

FEDERAL RESERVE statistical release



G.17 (419) 2016 Historical and Annual Revision

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Industrial Production and Capacity Utilization: The 2016 Annual Revision

The Federal Reserve has revised its index of industrial production (IP) and the related measures of capacity and capacity utilization.¹ Total IP is now reported to have increased about 2½ percent per year, on average, from 2011 through 2014 before falling 1½ percent in 2015.² Relative to earlier reports, the current rates of change are lower, especially for 2014 and 2015. Total IP is now estimated to have returned to its pre-recession peak in November 2014, six months later than previously estimated. Capacity for total industry is now reported to have increased about 2 percent in 2014 and 2015 after having increased only 1 percent in 2013. Compared with the previously reported estimates, the gain in 2015 is ½ percentage point higher, and the gain in 2013 is ½ percentage point lower. Industrial capacity is expected to increase ½ percent in 2016.

This revision incorporates newly available annual data on output and prices. The updated IP indexes include new detailed data for manufacturing from the U.S. Census Bureau's 2014 Annual Survey of Manufactures (ASM) as well as revised data from the 2013 ASM. In addition, as a result of the new data on output for 2014, the productivity assumptions that feed into industrial production for subsequent years have been revised downward. The weaker productivity assumptions reflected the expectation that the slower pace of productivity growth for 2011 through 2014, compared with previous years, persisted in 2015 and after.

Other new annual data have been incorporated in addition to the data from the ASM. The IP indexes for publishing reflect new data for 2014 and revised data for 2013 from the Census Bureau's Service Annual Survey. The Census Bureau recently benchmarked the Service Annual Survey to the 2012 Economic Census, which resulted in updated estimates for 2008 through 2012. For logging, the IP indexes were updated with 2014 data from the U.S. Forest Service. In addition, the indexes for metallic and nonmetallic minerals were updated with revised annual data for 2014 from the Department of the Interior's U.S. Geological Survey (USGS). Data on prices from the Bureau of Labor Statistics (BLS) were also incorporated into most of the manufacturing indexes.

The monthly estimates of production have been updated to include late-arriving or revised monthly or quarterly indicator data (either outputs from or inputs to production), and they also now reflect recalculations of seasonal factors. In addition, the method used to calculate the high-frequency indicator for one production index was updated.

In the fourth quarter of 2015, capacity utilization stood at 75.8 percent, a rate nearly 1¼ percentage points lower than previously published and more than 4 percentage points below its long-run (1972–2015) average. The downward revision to the overall operating rate resulted from slower growth for IP. Relative to earlier estimates, the utilization rates for total industry from 2012 to 2014 are little changed, as the revision to the rates of change for capacity roughly matched those for IP.

¹The revision affected rates of change for IP from 1972 forward. When necessary to maintain consistency with any revisions to the data for 1972 and subsequent years, the levels of the production and capacity indexes for the years before 1972 were multiplied by a constant. However, utilization rates and the rates of change in IP for the years before 1972 were not revised.

²Rates 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.

The revised estimates of capacity and capacity utilization incorporated data for the manufacturing sector from the Census Bureau's Quarterly Survey of Plant Capacity Utilization (QSPC) for the fourth quarter of 2015, along with new data on capacity primarily for the energy and mining sectors from the USGS, the U.S. Department of Energy, and other organizations. The revised estimates also include new data on capital spending from the 2013 ASM. Capital expenditures data from the 2014 ASM are not yet available.

RESULTS OF THE REVISION

The tables show the summary statistics for the annual revision. Tables 1A and 1B present the monthly, quarterly, and annual average index levels for total IP and for total capacity and capacity utilization, along with the percent changes in total IP, for January 1986 through February 2016. Tables 2 and 3 show the revised rates of change in IP from 2011 through 2015 for market groups, industry groups, special aggregates, and selected detail. Table 4 shows the annual rates of change for total IP and for major market and industry groups for 2011 through 2015. Table 5 presents the revised rates of change in capacity by industry groups for 2012 through 2016. Tables 2 through 5 also show the differences between the revised and previous estimates of the rates of change. Table 6 contains the revised capacity utilization rates for the fourth quarters of 2012 through 2015; it also shows the differences between the revised and previous estimates. Table 7 reports revised semiannual rates of change for IP for 2011 through 2015. Table 8 contains revised capacity utilization rates for the second and fourth quarters from the second quarter of 2011 through the fourth quarter of 2015. Tables 9A, 9B, 10A, 10B, 11A, and 11B report the revised production, capacity, and utilization measures for manufacturing, total industry excluding selected high-technology industries, and manufacturing excluding selected high-technology industries. Table 12 displays the annual proportions in IP by market and industry groups for 2008 through 2015. Table 13 reports revised monthly IP indexes for the major market and industry groups for September 2015 through February 2016, and it also reports revised capacity utilization rates for the same period.

Industrial Production

Revisions to the changes in total IP show lower rates of change in recent years than were previously estimated (figure 1 and tables 2 and 7).³ Total IP is still reported to have increased in each year from 2011 to 2014 before falling back in 2015. The gains in 2011 through 2013 are similar to those reported earlier, but the rates of change for 2014 and 2015 are noticeably lower. As currently reported, total IP did not return to its pre-recession peak until November 2014; previously, it was reported to have reached that level in May 2014.

On net, the revision resulted in lower estimates for manufacturing in recent years than stated earlier; the estimates for mining and utilities were little revised. In particular, manufacturing output is currently reported to have increased 2 percent in 2014 and to have been unchanged in 2015, whereas it was previously stated to have advanced about 3½ percent in 2014 and 1 percent in 2015.⁴ The cumulative effects of these revisions leave manufacturing IP in February 2016 more than 6 percent below its pre-recession peak.

Production by Industry Group

The revised, smaller increases for manufacturing for 2014 and 2015 resulted from rates of change for many durable and nondurable goods industries that are lower than reported earlier.

The production of durables is currently estimated to have declined ¾ percent in 2015 after posting average gains of 3¾ percent for 2011 through 2014. Previously, it was reported to have advanced ½ percent in 2015 and at an average rate of about 3½ percent for 2011 through 2014. As currently estimated, the production

³In this section, all of the rates of change for a full year are calculated from the fourth quarter of the previous year to the fourth quarter of the reference year. Rates of change on a half-year basis are shown in table 7.

⁴Manufacturing consists of those industries in the North American Industry Classification System definition of manufacturing, plus those industries—logging and newspaper, periodical, book, and directory publishing—that were in the manufacturing sector under the Standard Industrial Classification system.

of durables in February 2016 is about 1 percent above its pre-recession peak.

Within durables, most industry groups posted gains in output for most years from 2011 through 2014. However, declines in 2015 were widespread, with especially large losses in the output of primary metals and machinery. Relative to earlier estimates, the net gains over the period from 2011 to 2015 are now reported to be lower for every durable goods industry other than nonmetallic mineral products, computer and electronic products, and aerospace and miscellaneous transportation equipment. In particular, the contours for machinery; electrical equipment, appliances, and components; furniture and related products; and miscellaneous manufacturing show much lower growth than previously reported.

The output of selected high-technology industries increased quickly over the period from 2011 to 2014 but barely edged up in 2015 (table 3). The current estimates for growth in 2013 and 2014 are appreciably stronger than the earlier estimates, primarily as a result of higher estimates for communications equipment and semiconductors.

The output of nondurable manufacturing industries declined sharply during the recession and has increased only modestly, on net, since then. The index moved up less than $\frac{1}{2}$ percent per year, on average, for the period from 2011 to 2015. With this revision, the growth of output over recent years is now lower than reported earlier; the slower path for output is most notable in 2013 and 2014, when the rates of change for each year have been revised down more than 1 percentage point. The indexes for most major nondurables industries, with the exceptions of food and of petroleum and coal products, remain well below their pre-recession peaks.

The output index for industries not in the scope of manufacturing under the North American Industry Classification System (NAICS)—that is, logging and publishing—fell or was little changed in every year from 2011 to 2015. The revisions took the cumulative decrease over that period from about $17\frac{1}{2}$ percent to about 20 percent, with rates of change lower for 2011, 2012, and 2015 and higher for 2013 and 2014.

The production index for mining fell $8\frac{1}{4}$ percent in 2015 because of declines for oil and natural gas well drilling and servicing over this period. Rates of change for mining output are very similar to previous reports. The output index for electric and natural gas utilities is now reported to have declined slightly more in 2015 than estimated earlier.

Production by Market Group

The production index for final products and nonindustrial supplies grew more than $1\frac{1}{4}$ percent per year, on average, between 2011 and 2014 before falling 1 percent in 2015 (table 2). Relative to previous reports, the rates of change in the index for 2013 through 2015 are now stated to have been lower. In February 2016, the index was more than 8 percent below its pre-recession peak.

The index for consumer goods now shows a weaker post-recession recovery than was previously estimated, with lower rates of change widespread across both the durables and nondurables categories. As currently stated, the output of consumer goods moved up at an average annual pace of 1 percent from 2013 through 2015 after declining $1\frac{1}{2}$ percent in 2012.

Following a sharp decline during the recession, the index for business equipment rose substantially through 2012 and then declined in 2013, moved up in 2014, and came back down somewhat in 2015. Relative to earlier reports, the output gain in 2014 is considerably weaker as a result of lower production across all major components of business equipment: transit equipment, information processing equipment, and industrial and other equipment. The output of business equipment surpassed its early 2008 peak in late 2014 but was nearly 2 percent below its peak as of February 2016.

The production of defense and space equipment fell about 4 percent per year, on average, from 2013 to 2015. As currently published, the decline for 2013 is not as steep as in the earlier estimates, but the drops for 2014 and 2015 are each revised down more than 2½ percent.

After falling sharply during the recession, the output of construction supplies has advanced in every year since. Even with these gains, however, the index in February 2016 was about 18 percent below its pre-recession peak. The index rose about 3¾ percent per year in the period from 2012 to 2014, on average, but it moved up only about 1 percent in 2015. The increases in 2014 and 2015 are now reported to be smaller than previously published. Compared with the index for construction supplies, the index for business supplies declined less steeply during the recession and rebounded less sharply during the recovery, and its most recent reading was about 8 percent below its pre-recession peak. Relative to the previously published estimates, gains in the output of business supplies are now more modest in 2014 and 2015.

The output of materials recovered strongly after the recession before falling 2¼ percent in 2015. As currently estimated, the gain in 2014 is not as robust as previously estimated and the decline in 2015 is steeper. Still, in February 2016, the index stood 6¼ percent above its pre-recession peak.

Within materials, the recovery from the recession has been uneven. The output of durable goods materials grew quickly through 2011, then grew more slowly from 2012 to 2014 before declining in 2015. The output of nondurable goods materials has been more or less flat since 2011. By contrast, the output of energy materials grew rapidly through 2014 before falling about 5 percent in 2015. Relative to earlier estimates, on net, the indexes for durable materials, nondurable materials, and energy materials have all been lower in recent years.

Capacity

After increasing 1 percent in 2013 and 2 percent in both 2014 and 2015, capacity is projected to increase about ½ percent in 2016 (table 5).⁵ The gain in total industrial capacity in recent years is, on net, close to the previously reported increase, though the advance in 2013 is now about ½ percentage point weaker than previously estimated, while the gain for 2015 is stronger by a similar amount.

With this revision, manufacturing capacity now shows a slower post-recession recovery than reported earlier. Most notably, capacity is now estimated to have increased about ½ percent over 2013 and 2014 combined, whereas the previous measure showed an expansion of nearly 2 percent. Relative to earlier estimates, the gains in other recent years are now more modest; the increase in the manufacturing capacity index over 2012 through 2015 is about 2 percentage points below the previously reported value.

Capacity in durable manufacturing industries advanced in each year from 2012 to 2015, with average increases of about 2 percent for 2012 and 2013 and slower gains of about ½ percent, on average, for 2014 and 2015. Relative to the previous estimates, the additions to durable manufacturing capacity are now reported to be more than 1 percentage point weaker for 2014 and 2015.

For nondurable manufacturing, capacity growth has averaged about ¾ percent from 2012 through 2015, about the same rate as in the previous estimates as revisions to the individual years roughly offset. Capacity is now shown to have contracted ¾ percent in 2013; previously, it was reported to have expanded by a similar amount. These lower estimates were primarily due to downward revisions for petroleum and coal products, chemicals, and plastics and rubber products. In other recent years, nondurable manufacturing capacity expanded, and the rates of increase are now reported to have been stronger in 2014 and 2015.

The capacity index for non-NAICS manufacturing fell about 5 percent per year in 2013, 2014, and 2015,

⁵In this section, all of the rates of change for a full year are calculated from the fourth quarter of the previous year to the fourth quarter of the reference year.

primarily because of declines in capacity for newspaper, periodicals, and book publishing. The declines in each of these years are between 2½ and 4 percentage points weaker than those reported earlier.

Capacity at mines increased around 6½ percent, on average, from 2012 through 2015, but it is projected to fall 3½ percent in 2016. Relative to previous estimates, the rate of change for 2014 is now about 1 percentage point less, and the rate in 2015 is about 1½ percentage points more. Capacity at utilities increased about ¾ percent, on average, from 2012 to 2015. The revised gains are little changed from the earlier estimates.

Capacity at the crude stage of processing recorded gains of 4 percent or more in each year from 2012 through 2015, but it is expected to contract nearly 3 percent in 2016. Relative to previous estimates, the rates of change in capacity at the crude stage are now reported to be higher in 2015 and little revised in other years. Capacity at the primary and semifinished stages increased modestly each year from 2012 to 2015—little changed from previous estimates—and is expected to increase 1 percent in 2016. Capacity at the finished stage increased in 2012, fell back in 2013, and then moved up in each year since. The rates of change were revised down for each year from 2013 through 2015.

Capacity Utilization

Capacity utilization for total industry moved somewhat higher in 2013 and 2014 before falling in 2015.⁶ The pullback in 2015 resulted from a large cutback for mining and smaller reductions for both manufacturing and utilities. In the fourth quarter of 2015, capacity utilization for total industry was 75.8 percent, a rate 4.2 percentage points below its long-run average of 80.0 percent and equal to its value in the second quarter of 2011 (table 6 and table 8). Compared with earlier estimates, capacity utilization for total industry is now reported to have been higher in 2012 and 2013 but lower in 2014 and especially in 2015.

The capacity utilization rate for manufacturing was relatively flat in 2012 and 2013; it moved up some in 2014 but fell back slightly in 2015. It has remained at least 2½ percentage points below its long-run average over the entire period from 2012 through 2015. Relative to previous reports, the capacity utilization rates for manufacturing are now modestly higher in 2012 and 2013 and somewhat lower in 2014 and 2015. At 75.6 percent, the rate for February 2016 was 2.9 percentage points below its long-run average.

The utilization rate for durable manufacturing increased in 2013, moved up more solidly in 2014, and then fell back somewhat in 2015. Utilization for durables was about 1 percentage point below its long-run average in the fourth quarter of 2015, as slightly less than half of the major industry groups in table 6 recorded operating rates below their long-run averages.

The utilization rate for nondurable manufacturing has held steady at about 5 percentage points below its long-run average since 2012. The rates for nondurables in 2014 and 2015 were revised down 1½ and 2½ percentage points, respectively, but they were little revised for earlier years. As of the fourth quarter of 2015, the operating rates for all nondurable manufacturing industry groups were below their industry-specific long-run averages (tables 6 and 8), with the rates for apparel and leather and for printing and support more than 10 percentage points below their long-run averages.

Capacity utilization rates for mining trended up from 2010 through 2014, reaching nearly 91 percent, a rate that is 3½ percentage points above its long-run average. Subsequently, the utilization rate fell almost 12 percentage points over the course of 2015, largely because of decreased output and increased capacity in the oil and gas drilling and servicing sector. Capacity utilization rates in mining for recent years were about 1 percentage point of the previous estimates.

⁶Unless otherwise noted, rates of capacity utilization are reported for the fourth quarter of the reference year.

The operating rates for utilities have been below their long-run average of 85.8 percent for the past several years; the current estimates are somewhat higher in 2014 and 2015 than previously reported.

TECHNICAL ASPECTS OF THE REVISION

The industrial production (IP) statistics are monthly production indexes that represent the level of real output relative to a base year. At the monthly frequency, movements of the indexes are based on indicators that are derived using industry-specific data from a variety of government and private sources. The monthly production indexes, however, are anchored to annual benchmarks that are less timely but typically based on more comprehensive data. Annual revisions to the industrial production and capacity measures involve (1) incorporating new annual benchmark data on output, prices, and value-added proportions; (2) incorporating new monthly or quarterly data that were revised or that arrived too late to be included in the regular six-month reporting window for monthly IP; (3) updating seasonal adjustment factors; and (4) updating the methods used to construct the indexes.

This revision includes new annual manufacturing data from the 2014 Annual Survey of Manufactures (ASM), as well as revised data from the 2013 ASM. For most industries, this revision updated the benchmark index deflators with producer price indexes (PPIs) from the Bureau of Labor Statistics (BLS). For a few selected industries, updated price indexes constructed by the Federal Reserve were incorporated.⁷ New annual data were also incorporated into several other indexes. The benchmark indexes for metallic and nonmetallic mineral mining were updated with revised 2014 data from the U.S. Geological Survey, and the benchmark indexes for logging and publishing were advanced through 2014 based on data from the U.S. Forest Service and the U.S. Census Bureau.

The revised IP indexes include information from the Quarterly Survey of Plant Capacity Utilization (QSPC) for 2015 and from other industry reports. The indexes also incorporate revised monthly and quarterly source data on production, shipments, and inventories.

Annual Benchmark Real Output Indexes

The annual benchmark output indexes for IP are measures of real gross output at the six-digit North American Industry Classification System (NAICS) level. The Census Bureau provides annual figures for value added and the cost of materials for manufacturing industries, which can be summed to obtain nominal gross output. The benchmark indexes for this revision incorporated revised information for 2013 and new information for 2014 from the ASM.

To obtain individual benchmarks of real gross output, the measures of nominal gross output were deflated by annual price deflators. In general, the benchmark industry price deflators consist of price indexes from the Bureau of Economic Analysis (BEA) through 2011 that are extended through 2014 with the related PPIs.⁸

Methodological Changes to Individual Production Indexes

One production indicator was affected by methodological changes in this revision.

Fertilizer

With this revision, the IP index for fertilizer (NAICS 32531) incorporates information only on the

⁷For selected industries, the Federal Reserve constructs price indexes from alternative sources. These industries include communications equipment (NAICS 3342), computer storage devices (NAICS 334112), semiconductors (NAICS 334413), and pharmaceuticals (NAICS 325412). Updated price indexes for data storage devices and for selected components of communications equipment and semiconductors are available on the Board's website at www.federalreserve.gov/releases/g17.

⁸Overall, at the industry level, the BEA measures and PPI measures are quite similar, as the BEA used weighted product-level PPIs to derive their industry-level shipments deflator.

production of the two base fertilizer products—anhydrous ammonia and phosphate rock—and no longer adds to that the output of their downstream products. This change leaves the historical movements in the index largely unrevised.

Adjustments to Market Groups

The industrial production indexes are organized in two main ways: industry groups and market groups. Industry groups reflect a supply-oriented classification where output is grouped based on the NAICS industries of the producers. Market groups reflect a demand-oriented classification where output is grouped according to the purchaser and by how the output is used. An industry's output is often allocated across a variety of market groups. Whenever possible, an industry's market group allocation is determined through detailed product-level data. For example, the IP index for steel mill products (NAICS 3311 and NAICS 3312) uses data from the American Iron and Steel Institute that includes information on the end-market classifications for different types of steel (for example, automotive, construction, or oil patch). These classifications are used to allocate the production of steel mill products to different market groups. For industries where market-level detail is not available, an industry's market group allocation is determined based on information provided in the BEA's Input-Output (I-O) tables, which are issued every five years.

Non-energy Business Supplies

This revision changes the name of one market group: The name “Non-energy business supplies” replaces “General business supplies.” The components of this group are unchanged.

Weights for Aggregation

The IP system is organized as a hierarchical structure where the finest-level production indexes are aggregated using a version of the Fisher-ideal index formula to construct higher-level measures of production. The weights that are used to combine individual IP measures into more aggregate measures are based on the value added from the industry, calculated as gross output less cost of materials. For IP indexes that are defined at the six-digit (or more aggregate) NAICS level, the value-added weights are derived from the Economic Census or ASM. For IP indexes that cover only part of a six-digit NAICS industry, the aggregation weights were constructed by allocating value added for a six-digit industry across the various components of IP that compose that industry. Data from the Economic Census and ASM on shipments of different types of products within a six-digit NAICS industry were used to determine the share of an industry's value added that was assigned to each component IP index.

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. For electric utilities, the measures of value added incorporate data from the Energy Information Administration of the U.S. Department of Energy and from the Edison Electric Institute. For gas utilities, the value-added estimates incorporate data from the American Gas Association. The weights for aggregation for mining industries are derived from value-added data from the Economic Census.

The weights for aggregation expressed as value added per unit were estimated with data on producer prices for the period after 2014. Table 12 shows the annual value-added proportions in the IP index from 2008 through 2015.

Revised Quarterly and Monthly Data

This revision incorporated product data that became available or were revised after the regular six-month

reporting window for monthly IP was closed. These data were released with too great of a lag to be included with monthly IP estimates but were available for inclusion in the annual revision.

Revised Seasonal Factors

Seasonal factors for production-worker hours—which adjust for timing, holiday, and monthly seasonal patterns—were updated with data through January 2016. The updated factors for the physical product series, which include adjustments for holiday and workday patterns, used data through December 2015 where available.

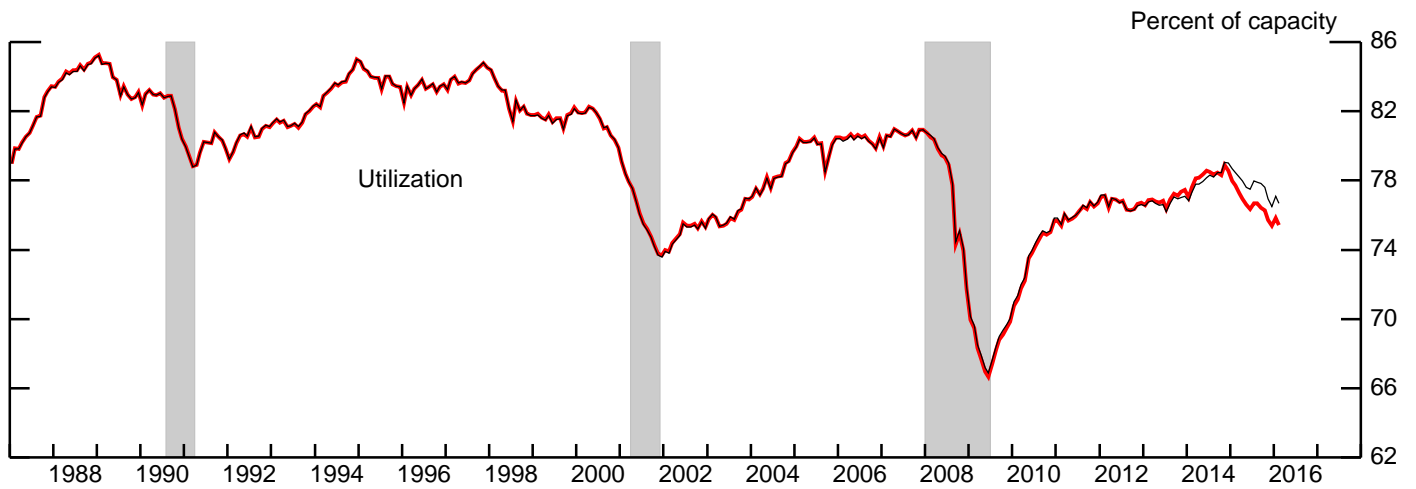
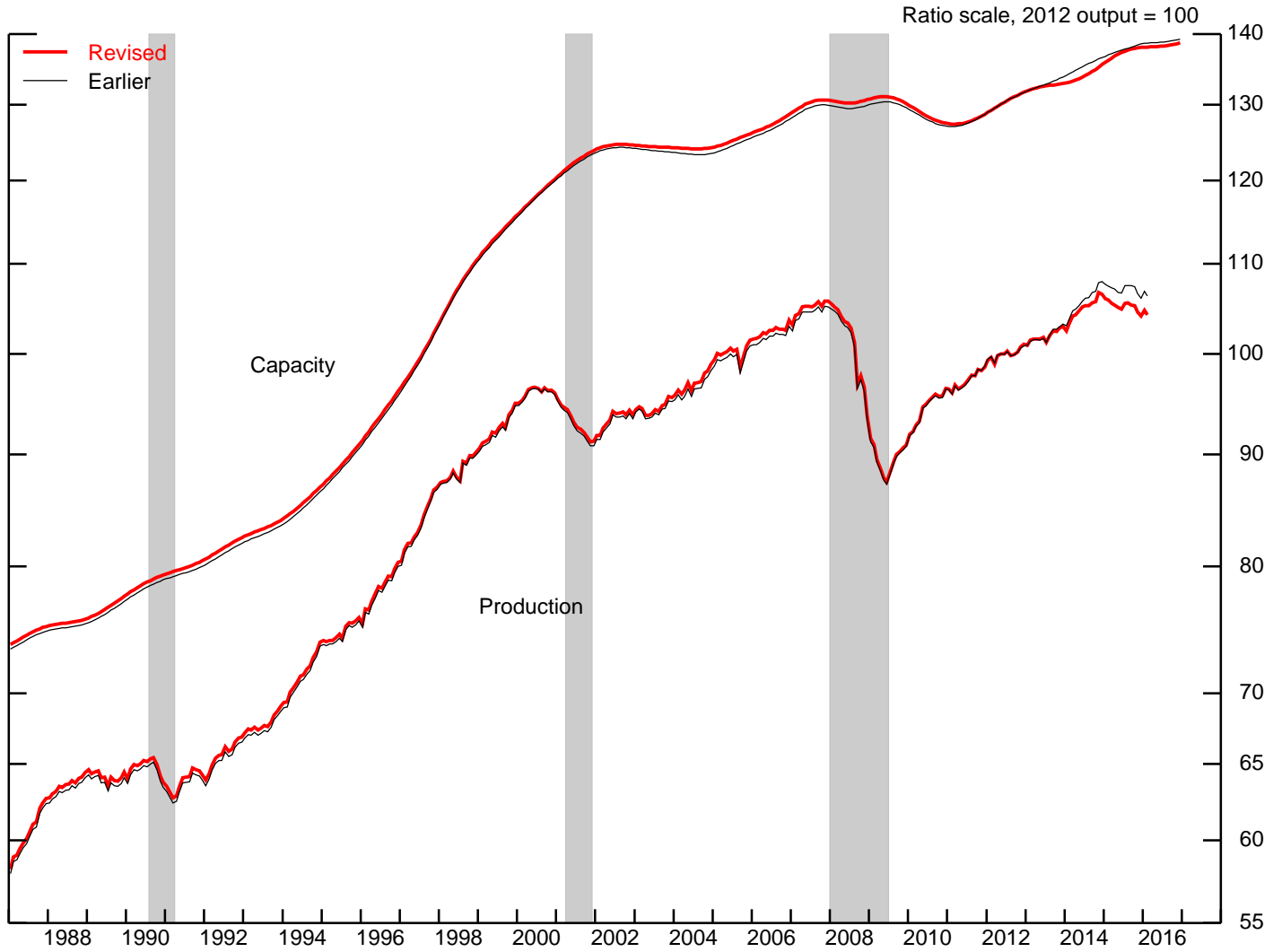
Seasonal factors for unit motor vehicle assemblies have been updated, and projections through December 2016 are available on the Board’s website at www.federalreserve.gov/releases/g17/mvsf.htm. These factors are based on production data through March 2016 and were revised back to January 1996. The seasonal factors explicitly incorporate the holiday schedule for the vehicle assembly lines specified in the latest collective bargaining agreements with domestic manufacturers.

Data Availability and Publication Changes

Files containing the revised data and the text and tables from this release are available on the Board’s website at www.federalreserve.gov/releases/g17, as are updated data for the annual revision and for all of the regularly issued series on industrial production, capacity, and capacity utilization. Other changes are listed on the Board’s website at www.federalreserve.gov/releases/g17/g17_revision_series.htm.

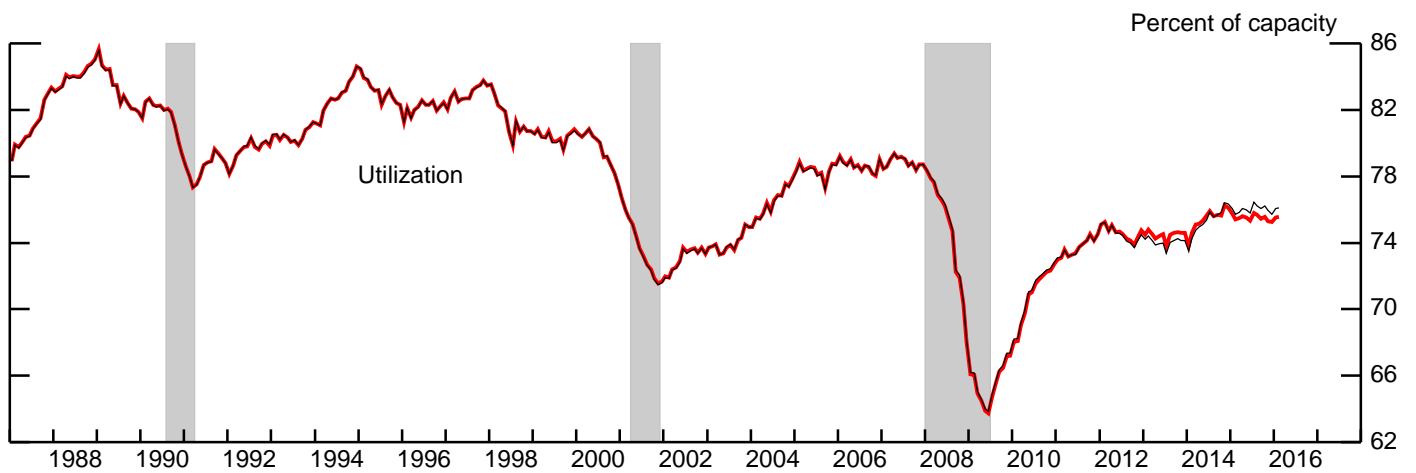
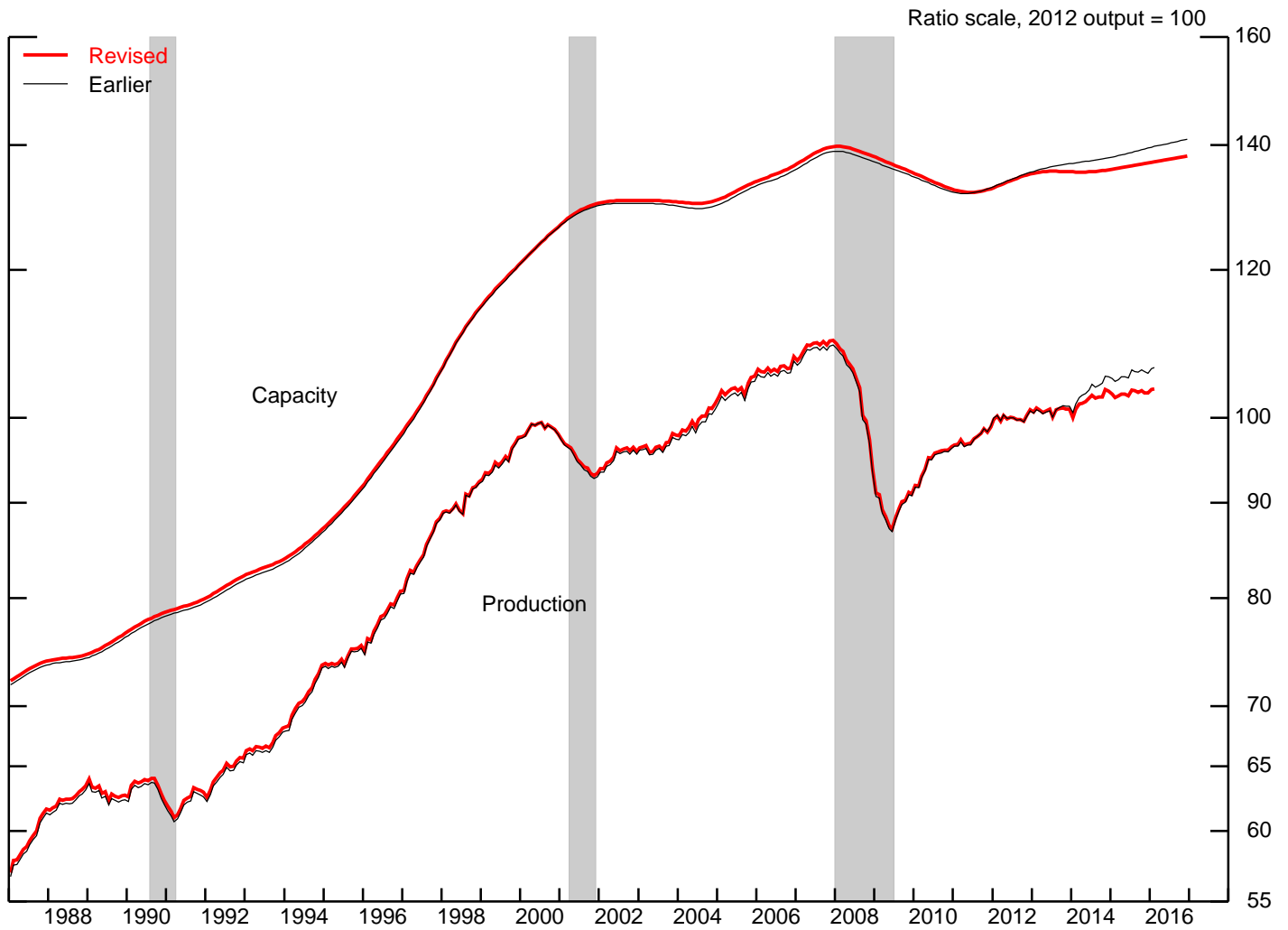
A document with printed tables of the revised estimates of series shown in the G.17 release is available upon request to the Industrial Output Section, Mail Stop 82, Division of Research and Statistics, Board of Governors of the Federal Reserve System, Washington, DC 20551.

1. Total industrial production, capacity, and utilization



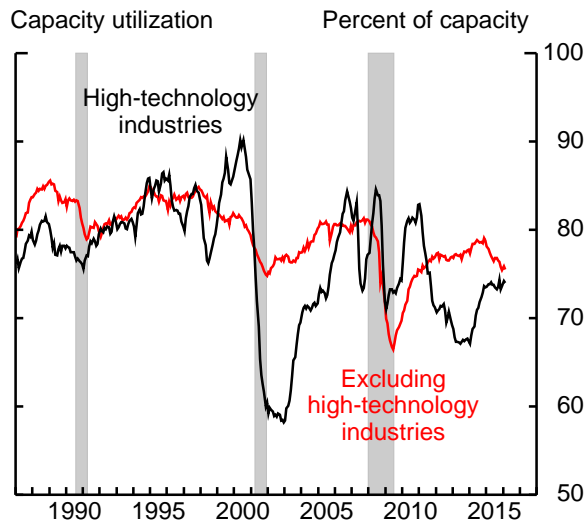
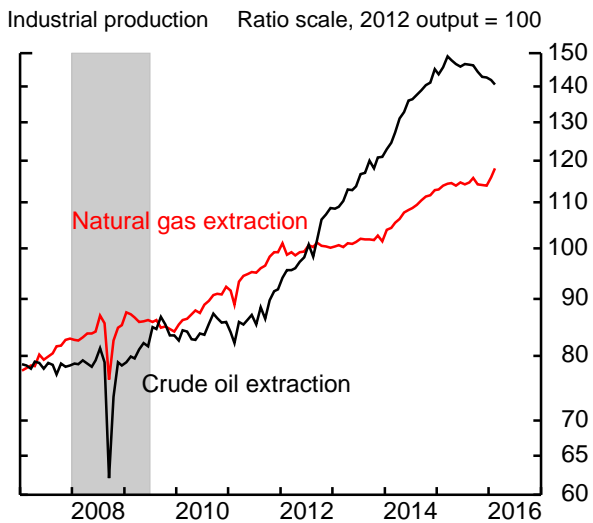
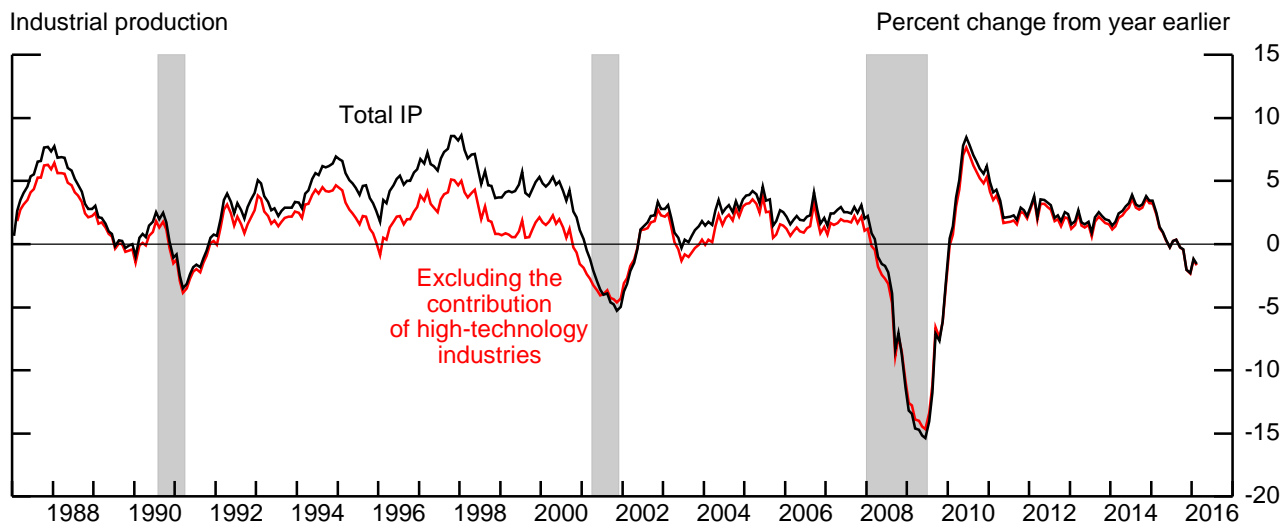
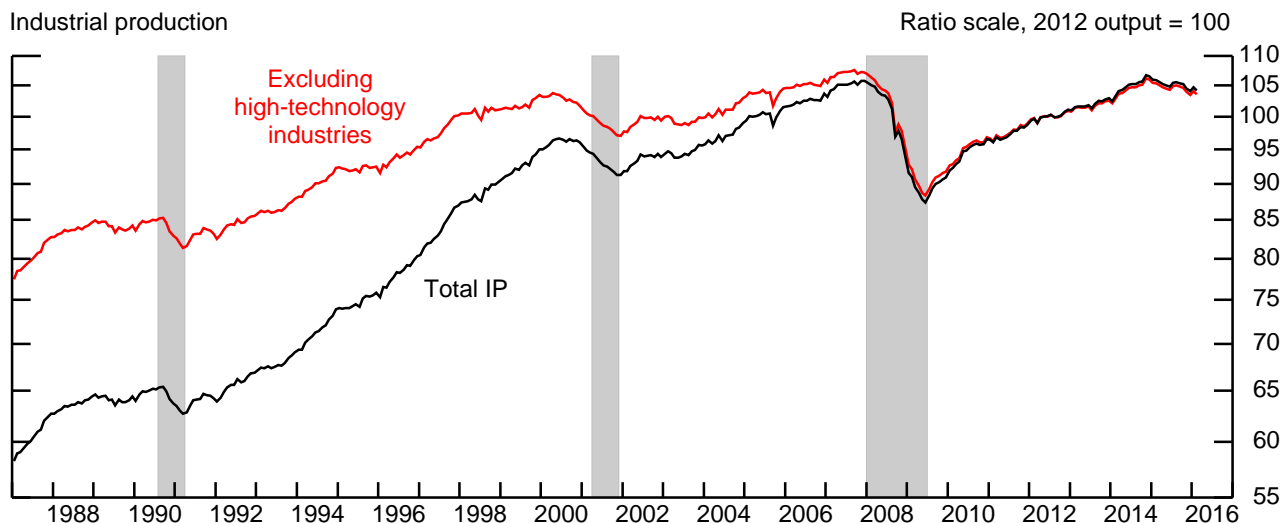
Note: The shaded areas represent periods of business recession as defined by the National Bureau of Economic Research (NBER).

2. Manufacturing industrial production, capacity, and utilization



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

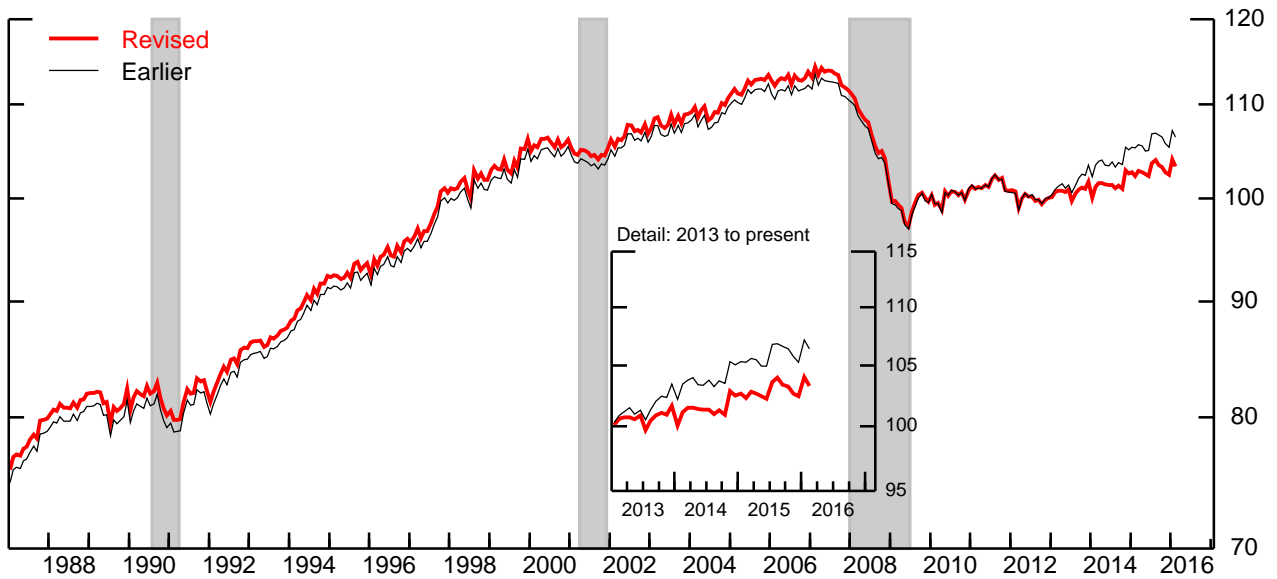
3. Industrial production and capacity utilization



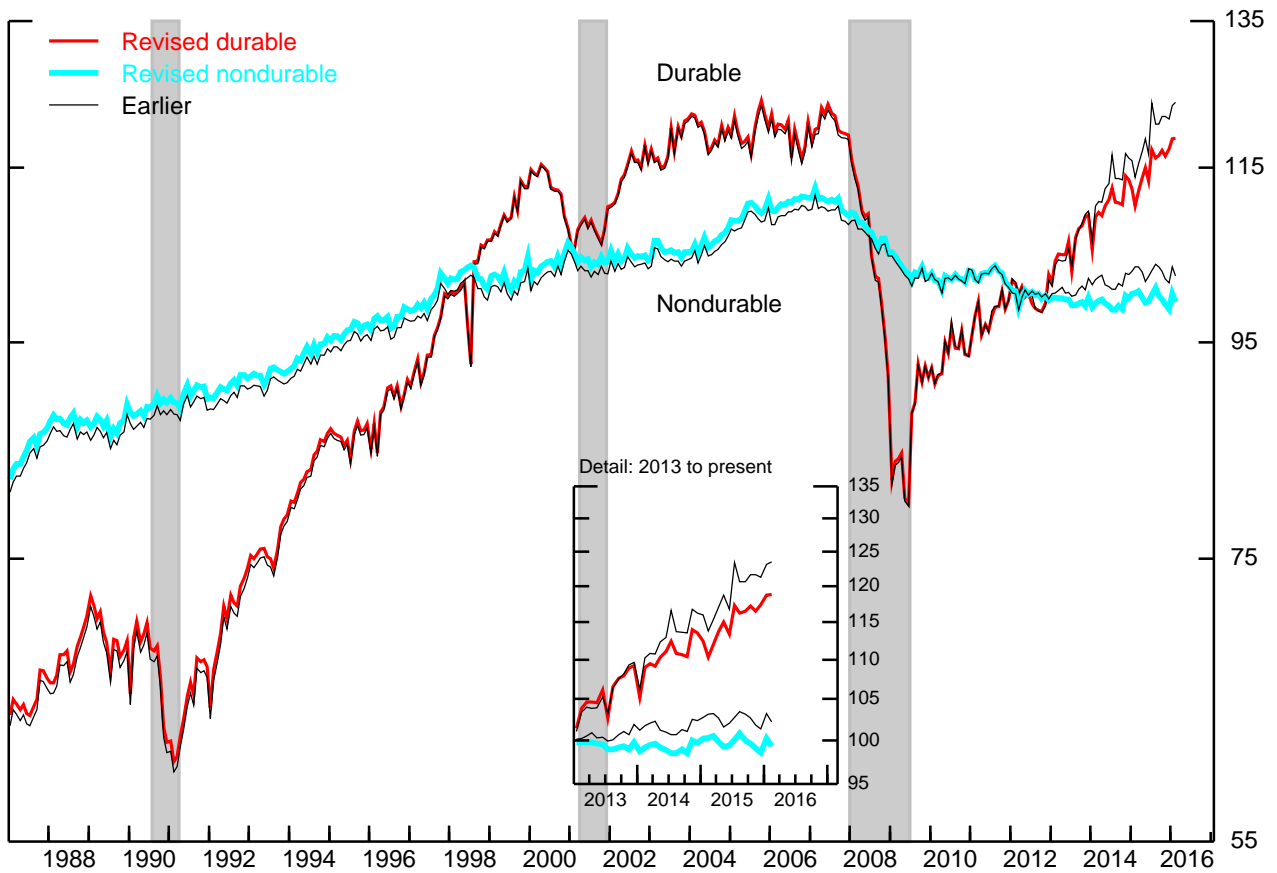
Notes: High-technology industries are defined as semiconductors and related electronic components (NAICS 3344), computers (NAICS 3341), and communications equipment (NAICS 3342). The shaded areas represent periods of business recession as defined by the NBER.

4. Consumer goods

Total

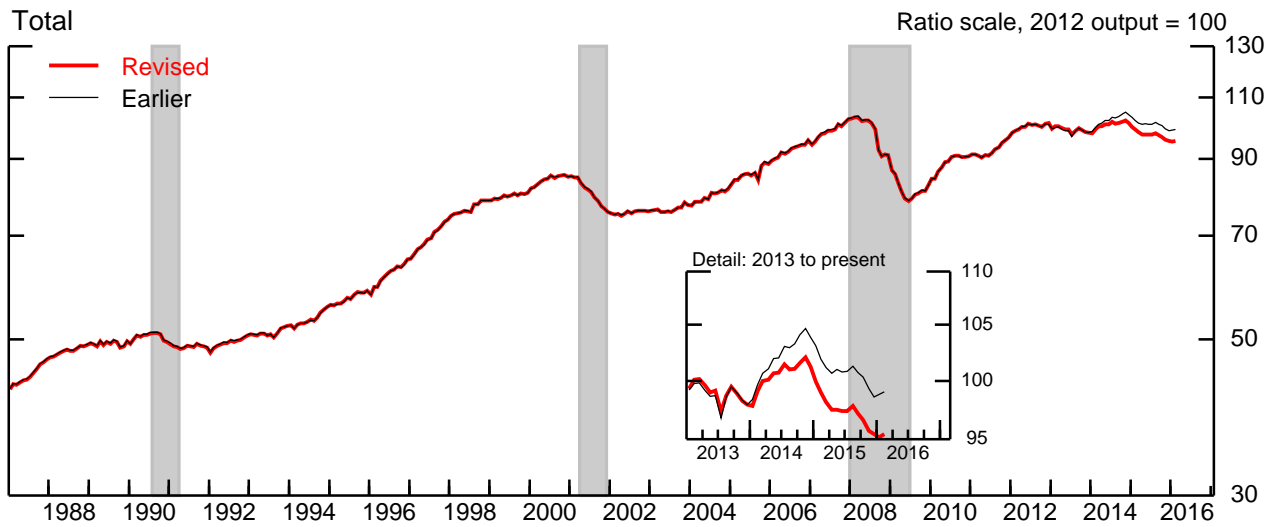


Components of consumer goods

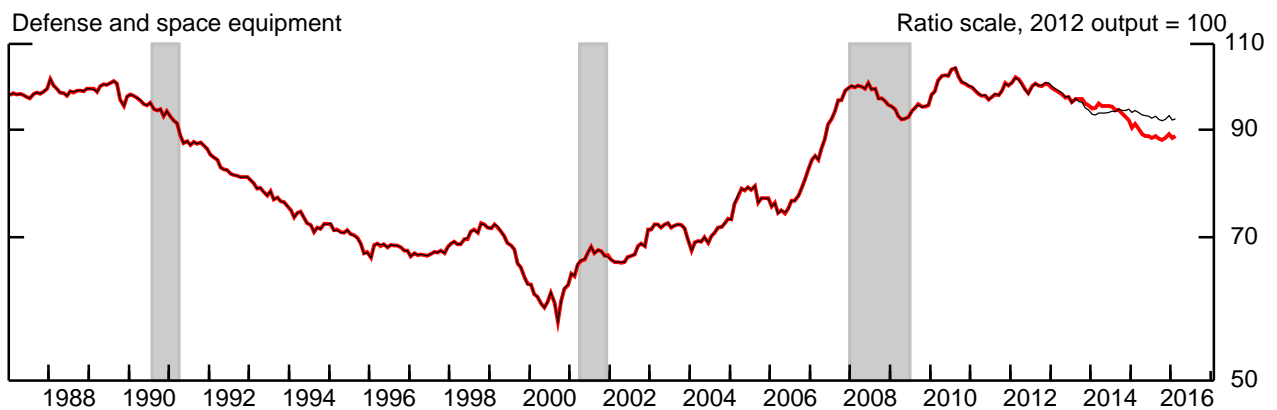
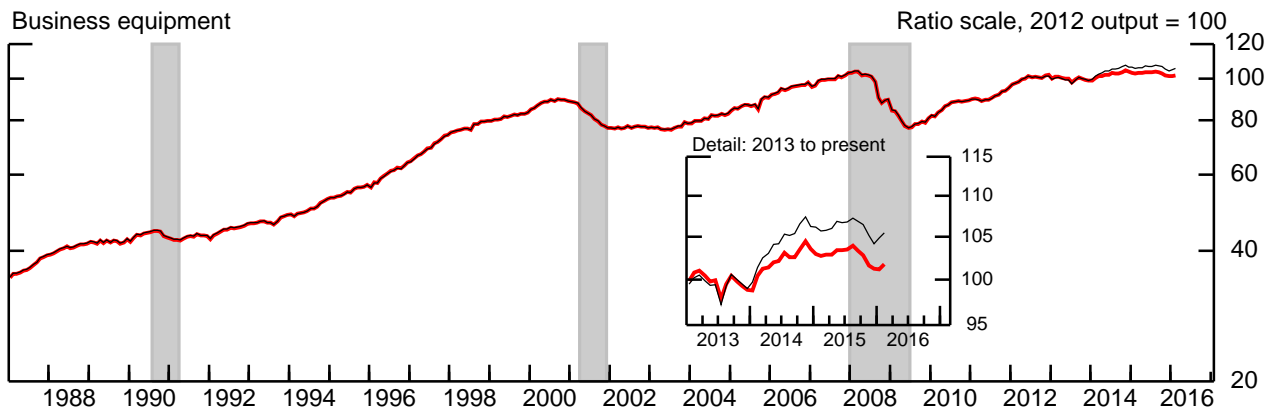


Note: The shaded areas represent periods of business recession as defined by the NBER.

5. Equipment

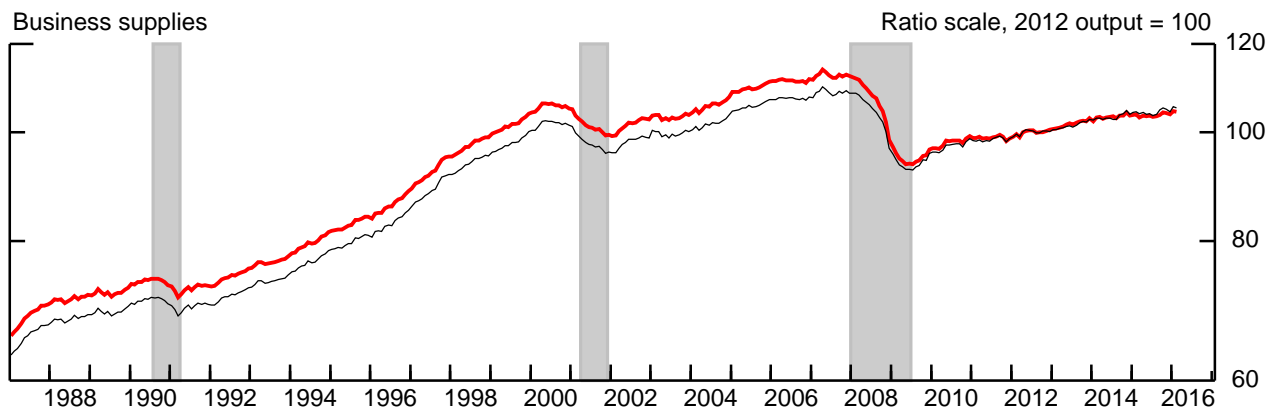
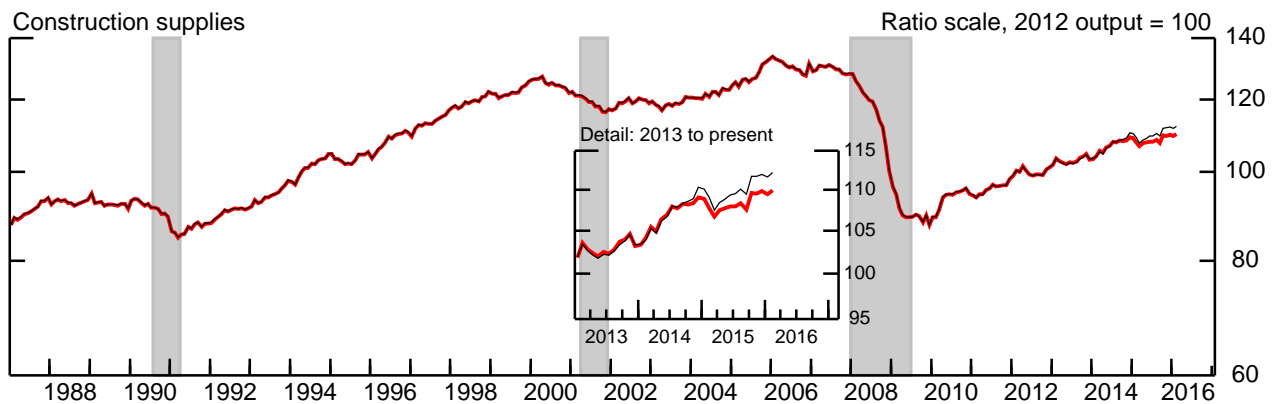
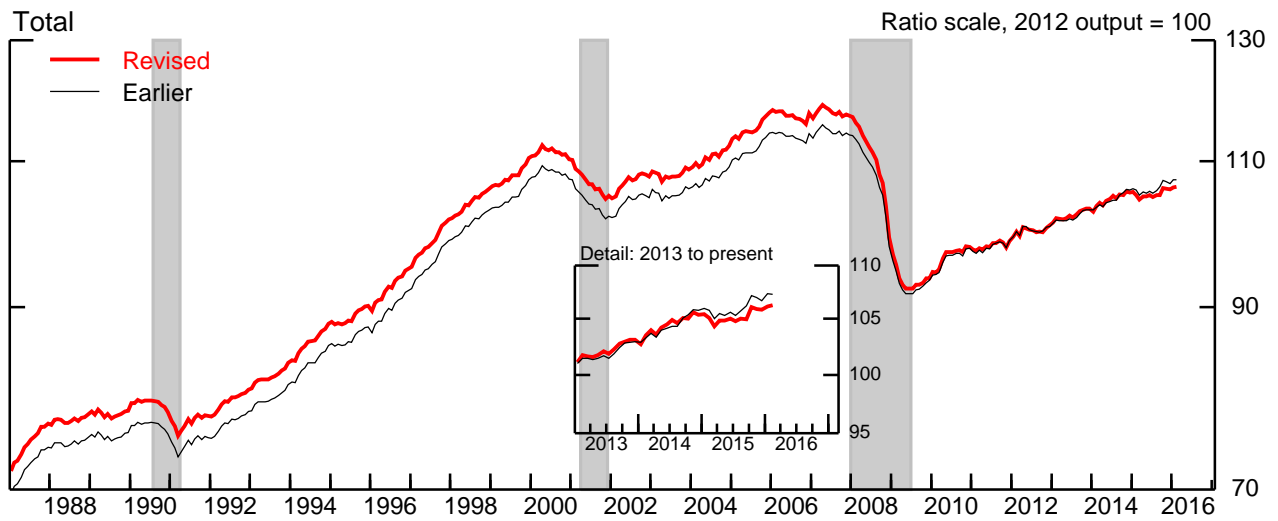


Note: Includes business equipment, defense and space equipment, oil and gas well drilling, and manufactured homes.



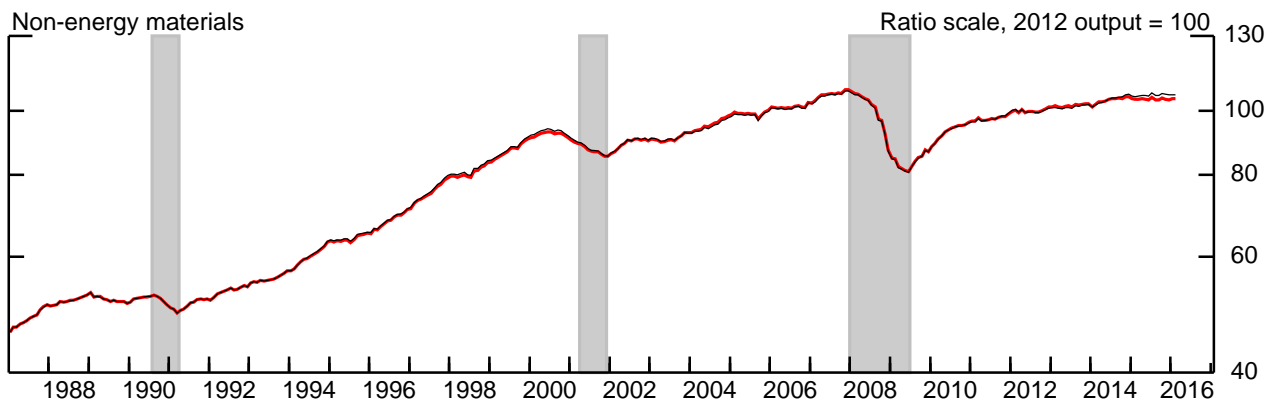
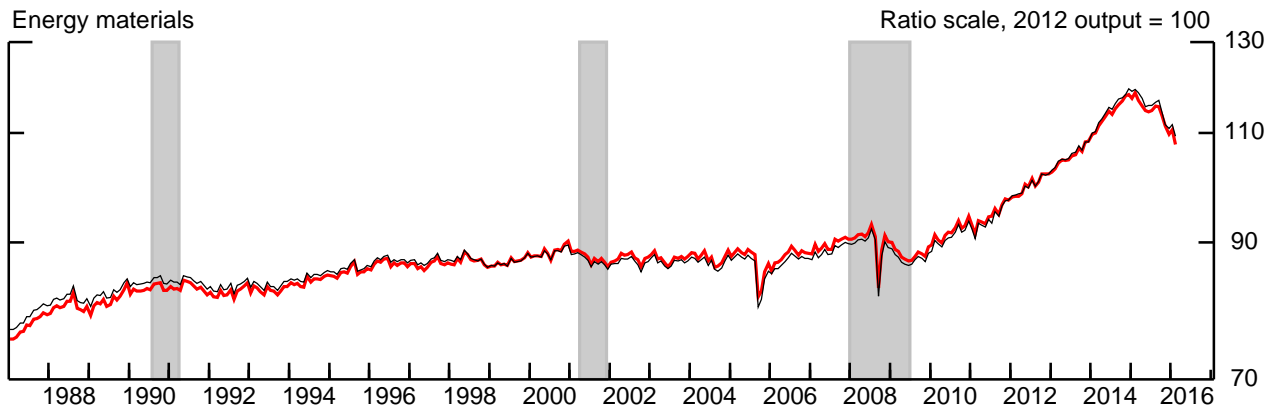
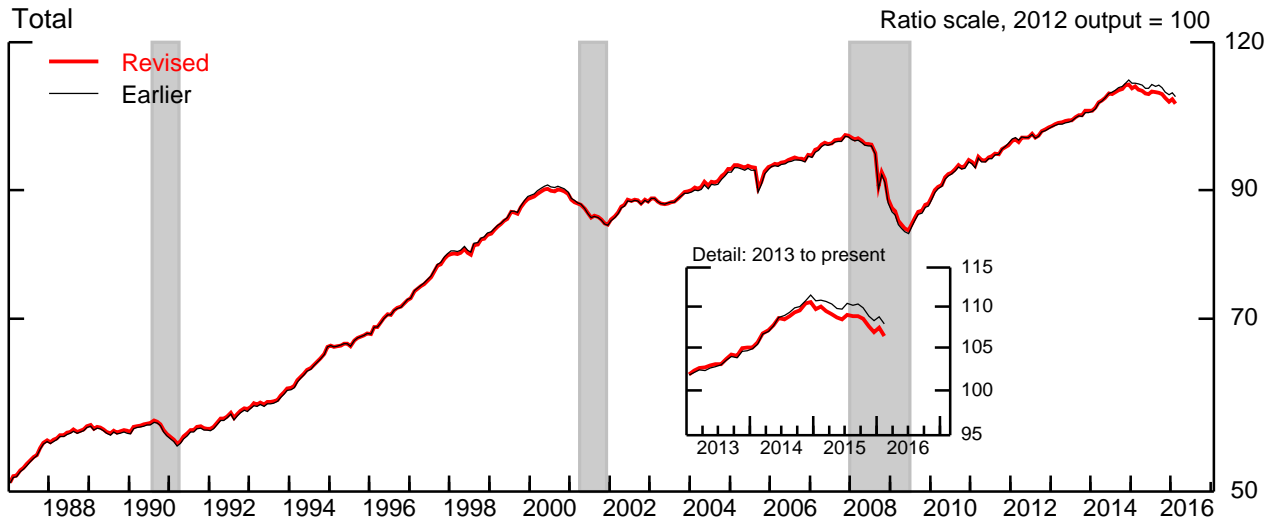
Note: The shaded areas represent periods of business recession as defined by the NBER.

6. Nonindustrial supplies



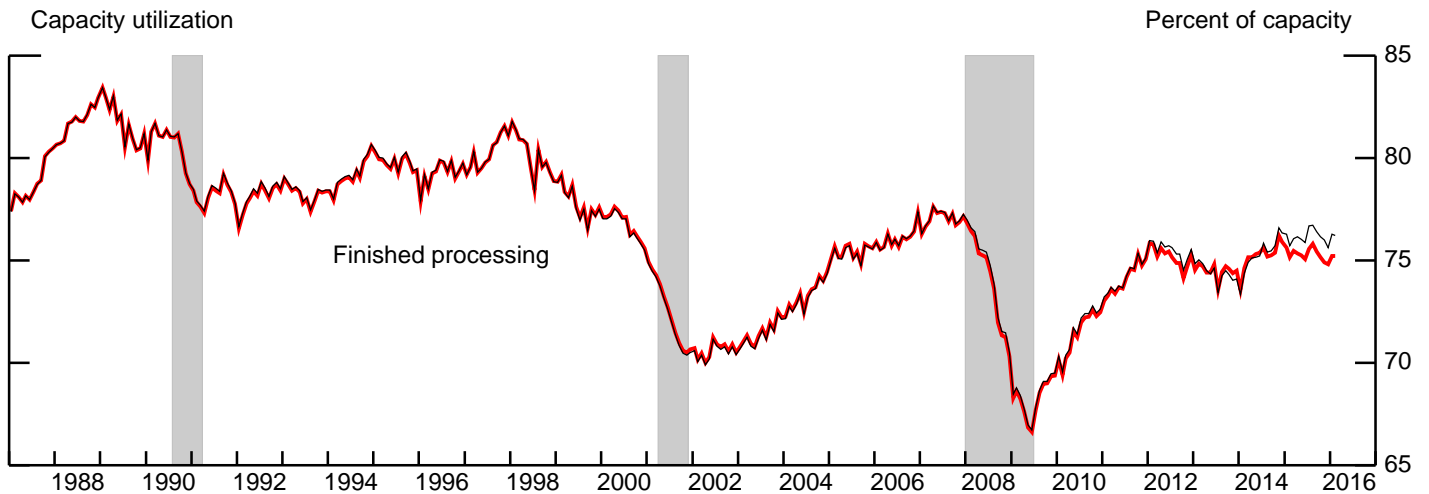
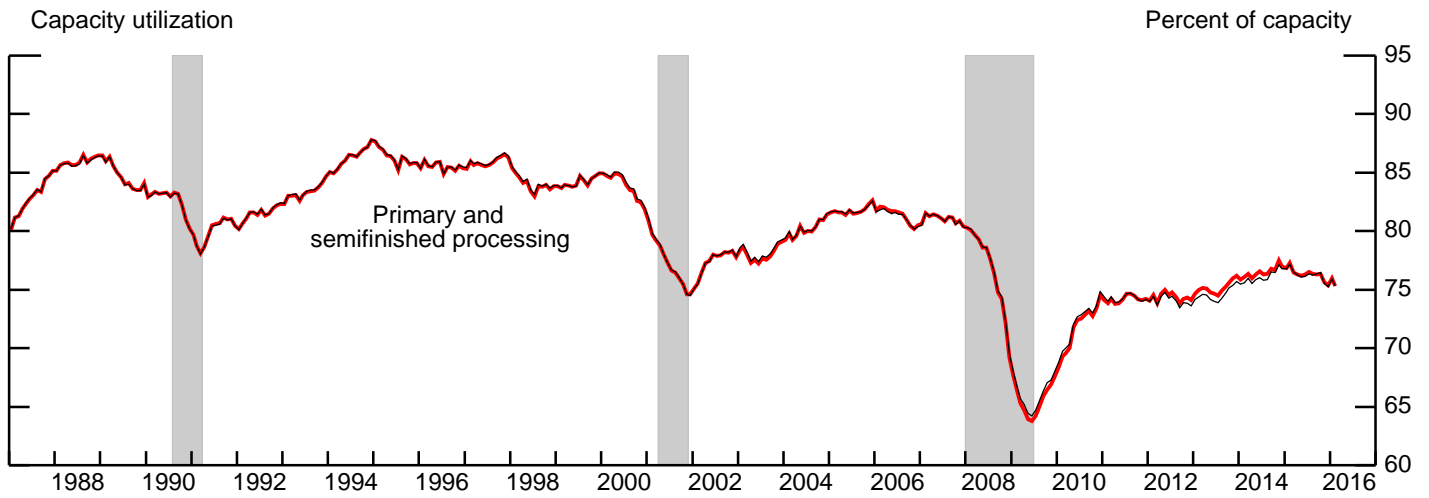
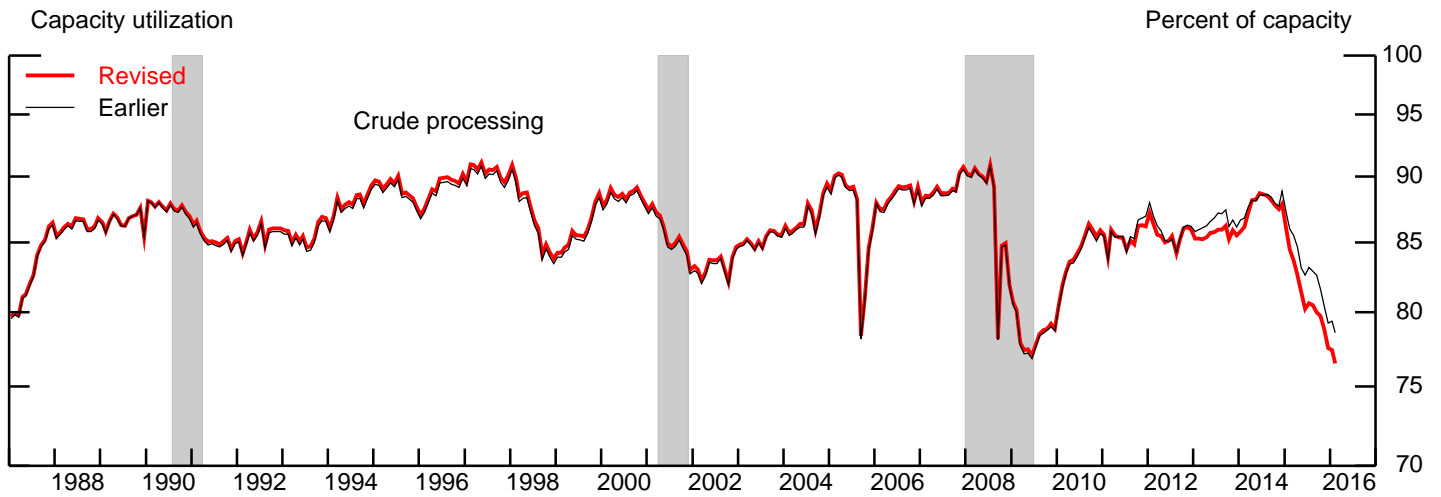
Note: The shaded areas represent periods of business recession as defined by the NBER.

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 represent 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)																	
1986	.4	-.7	-.7	.1	.2	-.3	.5	-.1	.2	.4	.5	.8	2.4	-2.3	1.5	4.7	1.0
1987	-.3	1.3	.2	.6	.6	.5	.7	.8	.3	1.4	.5	.5	5.4	7.3	7.7	10.1	5.2
1988	.0	.4	.3	.5	-.1	.3	.1	.4	-.3	.5	.1	.5	3.7	3.6	1.5	2.9	5.2
1989	.3	-.4	.2	.1	-.7	.0	-.9	.9	-.4	-.1	.3	.6	1.8	-1.5	-2.5	1.7	.9
1990	-.7	1.0	.5	-.1	.2	.3	-.1	.3	.1	-.8	-1.2	-.7	2.8	3.1	1.7	-6.1	1.0
1991	-.4	-.7	-.5	.2	1.0	.9	.1	.1	.9	-.2	-.1	-.4	-7.4	2.4	5.6	.9	-1.5
1992	-.6	-.7	-.9	-.7	-.3	.0	.9	-.5	-.2	-.7	.4	-.1	-.5	7.3	3.1	4.3	2.9
1993	.4	.4	-.1	.3	-.3	.2	.3	-.1	.5	.8	.4	.5	3.6	.9	1.6	6.2	3.3
1994	.4	.0	1.0	.5	.5	.6	.2	.6	.4	.9	.6	1.0	5.0	7.4	5.2	8.5	5.2
1995	.2	-.1	.1	.0	.3	.3	-.4	1.3	.4	-.1	.2	.4	4.2	1.4	3.7	3.6	4.7
1996	-.7	1.6	-.1	.9	.8	.8	-.2	.6	.7	-.1	.9	.6	2.8	8.8	5.1	5.6	4.5
1997	.1	1.2	.7	.1	.6	.5	.7	1.1	.9	.8	.9	.3	7.8	6.1	9.6	10.4	7.2
1998	.5	.1	.1	.3	.6	-.6	-.4	2.0	-.2	.8	-.1	.4	4.5	2.6	2.9	5.9	5.8
1999	.5	.5	.2	.3	.7	-.2	.6	.4	-.4	1.3	.5	.8	4.5	4.0	3.7	7.3	4.4
2000	.0	.3	.4	.7	.2	.1	-.1	-.3	.4	-.3	.0	-.3	4.1	5.1	-.4	-.8	3.9
2001	-.7	-.6	-.2	-.2	-.7	-.6	-.6	-.2	-.3	-.4	-.5	.1	-5.3	-4.9	-5.6	-4.2	-3.1
2002	.6	.0	.8	.4	.4	1.0	-.2	.0	.1	-.3	.5	-.5	2.9	6.4	2.4	-.2	.3
2003	.6	.3	-.2	-.7	.0	.2	.4	-.2	.6	.1	.8	-.1	2.2	-2.8	2.5	4.1	1.2
2004	.2	.6	-.5	.4	.8	-.8	.8	.1	.1	.9	.2	.7	2.7	2.3	2.3	5.7	2.6
2005	.5	.7	-.2	.1	.2	.4	-.3	.2	-1.9	1.3	1.0	.6	5.7	2.0	-2.0	3.8	3.3
2006	.1	.1	.2	.4	-.1	.4	.0	.3	-.2	.0	-.1	1.1	3.9	2.4	1.4	1.0	2.2
2007	-.5	1.0	.2	.7	.0	.0	.0	.2	.3	-.5	.5	.0	3.7	4.9	.9	.7	2.5
2008	-.3	-.3	-.2	-.7	-.5	-.2	-.5	-1.5	-4.3	.9	-1.2	-2.9	-1.7	-5.5	-12.2	-16.0	-3.6
2009	-2.4	-.6	-1.6	-.9	-1.0	-.4	1.0	1.1	.8	.3	.4	.3	-20.5	-11.3	5.8	6.4	-11.5
2010	1.1	.3	.7	.4	1.6	.2	.4	.4	.3	-.3	.1	.8	7.8	8.6	5.9	1.5	5.5
2011	-.1	-.4	.9	-.4	.2	.2	.5	.5	.0	.7	-.1	.4	2.0	.9	4.1	3.5	2.9
2012	.7	.3	-.7	.9	.2	.0	.3	-.5	.1	.3	.5	.3	3.6	2.5	.3	2.6	2.8
2013	-.1	.5	.1	.0	.0	.2	-.6	.7	.5	-.1	.3	.2	2.7	1.2	.9	3.2	1.9
2014	-.5	.8	.8	.1	.4	.4	.1	.0	.4	.1	1.0	-.2	2.2	5.5	2.5	3.7	2.9
2015	-.5	-.1	-.3	-.2	-.2	-.2	.6	.1	-.3	-.1	-.7	-.4	-1.9	-2.7	1.5	-3.2	.3
2016	.6	-.5															
IP (2012=100)																	
1986	57.8	57.4	57.0	57.1	57.2	57.0	57.3	57.3	57.4	57.6	57.9	58.4	57.4	57.1	57.3	58.0	57.5
1987	58.2	59.0	59.0	59.4	59.8	60.1	60.5	61.0	61.2	62.0	62.4	62.7	58.7	59.8	60.9	62.4	60.4
1988	62.7	63.0	63.1	63.5	63.4	63.6	63.6	63.9	63.7	64.0	64.1	64.4	62.9	63.5	63.7	64.2	63.6
1989	64.6	64.3	64.5	64.5	64.1	64.1	63.5	64.1	63.9	63.8	64.0	64.4	64.5	64.2	63.8	64.1	64.2
1990	64.0	64.7	65.0	64.9	65.0	65.2	65.2	65.4	65.4	64.9	64.2	63.8	64.5	65.0	65.3	64.3	64.8
1991	63.5	63.0	62.7	62.8	63.5	64.0	64.1	64.2	64.7	64.6	64.5	64.3	63.1	63.5	64.3	64.5	63.8
1992	63.9	64.3	64.9	65.4	65.6	65.6	66.2	65.9	66.0	66.5	66.8	66.9	64.4	65.5	66.0	66.7	65.7
1993	67.1	67.4	67.4	67.6	67.3	67.5	67.7	67.6	67.9	68.4	68.7	69.1	67.3	67.5	67.7	68.8	67.8
1994	69.3	69.4	70.1	70.4	70.8	71.3	71.4	71.8	72.1	72.7	73.1	73.9	69.6	70.8	71.8	73.2	71.4
1995	74.0	73.9	74.0	74.0	74.2	74.5	74.2	75.1	75.4	75.3	75.5	75.8	74.0	74.2	74.9	75.6	74.7
1996	75.3	76.5	76.4	77.1	77.7	78.3	78.2	78.7	79.2	79.1	79.8	80.3	76.1	77.7	78.7	79.8	78.1
1997	80.4	81.4	82.0	82.0	82.5	82.9	83.5	84.4	85.2	85.9	86.7	86.9	81.3	82.5	84.4	86.5	83.7
1998	87.4	87.5	87.6	87.9	88.4	87.9	87.5	89.3	89.2	89.9	89.8	90.2	87.5	88.0	88.7	90.0	88.5
1999	90.6	91.1	91.2	91.5	92.2	92.0	92.6	93.0	92.6	93.8	94.3	95.0	91.0	91.9	92.7	94.3	92.5
2000	95.0	95.3	95.6	96.3	96.5	96.6	96.5	96.1	96.5	96.3	96.3	96.0	95.3	96.5	96.4	96.2	96.1
2001	95.4	94.8	94.5	94.3	93.7	93.1	92.6	92.4	92.1	91.7	91.2	91.3	94.9	93.7	92.4	91.4	93.1
2002	91.8	91.8	92.5	92.9	93.3	94.2	94.0	94.0	94.1	93.8	94.3	93.8	92.0	93.5	94.0	94.0	93.4
2003	94.4	94.6	94.4	93.8	93.8	93.9	94.3	94.1	94.7	94.9	95.6	95.6	94.5	93.8	94.4	95.3	94.5
2004	95.7	96.3	95.9	96.3	97.1	96.3	97.0	97.1	97.2	98.1	98.3	99.0	96.0	96.5	97.1	98.4	97.0
2005	99.4	100.1	99.9	100.1	100.2	100.6	100.3	100.5	98.6	99.9	100.9	101.5	99.8	100.3	99.8	100.8	100.2
2006	101.6	101.7	101.9	102.3	102.2	102.5	102.5	102.8	102.7	102.6	102.5	103.6	101.7	102.3	102.7	102.9	102.4
2007	103.1	104.2	104.4	105.1	105.1	105.1	105.1	105.3	105.7	105.2	105.7	105.7	103.9	105.1	105.4	105.5	105.0
2008	105.4	105.1	104.8	104.0	103.5	103.3	102.8	101.2	96.9	97.8	96.6	93.7	105.1	103.6	100.3	96.0	101.2
2009	91.5	90.9	89.5	88.7	87.8	87.4	88.3	89.3	90.0	90.3	90.6	90.9	90.6	88.0	89.2	90.6	89.6
2010	91.9	92.2	92.8	93.2	94.6	94.8	95.3	95.6	95.9	95.6	95.7	96.5	92.3	94.2	95.6	95.9	94.5
2011	96.4	96.0	96.8	96.4	96.6	96.9	97.3	97.8	97.7	98.4	98.3	98.7	96.4	96.6	97.6	98.5	97.3
2012	99.4	99.7	99.0	99.8	100.0	100.0	100.3	99.8	100.0	100.2	100.8	101.0	99.3	100.0	100.0	100.7	100.0
2013	101.0	101.5	101.6	101.6	101.6	101.8	101.2	102.0	102.5	102.4	102.8	103.0	101.4	101.7	101.9	102.7	101.9
2014	102.5	103.3	104.1	104.2	104.7	105.1	105.2	105.2	105.6	105.6	106.7	106.5	103.3	104.7	105.3	106.3	104.9
2015	106.0	105.9	105.5	105.3	105.0	104.9	105.5	105.6	105.3	105.2	104.5	104.1	105.8	105.1	105.5	104.6	105.2
2016	104.7	104.2															

NOTE: Estimates from October 2015 through February 2016 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 2012 output)																	
1986	72.7	72.8	72.8	72.9	73.0	73.0	73.1	73.2	73.3	73.4	73.5	73.6	72.8	73.0	73.2	73.5	73.1
1987	73.7	73.8	74.0	74.1	74.3	74.4	74.6	74.7	74.8	74.9	75.0	75.1	73.8	74.3	74.7	75.0	74.4
1988	75.2	75.2	75.3	75.3	75.3	75.4	75.4	75.4	75.5	75.5	75.6	75.7	75.2	75.3	75.4	75.6	75.4
1989	75.8	75.9	76.0	76.1	76.3	76.5	76.6	76.8	77.0	77.2	77.3	77.5	75.9	76.3	76.8	77.3	76.6
1990	77.7	77.9	78.1	78.2	78.4	78.5	78.7	78.8	79.0	79.1	79.2	79.3	77.9	78.4	78.8	79.2	78.6
1991	79.4	79.5	79.6	79.6	79.7	79.8	79.9	80.0	80.1	80.2	80.3	80.5	79.5	79.7	80.0	80.3	79.9
1992	80.6	80.8	80.9	81.1	81.3	81.5	81.7	81.8	82.0	82.2	82.3	82.4	80.8	81.3	81.8	82.3	81.6
1993	82.6	82.7	82.8	82.9	83.0	83.2	83.3	83.4	83.5	83.7	83.8	84.0	82.7	83.0	83.4	83.8	83.2
1994	84.2	84.3	84.6	84.8	85.0	85.3	85.5	85.8	86.1	86.4	86.6	86.9	84.4	85.0	85.8	86.6	85.5
1995	87.2	87.5	87.8	88.1	88.4	88.8	89.1	89.4	89.8	90.1	90.5	90.9	87.5	88.4	89.4	90.5	89.0
1996	91.3	91.7	92.2	92.6	93.0	93.4	93.9	94.3	94.8	95.2	95.7	96.1	91.7	93.0	94.3	95.7	93.7
1997	96.6	97.1	97.6	98.1	98.6	99.2	99.7	100.3	100.9	101.6	102.2	102.9	97.1	98.6	100.3	102.2	99.6
1998	103.6	104.2	104.9	105.6	106.3	106.9	107.5	108.1	108.7	109.2	109.8	110.3	104.2	106.3	108.1	109.8	107.1
1999	110.8	111.3	111.7	112.2	112.6	113.1	113.5	113.9	114.3	114.7	115.1	115.5	111.3	112.6	113.9	115.1	113.2
2000	115.9	116.3	116.7	117.1	117.5	117.9	118.3	118.7	119.0	119.4	119.8	120.2	116.3	117.5	118.7	119.8	118.1
2001	120.6	120.9	121.3	121.6	122.0	122.3	122.6	122.9	123.1	123.4	123.6	123.9	120.9	122.0	122.9	123.6	122.3
2002	124.0	124.2	124.4	124.5	124.6	124.6	124.7	124.7	124.7	124.7	124.6	124.6	124.2	124.5	124.7	124.6	124.5
2003	124.6	124.5	124.5	124.5	124.4	124.4	124.4	124.3	124.3	124.3	124.3	124.3	124.5	124.4	124.3	124.3	124.4
2004	124.2	124.2	124.2	124.2	124.1	124.1	124.1	124.1	124.1	124.1	124.2	124.2	124.2	124.1	124.1	124.2	124.2
2005	124.3	124.4	124.6	124.7	124.9	125.0	125.2	125.4	125.6	125.7	125.9	126.1	124.4	124.9	125.4	125.9	125.2
2006	126.3	126.4	126.6	126.8	127.0	127.1	127.4	127.6	127.8	128.1	128.4	128.7	126.4	127.0	127.6	128.4	127.3
2007	129.0	129.2	129.5	129.8	130.0	130.2	130.4	130.5	130.6	130.7	130.7	130.6	129.2	130.0	130.5	130.6	130.1
2008	130.6	130.5	130.4	130.3	130.2	130.2	130.2	130.3	130.3	130.4	130.6	130.7	130.5	130.3	130.3	130.6	130.4
2009	130.8	130.9	131.0	131.1	131.1	131.1	131.0	130.9	130.8	130.6	130.4	130.1	130.9	131.1	130.9	130.4	130.8
2010	129.9	129.6	129.3	129.0	128.8	128.5	128.3	128.1	127.9	127.7	127.6	127.5	129.6	128.8	128.1	127.6	128.5
2011	127.4	127.4	127.4	127.4	127.4	127.5	127.7	127.8	128.0	128.2	128.4	128.7	127.4	127.5	127.8	128.5	127.8
2012	129.0	129.2	129.5	129.8	130.0	130.3	130.6	130.8	131.1	131.3	131.5	131.7	129.2	130.0	130.8	131.5	130.4
2013	131.9	132.0	132.2	132.3	132.4	132.5	132.6	132.6	132.7	132.8	132.8	132.9	132.0	132.4	132.6	132.8	132.5
2014	133.0	133.1	133.2	133.4	133.6	133.8	134.0	134.3	134.6	134.9	135.2	135.6	133.1	133.6	134.3	135.2	134.1
2015	135.9	136.2	136.5	136.8	137.1	137.3	137.5	137.7	137.8	137.9	138.0	138.0	136.2	137.1	137.7	138.0	137.2
2016	138.1	138.1															
Utilization (percent)																	
1986	79.6	78.9	78.3	78.3	78.4	78.1	78.4	78.2	78.3	78.6	78.8	79.4	78.9	78.3	78.3	78.9	78.6
1987	79.0	79.8	79.8	80.2	80.5	80.7	81.1	81.7	81.8	82.8	83.1	83.5	79.6	80.5	81.5	83.1	81.2
1988	83.4	83.7	83.9	84.3	84.2	84.4	84.4	84.7	84.4	84.8	84.8	85.1	83.7	84.3	84.5	84.9	84.3
1989	85.3	84.8	84.8	84.7	84.0	83.8	82.9	83.5	83.0	82.7	82.8	83.1	84.9	84.2	83.1	82.9	83.8
1990	82.4	83.0	83.2	83.0	82.9	83.0	82.8	82.9	82.9	82.1	81.1	80.4	82.9	83.0	82.9	81.2	82.5
1991	80.0	79.3	78.8	78.9	79.6	80.2	80.2	80.2	80.8	80.5	80.3	79.9	79.4	79.6	80.4	80.2	79.9
1992	79.2	79.6	80.2	80.6	80.7	80.5	81.1	80.5	80.5	81.0	81.2	81.1	79.7	80.6	80.7	81.1	80.5
1993	81.3	81.5	81.3	81.5	81.1	81.1	81.3	81.1	81.3	81.8	82.0	82.3	81.4	81.2	81.2	82.0	81.5
1994	82.4	82.2	82.9	83.1	83.3	83.6	83.5	83.7	83.7	84.2	84.4	85.0	82.5	83.3	83.6	84.5	83.5
1995	84.9	84.5	84.3	84.0	83.9	83.9	83.3	84.0	84.0	83.6	83.4	83.4	84.5	83.9	83.8	83.5	83.9
1996	82.5	83.4	82.9	83.3	83.5	83.8	83.3	83.4	83.6	83.1	83.4	83.5	82.9	83.6	83.4	83.4	83.3
1997	83.2	83.8	84.0	83.6	83.7	83.6	83.8	84.2	84.4	84.6	84.8	84.5	83.7	83.6	84.1	84.6	84.0
1998	84.4	83.9	83.4	83.2	83.2	82.2	81.4	82.6	82.0	82.3	81.8	81.8	83.9	82.8	82.0	82.0	82.7
1999	81.8	81.9	81.6	81.5	81.8	81.4	81.6	81.6	81.0	81.8	81.9	82.2	81.8	81.6	81.4	82.0	81.7
2000	81.9	81.9	81.9	82.3	82.1	81.9	81.6	81.0	81.1	80.6	80.4	79.9	81.9	82.1	81.2	80.3	81.4
2001	79.1	78.4	77.9	77.5	76.8	76.1	75.5	75.2	74.8	74.3	73.8	73.7	78.5	76.8	75.2	73.9	76.1
2002	74.0	73.9	74.4	74.7	74.9	75.6	75.4	75.4	75.5	75.2	75.6	75.3	74.1	75.0	75.4	75.4	75.0
2003	75.7	76.0	75.9	75.3	75.4	75.5	75.8	75.7	76.2	76.3	76.9	76.9	75.9	75.4	75.9	76.7	76.0
2004	77.1	77.5	77.2	77.5	78.2	77.6	78.2	78.2	78.3	79.0	79.1	79.7	77.3	77.8	78.2	79.3	78.1
2005	80.0	80.4	80.2	80.2	80.3	80.5	80.1	80.2	78.5	79.4	80.1	80.5	80.2	80.3	79.6	80.0	80.0
2006	80.5	80.4	80.5	80.7	80.5	80.6	80.5	80.6	80.3	80.1	79.9	80.5	80.5	80.6	80.5	80.2	80.4
2007	80.0	80.6	80.6	81.0	80.9	80.7	80.6	80.7	80.9	80.5	80.9	80.9	80.4	80.9	80.7	80.8	80.7
2008	80.7	80.5	80.4	79.8	79.5	79.4	78.9	77.7	74.3	74.9	74.0	71.7	80.5	79.5	77.0	73.5	77.7
2009	70.0	69.5	68.3	67.7	67.0	66.7	67.4	68.2	68.8	69.1	69.5	69.8	69.2	67.1	68.1	69.5	68.5
2010	70.8	71.2	71.8	72.2	73.5	73.8	74.3	74.7	75.0	74.9	75.0	75.7	71.2	73.2	74.6	75.2	73.6
2011	75.7	75.4	76.0	75.7	75.8	75.9	76.2	76.5	76.4	76.8	76.5	76.7	75.7	75.8	76.4	76.6	76.1
2012	77.1	77.1	76.4	76.9	76.9	76.8	76.8	76.3	76.3	76.3	76.6	76.7	76.9	76.9	76.5	76.6	76.7
2013	76.6	76.9	76.9	76.8	76.7	76.8	76.4	76.9	77.2	77.1	77.4	77.5	76.8	76.8	76.8	77.3	76.9
2014	77.0	77.6	78.1	78.1	78.4	78.6	78.5	78.3	78.4	78.3	78.9	78.6	77.6	78.4	78.4	78.6	78.2
2015	78.0	77.7	77.3	76.9	76.6	76.4	76.7	76.7	76.4	76.3	75.7	75.4	77.7	76.6	76.6	75.8	76.7
2016	75.8	75.4															

NOTE: Estimates from October 2015 through February 2016 are subject to further revision in the upcoming monthly releases.

Table 2

RATES OF CHANGE IN INDUSTRIAL PRODUCTION, MARKET AND INDUSTRY GROUP SUMMARY: 2011–15¹

Item	Revised change (percent)					Difference between revised and earlier changes (percentage points)				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Total IP	2.6	2.3	2.0	3.5	-1.6	-2	.2	-3	-1.0	-8
MARKET GROUPS										
Final products and nonindustrial supplies	1.8	1.1	.8	1.8	-1.0	.0	-.1	-.7	-1.2	-.7
Consumer goods	.8	-1.5	1.5	.9	.7	.1	-.2	-1.4	-1.0	-.5
Durable	5.2	.4	8.8	3.6	3.9	.0	.4	-.7	-2.3	-1.3
Automotive products	11.6	-1.2	15.1	5.3	6.7	.0	.7	-.4	-1.5	-1.2
Home electronics	15.2	5.6	3.9	.2	-.6	3.1	-1.4	1.4	-3.1	-6.0
Appliances, furniture, carpeting	.8	2.4	2.9	2.6	3.1	-.1	.4	-2.7	-5.0	.3
Miscellaneous goods	-2.1	1.4	3.2	2.0	.5	.0	.1	-.6	-2.3	-1.7
Nondurable	-.3	-1.9	-.4	.1	-.3	.1	-.4	-1.7	-.7	-.3
Non-energy	-.1	-3.0	-2.0	1.0	.1	.0	-.5	-1.2	-.8	-.9
Foods and tobacco	-1.0	1.2	1.0	-.4	.3	-.1	.2	-.1	-.7	-.7
Clothing	-5.6	-7.4	-4.1	-1.3	-4.6	.2	-.6	-2.5	-1.5	-.4
Chemical products	2.3	-9.1	-8.0	5.0	.7	.3	-1.0	-3.1	-1.3	-1.1
Paper products	-.2	-8.2	-1.3	-2.8	-3.3	-.9	-3.4	-.7	2.8	-2.0
Energy	-1.1	1.3	5.2	-2.8	-2.6	.5	.3	-2.1	-1.1	.7
Business equipment	6.0	7.7	-2.0	4.6	-1.9	-.1	.3	-.5	-2.7	-.5
Transit	8.7	19.6	2.3	10.4	-.4	.0	.1	.8	-1.3	-.3
Information processing	2.1	6.1	-.5	1.9	1.1	-.3	.4	-.3	-1.6	.2
Industrial and other	6.7	4.0	-4.5	3.0	-3.9	-.1	.3	-1.1	-3.9	-1.1
Defense and space equipment	-.6	.3	-4.1	-3.2	-4.7	.1	-.3	1.1	-2.5	-2.7
Construction supplies	1.9	3.2	3.6	4.4	1.1	.0	.0	.1	-.8	-1.2
Business supplies	.1	1.6	2.3	1.1	.3	-.6	-.1	.1	-.6	-.4
Materials	3.5	3.5	3.3	5.2	-2.3	-.5	.3	.1	-.9	-.7
Non-energy	3.0	2.4	1.7	2.2	-.5	-.4	.6	.1	-1.1	-.9
Durable	6.3	3.4	3.2	3.6	-1.3	-.2	.3	.8	-1.2	-1.0
Consumer parts	8.7	8.8	3.8	4.6	3.3	-.2	.1	-.3	-4.4	-1.5
Equipment parts	10.5	3.1	3.7	5.7	-1.3	-.1	.7	2.9	1.7	-.5
Other	2.7	1.8	2.7	2.0	-3.0	-.1	.1	-.4	-1.8	-1.3
Nondurable	-1.7	1.1	-.5	.1	.8	-.7	.9	-1.0	-1.1	-.7
Textile	-6.5	-1.0	8.1	-1.2	-.4	-.1	.4	1.4	-2.7	-2.9
Paper	-.1	.9	-.9	-.5	-2.6	.1	-.3	.6	1.3	-.7
Chemical	-2.6	1.6	-2.3	.0	2.7	-1.4	1.8	-2.3	-2.4	-.3
Energy	4.2	5.1	5.5	9.2	-5.1	-.7	-.1	-.1	-.7	.0
INDUSTRY GROUPS										
Manufacturing²	2.5	1.7	.8	2.0	.0	-.3	.2	-.4	-1.4	-.9
Manufacturing (NAICS)	31–33	2.7	2.2	.9	2.3	.1	-.2	.3	-.5	-1.6
Durable manufacturing		5.2	4.0	2.5	3.3	-.7	-.2	.4	-.4	-1.8
Wood products	321	1.0	7.9	4.9	3.0	-.6	-.1	-.1	-4.3	-1.5
Nonmetallic mineral products	327	-.5	4.0	4.5	4.9	4.4	-.1	.1	.9	-.3
Primary metals	331	6.0	-3.9	4.9	-1.8	-6.9	-.5	.6	-.6	-3.0
Fabricated metal products	332	4.1	1.7	3.5	1.1	-3.2	-.1	.3	.7	-1.2
Machinery	333	9.8	2.7	-5.0	3.9	-4.9	-.2	.4	-1.4	-4.2
Computer and electronic products	334	6.0	7.7	2.9	5.6	1.5	-.4	1.4	3.4	2.0
Electrical equip., appliances, and components	335	1.5	2.4	-.4	.8	2.4	-.1	.1	.3	-1.8
Motor vehicles and parts	3361–3	11.1	6.8	10.1	6.4	5.1	-.1	.6	-.1	-3.4
Aerospace and miscellaneous transportation equipment	3364–9	6.7	7.5	.9	4.6	-1.6	.3	-.7	2.0	1.7
Furniture and related products	337	1.4	6.2	-.8	3.9	3.1	.0	-.1	-3.9	-5.4
Miscellaneous	339	-4.4	.4	3.8	.3	-1.5	-.2	.4	-1.8	-5.5
Nondurable manufacturing		.0	.2	-.9	1.1	1.1	-.2	.2	-1.6	-1.5
Food, beverage, and tobacco products	311,2	-1.0	1.2	1.2	-.1	.5	-.1	.2	-.2	-.8
Textile and product mills	313,4	-4.1	-1.8	6.5	.1	-.5	-.1	.3	1.0	-1.6
Apparel and leather	315,6	-5.6	-7.8	-3.7	-1.4	-4.3	.2	-.6	-3.0	-1.8
Paper	322	1.5	2.2	-1.4	.7	-3.3	.1	-.4	.6	1.6
Printing and support	323	-3.6	-.6	2.4	-.6	2.7	.0	.0	-.6	-.8
Petroleum and coal products	324	2.7	-.4	1.7	-2.4	6.5	-.1	.2	-3.9	-2.5
Chemicals	325	.2	-1.8	-4.6	2.3	1.5	-.6	.4	-2.7	-2.2
Plastics and rubber products	326	1.3	5.1	-.1	5.7	1.2	-.1	.3	-2.2	-4.1
Other manufacturing (non-NAICS)	1133,5111	-2.6	-10.2	.2	-5.3	-3.5	-2.1	-3.8	1.8	3.3
Mining	21	7.0	6.4	5.9	12.4	-8.2	-.2	.1	.1	.2
Utilities	2211,2	-2.4	.0	4.4	-.7	-4.1	-.2	-.1	-.2	.2
Electric	2211	-1.9	-.6	3.6	-.3	-3.2	-.2	-.2	-.1	.3
Natural gas	2212	-5.9	4.4	11.0	-3.4	-11.5	-.1	.4	.1	-.2

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. 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 3
RATES OF CHANGE IN INDUSTRIAL PRODUCTION, SPECIAL AGGREGATES AND SELECTED DETAIL: 2011–15¹

Item	Revised change (percent)					Difference between revised and earlier changes (percentage points)				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Total industry	2.6	2.3	2.0	3.5	-1.6	-.2	.2	-.3	-1.0	-.8
Energy	3.2	3.8	5.1	6.7	-6.0	.0	.2	-.5	.1	-.4
Consumer products	-1.1	1.3	5.2	-2.8	-2.6	.5	.3	-2.1	-1.1	.7
Commercial products	-.5	1.3	3.7	.7	-.2	-.1	.0	-.9	-.6	.0
Oil and gas well drilling	213111	21.0	-7.8	-1.5	7.1	-59.5	-.1	-.2	-.2	-.2
Converted fuel	-1.0	4.8	.9	.5	-2.0	-1.0	.2	.0	-.3	-1.0
Primary energy	6.0	5.2	6.9	12.0	-6.0	-.3	-.1	.0	-.2	.3
Non-energy	2.4	1.7	.8	2.3	-.2	-.3	.2	-.2	-1.3	-1.0
Selected high-technology industries	7.9	11.8	11.5	8.8	.2	-.1	2.0	8.9	7.1	.2
Computers and peripheral equipment	3341	1.7	18.5	.3	2.2	-10.7	1.1	-2.1	1.1	-8.1
Communications equipment	3342	4.1	1.6	18.0	-2.6	.5	.4	-1.4	4.4	8.2
Semiconductors and related electronic components	3344	10.2	13.5	12.2	15.5	2.6	-.1	3.8	12.0	11.4
Excluding selected high-technology industries	2.1	1.2	.4	2.0	-.2	-.2	.1	-.6	-1.6	-1.0
Motor vehicles and parts	3361-3	11.1	6.8	10.1	6.4	5.1	-.1	.6	-.1	-3.4
Motor vehicles	3361	13.0	2.3	13.8	3.4	3.2	-.2	1.1	-.8	-4.7
Motor vehicle parts	3363	9.2	10.6	5.4	8.9	6.4	.1	.1	.1	-2.7
Excluding motor vehicles and parts	1.6	.8	-.3	1.7	-.6	-.2	.1	-.6	-1.5	-1.0
Consumer goods	-.1	-2.5	-1.2	1.2	.3	-.1	-.4	-1.2	-1.2	-1.0
Business equipment	6.9	7.2	-3.1	4.9	-1.9	-.1	.4	-.7	-2.4	-.3
Construction supplies	1.9	3.2	3.5	4.5	1.1	.0	.0	.1	-.8	-1.2
Business supplies	-.8	.5	.9	.1	.2	-.7	-.4	-.2	-1.4	-1.0
Materials	1.9	1.0	.9	1.3	-1.1	-.4	.5	-.6	-1.4	-1.1
Measures excluding selected high-technology industries										
Total industry	2.4	1.9	1.8	3.3	-1.7	-.2	.1	-.6	-1.2	-.8
Manufacturing ²	2.2	1.3	.4	1.8	.0	-.2	.1	-.8	-1.7	-.9
Durable	5.0	3.3	1.8	2.9	-.8	-.1	.3	-.2	-2.4	-1.2
Measures excluding motor vehicles and parts										
Total industry	2.2	2.0	1.6	3.3	-2.0	-.2	.1	-.3	-.9	-.8
Manufacturing ²	1.9	1.4	.2	1.7	-.4	-.3	.1	-.5	-1.3	-.9
Durable	4.5	3.6	1.4	2.8	-1.6	-.2	.3	.5	-1.5	-1.1
Measures excluding selected high-technology industries and motor vehicles and parts										
Total industry	2.0	1.7	1.4	3.2	-2.0	-.2	.1	-.6	-1.1	-.8
Manufacturing ²	1.6	.9	-.2	1.4	-.4	-.3	.1	-.9	-1.6	-.9
Stage-of-process components of non-energy materials, measures of the input to										
Finished processors	7.3	3.9	3.0	4.0	-.2	-.1	.4	1.6	-.2	-.9
Primary and semifinished processors	.3	1.5	.9	1.1	-.7	-.5	.7	-.9	-1.7	-1.0
STAGE-OF-PROCESS GROUPS										
Crude	4.3	6.2	4.5	8.9	-3.4	-.6	.6	-.2	-.1	-.1
Primary and semifinished	1.4	1.4	3.3	1.9	-1.0	-.2	.0	.2	-.4	-.8
Finished	3.2	1.2	-1.1	2.2	-1.4	.0	.0	-1.0	-2.3	-1.0

1. See footnote 1 to table 2.

2. See footnote 2 to table 2.

Table 4
ANNUAL RATES OF CHANGE FOR INDUSTRIAL PRODUCTION: 2011–15¹

Item	Revised change (percent)					Difference between revised and earlier changes (percentage points)				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Total IP	2.9	2.8	1.9	2.9	.3	-1	-1	.0	-8	-1.0
MARKET GROUPS										
Consumer goods	1.2	-1.4	.7	.7	1.4	.0	.0	-.8	-1.5	-.6
Durable	4.6	2.1	5.7	4.6	3.9	.1	.1	.2	-2.4	-1.3
Nondurable	.4	-2.2	-.6	-.4	.7	.0	-.1	-1.1	-1.3	-.5
Business equipment	5.3	9.9	-.2	2.4	.7	.0	.0	.3	-2.4	-1.0
Defense and space equipment	-2.9	1.9	-2.9	-2.8	-5.6	-.1	.1	.1	.4	-4.7
Construction supplies	2.4	4.3	3.0	3.7	1.4	.0	.0	.1	-.2	-1.2
Business supplies	1.0	1.1	1.8	1.5	.3	-.4	-.4	.3	-.3	-.7
Materials	4.0	4.0	3.3	4.7	.6	-.2	-.2	.2	-.5	-1.0
Non-energy	4.6	2.8	1.8	1.9	.4	-.1	.0	.5	-.6	-1.2
Energy	3.1	5.7	5.4	8.2	.6	-.3	-.6	-.3	-.4	-.5
INDUSTRY GROUPS										
Manufacturing²	2.9	2.6	.9	1.3	.8	-.1	-.1	.0	-1.2	-1.1
Manufacturing (NAICS)	3.2	2.9	1.1	1.3	1.1	-.1	.0	.0	-1.5	-1.1
Durable manufacturing	6.1	5.5	2.1	3.0	.5	-.1	.0	.8	-1.0	-1.5
Nondurable manufacturing	.1	.1	.0	-.6	1.7	.0	.0	-.8	-2.0	-.6
Other manufacturing (non-NAICS)	-4.7	-5.9	-5.0	-.6	-6.3	-2.0	-3.2	-1.7	5.0	-1.6
Mining	5.6	7.4	6.5	11.0	-1.7	.0	-.1	-.1	.2	-.5
Utilities	-.3	-2.3	2.3	1.3	-.7	-.2	-.2	-.1	.3	-.6

1. The rates of change are calculated as the percent change in the annual averages of not seasonally adjusted industrial production indexes rather than as the percent change between the fourth quarter of one year and the fourth quarter of the next.

2. See footnote 2 to table 2.

Table 5
RATES OF CHANGE IN CAPACITY, BY INDUSTRY GROUPS: 2012–16¹

Item	Revised change (percent)					Difference between revised and earlier changes (percentage points)				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
Total industry	2.4	1.0	1.8	2.0	.5	.0	-.6	-.3	.5	-.1
Manufacturing²	1.8	.4	.2	.8	.9	-.1	-.7	-.6	-.4	-.3
Manufacturing (NAICS)	2.1	.6	.4	1.0	.9	.0	-.6	-.5	-.3	-.3
Durable manufacturing	2.4	1.9	.3	.6	1.3	.2	.0	-1.3	-1.3	-.6
Nondurable manufacturing	1.7	-.7	.5	1.6	.5	-.1	-1.3	.5	.8	.0
Other manufacturing (non-NAICS)	-3.4	-5.2	-5.5	-4.9	-.2	-3.5	-4.0	-3.2	-2.7	.3
Mining	5.9	6.7	8.3	5.6	-3.4	.1	.2	-1.0	1.4	-.2
Utilities	1.1	.0	.9	.7	.8	.0	-.3	-.2	-.1	.0
Selected high-technology industries	14.4	15.4	.2	-.4	9.1	.7	15.8	-.8	-6.3	5.5
Manufacturing ² ex. selected high-technology industries	1.3	-.1	.2	.9	.5	-.1	-1.4	-.5	-.1	-.4
STAGE-OF-PROCESS GROUPS										
Crude	6.3	4.9	6.5	4.8	-2.8	.0	.5	-.4	1.5	-.3
Primary and semifinished	1.4	.7	.1	.6	1.1	-.4	.0	-.4	-.4	.0
Finished	1.6	-.2	.5	1.2	.9	.4	-1.8	-.8	-.3	-.3

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 2.

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)				
	1972-2015 Ave.	2012 Q4	2013 Q4	2014 Q4	2015 Q4	2012 Q4	2013 Q4	2014 Q4	2015 Q4	
Total industry		80.0	76.6	77.3	78.6	75.8	.1	.3	-.2	-1.2
Manufacturing¹		78.5	74.3	74.6	76.0	75.4	.2	.4	-.2	-.6
Manufacturing (NAICS)	31-33	78.4	74.8	75.0	76.4	75.7	.2	.3	-.6	-1.0
Durable manufacturing		76.9	74.3	74.8	77.0	76.1	.1	.4	.1	.3
Wood products	321	76.4	69.5	71.8	71.4	67.8	3.2	1.6	-.5	-3.1
Nonmetallic mineral products	327	74.0	57.2	60.8	63.9	66.4	1.4	1.8	1.4	.8
Primary metals	331	78.8	75.3	75.0	75.4	70.4	-.8	-1.0	-2.5	-1.4
Fabricated metal products	332	77.6	77.5	80.6	81.6	79.4	.2	1.1	.1	-1.0
Machinery	333	77.7	78.5	74.2	75.9	72.1	-.7	.3	-2.1	-1.5
Computer and electronic products	334	77.6	73.4	70.2	73.2	73.2	.2	-2.8	-.9	2.3
Electrical equip., appliances, and components	335	82.6	81.5	82.6	82.9	84.8	-.2	1.5	-.1	-4.1
Motor vehicles and parts	3361-3	74.9	69.4	73.5	77.9	80.9	.0	.6	1.4	2.4
Aerospace and miscellaneous transportation equipment	3364-9	74.0	78.4	79.0	83.1	81.9	-.2	2.5	4.8	3.4
Furniture and related products	337	76.5	71.9	72.6	75.9	77.9	2.1	.4	-3.0	-3.0
Miscellaneous	339	76.4	75.8	78.8	79.1	77.1	-.2	1.5	.2	-.3
Nondurable manufacturing		80.3	75.3	75.2	75.6	75.3	.3	.1	-1.4	-2.4
Food, beverage, and tobacco products	311,2	80.8	78.5	79.1	77.5	76.0	.3	.2	-1.5	-3.4
Textile and product mills	313,4	79.3	67.2	72.3	72.5	71.7	1.1	1.2	-.7	-2.8
Apparel and leather	315,6	76.8	67.5	66.4	66.1	63.5	4.5	2.5	.4	-.9
Paper	322	86.6	83.5	82.5	84.4	82.2	-.1	-.1	.9	.2
Printing and support	323	79.7	61.4	63.0	63.7	65.6	-.6	-.2	.4	1.9
Petroleum and coal products	324	85.4	83.0	83.9	81.7	80.4	2.0	1.6	-1.7	-4.5
Chemicals	325	77.1	71.1	69.5	72.0	73.2	-.4	-.6	-1.7	-1.6
Plastics and rubber products	326	82.0	77.9	77.9	81.0	80.0	1.9	1.9	.3	-1.9
Other manufacturing (non-NAICS)	1133,5111	81.0	61.6	65.1	65.3	66.2	-1.1	2.6	6.8	7.3
Mining	21	87.3	88.2	87.6	90.9	79.0	-.6	-.8	.2	-1.1
Utilities	2211,2	85.8	78.3	81.8	80.4	76.6	.0	.0	.4	.2
Selected high-technology industries		77.5	69.9	67.5	73.3	73.7	.5	-4.0	1.3	5.7
Computers and peripheral equipment	3341	77.6	64.9	64.0	69.9	66.9	-2.1	-.1	3.5	4.7
Communications equipment	3342	76.6	76.3	80.4	72.9	67.7	.1	-5.5	-1.3	-2.7
Semiconductors and related electronic components	3344	78.9	69.1	63.9	74.3	77.9	1.0	-5.3	1.4	9.2
Measures excluding selected high-technology industries										
Total industry		80.1	76.8	77.6	78.7	75.9	.0	.4	-.3	-1.5
Manufacturing ¹		78.5	74.5	74.9	76.1	75.4	.2	.6	-.3	-.9
STAGE-OF-PROCESS GROUPS										
Crude		86.3	86.1	85.5	87.7	78.7	-.1	-.8	-.5	-1.7
Primary and semifinished		80.6	74.2	75.9	77.1	75.8	.4	.5	.2	.0
Finished		77.0	74.7	74.5	75.8	75.0	-.3	.4	-.4	-1.0

1. See footnote 2 to table 2.

Table 7
RATES OF CHANGE IN INDUSTRIAL PRODUCTION, 2011 H1–2015 H2

Item	NAICS code	2011		2012		2013		2014		2015	
		H1	H2	H1	H2	H1	H2	H1	H2	H1	H2
Total IP		1.5	3.8	3.1	1.4	2.0	2.1	3.8	3.1	-2.3	-9
MARKET GROUPS											
Final products and nonindustrial supplies		.9	2.8	2.4	-.2	1.0	.7	1.8	1.8	-2.0	.0
Consumer goods		1.5	.1	-2.0	-.9	2.0	1.0	.4	1.3	.7	.6
Durable		3.7	6.8	1.7	-.8	10.6	7.0	2.7	4.5	2.5	5.3
Automotive products		6.9	16.6	-.8	-1.5	18.6	11.7	3.5	7.2	6.7	6.7
Home electronics		16.1	14.3	9.1	2.3	7.5	.3	-1.1	1.6	-1.3	.2
Appliances, furniture, carpeting		.6	1.0	5.3	-.3	4.8	1.0	.8	4.4	.2	6.1
Miscellaneous goods		-.6	-3.7	3.2	-.4	2.9	3.6	2.9	1.0	-2.1	3.2
Nondurable		.9	-1.5	-3.0	-.9	-.2	-.6	-.3	.4	.1	-.8
Non-energy		.7	-.9	-2.9	-3.0	-2.4	-1.7	1.4	.6	-.1	.2
Foods and tobacco		-.8	-1.3	.1	2.3	1.7	.2	-.2	-.6	.1	.4
Clothing		-5.0	-6.2	-1.6	-12.9	-9.7	1.9	-4.0	1.4	-4.3	-4.9
Chemical products		5.7	-.9	-7.2	-10.9	-9.1	-6.8	5.2	4.7	1.3	.1
Paper products		-5.9	5.8	-8.2	-8.2	-5.4	3.1	1.2	-6.6	-4.9	-1.7
Energy		1.4	-3.6	-3.3	6.1	7.0	3.4	-5.6	.0	.6	-5.7
Business equipment		.8	11.4	13.5	2.2	-2.5	-1.5	5.1	4.0	-1.2	-2.6
Transit		-5.7	25.2	26.8	12.8	1.8	2.8	13.1	7.8	2.6	-3.4
Information processing		-2.5	7.0	10.7	1.7	-1.6	.6	-1.1	4.9	2.2	.0
Industrial and other		4.8	8.5	9.9	-1.7	-4.6	-4.3	4.2	1.8	-4.5	-3.3
Defense and space equipment		-6.0	5.1	-1.1	1.8	-5.2	-2.9	-1.5	-4.9	-8.4	-9
Construction supplies		.0	3.9	6.7	-.2	3.9	3.3	4.2	4.6	-1.5	3.7
Business supplies		.3	-.2	3.3	.0	2.5	2.1	.9	1.3	-.5	1.0
Materials		2.1	4.9	3.8	3.3	3.1	3.6	6.0	4.5	-2.6	-2.0
Non-energy		2.8	3.1	3.0	1.9	1.6	1.8	2.1	2.3	-1.2	.2
Durable		7.1	5.6	5.8	1.0	2.2	4.2	4.7	2.6	-2.4	-.2
Consumer parts		2.2	15.5	14.5	3.3	3.2	4.3	4.1	5.1	3.0	3.5
Equipment parts		12.1	8.9	8.9	-2.4	2.0	5.5	6.1	5.4	-2.3	-.4
Other		5.1	.3	1.0	2.6	1.9	3.4	4.0	.1	-4.4	-1.5
Nondurable		-3.0	-.3	-1.0	3.2	.8	-1.8	-1.7	1.9	.9	.7
Textile		-4.4	-8.7	-.2	-1.7	9.3	6.9	-5.4	3.1	-1.2	.3
Paper		-1.3	1.1	2.0	-.3	.8	-2.5	-.5	-.5	-1.8	-3.5
Chemical		-4.3	-.9	-2.5	5.9	-.6	-3.9	-2.7	2.8	2.8	2.6
Energy		1.1	7.4	4.9	5.4	5.1	5.8	11.0	7.5	-4.5	-5.6
INDUSTRY GROUPS											
Manufacturing¹		1.2	3.7	3.0	.5	1.1	.6	1.9	2.1	-.5	.6
Manufacturing (NAICS)	31–33	1.5	3.8	3.5	.9	1.3	.4	2.0	2.6	-.4	.7
Durable manufacturing		3.4	7.1	7.2	.9	2.2	2.7	3.8	2.9	-1.7	.4
Wood products	321	-.2	2.1	11.2	4.7	3.5	6.4	1.6	4.3	-6.1	5.3
Nonmetallic mineral products	327	-.2	-.8	4.8	3.2	6.4	2.6	6.3	3.6	.9	8.1
Primary metals	331	9.0	3.1	-6.4	-1.4	7.3	2.5	.1	-3.7	-9.5	-4.2
Fabricated metal products	332	5.5	2.7	3.9	-.5	1.9	5.2	1.7	.6	-2.5	-3.9
Machinery	333	7.1	12.6	12.6	-6.4	-6.1	-3.9	3.8	4.0	-5.3	-4.5
Computer and electronic products	334	5.4	6.6	11.4	4.2	.8	5.1	6.0	5.1	.5	2.6
Selected high-technology industries		10.2	5.6	14.6	9.1	8.8	14.2	11.5	6.1	-1.5	1.9
Computers and peripheral equipment	3341	-13.5	19.7	43.2	-2.0	-5.7	6.6	-3.5	8.2	-.5	-20.0
Communications equipment	3342	11.4	-2.7	-8.0	12.3	25.8	10.7	-7.4	2.5	.8	.3
Semiconductors and related electronic components	3344	14.9	5.7	16.3	10.8	7.0	17.6	24.8	6.9	-2.5	7.9
Electrical equip., appliances, and components	335	.5	2.4	3.8	.9	-1.8	1.0	2.7	-1.1	1.8	3.1
Motor vehicles and parts	3361–3	2.5	20.4	11.9	2.0	11.0	9.3	6.2	6.5	5.7	4.5
Aerospace and miscellaneous transportation equipment	3364–9	-2.0	16.1	7.5	7.5	1.5	.3	6.4	2.9	-2.3	-.9
Furniture and related products	337	3.5	-.7	11.3	1.4	3.8	-5.2	1.3	6.5	-.7	7.1
Miscellaneous	339	-1.4	-7.2	.3	.6	4.9	2.7	-.1	.6	-4.9	2.0
Nondurable manufacturing		-.5	.4	-.4	.8	.3	-2.1	-.1	2.3	1.2	.9
Food, beverage, and tobacco products	311,2	-.9	-1.2	.1	2.4	2.0	.5	-.4	.2	.3	.8
Textile and product mills	313,4	-.7	-7.4	-2.2	-1.4	6.9	6.1	-2.3	2.6	-1.7	.7
Apparel and leather	315,6	-4.6	-6.6	-3.0	-12.3	-8.8	1.6	-3.9	1.1	-3.5	-5.2
Paper	322	-.7	3.7	3.4	1.1	.5	-3.2	1.1	.4	-2.7	-3.8
Printing and support	323	-2.8	-4.3	2.4	-3.4	3.0	1.8	-2.5	1.3	2.1	3.3
Petroleum and coal products	324	.9	4.7	-4.2	3.7	6.6	-3.0	-5.4	.7	8.9	4.2
Chemicals	325	-.1	.4	-2.3	-1.3	-4.0	-5.2	.4	4.3	1.7	1.2
Plastics and rubber products	326	.2	2.4	6.9	3.3	.6	-.8	6.1	5.3	.5	1.9
Other manufacturing (non-NAICS)	1133,5111	-7.0	2.0	-9.3	-11.1	-4.5	5.1	.7	-11.0	-4.0	-3.1
Mining	21	5.0	8.9	4.4	8.4	5.3	6.6	17.0	8.1	-10.1	-6.2
Utilities	2211,2	-1.9	-2.9	1.6	-1.5	3.3	5.5	-4.0	2.7	-2.9	-5.2

NOTE: The data are semiannual. Rates of change are calculated as the annualized percent change in the seasonally adjusted index from the second quarter of the previous half-year to the second quarter of the half-year specified in the column heading.

1. See footnote 2 to table 2.

Table 8
CAPACITY UTILIZATION RATES, BY INDUSTRY GROUPS, 2011 Q2–2015 Q4

Percent of capacity, seasonally adjusted

Item	NAICS code	2011		2012		2013		2014		2015	
		Q2	Q4	Q2	Q4	Q2	Q4	Q2	Q4	Q2	Q4
Total industry		75.8	76.6	76.9	76.6	76.8	77.3	78.4	78.6	76.6	75.8
Manufacturing¹		73.3	74.4	74.8	74.3	74.4	74.6	75.4	76.0	75.5	75.4
Manufacturing (NAICS)	31–33	73.6	74.7	75.2	74.8	74.9	75.0	75.7	76.4	75.8	75.7
Durable manufacturing		71.5	73.2	74.9	74.3	74.3	74.8	76.0	77.0	76.2	76.1
Wood products	321	60.3	62.8	67.6	69.5	70.3	71.8	71.2	71.4	67.6	67.8
Nonmetallic mineral products	327	53.7	54.4	56.1	57.2	59.6	60.8	62.9	63.9	64.1	66.4
Primary metals	331	74.2	76.0	75.2	75.3	76.1	75.0	75.4	75.4	72.2	70.4
Fabricated metal products	332	77.7	78.3	78.6	77.5	78.2	80.6	81.4	81.6	80.7	79.4
Machinery	333	74.6	77.5	81.2	78.5	76.1	74.2	74.9	75.9	73.8	72.1
Computer and electronic products	334	75.8	73.7	74.6	73.4	70.7	70.2	71.4	73.2	73.3	73.2
Selected high-technology industries		77.3	71.5	71.4	69.9	67.2	67.5	70.1	73.3	73.8	73.7
Computers and peripheral equipment	3341	78.6	74.1	74.6	64.9	60.6	64.0	65.2	69.9	72.1	66.9
Communications equipment	3342	81.5	78.6	74.2	76.3	81.0	80.4	74.3	72.9	70.4	67.7
Semiconductors and related electronic components	3344	76.0	69.3	70.1	69.1	64.3	63.9	69.7	74.3	75.7	77.9
Electrical equip., appliances, and components	335	79.5	80.7	81.6	81.5	81.5	82.6	83.7	82.9	83.5	84.8
Motor vehicles and parts	3361–3	61.1	66.9	70.1	69.4	71.4	73.5	75.5	77.9	79.8	80.9
Aerospace and miscellaneous transportation equipment	3364–9	70.1	74.6	76.5	78.4	78.6	79.0	81.9	83.1	82.1	81.9
Furniture and related products	337	66.1	67.2	71.3	71.9	73.8	72.6	73.5	75.9	75.5	77.9
Miscellaneous	339	78.5	76.3	76.1	75.8	77.5	78.8	79.0	79.1	76.8	77.1
Nondurable manufacturing		76.0	76.4	75.6	75.3	75.5	75.2	75.3	75.6	75.4	75.3
Food, beverage, and tobacco products	311,2	78.3	78.6	78.3	78.5	79.0	79.1	78.4	77.5	76.6	76.0
Textile and product mills	313,4	66.8	65.9	66.6	67.2	70.0	72.3	71.5	72.5	71.7	71.7
Apparel and leather	315,6	70.3	69.5	70.3	67.5	65.5	66.4	65.5	66.1	65.1	63.5
Paper	322	80.6	81.8	83.0	83.5	83.6	82.5	83.6	84.4	83.6	82.2
Printing and support	323	64.0	62.0	62.5	61.4	62.3	63.0	62.7	63.7	64.5	65.6
Petroleum and coal products	324	84.1	85.5	82.6	83.0	84.8	83.9	82.6	81.7	81.7	80.4
Chemicals	325	74.3	74.7	72.6	71.1	70.0	69.5	70.5	72.0	72.5	73.2
Plastics and rubber products	326	71.8	72.8	75.9	77.9	78.5	77.9	79.7	81.0	80.3	80.0
Other manufacturing (non-NAICS)	1133,5111	64.6	66.3	64.1	61.6	61.8	65.1	67.2	65.3	65.9	66.2
Mining	21	86.4	87.8	87.2	88.2	87.5	87.6	91.6	90.9	82.6	79.0
Utilities	2211,2	81.1	79.2	79.2	78.3	79.6	81.8	79.8	80.4	78.9	76.6

1. See footnote 2 to table 2.

Table 9A
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)																	
1986	1.1	-.5	-.3	.4	.2	-.3	.5	.3	.2	.4	.5	.8	4.6	.0	2.3	5.0	2.2
1987	-.3	1.5	.1	.6	.7	.3	.8	.6	.6	1.5	.6	.6	5.9	7.0	7.6	11.5	5.7
1988	-.2	.3	.3	.8	-.2	.2	.0	.0	.4	.5	.2	.5	2.8	4.4	.8	4.5	5.4
1989	.8	-1.0	-1	.3	-.9	.2	-1.1	.8	-.3	-.2	.2	.1	2.1	-2.8	-3.2	.4	.8
1990	-.2	1.5	.5	-.2	.1	.3	-.1	.3	.0	-.8	-1.1	-.7	4.3	3.1	1.1	-6.7	.8
1991	-.8	-.7	-.7	.3	.7	1.1	.3	.2	1.1	-.2	-.2	-.2	-8.8	1.8	7.2	1.6	-1.9
1992	-.6	.9	1.0	.5	.6	.3	.9	-.4	.1	.6	.4	-.1	.5	8.4	4.1	3.2	3.7
1993	1.0	.2	-.2	.5	-.1	-.2	.3	-.2	.7	.8	.4	.6	4.5	1.4	.8	6.9	3.5
1994	.2	.1	1.3	.8	.7	.3	.4	.8	.5	1.0	.8	1.1	4.8	9.4	6.1	10.2	5.8
1995	.2	-.2	.2	-.1	.1	.5	-.6	1.1	.9	.0	.1	.4	4.4	.8	3.0	4.5	5.1
1996	-.8	1.6	-.2	1.1	.8	1.0	.2	.5	.8	-.2	.9	.9	2.0	10.0	7.5	5.8	4.9
1997	.1	1.4	1.1	-.2	.8	.7	.7	1.3	.9	.9	1.1	.4	9.3	7.3	10.6	11.4	8.4
1998	.8	.1	-.1	.5	.5	-.8	-.4	2.4	-.2	1.0	.2	.6	6.0	2.1	3.3	8.1	6.6
1999	.3	.8	-.1	.4	.9	-.3	.4	.6	-.4	1.5	.6	.7	5.2	4.6	3.3	8.6	5.1
2000	.1	.2	.6	.7	-.1	.2	.1	-.7	.4	-.3	-.3	-.6	4.4	4.9	-.4	-2.3	4.1
2001	-.6	-.6	-.3	-.2	-.7	-.7	-.4	-.5	-.2	-.6	-.3	.3	-6.0	-5.2	-5.9	-3.9	-3.7
2002	.5	.0	.8	.2	.5	1.1	-.4	.2	.1	-.4	.4	-.5	3.6	5.9	3.1	-.4	.4
2003	.5	.1	.1	-.8	.1	.5	.2	-.4	.8	.1	1.0	-.2	1.7	-1.9	2.2	4.6	1.3
2004	-.1	.7	-.2	.4	.8	-.7	.9	.5	.0	1.0	-.1	.7	2.4	3.4	4.0	5.4	3.1
2005	.8	.8	-.5	.3	.4	.2	-.4	.4	-1.0	1.5	.8	.1	6.4	2.3	-.8	6.3	4.0
2006	.8	-.3	-.1	.6	-.5	.3	-.3	.6	.1	-.3	.1	1.5	3.8	.8	.8	1.8	2.5
2007	-.5	.4	.8	.7	-.1	.3	.1	-.3	.4	-.4	.5	.1	4.2	5.8	.7	.4	2.7
2008	-.4	-.6	-.3	-1.1	-.5	-.5	-1.2	-1.2	-3.4	-.6	-2.3	-3.4	-2.9	-7.8	-13.5	-21.5	-4.8
2009	-3.0	-.2	-1.9	-.8	-1.1	-.4	1.4	1.1	.8	.2	.9	-.2	-24.3	-11.5	7.4	6.9	-13.8
2010	1.1	-.1	1.2	.9	1.5	.0	.6	.2	.1	.1	.0	.4	6.7	10.8	5.0	1.5	5.8
2011	.2	.1	.5	-.6	.1	.1	.6	.3	.3	.6	-.4	.6	2.9	-.5	4.0	3.4	2.9
2012	1.0	.4	-.6	.7	-.4	.2	-.1	-.2	.0	-.3	.7	.7	5.3	.8	-.8	1.7	2.6
2013	-.3	.5	-.3	-.3	.2	.2	-1.0	.9	.1	.1	-.1	.0	2.8	-.6	-.4	1.6	.9
2014	-1.1	1.1	.7	.1	.2	.4	.4	-.4	.1	.0	.9	-.2	-.8	4.7	2.2	2.0	1.3
2015	-.4	-.4	.2	.2	.0	-.2	.7	-.1	-.2	.2	-.3	.0	-1.6	.6	1.7	-.6	.8
2016	.4	.1															
IP (2012=100)																	
1986	56.0	55.7	55.6	55.8	55.9	55.7	55.9	56.1	56.2	56.4	56.7	57.2	55.8	55.8	56.1	56.8	56.1
1987	57.0	57.9	57.9	58.3	58.7	58.9	59.3	59.7	60.0	61.0	61.3	61.7	57.6	58.6	59.7	61.3	59.3
1988	61.6	61.7	61.9	62.4	62.3	62.4	62.4	62.5	62.7	63.0	63.2	63.5	61.7	62.4	62.5	63.2	62.5
1989	64.0	63.4	63.3	63.4	62.9	63.0	62.3	62.8	62.6	62.6	62.7	62.7	63.5	63.1	62.6	62.7	63.0
1990	62.6	63.5	63.8	63.7	63.8	64.0	63.9	64.1	64.0	63.5	62.8	62.3	63.3	63.8	64.0	62.9	63.5
1991	61.9	61.5	61.0	61.2	61.7	62.3	62.5	62.6	63.3	63.2	63.1	63.0	61.5	61.7	62.8	63.1	62.3
1992	62.6	63.1	63.8	64.1	64.5	64.7	65.3	65.0	65.0	65.4	65.7	65.6	63.2	64.4	65.1	65.6	64.6
1993	66.3	66.4	66.3	66.6	66.6	66.5	66.6	66.5	66.9	67.5	67.8	68.2	66.3	66.6	66.7	67.8	66.8
1994	68.3	68.3	69.2	69.8	70.3	70.4	70.7	71.3	71.6	72.3	72.9	73.7	68.6	70.2	71.2	73.0	70.7
1995	73.8	73.6	73.8	73.7	73.8	74.2	73.7	74.5	75.2	75.1	75.2	75.5	73.8	73.9	74.5	75.3	74.4
1996	74.9	76.1	76.0	76.8	77.4	78.2	78.4	78.8	79.5	79.3	80.0	80.7	75.7	77.5	78.9	80.0	78.0
1997	80.8	81.9	82.8	82.6	83.3	83.9	84.4	85.5	86.3	87.0	87.9	88.3	81.8	83.3	85.4	87.7	84.6
1998	89.0	89.1	89.0	89.4	89.9	89.2	88.8	91.0	90.8	91.7	91.9	92.4	89.0	89.5	90.2	92.0	90.2
1999	92.7	93.4	93.4	93.7	94.6	94.3	94.7	95.3	94.9	96.3	96.9	97.6	93.1	94.2	95.0	96.9	94.8
2000	97.7	97.8	98.5	99.2	99.1	99.3	99.4	98.7	99.1	98.8	98.6	98.0	98.0	99.2	99.1	98.5	98.7
2001	97.5	96.8	96.6	96.4	95.6	95.0	94.6	94.1	93.9	93.4	93.1	93.4	97.0	95.7	94.2	93.3	95.0
2002	93.9	93.9	94.6	94.8	95.3	96.3	96.0	96.2	96.3	96.0	96.4	95.9	94.1	95.5	96.2	96.1	95.5
2003	96.4	96.5	96.6	95.8	95.9	96.4	96.6	96.1	96.9	97.0	98.1	97.9	96.5	96.0	96.6	97.7	96.7
2004	97.8	98.5	98.4	98.8	99.6	98.9	99.7	100.2	100.2	101.2	101.1	101.8	98.2	99.1	100.0	101.4	99.7
2005	102.6	103.4	102.9	103.2	103.6	103.8	103.4	103.8	102.8	104.3	105.1	105.3	102.9	103.5	103.3	104.9	103.7
2006	106.1	105.8	105.8	106.3	105.8	106.2	105.9	106.5	106.6	106.2	106.3	107.9	105.9	106.1	106.3	106.8	106.3
2007	107.3	107.7	108.6	109.4	109.3	109.6	109.7	109.4	109.8	109.4	109.9	110.0	107.9	109.4	109.6	109.8	109.2
2008	109.5	108.9	108.5	107.3	106.8	106.2	105.0	103.8	100.2	99.6	97.3	93.9	109.0	106.8	103.0	97.0	103.9
2009	91.1	90.9	89.2	88.5	87.5	87.2	88.4	89.4	90.1	90.3	91.2	91.0	90.4	87.7	89.3	90.8	89.6
2010	92.0	91.9	93.0	93.8	95.2	95.1	95.7	95.9	96.0	96.1	96.1	96.4	92.3	94.7	95.8	96.2	94.8
2011	96.7	96.7	97.3	96.7	96.8	96.9	97.4	97.7	98.1	98.6	98.2	98.9	96.9	96.8	97.7	98.6	97.5
2012	99.8	100.2	99.6	100.2	99.8	100.0	100.0	99.8	99.8	99.5	100.3	101.0	99.8	100.0	99.8	100.3	100.0
2013	100.7	101.2	100.9	100.6	100.8	101.0	100.1	101.0	101.1	101.2	101.1	101.1	101.0	100.8	100.7	101.1	100.9
2014	100.0	101.0	101.7	101.8	102.0	102.4	102.8	102.4	102.6	102.6	103.5	103.3	100.9	102.1	102.6	103.1	102.2
2015	103.0	102.5	102.7	102.9	103.0	102.8	103.5	103.4	103.1	103.4	103.1	103.1	102.7	102.9	103.3	103.2	103.0
2016	103.5	103.6															

NOTE: Estimates from October 2015 through February 2016 are subject to further revision in the upcoming monthly releases.

1. See footnote 2 to table 2.

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

Table 9B
CAPACITY AND UTILIZATION: Manufacturing¹
 Seasonally adjusted

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
Capacity (percent of 2012 output)																	
1986	71.2	71.2	71.3	71.3	71.4	71.5	71.5	71.6	71.7	71.8	72.0	72.1	71.2	71.4	71.6	72.0	71.6
1987	72.3	72.4	72.6	72.8	73.0	73.2	73.4	73.5	73.7	73.8	73.9	74.0	72.4	73.0	73.5	73.9	73.2
1988	74.1	74.2	74.2	74.2	74.3	74.3	74.3	74.4	74.4	74.5	74.5	74.6	74.2	74.3	74.4	74.5	74.3
1989	74.7	74.8	75.0	75.1	75.3	75.4	75.6	75.8	76.0	76.2	76.4	76.6	74.8	75.3	75.8	76.4	75.6
1990	76.8	77.0	77.2	77.4	77.6	77.7	77.9	78.1	78.2	78.3	78.5	78.6	77.0	77.6	78.1	78.5	77.8
1991	78.7	78.8	78.9	79.0	79.1	79.2	79.3	79.4	79.5	79.6	79.8	79.9	78.8	79.1	79.4	79.8	79.3
1992	80.1	80.3	80.5	80.7	80.9	81.1	81.3	81.5	81.7	81.9	82.0	82.2	80.3	80.9	81.5	82.0	81.2
1993	82.4	82.5	82.7	82.8	82.9	83.0	83.1	83.3	83.4	83.6	83.7	83.9	82.5	82.9	83.3	83.7	83.1
1994	84.1	84.3	84.5	84.7	85.0	85.3	85.6	85.8	86.1	86.5	86.8	87.1	84.3	85.0	85.8	86.8	85.5
1995	87.4	87.8	88.1	88.4	88.8	89.2	89.6	90.0	90.4	90.8	91.3	91.7	87.8	88.8	90.0	91.3	89.4
1996	92.2	92.7	93.2	93.7	94.2	94.7	95.3	95.8	96.3	96.8	97.4	97.9	92.7	94.2	95.8	97.4	95.0
1997	98.5	99.0	99.6	100.2	100.8	101.4	102.1	102.8	103.5	104.2	105.0	105.8	99.0	100.8	102.8	105.0	101.9
1998	106.6	107.4	108.2	109.0	109.7	110.5	111.2	111.9	112.6	113.2	113.8	114.4	107.4	109.7	111.9	113.8	110.7
1999	115.0	115.6	116.1	116.7	117.2	117.7	118.2	118.7	119.2	119.7	120.2	120.7	115.6	117.2	118.7	120.2	117.9
2000	121.2	121.7	122.2	122.7	123.2	123.7	124.2	124.7	125.2	125.6	126.1	126.6	121.7	123.2	124.7	126.1	123.9
2001	127.0	127.4	127.9	128.2	128.6	128.9	129.2	129.5	129.7	129.9	130.1	130.3	127.4	128.6	129.5	130.1	128.9
2002	130.4	130.5	130.6	130.6	130.7	130.7	130.7	130.7	130.8	130.8	130.8	130.8	130.5	130.7	130.7	130.8	130.7
2003	130.8	130.8	130.8	130.7	130.7	130.7	130.7	130.7	130.7	130.6	130.6	130.6	130.8	130.7	130.7	130.6	130.7
2004	130.5	130.5	130.4	130.4	130.3	130.3	130.3	130.3	130.4	130.5	130.6	130.7	130.5	130.3	130.3	130.6	130.4
2005	130.9	131.1	131.3	131.6	131.9	132.1	132.4	132.7	133.0	133.3	133.5	133.7	131.1	131.9	132.7	133.5	132.3
2006	134.0	134.2	134.4	134.6	134.8	135.0	135.2	135.4	135.7	135.9	136.2	136.5	134.2	134.8	135.4	136.2	135.1
2007	136.8	137.1	137.5	137.8	138.2	138.5	138.8	139.1	139.3	139.5	139.7	139.8	137.1	138.2	139.1	139.6	138.5
2008	139.8	139.8	139.7	139.6	139.5	139.3	139.2	139.0	138.8	138.6	138.3	138.1	139.8	139.5	139.0	138.3	139.1
2009	137.9	137.7	137.4	137.2	137.0	136.7	136.5	136.3	136.1	135.8	135.6	135.4	137.7	137.0	136.3	135.6	136.6
2010	135.2	134.9	134.7	134.4	134.2	134.0	133.7	133.5	133.2	133.0	132.8	132.6	134.9	134.2	133.5	132.8	133.9
2011	132.5	132.3	132.2	132.1	132.1	132.1	132.1	132.1	132.2	132.3	132.5	132.7	132.3	132.1	132.1	132.5	132.3
2012	132.9	133.1	133.3	133.5	133.7	134.0	134.2	134.4	134.6	134.8	135.0	135.1	133.1	133.7	134.4	134.9	134.0
2013	135.2	135.3	135.4	135.5	135.5	135.6	135.6	135.6	135.5	135.5	135.5	135.5	135.3	135.5	135.6	135.5	135.5
2014	135.5	135.4	135.4	135.4	135.4	135.5	135.5	135.5	135.6	135.7	135.7	135.8	135.4	135.4	135.5	135.7	135.5
2015	135.9	136.0	136.1	136.2	136.3	136.4	136.5	136.6	136.7	136.8	136.9	137.0	136.0	136.3	136.6	136.9	136.4
2016	137.0	137.1															
Utilization (percent)																	
1986	78.7	78.2	77.9	78.2	78.2	77.9	78.2	78.4	78.4	78.6	78.8	79.3	78.3	78.1	78.3	78.9	78.4
1987	78.9	79.9	79.8	80.0	80.4	80.4	80.9	81.2	81.5	82.6	82.9	83.3	79.5	80.3	81.2	83.0	81.0
1988	83.1	83.2	83.4	84.1	83.9	84.0	84.0	84.0	84.3	84.6	84.8	85.0	83.3	84.0	84.1	84.8	84.0
1989	85.6	84.7	84.4	84.5	83.5	83.5	82.4	82.9	82.4	82.1	82.0	81.9	84.9	83.8	82.5	82.0	83.3
1990	81.5	82.5	82.7	82.3	82.2	82.3	82.0	82.1	81.9	81.1	80.0	79.3	82.2	82.3	82.0	80.1	81.6
1991	78.6	78.0	77.3	77.5	78.0	78.7	78.8	78.9	79.6	79.4	79.1	78.8	78.0	78.1	79.1	79.1	78.6
1992	78.1	78.6	79.3	79.5	79.8	79.8	80.3	79.8	79.6	79.9	80.1	79.8	78.7	79.7	79.9	80.0	79.6
1993	80.5	80.5	80.2	80.5	80.3	80.1	80.2	79.9	80.2	80.8	81.0	81.2	80.4	80.3	80.1	81.0	80.4
1994	81.2	81.1	81.9	82.4	82.7	82.6	82.7	83.0	83.1	83.7	84.0	84.6	81.4	82.5	83.0	84.1	82.7
1995	84.4	83.9	83.8	83.4	83.1	83.2	82.3	82.8	83.2	82.7	82.4	82.3	84.0	83.2	82.8	82.5	83.1
1996	81.3	82.1	81.5	82.0	82.2	82.6	82.3	82.3	82.5	81.9	82.2	82.4	81.6	82.2	82.4	82.2	82.1
1997	82.0	82.7	83.1	82.5	82.6	82.7	82.7	83.2	83.4	83.5	83.8	83.5	82.6	82.6	83.1	83.6	83.0
1998	83.5	83.0	82.3	82.1	81.9	80.7	79.9	81.3	80.7	81.0	80.7	80.7	82.9	81.6	80.6	80.8	81.5
1999	80.6	80.8	80.4	80.3	80.7	80.1	80.1	80.3	79.6	80.5	80.6	80.8	80.6	80.4	80.0	80.6	80.4
2000	80.6	80.4	80.6	80.8	80.4	80.2	80.0	79.2	79.2	78.7	78.2	77.5	80.5	80.5	79.5	78.1	79.6
2001	76.7	76.0	75.5	75.1	74.4	73.7	73.2	72.7	72.4	71.9	71.6	71.7	76.1	74.4	72.8	71.7	73.7
2002	72.0	71.9	72.4	72.5	72.9	73.7	73.4	73.6	73.7	73.4	73.7	73.3	72.1	73.0	73.6	73.5	73.1
2003	73.7	73.8	73.9	73.3	73.4	73.7	73.9	73.6	74.2	74.3	75.1	75.0	73.8	73.5	73.9	74.8	74.0
2004	74.9	75.5	75.4	75.8	76.4	75.9	76.5	76.9	76.8	77.6	77.4	77.9	75.3	76.0	76.8	77.6	76.4
2005	78.4	78.9	78.3	78.4	78.6	78.5	78.1	78.2	77.3	78.3	78.7	78.7	78.5	78.5	77.9	78.6	78.4
2006	79.2	78.9	78.7	79.0	78.5	78.7	78.3	78.7	78.6	78.2	78.0	79.0	78.9	78.7	78.5	78.4	78.6
2007	78.4	78.6	79.0	79.4	79.1	79.2	79.0	78.6	78.8	78.4	78.7	78.7	78.7	79.2	78.8	78.6	78.8
2008	78.4	77.9	77.6	76.9	76.6	76.2	75.4	74.7	72.2	71.9	70.3	68.0	78.0	76.6	74.1	70.1	74.7
2009	66.1	66.1	64.9	64.5	63.9	63.8	64.7	65.6	66.2	66.5	67.2	67.2	65.7	64.0	65.5	67.0	65.6
2010	68.0	68.1	69.0	69.8	70.9	71.0	71.6	71.8	72.0	72.2	72.3	72.7	68.4	70.6	71.8	72.4	70.8
2011	73.0	73.1	73.6	73.2	73.3	73.4	73.8	74.0	74.2	74.5	74.1	74.5	73.2	73.3	74.0	74.4	73.7
2012	75.1	75.3	74.7	75.1	74.7	74.7	74.5	74.2	74.1	73.8	74.3	74.8	75.0	74.8	74.3	74.3	74.6
2013	74.5	74.8	74.5	74.2	74.4	74.5	73.8	74.5	74.6	74.7	74.6	74.6	74.6	74.4	74.3	74.6	74.5
2014	73.8	74.6	75.1	75.1	75.3	75.6	75.9	75.6	75.7	75.6	76.3	76.1	74.5	75.4	75.7	76.0	75.4
2015	75.8	75.4	75.5	75.6	75.5	75.3	75.8	75.7	75.5	75.6	75.3	75.3	75.5	75.5	75.6	75.4	75.5
2016	75.5	75.6															

NOTE: Estimates from October 2015 through February 2016 are subject to further revision in the upcoming monthly releases.

1. See footnote 2 to table 2.

Table 10A
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)																	
1986	.5	-.7	-.8	.1	.2	-.2	.3	-.2	.2	.4	.4	.8	2.3	-2.4	.5	4.0	.9
1987	-.5	1.2	.2	.5	.5	.4	.6	.7	.2	1.4	.5	.4	4.4	6.3	6.3	9.1	4.3
1988	.0	.4	.2	.5	-.2	.2	.0	.4	-.3	.5	.2	.5	3.4	2.8	.9	2.6	4.5
1989	.3	-.4	.3	.0	-.7	.0	-1.0	.9	-.4	-.2	.3	.6	2.0	-1.6	-3.3	.9	.6
1990	-.8	1.0	.5	-.2	.1	.3	-.1	.3	.1	-.8	-1.2	-.7	2.0	2.6	1.3	-6.7	.4
1991	-.4	-.8	-.6	.2	.9	.9	.1	.0	.9	-.2	-.2	-.6	-8.0	1.9	5.4	.4	-2.0
1992	-.7	.7	.8	.6	.2	-.1	.8	-.6	.1	.6	.3	.1	-1.9	6.2	2.0	2.9	1.9
1993	.4	.4	-.2	.2	-.4	.2	.3	-.2	.4	.7	.3	.5	3.1	.2	1.2	5.3	2.5
1994	.3	.0	.9	.3	.4	.6	.0	.4	.1	.6	.4	.9	4.3	5.4	3.2	5.8	4.0
1995	.1	-.2	-.1	-.2	.1	.2	-.5	1.0	.1	-.4	.1	.1	2.8	-1.2	1.3	.4	2.4
1996	-1.0	1.3	-.3	.8	.6	.6	-.5	.3	.5	-.4	.7	.5	-.5	6.6	2.0	2.9	1.7
1997	-.1	.9	.4	-.2	.3	.2	.5	.8	.6	.7	.7	.1	5.1	2.5	6.4	7.6	4.2
1998	.3	.0	.0	.1	.6	-1.0	-.7	1.9	-.5	.5	-.3	.1	2.2	.7	-.4	2.5	3.1
1999	.1	.2	-.1	-.1	.6	-.5	.3	.4	-.5	1.2	.2	.6	.6	.3	.9	5.6	1.1
2000	-.3	.0	.1	.5	-.1	-.1	-.5	-.5	.3	-.4	-.2	-.5	.6	1.7	-3.2	-2.6	1.0
2001	-.7	-.6	-.3	-.1	-.6	-.5	-.4	-.1	-.4	-.5	-.5	-.1	-5.9	-4.2	-4.5	-4.4	-3.9
2002	.6	-.1	.8	.4	.4	.9	-.3	-.1	.1	-.4	.5	-.5	2.5	6.1	1.9	-.7	.2
2003	.5	.1	-.3	-.9	-.1	.0	.2	-.3	.5	.0	.8	-.1	1.2	-4.4	.6	2.8	.2
2004	.1	.6	-.5	.4	.8	-.9	.8	.0	.0	.9	.2	.7	1.8	2.2	2.0	5.2	1.8
2005	.3	.6	-.2	.1	.1	.4	-.4	.1	-2.1	1.2	1.0	.5	4.7	1.3	-3.1	2.6	2.5
2006	.1	.0	.1	.4	-.2	.3	-.1	.2	-.3	-.1	-.1	1.1	3.3	1.8	.5	.3	1.4
2007	-.6	1.0	.0	.6	.1	.1	-.1	.1	.2	-.6	.4	-.1	3.0	4.0	.9	-1.0	1.8
2008	-.4	-.5	-.4	-.8	-.6	-.2	-.5	-1.5	-4.4	1.2	-1.0	-2.8	-2.9	-6.5	-12.4	-14.9	-4.3
2009	-2.4	-.7	-1.7	-1.0	-1.1	-.4	1.0	1.1	.7	.2	.4	.3	-20.3	-12.1	5.7	5.9	-11.5
2010	1.0	.2	.6	.4	1.6	.2	.4	.3	.3	-.3	.0	.7	6.8	8.0	5.7	1.0	4.9
2011	-.1	-.5	.9	-.4	.2	.2	.5	.4	.0	.7	-.2	.4	1.5	.8	4.0	3.5	2.6
2012	.7	.2	-.8	.9	.1	.0	.3	-.5	.1	.2	.6	.3	3.3	2.1	.2	2.2	2.6
2013	-.1	.5	.1	-.1	.0	.2	-.6	.7	.5	-.1	.3	-.2	2.7	.9	.5	3.0	1.7
2014	-.5	.8	.8	.1	.4	.4	.1	.0	.4	.1	1.0	-.1	2.0	5.3	2.4	3.7	2.7
2015	-.5	-.1	-.3	-.2	-.2	-.2	.6	.1	-.3	-.1	-.7	-.5	-1.9	-2.8	1.6	-3.5	.3
2016	.6	-.5															
IP (2012=100)																	
1986	77.5	77.0	76.4	76.4	76.6	76.4	76.6	76.5	76.6	76.9	77.2	77.8	76.9	76.5	76.6	77.3	76.8
1987	77.5	78.4	78.6	79.0	79.4	79.7	80.2	80.7	80.9	82.0	82.4	82.7	78.2	79.4	80.6	82.4	80.1
1988	82.8	83.1	83.3	83.7	83.5	83.7	83.7	84.0	83.7	84.1	84.3	84.7	83.0	83.6	83.8	84.3	83.7
1989	85.0	84.6	84.8	84.8	84.2	84.2	83.3	84.1	83.7	83.6	83.8	84.3	84.8	84.4	83.7	83.9	84.2
1990	83.6	84.5	84.9	84.7	84.8	85.1	85.0	85.2	85.3	84.6	83.5	82.9	84.3	84.9	85.2	83.7	84.5
1991	82.6	81.9	81.4	81.6	82.4	83.1	83.2	83.2	84.0	83.8	83.6	83.1	82.0	82.3	83.4	83.5	82.8
1992	82.5	83.1	83.8	84.3	84.5	84.4	85.1	84.6	84.7	85.2	85.5	85.5	83.1	84.4	84.8	85.4	84.4
1993	85.9	86.2	86.1	86.3	85.9	86.1	86.4	86.2	86.6	87.2	87.5	87.9	86.1	86.1	86.4	87.5	86.5
1994	88.2	88.2	88.9	89.2	89.5	90.0	90.0	90.4	90.5	91.0	91.4	92.2	88.4	89.6	90.3	91.6	90.0
1995	92.4	92.2	92.0	91.8	91.9	92.0	91.6	92.5	92.6	92.2	92.3	92.4	92.2	91.9	92.2	92.3	92.2
1996	91.5	92.7	92.4	93.1	93.7	94.2	93.8	94.1	94.5	94.2	94.9	95.4	92.2	93.7	94.1	94.8	93.7
1997	95.3	96.2	96.6	96.3	96.6	96.8	97.4	98.2	98.8	99.5	100.1	100.2	96.0	96.6	98.1	99.9	97.7
1998	100.5	100.5	100.4	100.6	101.2	100.2	99.5	101.4	100.8	101.4	101.0	101.1	100.5	100.6	100.5	101.2	100.7
1999	101.2	101.4	101.3	101.2	101.7	101.3	101.5	101.9	101.4	102.7	102.9	103.5	101.3	101.4	101.6	103.0	101.8
2000	103.1	103.1	103.2	103.7	103.6	103.5	103.0	102.5	102.8	102.4	102.2	101.7	103.2	103.6	102.7	102.1	102.9
2001	101.0	100.4	100.2	100.1	99.5	98.9	98.6	98.4	98.1	97.6	97.1	97.1	100.5	99.5	98.3	97.2	98.9
2002	97.7	97.6	98.3	98.7	99.2	100.1	99.8	99.7	99.8	99.5	100.0	99.4	97.9	99.3	99.8	99.6	99.2
2003	99.9	100.1	99.7	98.9	98.7	98.7	98.9	98.7	99.2	99.2	99.9	99.8	99.9	98.8	98.9	99.6	99.3
2004	99.9	100.4	99.9	100.4	101.2	100.3	101.1	101.1	101.1	102.1	102.2	102.9	100.1	100.6	101.1	102.4	101.1
2005	103.3	103.9	103.7	103.7	103.8	104.3	103.8	103.9	101.7	102.9	104.0	104.5	103.6	103.9	103.1	103.8	103.6
2006	104.6	104.6	104.7	105.2	104.9	105.3	105.2	105.4	105.1	105.1	104.9	106.0	104.6	105.1	105.2	105.3	105.1
2007	105.4	106.5	106.4	107.0	107.1	107.3	107.2	107.4	107.6	106.9	107.3	107.2	106.1	107.1	107.4	107.1	106.9
2008	106.8	106.3	105.9	105.0	104.4	104.2	103.7	102.1	97.6	98.8	97.7	95.0	106.3	104.6	101.2	97.2	102.3
2009	92.7	92.1	90.6	89.7	88.7	88.3	89.2	90.2	90.9	91.1	91.5	91.7	91.8	88.9	90.1	91.4	90.6
2010	92.7	92.8	93.4	93.7	95.2	95.4	95.8	96.1	96.3	96.1	96.1	96.8	92.9	94.7	96.1	96.3	95.0
2011	96.6	96.2	97.1	96.7	96.8	97.1	97.5	98.0	97.9	98.6	98.5	98.8	96.7	96.9	97.8	98.6	97.5
2012	99.6	99.8	99.0	99.9	100.0	100.0	100.3	99.8	99.9	100.1	100.7	100.9	99.5	100.0	100.0	100.6	100.0
2013	100.8	101.4	101.5	101.4	101.4	101.6	100.9	101.7	102.2	102.1	102.4	102.6	101.2	101.5	101.6	102.3	101.7
2014	102.1	102.9	103.6	103.8	104.2	104.6	104.7	104.7	105.0	105.1	106.2	106.0	102.9	104.2	104.8	105.8	104.4
2015	105.5	105.3	105.0	104.7	104.5	104.3	105.0	105.1	104.8	104.6	103.9	103.5	105.3	104.5	104.9	104.0	104.7
2016	104.1	103.5															

NOTE: Estimates from October 2015 through February 2016 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 10B
CAPACITY AND UTILIZATION: Total Industry Excluding Selected High-Technology Industries¹
 Seasonally adjusted

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
Capacity (percent of 2012 output)																	
1986	96.9	97.0	97.1	97.1	97.2	97.3	97.4	97.4	97.5	97.6	97.7	97.8	97.0	97.2	97.4	97.7	97.3
1987	97.9	98.0	98.1	98.2	98.3	98.4	98.5	98.6	98.7	98.7	98.8	98.8	98.0	98.3	98.6	98.8	98.4
1988	98.9	98.9	98.9	98.9	98.9	98.9	98.9	98.9	99.0	99.0	99.1	99.1	98.9	98.9	98.9	99.1	98.9
1989	99.2	99.4	99.5	99.6	99.8	100.0	100.1	100.3	100.5	100.7	100.9	101.0	99.4	99.8	100.3	100.9	100.1
1990	101.2	101.4	101.6	101.7	101.9	102.0	102.2	102.3	102.4	102.5	102.7	102.8	101.4	101.9	102.3	102.7	102.1
1991	102.9	103.0	103.1	103.2	103.4	103.5	103.6	103.7	103.8	103.9	104.0	104.1	103.0	103.4	103.7	104.0	103.5
1992	104.2	104.3	104.4	104.6	104.7	104.8	104.9	105.0	105.1	105.2	105.3	105.5	104.3	104.7	105.0	105.3	104.8
1993	105.6	105.7	105.8	105.9	106.0	106.1	106.2	106.3	106.4	106.5	106.6	106.7	105.7	106.0	106.3	106.6	106.1
1994	106.8	107.0	107.1	107.2	107.4	107.5	107.7	107.9	108.1	108.2	108.4	108.6	107.0	107.4	107.9	108.4	107.7
1995	108.8	109.0	109.2	109.4	109.7	109.9	110.1	110.3	110.5	110.6	110.8	111.0	109.0	109.7	110.3	110.8	109.9
1996	111.2	111.4	111.6	111.8	112.0	112.2	112.4	112.7	112.9	113.2	113.4	113.7	111.4	112.0	112.7	113.4	112.4
1997	114.0	114.4	114.7	115.1	115.5	115.9	116.3	116.7	117.1	117.6	118.0	118.5	114.4	115.5	116.7	118.0	116.1
1998	118.9	119.4	119.8	120.3	120.7	121.1	121.5	122.0	122.3	122.7	123.1	123.4	119.4	120.7	121.9	123.1	121.3
1999	123.7	124.0	124.3	124.6	124.9	125.1	125.4	125.6	125.8	126.0	126.2	126.4	124.0	124.9	125.6	126.2	125.2
2000	126.6	126.7	126.9	127.0	127.2	127.3	127.4	127.6	127.7	127.8	128.0	128.1	126.7	127.2	127.6	128.0	127.4
2001	128.2	128.4	128.5	128.6	128.8	128.9	129.1	129.2	129.4	129.5	129.6	129.8	128.4	128.8	129.2	129.6	129.0
2002	129.9	130.0	130.0	130.1	130.2	130.2	130.2	130.2	130.1	130.1	130.0	129.9	130.0	130.2	130.2	130.0	130.1
2003	129.8	129.7	129.6	129.5	129.4	129.3	129.3	129.2	129.1	129.1	129.0	129.0	129.7	129.4	129.2	129.0	129.3
2004	128.9	128.9	128.8	128.8	128.7	128.6	128.6	128.6	128.5	128.5	128.5	128.5	128.9	128.7	128.6	128.5	128.6
2005	128.5	128.5	128.5	128.6	128.7	128.8	128.9	129.0	129.1	129.3	129.4	129.6	128.5	128.7	129.0	129.4	128.9
2006	129.7	129.9	130.1	130.3	130.5	130.6	130.8	131.0	131.2	131.4	131.6	131.8	129.9	130.5	131.0	131.6	130.8
2007	131.9	132.1	132.2	132.3	132.4	132.4	132.5	132.4	132.4	132.3	132.2	132.1	132.1	132.4	132.4	132.2	132.3
2008	132.0	131.9	131.8	131.7	131.7	131.7	131.8	131.9	132.0	132.2	132.3	132.5	131.9	131.7	131.9	132.3	132.0
2009	132.7	132.8	132.9	132.9	132.9	132.9	132.8	132.6	132.4	132.2	131.9	131.6	132.8	132.9	132.6	131.9	132.6
2010	131.3	131.0	130.6	130.3	130.0	129.6	129.4	129.1	128.8	128.6	128.4	128.3	130.9	130.0	129.1	128.4	129.6
2011	128.1	128.0	127.9	127.8	127.8	127.8	127.9	128.0	128.1	128.2	128.4	128.6	128.0	127.8	128.0	128.4	128.0
2012	128.8	129.0	129.2	129.5	129.7	130.0	130.2	130.4	130.6	130.8	131.0	131.1	129.0	129.7	130.4	131.0	130.0
2013	131.2	131.4	131.5	131.5	131.6	131.6	131.7	131.7	131.7	131.8	131.8	131.9	131.4	131.6	131.7	131.8	131.6
2014	132.0	132.1	132.2	132.3	132.5	132.7	133.0	133.3	133.6	133.9	134.3	134.6	132.1	132.5	133.3	134.3	133.0
2015	135.0	135.3	135.7	136.0	136.2	136.5	136.7	136.8	137.0	137.1	137.1	137.2	135.3	136.2	136.8	137.1	136.4
2016	137.2	137.2															
Utilization (percent)																	
1986	80.0	79.4	78.7	78.7	78.8	78.5	78.7	78.5	78.8	79.1	79.6	79.3	78.7	78.6	79.1	78.9	78.9
1987	79.1	80.0	80.1	80.4	80.8	81.0	81.4	81.9	81.9	83.0	83.4	83.7	79.8	80.7	81.7	83.4	81.4
1988	83.7	84.1	84.2	84.6	84.4	84.6	84.6	84.9	84.6	85.0	85.1	85.4	84.0	84.5	84.7	85.1	84.6
1989	85.6	85.1	85.2	85.1	84.4	84.3	83.2	83.8	83.3	83.0	83.1	83.4	85.3	84.6	83.4	83.2	84.1
1990	82.6	83.3	83.6	83.3	83.3	83.4	83.2	83.3	83.3	82.5	81.4	80.7	83.2	83.3	83.2	81.5	82.8
1991	80.2	79.5	78.9	79.0	79.7	80.3	80.3	80.2	80.9	80.7	80.4	79.9	79.6	79.7	80.5	80.3	80.0
1992	79.2	79.6	80.2	80.6	80.7	80.5	81.1	80.6	80.6	81.0	81.1	81.1	79.7	80.6	80.7	81.1	80.5
1993	81.4	81.6	81.4	81.5	81.1	81.2	81.3	81.1	81.4	81.9	82.1	82.4	81.5	81.3	81.3	82.1	81.5
1994	82.5	82.4	83.0	83.2	83.4	83.7	83.6	83.8	83.7	84.1	84.3	84.9	82.7	83.4	83.7	84.4	83.6
1995	84.9	84.5	84.3	83.9	83.8	83.8	83.2	83.9	83.8	83.4	83.3	83.2	84.5	83.8	83.6	83.3	83.8
1996	82.2	83.2	82.8	83.3	83.6	84.0	83.4	83.5	83.7	83.2	83.7	83.8	82.7	83.6	83.6	83.6	83.4
1997	83.6	84.1	84.2	83.7	83.7	83.6	83.8	84.1	84.3	84.6	84.8	84.6	83.9	83.7	84.1	84.7	84.1
1998	84.5	84.2	83.8	83.6	83.8	82.7	81.8	83.1	82.4	82.6	82.1	81.9	84.2	83.4	82.5	82.2	83.0
1999	81.8	81.8	81.5	81.2	81.5	80.9	81.0	81.1	80.6	81.5	81.5	81.9	81.7	81.2	80.9	81.6	81.3
2000	81.5	81.4	81.4	81.7	81.5	81.3	80.8	80.3	80.5	80.1	79.9	79.4	81.4	81.5	80.5	79.8	80.8
2001	78.8	78.3	78.0	77.8	77.2	76.7	76.4	76.2	75.8	75.3	74.9	74.8	78.3	77.2	76.1	75.0	76.7
2002	75.2	75.1	75.6	75.9	76.2	76.9	76.7	76.6	76.7	76.5	76.9	76.5	75.3	76.3	76.7	76.6	76.2
2003	77.0	77.1	77.0	76.3	76.3	76.3	76.5	76.4	76.8	76.8	77.4	77.4	77.0	76.3	76.6	77.2	76.8
2004	77.5	77.9	77.6	77.9	78.6	78.0	78.6	78.7	78.7	79.4	79.6	80.1	77.7	78.2	78.7	79.7	78.6
2005	80.4	80.8	80.6	80.7	80.7	81.0	80.6	80.5	78.7	79.6	80.3	80.7	80.6	80.8	79.9	80.2	80.4
2006	80.6	80.5	80.5	80.7	80.4	80.6	80.4	80.5	80.1	79.9	79.7	80.4	80.5	80.6	80.3	80.0	80.4
2007	79.9	80.6	80.5	80.9	80.9	81.0	80.9	81.1	81.3	80.8	81.2	81.1	80.3	80.9	81.1	81.0	80.8
2008	80.9	80.6	80.4	79.7	79.3	79.1	78.7	77.4	73.9	74.7	73.9	71.7	80.6	79.4	76.7	73.4	77.5
2009	69.9	69.4	68.2	67.5	66.7	66.4	67.2	68.0	68.6	68.9	69.3	69.7	69.1	66.9	68.0	69.3	68.3
2010	70.6	70.9	71.5	71.9	73.2	73.6	74.0	74.4	74.8	74.7	74.8	75.5	71.0	72.9	74.4	75.0	73.3
2011	75.4	75.2	75.9	75.6	75.8	75.9	76.3	76.6	76.5	76.9	76.7	76.9	75.5	75.8	76.4	76.8	76.1
2012	77.3	77.4	76.6	77.1	77.1	77.0	77.0	76.6	76.5	76.5	76.9	77.0	77.1	77.1	76.7	76.8	76.9
2013	76.8	77.2	77.2	77.1	77.0	77.2	76.7	77.2	77.5	77.4	77.7	77.8	77.1	77.1	77.1	77.6	77.2
2014	77.3	77.9	78.4	78.4	78.6	78.8	78.7	78.5	78.6	78.5	79.0	78.7	77.9	78.6	78.6	78.7	78.5
2015	78.1	77.8	77.4	77.0	76.7	76.4	76.8	76.8	76.5	76.3	75.8	75.4	77.8	76.7	76.7	75.9	76.8
2016	75.9	75.5															

Table 11A
INDUSTRIAL PRODUCTION: Manufacturing Excluding Selected High-Technology Industries^{1,2}
 Seasonally adjusted

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual ³
IP (percent change)																	
1986	1.2	-6	-4	.4	.2	-.2	.1	.3	.2	.3	.4	.8	4.7	-.1	1.1	4.3	2.2
1987	-.5	1.4	.1	.4	.6	.2	.6	.5	.4	1.5	.5	.5	4.6	5.9	5.9	10.4	4.6
1988	-.2	.2	.2	.8	-.3	.1	-.1	.0	.4	.5	.3	.5	2.2	3.4	.0	4.3	4.5
1989	.9	-1.0	-1	.2	-.9	.2	-1.3	.8	-.3	-.3	.2	.0	2.4	-3.1	-4.3	-.6	.4
1990	-.4	1.5	.4	-.3	.1	.2	-.2	.3	-.1	-.9	-1.2	-.8	3.5	2.5	.6	-7.5	.0
1991	-.8	-.8	-.8	.4	.6	1.1	.3	.1	1.1	-.2	-.3	-.4	-9.7	1.2	7.1	1.1	-2.6
1992	-.8	.8	1.0	.4	.5	.1	.8	-.5	-.1	.5	.3	-.2	-1.2	7.1	2.8	1.5	2.6
1993	1.0	.1	-.3	.5	-.1	-.2	.3	-.3	.6	.8	.3	.5	4.0	.6	.3	5.9	2.6
1994	.1	.1	1.1	.6	.5	.1	.2	.5	.2	.7	.6	.9	3.9	7.1	3.7	7.1	4.4
1995	.1	-.4	-.1	-.4	-.1	.3	-.8	.8	.6	-.4	-.1	.0	2.7	-2.2	.2	.8	2.5
1996	-1.2	1.3	-.5	1.0	.6	.8	-.1	.2	.6	-.5	.7	.7	-2.0	7.4	4.0	2.7	1.5
1997	-.2	1.1	.8	-.5	.4	.4	.4	1.0	.6	.7	.8	.1	6.2	3.0	6.9	8.2	4.9
1998	.6	.0	-.3	.2	.4	-1.2	-.8	2.3	-.6	.7	-.1	.2	3.4	-.3	-.6	4.2	3.5
1999	-.1	.5	-.5	.0	.7	-.7	.0	.6	-.5	1.4	.4	.4	.7	.4	.0	6.7	1.3
2000	-.3	-.2	.3	.4	-.6	.0	-.2	-1.0	.3	-.4	-.5	-.8	.3	.9	-3.8	-4.6	.7
2001	-.6	-.6	-.3	-.1	-.7	-.6	-.2	-.5	-.2	-.7	-.2	.2	-6.9	-4.4	-4.6	-4.2	-4.7
2002	.6	-.2	.8	.2	.6	1.1	-.4	.1	.1	-.4	.4	-.6	3.2	5.6	2.5	-1.0	.4
2003	.4	-.1	.1	-1.0	-.1	.3	.0	-.6	.7	-.1	1.0	-.3	.4	-3.9	-.1	3.1	.0
2004	-.2	.7	-.2	.4	.8	-.8	.9	.4	-.1	1.0	-.1	.6	1.3	3.3	3.8	4.8	2.0
2005	.6	.7	-.6	.2	.3	.1	-.5	.2	-1.2	1.4	.7	.1	5.2	1.4	-2.2	4.9	3.1
2006	.8	-.4	-.1	.5	-.6	.2	-.4	.5	.0	-.4	.0	1.5	3.1	.0	-.4	.9	1.5
2007	-.6	.3	.6	.5	.0	.5	.0	-.4	.3	-.7	.3	.0	3.2	4.7	.7	-1.7	1.8
2008	-.5	-.8	-.5	-1.2	-.6	-.6	-1.1	-1.2	-3.5	-.4	-2.1	-3.3	-4.5	-9.2	-13.8	-20.3	-5.9
2009	-3.1	-.2	-2.0	-.9	-1.2	-.4	1.4	1.2	.8	.1	.9	-.2	-24.2	-12.5	7.4	6.4	-13.9
2010	1.0	-.3	1.1	.8	1.5	-.1	.6	.1	.1	.1	-.1	.2	5.2	10.1	4.7	.8	5.1
2011	.2	.1	.6	-.6	.1	.0	.6	.2	.4	.6	-.4	.6	2.2	-.6	3.8	3.5	2.5
2012	1.0	.3	-.7	.6	-.5	.2	-.1	-.2	-.1	-.4	.8	.7	5.0	.1	-1.0	1.2	2.3
2013	-.3	.5	-.3	-.4	.2	.2	-1.1	.9	.1	.0	-.1	.0	2.7	-1.1	-1.1	1.2	.5
2014	-1.1	1.0	.6	.0	.2	.4	.4	-.4	.1	.0	.9	-.1	-1.1	4.3	2.0	2.0	.9
2015	-.4	-.4	.2	.2	.0	-.2	.7	-.1	-.3	.2	-.3	.0	-1.5	.6	1.8	-.9	.8
2016	.4	.1															
IP (2012=100)																	
1986	79.7	79.3	79.0	79.3	79.4	79.2	79.3	79.5	79.7	79.9	80.3	80.9	79.3	79.3	79.5	80.3	79.6
1987	80.5	81.6	81.7	82.0	82.5	82.7	83.3	83.6	84.0	85.3	85.7	86.2	81.3	82.4	83.6	85.7	83.3
1988	86.0	86.2	86.4	87.1	86.8	86.9	86.8	86.8	87.1	87.5	87.8	88.2	86.2	86.9	86.9	87.8	87.0
1989	89.0	88.1	88.0	88.2	87.4	87.5	86.4	87.0	86.8	86.5	86.6	86.6	88.4	87.7	86.7	86.6	87.3
1990	86.3	87.6	88.0	87.8	87.8	88.0	87.9	88.1	88.0	87.2	86.2	85.5	87.3	87.9	88.0	86.3	87.4
1991	84.8	84.2	83.5	83.8	84.3	85.2	85.5	85.6	86.6	86.4	86.1	85.8	84.1	84.4	85.9	86.1	85.1
1992	85.1	85.8	86.7	87.0	87.4	87.6	88.3	87.8	87.7	88.1	88.4	88.3	85.8	87.3	87.9	88.3	87.3
1993	89.1	89.3	89.0	89.4	89.3	89.1	89.3	89.1	89.6	90.3	90.6	91.0	89.1	89.3	89.3	90.6	89.6
1994	91.1	91.2	92.2	92.7	93.2	93.3	93.5	94.0	94.2	94.9	95.4	96.3	91.5	93.1	93.9	95.5	93.5
1995	96.4	96.1	96.0	95.6	95.5	95.8	95.0	95.7	96.3	95.9	95.8	95.8	96.2	95.6	95.7	95.8	95.8
1996	94.7	95.9	95.5	96.5	97.0	97.8	97.7	97.9	98.5	98.0	98.7	99.4	95.4	97.1	98.0	98.7	97.3
1997	99.2	100.3	101.1	100.5	100.9	101.3	101.8	102.8	103.4	104.1	104.9	105.1	100.2	100.9	102.6	104.7	102.1
1998	105.7	105.6	105.3	105.6	106.0	104.8	104.0	106.3	105.7	106.4	106.3	106.5	105.5	105.5	105.3	106.4	105.7
1999	106.4	106.9	106.4	106.4	107.2	106.4	106.4	107.1	106.5	108.0	108.4	108.8	106.6	106.7	106.7	108.4	107.1
2000	108.5	108.3	108.7	109.2	108.5	108.5	108.3	107.2	107.5	107.1	106.5	105.7	108.5	108.7	107.7	106.4	107.8
2001	105.1	104.5	104.2	104.1	103.4	102.8	102.6	102.1	101.9	101.2	101.0	101.1	104.6	103.4	102.2	101.1	102.8
2002	101.8	101.6	102.4	102.5	103.1	104.3	103.8	103.9	104.0	103.6	104.0	103.4	101.9	103.3	103.9	103.7	103.2
2003	103.8	103.7	103.8	102.7	102.6	102.9	102.9	102.3	103.0	103.0	104.0	103.7	103.8	102.8	102.7	103.5	103.2
2004	103.5	104.2	104.0	104.4	105.3	104.5	105.4	105.9	105.8	106.8	106.7	107.3	103.9	104.7	105.7	106.9	105.3
2005	108.0	108.8	108.1	108.4	108.7	108.9	108.4	108.6	107.3	108.8	109.6	109.7	108.3	108.7	108.1	109.4	108.6
2006	110.6	110.1	110.0	110.6	109.9	110.2	109.8	110.3	110.3	109.8	109.8	111.4	110.2	110.2	110.1	110.3	110.2
2007	110.8	111.1	111.8	112.4	112.3	112.9	112.9	112.4	112.8	112.0	112.3	112.3	111.2	112.5	112.7	112.2	112.2
2008	111.7	110.8	110.3	109.0	108.3	107.6	106.4	105.2	101.5	101.1	99.0	95.7	110.9	108.3	104.3	98.6	105.5
2009	92.7	92.5	90.6	89.8	88.7	88.4	89.6	90.7	91.4	91.5	92.3	92.1	92.0	88.9	90.5	92.0	90.9
2010	93.0	92.7	93.7	94.5	95.9	95.8	96.4	96.5	96.6	96.7	96.6	96.8	93.1	95.4	96.5	96.7	95.4
2011	97.0	97.1	97.6	97.0	97.1	97.1	97.7	98.0	98.3	98.9	98.5	99.1	97.2	97.1	98.0	98.8	97.8
2012	100.1	100.4	99.7	100.3	99.9	100.0	99.9	99.8	99.7	99.3	100.1	100.8	100.0	100.1	99.8	100.1	100.0
2013	100.5	101.0	100.7	100.3	100.5	100.7	99.6	100.5	100.6	100.6	100.5	100.5	100.8	100.5	100.2	100.5	100.5
2014	99.3	100.4	101.0	101.1	101.2	101.7	102.1	101.6	101.8	101.8	102.7	102.5	100.2	101.3	101.8	102.3	101.4
2015	102.1	101.7	101.9	102.1	102.2	102.0	102.7	102.6	102.3	102.5	102.3	102.2	101.9	102.1	102.5	102.3	102.2
2016	102.6	102.7															

NOTE: Estimates from October 2015 through February 2016 are subject to further revision in the upcoming monthly releases.

1. See footnote 2 to table 2.

2. High-technology industries include computers, communications equipment, and semiconductors and related electronic components.

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

Table 11B
CAPACITY AND UTILIZATION: Manufacturing Excluding Selected High-Technology Industries^{1,2}

Seasonally adjusted

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Q1	Q2	Q3	Q4	Annual
Capacity (percent of 2012 output)																	
1986	100.6	100.7	100.7	100.8	100.9	100.9	101.0	101.1	101.2	101.3	101.4	101.6	100.7	100.9	101.1	101.4	101.0
1987	101.7	101.9	102.0	102.2	102.3	102.5	102.6	102.7	102.8	102.9	103.0	103.0	101.9	102.3	102.7	103.0	102.5
1988	103.1	103.1	103.1	103.1	103.1	103.1	103.1	103.1	103.1	103.1	103.2	103.3	103.1	103.1	103.1	103.2	103.1
1989	103.4	103.5	103.7	103.8	104.0	104.2	104.4	104.6	104.8	105.0	105.2	105.4	103.5	104.0	104.6	105.2	104.3
1990	105.6	105.8	106.0	106.2	106.4	106.5	106.7	106.9	107.0	107.2	107.3	107.5	105.8	106.4	106.9	107.3	106.6
1991	107.6	107.7	107.9	108.0	108.1	108.3	108.4	108.5	108.6	108.7	108.9	109.0	107.7	108.1	108.5	108.9	108.3
1992	109.1	109.2	109.4	109.5	109.6	109.8	109.9	110.1	110.2	110.3	110.5	110.6	109.2	109.6	110.1	110.5	109.9
1993	110.8	110.9	111.0	111.1	111.2	111.3	111.4	111.5	111.7	111.8	111.9	112.0	110.9	111.2	111.5	111.9	111.4
1994	112.1	112.2	112.4	112.5	112.7	112.8	113.0	113.2	113.4	113.6	113.8	114.0	112.2	112.7	113.2	113.8	113.0
1995	114.2	114.5	114.7	114.9	115.2	115.4	115.7	115.9	116.2	116.4	116.6	116.9	114.5	115.2	115.9	116.6	115.5
1996	117.1	117.4	117.6	117.9	118.1	118.4	118.6	118.9	119.2	119.5	119.9	120.2	117.4	118.1	118.9	119.9	118.6
1997	120.6	121.0	121.4	121.8	122.3	122.8	123.3	123.8	124.3	124.8	125.4	125.9	121.0	122.3	123.8	125.4	123.1
1998	126.5	127.0	127.5	128.1	128.6	129.1	129.6	130.1	130.5	131.0	131.4	131.8	127.0	128.6	130.1	131.4	129.3
1999	132.2	132.6	133.0	133.3	133.6	134.0	134.3	134.6	134.8	135.1	135.4	135.6	132.6	133.6	134.6	135.4	134.0
2000	135.8	136.0	136.3	136.5	136.7	136.8	137.0	137.2	137.4	137.5	137.7	137.9	136.0	136.7	137.2	137.7	136.9
2001	138.0	138.1	138.3	138.4	138.5	138.6	138.7	138.8	138.8	138.9	138.9	138.9	138.1	138.5	138.7	138.9	138.6
2002	139.0	139.0	139.0	139.0	138.9	138.9	138.9	138.8	138.8	138.7	138.6	138.6	139.0	138.9	138.8	138.6	138.8
2003	138.5	138.4	138.3	138.3	138.2	138.1	138.0	137.9	137.8	137.7	137.6	137.5	138.4	138.2	137.9	137.6	138.0
2004	137.4	137.3	137.3	137.2	137.1	137.0	137.0	137.0	136.9	137.0	137.0	137.0	137.3	137.1	137.0	137.0	137.1
2005	137.1	137.2	137.4	137.5	137.7	137.9	138.1	138.3	138.5	138.7	139.0	139.2	137.2	137.7	138.3	139.0	138.1
2006	139.4	139.6	139.8	140.0	140.2	140.4	140.6	140.8	140.9	141.1	141.3	141.4	139.6	140.2	140.8	141.3	140.5
2007	141.6	141.7	141.8	141.9	142.1	142.2	142.3	142.3	142.4	142.4	142.5	142.5	141.7	142.1	142.3	142.5	142.1
2008	142.5	142.4	142.4	142.3	142.2	142.1	142.0	141.8	141.7	141.5	141.3	141.1	142.4	142.2	141.8	141.3	141.9
2009	140.9	140.6	140.4	140.1	139.8	139.5	139.2	138.9	138.6	138.3	138.0	137.7	140.6	139.8	138.9	138.0	139.4
2010	137.4	137.1	136.7	136.4	136.1	135.8	135.5	135.2	134.9	134.6	134.3	134.0	137.1	136.1	135.2	134.3	135.6
2011	133.7	133.4	133.2	133.0	132.8	132.7	132.6	132.5	132.5	132.5	132.6	132.7	133.4	132.8	132.5	132.6	132.8
2012	132.8	133.0	133.1	133.3	133.5	133.6	133.8	134.0	134.1	134.3	134.4	134.5	133.0	133.5	134.0	134.4	133.7
2013	134.5	134.6	134.6	134.6	134.5	134.5	134.4	134.4	134.3	134.2	134.2	134.1	134.6	134.5	134.4	134.2	134.4
2014	134.1	134.1	134.0	134.0	134.1	134.1	134.1	134.2	134.3	134.4	134.5	134.6	134.1	134.1	134.2	134.5	134.2
2015	134.7	134.8	134.9	135.0	135.1	135.2	135.3	135.4	135.5	135.6	135.7	135.7	134.8	135.1	135.4	135.6	135.2
2016	135.8	135.8															
Utilization (percent)																	
1986	79.2	78.7	78.4	78.6	78.7	78.5	78.5	78.7	78.7	78.9	79.1	79.6	78.8	78.6	78.6	79.2	78.8
1987	79.1	80.1	80.1	80.3	80.7	80.7	81.1	81.4	81.7	82.8	83.2	83.6	79.8	80.6	81.4	83.2	81.2
1988	83.4	83.6	83.8	84.5	84.2	84.3	84.2	84.2	84.5	84.9	85.0	85.4	83.6	84.3	84.3	85.1	84.3
1989	86.1	85.1	84.9	84.9	84.0	84.0	82.7	83.2	82.8	82.4	82.3	82.2	85.4	84.3	82.9	82.3	83.7
1990	81.7	82.8	83.0	82.6	82.6	82.6	82.4	82.5	82.3	81.4	80.3	79.6	82.5	82.6	82.4	80.4	82.0
1991	78.8	78.1	77.4	77.5	77.9	78.7	78.9	78.9	79.7	79.4	79.1	78.7	78.1	78.1	79.1	79.1	78.6
1992	78.0	78.5	79.2	79.5	79.7	79.8	80.3	79.8	79.6	79.9	80.0	79.8	78.6	79.7	79.9	79.9	79.5
1993	80.5	80.5	80.2	80.5	80.3	80.0	80.2	79.8	80.2	80.8	80.9	81.3	80.4	80.2	80.1	81.0	80.4
1994	81.3	81.2	82.1	82.4	82.7	82.7	82.8	83.1	83.1	83.5	83.8	84.5	81.5	82.6	83.0	83.9	82.8
1995	84.4	83.9	83.7	83.2	82.9	83.0	82.1	82.6	82.9	82.4	82.1	82.0	84.0	83.0	82.5	82.2	82.9
1996	80.8	81.7	81.2	81.8	82.1	82.6	82.3	82.3	82.6	82.0	82.3	82.7	81.2	82.2	82.4	82.3	82.0
1997	82.3	82.9	83.2	82.5	82.5	82.5	82.5	83.0	83.2	83.3	83.7	83.4	82.8	82.5	82.9	83.5	82.9
1998	83.6	83.2	82.6	82.4	82.5	81.2	80.2	81.7	80.9	81.2	80.9	80.8	83.1	82.0	81.0	81.0	81.8
1999	80.5	80.6	80.0	79.8	80.2	79.4	79.3	79.6	79.0	80.0	80.1	80.3	80.4	79.8	79.3	80.1	79.9
2000	79.9	79.6	79.8	80.0	79.4	79.3	79.0	78.2	78.3	77.9	77.4	76.7	79.8	79.6	78.5	77.3	78.8
2001	76.1	75.6	75.3	75.2	74.6	74.2	74.0	73.6	73.4	72.9	72.7	72.8	75.7	74.7	73.6	72.8	74.2
2002	73.2	73.1	73.7	73.8	74.2	75.1	74.8	74.9	75.0	74.7	75.0	74.6	73.3	74.3	74.9	74.8	74.3
2003	75.0	75.0	75.0	74.3	74.3	74.5	74.6	74.2	74.8	74.8	75.5	75.4	75.0	74.4	74.5	75.2	74.8
2004	75.3	75.9	75.7	76.1	76.8	76.2	77.0	77.3	77.2	78.0	77.9	78.3	75.6	76.4	77.2	78.1	76.8
2005	78.8	79.3	78.7	78.8	79.0	79.0	78.5	78.5	77.4	78.4	78.9	78.8	78.9	78.9	78.1	78.7	78.7
2006	79.3	78.9	78.7	79.0	78.4	78.5	78.1	78.4	78.2	77.8	77.7	78.8	78.9	78.6	78.2	78.1	78.5
2007	78.3	78.4	78.8	79.1	79.1	79.4	79.4	79.0	79.2	78.7	78.8	78.8	78.5	79.2	79.2	78.8	78.9
2008	78.4	77.8	77.5	76.6	76.1	75.7	74.9	74.1	71.6	71.4	70.0	67.8	77.9	76.2	73.6	69.8	74.3
2009	65.8	65.8	64.6	64.1	63.4	63.3	64.4	65.3	65.9	66.1	66.9	66.9	65.4	63.6	65.2	66.6	65.2
2010	67.7	67.6	68.6	69.3	70.5	70.6	71.2	71.4	71.6	71.9	72.0	72.3	68.0	70.1	71.4	72.0	70.4
2011	72.6	72.7	73.3	73.0	73.1	73.2	73.7	73.9	74.2	74.6	74.3	74.7	72.9	73.1	73.9	74.5	73.6
2012	75.3	75.5	74.9	75.3	74.8	74.8	74.7	74.5	74.3	74.0	74.5	75.0	75.2	75.0	74.5	74.5	74.8
2013	74.7	75.1	74.8	74.5	74.7	74.8	74.1	74.8	74.9	75.0	74.9	74.9	74.9	74.7	74.6	74.9	74.8
2014	74.1	74.9	75.4	75.4	75.5	75.8	76.1	75.7	75.8	75.7	76.4	76.2	74.8	75.6	75.9	76.1	75.6
2015	75.8	75.5	75.5	75.6	75.6	75.4	75.9	75.8	75.5	75.6	75.4	75.3	75.6	75.5	75.7	75.4	75.6
2016	75.6	75.6															

NOTE: Estimates from October 2015 through February 2016 are subject to further revision in the upcoming monthly releases.

1. See footnote 2 to table 2.

2. High-technology industries include computers, communications equipment, and semiconductors and related electronic components.

Table 12

ANNUAL PROPORTIONS IN INDUSTRIAL PRODUCTION, MARKET AND INDUSTRY GROUP SUMMARY

Item		2008	2009	2010	2011	2012	2013	2014	2015
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		54.6	55.8	53.6	53.0	52.6	51.8	52.8	55.5
Consumer goods		26.2	28.6	27.0	26.7	25.8	25.4	25.6	27.1
Durable		6.0	5.8	5.5	5.3	5.3	5.5	5.8	6.4
Automotive products		2.7	2.7	2.7	2.6	2.5	2.6	2.8	3.2
Home electronics		.4	.3	.2	.2	.2	.2	.2	.2
Appliances, furniture, carpeting		1.0	.9	.8	.8	.8	.8	.8	.9
Miscellaneous goods		2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.1
Nondurable		20.2	22.8	21.5	21.3	20.5	20.0	19.8	20.7
Non-energy		16.4	18.3	16.7	16.3	15.8	15.5	16.0	17.3
Foods and tobacco		8.7	10.0	9.3	9.0	8.8	8.9	9.1	9.6
Clothing		.4	.3	.3	.3	.3	.2	.2	.3
Chemical products		5.4	5.8	5.2	5.3	5.0	4.7	5.0	5.7
Paper products		1.5	1.6	1.4	1.3	1.3	1.2	1.2	1.3
Energy		3.8	4.5	4.7	5.0	4.8	4.5	3.8	3.4
Business equipment		10.1	9.5	9.4	9.4	10.1	9.9	10.5	11.3
Transit		2.0	1.9	2.1	1.9	2.2	2.4	2.7	3.1
Information processing		2.8	2.7	2.3	2.2	2.3	2.3	2.3	2.5
Industrial and other		5.3	5.0	5.0	5.3	5.5	5.3	5.5	5.8
Defense and space equipment		2.3	2.5	2.6	2.4	2.4	2.3	2.3	2.4
Construction supplies		5.0	4.5	4.3	4.3	4.3	4.5	4.7	5.1
Business supplies		10.2	10.2	9.7	9.5	9.1	8.8	8.9	9.2
Materials		45.4	44.2	46.4	47.0	47.4	48.2	47.2	44.5
Non-energy		27.3	26.3	27.4	27.8	27.6	27.2	27.6	28.6
Durable		16.7	15.0	16.0	16.5	16.6	16.4	17.1	17.8
Consumer parts		2.8	2.3	2.6	2.6	2.8	2.9	3.0	3.3
Equipment parts		5.9	5.4	5.4	5.7	5.6	5.3	5.6	5.9
Other		8.0	7.3	8.0	8.2	8.2	8.2	8.4	8.6
Nondurable		10.6	11.3	11.5	11.3	11.0	10.8	10.5	10.8
Textile		.4	.4	.5	.4	.4	.4	.4	.4
Paper		2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.1
Chemical		4.8	5.0	5.5	5.7	5.5	5.3	5.0	5.1
Energy		18.1	17.9	19.0	19.2	19.7	21.0	19.6	15.9
INDUSTRY GROUPS									
Manufacturing		76.4	76.3	75.1	74.9	74.6	73.4	74.6	78.5
Manufacturing (NAICS)	31–33	72.8	72.8	72.2	72.1	72.1	71.0	72.1	76.0
Durable manufacturing		39.5	36.8	37.0	37.1	37.7	37.5	39.3	41.8
Wood products	321	1.1	1.0	.9	.9	1.0	1.1	1.2	1.3
Nonmetallic mineral products	327	2.0	1.8	1.6	1.6	1.7	1.8	2.0	2.2
Primary metals	331	2.5	2.2	2.8	2.8	2.6	2.7	2.6	2.4
Fabricated metal products	332	6.1	5.3	5.2	5.5	5.5	5.6	5.8	6.1
Machinery	333	5.4	4.9	5.2	5.7	6.0	5.7	6.0	6.3
Computer and electronic products	334	7.0	6.5	6.2	6.0	5.9	5.4	5.5	5.9
Electrical equip., appliances, and components	335	2.0	1.9	1.8	1.8	1.8	1.8	1.8	2.0
Motor vehicles and parts	3361–3	4.5	4.0	4.5	4.3	4.6	4.8	5.3	5.9
Aerospace and miscellaneous transportation equipment	3364–9	4.3	4.7	4.5	4.3	4.5	4.6	5.0	5.3
Furniture and related products	337	1.4	1.1	1.0	1.0	1.1	1.1	1.1	1.2
Miscellaneous	339	3.2	3.4	3.2	3.1	2.9	3.0	3.0	3.2
Nondurable manufacturing		33.3	36.0	35.1	35.0	34.4	33.5	32.9	34.2
Food, beverage, and tobacco products	311,2	10.5	12.2	11.3	10.9	10.6	10.7	10.8	11.4
Textile and product mills	313,4	.8	.7	.7	.7	.7	.7	.7	.7
Apparel and leather	315,6	.4	.3	.3	.3	.3	.3	.3	.3
Paper	322	2.6	2.8	2.7	2.6	2.6	2.6	2.6	2.7
Printing and support	323	1.9	1.8	1.6	1.5	1.5	1.5	1.5	1.6
Petroleum and coal products	324	2.7	3.2	3.6	4.0	3.9	3.4	2.4	1.9
Chemicals	325	11.4	12.0	11.9	12.1	11.8	11.3	11.4	12.2
Plastics and rubber products	326	3.0	3.0	3.0	2.9	3.1	3.1	3.2	3.5
Other manufacturing (non-NAICS)	1133,5111	3.5	3.4	2.9	2.7	2.5	2.4	2.4	2.5
Mining	21	13.8	12.8	14.2	15.0	15.8	16.8	15.2	10.8
Utilities	2211,2	9.8	11.0	10.6	10.2	9.6	9.8	10.2	10.8
Electric	2211	8.6	9.6	9.4	9.0	8.6	8.7	9.1	9.7
Natural gas	2212	1.2	1.3	1.2	1.2	1.1	1.1	1.1	1.0

NOTE: The IP proportion data are estimates of the industries' relative contributions to the overall change in IP between the reference year and the following year. For example, a 1 percent increase in durable goods manufacturing between 2015 and 2016 would account for a 0.412 percent increase in total IP.

Table 13

INDUSTRIAL PRODUCTION AND CAPACITY UTILIZATION: SUMMARY

Seasonally adjusted

Industrial production	2012=100						Percent change						
	2015 Sept. ^r	Oct. ^r	Nov. ^r	Dec. ^r	2016 Jan. ^r	Feb. ^r	2015 Sept. ^r	Oct. ^r	Nov. ^r	Dec. ^r	2016 Jan. ^r	Feb. ^r	Feb. '15 to Feb. '16
Total index	105.3	105.2	104.5	104.1	104.7	104.2	-.3	-.1	-.7	-.4	.6	-.5	-1.6
<i>Previous estimates</i>	107.5	107.3	106.5	106.0	106.9	106.3	.0	-.1	-.7	-.5	.8	-.5	-1.0
Major market groups													
Final Products	101.2	100.9	100.3	100.0	100.9	100.6	-.6	-.3	-.7	-.3	.9	-.4	-.6
Consumer goods	103.4	103.2	102.7	102.5	104.0	103.3	-.5	-.2	-.5	-.2	1.5	-.7	1.0
Business equipment	103.4	102.8	101.6	101.2	101.2	101.8	-.5	-.5	-1.2	-.4	-.1	.6	-1.0
Nonindustrial supplies	105.0	106.1	105.9	105.8	106.2	106.2	-.1	1.0	-.1	-.1	.3	.1	1.1
Construction	107.6	109.6	109.6	109.9	109.4	110.0	-.7	1.9	.0	.3	-.4	.5	2.1
Materials	108.8	108.5	107.6	106.8	107.3	106.4	.0	-.3	-.8	-.7	.5	-.9	-3.3
Major industry groups													
Manufacturing (see note below)	103.1	103.4	103.1	103.1	103.5	103.6	-.2	.2	-.3	.0	.4	.1	1.0
<i>Previous estimates</i>	105.8	106.1	105.9	105.6	106.2	106.4	-.1	.3	-.2	-.2	.5	.2	1.8
Mining	115.2	114.4	112.7	110.1	108.7	106.8	-1.1	-.6	-1.5	-2.4	-1.2	-1.8	-10.7
Utilities	104.3	102.3	99.6	97.9	101.8	97.7	.5	-1.9	-2.6	-1.7	4.0	-4.1	-9.9
Capacity utilization													Capacity growth
	Percent of capacity												
	Average 1972- 2015	1988- 89 high	1990- 91 low	1994- 95 high	2008- 09 low	2015 Feb.	2015 Sept. ^r	Oct. ^r	Nov. ^r	Dec. ^r	2016 Jan. ^r	Feb. ^r	Feb. '15 to Feb. '16
Total industry	80.0	85.3	78.8	85.0	66.7	77.7	76.4	76.3	75.7	75.4	75.8	75.4	1.4
<i>Previous estimates</i>	80.0	85.2	78.8	85.0	66.9	78.4	77.8	77.6	77.0	76.5	77.1	76.7	1.3
Manufacturing (see note below)	78.5	85.6	77.3	84.6	63.8	75.4	75.5	75.6	75.3	75.3	75.5	75.6	.8
<i>Previous estimates</i>	78.5	85.6	77.3	84.6	63.9	75.7	76.0	76.2	76.0	75.7	76.1	76.1	1.2
Mining	87.3	86.2	83.8	88.6	79.0	86.8	81.0	80.4	79.2	77.5	76.7	75.5	2.6
Utilities	85.8	93.2	84.7	93.2	78.2	83.5	80.0	78.5	76.4	75.0	78.0	74.8	.6
Stage-of-process groups													
Crude	86.3	87.6	84.5	90.1	77.0	84.5	80.0	79.7	78.8	77.5	77.4	76.5	2.2
Primary and semifinished	80.6	86.5	78.1	87.8	63.8	77.3	76.3	76.3	75.7	75.4	76.0	75.3	.7
Finished	77.0	83.4	77.3	80.6	66.6	75.1	75.4	75.2	74.9	74.8	75.2	75.2	1.1

^r Revised.
 NOTE. The statistics in this release cover output, capacity, and capacity utilization in the U.S. industrial sector, which is defined by the Federal Reserve to comprise manufacturing, mining, and electric and gas utilities. Mining is defined as all industries in sector 21 of the North American Industry Classification System (NAICS); electric and gas utilities are those in NAICS sectors 2211 and 2212. Manufacturing comprises NAICS manufacturing industries (sector 31-33) plus the logging industry and the newspaper, periodical, book, and directory publishing industries. Logging and publishing are classified elsewhere in NAICS (under agriculture and information respectively), but historically they were considered to be manufacturing and were included in the industrial sector under the Standard Industrial Classification (SIC) system. In December 2002, the Federal Reserve reclassified all of its industrial output data from the SIC system to NAICS.

The **Industrial Production and Capacity Utilization** statistical release, which is published around the middle of the month, reports measures of output, capacity, and capacity utilization in manufacturing, mining, and the electric and gas utilities industries. More detailed descriptions of industrial production and capacity utilization are available on the Board's website at www.federalreserve.gov/releases/G17. In addition, files containing data shown in the release, more detailed series that were published in the G.17 prior to December 2000, and historical data are available from the Data Download Program on the Board's website. Instructions for searching for and downloading specific series are provided as well.

INDUSTRIAL PRODUCTION

Coverage. The industrial production (IP) index measures the real output of the manufacturing, mining, and electric and gas utilities industries; the reference period for the index is 2012. 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 299 individual series based on the 2012 NAICS codes. These individual series are classified in two ways: (1) market groups, and (2) industry groups. Market groups consist of products and materials. Total products are the aggregate of final products, such as consumer goods and equipment, and nonindustrial supplies (which are inputs to nonindustrial sectors). Materials are inputs in the manufacture of products. Major industry groups include three-digit NAICS industries and aggregates of these industries—for example, durable and nondurable manufacturing, mining, and utilities. A complete description of the market and industry structures, including details regarding series classification, relative importance weights, and data sources, is available on the Board's website at www.federalreserve.gov/releases/G17/About.htm.

Source data. On a monthly basis, the individual indexes of industrial production are constructed from two main types of source data: (1) output measured in physical units, and (2) data on inputs to the production process, from which output is inferred. Data on physical products, such as tons of steel or barrels of oil, are typically obtained from private trade associations and from government agencies; data of this type are used to estimate monthly IP wherever possible and appropriate. Production indexes for a few industries are derived by dividing estimated nominal output (calculated using unit production or sales and unit values) by a corresponding Fisher price index; the most notable of these fall within the high-technology grouping and include semiconductors. When suitable data on physical product are not available, estimates of output are based on production-worker hours by industry. Data on hours worked by production workers are collected in the monthly establishment survey conducted by the Bureau of Labor Statistics. The factors used to convert inputs into estimates of production are based on historical relationships between the inputs and the comprehensive annual data used to benchmark the IP indexes; these factors also may be influenced by technological or cyclical developments. The annual data used in benchmarking the individual IP indexes are constructed from a variety of source data, such as the quinquennial *Censuses of Manufactures and Mineral Industries* and the *Annual Survey of Manufactures*, prepared by the Bureau of the Census; the *Minerals Yearbook*, prepared by the U.S. Geological Survey of the Department of the Interior; and publications of the Department of Energy.

Aggregation Methodology and Weights. The aggregation method for the IP index is a version of the Fisher-ideal index formula. (For a detailed discussion of the aggregation method, see *The Federal Reserve Bulletin* February 1997 and March 2001.) In the IP index, series that measure the output of an individual industry are combined using weights derived from their proportion in the total value-added output of all industries. The IP index, which extends back to 1919, is built as a chain-type index since 1972. The current formula for the growth in monthly IP (or any of the sub-aggregates) since 1972 is the geometric mean of the change in output (I), and, as can be seen below, is computed using the unit value added estimate for the current month (p_m) and the estimate for previous month:

$$\frac{I_m^A}{I_{m-1}^A} = \sqrt{\frac{\sum I_m p_{m-1}}{\sum I_{m-1} p_{m-1}} \times \frac{\sum I_m p_m}{\sum I_{m-1} p_m}}$$

The IP proportions (typically shown in the first column of the relevant tables in the monthly G.17 release) are estimates of the industries' relative contributions to overall growth in the following year. For example, the relative importance weight of the motor vehicles and parts industry is about 6 percent. If output in this industry increased 10 percent in a month, then this gain would boost growth in total IP by 6/10 percentage point ($0.06 \times 10\% = 0.6\%$). To assist users with calculations, the Federal Reserve's website provides supplemental monthly statistics that represent the exact proportionate contribution of a monthly change in a component index to the monthly change in the total index (www.federalreserve.gov/releases/G17/ipdisk/ipweightssa.txt).

Timing. The first estimate of output for a month is published around the 15th of the following month. The estimate is preliminary (denoted by the superscript "p" in tables) and subject to revision in each of the subsequent five months as new source data become available. (Revised estimates are denoted by the superscript "r" in tables.) For the first estimate of output for a given month, about 73 percent of the source data (in value-added terms) are available; the fraction of available source data increases to 87 percent for estimates in the second month that the estimate is published, 94 percent in the third month, 97 percent in the fourth month, 99 percent in the fifth month, and 99 percent in the sixth month. Data availability by data type in early 2016 is summarized in the table below:

Availability of Monthly IP Data in Publication Window
(Percent of value added in 2015; the numbers may not sum because of rounding.)

Type of data	Month of estimate					
	1st	2nd	3rd	4th	5th	6th
Physical product	31	45	52	55	56	56
Production-worker hours	42	42	42	42	42	42
IP data received	73	87	94	97	99	99
IP data estimated	27	13	6	3	1	1

The physical product group includes series based on either monthly or quarterly data. As can be seen in the first row of the table, in the first month, a physical product indicator is available for about one-half of the series (in terms of value added) that ultimately are based on physical product data (31 percent out of a total of 56 percent). Of the 31 percent, about three-fourths (23 percent of total IP) include series that are derived from weekly physical product data and for which actual monthly data may lag up to several months. On average, quarterly product data are received for the fourth estimate of industrial production. Specifically, quarterly data are available for the third estimate of the last month of a quarter, the fourth estimate of the second month of a quarter, and the fifth estimate of the first month of a quarter.

Seasonal adjustment. Individual series are seasonally adjusted using Census X-12 ARIMA. For series based on production-worker hours, the current seasonal factors were estimated with data through January 2016; for other series, the factors were estimated with data through at least December 2015. Series are pre-adjusted for the effects of holidays or the business cycle when appropriate. For the data since 1972, all seasonally adjusted aggregate indexes are calculated by aggregating the seasonally adjusted indexes of the individual series. Additional documentation and X-12 specifications can be found on the Board's website at www.federalreserve.gov/releases/G17/About.htm.

Reliability. The average revision to the *level* of the total IP index, without regard to sign, between the first and the fourth estimates was 0.27 percent during the 1987–2015 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 1987–2015

period. In most cases (about 85 percent), the direction of the change in output indicated by the first estimate for a given month is the same as that shown by the fourth estimate.

Rounding. The published percent changes are calculated from unrounded indexes, and may not be the same as percent changes calculated from the rounded indexes shown in the release.

CAPACITY UTILIZATION

Overview. The Federal Reserve Board constructs estimates of capacity and capacity utilization for industries in manufacturing, mining, and electric and gas utilities. For a given industry, the capacity utilization rate is equal to an output index (seasonally adjusted) divided by a capacity index. The Federal Reserve Board's capacity indexes attempt to capture the concept of *sustainable maximum output*—the greatest level of output a plant can maintain within the framework of a realistic work schedule, after factoring in normal downtime and assuming sufficient availability of inputs to operate the capital in place.

Coverage. Capacity indexes are constructed for 89 detailed industries (71 in manufacturing, 16 in mining, and 2 in utilities), which mostly correspond to industries at the three- and four-digit 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-technology industries and manufacturing excluding high-technology industries.

Source Data. The monthly rates of capacity utilization are designed to be consistent with both the monthly data on production and the periodically available data on capacity and utilization. Because there is no direct monthly information on overall industrial capacity or utilization rates, the Federal Reserve first estimates annual capacity indexes from the source data. Capacity data reported in physical units from government sources (primarily from the U.S. Geological Survey and the Department of Energy's Energy Information Administration) and trade sources are available for portions of several industries in manufacturing (for example, paper, industrial chemicals, petroleum refining, motor vehicles), as well as for electric utilities and mining; these industries represent about 25 percent of total industrial capacity. When physical product data are unavailable for manufacturing industries, capacity indexes are based on responses to the Bureau of the Census's *Quarterly Survey of Plant Capacity* (QSPC); these industries account for about 65 percent of total industry capacity. In the absence of utilization data for a few mining and petroleum series, capacity is based on trends through peaks in production (roughly 10 percent of total industry capacity). A detailed description of the methodology used to construct the capacity indexes is available on the Board's website (www.federalreserve.gov/releases/G17/CapNotes.htm).

Aggregation Methodology. Monthly capacity aggregates are calculated in three steps: (1) utilization aggregates are calculated on an annual basis through the most recent full year as capacity-weighted aggregates of individual utilization rates; (2) the annual aggregate capacity is derived from the corresponding production and utilization aggregates; (3) the monthly capacity aggregate is obtained by interpolating with a Fisher index of its constituent monthly capacity series. Utilization rates for the individual series and aggregates are calculated by dividing the pertinent monthly production index by the related capacity index.

Consistency. A major aim is that the Federal Reserve utilization rates be consistent over time so that, for example, a rate of 85 percent means about the same degree of tightness that it meant in the past. A major task for the Federal Reserve in developing reasonable and consistent time series of capacity and utilization is dealing with inconsistencies between the movements of the industrial production index and the survey-based utilization rates. The McGraw-Hill/DRI Survey, now discontinued, was the primary source of manufacturing utilization rates for many years. This survey of large companies reported, on average, higher utilization rates than those reported by

establishments covered by the annual Survey of Plant Capacity (the primary source of factory operating rates through 2006, after which it was discontinued) for the fourteen years they overlapped.

Adjustments have been made to keep the industry utilization rates currently reported by the Federal Reserve (now based on the QSPC) roughly in line with rates formerly reported by McGraw-Hill. As a consequence, the rates reported by the Federal Reserve tend to be higher than the rates reported in the Census utilization surveys.

Perspective. Over the 1972–2015 period, the average total industry utilization rate was 80.0 percent; for manufacturing, the average factory operating rate was 78.5 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 are specific to each series and do not all occur in the same month.

REFERENCES AND RELEASE DATES

References. The release for the annual revision that was published on July 21, 2015, is available on the Board's website (www.federalreserve.gov/releases/g17/revisions/20150721/DefaultRev.htm). A summary of the annual revision that incorporated back to 1972 production and capacity indexes reclassified according to the North American Industry Classification System is available in an article in the *Federal Reserve Bulletin*, vol. 89 (April 2003), pp.151-76. A description of the aggregation methods for industrial production and capacity utilization is included in an article in the *Federal Reserve Bulletin*, vol. 83 (February 1997), pp. 67-92. The Federal Reserve methodology for constructing industry-level measures of capital is detailed in "Capital Stock Estimates for Manufacturing Industries: Methods and Data" by Mike Mohr and Charles Gilbert (1996), which can be obtained at www.federalreserve.gov/releases/g17/CapitalStockDocLatest.pdf.

Industrial Production—1986 Edition contains a more detailed description of the other methods used to compile the industrial production index, plus a history of its development, a glossary of terms, and a bibliography. The major revisions to the IP indexes and capacity utilization since 1990 have been described in the *Federal Reserve Bulletin* (April 1990, June 1990, June 1993, March 1994, January 1995, January 1996, February 1997, February 1998, January 1999, March 2000, March 2001, March 2002, April 2003, Winter 2004, Winter 2005).

Release Schedule

On the day the G.17 is released, it is published at 9:15 a.m., the publication schedule for 2016 is January 15, February 17, March 16, April 15, May 17, June 15, July 15, August 16, September 15, October 17, November 16, and December 14.

This release schedule is available on the Board's website at <http://www.federalreserve.gov/releases/g17>.