

COMMENTARY NUMBER 813
May 2016 Industrial Production, Producer Price Index
June 15, 2016

Deepening Recession

**Second-Quarter 2016 Industrial Production Continued to Sink,
Quarter-to-Quarter and Year-to-Year**

**Outside of Recession, a Third Consecutive Quarter of Annual Contraction
Is Unprecedented in the 97-Year History of the Production Series**

**Never Recovering Its Pre-Recession High, the Manufacturing Sector Was
Down by 6.55% (-6.55%) from Its December 2007 Peak**

**Having Had a One-Month Recovery in November 2014; Production
Was Down by 2.94% (-2.94%) from Its “Recovery” Peak, and by
2.06% (-2.06%) from Its November 2007 Pre-Recession High**

Tentative Respite for the Mining Sector?

**May 2016 PPI Goods Inflation Rose by 0.66% Month-to-Month,
PPI Services Profit Margins Rose by 0.18%,
Leaving Aggregate Final-Demand PPI Inflation Up by 0.36%**

Year-to-Year PPI Final-Demand Inflation Fell by 0.09% (-0.09%)

PLEASE NOTE: The next regular Commentary, scheduled for tomorrow, Thursday, June 16th, will cover the May Consumer Price Index (CPI) and real Retail Sales, with a subsequent Commentary on June 17th covering May Housing Starts. Due to travel, these daily postings likely will be late-day, possibly overnight.

Best wishes to all — John Williams

OPENING COMMENTS AND EXECUTIVE SUMMARY

May Industrial Production Confirmed and Signaled a Deepening Economic Contraction. Today's (June 15th) missive covers the second of the major economic releases due out this week. Discussed in [General Commentary No. 811](#), key May 2016 data should tend to show deteriorating headline economic conditions. Per yesterday's [Commentary No. 812](#), although the headline nominal retail sales monthly growth came in above consensus, inflation-adjusted real monthly sales could be unchanged, likely no more than a 0.1% gain, with annual real growth falling back well below 2.0%, again generating an intense, ongoing-recession signal.

Today's May 2016 production report reversed any positive signals from last month's irregular gains, signaling a deepening recession, and annual and quarterly contractions in second-quarter 2016. This week's new economic detail, including housing starts, will be reviewed in the context of pending GDP reporting, in *Commentary No. 815* of Friday, June 17th.

The general economic outlook has become increasingly bleak. What the continually-waffling Federal Reserve and the Administration are afraid to admit is that the U.S. economy never really recovered from the "2007 Recession." Evidence of that continued to surface into today's detail, and further discussion will follow in *No. 815*.

Today's Commentary (June 15th). The balance of these *Opening Comments* provides summaries of the May 2016 Industrial Production and Producer Price Index details, with more-comprehensive coverage and additional graphics in the *Reporting Detail* section.

The most-recent *Hyperinflation Outlook Summary* is found in [Commentary No. 783](#), with [General Commentary No. 811](#), [Commentary No. 799](#) and [No. 777 Year-End Special Commentary](#) as background to the currently unfolding financial circumstances. These documents will be updated shortly in a new *Special Report*, when first half-2016 economic detail is in place.

The *Week and Month Ahead* section updates the *Pending Releases* for the week ahead, specifically the May 2016 CPI, and May Housing Starts.

Index of Industrial Production—May 2016—The Recession Has Deepened. With headline May 2016 reporting in place, second-quarter 2016 industrial production virtually is assured of annual and quarterly contractions. In order for second-quarter activity to turn positive quarter-to-quarter, headline June 2016 production would have to rise by an unlikely 1.28% for the month, versus the current headline May 2016 detail. More significantly, for second-quarter 2016 production to turn positive year-to-year, June production would have to jump month-to-month by more than 3.92%, which is not going to happen.

Accordingly, second-quarter 2016 industrial production appears set to become the third consecutive quarter showing both annual and quarterly contractions, and the fifth quarter out of the last six, to decline quarter-to-quarter. Nothing like this ever has been seen outside of formally recognized recessions, in the history of the Index of Industrial Production, which goes back to 1918 (1919 in terms of year-to-year growth rates). The United States is in recession, and formal recognition of that remains likely in the next several months.

An overriding issue that has continued to stymie the Fed and other central banks is that the U.S. economy never really recovered from the “2007 Recession.” The unfolding “new” downturn remains no more than another down-leg in an economic collapse that began to show itself in 2005 and 2006 (see [No. 777 Year-End Special Commentary](#)). In the post-benchmark revision era for Industrial Production (see [Commentary No. 796-A](#) for specifics), the headline production series recovered its pre-recession high only in November 2014, and it has been in fairly-consistent monthly decline ever since, falling month-to-month in 14 out of the 18 subsequent months. The headline “recovery” in the November 2014 production likely was gimmicked. Nonetheless, the headline May 2016 production level stood at 2.94% (-2.94%) below that one-month recovery high, and 2.06% (-2.06%) below the November 2007 pre-recession peak.

Separately, the dominant manufacturing sector of industrial production never recovered its pre-recession peak of December 2007, currently down by 6.55% (-6.55%) from that level, as of May 2016.

Quarterly and Annual Production Contractions. Annual growth in aggregate production held in negative territory for the ninth straight month, down by 1.40% (-1.40%) in May 2016, again, putting second-quarter 2016 production on virtually certain tracks for quarter-to-quarter and annual contractions, consecutive events unprecedented outside of formal recessions. With two months of reporting in hand, second-quarter 2016 production is on track for a year-to-year contraction of 1.22% (-1.22%), and for an annualized quarter-to-quarter contraction of 1.41% (-1.41%).

Previously, first-quarter 2015 industrial production contracted at an annualized pace of 1.85% (-1.85%), followed by a second-quarter 2015 contraction of 2.75% (-2.75%), with a third-quarter 2015 production gain of 1.53%, followed by an unrevised fourth-quarter 2015 contraction of 3.33% (-3.33%). The first-quarter 2016 annualized quarterly decline revised to 1.62% (-1.62%).

Year-to-year growth patterns in quarterly production continued to slow and now have declined, ranging from a positive 2.43% in first-quarter 2015, to 0.36% in second-quarter 2015, to 0.12% in third-quarter 2015, to an unrevised annual decline of 1.62% (-1.62%) in fourth-quarter 2015, and a revised annual contraction of 1.60% (-1.60%) in first-quarter 2016.

Headline Industrial Production—May 2016. In the context of the significantly-negative, April 1st benchmark revisions (see [Commentary No. 796-A](#)) and continued prior-period revisions with subsequent headline reporting through the current May 2016 detail, the headline monthly contraction in May 2016

industrial production was 0.42% (-0.42%). That was against a downwardly-revised gain of 0.57% in April 2016, a deeper monthly contraction in revision of 0.98% (-0.98%) for March, and a minimally revised decline of 0.18% (-0.18%) in February.

Net of prior-period revisions, May 2016 monthly activity fell by 0.57% (-0.57%).

Reflected in *Graphs 6, 7, 12 and 14* in the *Reporting Detail*, by major industry groups, the headline May 2016 monthly aggregate production decline of 0.42% (-0.42%) [an April 2016 gain of 0.57%] was composed of a monthly May decline of 0.40% (-0.40%) [an April gain of 0.20%] in manufacturing activity; a May gain of 0.22% [an April decline of 2.58% (-2.58%)] in mining activity (including oil and gas production); and a May decline of 1.04% (-1.04%) [an April jump of 6.08%] in utilities activity.

Year-to-year change in May 2016 was a drop of 1.40% (-1.40%), following revised annual declines in April 2016 of 1.22% (-1.22%), in March 2016 of 2.01% (-2.01%), in February 2016 of 1.36% (-1.36%).

Production Graphs—Corrected and Otherwise. The regular graphs of headline production level and annual growth detail are found in the *Reporting Detail* (*Graphs 3 to 6*), along with the drill-down graphs of major subcomponents of the production series (*Graphs 7 to 20*). The level of headline production showed a topping-out process late in 2014, followed by a deepening downturn into first- and second-quarter 2015. Third-quarter 2015 showed some bounce, but activity in fourth-quarter 2015 and in first- and second-quarter 2016 turned down anew, dropping sharply into negative year-to-year growth and quarter-to-quarter growth, patterns never seen outside of what have become designated as formal recessions. Such faltering patterns of monthly, quarterly and annual decline last were seen in the depths of the economic collapse from 2007 into 2009.

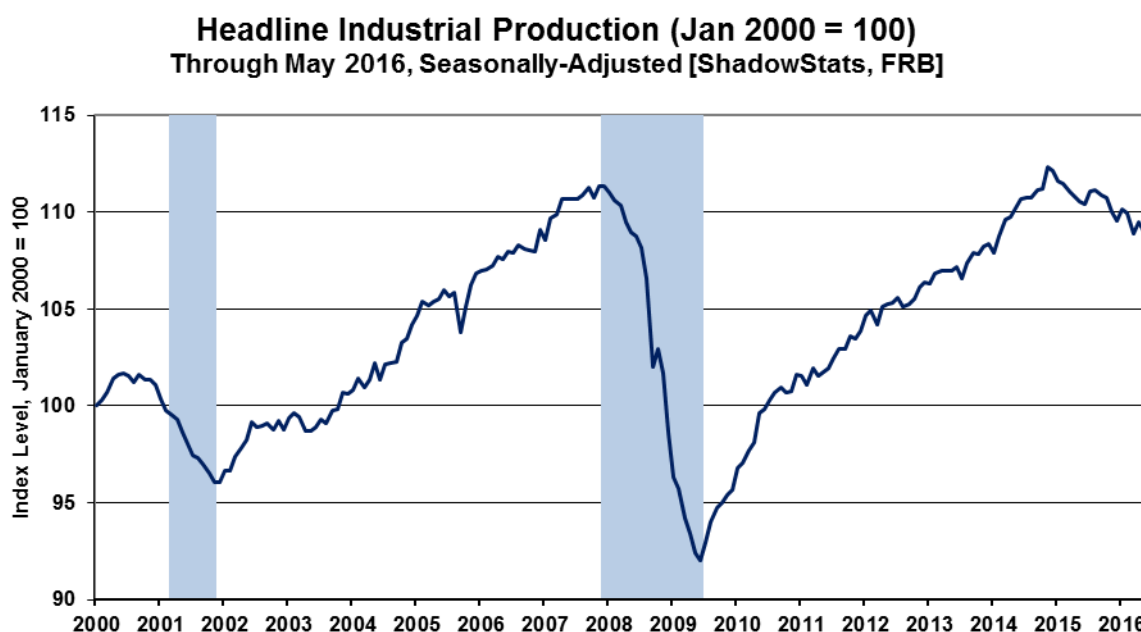
Headline reporting for May 2016 has set second-quarter 2016 production growth for virtually certain year-to-year and quarter-to-quarter declines.

Graphs 1 and 2, which follow in this section, address reporting quality issues tied just to the overstatement of headline growth in the total series that results directly from the Federal Reserve Board using too-low an estimate of inflation in deflating some components of its production estimates into real dollar terms, for inclusion in the Index of Industrial Production. Hedonic quality adjustments to the inflation estimates understate the inflation rates used in deflating those components; thus overstating the resulting inflation-adjusted growth in the headline industrial production series (see [Public Comment on Inflation](#) and *Chapter 9* of [2014 Hyperinflation Report—Great Economic Tumble](#)).

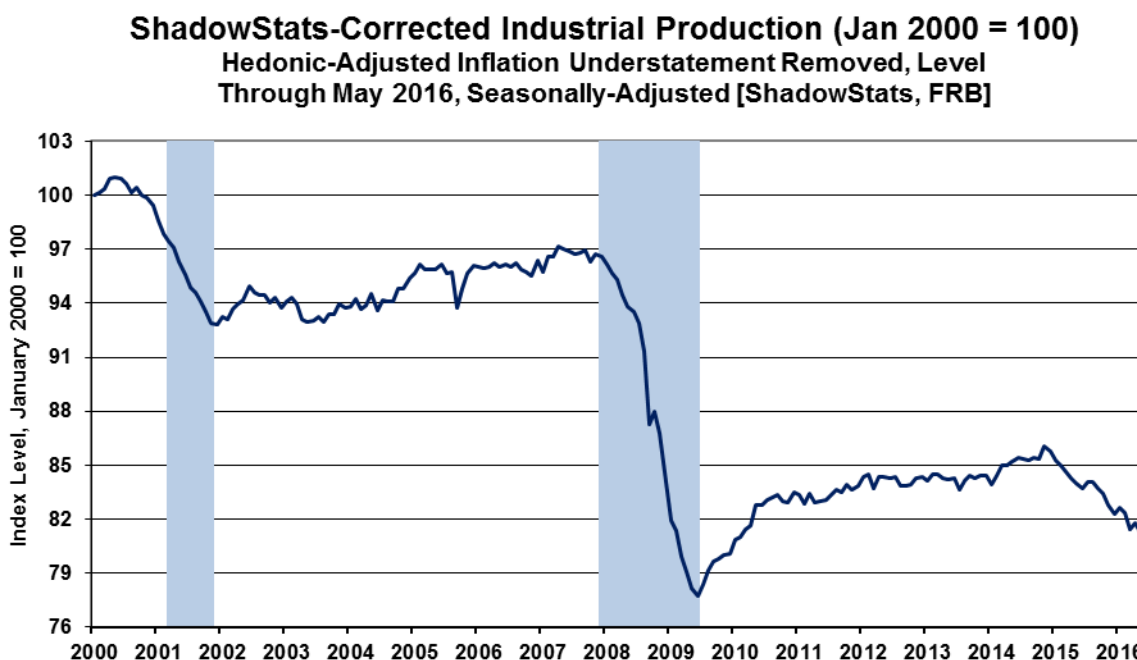
Graph 1 shows official, headline industrial production reporting, but indexed to January 2000 = 100, instead of the Fed's formal index that is set at 2012 = 100. The 2000 indexing simply provides for some consistency in the series of revamped "corrected" graphics including real retail sales (see [Commentary No. 807](#) and tomorrow's *Commentary No. 814*), new orders for durable goods (see [Commentary No. 808](#)) and the GDP (see [Commentary No. 809](#)). It does not affect the appearance of the graph or reported growth rates (as can be seen with a comparison of *Graph 1* to *Graph 6* in the *Reporting Detail* section).

Graph 2 is a recast version of *Graph 1*, corrected for the estimated understatement of the inflation used in deflating certain components of the production index. Estimated hedonic-inflation adjustments have been backed-out of the official industrial-production deflators used for headline reporting.

Graph 1: Indexed Headline Level of Industrial Production (Jan 2000 = 100)



Graph 2: Headline ShadowStats-Corrected Level of Industrial Production (Jan 2000 = 100)



This “corrected” *Graph 2* shows some growth in the period subsequent to the official June 2009 trough in production activity, but that upturn has been far shy of the full recovery and the renewed expansion reported in official GDP estimation (again, see [Commentary No. 808](#) and [No. 777 Year-End Special](#)

[Commentary](#)). Unlike the headline industrial production data and the headline GDP numbers, corrected production levels never recovered pre-recession highs, although the aggregate production index now has backed off its one-month “recovery” in November 2014, and the manufacturing sector never recovered fully. Instead, the “corrected” series entered a period of protracted low-level, but up-trending, stagnation in 2010, with irregular quarterly contractions seen through 2014, and an irregular uptrend into 2014, a topping-out in late-2014 and generally turning lower through 2015 and through second-quarter 2016.

Where the corrected series has remained well shy of a formal recovery, both the official and corrected series suffered an outright contraction in both first- and second-quarter 2015; this is a pattern of severe economic weakness last seen during the economic collapse. Despite the brief third-quarter 2015 uptick, headline fourth-quarter 2015 and first- and second-quarter 2016 industrial production have continued in annual and quarter-to-quarter contractions.

Producer Price Index (PPI)—May 2016—Goods Inflation Increased by 0.66%; Construction Inflation Rose by 0.09%; Profit Margins in Services Sector 0.18%; Aggregate PPI Rose by 0.36%.

The aggregate monthly increase of 0.36% in May 2016 PPI was dominated by goods inflation, along with some muting from weaker inflation on the services side. Indeed, a partial offset to the gain in the pace of goods inflation was the relatively weaker gain in the more-heavily-weighted and counter-intuitive services sector. The net increase there resulted largely from the “trade” services sector, with higher margins spread across a number of fields.

Despite its light weighting in the aggregate, construction inflation showed a continuing pickup, with a seasonally-adjusted monthly gain in May 2016 inflation of 0.09%, not a happy signal for inflation-adjusted real construction spending.

Discussed in the *Reporting Detail*, the conceptual differences between goods inflation and services profit margins do not blend well and are not merged easily or meaningfully in this current version of PPI. The dual measures are more meaningful viewed independently than as the hybrid measure of the headline Producer Price Index Final Demand.

May 2016 Headline PPI Detail. The seasonally-adjusted, month-to-month, headline Producer Price Index (PPI) Final Demand inflation for May 2016 was a gain of 0.36%, versus a monthly gain of 0.18% in April. The impact of seasonal adjustments on the headline PPI reporting was positive in May, where the unadjusted aggregate monthly May measure gained 0.27%.

On a not-seasonally-adjusted basis—all annual growth rates are expressed unadjusted—year-to-year PPI Final Demand inflation in May 2016 was a decline of 0.09% (-0.09%) having been “unchanged” at 0.00% in April 2016. Unadjusted January 2016 annual PPI inflation revised from down by 0.18% (-0.18%) to “unchanged” at 0.00%.

For the three major subcategories of May 2016 Final Demand PPI, headline monthly Goods inflation rose by 0.66%, Services inflation gained 0.18%, and Construction inflation rose by 0.09%.

Final Demand Goods (Weighted at 33.60% of the Aggregate Index). Running somewhat in parallel with the old Finished Goods PPI series, headline month-to-month Final Demand Goods inflation in May 2016 rose by 0.66%, up from 0.19% in April. There was neutral impact on the aggregate headline May reading

from underlying seasonal-factor adjustments. Not-seasonally-adjusted, May Final Demand Goods inflation also rose by 0.66% for the month.

Unadjusted, year-to-year goods inflation in May 2016 declined by 2.63% (-2.63%), having declined by 1.93% (-1.93%) in April 2016.

Headline seasonally-adjusted monthly changes by major components of the May 2016 Final Demand Goods:

- “Foods” inflation (weighted at 5.56% of the total index) rose month-to-month in May 2016 by 0.35%, having declined by 0.35% (-0.35%) in April. Seasonal adjustments were a negative factor for the May monthly change, which was up by 0.61% unadjusted. Unadjusted and year-to-year, annual May 2016 foods inflation declined by 2.61% (-2.61%), versus a decline in April 2016 of 2.04% (-2.04%).
- “Energy” inflation (weighted at 5.23% of the total index) rose by 2.79% in May 2016, having gained 0.23% in April, with the May reading hit again by seasonal adjustments. Unadjusted, monthly energy inflation rose by 3.11% in May. Unadjusted and year-to-year, the May 2016 annual contraction in energy prices widened to 14.60% (-14.60%), versus an annual decline in April 2016 of 11.97% (-11.97%).
- “Less foods and energy” (“Core” goods) monthly inflation (weighted at 22.81% of the total index) rose by 0.27% in May 2016, the same monthly gain as in April. Seasonal adjustments were positive for monthly core inflation, with an unadjusted monthly gain of 0.18%. Unadjusted and year-to-year, May 2016 was up by 0.73%, having increased in April 2016 by 0.64%.

Final Demand Services (Weighted at 64.32% of the Aggregate Index). Headline monthly Final Demand Services inflation rose by 0.18% in May 2016, having increased by 0.09% in April. The overall seasonal-adjustment impact on headline May services inflation was positive, with an unadjusted monthly gain of 0.09%. Year-to-year, unadjusted May 2016 services inflation rose to 1.37%, from 1.00% in April 2016.

The headline monthly changes by major component for May 2016 Final Demand Services inflation:

- “Services less trade, transportation and warehousing” inflation, or the “Other” category (weighted at 38.97% of the total index), declined by 0.18% (-0.18%) in May 2016, having increased by 0.27% in April 2016. Seasonal-adjustment impact on the adjusted May detail was positive, where the unadjusted monthly reading had been a decline of 0.27% (-0.27%). Unadjusted and year-to-year, May 2016 “other” services inflation was 1.29%, versus 1.47% in April 2016.
- “Transportation and warehousing” inflation (weighted at 4.99% of the total index) fell month-to-month in May 2016 by 0.62% (-0.62%), having declined in April by 0.35% (-0.35%). Seasonal adjustments had positive impact on the headline May number, where the unadjusted monthly reading had been a decline of 0.80% (-0.80%). Unadjusted and year-to-year, May 2016 transportation inflation fell by 2.94% (-2.94%), following an annual decline of 2.33% (-2.33%) in April 2016.
- “Trade” inflation (weighted at 20.36% of the total index) rose by 1.25% in the month of May 2016, having declined by 0.09% (-0.09%) in April. Seasonal adjustments had a positive impact here, where unadjusted monthly inflation gained 1.16% in May. Unadjusted and year-to-year, May 2016 trade inflation rose by 2.43%, having gained 0.99% in April 2016.

Final Demand Construction (Weighted at 2.08% of the Aggregate Index). Although a fully self-contained subsection of the Final Demand PPI, Final Demand Construction inflation receives no formal headline coverage. Nonetheless, headline numbers are published, and month-to-month construction inflation rose by 0.09% in May 2016, having gained 0.79% in April. The impact of seasonal factors on the May reading was neutral, where the unadjusted monthly change also was a gain of 0.09%.

Further details on other construction indices and durable goods inflation are covered in the *Reporting Detail*.

[The Reporting Detail section contains significant additional graphs and statistical detail.]

REPORTING DETAIL

INDEX OF INDUSTRIAL PRODUCTION (May 2016)

The Recession Continued to Deepen. With headline May 2016 reporting in place, second-quarter 2016 industrial production virtually is assured of annual and quarterly contractions. In order for second-quarter activity to turn positive quarter-to-quarter, headline June 2016 production would have to rise by an unlikely 1.28% for the month, versus the current headline May 2016 detail. More significantly, for second-quarter 2016 production to turn positive year-to-year, June production would have to jump month-to-month by more than 3.92%, which is not going to happen.

Accordingly, second-quarter 2016 industrial production appears set to become the third consecutive quarter, showing both annual and quarterly contractions, and the fifth quarter out of the last six, to decline quarter-to-quarter. Nothing like this ever has been seen in the history of the Index of Industrial Production, which goes back to 1918 (1919 in terms of year-to-year growth rates), outside of formally recognized recessions. We are in a recession, and formal recognition remains likely in the next several months.

An overriding issue that has continued to stymie the Fed and other central banks is that the U.S. economy never really recovered from the “2007 Recession.” The unfolding “new” downturn remains no more than another down-leg in an economic collapse that began to show itself in 2005 and 2006 (see [No. 777 Year-End Special Commentary](#)). In the post-benchmark revision era for Industrial Production (see

[Commentary No. 796-A](#) for specifics), the headline (not the ShadowStats-corrected) series recovered its pre-recession high only in November 2014, and it has been in fairly-consistent monthly decline ever since, falling month-to-month in 14 out of the 18 subsequent months. The headline “recovery” in November 2014 production likely was a gimmick. Nonetheless, the headline May 2016 aggregate production level stood at 2.94% (-2.94%) below that one-month recovery high, and was 2.06% (-2.06%) below its pre-recession peak of November 2007.

Separately, the dominant manufacturing sector of industrial production never recovered its pre-recession peak of December 2007, currently down by 6.55% (-6.55%) from that level as of May 2016.

Quarterly and Annual Production Contractions. Annual growth in aggregate production held in negative territory for the ninth straight month, down by 1.40% (-1.40%) in May 2016, again, putting second-quarter 2016 production on virtually certain tracks for quarter-to-quarter and annual contractions, consecutive events unprecedented outside of formal recessions. With two months of reporting in hand, second-quarter 2016 production is on track for a year-to-year contraction of 1.22% (-1.22%), and for an annualized quarter-to-quarter contraction of 1.41% (-1.41%).

First-quarter 2015 industrial production contracted at an annualized quarterly pace of 1.85% (-1.85%), followed by a second-quarter 2015 contraction of 2.75% (-2.75%), with a third-quarter 2015 production gain of 1.53%, followed by an unrevised fourth-quarter 2015 contraction of 3.33% (-3.33%). The first-quarter 2016 annualized quarterly decline revised to 1.62% (-1.62%) [previously 1.60% (-1.60%), initially down by 2.24% (-2.24%)].

Year-to-year growth patterns in quarterly production continued to slow and now have declined, ranging from a positive 2.43% in first-quarter 2015, to 0.36% in second-quarter 2015, to 0.12% in third-quarter 2015, to an unrevised annual decline of 1.62% (-1.62%) in fourth-quarter 2015, and a revised annual contraction of 1.60% (-1.60%) [previously down by 1.55% (-1.55%), initially 1.70% (-1.70%)] in first-quarter 2016.

Headline Industrial Production—May 2016. The Federal Reserve Board released its first estimate of seasonally-adjusted, May 2016 industrial production on June 14th. In the context of the significantly-negative, April 1st benchmark revisions (see [Commentary No. 796-A](#)) and continued prior-period revisions with subsequent headline reporting through the current May 2016 detail, the monthly contraction in May 2016 was 0.42% (-0.42%). That was against a downwardly-revised gain of 0.57% [previously up by 0.66%] in April 2016, a deeper monthly contraction in revision of 0.98% (-0.98%) [previously down by 0.87% (-0.87%), initially down by 0.60% (-0.60%)] in March 2016, and a minimally revised decline of 0.18% (-0.18%) [previously down by 0.21% (-0.21%), down by 0.59% (-0.59%), and initially benchmarked at down 0.52% (-0.52%)] in February.

Net of prior-period revisions, May 2016 monthly activity fell by 0.57% (-0.57%).

Detailed in *Graphs 6, 7, 12 and 14*, by major industry groups, the headline May 2016 monthly aggregate production decline of 0.42% (-0.42%) [an April 2016 gain of 0.57%] was composed of a monthly May decline of 0.40% (-0.40%) [an April gain of 0.20%] in manufacturing activity; a May gain of 0.22% [an April decline of 2.58% (-2.58%)] in mining activity (including oil and gas production); and a May decline of 1.04% (-1.04%) [an April jump of 6.08%] in utilities activity.

Year-to-year change in May 2016 was a drop of 1.40% (-1.40%), following revised annual declines in April 2016 of 1.22% (-1.22%) [previously down by 1.07% (-1.07%)], in March 2016 of 2.01% (-2.01%) [previously down by 1.94% (-1.94%), initially by 2.03% (-2.03%)], in February 2016 of 1.36% (-1.36%) [previously down by 1.40% (-1.40%), down by 1.76% (-1.76%), and initially benchmarked down by 1.58% (-1.58%)].

Production Graphs. The regular two sets of plots for long- and short-term industrial production levels and annual growth rates (*Graphs 3 to 6*) set the background for the drill-down detail graphs of various components of the aggregate industrial series (*Graphs 7 to 20*).

Graphs 3 and 4, and *Graphs 5 and 6* show headline industrial production activity to date. *Graph 3* shows the monthly year-to-year percent change in the aggregate series, in historical context since World War II. With the headline annual declines in monthly production currently hitting 1.40% (-1.40%) in May 2016, and with headline annual contractions in place for the last nine months, the pattern is one that never has been seen outside of formal recessions.

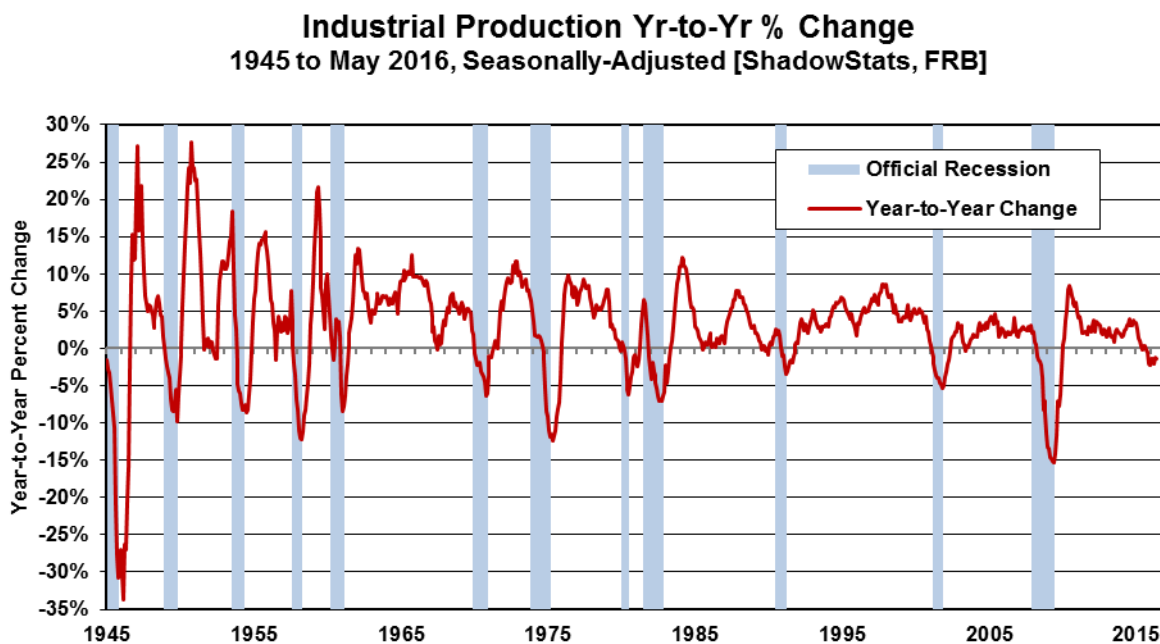
Graph 4 shows the monthly level of the production index post-World War II, with a topping-out and renewed downturn—deepening quarterly contractions in first- and second-quarter 2015, with a bounce in third-quarter 2015, followed by renewed and deeper contractions in fourth-quarter 2015 and first- and second-quarter 2016. Such patterns of monthly and quarterly and annual declines were seen last in the economic collapse into 2009. *Graphs 5 and 6* show the same series in near-term detail, beginning in January 2000.

Seen most clearly in *Graph 5*, the pattern of year-to-year activity dipped anew in 2013, again, to levels usually seen at the onset of recent recessions, bounced higher into mid-2014, fluctuated thereafter, now turning sharply negative, again, as seen only in formal recessions. Year-to-year growth remains well off the recent relative peak for the series, which was 8.48% in June 2010, going against the official June 2009 trough of the economic collapse. Indeed, as shown in *Graph 3*, the June 2009 (the end of second-quarter 2009) year-to-year contraction of a 15.40% (-15.40%) was the steepest annual decline in production since the shutdown of wartime production following World War II.

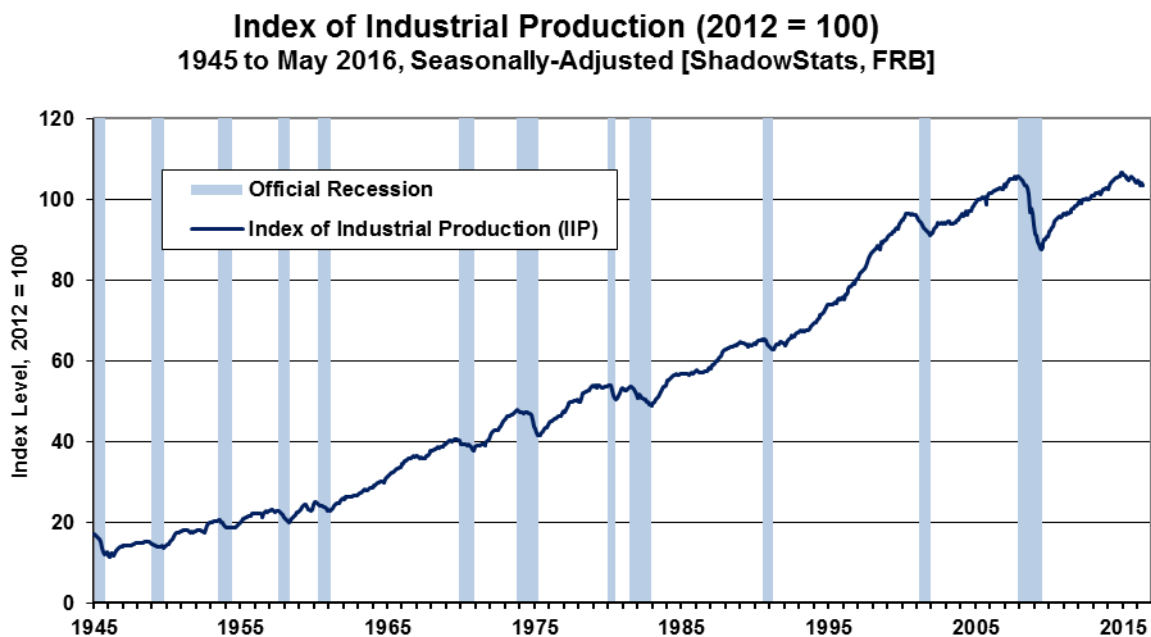
Although now-faltering official production levels had moved higher since the June 2009 trough, corrected for the understatement of inflation used in deflating portions of the industrial production index (see the *Opening Comments* section, *Graph 2*) the series has shown more of a pattern of stagnation with a slow upside trend, since 2009, with irregular quarterly contractions interspersed. The slow uptrend continued into a topping out pattern in late-2014. Headline growth—purportedly already neutered of any inflation impact—contracted in both first- and second-quarter 2015, with monthly activity moving consistently lower again, following a third-quarter increase. The “corrected” series has done the same but remains well shy of ever reflecting a formal recovery.

[Graphs 3 to 8 begin on the following page]

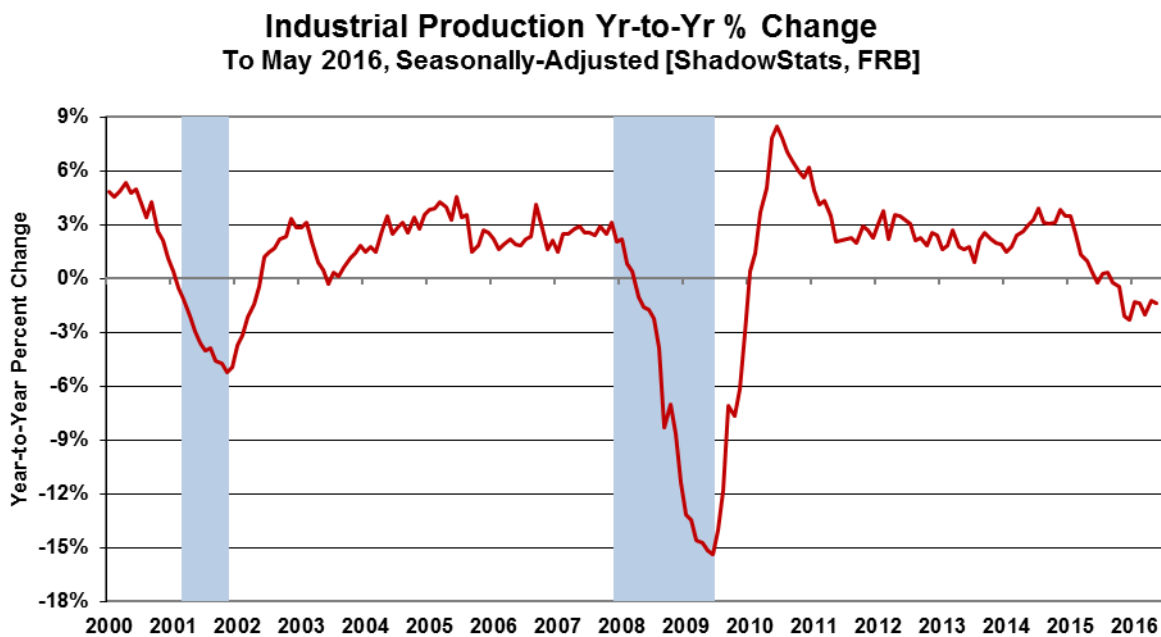
Graph 3: Industrial Production, Year-to-Year Percent Change since 1945



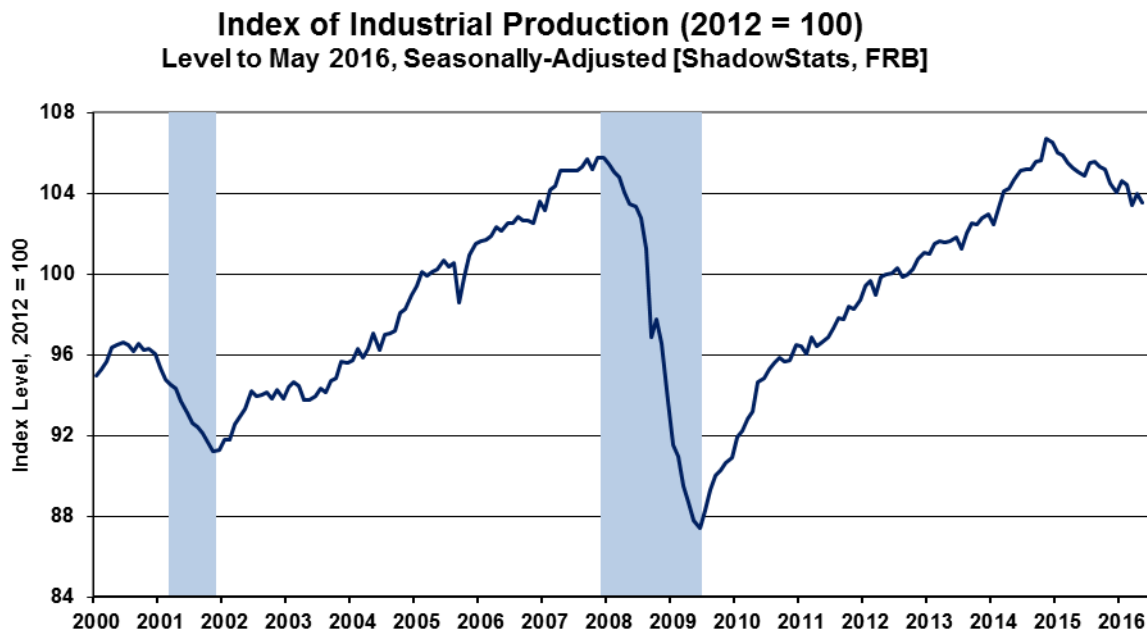
Graph 4: Index of Industrial Production (Aggregate) since 1945



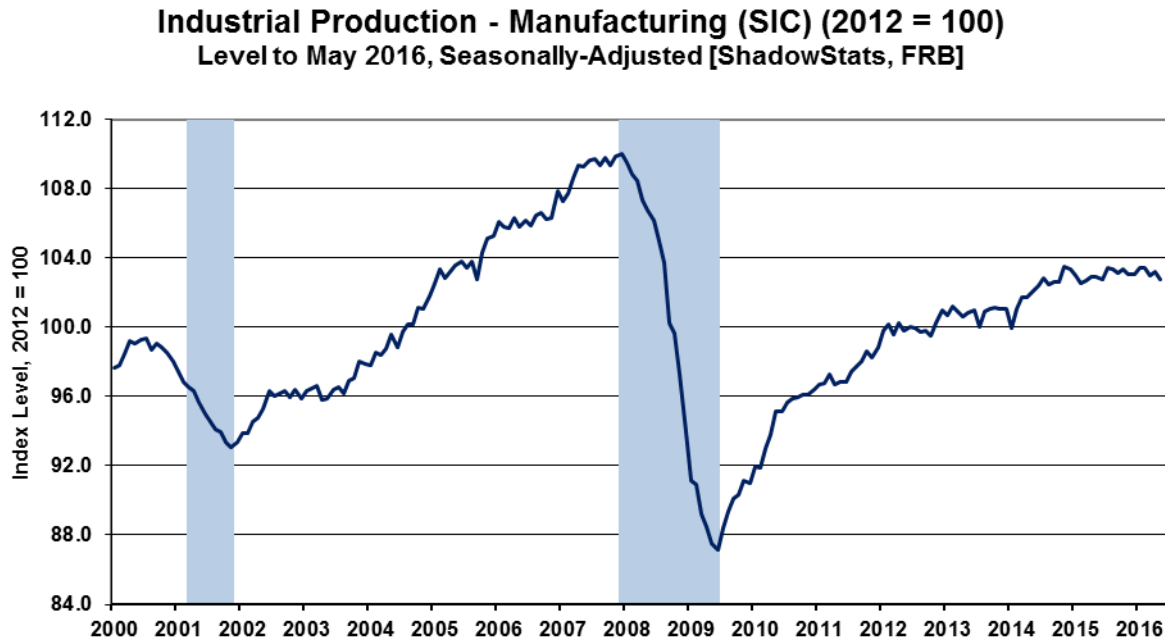
Graph 5: Aggregate Industrial Production, Year-to-Year Percent Change since 2000



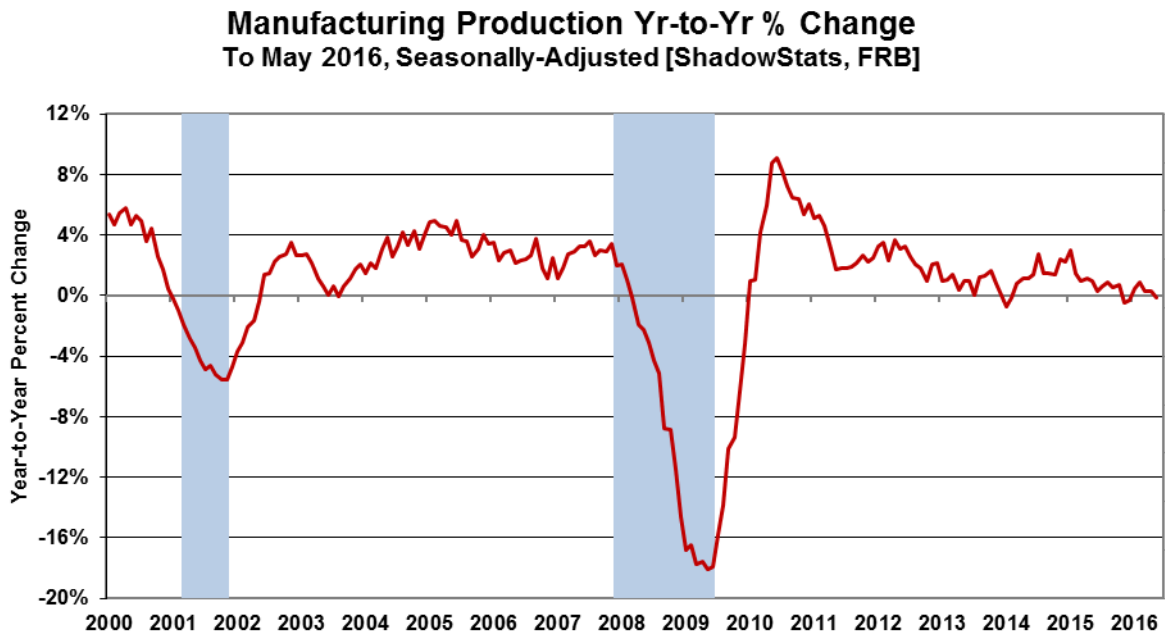
Graph 6: Index of Aggregate Industrial Production since 2000



Graph 7: Industrial Production - Manufacturing (78.48% of the Aggregate in 2015)



Graph 8: Industrial Production - Manufacturing, Year-to-Year Percent Change Since 2000



Drilling Down into the May 2016 U.S. Industrial Production Detail. Graphs 6, 7, 12 and 14 show headline reporting of industrial production and its major components. The broad, aggregate index (Graph 6) contracted in both first- and second-quarter 2015, with a third-quarter 2015 bounce, followed by

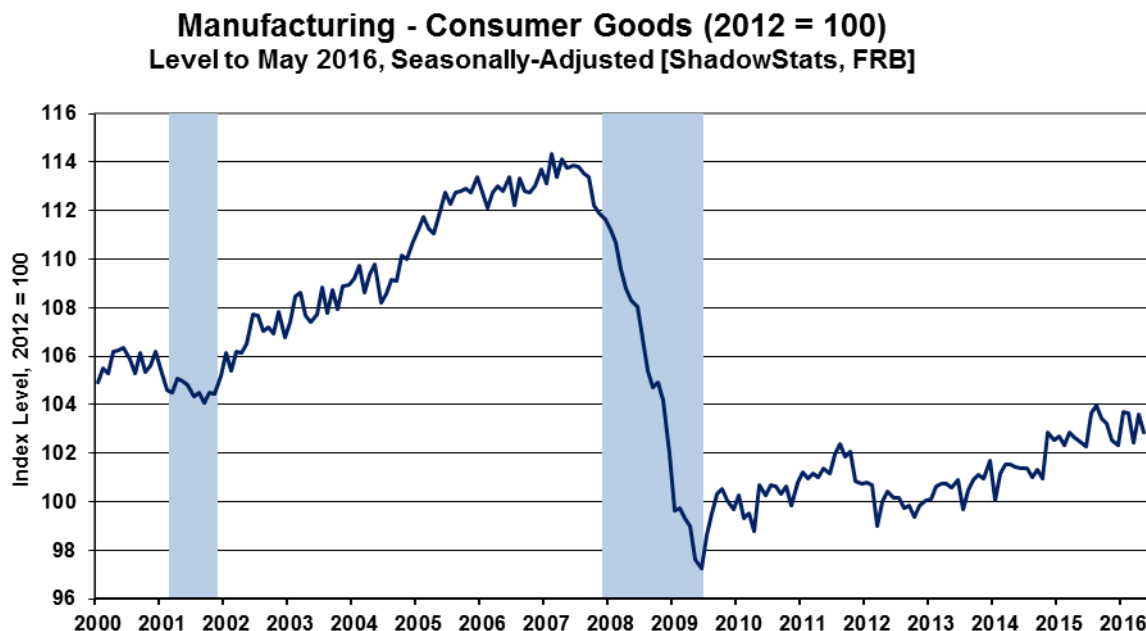
ongoing quarterly and annual contractions in fourth-quarter 2015 and in first- and second-quarter 2016. Such circumstances simply are not seen outside of recessions, discussed earlier in this section.

Again, in headline May 2016 reporting, manufacturing showed a monthly decline, as did utilities, but mining reversed its recent downtrend, showing a monthly gain for the first time since August 2015, thanks largely to a one-month upturn in coal production and level activity in oil and gas extraction, as reflected in *Graphs 7, 12 and 14*, respectively.

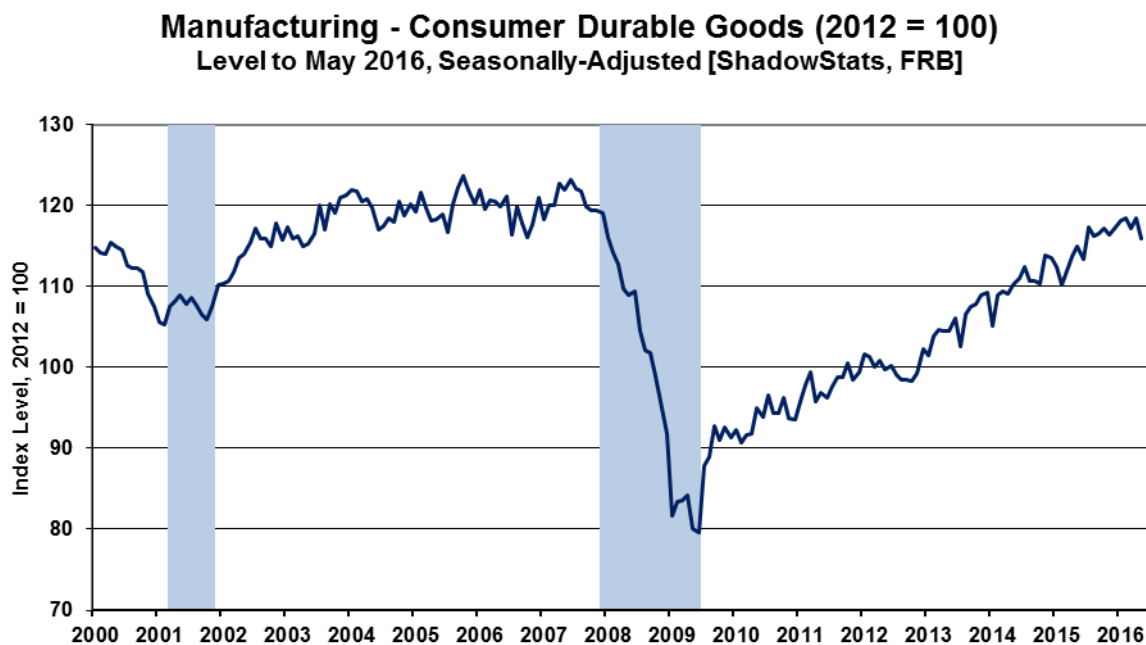
Graph 17 of the dominant manufacturing sector showed a month-to-month contraction of 0.40% (-0.40%) in May 2016, versus a downwardly revised gain of 0.20% [previously up by 0.31% in April]. The series remains down by 6.55% (-6.55%) from reclaiming its pre-recession high of December 2007. *Graph 18* reflects annual growth patterns in manufacturing, which have been fluttering at low levels since an initial bounce off the 2009 trough, turning down year-to-year by 0.15% (-0.15%) in May 2016.

The story with consumer goods remains bleak, in line with troubled real retail sales, as should be evident in the reporting of tomorrow's *Commentary No. 814*, and irrespective of the unsustainable auto sales increase in nominal April 2016 retail sales (see [Commentary No. 806](#)). May 2016 automobile manufacturing plunged by 4.2% (-4.2%), which remains heavily representative of conditions underlying roughly 70% of the GDP. Seen in *Graphs 9 to 11*, total consumer goods have remained in low-level stagnation since the economic collapse, with all the series in monthly contraction for May 2016, down respectively by 0.71% (-0.71%) for total consumer goods, with durables down by 2.15% (-2.15%) and nondurables down by 0.25% (-0.25%) in the month.

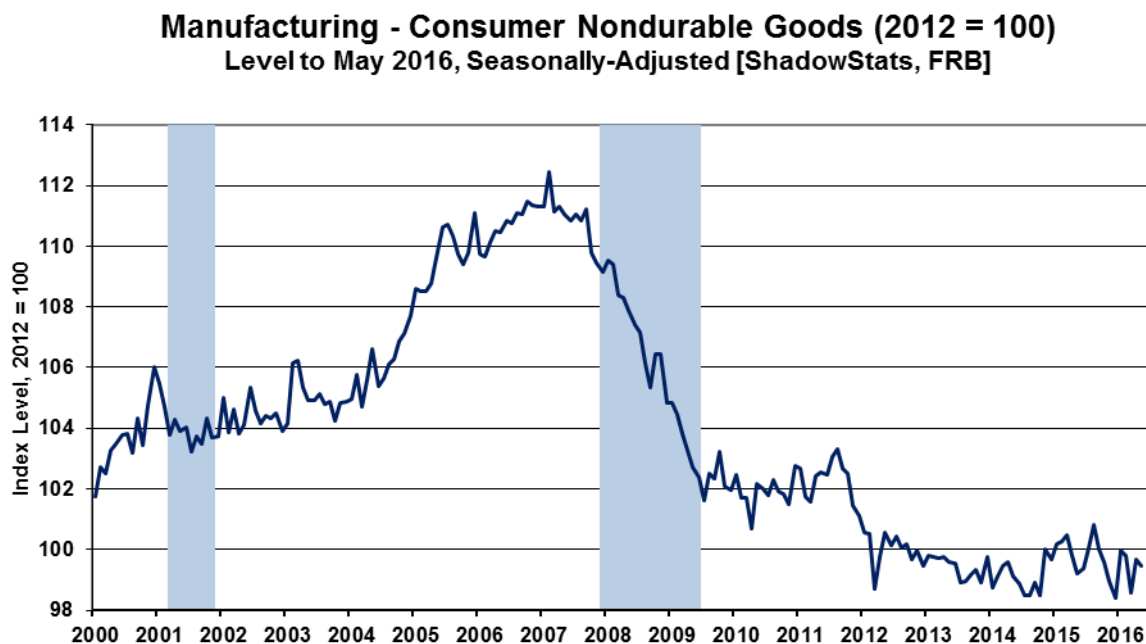
Graph 9: Consumer Goods (27.08% of the Aggregate in 2015)



Graph 10: Durable Consumer Goods (6.36% of the Aggregate in 2015)

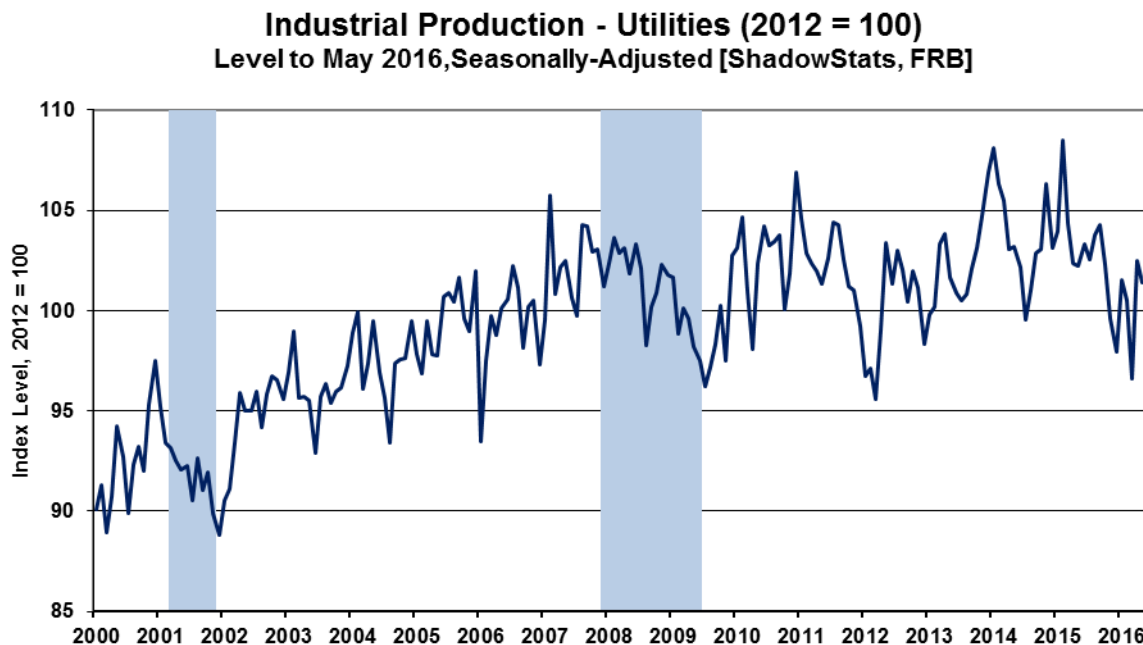


Graph 11: Nondurable Consumer Goods (20.73% of the Aggregate in 2015)

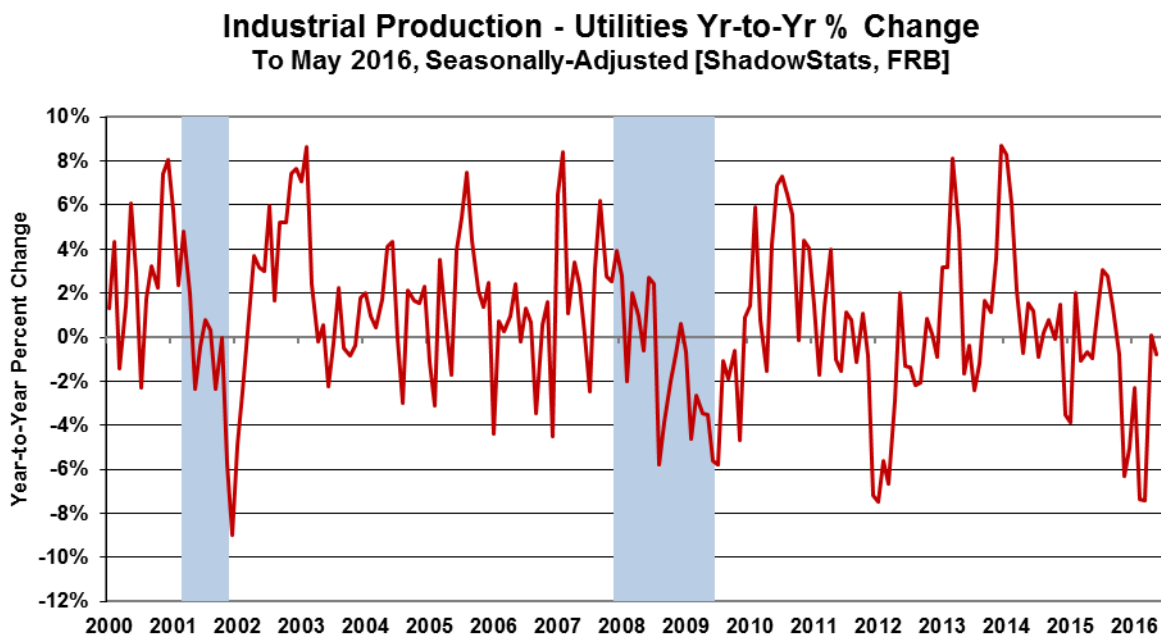


Monthly volatility seen the utilities sector (*Graph 12*) usually reflects unseasonable shifts in weather conditions and reversals of same, but the May 2016 shift was relatively mild, with utilities down by 1.04% (-1.04%), following an upwardly-revised surge of 6.08% [previously up by 5.75%] in April 2016.

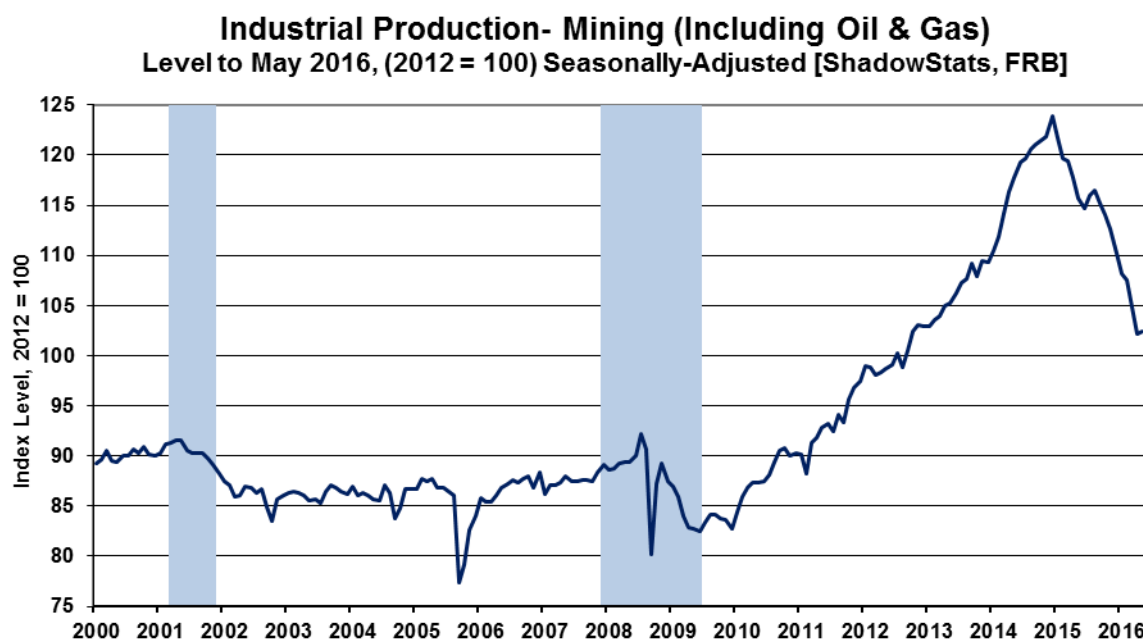
Graph 12: Industrial Production - Utilities (10.76% of the Aggregate in 2015)



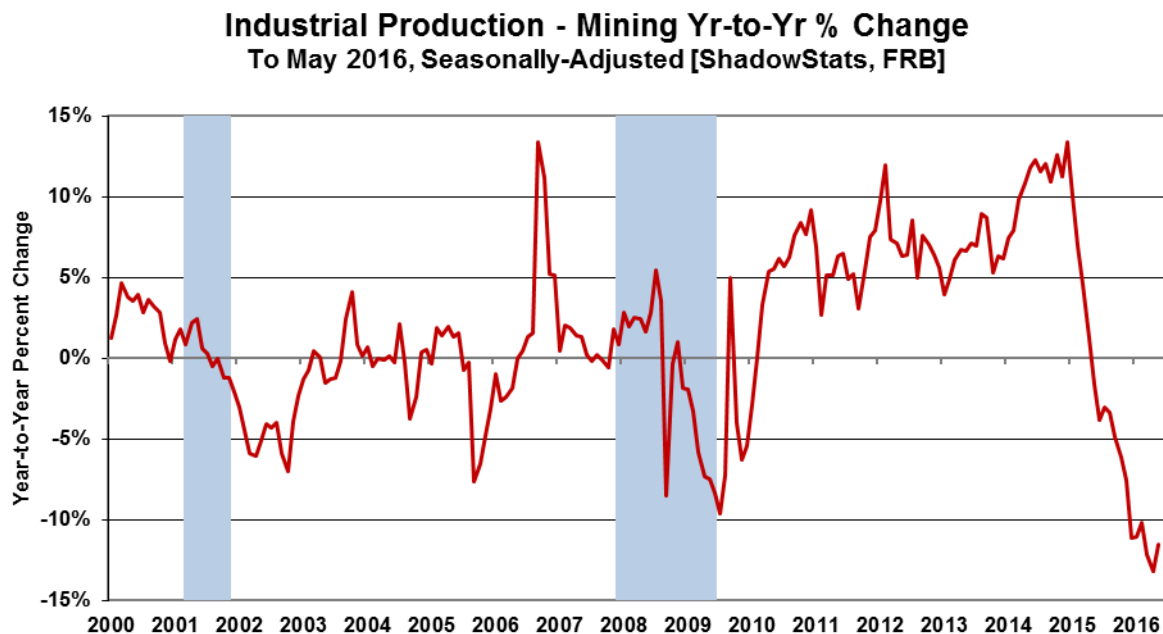
Graph 13: Industrial Production - Utilities, Year-to-Year Percent Change Since 2000



Graph 14: Industrial Production - Mining, Including Oil and Gas (10.76% of the Aggregate in 2015)



Graph 15: Industrial Production - Mining, Year-to-Year Percent Change



Activity in the mining (*Graph 14*), particularly in oil and gas exploration and production, and in coal production, remains the near-term focus of this analysis. This sector easily recovered its pre-recession high and accounts for the full “recovery,” albeit extremely short-lived, seen in the aggregate production

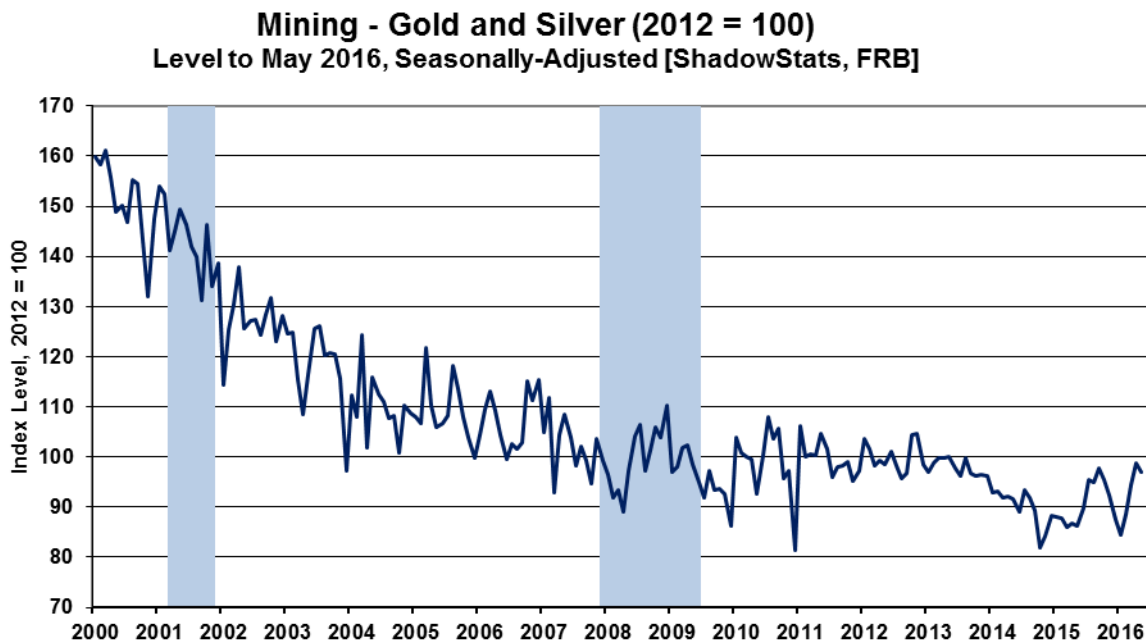
detail since the economic collapse. Since then, however, mining production has turned down sharply, reflecting a number of factors, including the impact of largely orchestrated lower oil prices (and related recent, now-faltering U.S. dollar strength), as well as U.S. government actions to limit coal consumption and production. Year-to-year May 2016 mining activity still was down by 11.52% (-11.52%), versus a revised annual decline in April 2016 of 13.20% (-13.20%) [initially down by 13.37% (-13.37%)].

That said, mining-sector activity showed its first uptick in ten months in May 2016, gaining 0.22%, versus a revised month-to-month decline in April of 2.58% (-2.58%) [previously down by 2.36% (-2.36%)]. Year-to-year change in this sector (*Graph 15*) also reflected a minimal uptick.

The May 2016 breather in mining activity largely reflected an 8.42% monthly gain in coal production (*Graph 17*), and reasonably stable gold and silver mining and oil and gas extraction (*Graphs 16 and 18*) in the month. Drilling and exploration continued to collapse (*Graph 19*).

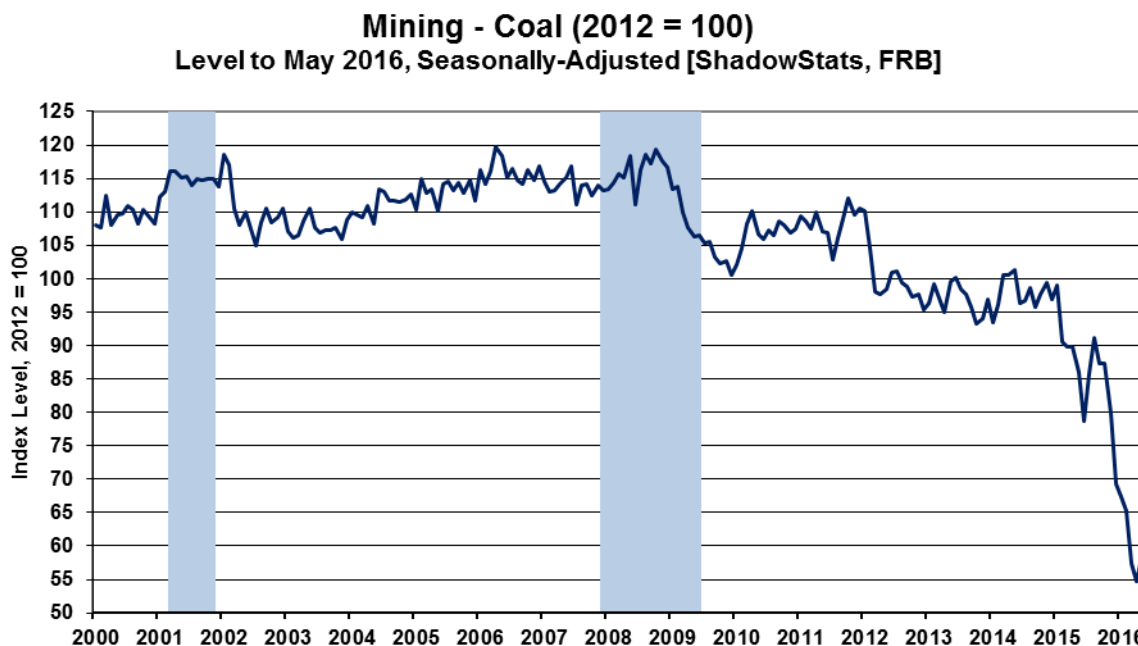
Graph 16 reflects monthly production continuing off the near-term-trough in activity for gold and silver, irrespective of the pummeling given the prices of precious metals in recent years by market interventions orchestrated by flailing central banks. Discussed in [General Commentary No. 811](#), however, pricing circumstances may be shifting to the upside for gold and silver, as well as for oil.

Graph 16: Mining – Gold and Silver Mining (Since 2000)

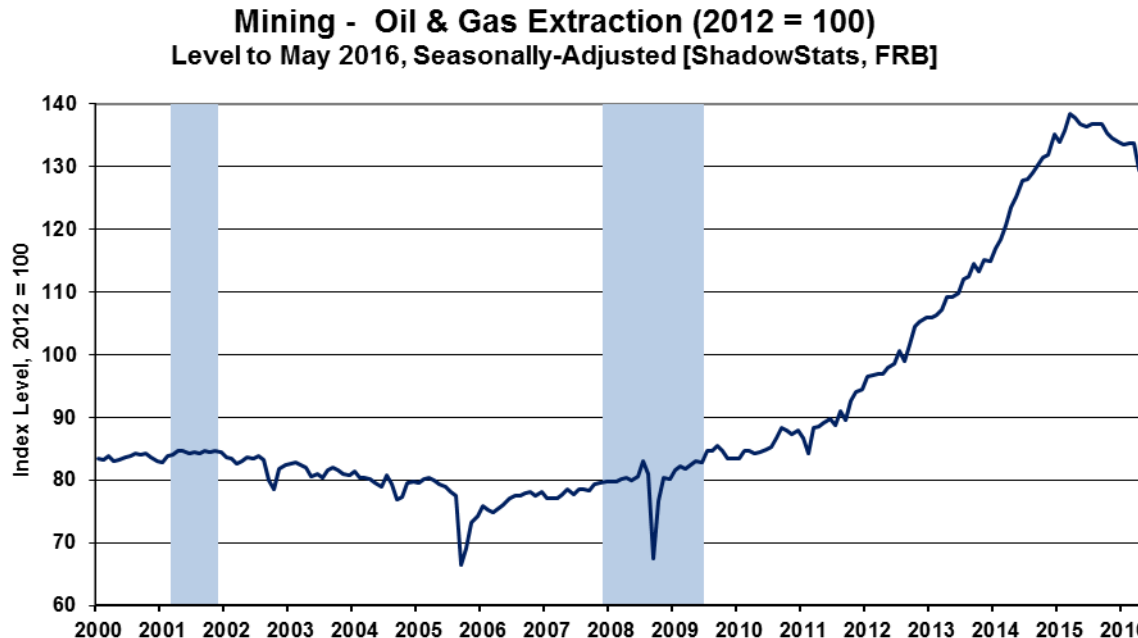


Graph 17 still shows an extraordinarily sharp drop in monthly coal production, despite the May 2016 monthly rebound of 8.42%, versus an unrevised monthly decline of 4.72% (-4.72%) in April 2016. May 2016 activity still was down by 31.04% (-31.04%) year-to-year, versus an unrevised annual plunge of 39.15% (-39.15%) in April 2016.

Graph 17: Mining - Coal Mining (Since 2000)



Graph 18: Mining – U.S. Oil & Gas Extraction (Since 2000)

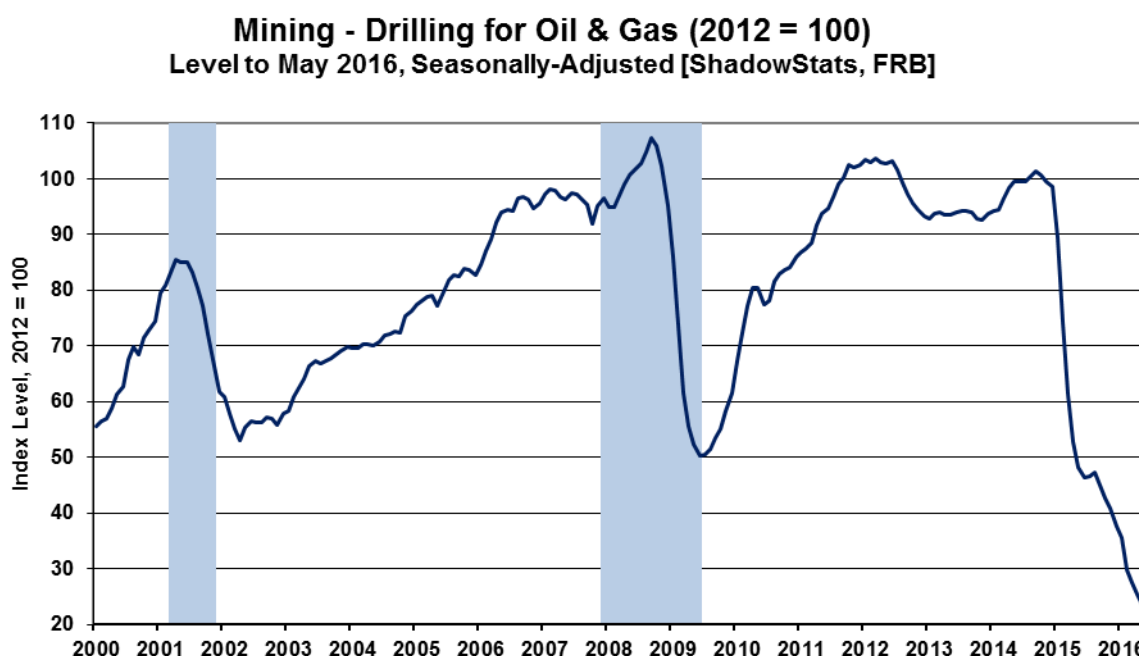


With oil prices moving off recent lows, oil and gas extraction still has remained well off its all-time high, but it leveled out in May 2016, down by just 0.02% (-0.02%) for the month, having declined by a revised 3.18% (-3.18%) [previously down by 2.13% (-2.13%)] for the month in April 2016, down year-to-year

by 5.39% (-5.39%) in May 2016, versus a revised annual decline of 6.07% (-6.07%) [previously down by 5.92% (-5.92%)] in April 2016, as seen in *Graph 18*. Exploration in terms of oil and gas drilling (*Graph 19*) continued to plunge, though, down month-to-month in May by 7.87% (-7.87%), versus an unrevised April 2016 decline of 6.82% (-6.82%), down by 51.30% (-51.30%) year-to-year in May 2016.

The recent collapse in drilling largely is an artefact of the massive U.S. dollar rally and oil-price plunge that began in July 2014. Those shifts appeared, at least initially, to be U.S.-orchestrated covert actions designed to stress Russia, financially, in response the circumstance in Ukraine. Since the related September 2014 peak in oil drilling, activity there has collapsed by 76.82% (-76.82%).

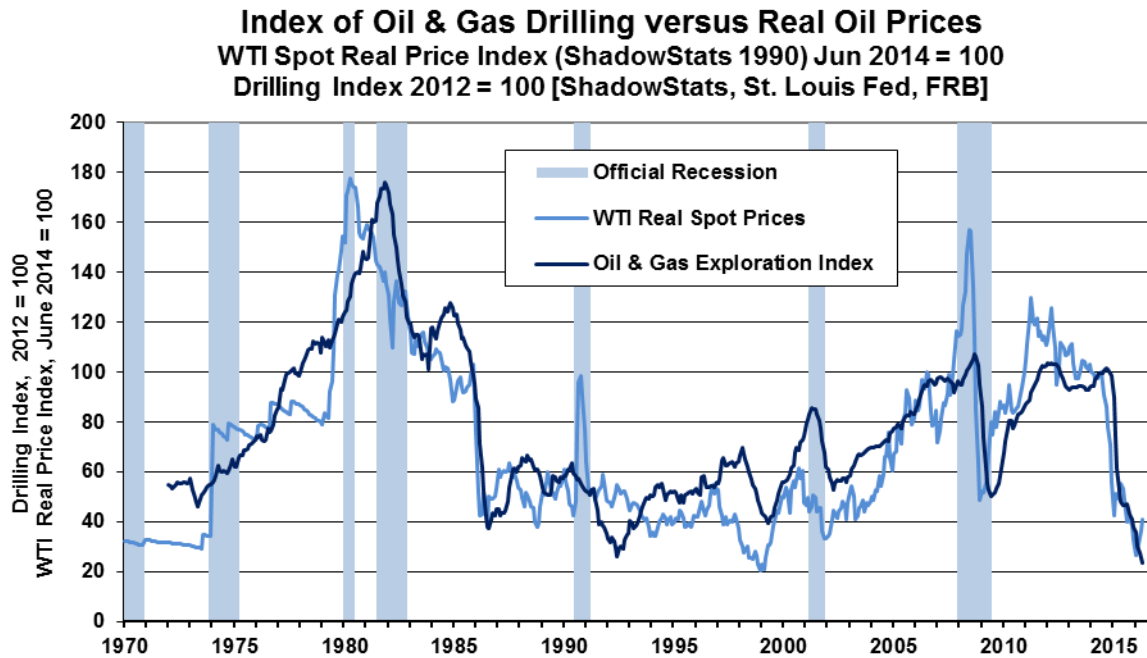
Graph 19: U.S. Drilling for Oil & Gas (Since 2000)



Shown in *Graph 20*, with some lag following the sharp movements in oil prices, oil and gas exploration tends to move in tandem. The oil price index used is for the West Texas Intermediate (WTI) monthly average spot price, deflated using the ShadowStats Alternate CPI measure (1990 Base).

With the dollar having started to weaken anew, dollar-denominated oil prices also have begun to strengthen, even in a circumstance with excess supply conditions. At such time as the U.S. dollar declines meaningfully—ShadowStats is looking for a massive sell-off in the dollar in the year ahead—U.S. dollar-denominated oil prices should rally (again see [General Commentary No. 811](#)).

Graph 20: Mining – U.S. Drilling for Oil & Gas versus Real Oil Prices (WTI ShadowStats 1990 Base)



PRODUCER PRICE INDEX—PPI (May 2016)

May 2016 PPI Goods Inflation Increased by 0.66%; Construction Inflation Rose by 0.09%; Profit Margins in the Dominant Services Sector Gained 0.18%; Aggregate PPI Rose by 0.36%. The aggregate monthly increase of 0.36% in May 2016 PPI was dominated by goods inflation, but with some muting from weaker inflation on the services side.

A partial offset to the gain in the pace of goods inflation was the relatively weaker gain in the more-heavily-weighted and counter-intuitive services sector. The net increase there resulted largely from the “trade” services sector, with higher margins spread across a number of fields.

Despite its light weighting in the PPI, construction inflation showed a continuing pickup, with a seasonally-adjusted monthly gain in headline inflation of 0.09%, not a happy sign for inflation-adjusted real construction spending.

Discussed below, the conceptual differences between goods inflation and services profit margins do not blend well and are not merged easily or meaningfully in this current version of PPI. The dual measures are more meaningful viewed independently than as the hybrid measure of the headline Producer Price Index Final Demand.

Inflation that Is More Theoretical than Real World? [This background text is as published previously.] Effective with January 2014 reporting, a new Producer Price Index (PPI) replaced what had been the traditional headline monthly measure of wholesale inflation in Finished Goods (see [Commentary No.](#)

[591](#)). In the new headline monthly measure of wholesale Final Demand, Final Demand Goods basically is the old Finished Goods series, albeit expanded.

The new and otherwise dominant Final Demand Services sector largely reflects problematic and questionable surveying of intermediate or quasi-wholesale profit margins in the services area. To the extent that profit margins shrink in the services sector, one could argue that the resulting lowered estimation of inflation actually is a precursor to higher inflation, as firms subsequently would move to raise prices, in an effort to regain more-normal margins. In like manner, in the circumstance of “increased” margins—due to the lower cost of petroleum-related products not being passed along immediately to customers—competitive pressures to lower margins would tend to be reflected eventually in reduced retail prices (CPI). The oil-price versus margin gimmick works both way. In times of rapidly rising oil prices, it mutes the increase in Final Demand inflation, in times of rapidly declining oil prices; it tends to mute the decline in Final Demand inflation.

The current PPI series remains an interesting concept, but it appears limited as to its aggregate predictive ability versus general consumer inflation. Further, there is not enough history available on the new series (just six years of post-2008-panic data) to establish any meaningful relationship to general inflation or other economic or financial series.

May 2016 Headline PPI Detail. The Bureau of Labor Statistics (BLS) reported June 15th, that the seasonally-adjusted, month-to-month, headline Producer Price Index (PPI) Final Demand inflation for May 2016 was a gain of 0.36%, versus a monthly gain 0.18% in April. The impact of seasonal adjustments on the headline PPI reporting was positive, where the unadjusted monthly May measure gained 0.27%.

Not an extraordinarily stable series, the PPI index is revised each month, for one month four months back in time. With the headline May 2016 detail, for example, January 2016 inflation was revised higher, with the headline adjusted index revising from 109.8 to 110.0, and with the monthly headline inflation being revised from 0.18% to 0.36%. That will tend to get passed along in next month’s revision.

On a not-seasonally-adjusted basis—all annual growth rates are expressed unadjusted—year-to-year PPI Final Demand inflation in May 2016 was a decline of 0.09% (-0.09%) having been “unchanged” at 0.00% in April 2016. Unadjusted January 2016 annual PPI inflation revised from down by 0.18% (-0.18%) to “unchanged” at 0.00%.

For the three major subcategories of May 2016 Final Demand PPI, headline monthly Goods inflation rose by 0.66%, Services inflation gained 0.18%, and Construction inflation rose by 0.09%.

Final Demand Goods (Weighted at 33.60% of the Aggregate Index). Running somewhat in parallel with the old Finished Goods PPI series, headline month-to-month Final Demand Goods inflation in May 2016 rose by 0.66%, up from 0.19% in April. There was neutral impact on the aggregate headline May reading from underlying seasonal-factor adjustments. Not-seasonally-adjusted, May Final Demand Goods inflation also rose by 0.66% for the month.

Unadjusted, year-to-year goods inflation in May 2016 declined by 2.63% (-2.63%), having declined by 1.93% (-1.93%) in April 2016.

Headline seasonally-adjusted monthly changes by major components of the May 2016 Final Demand Goods:

- “Foods” inflation (weighted at 5.56% of the total index) rose month-to-month in May 2016 by 0.35%, having declined by 0.35% (-0.35%) in April. Seasonal adjustments were a negative factor for the May monthly change, which was up by 0.61% unadjusted. Unadjusted and year-to-year, annual May 2016 foods inflation declined by 2.61% (-2.61%), versus a decline in April 2016 of 2.04% (-2.04%).
- “Energy” inflation (weighted at 5.23% of the total index) rose by 2.79% in May 2016, having gained 0.23% in April, with the May reading hit again by seasonal adjustments. Unadjusted, monthly energy inflation rose by 3.11% in May. Unadjusted and year-to-year, the May 2016 annual contraction in energy prices widened to 14.60% (-14.60%), versus an annual decline in April 2016 of 11.97% (-11.97%).
- “Less foods and energy” (“Core” goods) monthly inflation (weighted at 22.81% of the total index) rose by 0.27% in May 2016, the same monthly gain as in April. Seasonal adjustments were positive for monthly core inflation, with an unadjusted monthly gain of 0.18%. Unadjusted and year-to-year, May 2016 was up by 0.73%, having increased in April 2016 by 0.64%.

Final Demand Services (Weighted at 64.32% of the Aggregate Index). Headline monthly Final Demand Services inflation rose by 0.18% in May 2016, having increased by 0.09% in April. The overall seasonal-adjustment impact on headline May services inflation was positive, with an unadjusted monthly gain of 0.09%. Year-to-year, unadjusted May 2016 services inflation rose to 1.37%, from 1.00% in April 2016.

The headline monthly changes by major component for May 2016 Final Demand Services inflation:

- “Services less trade, transportation and warehousing” inflation, or the “Other” category (weighted at 38.97% of the total index), declined by 0.18% (-0.18%) in May 2016, having increased by 0.27% in April 2016. Seasonal-adjustment impact on the adjusted May detail was positive, where the unadjusted monthly reading had been a decline of 0.27% (-0.27%). Unadjusted and year-to-year, May 2016 “other” services inflation was 1.29%, versus 1.47% in April 2016.
- “Transportation and warehousing” inflation (weighted at 4.99% of the total index) fell month-to-month in May 2016 by 0.62% (-0.62%), having declined in April by 0.35% (-0.35%). Seasonal adjustments had positive impact on the headline May number, where the unadjusted monthly reading had been a decline of 0.80% (-0.80%). Unadjusted and year-to-year, May 2016 transportation inflation fell by 2.94% (-2.94%), following an annual decline of 2.33% (-2.33%) in April 2016.
- “Trade” inflation (weighted at 20.36% of the total index) rose by 1.25% in the month of May 2016, having declined by 0.09% (-0.09%) in April. Seasonal adjustments had a positive impact here, where unadjusted monthly inflation gained 1.16% in May. Unadjusted and year-to-year, May 2016 trade inflation rose by 2.43%, having gained 0.99% in April 2016.

Final Demand Construction (Weighted at 2.08% of the Aggregate Index). Although a fully self-contained subsection of the Final Demand PPI, Final Demand Construction inflation receives no formal headline coverage. Nonetheless, headline numbers are published, and month-to-month construction inflation rose by 0.09% in May 2016, having gained 0.79% in April. The impact of seasonal factors on the May reading was neutral, where the unadjusted monthly change also was a gain of 0.09%.

On an unadjusted basis, year-to-year construction inflation rose by 1.87% in May 2016, the same level as in April 2016.

- “Construction for private capital investment” headline monthly inflation (weighted at 1.40% of the total index) rose by 0.09% in May 2016, having gained 0.88% in April. As usual, seasonal adjustments had neutral impact here, where the unadjusted May monthly inflation also was up by 0.09%. Unadjusted and year-to-year, May 2016 private construction inflation was up by 1.88%, the same level as in April 2016.
- “Construction for government” inflation (weighted at 0.68% of the total index) gained month-to-month by 0.17% in May 2016, having gained 0.62% in April. Seasonal adjustments had neutral impact, where unadjusted monthly inflation also showed a gain of 0.17% in May. Unadjusted and year-to-year, May 2016 government construction inflation was 1.78%, the same level as in April 2016.

Discussed in [Commentary No. 810](#), ShadowStats uses the Final Demand Construction index for deflating headline activity in the monthly construction-spending series. The July 1st release of May 2016 U.S. Construction Spending will be covered in ShadowStats *Commentary No. 818* of July 6th. The continued rise in headline construction inflation should continue to take a toll on the inflation-adjusted real May 2016 numbers.

PPI-Inflation Impact on Pending Reporting of New Orders for Durable Goods. As to the upcoming reporting of May 2016 new orders for durable goods, monthly inflation (reported only on a not-seasonally-adjusted basis) for new orders for manufactured durable goods was up by 0.18%, having gained 0.12% in April. The decline in annual inflation continued to narrow, to a contraction in May 2016 of 0.60% (-0.60%), versus an annual decline of 0.84% (-0.84%) in April 2016. May 2016 durable goods orders will be reported on June 24th and covered in ShadowStats *Commentary No. 816* of that date.

WEEK AND MONTH AHEAD

Economic Deterioration Should Intensify in the Weeks and Month Ahead, Increasingly Pummeling the U.S. Dollar and Boosting Gold, Silver and Oil Prices. Market expectations for business activity should deteriorate at an accelerating pace, amidst intensifying, negative headline economic reporting and continued Fed-policy waffling in the near term. The general trend in weakening expectations for business activity and movement towards looming recession recognition, reflect a broad spectrum of market-disappointing headline data. That unfolding circumstance has been detailed in [General Commentary No. 811](#), [Commentary No. 810](#), [Commentary No. 809](#), [Commentary No. 808](#), [Supplemental Commentary No.](#)

[807-A](#), [Commentary No. 807](#), [Commentary No. 806](#), [Commentary No. 800](#), [Commentary No. 799](#), [Commentary No. 796-A](#), [Commentary No. 796](#) and [No. 777 Year-End Special Commentary](#).

In response to perpetual economic non-recovery and a renewed, intensifying downtrend in underlying economic activity, negative market reactions have surfaced in trading of the U.S. dollar and in related financial markets, with upside pressures on gold, silver and oil prices—although market activity is somewhat mixed on oil at the moment—as discussed in [No. 811](#), [No. 807](#) and [No. 799](#). These market reactions reflect, at least in part, an intensifying sense of Federal Reserve impotence, despite any near-term games being played by the U.S. central bank. Further tightening by the Fed prior to the election remains unlikely, despite the continuing “good cop” versus “bad cop” routine (“rates are going” or “rates are not going up”) used by various Fed officials with the investment community. Instead, renewed quantitative easing could become a target of intensified market speculation as the deepening recession unfolds and becomes increasingly obvious in the next several months.

Rapidly weakening, regular monthly economic reporting should be accompanied by much worse-than-expected—negative—reporting for at least the next several quarters of GDP (and GDI and GNP), as seen minimally with the initial reporting of a first-quarter 2016 contraction in the Gross National Product (GNP)—the broadest measure of U.S. economic activity—discussed in [No. 809](#).

Such includes reasonable odds of a reported outright quarterly contraction in first-quarter 2016 GDP in the June 28th second monthly revision, as well as pending, meaningful downside revisions to GDP history (including likely headline quarterly contractions in first-quarter 2015, fourth-quarter 2015 and first-quarter 2016, should it still be in positive territory) come the July 29, 2016 annual GDP benchmark revisions.

Consistent with the relatively neutral benchmark revisions to retail sales and housing starts, and in line with recent sharp downside revisions to industrial production, durable goods orders, the annual revisions to the real merchandise-trade deficit and likely negative benchmark revisions to construction spending next month, expectations for the GDP benchmarking also should fall sharply. Discussed in the *Opening Comments* of [No. 810](#), upside redefinitions to the service-sector trade surplus could have some minimal upside revision impact pre-2015. Nonetheless, that GDP benchmarking now appears to be the most-likely point at which the elements for a “formal” recession call will be in full play.

CPI-U consumer inflation—intermittently driven lower in 2015 and early-2016 by collapsing prices for gasoline and other oil-price related commodities—likely has seen its near-term, year-to-year low. Headline monthly March and April 2016 detail moved into positive headline territory, in tandem with rising gasoline prices. CPI inflation is on track to rise further in May (see *Pending Releases*) and likely going forward, still boosted by a weakening U.S. dollar environment, and a continued, related upturn in oil prices and other commodities. Fundamental reporting issues with the headline CPI also are discussed here: [Public Commentary on Inflation Measurement](#).

Note on Reporting-Quality Issues and Systemic-Reporting Biases. Significant reporting-quality problems remain with most major economic series. Beyond the pre-announced gimmicked changes to reporting methodologies of the last several decades, which have tended to understate actual inflation and to overstate actual economic activity, ongoing headline reporting issues are tied largely to systemic distortions of monthly seasonal adjustments.

Data instabilities—induced partially by the still-evolving economic turmoil of the last nine-to-eleven years—have been without precedent in the post-World War II era of modern-economic reporting. The severity and ongoing nature of the downturn provide particularly unstable headline economic results, when concurrent seasonal adjustments are used (as with retail sales, durable goods orders, employment and unemployment data). That was discussed and explored in the labor-numbers related [Supplemental Commentary No. 784-A](#) and [Commentary No. 695](#).

Further, discussed in [Commentary No. 778](#), a heretofore unheard of spate of “processing errors” surfaced in recent surveys of earnings (Bureau of Labor Statistics) and construction spending (Census Bureau). This is suggestive of deteriorating internal oversight and control of the U.S. government’s headline economic reporting. At the same time, it indicates an increasing openness of the involved statistical agencies in revealing the reporting-quality issues.

Combined with ongoing allegations in the last year or two of Census Bureau falsification of data in its monthly Current Population Survey (the source for the BLS Household Survey), these issues have thrown into question the statistical-significance of the headline month-to-month reporting for many popular economic series (see [Commentary No. 669](#)). John Crudele of the *New York Post* continues his investigations in reporting irregularities: [Crudele Investigation](#).

UPDATED PENDING RELEASES:

Consumer Price Index—CPI (May 2016). The Bureau of Labor Statistics (BLS) will release the May 2016 CPI tomorrow, Thursday, June 16th, and it will be covered in *Commentary No. 814* of that date. The headline May CPI-U should increase month-to-month by roughly 0.3%, or more, reflecting rebounding gasoline prices plus higher non-energy inflation. Headline annual inflation in May 2016 likely held around 1.1% for the second month. Consensus forecasts appear to be for a gain of 0.3%.

Continuing Positive Inflation Impact from Gasoline Prices. Average gasoline prices continued to increase in May 2016, up by 6.99% for the month on a not-seasonally-adjusted basis, per the Department of Energy (DOE). Where BLS seasonal adjustments to gasoline prices in May traditionally are negative, they would reduce the unadjusted price gain, but leave it in positive territory. Adjusted gasoline prices should rise by enough to add a positive 0.12% to the headline CPI-U monthly change. Boosted as well by higher food and “core” (net of food and energy) inflation, a headline monthly CPI-U gain of 0.3% or higher (possibly 0.4%), once again, is a reasonable expectation.

Annual Inflation Rate. Noted in [Commentary No. 807](#), year-to-year, CPI-U inflation would increase or decrease with the May 2016 monthly reporting, dependent on the seasonally-adjusted monthly change, versus the adjusted, headline gain of 0.29% in May 2015 CPI-U. The adjusted change is used here, since that is how consensus expectations are expressed. To approximate the annual unadjusted inflation rate for May 2016, the difference in May’s headline monthly change (or forecast of same), versus the year-ago monthly change, should be added to or subtracted directly from the April 2016 annual inflation rate of 1.13%. For example, a seasonally-adjusted, headline monthly gain of 0.3%, which appears within reason for the May 2016 CPI-U, would hold the annual CPI-U inflation rate for May 2016 at about 1.1%

Real (Inflation-Adjusted) Retail Sales (May 2016). The nominal monthly gain of 0.45% in May 2016 Retail Sales was before accounting for inflation (see prior [Commentary No. 812](#)). The monthly change in inflation-adjusted real retail sales for May awaits tomorrow's estimate of May 2016 CPI-U consumer inflation. With the headline CPI-U inflation likely to show a headline monthly gain in excess 0.3%, the headline real retail sales would be reduced by a parallel amount versus the headline nominal gain, effectively show flat to minimally-positive headline monthly real growth.

Annual inflation should hold around 1.1%, reducing the headline nominal annual gain in May 2016 retail sales of 2.55% to well below two-percent. Such would continue generating an intense signal of recession, from low-level, annual real-retail sales growth.

Constraining retail sales activity, the consumer remains in an extreme liquidity bind, as updated fully in the [General Commentary No. 811](#). Without sustainable growth in real income, and without the ability and/or willingness to take on meaningful new debt in order to make up for the income shortfall, the U.S. consumer is unable to sustain positive growth in domestic personal consumption, including retail sales, real or otherwise.

Residential Construction—Housing Starts (May 2016). The Census Bureau will release May 2016 residential construction detail on Friday, June 17th, covered in *Commentary No. 815* of that date.

In line with common-reporting experience of recent years, monthly results are likely to be unstable and not statistically meaningful, holding in a general pattern of down-trending stagnation. After the extreme surge and bloating in headline April starts, May reporting likely to be on the catch-up downside, which is where consensus estimates have settled, but with expected monthly declines of a couple of percent versus April's initial headline reporting well shy of any meaningful statistical significance.

Irrespective of the generally meaningless headline detail (although a headline monthly downturn in May 2016 and downside revision to April 2016 are reasonable expectations), the broad pattern of housing starts should remain consistent with the low-level, stagnant activity, seen in the series at present, where April 2016 activity remained down by about 48% (-48%) from the pre-recession high of the series. Such is particularly evident with the detail viewed in the context of a six-month moving average. Again, this series remains is subject to regular and extremely-large, prior-period revisions.

Discussed in [Commentary No. 660](#) on the August 2014 version of this most-unstable of major monthly economic series, the monthly headline detail here simply is worthless. The series best is viewed in terms of a six-month moving average. Again, not only is month-to-month reporting volatility frequently extreme, but also those headline monthly growth rates rarely come close to being statistically significant.

Continuing to constrain spending, the circumstances surrounding the ongoing the extreme liquidity bind besetting consumers, again, were updated fully in the [General Commentary No. 811](#). Without sustainable growth in real income, and without the ability and/or willingness to take on meaningful new debt in order to make up for an income shortfall, the U.S. consumer is unable to sustain positive growth in domestic personal consumption, including residential real estate and real retail sales.