



# FEDERAL RESERVE

## statistical release

G.12.3

For release at 9:30 a.m. (EDT)  
August 15, 1978

Industrial production increased by an estimated 0.5 per cent in July, following revised 0.5 per cent rises in both May and June and a 1.6 per cent gain in April. Increases in output of equipment, construction supplies, and durable goods materials continued to be large in July; and there was a moderate rise in production of consumer goods, following declines in the two preceding months. At 145.3 per cent of the 1967 average, the July index is 4.8 per cent higher than a year earlier; the index for consumer goods is 1.3 per cent higher, and the index for equipment is 7.2 per cent higher than a year ago.

Products. Output of consumer goods in July increased 0.3 per cent, as auto assemblies--at a seasonally adjusted annual rate of 9.4 million units--increased fractionally from the 9.3 million rate in June. Production of durable home goods rose further in July, but by less than in the preceding month; output of consumer nondurable goods increased in July following two months of decline, but the level remained below that of April. Output of business equipment increased by 0.9 per cent in July and production of intermediate products, especially construction supplies, continued to rise.

Materials. Output of durable goods materials increased 1.0 per cent in July, reflecting continued gains in steel and equipment parts. Nondurable goods materials output was unchanged, as the decline in strike-affected paper materials offset gains in other nondurable goods materials. The output of materials was 5.8 per cent higher than in July 1977.

### INDUSTRIAL PRODUCTION: SUMMARY (Seasonally Adjusted)

Indexes, 1967=100	1978		Per cent changes						
	June (p)	July (e)	Feb.	Mar.	Apr.	May.	June	July	July July 77
Total	144.6	145.3	.3	1.2	1.6	.5	.5	.5	4.8
Products, total	143.7	144.3	.8	1.4	1.0	.1	.4	.4	4.0
Final Products	140.9	141.6	1.1	1.8	1.2	.0	.3	.5	3.5
Consumer Goods	146.9	147.3	1.4	1.5	1.1	-.3	-.1	.3	1.3
Durable	161.2	161.6	3.2	4.2	2.7	-.9	.6	.2	2.3
Nondurable	141.1	141.6	.6	.4	.4	-.1	-.4	.4	.9
Business Equipment	161.3	162.8	1.0	2.1	1.2	.6	.7	.9	7.7
Intermediate Products	154.3	154.8	-.1	.0	.5	.5	.9	.3	5.8
Construction Supplies	151.3	152.4	-.4	-.5	.4	1.3	.6	.7	7.9
Materials	146.2	146.9	-.4	.9	2.7	1.0	.7	.5	5.8

p--preliminary      e--estimate



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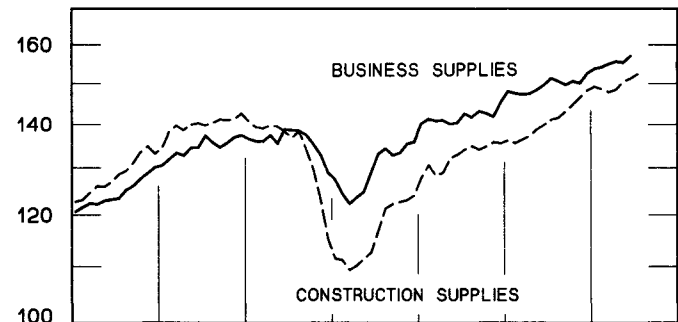
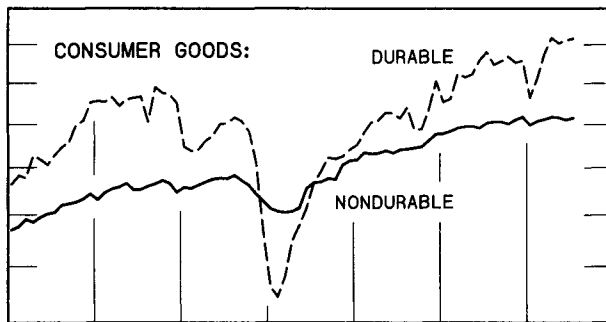
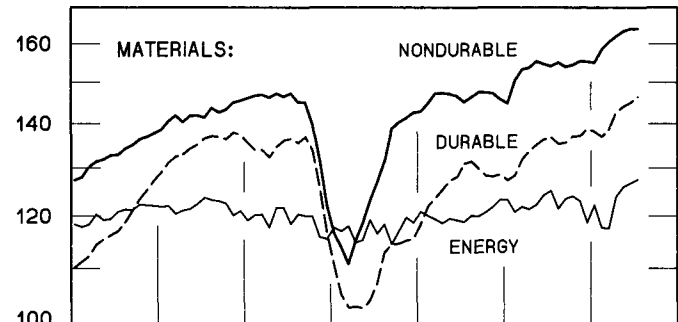
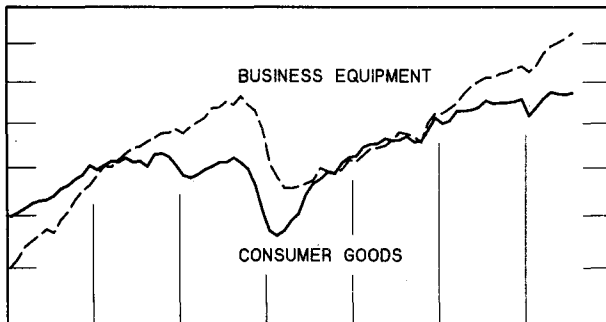
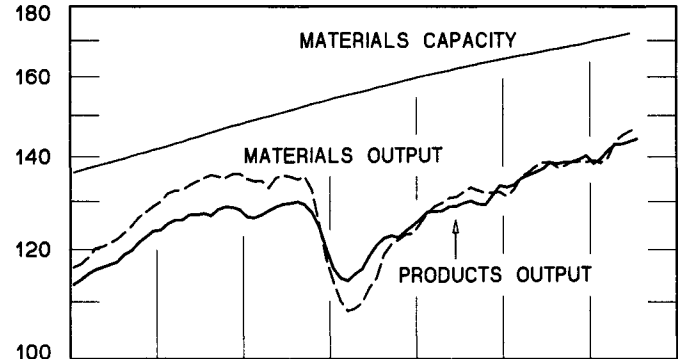
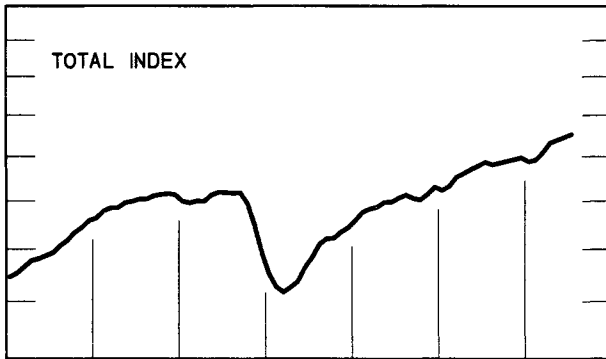
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### INDUSTRIAL PRODUCTION

JULY DATA

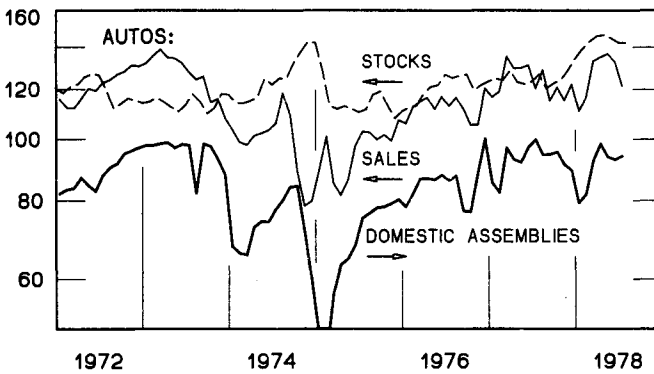
SEASONALLY ADJUSTED, RATIO SCALE, 1967=100



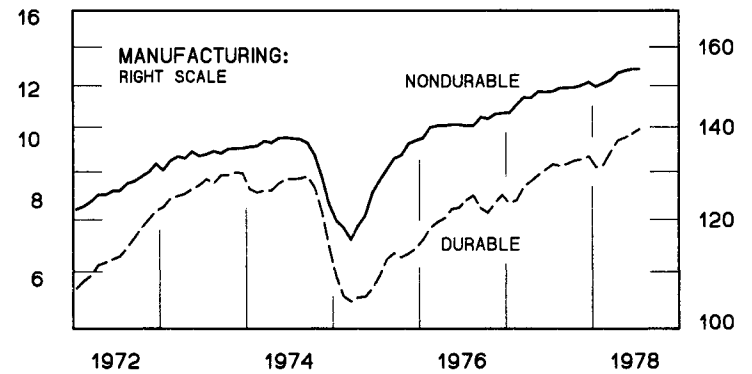
1969-70=100

ANNUAL RATE, MILLIONS OF UNITS

1967=100



AUTOS: SALES AND STOCKS INCLUDE IMPORTS









**Table 5.**  
**PRODUCTION BY INDUSTRY GROUPINGS**

Not Seasonally Adjusted, 1967=100

MAJOR INDUSTRY GROUPINGS	SIC CODE	1967		1977					1978							
		PRO- POR- TION	1977 AVG.	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY
<b>MINING AND UTILITIES</b>																
MINING		12.05	136.2	140.6	138.8	137.3	134.1	132.9	135.0	142.0	139.9	136.3	137.0	136.9	141.2	144.8
UTILITIES		5.69	156.5	166.9	164.5	157.2	148.7	146.9	158.7	173.9	169.5	157.4	148.2	146.2	154.7	165.6
<b>MANUFACTURING</b>																
NONDURABLE		87.95	137.1	133.2	138.2	142.6	144.1	140.3	134.8	133.9	139.6	142.1	145.1	145.0	148.9	140.1
DURABLE		35.97	148.1	144.1	154.1	156.2	155.8	151.0	143.0	142.8	148.7	150.5	153.3	153.4	158.6	149.5
		51.98	129.5	125.6	127.2	133.7	136.0	132.9	129.2	127.8	133.2	136.3	139.5	139.2	142.4	133.5
<b>MINING</b>																
METAL MINING	10	.51	105.4	99.4	74.1	77.4	82.1	82.1	97.3	109.6	113.3	120.5	121.1	130.0	132.0	
COAL	11,12	.69	118.0	104.8	112.4	137.4	141.3	137.4	67.6	53.3	59.4	82.4	137.4	138.7	137.4	119.3
OIL AND GAS EXTRACTION	13	4.40	118.0	119.5	118.8	119.7	120.2	120.0	120.6	122.2	121.1	121.8	125.6	126.0	126.7	127.5
STONE AND EARTH MINERALS	14	.75	124.9	125.4	127.5	129.9	133.6	132.4	126.7	119.9	117.1	121.8	129.7	133.6	134.8	
<b>NONDURABLE MANUFACTURES</b>																
FOODS	20	8.75	137.9	136.4	144.2	148.1	146.4	141.6	135.3	133.5	135.9	137.0	140.5	138.7	144.0	
TOBACCO PRODUCTS	21	.67	114.3	98.2	125.3	120.1	126.2	120.2	99.4	115.2	125.6	116.6	115.4	117.8		
TEXTILE MILL PRODUCTS	22	2.68	137.1	120.9	142.2	143.7	146.3	141.5	132.0	131.1	137.5	137.6	143.0	142.7	145.2	
APPAREL PRODUCTS	23	3.31	124.2	109.3	131.5	136.3	135.0	120.9	110.1	112.4	125.1	126.5	130.2	125.5		
PAPER AND PRODUCTS	26	3.21	137.4	127.9	140.2	137.4	143.0	138.5	126.3	137.7	148.2	150.5	151.8	150.2	152.2	134.0
PRINTING AND PUBLISHING	27	4.72	124.7	130.5	136.3	136.3	132.6	128.0	121.1	116.4	118.9	121.4	123.5	125.9	132.4	134.4
CHEMICALS AND PRODUCTS	28	7.74	180.7	183.2	185.7	187.5	185.9	182.9	176.0	174.8	179.3	183.9	186.8	190.0	195.9	
PETROLEUM PRODUCTS	29	1.79	141.0	145.0	145.5	145.0	141.8	143.5	138.5	136.8	133.9	134.5	136.0	140.2	145.3	147.1
RUBBER & PLASTICS PRODUCTS	30	2.24	232.2	213.9	233.6	242.4	243.1	244.0	234.3	231.5	251.3	252.3	253.6	253.0	256.4	
LEATHER AND PRODUCTS	31	.86	75.3	64.2	76.3	76.0	79.9	77.2	72.5	73.0	75.7	73.7	79.9	74.9	77.2	
<b>DURABLE MANUFACTURES</b>																
ORDNANCE, PVT & GOVT	19,91	3.64	75.9	74.2	73.9	74.3	73.4	73.7	74.2	73.0	72.3	74.0	73.2	73.4	74.3	73.6
LUMBER AND PRODUCTS	24	1.64	133.4	130.0	136.3	139.8	140.9	131.2	130.0	128.5	136.0	137.6	140.6	138.4	141.5	
FURNITURE AND FIXTURES	25	1.37	140.9	127.4	144.0	148.5	148.2	148.2	146.5	144.9	157.4	152.5	148.9	150.7	154.4	
CLAY, GLASS, STONE PROD	32	2.74	146.1	147.9	154.3	150.3	155.1	153.9	143.6	140.0	145.0	151.6	158.8	160.2	165.8	
<b>PRIMARY METALS</b>																
IRON AND STEEL	33,1,2	4.21	103.4	102.0	101.6	99.4	105.8	98.0	96.5	99.0	100.9	104.0	119.9	119.9	119.6	
FABRICATED METAL PROD	34	5.93	130.9	126.8	131.7	135.2	137.0	137.2	134.6	132.9	139.4	140.0	139.8	141.0	142.9	137.5
NONELECTRICAL MACHINERY	35	9.15	144.8	144.1	145.2	153.3	151.7	150.2	146.2	144.6	151.5	151.3	151.7	151.8	157.9	154.4
ELECTRICAL MACHINERY	36	8.05	141.9	136.1	141.7	148.8	150.3	148.3	144.6	142.0	146.8	150.1	152.0	152.4	156.7	147.9
<b>TRANSPORTATION EQUIP</b>																
MOTOR VEHICLES & PTS	37	4.50	159.7	148.5	132.0	161.8	179.2	164.0	151.1	148.7	166.4	172.7	184.8	176.4	178.4	148.6
AEROSPACE & MISC	372-9	4.77	84.7	84.2	84.2	88.2	83.9	84.6	86.2	85.6	85.6	91.2	93.3	94.3	95.6	92.5
INSTRUMENTS	38	2.11	159.1	158.0	159.6	165.0	165.0	165.4	164.5	158.5	161.4	166.2	167.3	169.1	175.0	170.8
MISCELLANEOUS MFRS	39	1.51	149.1	146.0	154.0	161.6	158.7	154.2	146.4	142.3	149.8	151.1	150.9	150.7	156.3	148.6
<b>UTILITIES</b>																
ELECTRIC		3.88	175.5	194.7	191.4	180.8	167.6	162.1	176.4	195.8	188.4	173.1	162.4	162.6		















Table 9.

**GROSS VALUES IN BILLIONS OF 1972  
DOLLARS, ANNUAL RATES, BY QUARTER**

SUMMARY GROUPINGS	1977						1978					
	I		II		III		IV		I		II	
	I	II	III	IV	I	II	III	IV	I	II		
TOTAL INDEX	133.6	137.0	138.4	139.3	139.6	143.9	570.8	582.1	590.3	592.5	591.5	607.4
PRODUCTS, TOTAL	133.9	136.5	138.6	139.6	139.9	143.3	442.2	451.1	457.2	457.9	454.3	468.9
FINAL PRODUCTS	131.9	134.7	136.6	137.0	136.7	140.6	312.6	317.1	320.2	320.0	317.1	324.5
CONSUMER GOODS	141.1	143.3	145.0	145.3	143.8	147.2						
DURABLE CONSUMER GOODS	148.0	153.2	156.1	155.9	151.7	161.1	90.9	94.7	97.0	95.9	92.2	98.7
AUTOMOTIVE PRODUCTS	168.1	175.5	179.7	175.1	165.4	181.5	48.1	50.5	51.6	49.9	46.8	51.8
HOME GOODS	136.7	140.6	142.9	145.3	144.0	149.6	42.8	44.1	45.4	46.0	45.5	46.9
NONDURABLE CONSUMER GOODS	138.4	139.3	140.5	141.0	140.7	141.5	221.7	222.4	223.3	223.9	224.9	225.9
CLOTHING	123.7	125.2	126.3	127.1	120.6		31.8	32.6	32.3	32.9	31.2	31.2
CONSUMER STAPLES	142.4	143.3	144.5	144.9	146.2	146.1	189.9	190.0	191.0	191.1	193.7	193.6
CONSUMER ENERGY (HOME GOODS AND CLOTHING)	155.6	151.2	150.8	149.6	153.7	150.1	45.4	44.4	44.1	43.6	44.9	44.0
(OTHER HOME GOODS AND CLOTHING)	130.7	133.5	135.2	136.9	133.3	138.3	74.6	76.7	77.7	78.8	76.6	79.2
EQUIPMENT	119.2	123.1	125.1	125.7	126.9	131.6	129.6	134.0	136.9	137.9	137.3	144.5
BUSINESS EQUIPMENT	143.5	148.7	151.5	153.4	154.7	160.3	96.7	100.5	103.0	104.8	103.7	109.5
INDUSTRIAL EQUIPMENT	133.0	138.2	140.8	142.5	145.3	149.3	43.3	44.9	45.8	46.4	47.4	48.7
COMMERCIAL, TRANSIT, FARM EQ.	155.7	160.9	163.7	166.0	165.7	172.9	53.4	55.6	57.3	58.5	56.3	60.8
DEFENSE AND SPACE EQUIPMENT	78.3	80.1	80.7	79.2	80.3	83.4	32.9	33.6	33.9	33.1	33.6	35.0
INTERMEDIATE PRODUCTS	141.9	143.5	146.3	148.9	151.5	153.1	128.6	131.1	133.1	134.6	137.1	138.8
CONSTRUCTION SUPPLIES	136.1	138.6	142.0	146.6	148.6	150.1	58.8	60.5	62.1	63.2	63.9	65.1
BUSINESS SUPPLIES	147.6	148.5	150.5	151.1	154.3	156.0	69.8	70.6	71.1	71.5	73.2	73.8
COMMERCIAL ENERGY PRODUCTS	164.5	164.9	165.3	163.2	165.1	163.6	18.0	18.1	18.2	17.8	18.2	18.1
MATERIALS	133.1	137.7	138.1	138.9	139.2	145.0						
DURABLE GOODS MATERIALS	129.2	135.1	136.0	137.7	137.9	143.9						
BASIC METAL MATERIALS	108.6	116.4	109.4	109.4	110.5	117.4						
NONDURABLE GOODS MATERIALS	149.5	154.6	154.4	155.0	158.0	163.1						
TEXTILE, PAPER AND CHEMICAL MAT	153.9	159.9	159.2	159.5	163.1	167.8						
TEXTILE MATERIALS	111.3	110.9	112.3	117.9	115.3	116.9						
PAPER MATERIALS	131.7	134.3	135.1	132.3	136.5	140.1						
CHEMICAL MATERIALS	181.6	191.8	189.5	188.9	194.9	201.3						
ENERGY MATERIALS	122.0	122.6	123.4	121.9	119.1	125.5						
MANUFACTURING	133.1	136.9	138.7	139.9	139.8	144.2						
DURABLE	124.7	129.3	131.5	132.8	132.3	137.7						
NONDURABLE	145.2	148.0	149.2	150.2	150.6	153.8						
MINING AND UTILITIES	136.9	137.2	136.3	135.1	137.8	141.5						
MINING	116.6	120.5	117.7	117.3	116.2	128.1						
UTILITIES	159.6	155.8	157.1	155.0	161.8	156.5						

Table 10.

**GROSS VALUES IN BILLIONS OF 1972 DOLLARS, ANNUAL RATES, BY MONTH**

MAJOR MARKET GROUPINGS	1972		1977					1978							
	DOLLARS	AVG.	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY
PRODUCTS, TOTAL	507.4	583.9	590.5	590.2	590.1	591.3	591.3	594.7	582.0	591.2	601.1	608.8	606.3	607.0	609.6
FINAL PRODUCTS	390.9	452.1	457.8	456.9	456.8	457.8	457.3	458.7	445.1	454.4	463.5	470.7	467.9	468.0	469.4
CONSUMER GOODS	277.5	317.5	321.5	320.0	319.1	319.5	320.0	320.4	311.2	318.6	321.6	326.3	324.0	323.2	324.1
DURABLE CONSUMER GOODS	82.0	94.6	98.7	96.2	96.0	97.1	95.5	95.2	88.5	91.5	96.7	99.4	98.1	98.7	99.0
AUTOMOTIVE PRODUCTS	41.1	50.0	53.4	50.7	50.6	51.5	49.4	48.8	44.1	45.9	50.3	53.1	51.2	51.2	51.4
HOME GOODS	40.9	44.6	45.3	45.4	45.5	45.5	46.1	46.4	44.4	45.6	46.4	46.4	46.9	47.5	47.6
NONDURABLE CONSUMER GOODS	195.5	222.8	222.7	224.1	223.1	222.4	224.4	225.0	222.7	227.0	224.9	226.9	226.2	224.6	225.2
CLOTHING	28.5	32.4	31.6	32.5	32.9	33.3	32.3	33.0	30.8	31.6	31.2	31.9	32.4		
CONSUMER STAPLES	167.0	190.5	191.0	191.5	190.3	189.2	192.1	192.0	192.0	195.3	193.8	195.0	193.7	192.2	192.5
CONSUMER ENERGY PROD (HOME GOODS & CLOTHING)	39.2	44.4	45.1	43.7	43.6	43.5	44.0	43.3	44.2	45.1	45.4	43.8	44.1	44.0	
(OTHER HOME GOODS & CLOTHING)	69.4	77.0	76.9	77.9	78.3	78.9	78.4	79.3	75.1	77.2	77.6	78.3	79.2	80.1	80.2
EQUIPMENT	113.4	134.6	136.2	137.0	137.6	138.1	137.3	138.2	133.9	135.8	142.0	144.4	144.0	145.0	145.5
BUSINESS EQUIPMENT	80.6	101.3	102.5	103.1	103.6	105.1	104.1	105.3	100.5	102.9	107.8	109.7	109.0	109.7	109.6
INDUSTRIAL EQUIPMENT	34.4	45.1	45.8	45.6	46.0	46.0	46.4	46.7	46.8	47.2	48.2	48.2	48.9	49.1	49.6
COM'L, TRANSIT, FARM EQ	46.2	56.2	56.7	57.4	57.6	59.1	57.8	58.5	53.7	55.7	59.6	61.5	60.1	60.6	60.1
DEFENSE & SPACE EQUIP.	32.7	33.4	33.6	33.9	34.0	33.0	33.2	33.0	33.4	33.0	34.3	34.8	34.9	35.4	35.9
INTERMEDIATE PRODUCTS	116.6	131.9	132.8	133.1	133.5	133.8	134.1	135.9	136.7	137.0	137.5	138.3	138.7	139.3	140.2
CONSTRUCTION SUPPLIES	57.8	61.1	61.7	62.2	62.3	62.8	62.8	63.8	64.1	63.8	63.7	64.6	65.2	65.4	65.8
BUSINESS SUPPLIES	58.8	70.7	71.1	70.9	71.2	71.0	71.3	72.1	72.5	73.2	73.8	73.8	73.6	74.0	
COMMERCIAL ENERGY PROD	15.6	18.0	18.5	18.1	17.9	17.6	17.6	18.0	18.0	18.5	18.2	18.2	18.1	18.0	











## Explanatory Note

**Coverage.** The industrial production index is a measure of the physical output of the Nation's factories, mines, and electric and gas utilities expressed as a percentage of production in a base period, currently 1967. The 235 individual series representing Standard Industrial Classification (SIC), 1967 edition, codes 10-14, 19-39, 49, and 91 (part) are calculated first as index series relatives. These relatives are aggregated into: (1) market groupings (such as consumer goods, equipment, intermediate products, and materials) from which the total is derived and (2) industry groupings (for example, SIC 2-digit industries) and major aggregates of these groupings, such as manufacturing, mining, and utilities.

**Timing.** A first estimate of output for a month is published about the 15th of the following month. This estimate may revise in each of the next 3 months as new data become available. After the fourth month, indexes are not further revised until an annual or a benchmark revision.

**Source data.** The monthly indexes of industrial production are built up from data of two types: (1) directly-measured physical product data, (2) estimates of physical product output derived from input data adjusted by conversion factors that relate these inputs to physical output. The directly measured physical product data (lbs., tons, etc.) are obtained from reports of the Bureau of the Census, Bureau of Mines, other Government agencies, and trade associations. Estimates of physical output based on input data are used when appropriate monthly physical product data are not available. The major input data are (1) hours worked by production workers as indicated by the monthly establishment survey of the Bureau of Labor Statistics, and (2) industrial electric power use as ascertained from utilities by the Federal Reserve Banks. The input conversion estimates are based mainly on their historical trends and recent developments.

**Seasonal adjustment.** Individual series are seasonally adjusted by the X-11 version of the Method II seasonal adjustment procedure developed by the Bureau of the Census. The seasonal adjustment factors for the basic aggregate series in the summary table and in Tables 1 and 3 are reviewed and edited monthly. The seasonal factors currently being used were developed from data only through 1974 in order to diminish the effect of the subsequent sharp recession and recovery on the seasonal factors.

**Weights.** The total index and various groupings of component series are combined on the basis of 1967 value-added weights (shown in the first column of the index tables). The gross-value-weighted product series are expressed in terms of 1972 dollars.

**Formula.** The symbolic expression for the total index ( $I$ ) is:

$$I_t = \Sigma \left( \frac{q_{67}p_{67}}{\Sigma q_{67}p_{67}} \right) \cdot \left( \frac{q_t}{q_{67}} \right) \cdot 100 = \frac{\Sigma q_t p_{67}}{\Sigma q_{67} p_{67}} \cdot 100$$

where  $q$  is quantity,  $p$  is Census value-added per unit of output, and  $t$  represents the  $t$ -th period.

**Reliability.** The median of the revisions in total IP, without regard to sign, between the first and fourth estimates is 0.25 per cent; that is, in about half of the cases, the absolute value of the revision from the first to the fourth estimate was less than 0.25 per cent. (Calculated on the basis of data for the August 1971 to July 1976 period.)

**Rounding.** Changes shown for index components may not aggregate to changes for totals due to independent rounding.