# John Williams' Shadow Government Statistics Analysis Behind and Beyond Government Economic Reporting

### **COMMENTARY NUMBER 840 September Industrial Production**

October 17, 2016

Representing 65% of the GDP, Industrial Production Fell Year-to-Year for the Fourth-Straight Quarter

Outside of Formal Recessions, Two-or-More Consecutive Quarters of Annual Decline are Unprecedented in the 98-Year History of the Production Series

September Monthly Production Gains Reflected No More than Downside Revisions to August and Before

Weaker than Initial August Reporting, September Production Was Down by 1.42% (-1.42%) from Its Pre-2007 Recession High; Down by 2.31% (-2.31%) from Its One-Month, November 2014 Recovery

September Manufacturing Was Down 6.28% (-6.28%) from Its Never-Recovered Pre-Recession Peak

Domestic Oil and Gas Exploration Collapse Tentatively Appears to be Bottoming, in the Context of Bottoming of Oil Prices

PLEASE NOTE: The next regular Commentary, scheduled for tomorrow, Tuesday, October 18th, will cover the September CPI and related real Retail Sales and Earnings, a subsequent missive on Wednesday, October 19th, will cover September Housing Starts. Special Comments accompanying the Tuesday missive will explore some of the unusual interactions between, and implications from, the unfolding election process and activity in the economy and markets.

Please call at (707) 763-5786 if you have questions or would like to discuss current issues or otherwise. Best wishes to all — John Williams

#### OPENING COMMENTS AND EXECUTIVE SUMMARY

**Broad Economic Downturn Continues to Unfold.** As seen with a number series, ranging from S&P 500 revenues, help-wanted advertising and domestic freight activity, to industrial production, housing-industry indicators and a variety of broad employment measures (see *Commentary No. 836* and *Commentary No. 838*), U.S. Economic activity collapsed from 2006/2007 into 2009 and never recovered. Nonetheless, at the end of 2014, the economy began to turn down anew in what still should gain recognition as a formal recession, likely timed from December 2014. This circumstance is tied directly to the nature and possible outcome of the still-evolving U.S. presidential election, as touched upon in prior *Commentary No. 839*, and as will be explored in tomorrow's (October 18th) *Special Comments* of *Commentary No. 841*.

Today's headline reporting of September and third-quarter 2016 industrial production continued to show an ongoing recession. As commonly is the case, prior reporting was revised lower, and such was the reason that headline September production showed any monthly increase, albeit a below-consensus gain of 0.06%. Without the specific downside revisions to the August detail, headline September production would have been contracted by 0.17% (-0.17%) month-to-month. Nonetheless, quarter-to-quarter growth turned positive in the third-quarter 2016, also boosted by downside revisions in second-quarter activity. Since first-quarter 2015, the third-quarter 2016 quarterly growth was only the second positive result (third-quarter 2015 was the first) out of seven quarters; the other five quarters showed quarterly contractions.

In terms of annual growth, September production fell by 1.03% (-1.03%), the thirteenth consecutive month of annual decline, with third-quarter 2016 production down year-to-year for the fourth consecutive quarter. In the 98-year history of the production series, those circumstances never have been seen outside of formal recessions. The Federal Reserve, which surveys the series, values its aggregate industrial production number at roughly 65% of nominal GDP.

**Today's** *Commentary* (October 17th). The balance of these *Opening Comments* covers the summary detail and special graphs of the September 2016 Industrial Production, while the *Reporting Detail* includes expanded detail and extensive, additional graphs.

The *Week and Month Ahead* updates the previews of the September CPI and real Retail Sales, and Residential Construction, including Housing Starts releases due later in the current week.

Index of Industrial Production—September 2017—August's Downside Revisions Created September's Gains. In the context of downside revisions to headline, monthly industrial production and its major industry components, back to April 2016, September 2016 production detail showed a weaker-than-consensus gain 0.06% at the second decimal point, where the consensus had been for a 0.2% gain.

Net of prior-period revisions, aggregate September production contracted by 0.17%% (-0.17%) at the second decimal point.

Headline September details by industry group also were boosted sharply by downside revisions to recent history. For the month, headline manufacturing gained by 0.2%, mining by 0.4%, while utilities fell by 1.0% (-1.0%). Net of revisions to August, though, monthly manufacturing gained by 0.1%, mining declined by 1.2% (-1.2%), while utilities activity fell by 1.6% (-1.6%).

*There Has Been No Economic Recovery.* With the thirteenth consecutive month of year-to-year decline in industrial production activity—65% of the nominal value of Gross Domestic Product (GDP) as estimated by the Federal Reserve—the economy remains in the harsh reality of recession, one that began somewhat before 2007. That is irrespective of the happy hype out of the Bureau of Economic Analysis (BEA), which guesstimates the headline GDP series. As of the July 29th GDP benchmarking (see *Commentary No. 823*), the BEA had taken to "smoothing" the business cycle, presumably to eliminate those occasional and politically-inconvenient dips in real (inflation-adjusted) broad economic activity.

The third estimate of third-quarter 2016 real GDP reflected broad economic activity at 10.6% above its pre-recession peak (see <u>Commentary No. 836</u>). No other major economic series shows anything close to that purported level of recovery, where industrial production is showing a renewed and intensifying downturn.

Noted <u>Commentary No. 826</u>, in its present incarnation, industrial production hit its pre-recession peak of 105.729 (2012=100) in November 2007, plummeting thereafter in the unfolding economic collapse into mid-2009. Coming into the 2015 benchmark revisions to the series, industrial production formally had recovered its pre-recession high as of October 2013. Coming out of the 2015 production benchmarking, the "recovery" had been revised to a later date, March 2014, but with subsequent production still holding above the recovery level.

The 2016 industrial-production benchmarking (see *No. 796-A*), moved the production recovery to an even later November 2014, with a still fortuitous monthly spike of 1.0% in that month. Yet, that level of November 2014 activity—the recovery level at present—also became the historical peak in production activity. That one-month "recovery" was followed by continual monthly declines (the onset of likely timing for the new recession), so that production had dropped back below its pre-recession high as of March 2015.

As of today's headline September 2016 reporting, Industrial Production at 104.226, stood below its formal pre-recession high by 1.42% (-1.42%) and was down by 2.31% (-2.31%) from its one-month "recovery" peak level of November 2014.

Subsequent to November 2014, the series did not have positive monthly growth until it dropped again below the pre-recession high, and it never has had a subsequent rebound into "recovery" territory. The dominant manufacturing sector (78.5% of Industrial Production, 51.0% of GDP) never even recovered its pre-recession high, in the current series. As of September 2016, manufacturing activity was down by 6.28% (-6.28%) from its pre-2007 recession peak.

An overriding issue that has continued to stymie policies of the Fed 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* 

<u>Special Commentary</u>). In the post-benchmark revision era for Industrial Production, the headline series (not the ShadowStats-corrected series in *Graph 2*), again, recovered its pre-recession high only for only one month, in November 2014, and it has been in fairly-consistent monthly decline ever since, falling month-to-month in 15 out of 21 subsequent months.

*Headline Industrial Production—September 2016.* In the context of downside revisions to the level of August production activity, and to months back through April 2016, September 2016 production rose by 0.06%. That was against a revised, deeper monthly contraction of 0.53% (-0.53%) in August, a downwardly-revised 0.48% gain in July, and a minimally, upwardly-revised 0.53% gain in June.

Net of prior-period revisions, September 2016 production declined by 0.17% (-0.17%), instead of the headline 0.06% gain. The revisions to August 2016 reflected downside revisions to monthly growth in manufacturing, mining and utilities all with relative boosts to headline September activity.

Detailed by major industry group (see *Graphs 5*, 7, 12 and 14 in the *Reporting Detail*), the headline September 2016 monthly aggregate production gain of 0.06% [an August decline of 0.53% (-0.53%), previously a decline of 0.43% (-0.43%)] was composed of a monthly September gain of 0.18% [an August decline of 0.52% (-0.52%), previously a contraction of 0.44% (-0.44%)] in manufacturing activity; a September gain of 0.39% [an August decline of 0.96% (-0.96%), previously a gain of 1.04%] in mining activity (including oil and gas production); and a September decline of 1.01% (-1.01%) [an August contraction of 0.26% (-0.26%), previously down by 1.42% (-1.42%)] in utilities activity].

Year-to-year change in September 2016 industrial production was a decline of 1.03% (-1.03%), the thirteenth consecutive monthly year-to-year decline, again, a circumstance that is unprecedented outside of formal recessions, in the 98-year history of the series. That followed a revised, steeper decline of 1.34% (-1.34%) in August 2016, a revised steeper of in July 2016 of 0.72% (-0.72%), and a revised, steeper annual decline of 0.61% (-0.61%) in June 2016.

*Quarterly and Annual Production Contractions*. Annual growth in aggregate production held in negative territory for the thirteenth straight month, again, down by 1.03% (-1.03%) in September 2016, locking in the fourth, consecutive quarter of annual contraction, as of third-quarter 2016, also down by 1.03% (-1.03%).

Year-to-year growth rates in quarterly production have continued to slow and then decline, 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 annual decline of 1.62% (-1.62%) in fourth-quarter 2015, an unrevised revised annual decline of 1.57% (-1.57%) in first-quarter 2016, and a revised annual contraction of 1.09% (-1.09%) in second-quarter 2016.

<u>Annualized Quarter-to-Quarter.</u> Going back a year, 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 a fourth-quarter 2015 contraction of 3.33% (-3.33%).

The first-quarter 2016 quarterly decline was 1.66% (-1.66%), with the second-quarter 2016 quarterly decline deepening to a revised 0.84% (-0.84%). Based on full reporting, third-quarter 2016 industrial production expanded at an annualized pace of 1.77%.

**Production Graphs—Corrected and Otherwise—September 2016.** The regular graphs of the 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. Third-quarter 2016 growth was positive on a quarter-to-quarter basis, but remained in annual contraction for the fourth consecutive quarter. Such patterns never have been seen outside of formal recessions. Such faltering patterns of monthly, quarterly and annual decline were seen last in the depths of the economic collapse from 2007 into 2009.

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 <u>Public Comment on Inflation</u> and Chapter 9 of <u>2014 Hyperinflation Report—Great Economic Tumble</u>).

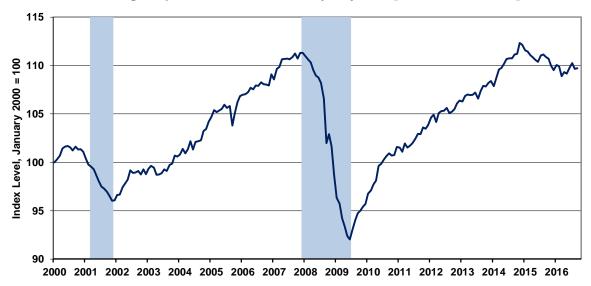
*Graph 1* shows official, headline industrial production reporting, but indexed to January 2000 = 100, instead of the Fed's formal index that is set at 2012 = 100. The 2000 indexing simply provides for some consistency in the series of revamped "corrected" graphics including real retail sales (see *Commentary No. 826*), new orders for durable goods (see *Commentary No. 827*) and the GDP (see *Commentary No. 828*). It does not affect the appearance of the graph or reported growth rates (as can be seen with a comparison of *Graph 1* here to *Graph 5* 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.

[Graphs 1 and 2 follow on the next page.]

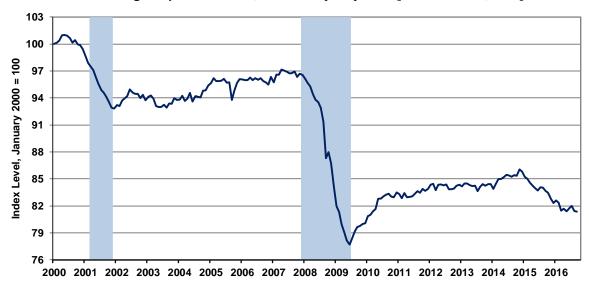
Graph 1: Indexed Headline Level of Industrial Production (Jan 2000 = 100)

### Headline Industrial Production (Jan 2000 = 100) Through September 2016, Seasonally-Adjusted [ShadowStats, FRB]



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

## ShadowStats-Corrected Industrial Production (Jan 2000 = 100) Hedonic-Adjusted Inflation Understatement Removed, Level Through September 2016, Seasonally-Adjusted [ShadowStats, FRB]



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 short-lived full recovery and the renewed expansion reported in official GDP estimation (see *Commentary No. 828* and *No. 777 Year-End Special* 

<u>Commentary</u>). Unlike the headline industrial production data and the headline GDP numbers, corrected production levels never recovered pre-recession highs, although the headline aggregate production index now has backed off its official one-month "recovery" in November 2014, and the headline 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 into third-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; that 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, with third-quarter 2016 activity showing an annual contraction, again, but a quarterly gain, patterns still never seen outside of formal recessions.

[The Reporting Detail section contains additional analysis and graphs.]

#### REPORTING DETAIL

#### **INDUSTRIAL PRODUCTION (September 2016)**

August's Downside Revisions Created September's Gains in Production. In the context of downside revisions to headline, monthly industrial production and its major industry components, back to April 2016, September 2016 production detail showed a weaker-than-consensus gain of 1.0% [0.06% at the second decimal point], where the consensus had been for a 0.2% gain. Net of prior-period revisions, aggregate September production contracted by 0.2% (-0.2%) [down by 0.17%% (-0.17%)] at the second decimal point.

Headline September details by industry group also were boosted sharply by downside revisions to recent history. For the month, headline manufacturing gained by 0.2%, mining by 0.4%, while utilities fell by 1.0% (-1.0%). Net of revisions to August, though, monthly manufacturing gained by 0.1%, mining declined by 1.2% (-1.2%), while utilities fell by 1.6% (-1.6%).

With unusual revision patterns affecting headline growth patterns by industry groups, those details are covered in the respective manufacturing (see *Graphs 7* to *11*), utilities (see *Graphs 12* to *13*) and mining (see *Graphs 14* to *20*) sections.

With the thirteenth consecutive month of year-to-year decline in industrial production activity—65% of the nominal value of Gross Domestic Product (GDP) as estimated by the Federal Reserve—the economy remains in the harsh reality of recession, one that began somewhat before 2007. That is irrespective of the happy hype out of the Bureau of Economic Analysis (BEA), which guesstimated that the third estimate of third-quarter 2016 real GDP reflected broad economic activity at 10.6% above its pre-recession peak (see *Commentary No. 836*). No other major economic series shows anything close to that purported level of recovery, where industrial production is showing a renewed and intensifying downturn.

As of today's headline September 2016 reporting, Industrial Production at 104.226, stood below its formal pre-recession high by 1.42% (-1.42%) and was down by 2.31% (-2.31%) from its one-month "recovery" peak level of November 2014. As an aside, the headline September 2016 level also was down by 0.17% (-0.17%) from the initial August 2016 reporting of 104.402 (which revised to 104.165 in today's headline detail). Of course, after the corrected August data, headline September gained 0.06%.

The dominant manufacturing sector (78.5% of Industrial Production, 51.0% of GDP) never even recovered its pre-recession high, in the current series. As of September 2016, manufacturing activity was down by 6.28% (-6.28%) from its pre-2007 recession peak.

An overriding issue that has continued to stymie policies of the Fed 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 <u>No. 777 Year-End Special Commentary</u>). In the post-benchmark revision era for Industrial Production, the headline (not the ShadowStats-corrected) series, again, recovered its pre-recession high only for only one month, in November 2014, and it has been in fairly-consistent monthly decline ever since, falling month-to-month in 15 out of 21 subsequent months.

*Headline Industrial Production—September 2016.* The Federal Reserve Board released its first estimate of seasonally-adjusted, September 2016 industrial production this morning, October 16th. In the context of downside revisions to the level of August production activity, and to months back through April 2016, September 2016 production rose by 0.06%. That was against a revised, deeper monthly contraction of 0.53% (-0.53%) [previously down by 0.43% (-0.43%)] in August, a downwardly-revised 0.48% [previously 0.56%, initially 0.74%] gain in July, and a minimally, upwardly-revised 0.53% [previously 0.52%, 0.42%, initially 0.60%] gain in June.

Net of prior-period revisions, September 2016 production declined by 0.17% (-0.17%), instead of the headline 0.06% gain. The revisions to August 2016 reflected downside revisions to monthly growth in manufacturing, mining, all with relative boosts to headline September activity.

Detailed by major industry group (see *Graphs 5*, 7, 12 and 14), the headline September 2016 monthly aggregate production gain of 0.06% [an August decline of 0.53% (-0.53%), previously a decline of 0.43% (-0.43%)] was composed of a monthly September gain of 0.18% [an August decline of 0.52% (-0.52%), previously a contraction of 0.44% (-0.44%)] in manufacturing activity; a September gain of 0.39% [an August decline of 0.96% (-0.96%), previously a gain of 1.04%] in mining activity (including oil and gas

production); and September decline of 1.01% (-1.01%) [an August contraction of 0.26% (-0.26%), previously down by 1.42% (-1.42%)] in utilities activity].

Year-to-year change in September 2016 industrial production was a decline of 1.03% (-1.03%), the thirteenth consecutive monthly year-to-year decline, again, a circumstance that is unprecedented outside of formal recessions, in the 98-year history of the series. That followed a revised, steeper decline of 1.34% (-1.34%) [previously down by 1.11% (-1.11%)] in August 2016, a revised steeper of in July 2016 of 0.72% (-0.72%) [previously down by 0.59% (-0.59%), initially down by 0.53% (-0.53%)], and a revised, steeper annual decline of 0.61% (-0.61%) [previously down by 0.56% (-0.56%), 0.68% (-0.68%), initially down by 0.69% (-0.69%)] in June 2016.

Quarterly and Annual Production Contractions. Annual growth in aggregate production held in negative territory for the thirteenth straight month, again, down by 1.03% (-1.03%) in September 2016, locking in the fourth, consecutive quarter of annual contraction, as of third-quarter 2016, also down by 1.03% (-1.03%). Such was based on initial full reporting for third-quarter 2016. That previously had been estimated as a contraction of 0.78% (-0.78%), based just on July and August detail, and at an annual contraction rate of 0.51% (-0.51%), based solely on the initial July estimate. In the 98-year history of the industrial production series, two consecutive quarters of annual contraction never have been seen outside of formal recessions, let alone four or more.

Year-to-year growth rates in quarterly production have continued to slow and then decline, 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 annual decline of 1.62% (-1.62%) in fourth-quarter 2015, an unrevised revised annual decline of 1.57% (-1.57%) in first-quarter 2016, and a revised annual contraction of 1.09% (-1.09%) [previously down by 1.03% (-1.03%), 1.09% (-1.09%), initially down by 1.17% (-1.17%)] in second-quarter 2016.

<u>Annualized Quarter-to-Quarter.</u> Going back a year, 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 a fourth-quarter 2015 contraction of 3.33% (-3.33%).

The first-quarter 2016 quarterly decline was 1.66% (-1.66%), with the second-quarter 2016 quarterly deepening to a revised 0.84% (-0.84%) [previously down by 0.62% (-0.62%), 0.81% (-0.81%), initially down by 1.03% (-1.03%)]. Based on full reporting, third-quarter 2016 industrial production expanded at an annualized pace of 1.77%. That had been on track for 2.57%, based just on July and August 2016 reporting, initially estimated at 3.92%, based only on the first estimate of July 2016 activity.

**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 4 shows the monthly year-to-year percent change in the aggregate series, in historical context since World War II. With the headline annual decline in monthly production currently at 1.03% (-1.03%) in September 2016, and with headline annual contractions in place for the last thirteen months, again, a pattern never seen outside of formal recessions.

Graph 3 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, and a bounce back in third quarter. Such patterns of monthly, 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.

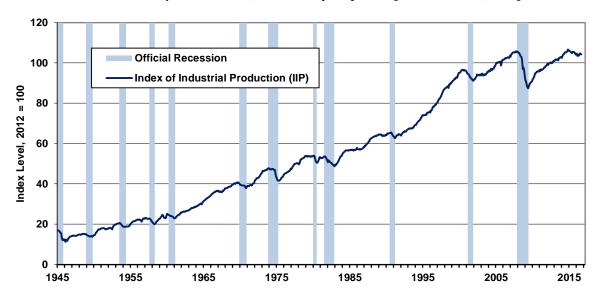
Seen most clearly in *Graph 6*, the pattern of year-to-year activity dipped anew in 2013, again, to levels usually seen at the onset of recent recessions, bounced higher into mid-2014, fluctuated thereafter, now turning sharply negative, again, as seen only in formal recessions. Year-to-year growth remains 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 4*, the June 2009 (the end of second-quarter 2009) year-to-year contraction of 15.40% (-15.40%) was the steepest annual decline in production since the shutdown of wartime production following World War II.

Although generally 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*) that 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, rallied into third-quarter 2015, then contracted into second-quarter 2016, with a gain in third-quarter 2016. The "corrected" series has contracted quarter-to-quarter throughout 2016.

[Graphs 3 to 8 begin on the following page]

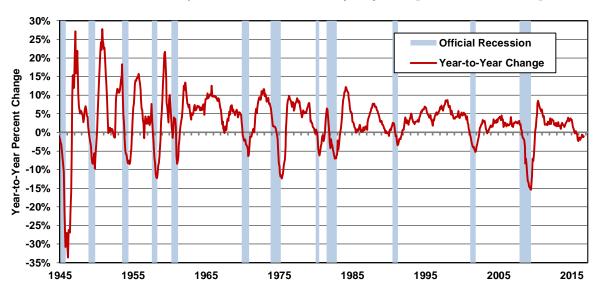
Graph 3: Index of Industrial Production (Aggregate) since 1945

### Index of Industrial Production (2012 = 100) 1945 to September 2016, Seasonally-Adjusted [ShadowStats, FRB]



Graph 4: Industrial Production, Year-to-Year Percent Change since 1945

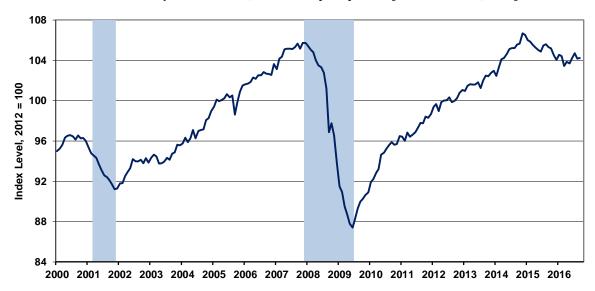
#### Industrial Production Yr-to-Yr % Change 1945 to September 2016, Seasonally-Adjusted [ShadowStats, FRB]



*Drilling Down into the September 2016 U.S. Industrial Production Detail. Graphs 5*, 7, 12 and 16 show headline reporting of industrial production and its major components.

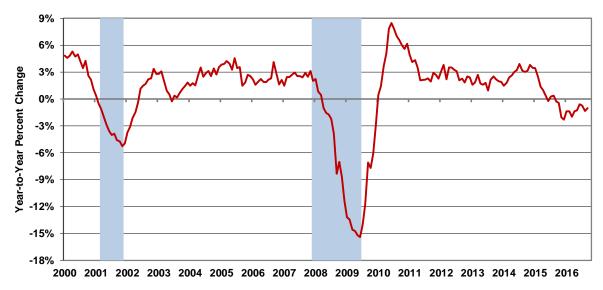
Graph 5: Index of Aggregate Industrial Production since 2000

### Index of Industrial Production (2012 = 100) Level to September 2016, Seasonally-Adjusted [ShadowStats, FRB]



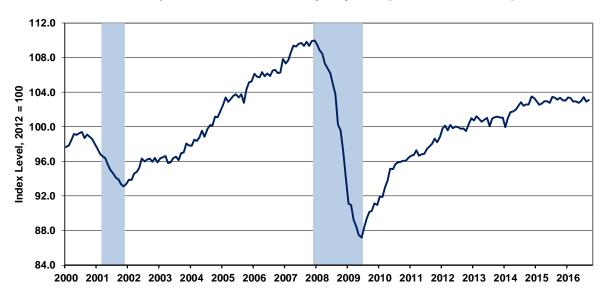
Graph 6: Aggregate Industrial Production, Year-to-Year Percent Change since 2000

### Industrial Production Yr-to-Yr % Change To September 2016, Seasonally-Adjusted [ShadowStats, FRB]



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

#### Industrial Production - Manufacturing (SIC) (2012 = 100) Level to September 2016, Seasonally-Adjusted [ShadowStats, FRB]



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

### Manufacturing Production Yr-to-Yr % Change To September 2016, Seasonally-Adjusted [ShadowStats, FRB]



The broad, aggregate index (*Graph 5*) contracted in both first- and second-quarter 2015, with a third-quarter 2015 bounce, followed by ongoing, consecutive quarterly and annual contractions in fourth-quarter 2015, first-quarter 2016 and second-quarter 2016, with another bounce in third-quarter 2016.

Third-quarter 2016, however, was the fourth consecutive annual contraction, a circumstance simply not seen outside of recessions, as discussed earlier.

Shown in *Graphs* 7, 12 and 14, of the three major industry groups, manufacturing, mining and utilities, manufacturing and mining showed monthly gains, while utilities contracted in September 2016 reporting, with headline activity boosted across the board by downside revisions to August detail. The headline gain in manufacturing was dominated by durable goods. Utilities reflected some pullback from recent stronger showings boosted by unseasonable weather (increased air-conditioning usage). The recent gain/low-level stability in mining has reflected some recovery in coal mining, and some apparent stabilization of activity in oil and gas extraction and exploration, likely in response to somewhat-stabilized oil prices. While those two subcomponents continued to gain, the headline September gain was bloated by a massive downside revision to August gold and silver mining.

Graph 7 of the dominant manufacturing sector showed a month-to-month gain of 0.18%, which was a gain of 0.14% net of prior-period revisions. The headline detail was against a revised, deeper monthly contraction of 0.52% (-0.52%) [previously down by 0.44% (-0.44%)] in August 2016. The series remained down by 6.28% (-6.28%) from reclaiming its pre-recession high of December 2007. Graph 8 reflects annual growth patterns in manufacturing, which had been fluttering at low levels since an initial bounce off the 2009 trough, down year-to-year by 0.05% (-0.05%) in September 2016, versus a revised deeper drop of 0.46% (-0.46%) [previously down by 0.42% (-0.42%)] in August 2016.

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



### Manufacturing - Consumer Goods (2012 = 100) Level to September 2016, Seasonally-Adjusted [ShadowStats, FRB]

The story with consumer goods generally improved, but again, such was boosted somewhat by prior period-revisions, particularly from a sharp downside revision to nondurable goods. Seen in *Graphs 9* to 11, total consumer goods generally have remained in low-level stagnation since the economic collapse, with all the September gain continuing in durable goods. September 2016 total consumer goods showed a monthly gain of 0.16%, versus an unrevised monthly decline in August of 0.24% (-0.24%); with durables

up by 0.65%, versus a revised gain of 0.71% in August, [previously down by 0.04% (-0.04%)]; and nondurables up by 0.01% in September, down by a revised down by 0.54% (-0.54% [previously down by 0.31% (-0.31%)] in August.

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

#### Manufacturing - Consumer Durable Goods (2012 = 100) Level to September 2016, Seasonally-Adjusted [ShadowStats, FRB]



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

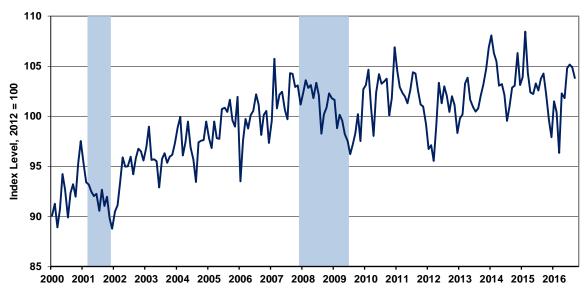
#### Manufacturing - Consumer Nondurable Goods (2012 = 100) Level to September 2016, Seasonally-Adjusted [ShadowStats, FRB]



The annual gain in the aggregate consumer goods series generally has held below 1.0% (0.82% in September 2016), with purported annual gains in durable goods of 4.26% in September, including auto production, well offset by an annual decline in dominant nondurables of 0.25% (-0.25%), including bread.

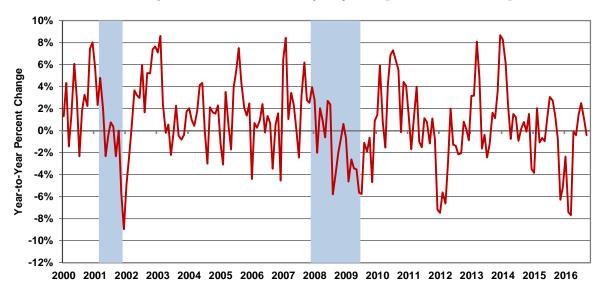
Graph 12: Industrial Production - Utilities (10.76% of the Aggregate in 2015)





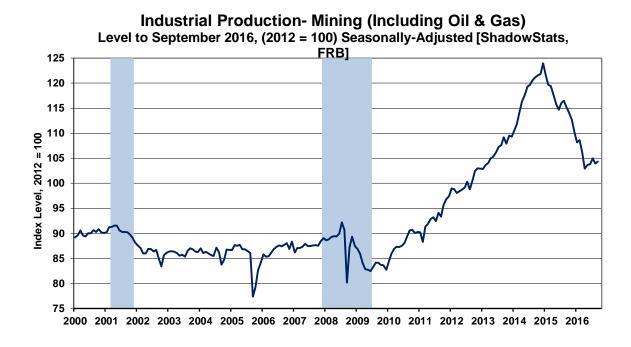
Graph 13: Industrial Production - Utilities, Year-to-Year Percent Change Since 2000

### Industrial Production - Utilities Yr-to-Yr % Change To September 2016, Seasonally-Adjusted [ShadowStats, FRB]



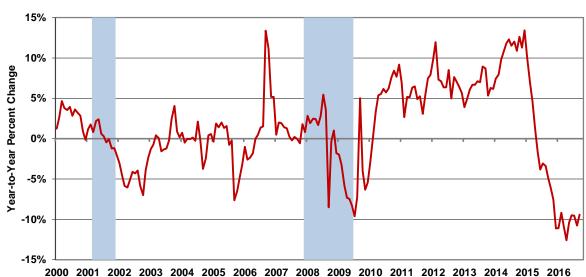
Monthly volatility in the utilities sector (*Graph 12*) most often reflects unseasonable shifts in weather conditions and reversals of same, with a 1.01% (-1.01%) decline in September 2016, following a sharply revised decline in August 2016 of 0.26% (-0.26%) [previously down by 1.42% (-1.42%)].

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



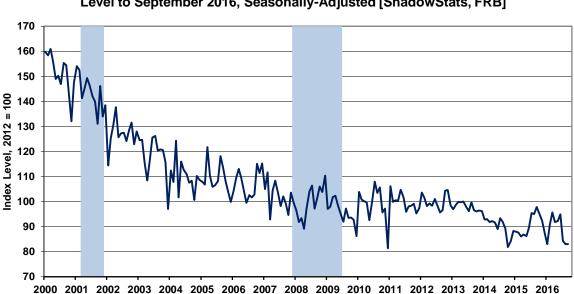


Activity in the mining (*Graph 14*), particularly in oil and gas exploration and production, and in coal production, still remains the near-term focus of this analysis. The sector easily recovered its pre-recession high and accounted for the full "recovery," albeit extremely short-lived, seen in the 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 mining activity (*Graph 15*) still was down by 9.41% (-9.41%) in September 2016, versus a revised decline of 10.76% (-10.76%) [previously down by 9.33% (-9.33%)] in August.

That said, mining-sector activity showed a monthly gain in September of 0.39%, but such was a monthly decline of 1.29% (-1.29%), net of prior-period downside revisions to gold and silver mining and oil and gas extraction. Coal mining and oil and gas drilling both continued to show some short-term stability. The oil drilling stability likely reflects some lag in adapting to more-stable petroleum prices.

*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 central-bank orchestrated market as well as recent pricing gains in the markets.

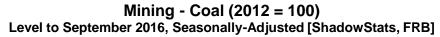
Graph 16: Mining – Gold and Silver Mining (Since 2000)

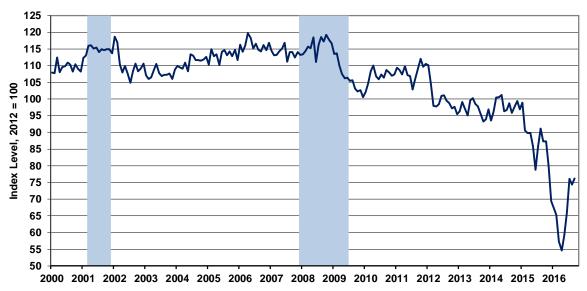


Mining - Gold and Silver (2012 = 100)
Level to September 2016, Seasonally-Adjusted [ShadowStats, FRB]

*Graph 17* still shows an extraordinarily sharp drop in monthly coal production, despite the May to July 2016 rebound and subsequent fluttering. September 2016 activity was down by 12.77% (-12.77%) year-to-year. Versus the near-term May 2014 peak in coal production, September 2016 activity still was down by 24.78% (-24.78%).

Graph 17: Mining - Coal Mining (Since 2000)





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

### Mining - Oil & Gas Extraction (2012 = 100) Level to September 2016, Seasonally-Adjusted [ShadowStats, FRB]



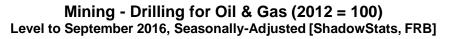
Despite oil prices continuing to move off recent lows, oil and gas extraction has continued to decline, revising into negative-monthly change from positive-monthly change, remaining well off its all-time high. September 2016 extraction dropped by 0.93% (-0.93%) for the month, versus a revised decline of 1.12%

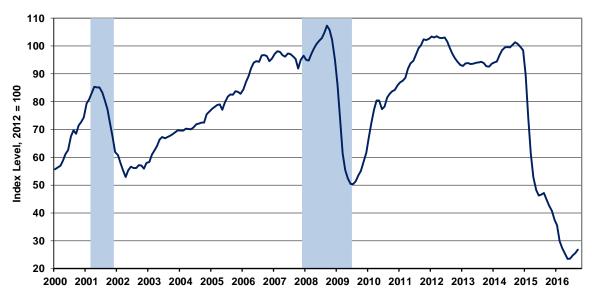
(-1.12%) [previously up by 0.64%] in August, as seen in *Graph 18*. Year-to-year change was an annual decline of 7.84% (-7.84%), versus a revised decline of 6.91% (-6.91%) [previously 6.64% (-6.64%)] in August 2016.

Exploration in terms of oil and gas drilling (*Graph 19*) rose by 5.11% month-to-month in September, having gained 3.31% month-to-month in August, but it still was down year-to-year by 40.25 (-40.25%) in September 2016.

Regularly discussed here, the collapse in drilling largely was 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 73.47% (-73.47%).

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



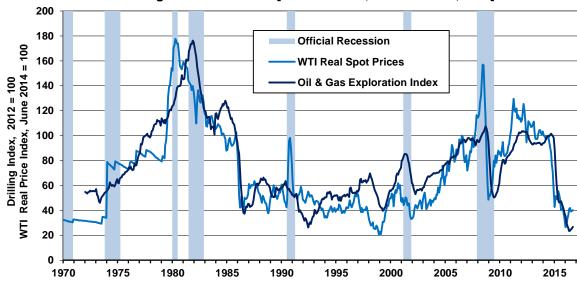


Shown in *Graph 20*, with some lag following the sharp movements in oil prices, oil and gas exploration tends to move in tandem, and an upswing, indeed, may be in the early stages. The oil price index used is for the West Texas Intermediate (WTI) monthly average spot price, deflated using the ShadowStats 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 looks for a massive sell-off in the dollar in the year ahead—U.S. dollar-denominated oil prices should rally (see *General Commentary No. 811*).

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





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#### WEEK AND MONTH AHEAD

Near-Term Headline Economic Deterioration Should Intensify, Increasingly Frustrating Fed Provocateurs, Pummeling the U.S. Dollar and Boosting Gold, Silver and Oil Prices. Market expectations for business activity should continue to deteriorate, amidst intensifying, negative headline economic reporting. Irrespective of continuing talk by some FOMC members of a near-term rate hike, an ongoing and deepening domestic economic downturn promises intensified stress on systemic liquidity. That circumstance ultimately dooms the U.S. central bank to an intensified quantitative easing.

<u>Commentary No. 839</u> provided an opening salvo of comments on the November 8th election and potential aftermath for the economy and the markets. Consumer liquidity conditions also were updated, along with a review of September 2016 nominal Retail Sales and the PPI.

September employment and unemployment circumstances were reviewed in <u>Commentary No. 838</u>. Fedpolicy retrenchment should remain very much alive, shifting towards that renewed quantitative easing, in the post-election environment, as discussed in the <u>Opening Comments</u> of <u>No. 839</u>, and those of

<u>Commentary No. 837</u> and <u>Commentary No. 835</u>, which respectively also reviewed the August trade deficit and construction spending, and August durable goods orders, home-sales activity and the most-recent FOMC inaction.

<u>Commentary No. 836</u> updated the latest GDP reporting (third-estimate of second-quarter 2016), as well as provided an economic reality check on some harder, less-theoretical and more-independent (non-government) economic numbers.

<u>Commentary No. 834</u> detailed August activity in residential construction units (*i.e.*, housing starts), while underlying consumer liquidity and household income conditions were updated fully in <u>Commentary No. 833</u>, along with continuing discussion of FOMC options and the latest consumer inflation detail.

The general trend in weakening expectations for business activity and movement towards looming recession recognition, reflect an ongoing broad spectrum of market-disappointing headline data, such as seen in today's industrial production detail and in <u>Commentary No. 832</u>. Earlier FOMC considerations also were covered in <u>Commentary No. 831</u>, while the initial payroll benchmark revision for 2016 was discussed in <u>Commentary No. 830</u>.

Broad economic and systemic details detail otherwise have been reviewed recently in <u>Commentary No. 827</u>, <u>Commentary No. 826</u>, <u>Commentary No. 825</u>, <u>Commentary No. 824</u>, <u>Commentary No. 823</u>, <u>Commentary No. 822</u>, <u>Commentary No. 821</u>, <u>Commentary No. 820</u>, <u>Commentary No. 818</u>, <u>Commentary No. 817</u>, <u>General Commentary No. 811</u>, <u>Supplemental Commentary No. 807-A</u>, <u>Commentary No. 799</u>, <u>Commentary No. 796-A</u>, <u>Commentary No. 796</u> and <u>No. 777 Year-End Special Commentary</u>.

Negative market reactions had surfaced in trading of the U.S. dollar and in related financial markets, with some upside pressure on gold, silver and oil prices, subsequent to recent, weaker-than-expected headline economic data or suggestions of a less-aggressive tightening stance by the Fed. Fed rate-hike jawboning, however, had put a temporary flutter into those market movements, placing some Fed-desired support under the U.S. currency. The downside spike to gold prices on October 4th was considered in *Commentary No.* 837 and will be discussed from a different perspective in tomorrow's *No.* 841.

Again, though, the fundamental liquidity issues facing the Fed remain dominated by the impact of perpetual U.S. economic non-recovery and a renewed, intensifying downturn. Even if the Fed should raise rates in the near future, ongoing negative economic pressures still will mount, forcing the U.S. central bank back into a position of having to support domestic financial- and banking-system liquidity needs. Effectively, the Fed will have no way out other than to return to some form of expanded quantitative easing, post-election.

Temporary jawboning aside, market reactions increasingly should reflect a renewed sense of Federal Reserve impotence in the wake of the latest no rate hike, with bleak longer-term implications for the U.S. dollar. While anything is possible, Fed tightening on November 2nd—the last formal opportunity prior to the November 8th election—appears to be out of consideration, with market expectations for a rate hike now centering on December 2016. Nonetheless, renewed quantitative easing increasingly should become the target of post-election speculation, as the deepening recession continues to unfold.

Rapidly weakening, regular monthly economic reporting should continue and result in much worse-than-expected—increasingly negative—reporting for at least the next several quarters of GDP (and GDI and GNP).

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 to June 2016 detail moved into positive headline territory, in tandem with rising gasoline prices. CPI inflation was "unchanged"—minimally negative—with a switch to positive seasonal adjustments for gasoline prices only partially offsetting the unadjusted monthly drop in gasoline prices in July. August CPI was boosted by "core" inflation, but the September and October CPIs appear set for gasoline-related spikes (see *Pending Releases*). Going forward, a weakening U.S. dollar increasingly should boost inflation, with a related upturn in oil prices, gasoline and other commodities. The *Public Commentary on Inflation Measurement* reviews fundamental reporting issues with the headline CPI.

*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, with the use of concurrent seasonal adjustments (as seen with retail sales, durable goods orders, employment and unemployment data). That issue is discussed and explored in the labor-numbers related <u>Supplemental Commentary No. 784-A</u> and <u>Commentary No. 695</u>.

Further, discussed in <u>Commentary No. 778</u>, 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. That construction-spending issue now appears to have been structured as a gimmick to help boost the recently-published 2016 GDP benchmark revisions, aimed at smoothing the headline reporting of the GDP business cycle, instead of detailing the business cycle and reflecting broad economic trends accurately, as discussed in <u>Commentary No. 823</u>.

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 <u>Commentary No. 669</u>). John Crudele of the <u>New York Post</u> continues his investigations in reporting irregularities: <u>Crudele Investigation</u>. In the 1990s, the Census Bureau and BLS played political-reporting games with the nature of statistical sampling size in "inner cities" in the Census Bureau surveying tied to the monthly Household Surveys and the annual piggy-backed Poverty Survey. Such had major distorting impact on the headline data, and it may be in the works, again.

#### **PENDING RELEASES:**

Consumer Price Index—CPI (September 2016). The Bureau of Labor Statistics (BLS) will release the September 2016 CPI, tomorrow, Tuesday, October 18th, which will be covered in *Commentary No. 841* of that date. The headline September CPI-U is a fair bet to show its strongest month-to-month increase this year, perhaps up by 0.3%, reflecting rising gasoline prices exacerbated by positive seasonal adjustments to same. Headline year-to-year annual inflation for September 2016 likely will increase to around 1.4% or higher, versus 1.1% in August 2016. Early indications for the October CPI suggest a similar inflation rate increases for that month's headline details.

2017 Social Security Annual COLA Adjustment Is Likely to Be About 0.3%. The headline September CPI-W for third-quarter 2016 will set the annual cost of living adjustment (COLA) for Social Security recipients in 2017. Having to overcome an annual inflation deficit as of third-quarter 2015, which had set the 2016 COLA adjustment to zero, the adjustment for 2017 likely will be about 0.3%.

**Positive Monthly Inflation Impact from Gasoline Prices.** Average gasoline prices rose in September 2016, up by 1.88% for the month on a not-seasonally-adjusted basis, per the Department of Energy (DOE). Where BLS seasonal adjustments to gasoline prices in September also are on the plus-side, they should exacerbate the unadjusted price increase in gasoline. As a result, seasonally-adjusted gasoline prices should contribute roughly a positive 0.15% to the headline monthly change in the CPI-U. Boosted by higher food and "core" (net of food and energy) inflation, a headline monthly CPI-U reading of 0.3%, plus or minus, is a reasonable expectation.

Annual Inflation Rate. Noted in <u>Commentary No. 833</u>, year-to-year, CPI-U inflation would increase or decrease in the headline September 2016 reporting, dependent on the seasonally-adjusted month-to-month change, versus the adjusted, headline monthly decline of 0.09% (-0.09%) in September 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 September 2016, the difference in September's headline monthly change (or forecast of same), versus the year-ago monthly change, should be added to or subtracted directly from the August 2016 annual inflation rate of 1.06%. For example, a seasonally-adjusted, gain of 0.3% in the monthly September 2016 CPI-U, would move the annual CPI-U inflation rate for September 2016 up to about 1.4% or 1.5%, plus-or-minus, depending on rounding.

Real Retail Sales (September 2016). The Census Bureau released September 2016 nominal (not-adjusted-for-inflation) Retail Sales on October 14th (Commentary No. 839), showing a headline monthly gain of 0.62%, with an annual gain of 2.67%. Those gains were boosted heavily by rising inflation, where they will be adjusted for the headline September 2016 CPI-U inflation detail in tomorrow's Commentary No. 841. With a likely solid increase in the monthly CPI-U, there is a parallel chance for real sales growth in September to be weaker than the headline nominal sales activity. Where the pace of annual CPI-U inflation in September also should increase sharply from August, that should generate an intense and continuing recession signal in the historically low-level, annual real Retail Sales growth.

Underlying consumer liquidity and household income conditions were updated in <u>Commentary No. 839</u>; liquidity remains impaired. The extreme liquidity bind besetting consumers continues to constrain activity in personal-consumption expenditures and retail sales. 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 retail sales, real or otherwise.

Residential Construction—Housing Starts (September 2016). The Census Bureau will release September 2016 residential construction detail, including Housing Starts, on Wednesday, October 19th, which will be covered in *Commentary No. 842* 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. Wherever consensus estimates settle—most frequently on the upside—they are virtually certain also to be well shy of any meaningful, statistically-significant change.

Irrespective of the generally meaningless headline detail, the broad pattern of housing starts should remain consistent with the low-level, stagnant activity seen at present, with August 2016 activity having been down by 50% (-50%) from the pre-recession high of the series. Such is particularly evident with the headline detail viewed in the context of a six-month moving average. Again, this series remains subject to regular and extremely-large, prior-period revisions.

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

Discussed in <u>Commentary No. 839</u>, 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 liquidity-strapped U.S. consumer is unable to sustain growth in broad economic activity, including sustainable growth in demand for residential construction.

**PLANNED UPDATES: Comprehensive** *Special Report* and **ShadowStats Website.** ShadowStats is updating fully, into one, massive background piece—a *Special Report (Commentary)*—the latest broad outlook for the U.S. and global economies, financial markets and systems, and inflation (U.S. hyperinflation). All of that will be in the context of incorporating and fully revising, wherever necessary, the materials in the <u>2014 Hyperinflation Report—The End Game Begins</u>, <u>2014 Hyperinflation Report—Great Economic Tumble</u>, <u>No. 777 Year-End Special Commentary</u> and other intervening missives, including the most-recent *Hyperinflation Outlook Summary* as found in <u>Commentary No. 783</u>.

The various background articles available at the <a href="www.ShadowStats.com">www.ShadowStats.com</a> site also will be updated in the process, including those first published in 2004 as introductory articles to the site. As usual, all original material will remain available to subscribers (all original public material also will remain available to anyone visiting the site).

As to timing, the *Special Report* will follow the November U.S. presidential election, as discussed in the *Special Note to Subscribers* at the beginning of *Commentary No. 839*. It will include updated, consistent GAAP-based financial detail on the U.S. government's financial condition through September 30, 2015 and initial prospects for the fiscal year ended September 30, 2016.

Updates to the various public materials on the Web site will be staggered through year-end. The introduction of the <u>2004 Primer Series</u> will be first (the link is to the initial background article that addressed among other issues political manipulation of data).

We also will introduce, in conjunction with the *Special Report*, a section with links to books and articles that we and/or our readers have found of particular interest and substance. Many thanks to those who already have submitted recommendations of specific books and publications. Anyone with materials they would like to have considered for inclusion should send details in an e-mail to johnwilliams@shadowstats.com or call John Williams directly at (707) 763-5786.