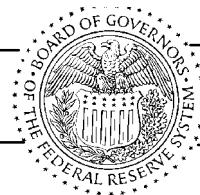


FEDERAL RESERVE statistical release



G.17 (419) 2006 Historical and Annual Revision

For release at 2:00 p.m. (EST)
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Industrial Production and Capacity Utilization: The 2006 Annual Revision

The Federal Reserve has revised the index of industrial production (IP) and the related measures of capacity and capacity utilization. Although data from January 1972 through October 2006 are affected, most of the revision occurs from 2003 onward. Measured from fourth quarter to fourth quarter, industrial production is now reported to have increased more slowly in 2003 and in 2004. The change in output was revised up for 2005 and revised down slightly for 2006.¹

The revision to industrial production incorporates the Census Bureau's 2004 and 2005 Annual Surveys of Manufactures (ASM), which show slightly lower annual levels of output than previously estimated. In addition to the 2004 and 2005 ASMs, other new source data for this year's statistical revision to the IP indexes include selected 2005 Current Industrial Reports from the U.S. Census Bureau, new annual data on mineral extraction for 2004 and 2005 from the U.S. Geological Survey, and updated deflators from the Bureau of Economic Analysis. The new monthly production estimates reflect the incorporation of updated seasonal factors and monthly source data that became available (or were revised) after the closing of the regular four-month reporting window.

The revision to capacity utilization was relatively small. In the fourth quarter of 2005, the rate of capacity utilization for total industry was revised up 1/4 percentage point, to 80.7 percent. As of the third quarter of 2006, capacity utilization was only slightly less than previously estimated; at 82.3 percent, the rate was 1.3 percentage points above the 1972–2005 (long-run) average.² In 2004, the operating rate for manufacturing is about 1/2 percentage point lower than previously estimated. However, factory utilization rates are only a bit lower, on average, in 2005 and in 2006. For the 2003–06 period, utilization rates were revised down in a number of manufacturing industries, including computers, communications equipment, and textiles. Noticeable upward revisions occurred in the semiconductor and chemical industries. In mining, operating rates were revised up from 2003 through 2006. In electric and gas utilities, the capacity utilization rate was little changed in 2003, up a touch in 2004, and lower in 2005 and in 2006.

The revised capacity utilization rates incorporate the results from the Census Bureau's 2005 Survey of Plant Capacity for the fourth quarter of that year. In addition, the revisions to the capacity indexes and capacity utilization rates incorporate the revised production indexes and newly available data on industrial capacity from the U.S. Geological Survey, the Energy Information Agency of the U.S. Department of Energy, and other organizations.

RESULTS OF THE REVISION

The tables show the summary statistics for the annual revision. Tables 1A and 1B show the monthly, quarterly, and annual average levels and rates of change for industrial production and for capacity for 1976 through 2006. Tables 2 and 3 show the revised rates of change from 2002 through 2006 of industrial production for market groups, industry groups, special aggregates, and selected detail. Table 4 shows revised rates of change

¹For 2006, the differences between the rates of change are calculated from annualized rates of change between the fourth quarter of 2005 and the third quarter of 2006.

²These comparisons use quarterly average data.

for selected detail in industrial production, and table 5 shows the rates of change in capacity. Tables 2 through 5 also show the difference between the revised and earlier rates of change. Table 6 shows the revised capacity utilization rates for the final quarters of recent years (the third quarter was used for 2006) and the difference between the revised and previous rates. Tables 7A, 7B, 8A, 8B, 9A, and 9B report the revised production, capacity, and utilization series for manufacturing, for total industry excluding selected high-technology industries, and for manufacturing excluding selected high-technology industries. Table 10 reports the annual proportions in industrial production by market and industry groups for 1998 to 2005.

Industrial Production

The gains in total industrial production were revised down 0.4 percentage point in 2003, down 1.4 percentage points in 2004, up 0.2 percentage point in 2005, and down 0.1 percentage point in 2006.³

Manufacturing production has expanded in each year since 2002, albeit at a somewhat slower rate than initially reported, on balance. Increases in the output of durable goods have remained robust in recent years despite downward revisions in 2003 and in 2004. For nondurable goods, the increases for 2003 through 2005 were revised up an average of 3/4 percentage point per year. The estimate for 2006 was little changed. Across industry groups (table 2), downward revisions in the durable goods sector were widespread. Increases in the output of computer and electronic products were revised down from 2003 through 2005, and declines in the production of motor vehicles and parts over this period are now reported to have been steeper than originally estimated. The output of machinery was revised down substantially in 2004. Within the nondurable goods sector, the indexes for apparel and leather goods and for plastics and rubber products were revised down for the period since 2002. The cumulative increases since 2002 for all the other major components of nondurable goods are now higher than previously reported. Regarding a few special aggregates (table 3), the rates of growth for selected high-technology industries—computers and peripheral equipment, communications equipment, and semiconductors and related electronic components—were revised down in 2003 and in 2004 but up in 2005 and in 2006, adjustments that left the level lower overall. However, the aggregate index masks different movements in the major components: A higher level of output of computers and peripheral equipment was more than offset by lower output levels for communications equipment and for semiconductors and related equipment.

Production by Market Group

Among the major market groups, the increase in the production index for final products and nonindustrial supplies was revised down for 2004. For 2005, the growth rate in this index remains unchanged. For 2006, it was revised down 0.3 percentage point. Growth in the output of consumer goods was revised up in 2005 but down in 2006.

Within durable consumer goods, the output of automotive products was revised down for 2003 through 2006. In contrast, the production gains for home electronics in 2003, 2004, and 2006 were revised up appreciably. Among producers of consumer nondurables, the indexes for foods and tobacco, chemical products, and consumer energy products were revised up overall. The indexes for clothing and for paper products are now noticeably lower than estimated previously.

The production of business equipment is now reported to have been weaker from 2003 to 2006, largely because of downward revisions to the index for information processing equipment. In addition, the production of defense and space equipment also increased less from 2003 to 2006 than reported initially.

³In this section, all the rates of change are calculated from the fourth quarter of the previous year to the fourth quarter of the reference year, except for 2006, for which the rates of change are from the fourth quarter of 2005 to the third quarter of 2006 and annualized.

The indexes for construction supplies and for business supplies were both revised down in 2004, but the increases in 2005 are now larger. This year, the rise in the output of construction supplies has slowed noticeably, while the production of business supplies has recorded another strong gain. Despite a downward revision in 2004, the level of the output of materials is currently estimated to be a touch higher, on balance, over the entire revision period.

Capacity

Total industrial capacity is estimated to have fallen 3/4 percentage point more rapidly in 2003 than previously reported and to have risen 1/2 percentage point more slowly in both 2004 and 2005. Capacity is estimated to have increased nearly 2-1/2 percent in 2006, roughly 1/2 percentage point more quickly than initially published. The contour of manufacturing capacity and the revisions to that contour are similar to those for total industry. The revision shows that, relative to previous reports, aggregate capacity for the selected high-technology industries rose less quickly from 2003 to 2005 but increased more rapidly in 2006. Excluding high-technology industries, manufacturing capacity declined in 2003 and 2004 and expanded in 2005 and 2006; the rates of increase were marked down in each year except 2005, which was unrevised.

Capacity at mines is still estimated to have contracted from 2003 to 2005 but is now shown to have increased in 2006. Capacity at electric and gas utilities was revised upward in 2006 but was little revised in previous years.

By stage of processing, capacity in the crude stage fell from 2003 to 2005 and is estimated to have edged up 0.3 percent in 2006. Capacity at the primary and semifinished stages declined in 2003 but rose from 2004 through 2006. Capacity expanded from 2003 to 2006 for finished goods.

Capacity Utilization

The capacity utilization rate for total industry was 82.3 percent in the third quarter of 2006, 1.3 percentage points above its 1972–2005 average and 0.2 percentage point lower than reported earlier. The utilization rate for total industry was revised up 1/4 percentage point in the fourth quarters of 2003 and 2005 and revised down 0.4 percentage point in the fourth quarter of 2004.

The manufacturing operating rate was 80.9 percent in the third quarter of 2006, 0.3 percentage point below the previous estimate and 1.1 percentage points above its 1972–2005 average. The rates for 2004 and 2005 were also marked down, by 0.6 percentage point and by 0.2 percentage point, respectively; the rate for 2003 was revised up 0.3 percentage point. Utilization rates for durable goods manufacturers were lower from 2004 to 2006 than previously published. Some of the largest downward revisions were in machinery and in electrical equipment, appliances, and components. Revisions generally were upward for wood products, primary metals, fabricated metal products, and furniture. Utilization rates for nondurable goods industries were revised upward; the largest revisions were in textile mills, petroleum and coal products, and chemicals. The largest downward revisions were in food, apparel and leather, and plastics and rubber products. Capacity utilization in the other (non-NAICS) manufacturing industries was revised upward in 2003 and 2004 and downward in 2005 and 2006.

The operating rates for computer and electronic products and for communications equipment were also lowered noticeably in recent years, while utilization in the semiconductor industry was revised up substantially. On balance, the aggregate of selected high-technology industries now shows that utilization was lower in 2004 and 2006 but higher in 2003 and 2005. In the third quarter of 2006, the operating rate was 78.5 percent, 2 percentage points above the fourth quarter of 2005.

Capacity utilization in mining was revised up between 2003 and 2006, mainly because of higher operating rates in the oil and gas extraction industries. As of the third quarter of 2006, the utilization rate for mining is now estimated to be 91.1 percent, up 6.1 percentage points from the fourth quarter of 2005. In electric and gas utilities, capacity utilization rates were revised down in 2005 and in 2006 but were little changed in previous years. At 86.0 percent in the third quarter of 2006, the operating rate for utilities was 0.8 percentage point below its long-run average.

TECHNICAL ASPECTS OF THE REVISION

The benchmark indexes for manufacturing—defined for each six-digit NAICS industry as nominal gross output divided by a price index—were updated to include new as well as revised information from the 2003, the 2004, and the 2005 Annual Surveys of Manufactures. This revision also incorporates the 2005 Survey of Plant Capacity, other annual industry reports, recent information on prices, and revised monthly source data on physical product and production-worker hours.

As mentioned earlier, the benchmark indexes for most industries incorporate updated price indexes from the industry output program of the Bureau of Economic Analysis. However, the price indexes for semiconductors and the price indexes for most components of communications equipment (NAICS 3342) are constructed by the Federal Reserve from alternative sources. These indexes along with others for transmission equipment (fiber-optic equipment), networking equipment (routers, switches, hubs, and wireless equipment), central office equipment, and for private branch exchange equipment were extended an additional year. In addition, new source data were introduced for the estimation of price indexes for mobile phones and related equipment and for satellites and related equipment. Gartner, a technology research firm, was the source for the data on prices and the value of sales for mobile phones, base stations, and cellular switching equipment that were used to construct an annual price index for the 1994–2005 period. For satellites and related equipment, data on satellite capacity costs from Futron Corporation and data on equipment for global positioning systems from the NPD Group were used to construct a price index for the 2001–2005 period. Price indexes for these products were extended back to 1972 using a bias adjustment to the relevant producer price indexes (PPIs) published by the U.S. Bureau of Labor Statistics. For the remaining series, PPIs were used.

The new product prices for communications equipment declined more than estimated earlier. Accordingly, the output of communications equipment is now shown to have risen about 6 percent more per year, on average, from 1972 through 2005. The yearly pattern was little changed; exceptions were 2004 and 2005, when upward revisions from faster falling prices were more than offset by downward revisions caused by benchmarking to the 2004 and the 2005 ASM. The revised level of output for communications equipment in October 2006 now stands 58 percent higher than its 2002 level compared with 95 percent before the revision.

As in 2003, the 2004 and 2005 ASMs did not provide data for all six-digit NAICS industries but combined some of them into higher-level industry aggregates. The benchmark indexes for manufacturing IP are calculated from gross output for six-digit industries and then aggregated to the IP industry level using proportions based on value added. To maintain benchmark references that were consistent over time, the Federal Reserve imputed estimates of gross output for industries no longer reported separately based on values for the aggregate industries that contained them and the gross output shares for the disaggregate industries in 2002.

Changes to Individual Production Series

With this revision, the monthly production indicators for some series have changed, and some new series have been created.

Ethanol

Data on ethanol production from the Energy Information Agency of the Department of Energy were used for a new industrial production index for ethyl alcohol (NAICS 325193) that begins in 1997. Previously, ethanol production had been included in the production index for organic chemicals (NAICS 32511, 32519), which used the output of eight basic organic chemicals as its high-frequency indicator. Those data are now used as the indicator for a new series that covers the combined output of petrochemicals (NAICS 32511) and other organic chemicals (NAICS 32519) except ethanol.⁴

Unitary air conditioners

The output of unitary air conditioners includes central air units and heat pumps and is a part of NAICS industry 333415, which covers air conditioners, nonhousehold refrigeration equipment, and warm air furnaces. The output of unitary air conditioners is now represented by separate production indexes for residential and nonresidential units for the period 1997 to the present. Previously, data on shipments adjusted by inventory change from the Air-Conditioning and Refrigeration Institute (ARI) were used to estimate the output of total unitary air conditioners. The ARI shipments data are available for seventeen size categories, each of which is now split between residential and nonresidential units. The bulk of the smaller categories is assumed to be residential, and the bulk of the larger categories is assumed to be nonresidential. Relative prices for the various size categories are derived from Current Industrial Reports from the Census Bureau for recent years; previously, the index was based on an unweighted sum of units.

Audio and video equipment

The monthly indicator for audio and video equipment (NAICS 3343) was updated to include both digital televisions and speakers for the period 2002 to the present. Previously, the index reflected shipments of analog televisions with diagonal sizes of 25 inches or larger that were adjusted for imports. New data on unit and dollar sales of digital televisions are available by technology (plasma, LCD, projection, and other) and by size from the Consumer Electronics Association (CEA). Likewise, data for speaker sales are available from the CEA. U.S. production weights are derived from Current Industrial Reports from the Census Bureau and are combined with the new data to construct a Fisher production index for the industry.

High-technology goods

Beginning in 2002, data on U.S. sales of routers and switches from Synergy Research Group, an industry research group, were introduced as the quarterly indicator for data networking equipment, which is part of telephone apparatus manufacturing (NAICS 334210). Previously, the indicator was constructed from somewhat less-comprehensive and less-timely information from Gartner and was extended by data on production-worker hours from the U.S. Bureau of Labor Statistics.

As in previous years, the index for the production of microprocessor units is based on worldwide sales data from the Semiconductor Industry Association. With this revision, the translation of worldwide sales to domestic production is based on quarterly estimates of production at U.S. manufacturing establishments provided by Instat, a technology research firm. Previously, the domestic production share of worldwide sales was based on product-level data from the Current Industrial Reports. New source data for estimating the U.S. share of microprocessor manufacturing introduced a different pattern of production in the industry; more-noticeable decelerations in 1994, 2001 and 2005 and a more-rapid acceleration in 1995. In 2006, a climbing production share and faster falling price index combine to revise microprocessor output up sharply.

⁴The market assignment of ethanol was changed from non-energy chemical materials to energy materials.

Periodicals and other publishers

The index for periodicals and other publishers (NAICS 51112, 51114, and 51119) was split into separate indexes for periodicals (NAICS 51112) and other publishers (NAICS 51114, 51119). Both new indexes use production-worker hours as monthly indicators and begin in 1987. The separate indicators will allow comparisons to other industry data.

Series switched from using product data to production-worker hours

Product data used as indicators for several IP indexes were discontinued in the past few years and have been replaced by production-worker hours for 2002 to the present. The industries affected are coffee (NAICS 31192), cotton and synthetic fabrics (part of NAICS 31321), wool fabrics (part of NAICS 31321), tire cord (NAICS 314992), hosiery (NAICS 31511), pigments (NAICS 31523), synthetic rubber (NAICS 325212), and electron tubes (NAICS 334411).

Reliability of monthly estimates

The first estimate of output for a month is preliminary and is subject to revision in each of the subsequent three months as new source data become available. By the third revision (the fourth month of estimate), the product-based content of IP is 54 percent (see table below).

Availability of Monthly IP Data
(Percent of value added in 2005)

Type of data	Month of estimate			
	1st	2nd	3rd	4th
Physical product	27	42	54	54
Production-worker hours	43	43	43	43
IP data received	70	84	96	97
IP data estimated	30	16	4	3

Changes to Individual Capacity Series

With this revision, the organic chemicals series (NAICS 32511, 9) was split into two series—ethyl alcohol (also known as ethanol, NAICS 325193) and organic chemicals excluding ethanol (NAICS 32511, 9 except 325193)—for 1997 and onward. The capacity indicator for ethanol is gallons of ethanol capacity from the Renewable Fuels Association. The capacity indicator for organic chemicals excluding ethanol is based on utilization rates from the Survey of Plant Capacity.

Capacity for synthetic rubber is now based on utilization rates from the Survey of Plant Capacity and begins in 2002. Capacity for previous years is still derived from physical capacity data from the International Institute of Synthetic Rubber Producers.

U.S. Networking Equipment, 1998 to 2005			
	Production Index	Price Index	Value of Production (millions of dollars)
Annual Estimates (indexes are 2002=100)			
1998	58.7	247.5	20,556.4
1999	82.5	202.6	23,781.6
2000	113.8	180.2	29,160.7
2001	124.7	135.4	25,202.6
2002	100.0	100.0	15,747.5
2003	90.7	91.8	13,088.5
2004	89.1	79.2	11,151.3
2005	102.0	71.1	11,455.9
Quarterly Estimates (indexes are 2002=100)			
1998q1	49.9	274.9	19,361.9
1998q2	59.1	242.6	21,667.2
1998q3	62.5	230.8	20,516.9
1998q4	63.3	240.1	20,806.8
1999q1	78.3	210.5	23,513.5
1999q2	82.7	192.7	23,906.1
1999q3	82.1	204.3	23,545.0
1999q4	87.0	202.6	24,224.3
2000q1	103.3	184.8	27,993.8
2000q2	113.9	170.9	28,940.9
2000q3	117.4	182.9	29,722.5
2000q4	120.6	182.1	29,970.2
2001q1	136.7	145.8	29,004.9
2001q2	124.1	136.5	25,699.2
2001q3	120.5	131.8	23,512.1
2001q4	117.4	128.1	22,504.3
2002q1	101.1	110.1	17,062.0
2002q2	102.5	114.5	16,765.8
2002q3	98.5	88.9	14,914.0
2002q4	97.9	88.2	14,158.7
2003q1	94.0	85.6	13,208.2
2003q2	86.7	110.9	13,634.8
2003q3	89.8	90.9	13,349.1
2003q4	92.3	81.8	12,057.9
2004q1	95.9	79.3	12,689.1
2004q2	89.6	85.6	10,716.9
2004q3	86.3	76.9	10,995.1
2004q4	84.5	75.5	10,241.2
2005q1	88.7	69.2	10,456.8
2005q2	109.9	76.2	11,598.7
2005q3	100.9	69.8	11,607.9
2005q4	108.4	69.6	12,090.7

Weights for Aggregation

The IP index is a Fisher index. This revision uses information from the Census of Manufactures to obtain updated estimates of the industry value-added weights used in the aggregation of IP indexes and capacity utilization rates. The Federal Reserve derives estimates of value added for the electric and gas utility industries from annual revenue and expense data issued by other organizations. The weights for aggregation, expressed as unit value added, were estimated using the latest data on producer prices. Table 10 shows the annual value-added proportions in the IP index from 1997 through 2005.

Revised Monthly Data

This revision incorporates product data that became available after the regular four-month reporting window for monthly IP was closed. These data are released with too great a lag to be included with monthly IP estimates; however, the data are available for inclusion in the annual revision.

Revised Seasonal Factors

Seasonal factors for all series were reestimated using data that extend into 2006. Factors for production-worker hours—which adjust for timing, holiday, and monthly seasonal patterns—were updated with data through September 2006 and were prorated to correspond with the seasonal factors for hours aggregated to the three-digit NAICS level. The updated factors for the physical product series, which include adjustments for holiday and workday patterns, used data through 2006. Seasonal factors for unit motor vehicle assemblies have been updated, and projections through June 2007 are on the Board’s website at www.federalreserve.gov/releases/g17/mvsf.htm.

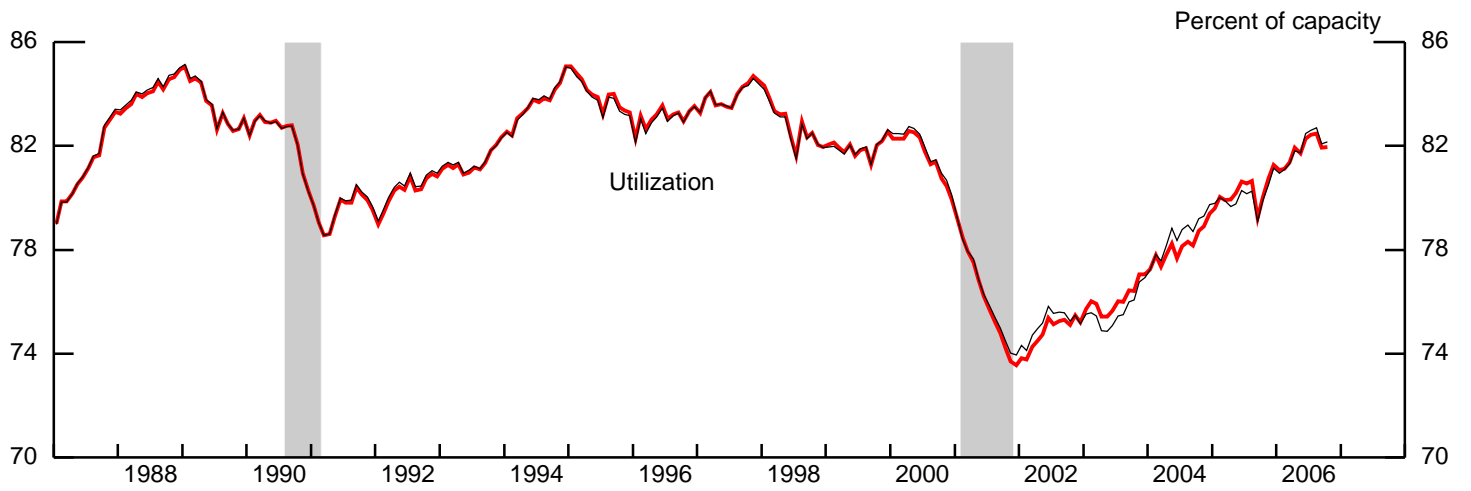
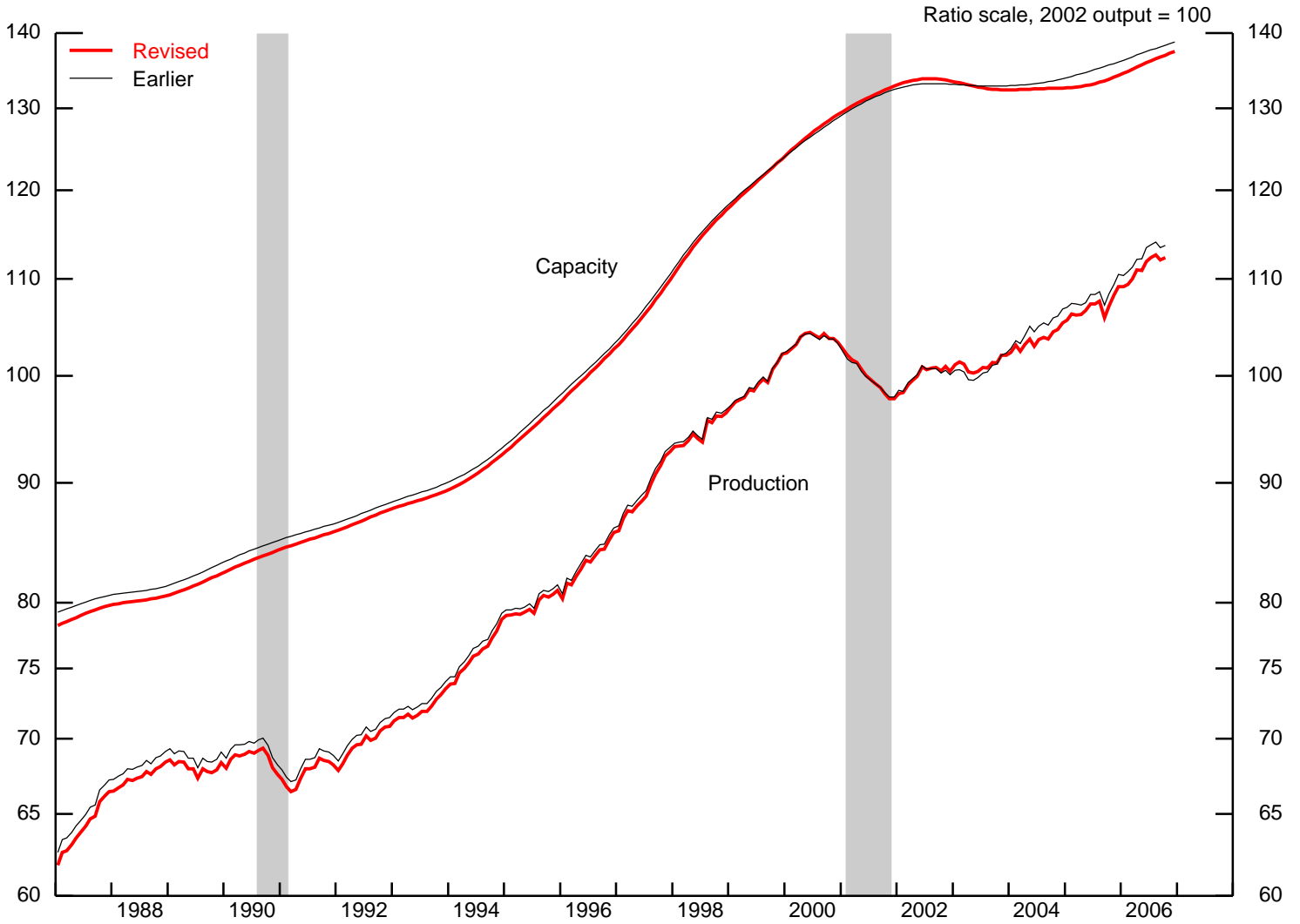
Data Availability and Publication Changes

Files containing the revised data and the text and tables from this release are available on the Board’s web site, at www.federalreserve.gov/releases/g17, and on diskettes from Publications Services (telephone number 202-452-3245). Updated data for all of the regularly issued series on industrial production, capacity, capacity utilization, and electric power use are available on the website. The revised data will also be available through the STAT-USA website of the Department of Commerce (www.stat-usa.gov). Further information on these revisions is available from the Board’s Industrial Output Section (telephone 202-452-3197).

A document with printed tables of the revised estimates of series shown in the G.17 release is available upon request to the Industrial Output Section, Mail Stop 82, Division of Research and Statistics, Board of Governors of the Federal Reserve System, Washington, DC 20551.

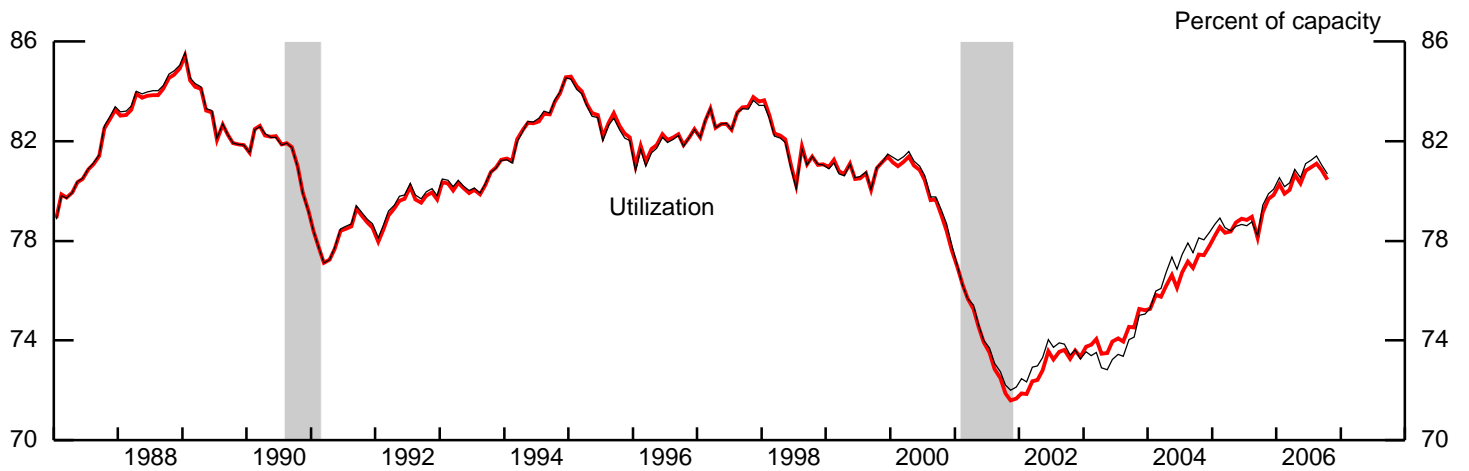
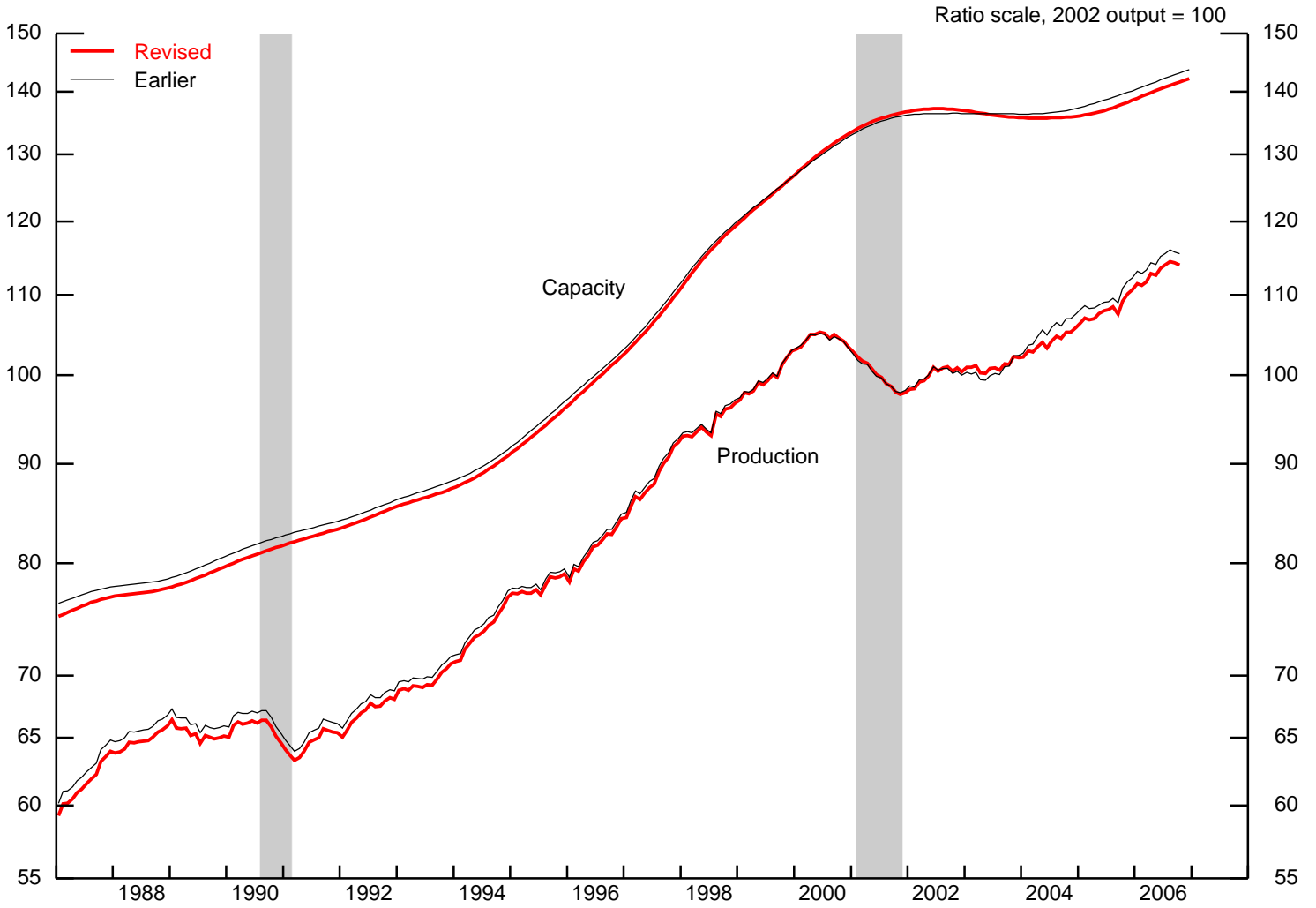
An expanded version of this release will be published in a forthcoming article in the Federal Reserve Bulletin.

1. Total industrial production, capacity, and utilization



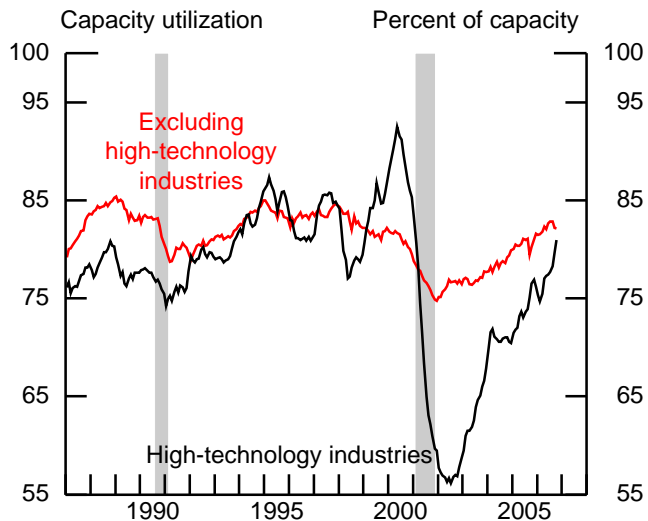
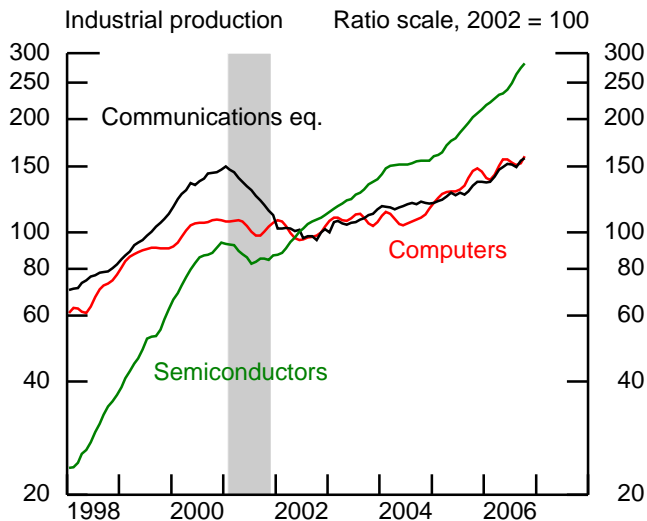
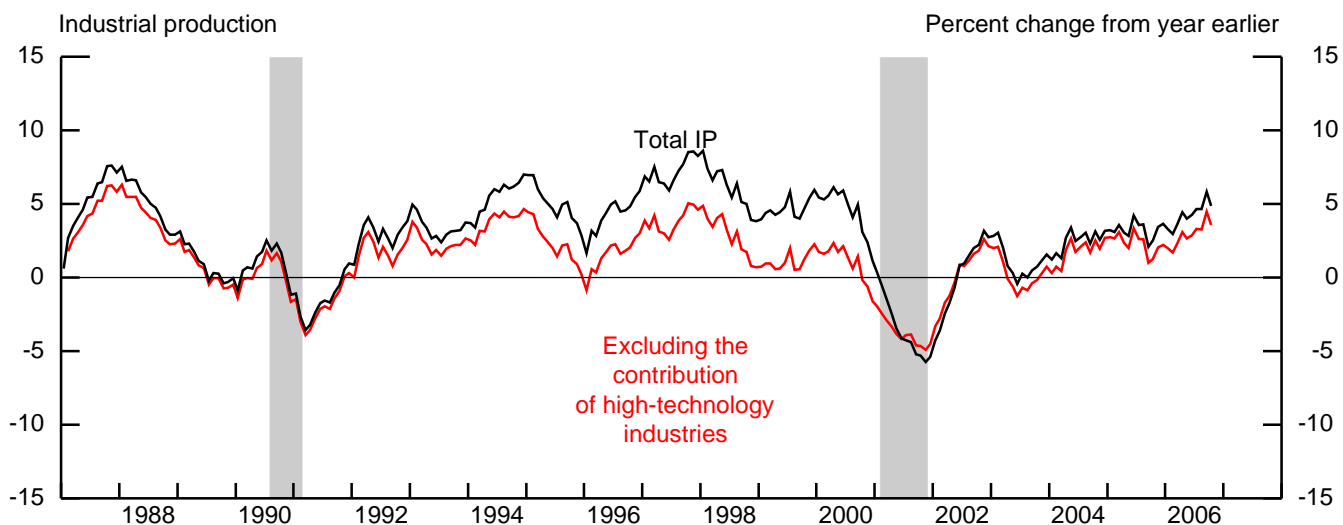
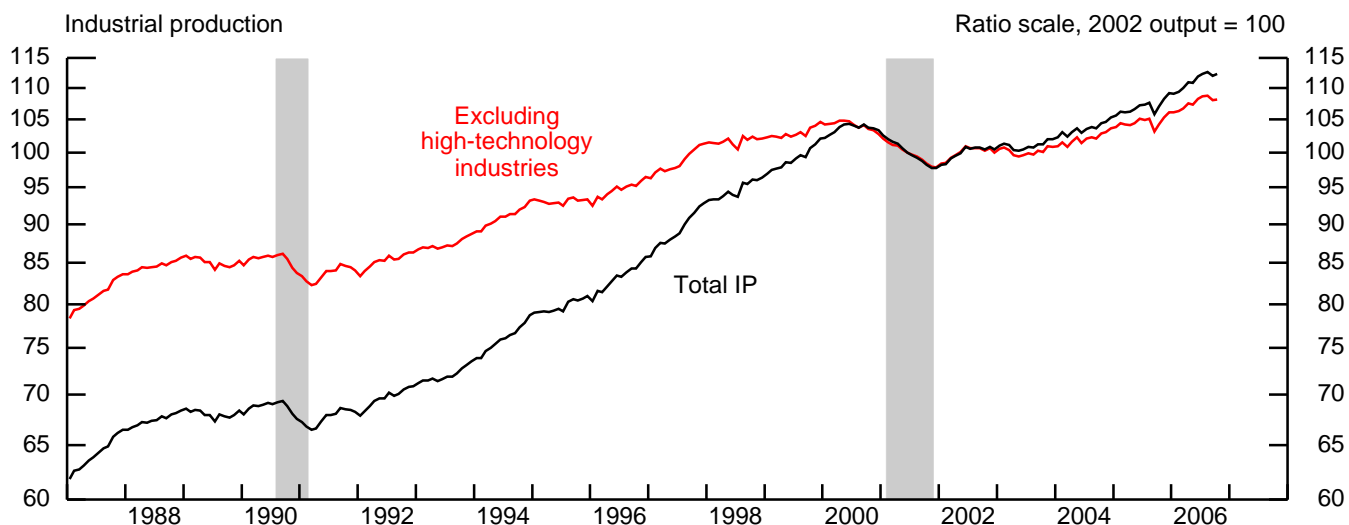
Note: The shaded areas are periods of business recession as defined by the National Bureau of Economic Research (NBER).

2. Manufacturing industrial production, capacity, and utilization



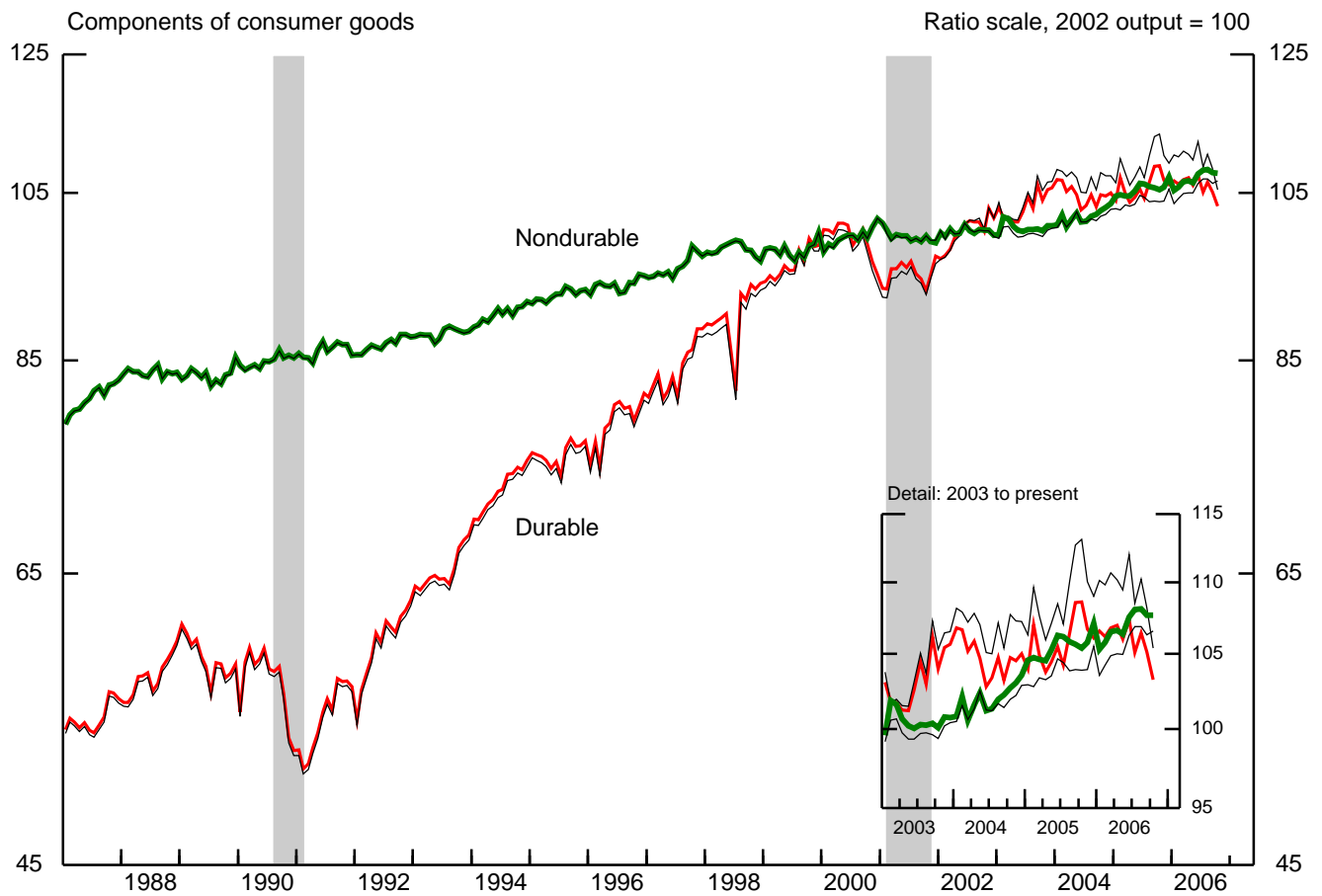
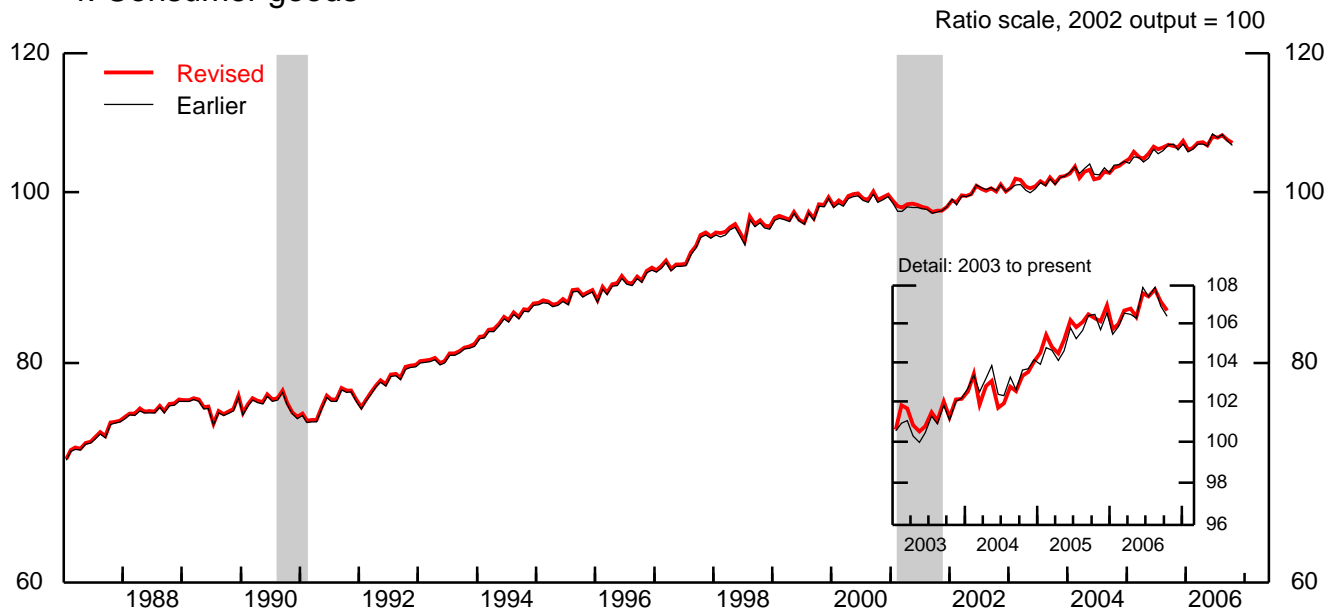
Notes: The shaded areas are periods of business recession as defined by the NBER. Manufacturing consists of those industries in the North American Industry Classification System, or NAICS, definition of manufacturing plus those industries--logging and newspaper, periodical, book and directory publishing--that have traditionally been considered to be manufacturing and included in the industrial sector.

3. Industrial production and capacity utilization



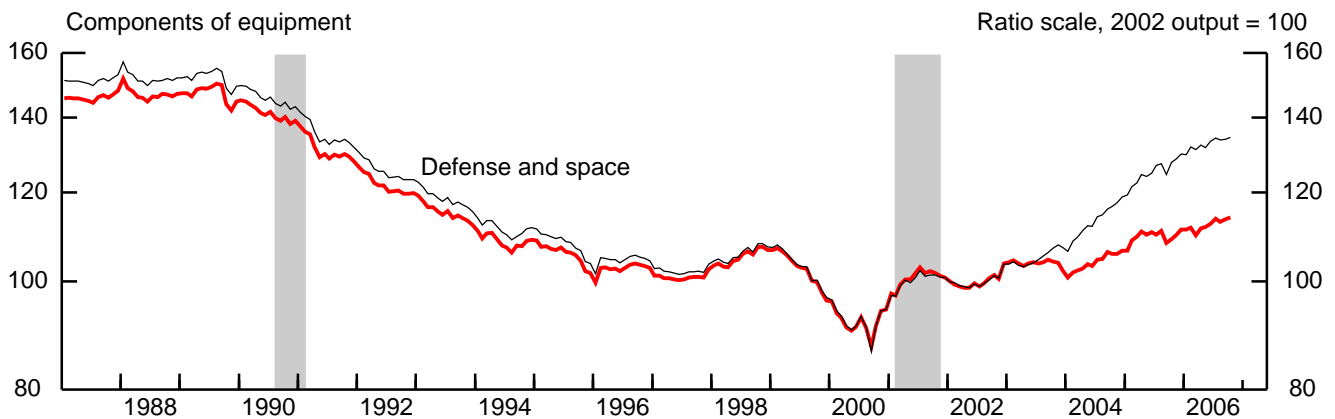
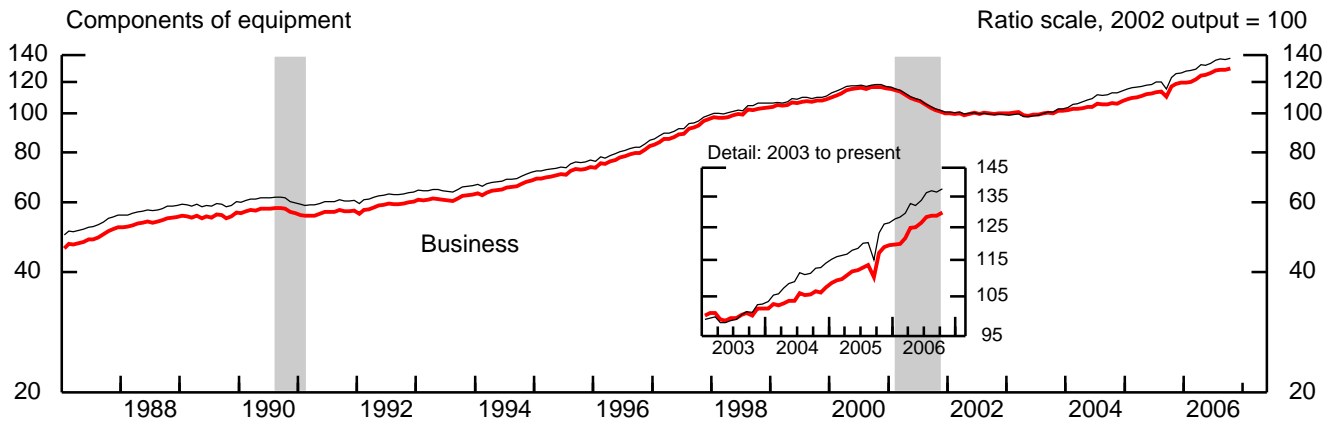
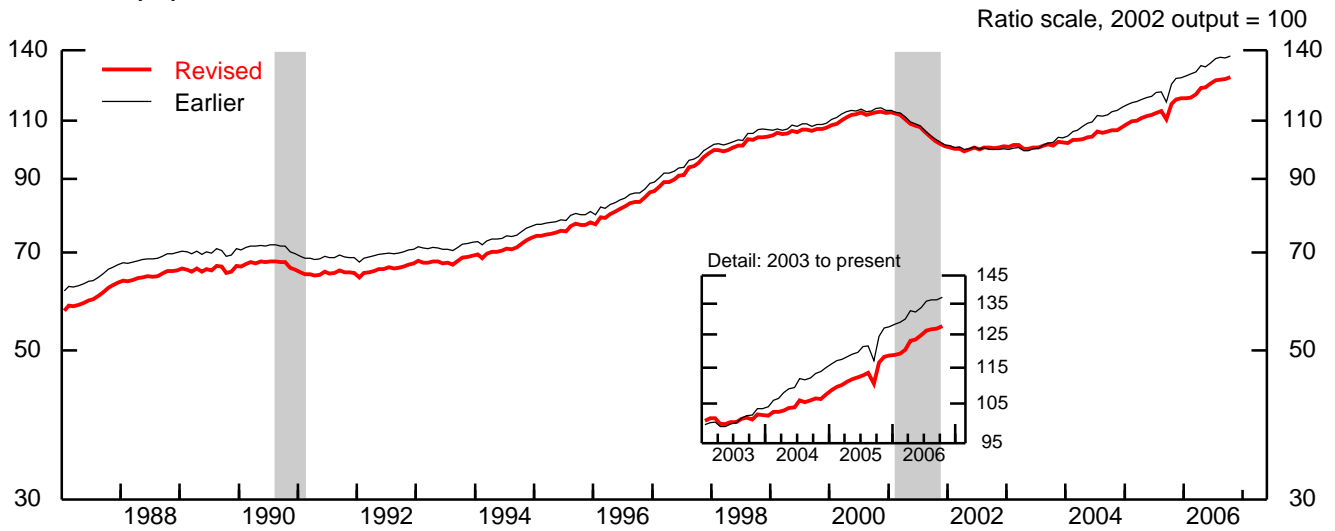
Notes: High-technology industries are defined as semiconductors and related electronic components (NAICS 334412-9), computers (NAICS 3341), and communications equipment (NAICS 3342). The shaded areas are periods of business recession as defined by the NBER.

4. Consumer goods



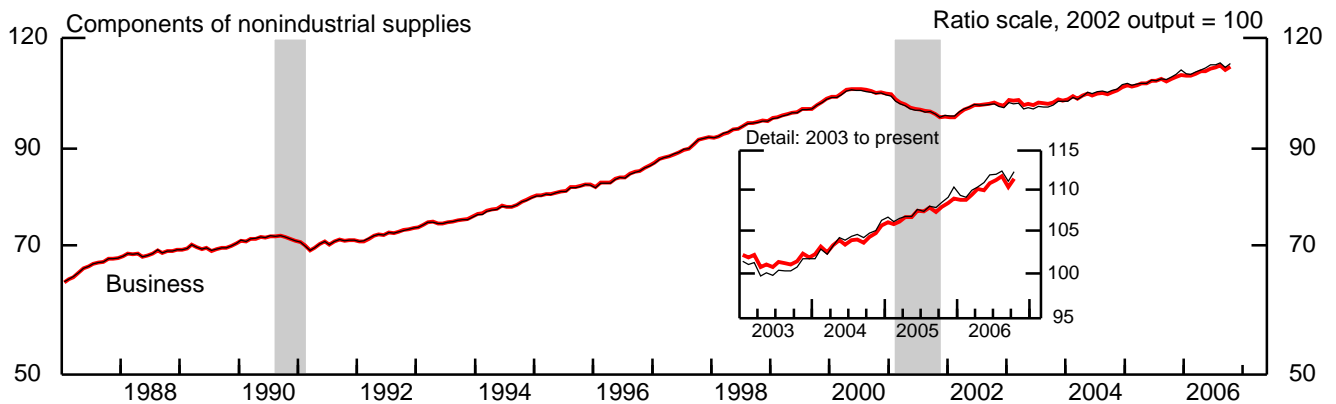
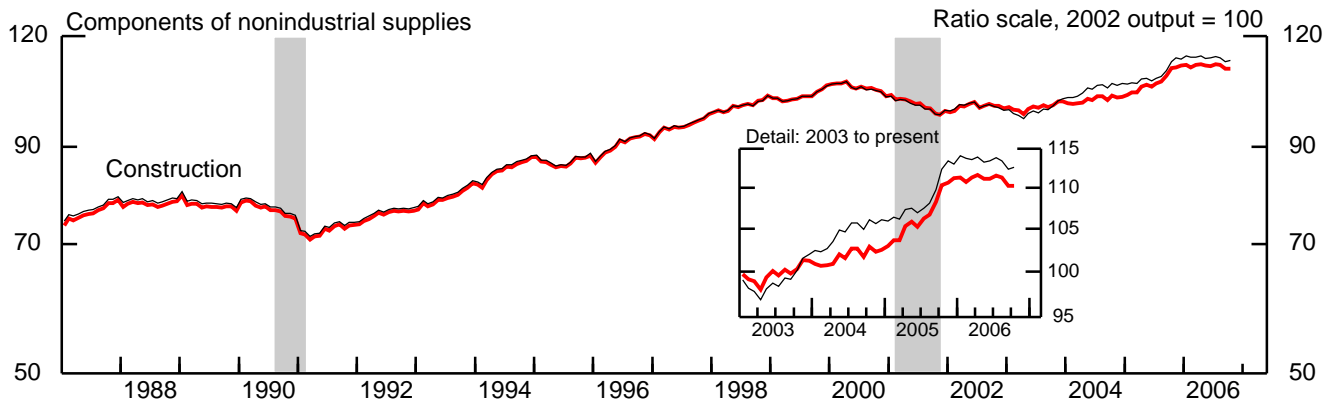
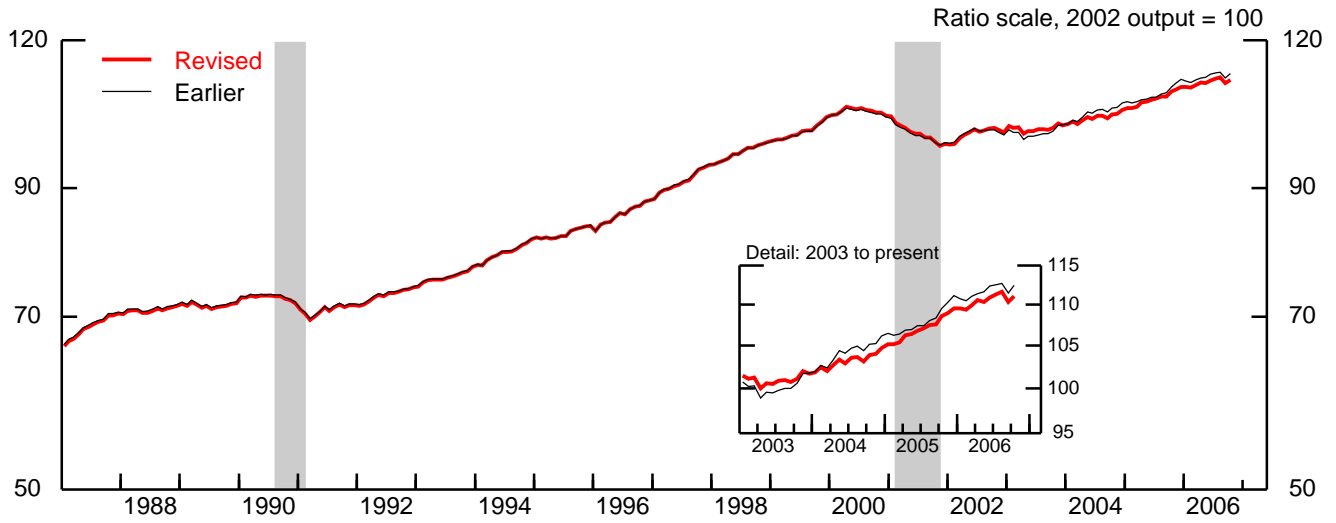
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5. Equipment, total



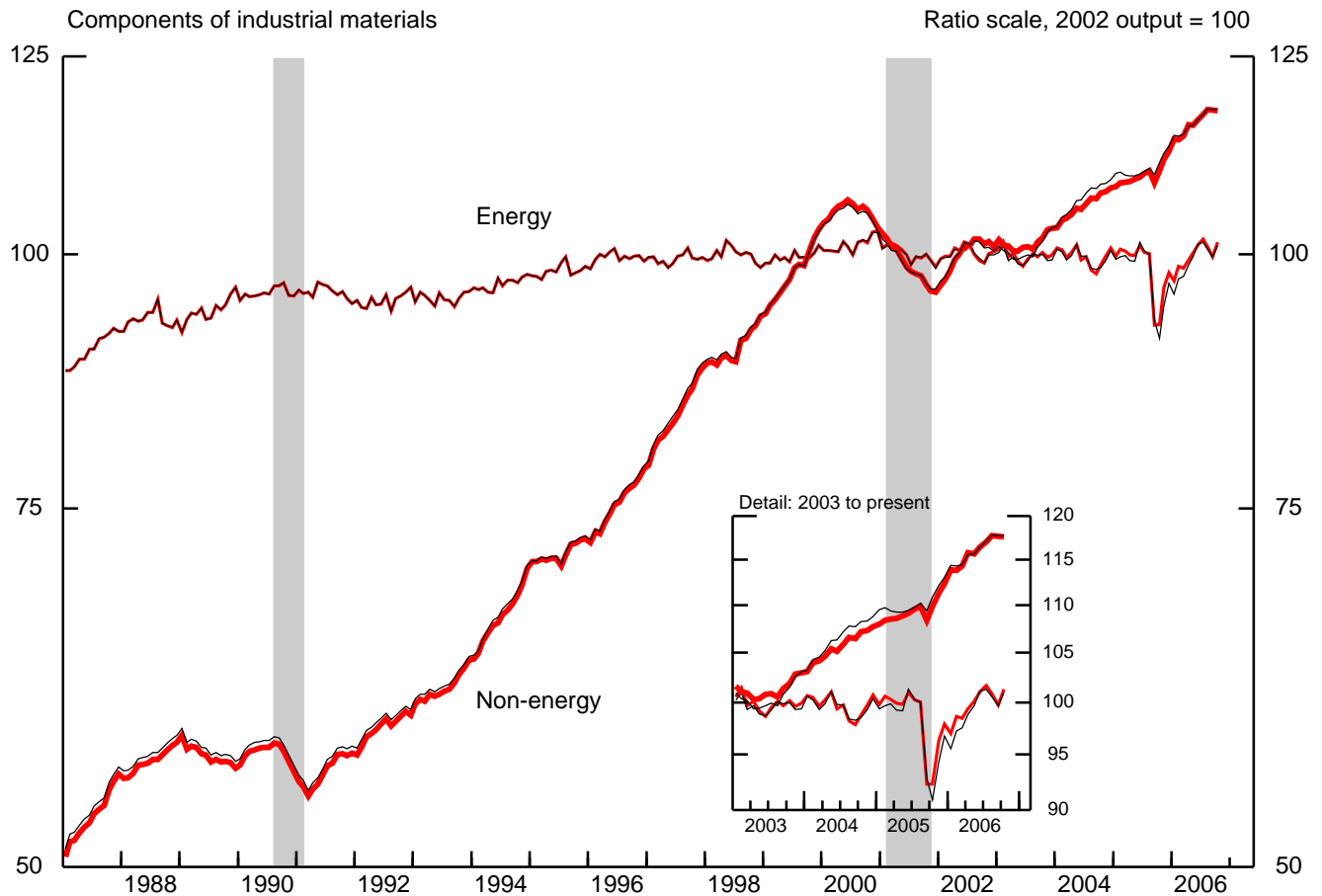
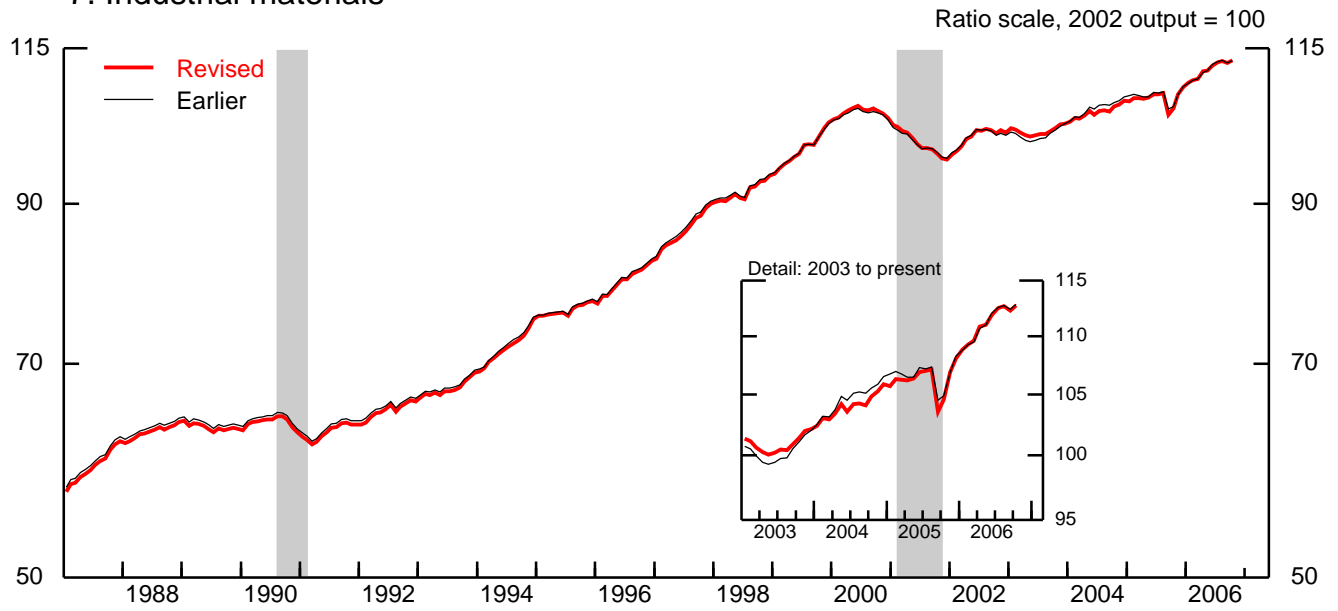
Note: The shaded areas represent periods of business recession as defined by the NBER.

6. Nonindustrial supplies



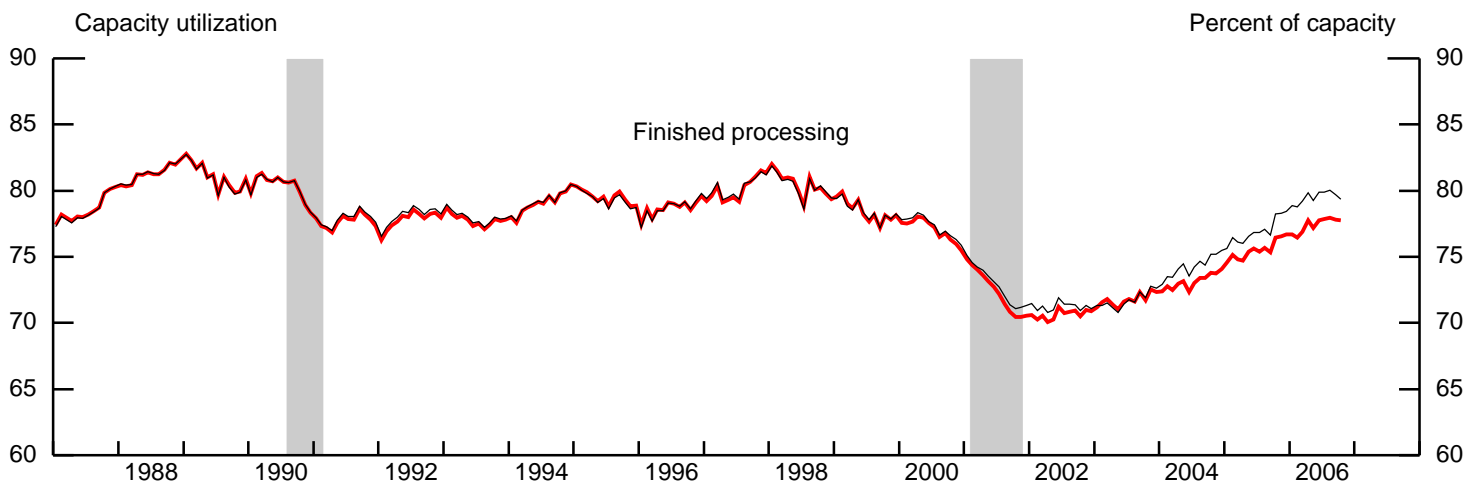
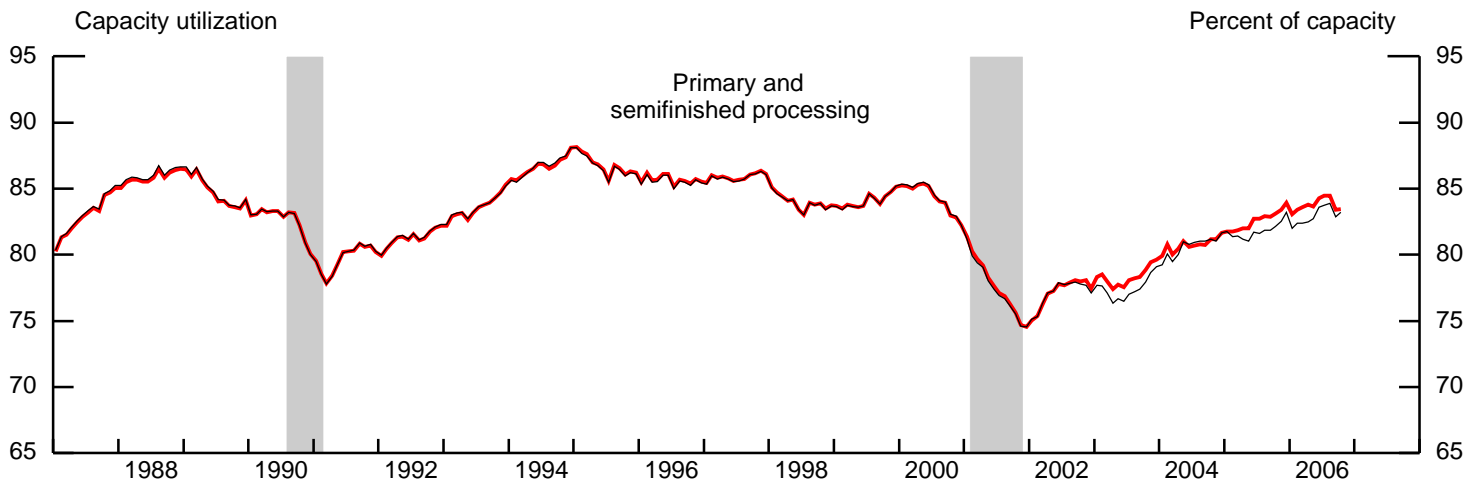
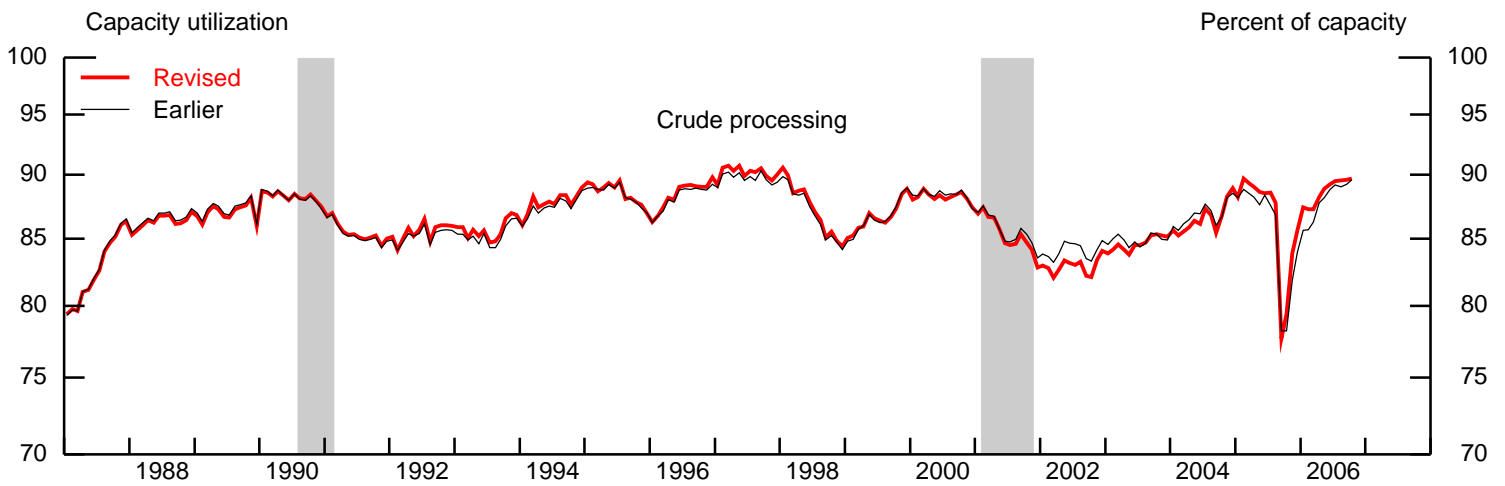
Note: The shaded areas represent periods of business recession as defined by the NBER.

7. Industrial materials



Note: The shaded areas represent periods of business recession as defined by the NBER.

8. Capacity utilization by stage of process



Note: The shaded areas are periods of business recession as defined by the NBER.

Table 1A
INDUSTRIAL PRODUCTION: Total
 Seasonally adjusted

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual ¹
IP (percent change)																	
1976	1.5	.9	.1	.6	.5	.0	.6	.7	.3	.1	1.5	1.0	12.6	5.2	5.3	7.8	7.9
1977	-6	1.5	1.3	.9	.8	.7	.2	.1	.5	.3	.0	.2	8.4	12.8	4.9	2.9	7.7
1978	-1.3	.4	1.8	2.1	.3	.7	.0	.4	.3	.9	.7	.6	-1.2	16.8	3.6	7.6	5.5
1979	-7	.6	.3	-1.1	.8	.0	-2	-7	.1	.6	-1	.1	2.0	-5	-1.4	1.4	3.1
1980	.5	.0	-3	-2.0	-2.5	-1.3	-6	.3	1.6	1.3	1.7	.6	1.7	-15.9	-6.2	16.2	-2.6
1981	-5	-5	.6	-5	.7	.5	.7	.0	-6	-7	-1.1	-1.1	1.0	1.5	4.3	-8.5	1.4
1982	-1.9	2.0	-7	-8	-7	-4	-3	-8	-4	-8	-4	-8	-7.6	-4.9	-5.9	-7.4	-5.1
1983	1.9	-6	.9	1.2	.7	.6	1.6	1.1	1.5	.9	.3	.5	4.4	9.6	14.8	11.0	2.7
1984	2.0	.5	.5	.6	.5	.4	.3	.1	-1	-1	.4	.1	12.5	6.5	2.9	.5	9.1
1985	-3	.4	.2	-2	.1	.1	-6	.5	.4	-4	.3	1.0	1.2	.7	-.5	2.7	1.4
1986	.5	-8	-6	.1	.2	-3	.6	-2	.2	.4	.5	.9	2.4	-2.4	1.7	4.6	1.1
1987	-3	1.3	.2	.6	.7	.5	.6	.7	.3	1.5	.5	.5	5.4	7.2	7.3	9.9	5.1
1988	.0	.4	.3	.5	-1	.2	.2	.5	-3	.6	.2	.4	3.4	3.4	2.1	3.3	5.1
1989	.2	-5	.3	.0	-7	.0	-9	1.0	-3	-1	.3	.7	1.5	-1.8	-2.4	1.8	.9
1990	-6	.9	.5	-1	.2	.3	-2	.3	.2	-7	-1.2	-7	3.0	2.8	1.4	-5.9	1.0
1991	-5	-7	-5	.2	1.0	1.0	.0	.2	.9	-2	-1	-3	-7.6	2.7	5.7	1.0	-1.5
1992	-5	.7	.8	.7	.4	.1	.8	-5	.2	.7	.4	.1	-3	7.1	3.1	4.0	2.9
1993	.5	.3	.0	.3	-4	.3	.4	.0	.5	.8	.4	.6	3.7	1.1	2.4	6.4	3.4
1994	.5	.0	1.0	.5	.5	.7	.2	.5	.3	.9	.7	1.1	5.6	7.3	5.1	8.3	5.5
1995	.4	.1	.1	-1	.2	.3	-4	1.3	.4	-2	.3	.3	6.0	1.0	3.8	3.5	5.0
1996	-8	1.5	-2	.9	.7	.9	-2	.7	.5	.0	.9	.7	2.0	8.4	5.2	6.1	4.3
1997	.2	1.2	.8	-1	.6	.4	.5	1.3	.9	.8	1.0	.4	8.3	5.5	9.0	11.1	7.2
1998	.5	.1	.0	.5	.7	-5	-3	2.2	-2	.7	-1	.4	4.7	3.3	3.8	5.3	6.1
1999	.6	.5	.2	.2	.8	-1	.7	.5	-4	1.3	.6	.9	4.9	4.0	4.4	8.2	4.7
2000	.1	.4	.4	.8	.3	.1	-3	-3	.5	-5	.0	-4	5.3	5.9	-.5	-1.6	4.5
2001	-7	-6	-4	-3	-7	-6	-4	-4	-4	-6	-5	.0	-5.7	-5.4	-5.6	-5.1	-3.5
2002	.5	.1	.8	.4	.4	.9	-3	.2	.1	-3	.4	-4	2.7	6.4	2.3	-.4	.0
2003	.6	.3	-2	-8	-1	.2	.4	-1	.5	-1	.8	.0	2.3	-3.2	2.5	3.3	1.1
2004	.2	.7	-6	.6	.6	-.7	.6	.2	-2	.7	.2	.6	3.3	2.5	1.8	4.3	2.5
2005	.3	.6	-1	.1	.4	.6	.0	.3	-1.6	1.2	1.1	.8	4.6	2.8	.8	4.7	3.2
2006	.0	.3	.5	.9	-1	.9	.4	.3	-5	.2			5.0	6.5	4.0		
IP (2002=100)																	
1976	47.0	47.4	47.4	47.7	48.0	48.0	48.2	48.6	48.7	48.8	49.5	50.0	47.3	47.9	48.5	49.4	48.3
1977	49.7	50.5	51.1	51.6	52.0	52.4	52.5	52.5	52.8	52.9	53.0	53.1	50.4	52.0	52.6	53.0	52.0
1978	52.3	52.6	53.5	54.7	54.8	55.2	55.2	55.4	55.6	56.0	56.5	56.8	52.8	54.9	55.4	56.4	54.9
1979	56.4	56.8	56.9	56.3	56.8	56.8	56.7	56.3	56.3	56.6	56.6	56.7	56.7	56.6	56.4	56.6	56.6
1980	56.9	56.9	56.8	55.6	54.2	53.5	53.2	53.4	54.2	54.9	55.9	56.2	56.9	54.5	53.6	55.7	55.1
1981	55.9	55.6	55.9	55.6	56.0	56.3	56.7	56.7	56.4	55.9	55.3	54.7	55.8	56.0	56.6	55.3	55.9
1982	53.7	54.7	54.4	53.9	53.5	53.3	53.2	52.7	52.5	52.1	51.8	51.4	54.3	53.6	52.8	51.8	53.1
1983	52.4	52.1	52.5	53.2	53.6	53.9	54.7	55.3	56.2	56.7	56.9	57.1	52.3	53.5	55.4	56.9	54.5
1984	58.3	58.6	58.9	59.2	59.5	59.8	59.9	60.0	59.9	59.8	60.1	60.1	58.6	59.5	59.9	60.0	59.5
1985	60.0	60.2	60.4	60.2	60.3	60.3	60.0	60.2	60.5	60.3	60.5	61.1	60.2	60.3	60.2	60.6	60.3
1986	61.4	60.9	60.6	60.6	60.7	60.5	60.9	60.8	60.9	61.2	61.5	62.0	61.0	60.6	60.9	61.6	61.0
1987	61.8	62.6	62.7	63.1	63.5	63.8	64.2	64.7	64.9	65.8	66.2	66.5	62.4	63.5	64.6	66.1	64.1
1988	66.5	66.7	66.9	67.2	67.2	67.3	67.4	67.8	67.6	68.0	68.1	68.4	66.7	67.3	67.6	68.2	67.4
1989	68.6	68.2	68.4	68.4	68.0	68.0	67.3	68.0	67.8	67.7	67.9	68.4	68.4	68.1	67.7	68.0	68.1
1990	68.0	68.6	68.9	68.8	68.9	69.1	69.0	69.2	69.4	68.9	68.1	67.6	68.5	69.0	69.2	68.2	68.7
1991	67.2	66.8	66.5	66.6	67.3	68.0	68.0	68.1	68.7	68.5	68.4	68.2	66.8	67.3	68.2	68.4	67.7
1992	67.9	68.3	68.8	69.3	69.6	69.6	70.2	69.9	70.0	70.5	70.8	70.9	68.3	69.5	70.0	70.7	69.7
1993	71.2	71.5	71.5	71.7	71.4	71.6	71.9	71.9	72.3	72.8	73.1	73.5	71.4	71.6	72.0	73.1	72.0
1994	73.9	73.9	74.7	75.0	75.4	75.9	76.1	76.4	76.6	77.3	77.8	78.7	74.1	75.4	76.4	77.9	76.0
1995	79.0	79.0	79.2	79.1	79.2	79.5	79.2	80.2	80.6	80.4	80.7	81.0	79.1	79.3	80.0	80.7	79.8
1996	80.3	81.6	81.4	82.1	82.7	83.4	83.3	83.8	84.3	84.3	85.1	85.7	81.1	82.8	83.8	85.1	83.2
1997	85.9	86.9	87.6	87.5	88.0	88.4	88.8	89.9	90.8	91.5	92.4	92.8	86.8	87.9	89.9	92.3	89.2
1998	93.3	93.3	93.4	93.8	94.4	94.0	93.7	95.7	95.5	96.1	96.1	96.4	93.3	94.1	95.0	96.2	94.6
1999	96.9	97.5	97.6	97.8	98.6	98.5	99.2	99.7	99.3	100.6	101.3	102.1	97.4	98.3	99.4	101.3	99.1
2000	102.2	102.7	103.1	103.9	104.2	104.3	104.0	103.8	104.2	103.7	103.7	103.3	102.7	104.1	104.0	103.6	103.6
2001	102.6	102.0	101.6	101.3	100.6	100.0	99.6	99.2	98.8	98.3	97.8	97.7	102.1	100.7	99.2	97.9	100.0
2002	98.3	98.4	99.1	99.5	99.9	100.9	100.6	100.7	100.8	100.5	100.9	100.4	98.6	100.1	100.7	100.6	100.0
2003	101.1	101.4	101.1	100.3	100.2	100.4	100.8	100.8	101.3	101.2	102.0	102.0	101.2	100.3	101.0	101.8	101.1
2004	102.3	103.0	102.4	103.1	103.7	102.9	103.6	103.8	103.6	104.4	104.7	105.3	102.6	103.2	103.7	104.8	103.6
2005	105.6	106.2	106.1	106.2	106.6	107.3	107.3	107.6	105.8	107.1	108.2	109.1	106.0	106.7	106.9	108.1	106.9
2006	109.1	109.4	110.0	110.9	110.9	111.9	112.3	112.6	112.0	112.3			109.5	111.2	112.3		

NOTE Estimates from August 2006 through October 2006 are subject to further revision in the upcoming monthly releases.
 1. Annual averages of industrial production are calculated from not seasonally adjusted indexes.

Table 1B
CAPACITY AND UTILIZATION: Total
 Seasonally adjusted

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
Capacity (percent of 2002 output)																	
1976	59.9	60.0	60.2	60.3	60.4	60.6	60.7	60.8	60.9	61.1	61.2	61.4	60.0	60.4	60.8	61.2	60.6
1977	61.5	61.7	61.8	62.0	62.2	62.4	62.5	62.7	62.9	63.1	63.3	63.5	61.7	62.2	62.7	63.3	62.5
1978	63.7	63.9	64.1	64.2	64.4	64.6	64.8	65.0	65.1	65.3	65.5	65.6	63.9	64.4	65.0	65.5	64.7
1979	65.8	65.9	66.1	66.2	66.4	66.5	66.7	66.8	66.9	67.1	67.2	67.4	65.9	66.4	66.8	67.2	66.6
1980	67.5	67.6	67.8	67.9	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	67.6	68.0	68.5	68.9	68.3
1981	69.2	69.4	69.6	69.7	69.9	70.1	70.2	70.4	70.6	70.8	70.9	71.1	69.4	69.9	70.4	70.9	70.2
1982	71.3	71.4	71.6	71.8	71.9	72.1	72.2	72.3	72.4	72.5	72.6	72.7	71.4	71.9	72.3	72.6	72.1
1983	72.7	72.8	72.8	72.9	72.9	72.9	73.0	73.0	73.0	73.1	73.2	73.2	72.8	72.9	73.0	73.2	73.0
1984	73.3	73.4	73.5	73.6	73.7	73.8	74.0	74.1	74.3	74.5	74.7	74.8	73.4	73.7	74.1	74.7	74.0
1985	75.0	75.2	75.4	75.6	75.8	76.0	76.2	76.3	76.5	76.6	76.8	76.9	75.2	75.8	76.3	76.8	76.0
1986	77.0	77.1	77.2	77.3	77.4	77.5	77.6	77.7	77.8	77.9	78.0	78.1	77.1	77.4	77.7	78.0	77.5
1987	78.2	78.4	78.5	78.7	78.9	79.0	79.2	79.3	79.5	79.6	79.7	79.8	78.4	78.9	79.3	79.7	79.1
1988	79.9	79.9	80.0	80.1	80.1	80.1	80.2	80.2	80.3	80.4	80.5	80.5	79.9	80.1	80.2	80.5	80.2
1989	80.6	80.8	80.9	81.0	81.2	81.3	81.5	81.6	81.8	82.0	82.2	82.3	80.8	81.2	81.6	82.2	81.4
1990	82.5	82.7	82.8	83.0	83.2	83.3	83.5	83.6	83.8	83.9	84.1	84.2	82.7	83.2	83.6	84.1	83.4
1991	84.4	84.5	84.6	84.8	84.9	85.0	85.1	85.3	85.4	85.5	85.6	85.8	84.5	84.9	85.3	85.6	85.1
1992	85.9	86.1	86.2	86.4	86.5	86.7	86.9	87.0	87.2	87.4	87.5	87.7	86.1	86.5	87.0	87.5	86.8
1993	87.8	87.9	88.1	88.2	88.3	88.4	88.6	88.7	88.8	89.0	89.1	89.3	87.9	88.3	88.7	89.1	88.5
1994	89.5	89.7	89.9	90.1	90.4	90.6	90.9	91.2	91.5	91.8	92.2	92.5	89.7	90.4	91.2	92.2	90.9
1995	92.9	93.2	93.6	94.0	94.4	94.8	95.1	95.5	95.9	96.4	96.8	97.2	93.2	94.4	95.5	96.8	95.0
1996	97.6	98.1	98.5	98.9	99.4	99.8	100.3	100.7	101.2	101.7	102.1	102.6	98.1	99.4	100.7	102.1	100.1
1997	103.1	103.6	104.1	104.7	105.2	105.8	106.4	107.1	107.7	108.4	109.1	109.8	103.6	105.3	107.1	109.1	106.3
1998	110.6	111.3	112.0	112.7	113.5	114.1	114.8	115.4	116.0	116.5	117.1	117.6	111.3	113.4	115.4	117.1	114.3
1999	118.2	118.7	119.2	119.7	120.2	120.7	121.2	121.7	122.2	122.7	123.2	123.7	118.7	120.2	121.7	123.2	120.9
2000	124.3	124.8	125.3	125.8	126.3	126.8	127.2	127.6	128.1	128.5	128.9	129.3	124.8	126.3	127.6	128.9	126.9
2001	129.6	130.0	130.3	130.6	131.0	131.3	131.6	131.9	132.1	132.4	132.7	132.9	130.0	131.0	131.8	132.7	131.4
2002	133.1	133.3	133.5	133.6	133.7	133.8	133.9	133.9	133.8	133.8	133.7	133.6	133.3	133.7	133.9	133.7	133.6
2003	133.5	133.3	133.2	133.0	132.9	132.8	132.7	132.6	132.5	132.5	132.4	132.4	133.3	132.9	132.6	132.4	132.8
2004	132.4	132.4	132.5	132.5	132.5	132.5	132.6	132.6	132.6	132.6	132.6	132.7	132.4	132.5	132.6	132.6	132.5
2005	132.7	132.7	132.8	132.9	133.0	133.1	133.2	133.4	133.6	133.8	134.1	134.3	132.7	133.0	133.4	134.1	133.3
2006	134.6	134.8	135.1	135.4	135.7	136.0	136.2	136.5	136.8	137.0			134.9	135.7	136.5		
Utilization (percent)																	
1976	78.4	78.9	78.9	79.2	79.4	79.2	79.5	79.9	79.9	79.9	80.9	81.5	78.7	79.3	79.8	80.7	79.6
1977	80.8	81.8	82.7	83.2	83.6	84.0	83.9	83.8	83.9	83.9	83.7	83.6	81.8	83.6	83.9	83.7	83.2
1978	82.2	82.3	83.6	85.1	85.1	85.5	85.2	85.3	85.3	85.8	86.2	86.5	82.7	85.2	85.3	86.2	84.9
1979	85.8	86.1	86.2	85.1	85.5	85.4	85.0	84.2	84.1	84.4	84.2	84.1	86.0	85.3	84.5	84.3	85.0
1980	84.3	84.2	83.8	81.9	79.7	78.5	77.9	77.9	79.0	79.8	81.0	81.3	84.1	80.1	78.3	80.7	80.8
1981	80.7	80.1	80.3	79.8	80.2	80.4	80.7	80.5	79.8	79.1	78.0	77.0	80.4	80.1	80.4	78.0	79.7
1982	75.3	76.6	75.9	75.1	74.4	74.0	73.6	72.9	72.5	71.8	71.4	70.8	75.9	74.5	73.0	71.3	73.7
1983	72.0	71.5	72.1	73.0	73.5	73.9	75.0	75.8	76.9	77.5	77.7	78.0	71.9	73.4	75.9	77.8	74.8
1984	79.5	79.8	80.1	80.5	80.8	80.9	81.0	80.9	80.6	80.3	80.5	80.4	79.8	80.7	80.8	80.4	80.4
1985	80.0	80.1	80.0	79.7	79.6	79.4	78.7	78.9	79.1	78.6	78.8	79.5	80.0	79.6	78.9	79.0	79.4
1986	79.8	79.0	78.4	78.4	78.4	78.1	78.5	78.3	78.3	78.6	78.8	79.4	79.1	78.3	78.4	78.9	78.7
1987	79.0	79.9	79.9	80.2	80.5	80.8	81.1	81.6	81.6	82.7	83.0	83.3	79.6	80.5	81.4	83.0	81.1
1988	83.2	83.5	83.6	84.0	83.9	84.0	84.1	84.5	84.2	84.6	84.7	84.9	83.4	84.0	84.2	84.7	84.1
1989	85.0	84.5	84.6	84.4	83.7	83.6	82.6	83.3	82.8	82.6	82.7	83.1	84.7	83.9	82.9	82.8	83.6
1990	82.4	83.0	83.2	82.9	82.9	83.0	82.7	82.8	82.8	82.1	80.9	80.2	82.9	82.9	82.7	81.1	82.4
1991	79.7	79.0	78.5	78.6	79.3	79.9	79.8	79.8	80.4	80.1	79.9	79.5	79.1	79.3	80.0	79.9	79.6
1992	79.0	79.4	79.9	80.3	80.4	80.3	80.8	80.3	80.3	80.8	80.9	80.8	79.4	80.3	80.5	80.8	80.3
1993	81.1	81.3	81.1	81.3	80.9	81.0	81.2	81.1	81.4	81.8	82.0	82.3	81.2	81.1	81.2	82.1	81.4
1994	82.6	82.4	83.1	83.3	83.5	83.8	83.7	83.8	83.8	84.2	84.4	85.1	82.7	83.5	83.8	84.6	83.6
1995	85.1	84.8	84.6	84.1	84.0	83.9	83.2	84.0	84.0	83.5	83.4	83.3	84.8	84.0	83.7	83.4	84.0
1996	82.3	83.2	82.6	83.0	83.2	83.6	83.0	83.2	83.3	83.0	83.3	83.5	82.7	83.3	83.2	83.3	83.1
1997	83.3	83.8	84.1	83.6	83.6	83.5	83.5	84.0	84.3	84.4	84.7	84.5	83.7	83.6	83.9	84.5	83.9
1998	84.3	83.9	83.3	83.2	83.2	82.3	81.6	82.9	82.3	82.5	82.0	81.9	83.8	82.9	82.3	82.2	82.8
1999	82.1	82.1	81.9	81.8	82.1	81.6	81.8	81.9	81.3	82.0	82.2	82.6	82.0	81.8	81.7	82.3	81.9
2000	82.3	82.3	82.3	82.6	82.5	82.3	81.8	81.3	81.4	80.8	80.5	79.9	82.3	82.5	81.5	80.4	81.7
2001	79.2	78.5	78.0	77.5	76.8	76.2	75.7	75.3	74.8	74.2	73.7	73.6	78.5	76.9	75.3	73.8	76.1
2002	73.8	73.8	74.3	74.5	74.7	75.4	75.1	75.2	75.3	75.1	75.5	75.2	74.0	74.9	75.2	75.3	74.8
2003	75.7	76.0	75.9	75.4	75.4	75.7	76.0	76.0	76.4	76.4	77.1	77.1	75.9	75.5	76.1	76.8	76.1
2004	77.2	77.8	77.3	77.8	78.2	77.7	78.1	78.3	78.2	78.7	78.9	79.4	77.5	77.9	78.2	79.0	78.1
2005	79.6	80.0	79.9	79.9	80.2	80.6	80.5	80.7	79.2	80.0	80.7	81.3	79.8	80.2	80.1	80.7	80.2
2006	81.1	81.1	81.4	81.9	81.7	82.3	82.4	82.5	81.9	82.0			81.2	82.0	82.3		

NOTE Estimates from August 2006 through October 2006 are subject to further revision in the upcoming monthly releases.

Table 2
RATES OF CHANGE IN INDUSTRIAL PRODUCTION, MARKET AND INDUSTRY GROUP SUMMARY: 2002–06¹

Item	Revised change (percent)					Difference between revised and earlier changes (percentage points)				
	2002	2003	2004	2005	2006	2002	2003	2004	2005	2006
Total IP	2.7	1.2	3.0	3.2	5.2	.5	-.4	-1.4	.2	-.1
MARKET GROUPS										
Final products and nonindustrial supplies	1.8	1.3	2.6	4.8	3.4	.4	-.5	-1.7	.0	-.3
Consumer goods	2.7	1.4	1.8	2.7	1.3	.0	.0	-2	.4	-.2
Durable	7.1	3.4	-.2	2.3	-2.0	-.8	-.9	-1.5	-.8	.1
Automotive products	11.7	4.8	-3.2	-1.8	-4.7	-.7	-1.7	-3.6	-4.3	-1.0
Home electronics	-10.1	20.4	14.2	16.8	12.8	-2.4	2.0	17.9	-.4	9.3
Appliances, furniture, carpeting	1.9	2.3	2.2	3.1	-3.7	-2.1	.1	-.2	.9	-.9
Miscellaneous goods	5.1	-1.3	2.1	6.4	.7	.2	-.5	-.9	3.2	-.2
Nondurable	1.0	.6	2.6	2.9	2.4	.3	.4	.2	.8	-.5
Non-energy	-.6	1.1	2.2	3.4	2.0	.4	.5	-.2	1.2	-.8
Foods and tobacco	-2.9	2.7	2.3	4.8	.3	.2	.5	.4	1.9	-1.2
Clothing	-10.6	-10.9	-10.5	-.3	1.7	-3.5	-1.6	-7.7	1.0	-3.6
Chemical products	5.6	2.3	3.8	.9	5.6	1.6	1.3	.8	.6	.7
Paper products	-.2	-4.3	3.2	2.2	.8	-.3	-.8	-2.7	-1.5	-1.0
Energy	9.2	-1.7	3.7	1.7	3.3	-.3	.2	2.0	.0	.3
Business equipment	-1.0	1.1	5.3	11.2	11.4	1.3	-1.7	-5.5	.7	-1.0
Transit	-10.8	.4	6.0	20.5	20.1	.0	-3.2	-3.7	5.5	5.2
Information processing	-6.7	7.0	7.2	13.7	10.5	2.2	.5	-7.4	-5.7	-5.6
Industrial and other	6.6	-2.0	3.9	6.7	8.7	1.2	-2.4	-5.2	2.4	-.7
Defense and space equipment	.6	1.5	2.5	3.8	4.1	-.2	-3.9	-7.2	-5.5	-1.4
Construction supplies	1.7	1.0	1.6	8.0	.4	.4	-.7	-3.1	1.4	.0
Business supplies	3.1	.9	2.9	3.4	3.4	.6	.0	-.9	-.4	.2
Materials	4.0	1.0	3.4	1.1	7.6	.6	-.2	-.8	.5	.1
Non-energy	5.2	1.4	4.8	3.5	7.6	.8	-.3	-1.2	.2	.9
Durable	6.0	2.9	5.4	7.0	9.1	.6	-.9	-2.2	.0	1.4
Consumer parts	7.5	-1.5	.2	1.7	-1.0	1.5	-.3	-1.8	-.5	-.8
Equipment parts	8.3	8.8	9.4	16.0	22.7	.9	-3.0	-4.7	-.2	4.9
Other	3.2	.5	4.5	2.7	3.5	-.1	.5	-.5	.6	.4
Nondurable	3.7	-1.1	3.8	-2.1	5.1	1.0	.6	.6	1.0	.3
Textile	5.7	-7.6	-3.4	.2	-5.2	.7	-1.1	3.0	4.6	-1.5
Paper	1.4	-5.2	3.9	-.2	2.4	.5	1.3	-.7	.7	.1
Chemical	6.0	2.4	7.7	-6.5	10.7	2.1	.9	2.4	2.1	.4
Energy	.5	.1	-.2	-4.2	7.4	.1	.2	.0	1.2	-1.9
INDUSTRY GROUPS										
Manufacturing	2.7	1.3	3.4	4.4	5.1	.6	-.4	-1.7	.2	.1
Manufacturing (NAICS)	3.1	1.6	3.5	4.6	5.5	.6	-.4	-1.7	.3	.2
Durable manufacturing	4.3	2.6	3.7	7.9	6.8	.5	-1.4	-3.4	.2	.6
Wood products 321	1.5	4.6	1.8	10.5	-9.9	.6	.6	-1.3	3.1	1.5
Nonmetallic mineral products 327	1.2	1.9	3.8	5.8	.7	.2	-.2	-1.2	2.9	1.2
Primary metal 331	5.5	4.3	7.4	-2.3	6.1	-1.1	3.3	3.6	-.6	2.4
Fabricated metal products 332	1.8	-2.2	1.6	6.1	5.6	.6	-1.5	-3.7	2.1	-.5
Machinery 333	6.3	-2.0	5.0	8.2	8.2	2.2	-3.0	-6.5	1.9	.4
Computer and electronic products 334	4.3	13.6	10.2	18.3	19.5	1.5	-2.1	-5.9	-4.7	2.5
Electrical equip., appliances, and components 335	-3.8	-1.0	2.0	3.8	4.3	-1.7	-.3	-3.1	-3.2	-5.8
Motor vehicles and parts 3361-3	12.4	3.1	-1.6	.2	-3.8	.2	-1.5	-4.3	-2.1	-.3
Aerospace and other miscellaneous transportation equipment 3364-9	-7.3	-3.7	2.0	15.0	17.5	.0	-3.3	-3.3	3.1	3.1
Furniture and related products 337	5.8	.1	3.5	1.7	.4	-1.6	-.1	1.3	3.7	-.1
Miscellaneous 339	9.1	.1	2.2	8.7	3.8	-.5	-.5	-1.7	3.9	-1.1
Nondurable manufacturing	1.5	.4	3.2	.9	4.1	.7	.8	.4	.9	-.1
Food, beverage, and tobacco products 311,2	-1.7	2.6	1.2	5.3	.7	.5	.9	-.5	1.9	-1.4
Textile and product mills 313,4	2.8	-4.7	-.7	2.0	-5.3	.6	-.5	3.1	2.3	-.1
Apparel and leather 315,6	-10.7	-10.5	-9.6	.4	1.1	-3.8	-1.1	-7.5	.8	-3.5
Paper 322	4.1	-5.4	3.0	-.1	-.1	.7	.6	-1.5	.6	.6
Printing and support 323	-3.3	-2.4	1.9	1.9	4.0	-.1	.7	.4	.2	-1.3
Petroleum and coal products 324	2.3	1.0	10.0	-3.6	8.1	-.6	.7	3.7	2.4	-.6
Chemical 325	5.4	2.0	6.1	-2.5	8.0	1.8	1.3	1.8	1.0	.5
Plastics and rubber products 326	5.0	-.2	.8	3.0	4.1	.6	.0	-2.4	-.9	.1
Other manufacturing (non-NAICS) 1133,5111	-2.5	-3.4	2.6	.6	-2.2	.1	-.4	-1.2	-1.2	-1.1
Mining 21	-3.7	.6	-.8	-5.5	10.0	.1	.1	-.3	1.4	-2.0
Utilities 2211,2	7.0	.6	1.6	2.1	1.2	.0	-.2	.4	-.7	-.4
Electric 2211	5.6	1.8	2.2	3.4	.9	.0	-.1	.2	-.4	-.2
Natural gas 2212	15.7	-6.0	-1.4	-3.4	2.6	.1	-.4	1.5	-1.8	-1.1

NOTE. Estimates for the third quarter of 2006 are subject to further revision in the upcoming monthly releases.

1. Rates of change are calculated as the percent change in the seasonally adjusted index from the fourth quarter of the previous year to the fourth quarter of the year specified in the column heading. For 2006, the rates are calculated from the fourth quarter of 2005 to the third quarter of 2006 annualized.

Table 3
RATES OF CHANGE IN INDUSTRIAL PRODUCTION, SPECIAL AGGREGATES AND SELECTED DETAIL: 2002-06 ¹

Item	Revised change (percent)					Difference between revised and earlier changes (percentage points)				
	2002	2003	2004	2005	2006	2002	2003	2004	2005	2006
Total industry	2.7	1.2	3.0	3.2	5.2	.5	-.4	-1.4	.2	-.1
Energy	2.8	.6	1.5	-1.8	6.1	.0	.1	.8	.7	-1.1
Consumer products	9.2	-1.7	3.7	1.7	3.3	-.3	-.2	2.0	.0	.3
Commercial products	4.3	4.8	4.5	.5	2.9	-.2	-.4	2.0	-2.3	1.4
Oil and gas well drilling 213111	-15.2	21.2	8.3	11.8	19.9	.0	.0	.0	.0	.5
Converted fuel	4.3	1.0	2.1	-2.5	6.4	.2	.4	.5	-.3	-1.8
Primary materials	-1.5	-.3	-1.3	-4.9	7.9	.1	.1	-.3	1.9	-2.1
Non-energy	2.7	1.3	3.3	4.6	4.9	.6	-.4	-1.8	.2	.1
Selected high-technology industries	8.3	17.2	10.4	28.1	24.2	3.5	-4.0	-8.0	2.4	1.6
Computers and peripheral equipment 3341	-2.9	4.8	6.6	30.4	5.7	-.3	-.9	2.0	18.3	-7.5
Communications equipment 3342	-13.6	13.9	6.2	12.9	16.9	9.0	4.0	-16.1	-12.5	-8.7
Semiconductors and related electronic components 334412-9	28.0	24.4	13.7	33.8	36.8	2.0	-9.6	-7.7	3.9	12.8
Excluding selected high-technology industries	2.2	.3	2.8	3.1	3.6	.3	-.2	-1.4	.1	-.1
Motor vehicles and parts 3361-3	12.4	3.1	-1.6	.2	-3.8	.2	-1.5	-4.3	-2.1	-.3
Motor vehicles 3361	13.7	7.8	-3.0	-2.5	-6.5	-.7	-2.6	-4.6	-2.4	-.5
Motor vehicle parts 3363	11.1	-2.1	-1.1	1.3	.8	.9	-.6	-3.3	-2.0	-.6
Excluding motor vehicles and parts	1.3	.0	3.2	3.4	4.3	.3	-.1	-1.2	.2	-.2
Consumer goods	.2	1.0	2.4	3.6	1.7	.2	.4	.1	1.3	-.6
Business equipment	.5	-1.5	4.4	8.9	12.6	.2	-2.0	-4.6	-.7	.6
Construction supplies	1.8	.8	1.5	8.0	.2	.4	-.8	-3.1	1.5	-.1
Business supplies	2.0	-1.0	2.1	3.1	2.1	.6	.5	-1.3	.4	-.4
Materials	2.3	-.4	4.4	.7	5.7	.5	.4	-.3	.1	.2
Measures excluding selected high-technology industries										
Total industry	2.3	.3	2.5	1.9	4.2	.3	-.2	-1.0	.1	-.3
Manufacturing ²	2.3	.3	3.0	2.9	3.9	.3	-.2	-1.3	.0	.0
Durable	3.5	.7	2.8	5.2	4.4	.0	-1.0	-2.8	-.3	.2
Measures excluding motor vehicles and parts										
Total industry	2.0	1.0	3.3	3.4	5.7	.5	-.3	-1.1	.3	-.2
Manufacturing ²	1.9	1.1	3.9	4.7	5.8	.6	-.3	-1.4	.3	.0
Durable	2.7	2.5	4.8	9.3	8.5	.5	-1.3	-3.2	.4	.5
Measures excluding selected high-technology industries and motor vehicles and parts										
Total industry	1.5	.1	2.9	2.1	4.7	.3	.0	-.7	.2	-.4
Manufacturing ²	1.3	.0	3.4	3.1	4.5	.3	.0	-1.0	.2	-.1
Measure of non-energy material inputs to										
Finished processors	6.7	2.2	5.2	8.3	11.2	1.0	-1.3	-2.8	.0	1.9
Primary and semifinished processors	3.8	.7	4.4	-.1	5.0	.5	.5	.1	.7	.4
STAGE-OF-PROCESS GROUPS										
Crude	-.2	-.4	3.1	-7.2	10.1	.9	1.3	1.1	1.5	-1.1
Primary and semifinished	4.5	.6	3.2	4.3	4.5	.3	-.6	-1.3	.1	.5
Finished	1.2	2.4	2.6	5.6	4.4	.6	-.5	-2.2	.2	-.8

NOTE. Estimates for the third quarter of 2006 are subject to further revision in the upcoming monthly releases.

1. Rates of change are calculated as the percent change in the seasonally adjusted index from the fourth quarter of the previous year to the fourth quarter of the year specified in the column heading. For 2006, the rates are calculated from the fourth quarter of 2005 to the third quarter of 2006 annualized.

2. 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 a part of manufacturing and are included in the industrial sector.

Table 4
ANNUAL RATES OF CHANGE FOR INDUSTRIAL PRODUCTION ¹

Item	Revised change (percent)					Difference between revised and earlier changes (percentage points)				
	2002	2003	2004	2005	2006	2002	2003	2004	2005	2006
Total IP	.0	1.1	2.5	3.2	4.3	-1	.4	-1.6	.1	-2
MARKET GROUPS										
Consumer goods	1.9	1.3	1.4	2.8	1.2	-.3	.3	-.7	.7	-.3
Durable	5.4	3.4	1.4	1.0	.1	-.9	-.6	-1.4	-.9	-.4
Nondurable	.6	.5	1.4	3.5	1.5	-.1	.7	-.3	1.3	-.3
Business equipment	-7.1	.2	4.3	7.9	12.0	.7	.2	-5.0	-1.1	-.7
Defense and space equipment	-.6	3.8	.2	5.5	2.6	-.4	-1.2	-7.6	-5.2	-3.9
Construction supplies	-.5	-.2	2.0	4.8	4.5	-.3	.7	-3.5	.8	-.3
Business supplies	.0	1.5	2.2	3.4	3.1	-.2	.8	-1.0	-.2	-.2
Materials	.9	.9	3.1	2.2	5.1	-.1	.5	-1.2	.2	.4
Non-energy	1.2	1.3	4.3	3.6	6.6	-.1	.6	-1.5	.1	.7
Energy	.0	-.1	-.2	-1.3	1.6	.0	.3	-.2	.5	.0
INDUSTRY GROUPS										
Manufacturing²	.0	1.1	2.9	3.9	5.0	-.1	.5	-1.9	.0	-.1
Manufacturing (NAICS)	.2	1.3	3.0	4.0	5.4	-.1	.6	-2.0	.1	.0
Durable manufacturing	-.4	2.3	4.0	5.5	8.1	-.2	.0	-3.3	-1.0	.5
Nondurable manufacturing	1.0	.1	1.9	2.4	2.4	.0	1.3	-.3	1.6	-.2
Other manufacturing (non-NAICS)	-3.1	-3.0	.9	1.8	-1.9	-.1	-.1	-.9	-1.3	-1.2
Mining	-4.3	-.1	-.6	-1.6	2.8	.0	.1	-.4	.5	-.1
Utilities	3.1	1.9	1.4	2.0	.1	.0	-.1	.2	-.4	-.3

1. The rates of change are calculated from annual averages of seasonally adjusted industrial production indexes, rather than between the fourth quarter of one year and the fourth quarter of the next.

2. See footnote 2 to table 3.

Table 5
RATES OF CHANGE IN CAPACITY, BY INDUSTRY GROUPS: 2002-06¹

Item	Revised change (percent)					Difference between revised and earlier changes (percentage points)				
	2002	2003	2004	2005	2006	2002	2003	2004	2005	2006
Total industry	.8	-.9	.1	1.1	2.4	.1	-.7	-.5	-.5	.4
Manufacturing²	.4	-.9	.0	1.7	2.7	.0	-.8	-.5	-.3	.1
Manufacturing (NAICS)	.5	-.7	.0	1.8	2.8	.0	-.8	-.5	-.4	.1
Durable manufacturing	.9	-.2	.5	3.3	4.2	-.2	-1.4	-.9	-.7	.5
Nondurable manufacturing	.1	-1.1	-.3	.3	1.0	.4	.0	.4	.5	-.3
Other manufacturing (non-NAICS)	-2.4	-3.8	-.1	.6	.9	-.3	-.7	-.5	.1	.8
Mining	-.5	-2.1	-.3	-1.7	.6	.8	-1.1	.3	-1.1	2.0
Utilities	4.5	3.2	2.6	.0	2.1	.0	.1	.0	.0	1.4
Selected high-technology industries	12.6	1.4	4.3	18.3	19.6	3.1	-6.6	-2.5	-2.5	7.4
Manufacturing ² ex. selected high-technology industries	-.4	-.8	-.2	.6	1.4	-.2	-.4	-.3	.0	-.4
STAGE-OF-PROCESS GROUPS										
Crude	.2	-2.2	-.1	-1.1	.3	1.3	-.1	1.0	-.2	1.4
Primary and semifinished	.9	-1.4	.4	1.4	3.0	.0	-1.3	-.5	-1.1	1.0
Finished	.6	.3	.5	2.0	2.3	.0	-.3	-.3	.8	-.5

1. Rates of change are calculated as the percent change in the seasonally adjusted index from the fourth quarter of the previous year to the fourth quarter of the year specified in the column heading.

2. See footnote 2 to table 3.

Table 6**REVISED AND EARLIER CAPACITY UTILIZATION RATES, BY INDUSTRY GROUPS**

Percent of capacity, seasonally adjusted

Item	Revised Rate					Difference between revised and earlier rates (percentage points)			
	1972-2004 Ave.	2003 Q4	2004 Q4	2005 Q4	2006 Q3	2003 Q4	2004 Q4	2005 Q4	2006 Q3
Total industry	81.0	76.8	79.0	80.7	82.3	.3	-.4	.2	-.2
Manufacturing	79.8	75.0	77.6	79.6	80.9	.3	-.6	-.2	-.3
Manufacturing (NAICS)	79.5	74.6	77.2	79.3	80.8	.2	-.6	-.2	-.2
Durable manufacturing	78.0	72.4	74.8	78.1	79.6	.2	-1.5	-.9	-.9
Wood products 321	80.2	80.3	81.3	88.5	80.8	1.8	.3	1.4	1.7
Nonmetallic mineral products 327	79.4	79.2	81.1	83.8	82.3	-.2	-1.3	.6	1.0
Primary metal 331	80.6	80.4	86.8	83.7	88.6	-.2	1.8	.2	2.1
Fabricated metal products 332	77.2	72.2	73.6	78.0	80.7	2.1	-.3	1.9	2.1
Machinery 333	78.6	70.2	73.5	78.8	82.1	.8	-4.8	-4.7	-5.4
Computer and electronic products 334	78.4	67.1	71.7	75.1	77.2	.1	-1.2	-3.1	-3.7
Electrical equip., appliances, and components 335	83.2	75.9	79.1	83.4	85.4	.1	-2.0	-4.3	-8.1
Motor vehicles and parts 3361-3	77.6	79.9	79.0	78.6	75.6	-.4	-1.5	-1.0	-.4
Aerospace and other miscellaneous transportation equipment 3364-9	72.4	60.4	61.5	70.3	78.0	-1.9	-3.7	-1.4	.0
Furniture and related products 337	78.5	72.4	76.5	78.6	79.3	-1.3	1.3	5.3	5.5
Miscellaneous 339	76.7	75.3	75.0	78.2	78.1	.6	-1.7	-.2	-.7
Nondurable manufacturing	81.7	77.4	80.1	80.6	82.4	.2	.2	.5	.6
Food, beverage, and tobacco products 311,2	81.6	77.8	78.2	81.4	80.9	-.5	-1.2	-.5	-1.0
Textile and product mills 313,4	82.4	73.3	75.6	79.8	78.3	-1.3	.6	2.6	2.7
Apparel and leather 315,6	78.9	66.2	67.9	71.5	74.0	-.5	-5.0	-8.8	-11.4
Paper 322	87.9	81.7	84.5	85.0	85.4	.4	-1.0	-.1	.4
Printing and support 323	83.8	72.9	76.0	78.0	79.2	1.3	1.1	.7	-1.2
Petroleum and coal products 324	86.1	89.0	94.4	87.9	92.9	.6	1.0	.6	.2
Chemical 325	78.3	75.2	78.5	75.7	79.6	.7	1.2	1.6	2.3
Plastics and rubber products 326	83.8	81.6	85.0	87.3	87.9	.4	.1	-1.7	-2.1
Other manufacturing (non-NAICS) 1133,5111	84.8	82.9	85.2	85.2	83.2	.8	.2	-.9	-2.1
Mining 21	87.3	88.8	88.4	85.0	91.1	.7	.1	2.3	.1
Utilities 2211,2	86.8	85.5	84.7	86.5	86.0	-.1	.2	-.4	-1.5
Selected high-technology industries	78.0	66.8	70.7	76.5	78.5	1.1	-2.1	.8	-1.7
Computers and peripheral equipment 3341	78.2	74.5	79.8	76.2	73.1	-.4	3.5	-4.2	-10.0
Communications equipment 3342	75.6	49.0	54.4	63.8	71.9	1.9	-4.3	-10.4	-12.7
Semiconductors and related electronic components 334412-9	80.5	75.6	76.8	83.2	83.8	1.4	-2.6	8.0	6.0
Measures excluding selected high-technology industries									
Total industry	81.1	77.5	79.5	80.9	82.6	.2	-.3	.0	-.3
Manufacturing ¹	79.9	75.7	78.1	79.8	81.3	.2	-.5	-.5	-.4
STAGE-OF-PROCESS GROUPS									
Crude	86.4	85.2	88.0	83.0	89.5	.2	.2	1.6	.4
Primary and semifinished	82.2	79.3	81.3	83.5	84.1	.7	.0	.9	.6
Finished	77.8	72.2	73.9	76.5	77.9	-.2	-1.4	-1.8	-2.0

NOTE. Estimates for the third quarter of 2006 are subject to further revision in the upcoming monthly releases.

1. See footnote 2 to table 3.

Table 7A
INDUSTRIAL PRODUCTION: Manufacturing¹
 Seasonally adjusted

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual ²
IP (percent change)																	
1976	1.3	1.3	.2	.7	.5	.0	.8	.7	.2	.1	1.3	1.1	13.7	6.8	6.0	6.8	9.1
1977	-3	1.8	1.5	1.1	.8	.8	.1	.6	.2	.3	.1	1.1	10.4	14.6	5.5	4.2	8.7
1978	-1.4	.3	1.7	1.6	.3	.8	-1	.5	.4	.8	.9	.8	.4	14.1	4.3	9.0	6.1
1979	-9	.5	.5	-1.5	1.2	.2	.1	-1.3	.2	.3	-2	.3	2.0	-7	-8	.0	3.2
1980	.4	-1	-8	-2.0	-3.1	-1.5	-9	.7	1.6	1.8	1.9	.3	1.0	-18.6	-7.6	19.2	-3.6
1981	-3	-7	.4	.5	.6	-5	.2	.1	-5	-1.0	-1.1	-1.6	.7	3.3	.3	-9.8	1.2
1982	-2.3	2.7	-8	-7	-2	-2	-1	-8	-3	-1.1	-7	-4	-8.9	-1.9	-4.0	-8.4	-5.3
1983	2.4	-1	1.0	1.2	1.3	.8	1.5	.8	1.9	1.2	.3	.3	8.8	12.4	15.6	12.7	4.8
1984	1.9	1.1	.5	.5	.3	.5	.5	.2	-2	.4	.3	.4	12.9	6.4	3.8	2.9	10.0
1985	-4	-3	.8	-3	.1	.2	-6	.6	.1	-2	.7	.4	.3	1.1	.3	2.5	1.9
1986	1.1	-7	-3	.4	.2	-3	.5	.3	.2	.4	.5	.9	4.6	.0	2.5	5.0	2.3
1987	-3	1.4	.1	.5	.8	.4	.7	.5	.6	1.6	.6	.6	6.0	7.0	7.2	11.4	5.7
1988	-2	.1	.3	.8	-1	.1	.1	.1	.4	.6	.3	.4	2.4	4.3	1.4	5.0	5.3
1989	.7	-1.0	-1	.1	-8	.1	-1.1	1.0	-3	-2	.2	.2	1.7	-3.2	-2.9	.6	.8
1990	-2	1.4	.4	-2	.1	.2	-2	.3	.0	-8	-1.1	-7	4.5	2.6	.8	-6.5	.8
1991	-8	-7	-6	.3	.7	1.1	.2	.3	1.1	-2	-2	-1	-9.0	2.3	7.4	1.8	-1.9
1992	-5	.8	.9	.5	.6	.3	.8	-4	.1	.6	.4	-1	.7	8.1	4.2	2.8	3.8
1993	1.1	.1	-2	.6	-1	-1	.3	-1	.6	.8	.4	.6	4.6	1.6	1.7	7.2	3.7
1994	.3	.1	1.3	.8	.7	.3	.5	.7	.4	1.0	.8	1.2	5.5	9.2	6.0	10.1	6.1
1995	.4	.0	.2	-2	.0	.4	-6	1.2	.9	-1	.1	.3	6.4	.4	3.1	4.4	5.5
1996	-9	1.5	-3	1.1	.7	1.1	.3	.6	.7	.0	.9	.9	1.1	9.6	7.6	6.5	4.6
1997	.1	1.4	1.1	-3	.8	.6	.4	1.5	.9	.8	1.2	.5	9.8	6.6	10.0	12.1	8.5
1998	.8	.0	-2	.6	.5	-6	-4	2.6	-3	.9	.2	.5	6.3	2.8	4.1	7.5	6.9
1999	.4	.8	-1	.3	1.0	-3	.5	.7	-3	1.6	.8	.8	5.4	4.5	4.1	9.9	5.4
2000	.2	.3	.7	.7	.0	.2	-1	-6	.5	-4	-4	-7	5.8	5.8	-7	-3.2	4.8
2001	-6	-6	-4	-3	-7	-6	-3	-7	-3	-7	-3	.2	-6.6	-5.7	-6.2	-5.0	-4.2
2002	.4	.1	.8	.1	.6	1.1	-4	.4	.1	-5	.4	-4	3.1	5.8	3.1	-.8	.0
2003	.5	.0	.2	-9	-1	.6	.1	-2	.7	-1	1.0	-1	1.7	-2.3	2.2	3.7	1.1
2004	.0	.7	-1	.6	.6	-7	.8	.6	-3	.7	.0	.6	2.9	3.7	3.5	3.7	2.9
2005	.5	.6	-2	.2	.6	.4	.1	.4	-8	1.5	.9	.4	5.1	3.1	1.9	7.5	3.9
2006	.8	-2	.4	1.0	-2	.9	.4	.4	-1	-3			5.5	5.5	4.4		
IP (2002=100)																	
1976	42.6	43.2	43.3	43.6	43.8	43.8	44.1	44.4	44.5	44.6	45.1	45.6	43.0	43.7	44.4	45.1	44.1
1977	45.5	46.3	47.0	47.5	47.8	48.2	48.3	48.6	48.6	48.8	48.8	49.4	46.2	47.9	48.5	49.0	47.9
1978	48.7	48.8	49.7	50.5	50.6	51.0	51.0	51.2	51.5	51.9	52.4	52.8	49.1	50.7	51.2	52.3	50.8
1979	52.3	52.6	52.9	52.1	52.7	52.8	52.8	52.1	52.2	52.4	52.3	52.5	52.6	52.5	52.4	52.4	52.5
1980	52.7	52.6	52.2	51.2	49.6	48.9	48.4	48.8	49.5	50.4	51.4	51.5	52.5	49.9	48.9	51.1	50.6
1981	51.3	51.0	51.2	51.5	51.8	51.6	51.7	51.8	51.5	51.0	50.4	49.6	51.2	51.6	51.6	50.3	51.2
1982	48.4	49.7	49.4	49.0	48.9	48.8	48.8	48.4	48.2	47.7	47.3	47.1	49.2	48.9	48.4	47.4	48.5
1983	48.3	48.2	48.7	49.3	49.9	50.3	51.1	51.5	52.5	53.1	53.3	53.4	48.4	49.8	51.7	53.2	50.8
1984	54.4	55.0	55.3	55.6	55.7	56.0	56.2	56.3	56.2	56.5	56.7	56.9	54.9	55.7	56.3	56.7	55.9
1985	56.7	56.5	56.9	56.8	56.8	56.9	56.6	57.0	57.1	56.9	57.3	57.5	56.7	56.9	56.9	57.2	56.9
1986	58.2	57.8	57.7	57.9	58.0	57.8	58.1	58.3	58.4	58.6	58.9	59.4	57.9	57.9	58.3	59.0	58.3
1987	59.3	60.1	60.2	60.5	60.9	61.2	61.6	61.9	62.3	63.2	63.6	64.0	59.8	60.9	61.9	63.6	61.6
1988	63.9	63.9	64.1	64.7	64.6	64.7	64.8	64.8	65.1	65.5	65.6	65.9	64.0	64.7	64.9	65.7	64.8
1989	66.4	65.8	65.7	65.8	65.2	65.3	64.6	65.2	65.0	64.9	65.0	65.2	66.0	65.4	64.9	65.0	65.3
1990	65.1	66.0	66.2	66.1	66.2	66.3	66.2	66.4	66.4	65.9	65.1	64.6	65.8	66.2	66.3	65.2	65.9
1991	64.1	63.7	63.3	63.5	64.0	64.7	64.8	65.0	65.7	65.6	65.5	65.4	63.7	64.0	65.2	65.5	64.6
1992	65.0	65.6	66.2	66.5	66.9	67.2	67.7	67.5	67.5	67.9	68.2	68.1	65.6	66.9	67.6	68.0	67.0
1993	68.8	68.9	68.8	69.2	69.1	69.0	69.3	69.2	69.7	70.3	70.6	71.0	68.8	69.1	69.4	70.6	69.5
1994	71.2	71.3	72.2	72.8	73.2	73.4	73.8	74.3	74.6	75.3	75.9	76.8	71.6	73.2	74.2	76.0	73.7
1995	77.2	77.2	77.3	77.2	77.2	77.5	77.0	78.0	78.7	78.6	78.7	78.9	77.2	77.3	77.9	78.7	77.8
1996	78.2	79.4	79.2	80.1	80.7	81.5	81.7	82.3	82.8	82.8	83.6	84.3	78.9	80.8	82.3	83.6	81.4
1997	84.4	85.6	86.6	86.3	87.0	87.5	87.8	89.2	90.0	90.7	91.8	92.3	85.5	86.9	89.0	91.6	88.3
1998	93.0	93.1	92.9	93.5	94.0	93.4	93.1	95.5	95.2	96.1	96.2	96.7	93.0	93.6	94.6	96.3	94.4
1999	97.1	97.9	97.8	98.2	99.1	98.8	99.3	100.1	99.7	101.3	102.1	102.9	97.6	98.7	99.7	102.1	99.5
2000	103.1	103.4	104.1	104.9	104.9	105.2	105.1	104.5	104.9	104.5	104.1	103.4	103.5	105.0	104.8	104.0	104.3
2001	102.8	102.2	101.7	101.4	100.7	100.1	99.7	99.0	98.7	98.0	97.7	97.9	102.2	100.7	99.1	97.9	100.0
2002	98.3	98.4	99.2	99.3	99.8	100.9	100.5	100.9	101.0	100.4	100.8	100.4	98.6	100.0	100.8	100.6	100.0
2003	100.9	100.9	101.2	100.3	100.2	100.8	100.9	100.6	101.4	101.3	102.2	102.1	101.0	100.4	100.9	101.9	101.1
2004	102.1	102.9	102.8	103.4	104.0	103.3	104.1	104.7	104.4	105.2	105.2	105.8	102.6	103.5	104.4	105.4	104.0
2005	106.4	107.0	106.7	106.9	107.6	108.0	108.1	108.4	107.5	109.2	110.1	110.6	106.7	107.5	108.0	110.0	108.0
2006	111.5	111.2	111.7	112.8	112.6	113.5	113.9	114.4	114.2	113.9			111.5	113.0	114.2		

NOTE Estimates from August 2006 through October 2006 are subject to further revision in the upcoming monthly releases.

1. See footnote 2 to table 3.

2. Annual averages of industrial production are calculated from not seasonally adjusted indexes.

Table 7B
CAPACITY AND UTILIZATION: Manufacturing ¹
 Seasonally adjusted

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
Capacity (percent of 2002 output)																	
1976	55.7	55.8	55.9	56.0	56.2	56.3	56.4	56.6	56.7	56.8	57.0	57.1	55.8	56.2	56.6	57.0	56.4
1977	57.3	57.4	57.6	57.7	57.9	58.1	58.2	58.4	58.6	58.7	58.9	59.1	57.4	57.9	58.4	58.9	58.2
1978	59.3	59.5	59.6	59.8	60.0	60.2	60.4	60.5	60.7	60.9	61.1	61.2	59.5	60.0	60.5	61.1	60.3
1979	61.4	61.6	61.8	61.9	62.1	62.3	62.4	62.6	62.7	62.9	63.1	63.2	61.6	62.1	62.6	63.1	62.3
1980	63.4	63.5	63.7	63.8	64.0	64.2	64.4	64.5	64.7	64.9	65.1	65.3	63.5	64.0	64.5	65.1	64.3
1981	65.5	65.7	65.9	66.0	66.2	66.4	66.6	66.7	66.9	67.1	67.2	67.4	65.7	66.2	66.7	67.2	66.5
1982	67.6	67.7	67.9	68.0	68.1	68.3	68.4	68.5	68.6	68.7	68.8	68.8	67.7	68.1	68.5	68.7	68.3
1983	68.9	68.9	69.0	69.0	69.0	69.1	69.1	69.2	69.2	69.3	69.3	69.4	68.9	69.0	69.2	69.3	69.1
1984	69.5	69.6	69.8	69.9	70.0	70.2	70.4	70.6	70.8	71.0	71.2	71.4	69.6	70.0	70.6	71.2	70.4
1985	71.6	71.9	72.1	72.3	72.5	72.7	72.9	73.1	73.2	73.4	73.5	73.6	71.9	72.5	73.1	73.5	72.7
1986	73.7	73.8	73.9	74.0	74.1	74.2	74.3	74.4	74.5	74.6	74.8	74.9	73.8	74.1	74.4	74.8	74.3
1987	75.1	75.3	75.4	75.6	75.8	76.0	76.2	76.3	76.5	76.6	76.7	76.8	75.3	75.8	76.3	76.7	76.0
1988	76.9	77.0	77.1	77.1	77.1	77.2	77.2	77.3	77.4	77.4	77.5	77.6	77.0	77.1	77.3	77.5	77.2
1989	77.8	77.9	78.0	78.2	78.4	78.5	78.7	78.9	79.1	79.3	79.4	79.6	77.9	78.4	78.9	79.4	78.6
1990	79.8	80.0	80.2	80.3	80.5	80.7	80.8	81.0	81.2	81.3	81.5	81.6	80.0	80.5	81.0	81.5	80.7
1991	81.8	81.9	82.1	82.2	82.3	82.5	82.6	82.7	82.9	83.0	83.1	83.3	81.9	82.3	82.7	83.1	82.5
1992	83.4	83.6	83.8	83.9	84.1	84.3	84.5	84.7	84.9	85.1	85.3	85.5	83.6	84.1	84.7	85.3	84.4
1993	85.6	85.8	85.9	86.1	86.2	86.4	86.5	86.7	86.8	87.0	87.2	87.4	85.8	86.2	86.7	87.2	86.5
1994	87.6	87.8	88.0	88.3	88.5	88.8	89.1	89.4	89.8	90.1	90.5	90.9	87.8	88.5	89.4	90.5	89.1
1995	91.2	91.6	92.1	92.5	92.9	93.3	93.8	94.2	94.7	95.1	95.6	96.1	91.6	92.9	94.2	95.6	93.6
1996	96.6	97.1	97.6	98.1	98.6	99.1	99.6	100.1	100.6	101.2	101.7	102.2	97.1	98.6	100.1	101.7	99.4
1997	102.8	103.4	104.0	104.6	105.2	105.9	106.6	107.3	108.0	108.8	109.6	110.4	103.4	105.2	107.3	109.6	106.4
1998	111.3	112.1	112.9	113.7	114.5	115.3	116.0	116.7	117.4	118.1	118.7	119.3	112.1	114.5	116.7	118.7	115.5
1999	119.9	120.5	121.1	121.7	122.2	122.8	123.4	124.0	124.6	125.2	125.8	126.4	120.5	122.2	124.0	125.8	123.1
2000	127.1	127.7	128.3	128.9	129.5	130.1	130.7	131.2	131.7	132.2	132.7	133.2	127.7	129.5	131.2	132.7	130.3
2001	133.6	134.0	134.4	134.7	135.1	135.4	135.6	135.9	136.1	136.3	136.5	136.6	134.0	135.1	135.9	136.5	135.4
2002	136.8	136.9	137.0	137.1	137.1	137.2	137.2	137.2	137.1	137.1	137.0	136.9	136.9	137.1	137.2	137.0	137.1
2003	136.8	136.7	136.6	136.5	136.4	136.2	136.1	136.0	135.9	135.9	135.8	135.8	136.7	136.4	136.0	135.8	136.2
2004	135.7	135.7	135.7	135.7	135.7	135.7	135.7	135.7	135.8	135.8	135.9	136.0	135.7	135.7	135.7	135.9	135.7
2005	136.0	136.2	136.3	136.5	136.6	136.9	137.1	137.3	137.6	137.9	138.2	138.6	136.2	136.6	137.4	138.2	137.1
2006	138.9	139.2	139.5	139.9	140.2	140.5	140.8	141.1	141.3	141.6			139.2	140.2	141.1		
Utilization (percent)																	
1976	76.5	77.4	77.4	77.8	78.0	77.8	78.3	78.6	78.6	78.4	79.3	79.9	77.1	77.9	78.5	79.2	78.2
1977	79.4	80.6	81.6	82.3	82.7	83.1	82.9	83.2	83.1	83.1	82.9	83.6	80.6	82.7	83.1	83.2	82.4
1978	82.1	82.1	83.3	84.4	84.3	84.8	84.5	84.6	84.8	85.2	85.7	86.2	82.5	84.5	84.6	85.7	84.3
1979	85.2	85.4	85.6	84.0	84.8	84.7	84.6	83.3	83.3	83.3	82.9	83.0	85.4	84.5	83.7	83.1	84.2
1980	83.1	82.9	82.0	80.1	77.5	76.1	75.2	75.5	76.5	77.7	78.9	78.9	82.7	77.9	75.8	78.5	78.7
1981	78.4	77.7	77.8	77.9	78.2	77.6	77.6	77.5	77.0	76.0	75.0	73.6	78.0	77.9	77.4	74.8	77.0
1982	71.7	73.5	72.7	72.1	71.8	71.5	71.3	70.6	70.3	69.4	68.9	68.5	72.6	71.8	70.7	68.9	71.0
1983	70.1	69.9	70.6	71.4	72.3	72.8	73.9	74.4	75.8	76.6	76.8	76.9	70.2	72.2	74.7	76.8	73.5
1984	78.2	79.0	79.2	79.5	79.5	79.7	79.9	79.8	79.4	79.5	79.6	79.6	78.8	79.6	79.7	79.6	79.4
1985	79.1	78.6	79.0	78.5	78.4	78.3	77.7	78.0	77.9	77.6	77.9	78.2	78.9	78.4	77.9	77.9	78.3
1986	78.9	78.3	78.0	78.2	78.3	77.9	78.2	78.3	78.4	78.5	78.8	79.3	78.4	78.1	78.3	78.9	78.4
1987	78.9	79.9	79.7	79.9	80.4	80.5	80.9	81.1	81.4	82.5	82.9	83.2	79.5	80.3	81.1	82.9	80.9
1988	83.0	83.0	83.2	83.9	83.7	83.8	83.8	83.9	84.1	84.5	84.7	84.9	83.1	83.8	83.9	84.7	83.9
1989	85.4	84.4	84.2	84.1	83.2	83.2	82.1	82.6	82.2	81.9	81.9	81.8	84.7	83.5	82.3	81.9	83.1
1990	81.5	82.5	82.6	82.2	82.2	82.2	81.9	81.9	81.8	81.0	79.9	79.2	82.2	82.2	81.8	80.0	81.6
1991	78.4	77.7	77.1	77.2	77.7	78.4	78.5	78.6	79.3	79.0	78.7	78.5	77.7	77.8	78.8	78.8	78.3
1992	78.0	78.5	79.0	79.3	79.6	79.7	80.2	79.7	79.5	79.8	79.9	79.6	78.5	79.5	79.8	79.8	79.4
1993	80.3	80.3	80.0	80.3	80.1	79.9	80.1	79.9	80.2	80.8	80.9	81.3	80.2	80.1	80.0	81.0	80.3
1994	81.3	81.2	82.1	82.5	82.7	82.7	82.8	83.1	83.1	83.6	83.9	84.6	81.5	82.6	83.0	84.0	82.8
1995	84.6	84.2	84.0	83.5	83.1	83.1	82.2	82.7	83.1	82.6	82.3	82.1	84.3	83.2	82.7	82.3	83.1
1996	81.0	81.8	81.2	81.7	81.8	82.3	82.0	82.1	82.3	81.8	82.2	82.5	81.3	81.9	82.2	82.2	81.9
1997	82.1	82.8	83.3	82.5	82.7	82.7	82.4	83.2	83.3	83.4	83.8	83.6	82.8	82.6	83.0	83.6	83.0
1998	83.6	83.0	82.3	82.2	82.1	81.0	80.2	81.8	81.1	81.4	81.1	81.1	83.0	81.8	81.0	81.2	81.7
1999	81.0	81.2	80.8	80.7	81.1	80.5	80.5	80.7	80.0	80.9	81.1	81.4	81.0	80.7	80.4	81.1	80.8
2000	81.1	81.0	81.2	81.4	81.0	80.8	80.4	79.6	79.7	79.0	78.4	77.6	81.1	81.1	79.9	78.3	80.1
2001	76.9	76.2	75.7	75.3	74.6	73.9	73.5	72.9	72.5	71.9	71.6	71.7	76.3	74.6	73.0	71.7	73.9
2002	71.9	71.9	72.4	72.4	72.8	73.6	73.2	73.5	73.6	73.3	73.6	73.3	72.0	72.9	73.5	73.4	73.0
2003	73.7	73.8	74.1	73.5	73.5	74.0	74.1	74.0	74.6	74.5	75.3	75.2	73.9	73.6	74.2	75.0	74.2
2004	75.3	75.8	75.7	76.2	76.6	76.1	76.7	77.2	76.9	77.4	77.4	77.8	75.6	76.3	76.9	77.6	76.6
2005	78.2	78.6	78.3	78.4	78.7	78.9	78.8	79.0	78.1	79.2	79.7	79.8	78.4	78.7	78.6	79.6	78.8
2006	80.3	79.9	80.1	80.7	80.3	80.8	80.9	81.1	80.8	80.5			80.1	80.6	80.9		

NOTE Estimates from August 2006 through October 2006 are subject to further revision in the upcoming monthly releases.

1. See footnote 2 to table 3.

Table 8A
INDUSTRIAL PRODUCTION: 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 ²
IP (percent change)																	
1976	1.4	.9	.0	.6	.4	.0	.5	.6	.1	.0	1.5	1.0	12.2	4.5	4.3	6.8	7.4
1977	-6	1.4	1.2	.8	.7	.6	.2	.0	.4	.2	.0	.1	7.9	11.8	4.1	2.0	6.9
1978	-1.4	.4	1.8	2.1	.3	.7	-1	.3	.2	.8	.6	.5	-2.0	16.3	2.6	6.6	4.7
1979	-8	.5	.3	-1.1	.7	-1	-3	-8	.0	.5	-2	.0	.8	-1.3	-2.7	.3	2.1
1980	.4	-1	-4	-2.1	-2.6	-1.3	-7	.2	1.7	1.2	1.7	.5	.6	-16.9	-6.9	15.9	-3.6
1981	-7	-6	.5	-6	.7	.5	.6	-1	-7	-9	-1.1	-1.2	.0	.5	3.6	-9.6	.6
1982	-2.0	1.8	-7	-9	-7	-5	-5	-8	-5	-9	-5	-9	-8.6	-5.8	-6.6	-8.1	-6.0
1983	1.9	-7	.8	1.1	.7	.5	1.4	1.2	1.3	.8	.2	.4	3.6	8.5	13.8	9.6	1.8
1984	2.0	.3	.4	.5	.4	.2	.2	.0	-2	-2	.3	.1	11.4	5.0	1.5	-.3	7.9
1985	-.3	.5	.2	-.1	.1	.0	-.5	.4	.5	-.4	.3	1.1	.9	1.1	-.2	2.6	1.0
1986	.5	-8	-7	.0	.1	-2	.3	-2	.2	.4	.4	.8	2.3	-2.7	.5	4.0	.9
1987	-.5	1.2	.2	.5	.6	.4	.5	.6	.2	1.4	.5	.4	4.4	6.4	6.1	9.0	4.3
1988	.0	.4	.2	.5	-2	.2	.1	.5	-.4	.5	.2	.4	3.0	2.7	1.4	2.9	4.4
1989	.3	-.5	.3	-.1	-.7	.0	-1.1	.9	-.3	-2	.3	.7	1.8	-2.0	-3.3	1.0	.6
1990	-.7	.9	.4	-.2	.1	.2	-.2	.3	.1	-.8	-1.2	-.7	2.2	2.3	1.0	-6.5	.3
1991	-.5	-.8	-.6	.2	1.0	1.0	.0	.1	.9	-.2	-.2	-.5	-8.1	2.2	5.4	.4	-2.0
1992	-.8	.7	-.7	.6	.3	-.1	.8	-.6	.2	.6	.3	.0	-1.9	6.1	1.8	2.9	1.9
1993	.5	.3	-.1	.3	-.4	.2	.3	-.1	.4	.7	.3	.5	3.0	.4	1.6	5.1	2.5
1994	.4	.0	.9	.3	.4	.6	.1	.3	.0	.6	.4	.9	4.2	5.4	3.3	5.5	4.0
1995	.2	-.2	-.2	-.3	.0	.1	-.5	1.1	.1	-.5	.1	.2	3.0	-1.4	1.5	.4	2.4
1996	-1.0	1.4	-.4	.8	.4	.7	-.5	.4	.4	-.2	.8	.5	-.3	6.0	2.2	3.4	1.7
1997	-.1	.8	.5	-.4	.3	.2	.3	1.0	.7	.7	.7	.2	5.0	2.1	6.0	8.3	4.2
1998	.2	-.1	-.1	.2	.5	-.9	-.8	2.0	-.6	.5	-.3	.0	1.7	1.0	-.2	2.2	3.1
1999	.2	.2	-.1	-.2	.6	-.5	.3	.4	-.5	1.2	.3	.6	.9	.3	1.2	5.5	1.2
2000	-.3	.0	.1	.4	.0	-.1	-.5	-.4	.4	-.6	-.2	-.5	.7	1.7	-2.9	-3.0	1.1
2001	-.7	-.5	-.4	-.1	-.6	-.4	-.3	-.3	-.5	-.6	-.5	-.1	-6.4	-4.1	-4.3	-5.3	-4.1
2002	.7	.1	.8	.4	.4	.9	-.3	.1	.0	-.4	.3	-.6	2.9	6.1	1.7	-1.3	.1
2003	.5	.2	-.3	-.8	-.1	.2	.3	-.1	.5	-.1	.8	-.1	1.0	-4.0	1.7	2.7	.2
2004	.1	.6	-.6	.7	.6	-.8	.7	.2	-.2	.7	.2	.6	1.9	2.6	1.6	4.0	1.9
2005	.2	.5	-.2	-.1	.3	.6	-.1	.2	-1.9	1.0	1.0	.8	3.8	1.5	-.5	3.0	2.5
2006	-.1	.2	.4	.7	-.2	.8	.3	.1	-.7	.1			4.5	5.2	2.8		
IP (2002=100)																	
1976	65.0	65.6	65.6	66.0	66.2	66.2	66.5	67.0	67.0	67.1	68.1	68.7	65.4	66.1	66.8	68.0	66.6
1977	68.3	69.3	70.1	70.7	71.2	71.7	71.8	71.8	72.1	72.3	72.2	72.3	69.3	71.2	71.9	72.3	71.2
1978	71.3	71.6	72.9	74.4	74.6	75.1	75.0	75.2	75.3	75.9	76.4	76.8	71.9	74.7	75.2	76.4	74.5
1979	76.2	76.6	76.8	76.0	76.5	76.4	76.2	75.6	75.5	75.9	75.8	75.8	76.5	76.3	75.8	75.8	76.1
1980	76.1	76.0	75.7	74.1	72.2	71.2	70.7	70.9	72.0	72.9	74.2	74.6	75.9	72.5	71.2	73.9	73.4
1981	74.1	73.6	74.0	73.5	74.0	74.4	74.9	74.8	74.3	73.6	72.8	71.9	73.9	74.0	74.6	72.8	73.8
1982	70.5	71.8	71.2	70.6	70.0	69.7	69.4	68.8	68.5	67.9	67.6	66.9	71.2	70.1	68.9	67.5	69.4
1983	68.2	67.7	68.3	69.0	69.5	69.9	70.9	71.7	72.6	73.2	73.4	73.7	68.1	69.5	71.8	73.4	70.7
1984	75.2	75.4	75.7	76.1	76.4	76.6	76.7	76.7	76.5	76.4	76.6	76.7	75.4	76.3	76.6	76.6	76.2
1985	76.5	76.8	77.0	76.9	77.0	77.0	76.6	76.9	77.3	77.0	77.2	78.0	76.7	77.0	76.9	77.4	77.0
1986	78.5	77.8	77.3	77.3	77.4	77.3	77.5	77.3	77.5	77.8	78.1	78.7	77.9	77.3	77.4	78.2	77.7
1987	78.4	79.3	79.5	79.8	80.3	80.7	81.1	81.6	81.7	82.9	83.3	83.6	79.1	80.3	81.5	83.3	81.0
1988	83.6	83.9	84.1	84.5	84.4	84.5	84.6	85.0	84.7	85.1	85.3	85.7	83.9	84.4	84.7	85.4	84.6
1989	85.9	85.5	85.8	85.7	85.1	85.1	84.2	85.0	84.7	84.5	84.7	85.3	85.7	85.3	84.6	84.8	85.1
1990	84.7	85.4	85.8	85.6	85.7	85.9	85.8	86.0	86.1	85.5	84.4	83.8	85.3	85.8	86.0	84.6	85.4
1991	83.4	82.7	82.2	82.4	83.2	84.0	84.0	84.1	84.8	84.6	84.5	84.0	82.8	83.2	84.3	84.4	83.7
1992	83.4	84.0	84.6	85.1	85.3	85.2	85.9	85.4	85.5	86.1	86.3	86.3	84.0	85.2	85.6	86.2	85.3
1993	86.7	87.0	86.9	87.2	86.8	86.9	87.2	87.2	87.5	88.1	88.4	88.8	86.9	87.0	87.3	88.4	87.4
1994	89.1	89.0	89.8	90.1	90.4	91.0	91.0	91.3	91.4	91.9	92.3	93.2	89.3	90.5	91.2	92.5	90.9
1995	93.3	93.1	93.0	92.7	92.8	92.9	92.4	93.5	93.6	93.1	93.2	93.4	93.2	92.8	93.2	93.3	93.1
1996	92.5	93.7	93.4	94.1	94.5	95.1	94.7	95.1	95.4	95.2	96.0	96.4	93.2	94.6	95.1	95.9	94.7
1997	96.3	97.2	97.6	97.3	97.6	97.8	98.1	99.1	99.8	100.5	101.2	101.3	97.1	97.5	99.0	101.0	98.6
1998	101.5	101.4	101.3	101.6	102.1	101.2	100.5	102.5	101.9	102.4	102.0	102.1	101.4	101.7	101.6	102.2	101.7
1999	102.3	102.5	102.4	102.2	102.8	102.4	102.7	103.1	102.5	103.8	104.1	104.6	102.4	102.5	102.8	104.1	102.9
2000	104.3	104.3	104.4	104.8	104.8	104.7	104.2	103.8	104.2	103.6	103.4	102.8	104.3	104.8	104.0	103.2	104.1
2001	102.1	101.5	101.1	101.0	100.5	100.0	99.8	99.4	99.0	98.4	97.9	97.8	101.6	100.5	99.4	98.0	99.9
2002	98.5	98.5	99.3	99.7	100.1	101.0	100.6	100.7	100.7	100.3	100.6	100.0	98.8	100.2	100.7	100.3	100.0
2003	100.6	100.7	100.4	99.6	99.5	99.6	99.9	99.8	100.3	100.1	100.9	100.8	100.6	99.6	100.0	100.6	100.2
2004	100.9	101.6	100.9	101.6	102.3	101.5	102.1	102.3	102.1	102.8	103.1	103.7	101.1	101.8	102.2	103.2	102.1
2005	103.9	104.4	104.2	104.2	104.4	105.1	105.0	105.2	103.2	104.2	105.3	106.2	104.2	104.6	104.4	105.2	104.6
2006	106.1	106.3	106.8	107.6	107.4	108.3	108.6	108.8	108.0	108.1			106.4	107.7	108.5		

NOTE Estimates from August 2006 through October 2006 are subject to further revision in the upcoming monthly releases.
 1. High technology industries include computers, communications equipment, and semiconductors and related electronic components.
 2. Annual averages of industrial production are calculated from not seasonally adjusted indexes.

Table 10
ANNUAL PROPORTIONS IN INDUSTRIAL PRODUCTION, MARKET AND INDUSTRY GROUP SUMMARY

Item	1998	1999	2000	2001	2002	2003	2004	2005
Total IP	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
MARKET GROUPS								
Final products and nonindustrial supplies	58.1	57.6	57.6	59.1	58.9	58.3	57.3	57.5
Consumer goods	28.1	28.2	28.6	30.1	31.1	31.1	30.4	30.3
Durable	7.9	8.0	7.9	8.1	8.9	8.7	8.0	7.5
Automotive products	3.7	3.9	3.7	4.0	4.7	4.6	4.0	3.6
Home electronics	.4	.4	.4	.4	.4	.4	.4	.4
Appliances, furniture, carpeting	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.3
Miscellaneous goods	2.4	2.4	2.4	2.3	2.4	2.3	2.2	2.2
Nondurable	20.2	20.2	20.7	22.0	22.2	22.4	22.5	22.8
Non-energy	16.9	16.7	16.9	18.2	18.3	18.1	17.4	17.0
Foods and tobacco	9.2	9.2	9.4	10.0	9.8	9.8	9.5	9.3
Clothing	1.5	1.4	1.2	1.1	.9	.8	.7	.6
Chemical products	3.8	3.8	3.9	4.5	5.0	5.0	4.9	4.8
Paper products	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.8
Energy	3.2	3.5	3.7	3.8	3.9	4.3	5.1	5.8
Business equipment	12.2	11.8	11.6	11.1	10.1	9.6	9.4	9.4
Transit	2.5	2.3	2.0	2.0	1.8	1.6	1.6	1.7
Information processing	4.0	4.0	4.0	3.7	3.0	2.9	2.8	2.7
Industrial and other	5.8	5.5	5.6	5.4	5.3	5.1	4.9	4.9
Defense and space equipment	1.9	1.8	1.5	1.8	1.8	1.8	1.7	1.7
Construction supplies	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.4
Business supplies	11.2	11.1	11.2	11.2	11.2	11.1	11.0	11.1
Materials	41.9	42.4	42.4	40.9	41.1	41.7	42.7	42.5
Non-energy	33.3	33.1	32.3	30.9	30.7	30.2	30.2	29.8
Durable	21.4	21.4	20.9	19.6	19.1	18.7	18.6	18.3
Consumer parts	4.2	4.4	4.1	3.8	4.0	3.8	3.6	3.4
Equipment parts	8.1	8.1	8.1	7.3	6.7	6.5	6.4	6.2
Other	9.1	9.0	8.6	8.4	8.4	8.3	8.6	8.7
Nondurable	11.9	11.7	11.4	11.3	11.6	11.5	11.6	11.5
Textile	1.0	1.0	.9	.8	.8	.8	.7	.6
Paper	2.8	2.9	2.8	2.8	2.7	2.5	2.4	2.3
Chemical	4.6	4.5	4.3	4.2	4.5	4.7	5.2	5.3
Energy	8.6	9.3	10.1	10.1	10.4	11.5	12.5	12.7
INDUSTRY GROUPS								
Manufacturing	86.4	85.8	84.5	84.1	83.9	82.5	81.5	80.9
Manufacturing (NAICS)	81.8	81.0	79.7	79.2	79.0	77.9	77.0	76.6
Durable manufacturing	47.1	46.6	45.5	44.2	43.4	42.3	41.0	40.2
Wood products 321	1.5	1.6	1.5	1.4	1.5	1.6	1.6	1.5
Nonmetallic mineral products 327	2.3	2.3	2.2	2.3	2.3	2.2	2.2	2.3
Primary metal 331	2.9	2.8	2.5	2.3	2.3	2.4	2.8	2.8
Fabricated metal products 332	6.1	6.0	6.1	5.9	5.7	5.6	5.4	5.4
Machinery 333	6.2	5.8	6.0	5.6	5.3	5.0	4.9	4.9
Computer and electronic products 334	10.2	10.3	10.3	9.1	8.0	7.9	7.8	7.4
Electrical equip., appliances, and components 335	2.6	2.5	2.5	2.4	2.2	2.0	2.0	1.9
Motor vehicles and parts 3361-3	6.6	7.0	6.6	6.5	7.5	7.3	6.5	5.9
Aerospace and other miscellaneous transportation equipment 3364-9	4.1	3.8	3.3	3.8	3.6	3.3	3.1	3.3
Furniture and related products 337	1.7	1.7	1.7	1.7	1.8	1.7	1.6	1.6
Miscellaneous 339	2.8	2.8	2.9	3.1	3.3	3.3	3.1	3.2
Nondurable manufacturing	34.7	34.4	34.2	35.0	35.6	35.6	36.0	36.4
Food, beverage, and tobacco products 311,2	10.6	10.4	10.7	11.4	11.4	11.5	11.1	10.8
Textile and product mills 313,4	1.6	1.5	1.4	1.4	1.4	1.3	1.2	1.1
Apparel and leather 315,6	1.6	1.4	1.3	1.2	1.0	.9	.7	.7
Paper 322	3.2	3.2	3.2	3.1	3.1	2.9	2.8	2.6
Printing and support 323	2.6	2.6	2.6	2.6	2.4	2.3	2.1	2.0
Petroleum and coal products 324	1.5	1.7	1.9	1.8	1.8	2.2	3.3	4.2
Chemical 325	9.9	9.6	9.4	9.8	10.8	10.9	11.4	11.5
Plastics and rubber products 326	3.7	3.8	3.7	3.7	3.8	3.7	3.5	3.4
Other manufacturing (non-NAICS) 1133,5111	4.7	4.8	4.9	4.9	4.8	4.6	4.5	4.3
Mining 21	4.8	5.5	6.5	6.4	6.4	7.5	8.7	9.2
Utilities 2211,2	8.7	8.7	9.0	9.5	9.7	9.9	9.8	9.9
Electric 2211	7.6	7.4	7.6	8.1	8.3	8.3	8.1	8.1
Natural gas 2212	1.2	1.2	1.4	1.4	1.4	1.6	1.7	1.7

NOTE: The IP proportion data are estimates of the industries' relative contributions to overall IP change between the reference year and the following year. For example, a 1 percent increase in durable goods manufacturing between 2005 and 2006 would account for a 0.402 percent increase in total IP.

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 at www.federalreserve.gov/releases/G17 at the Board's World Wide Web site. 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 at the Board's Web site. Instructions for searching for and downloading specific series are provided as well. For paid access to the data files through the Department of Commerce's Economic Bulletin Board or World Wide Web site, please call STAT-USA at 1-800-STAT-USA or 202-452-1986. Diskettes containing historical data and the data published in this release also are available from the Board of Governors of the Federal Reserve System, Publications Services, 202-452-3245.

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 2002. 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 1997, the total IP index has been constructed from 300 individual series based on the 2002 North American Industrial Classification System (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 web site (www.federalreserve.gov/releases/G17/About.html). Changes in output for the market and industry groups are summarized in table 1 and the levels of output (in index form) are shown in table 4. Special aggregates, that highlight the relative importance and contributions of several key industries, such as high-technology and motor vehicles, are summarized in tables 2 and 5. For a detailed description of the contents of the statistical tables, see below.

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 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 or sales and unit values) by a corresponding Fisher price index; the most notable of these fall within the high-technology grouping and include computers, communications equipment, and 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 United States 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 *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 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 8 percent. If output in this industry increased 10 percent in a month, then this gain would boost growth in total IP by 8/10 percentage point ($0.08 \times 10\% = 0.8\%$). To assist users with calculations, the Federal Reserve's web site 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/ipweights.sa).

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 three 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 70 percent of the source data (in value-added terms) are available; the fraction of available source data increases to about 85 percent for estimates in the second month that the estimate is published, 96 percent in the third month, and 97 percent in the fourth month. Data availability by data type is summarized in the table below:

Availability of Monthly IP Data in Publication Window
(Percent of value added in 2005)

Type of data	Month of estimate			
	1st	2nd	3rd	4th
Physical product	27	42	54	54
Production-worker hours	43	43	43	43
IP data received	70	84	96	97
IP data estimated	30	16	4	3

The physical product group includes series based on either monthly or quarterly data. As can be seen in the first line of the table, in the first month, a physical product indicator is available for about half of the series (in terms of value added) that ultimately are based on physical product data (25 percent out of total of 52 percent). Of the 25 percent, about two-thirds (17 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 third estimate of industrial production. Specifically, quarterly data are available for the second estimate of the last month of a quarter, the third estimate of the second month of a quarter, and the fourth estimate of the first month of a quarter. About 3 percent of the source data for monthly IP—all physical product measures—are available too late for direct inclusion in the current index and are incorporated at the time of an annual historical revision.

Seasonal adjustment. Individual series are seasonally adjusted using Census X-12 ARIMA. For series based on production-worker hours, the current seasonal factors were estimated with data through April 2006; for other series, the factors were estimated with data through at least June 2005. 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.

Reliability. The average revision to the *level* of the total IP index, without regard to sign, between the first and the fourth estimates was 0.27 percent during the 1987–2005 period. The average revision to the *percent change* in total IP, without regard to sign, from the first to the fourth estimates was 0.21 percentage point during the 1987–2005 period. In most cases (about 86 percent), the direction of 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 87 detailed industries (69 in manufacturing, 16 in mining, and 2 in utilities), which mostly correspond to industries at the three- and four-digit 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 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. Also, special aggregates are available, such as high-tech industries and manufacturing excluding high-tech 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 (*e.g.*, paper, industrial chemicals, petroleum refining, motor vehicles), as well as for electric utilities and mining; these industries represent about 24 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 *Survey of Plant Capacity* (SPC); these industries account for a bit less than 72 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 4 percent of total industry capacity). A detailed description of the methodology used to construct the capacity indexes is available on the Board's web site (www.federalreserve.gov/releases/G17/cap_notes.html).

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 was a survey of large companies that reported, on average, higher utilization rates than those reported by establishments covered by the SPC (currently the primary source of factory operating rates) for the fourteen years they overlapped. Adjustments have been made to keep the industry utilization rates currently reported by the Federal Reserve 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 SPC.

Perspective. Over the 1972–2005 period, the average total industry utilization rate was 81.0 percent; for manufacturing, the average factory operating rate was 79.8 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 industry and total manufacturing, utilization rates have exceeded 90 percent only in wartime. The highs and lows in capacity utilization shown in table 7 are specific to each series and do not all occur in the same month.

REFERENCES AND RELEASE DATES

References. The annual revision published in November 2005 is described in an article published in the *Federal Reserve Bulletin*, vol. 92, pp. A39–A58. 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/capital_stock_doc_latest.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).

Release Schedule

At 9:15 a.m. on

2006: January 17, February 15, March 17, April 14, May 16, June 15, July 17, August 16, September 15, October 17, November 16, and December 15.

2007: January 17, February 15, March 16, April 17, May 16, June 15, July 17, August 15, September 14, October 16, November 16, and December 14.