.	1985			
						JAN	FEB	MAR	APR
<b>Total Industry</b>	88.4	71.1	87.3	69.6	82.4.	81.1	81.0	81.1	80.6
Manufacturing	87.9	69.0	87.5	68.8	81.8.	81.2	80.9	81.0	80.5
Durable	87.9	67.6	89.4	64.8	80.5.	81.8	81.7	81.9	81.4
Nondurable	89.1	71.0	87.2	73.8	83.9.	80.6	80.0	79.8	79.5
Mining	91.8	86.0	90.4	69.6	86.5.	75.4	74.9	75.7	74.5
Utilities	94.9	82.0	86.8	79.0	88.6.	83.7	85.6	85.2	85.2
<b>Industrial Materials</b>	92.6	69.3	88.9	66.6	83.3.	80.5	80.8	80.8	80.2

# CAPACITY UTILIZATION

APRIL DATA

SEASONALLY ADJUSTED, PERCENT



# MANUFACTURING, MINING AND UTILITIES

Table 1

## Capacity Utilization Monthly, seasonally adjusted, percent of capacity

Series	1973	1975	1978	1982	1967	YEAR	1984					1985			
	HIGH	LOW	-80	LOW	-82	AGO	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR
<b>Total Industry</b>	88.4	71.1	87.3	69.6	82.4	81.3	82.5	81.9	81.4	81.4	81.2	81.1	81.0	81.1	80.6
<b>Manufacturing</b>	87.9	69.0	87.5	68.8	81.8	81.5	82.8	82.0	81.7	81.6	81.4	81.2	80.9	81.0	80.5
Primary processing	93.7	68.2	91.4	66.2	84.0	82.2	82.1	81.5	81.2	80.6	79.5	80.1	80.7	80.7	80.4
Advanced processing	85.5	69.4	85.9	70.0	80.6	81.0	83.1	82.4	81.8	82.0	82.2	82.0	81.3	81.2	80.7
<b>Durable manufacturing</b>	87.9	67.6	89.4	64.8	80.5	80.9	82.9	82.3	82.1	82.2	82.0	81.8	81.7	81.9	81.4
Stone, clay and glass products	88.0	64.0	90.4	63.0	78.4	78.4	77.7	76.6	77.4	76.7	76.5	76.5	76.8	77.0	77.0
Iron and steel, subtotal	103.3	69.2	97.5	38.8	82.3	71.5	67.9	68.1	66.0	65.9	64.5	64.8	66.9	71.4	
Nonferrous metals, subtotal	99.0	60.8	98.2	62.1	83.8	85.4	83.6	83.3	84.2	82.8	78.0	81.5	82.9	81.9	
Fabricated metal products	86.3	65.7	90.0	60.7	79.6	75.1	77.2	76.8	77.4	76.3	76.8	76.3	77.4	77.8	77.9
Nonelectrical machinery	88.3	71.8	83.1	61.6	79.8	75.3	81.1	80.5	80.4	80.8	80.4	80.7	80.2	80.1	79.8
Electrical machinery	88.7	62.3	90.6	74.7	80.0	91.9	92.5	92.5	91.7	91.3	91.5	89.2	88.4	88.5	86.9
Motor vehicles and parts	98.7	51.3	94.5	46.1	78.6	84.4	87.5	83.6	83.0	87.5	87.8	89.8	87.6	87.4	86.7
Autos	NA	NA	91.6	35.8	NA	79.2	77.9	70.0	71.2	79.8	81.6	86.5	82.5	83.5	81.0
Aerospace and misc. trans. eqp.	76.0	68.0	93.9	69.1	78.1	73.6	76.5	76.5	75.8	75.8	77.5	77.9	78.6	79.5	79.6
Instruments	89.6	73.7	92.3	73.1	83.5	78.6	81.1	81.5	80.5	80.8	82.0	81.4	81.1	81.8	81.8
<b>Nondurable manufacturing</b>	89.1	71.0	87.2	73.8	83.9	82.3	82.6	81.7	81.1	81.0	80.8	80.6	80.0	79.8	79.5
Foods	85.7	77.2	85.2	76.5	83.3	79.9	79.9	79.5	79.2	78.5	78.8	79.1	78.1		
Textile mill products	95.4	61.3	91.3	73.0	86.2	85.0	84.1	81.0	79.5	78.5	78.3	77.9	77.7	77.5	
Paper and products	96.7	69.1	95.1	84.2	89.6	96.0	97.3	97.4	95.0	94.4	94.5	94.6	95.5	94.8	
Chemicals and products	86.2	65.9	83.6	64.0	78.7	72.5	73.2	72.9	71.9	72.5	71.7	71.5	71.3	71.0	
Petroleum products	99.1	84.6	93.0	71.5	89.6	79.4	78.5	77.5	77.9	78.7	76.5	73.9	75.1	77.2	79.3
Rubber and plastics products	97.4	62.1	91.5	74.0	88.3	94.6	96.0	94.5	94.0	91.6	90.8	91.2	90.6	90.5	
<b>Mining</b>	91.8	86.0	90.4	69.6	86.5	74.3	77.3	77.4	74.3	75.1	74.8	75.4	74.9	75.7	74.5
<b>Utilities</b>	94.9	82.0	86.8	79.0	88.6	85.0	83.3	83.2	82.9	84.6	83.9	83.7	85.6	85.2	85.2
Electric utilities	97.6	82.1	87.0	77.9	89.8	83.6	81.3	81.2	80.8	82.7	80.9	81.3	83.8	83.1	83.1

Table 2

## Output, Capacity, and Capacity Utilization Quarterly, seasonally adjusted

Series	OUTPUT				1985	CAPACITY				1985	UTILIZATION				1985
	1984	1984	1984	1984		1984	1984	1984	1984		1984	1984	1984	1984	
<b>Total Industry</b>	159.8	163.1	165.6	164.7	165.4	198.4	199.7	201.1	202.4	204.0	60.5	61.7	62.4	61.3	61.1
<b>Manufacturing</b>	161.0	164.4	167.2	166.5	166.7	199.5	201.0	202.5	204.0	205.7	60.7	61.8	62.5	61.6	61.0
Primary processing	160.5	162.5	162.2	159.8	160.8	196.5	197.2	198.0	198.7	199.7	61.7	62.4	61.9	60.4	60.5
Advanced processing	161.7	165.2	169.7	169.6	170.3	201.1	203.0	204.9	206.8	208.9	60.3	61.4	62.8	62.0	61.5
<b>Durable manufacturing</b>	150.2	153.6	157.4	157.4	158.2	187.8	189.1	190.4	191.7	193.4	79.9	81.2	82.6	82.1	81.8
Stone, clay and glass products	159.5	160.1	159.6	159.3	160.3	203.0	204.4	205.9	207.3	208.7	78.5	78.3	77.5	76.9	76.8
Iron and steel, subtotal	83.7	83.7	77.2	73.5	75.3	119.0	116.7	114.5	112.2	111.0	70.4	71.7	67.5	65.5	67.7
Nonferrous metals, subtotal	119.0	124.9	124.7	121.2	121.9	148.4	148.4	148.4	148.4	148.4	80.2	84.2	84.0	81.7	82.1
Fabricated metal products	133.1	136.9	140.0	140.0	141.3	179.8	180.6	181.4	182.2	183.1	74.0	75.8	77.2	76.8	77.2
Nonelectrical machinery	170.8	178.6	188.0	188.3	188.7	232.0	232.6	233.1	233.7	234.9	73.6	76.8	80.6	80.5	80.3
Electrical machinery	209.4	215.0	221.9	223.1	220.5	230.4	234.9	239.3	243.8	248.5	90.8	91.5	92.7	91.5	88.7
Motor vehicles and parts	165.5	163.4	167.0	168.1	173.7	190.9	192.3	193.8	195.2	196.8	86.6	84.9	86.2	86.1	88.3
Autos	141.2	134.5	131.4	135.0	147.8	168.7	170.5	172.3	174.1	175.6	83.6	78.9	76.2	77.5	84.1
Aerospace and misc. trans. eqp.	106.8	109.4	114.0	114.7	118.7	147.2	148.1	149.0	149.9	150.8	72.6	73.8	76.5	76.5	78.7
Instruments	168.7	172.4	177.5	178.1	179.7	217.1	217.9	218.8	219.6	220.6	77.7	79.1	81.2	81.1	81.4
<b>Nondurable manufacturing</b>	176.7	180.1	181.3	179.5	179.1	216.5	218.2	220.0	221.7	223.5	81.6	82.5	82.4	81.0	80.1
Foods	160.2	164.1	164.6	163.7	163.1	203.1	204.6	206.1	207.6	208.7	78.9	80.2	79.9	78.8	78.8
Textile mill products	143.2	140.4	138.5	132.4	131.4	163.7	165.2	166.7	168.2	169.1	87.5	85.0	83.1	78.8	77.7
Paper and products	174.2	173.7	177.0	173.4	175.4	178.5	180.1	181.6	183.2	184.7	97.6	96.5	97.4	94.6	95.0
Chemicals and products	223.8	229.1	231.5	228.8	227.4	314.0	315.1	316.3	317.4	319.0	71.3	72.7	73.2	72.1	71.3
Petroleum products	124.5	127.4	123.9	122.4	118.3	160.4	159.4	158.5	157.5	156.8	77.6	79.9	78.2	77.7	75.4
Rubber and plastics products	319.8	334.4	340.4	334.0	334.6	342.3	349.1	355.8	362.6	369.0	93.4	95.8	95.7	92.1	90.7
<b>Mining</b>	124.2	125.1	129.0	124.3	125.5	165.7	165.9	166.1	166.3	166.5	75.0	75.4	77.7	74.7	75.4
<b>Utilities</b>	179.2	183.1	181.1	183.0	186.5	213.8	215.3	216.8	218.3	219.8	83.8	85.0	83.5	83.8	84.8
Electric utilities	203.8	208.0	204.8	206.1	210.9	246.9	248.9	251.0	253.0	255.0	82.5	83.6	81.6	81.4	82.7

# INDUSTRIAL MATERIALS

Table 3

## Capacity Utilization

Monthly, seasonally adjusted, percent of capacity

Series	1973	1975	1978	1982	1967	YEAR	1984					1985			
	HIGH	LOW	-80 HIGH	LOW	-82 AVER.	AGO MONTH	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR
Industrial Materials	92.6	69.3	88.9	66.6	83.3	82.5	83.2	82.4	81.0	80.9	80.4	80.5	80.8	80.8	80.2
Durable goods materials	91.4	63.5	88.4	59.8	79.7	81.5	82.9	82.2	81.3	80.8	80.0	80.0	79.9	79.8	79.0
Metal materials	97.8	68.0	95.4	46.2	82.2	73.0	70.8	69.8	67.6	66.7	64.5	65.2	67.7	68.8	68.4
Raw steel	107.1	68.0	102.9	40.2	84.8	74.5	62.9	62.5	65.4	64.0	61.6	68.2	70.7	71.5	
Aluminum	96.8	73.4	97.9	57.9	90.6	85.7	82.5	81.0	79.4	77.9	77.4	76.6	75.7	74.5	
Nondurable goods materials	94.4	67.4	91.7	70.7	86.5	83.2	82.9	81.5	80.5	80.2	79.4	79.2	79.2	79.5	79.3
Textile, paper, and chemical materials	95.1	65.4	92.3	68.6	86.5	82.7	82.4	80.5	79.7	79.1	78.0	78.0	78.2	78.4	78.2
Paper materials	99.4	72.4	97.9	86.3	93.4	98.5	99.7	99.7	98.7	97.2	98.5	98.2	96.4	95.9	
Chemical materials	95.5	64.2	91.3	64.0	85.1	78.9	78.1	76.1	75.7	75.7	73.9	74.3	74.7	75.0	
Energy materials	94.5	84.4	88.9	78.5	88.5	84.5	84.7	84.3	81.0	82.1	83.2	84.2	85.7	86.0	85.3

Table 4

## Output, Capacity, and Capacity Utilization

Quarterly, seasonally adjusted

Series	OUTPUT					CAPACITY					UTILIZATION				
	1984 I	II	III	IV	1985 I	1984 I	II	III	IV	1985 I	1984 I	II	III	IV	1985 I
Industrial Materials	158.8	162.1	163.4	160.2	161.2	194.7	195.9	197.2	198.4	199.7	81.6	82.7	82.9	80.7	80.7
Durable goods materials	157.6	162.0	164.6	162.1	161.8	197.1	198.3	199.5	200.8	202.4	79.9	81.7	82.5	80.7	79.9
Metal materials	97.3	100.3	97.2	91.0	92.0	139.1	138.5	137.9	137.3	136.8	70.0	72.4	70.5	66.3	67.2
Raw steel	84.5	83.1	71.6	69.9	76.1	117.1	114.6	112.2	109.7	108.3	72.2	72.5	63.8	63.7	70.2
Aluminum	137.5	144.9	138.1	131.2	126.6	167.7	167.7	167.7	167.7	167.5	82.0	86.4	82.3	78.2	75.6
Nondurable goods materials	183.7	186.6	185.7	181.5	181.1	221.8	223.4	225.2	226.9	228.4	82.8	83.5	82.5	80.0	79.3
Textile, paper and chemical materials	193.2	195.9	194.9	189.6	189.2	234.2	236.2	238.2	240.3	242.0	82.5	82.9	81.8	79.0	78.2
Paper materials	165.8	168.5	171.0	168.3	167.1	168.5	169.5	170.5	171.5	172.5	98.4	99.4	100.3	98.1	96.8
Chemical materials	236.7	240.4	238.4	233.5	234.0	302.3	305.2	308.0	310.9	313.5	78.3	78.8	77.4	75.1	74.7
Energy materials	131.2	132.4	133.1	129.4	135.1	155.8	156.4	157.0	157.6	158.4	84.2	84.6	84.8	82.1	85.3

**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 non-durable 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 1985.** Approximately 11 a.m. on January 16, February 19, March 18, April 17, May 16, June 17, July 17, August 16, September 16, October 17, November 18, and December 16.