

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

COMMENTARY NUMBER 807
CPI, Real Retail Sales, Production, Housing Starts, Freight Index, FOMC and the Dollar
May 19, 2016

**Ongoing and Intensifying Economic Downturn Continues,
Despite Some April Fluff, Unusual Seasonals and One-Time Factors**

Domestic Freight Index Continued to Show Crashing Activity

**Two Consecutive, Annual Declines in Quarterly Industrial Production
Never Have Been Seen Outside of Formal Recessions, and First-Quarter 2016
Is on Track for a Third Straight Contraction**

**April 2016 Annual Inflation Increased Across the Board:
CPI-U at 1.1%, CPI-W at 0.8%, ShadowStats at 8.8%**

Real Retail Sales Continued an Intense Recession Signal

**Non-Recovered Housing Starts Remained in Smoothed,
Low-Level Stagnation**

**Downside Revisions to Durable Goods Orders and Shipments
Promise Downside GDP Benchmarking**

PLEASE NOTE: The next regular Commentary, scheduled for Thursday, May 26th will cover April New Orders for Durable Goods and New- and Existing-Home Sale, followed by a Commentary on May 27th reviewing the first revision to first-quarter 2016 GDP. A special Supplemental Commentary will follow tomorrow, May 20th, previewing the GDP revision and reviewing the significant and negative annual revisions just published for new orders for durable goods orders and factory shipments.

A tremendous amount of new information has been released in the last two days, including shifting FOMC jawboning. Details are covered this unusually long, and delayed newsletter published today, and in a supplement pending for tomorrow.

Best wishes to all — John Williams

OPENING COMMENTS AND EXECUTIVE SUMMARY

Despite Some Near-Term April Fluff, Seasonal-Factor Distortions, Prior-Period Revisions and One-Time Events, Economic Activity Has Continued in a Deepening Downturn. Headline economic activity was busting out all over in April, with surging retail sales, industrial production and housing starts, but that happy news reflected special or one-time events, not fundamental, underlying economic strength. Retail sales were boosted by a one-time, unsustainable surge in irregularly-volatile monthly automobile sales, while a distorted seasonal-adjustment spike, generated by last year's artificially strong 24% monthly jump in April housing-starts, against weather-savaged February and March, boosted adjusted headline April 2016 detail. Weather also played a major role in April industrial production, where utilities jumped by 5.8% for the month. Despite a 0.3% gain in manufacturing, headline April production would have contracted without the utility surge from shifting unseasonable weather effects.

Those gains should be muted or turn down in revision in the months ahead, tempering what otherwise was an early monthly upturn into second-quarter activity. The Fed should be aware of those circumstances, with a June rate hike by the FOMC unlikely, despite current rumors (see the *Hyperinflation Watch*). Discussed in the relevant economic sections, first-quarter 2016 activity broadly remained bleak, while second quarter-activity for industrial production (a Federal Reserve series) was trending flat quarter-to-quarter and negative year-to-year, despite the headline monthly gain in April.

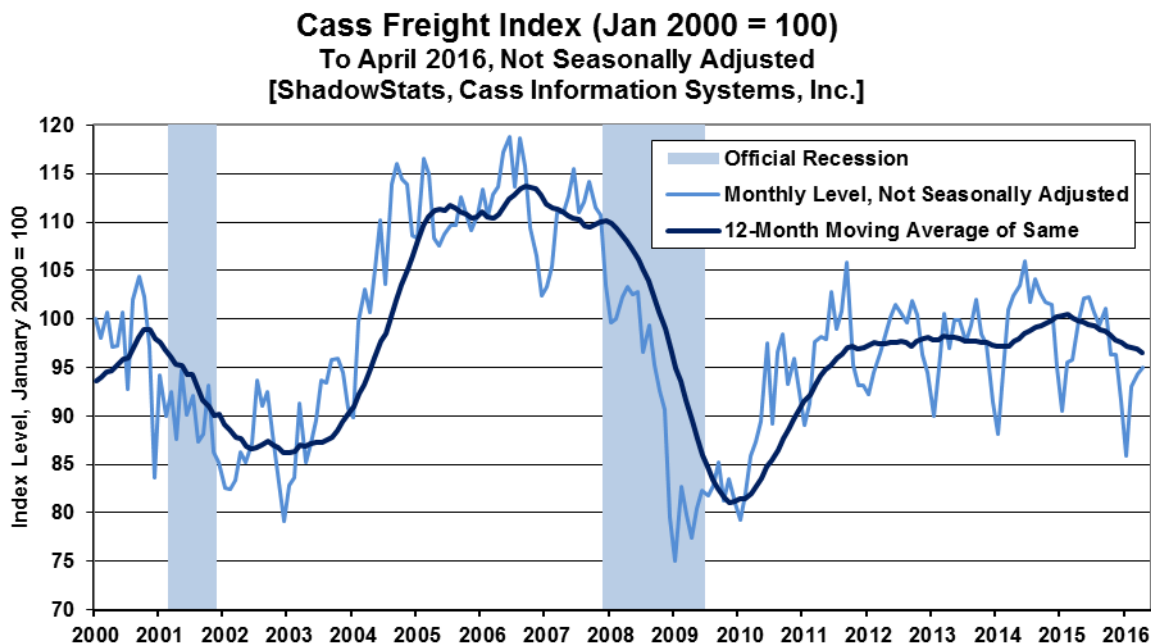
Downside Industrial Production Activity Continued to Intensify in a Manner Never Seen Outside of a Formal Recession. Noted in last month's production missive [Commentary No. 800](#), production contracted year-to-year in first-quarter 2016, for the second consecutive quarter. Since the creation of the Federal Reserve's Index of Industrial Production in 1919, that never has happened outside of a formal recession. With headline April 2016 production in place, second-quarter 2016 now is on track for third consecutive annual contraction in quarterly production. The prospects for near-term recognition of a formal recession are closer than most realize. That will be discussed in tomorrow's *Supplemental Commentary*.

Continuing "Other" Confirmation of Non-Recovery and Economic Renewed Downturn. Patterns of non-recovery in the general economy and renewed downturn in business activity were reconfirmed in the headline detail of the April 2016 [Cass Freight Index](#)TM, published May 13th.

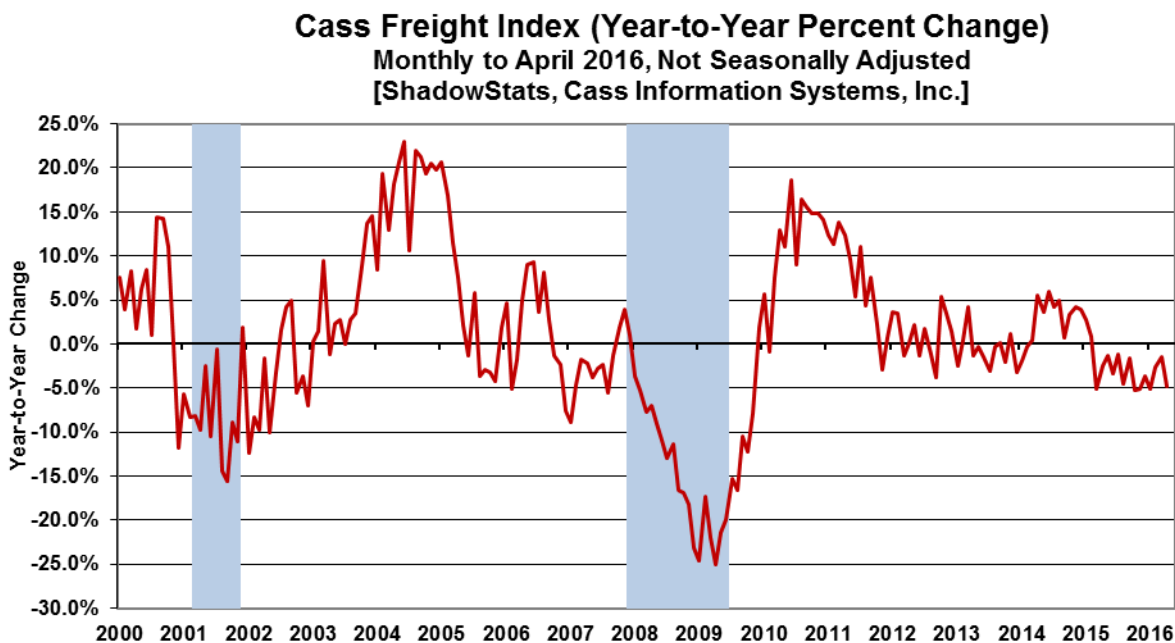
Beginning with [Commentary No. 782](#) (further background available there), ShadowStats published the graphic detail on the Cass Index, a measure of North American freight volume as calculated by, and used with the permission of Cass Information Systems, Inc. As background, freight activity is a basic,

underlying indicator of commercial activity and broad GDP. Of the combined U.S. and Canadian (North American) GDP in 2014, roughly 91% was attributable to the United States.

Graph 1: CASS Freight Index, Unadjusted Monthly and Trailing 12-Month Average, through April 2016



Graph 2: CASS Freight Index, Year-to-Year Percent Change, Monthly through April 2016



The plot in *Graph 1* reflects the monthly numbers updated through April 2016. The headline monthly detail is not adjusted for broad seasonal patterns, such as retailers stocking for the holiday shopping season. Accordingly, ShadowStats plots the series using a trailing twelve-month average, which tends to neutralize regular seasonal patterns over the period of a year, along with the unadjusted monthly detail plotted in the background.

In [Commentary No. 805](#) (see pages 7 to 11 there), a variation on *Graph 1* was compared with various U.S. unemployment and economic measures. Shown in *Graph 1*, the trailing twelve-month average peaked in January 2015 and has been slowing since, with the twelve-month average level through April 2016 down by 4.0% (-4.0%) from that peak, currently down 3.3% (-3.3%) year-to-year from the April 2015 average.

Another approach to assessing not-seasonally-adjusted monthly detail is to look at year-to-year change by individual month, as plotted in *Graph 2*. The unadjusted monthly detail has been in continual year-to-year decline since March of 2015, down by 4.9% (-4.9%) year-to-year as of April 2016.

In combination, *Graphs 1* and *2* are consistent with a pattern of economic collapse into 2009, low-level stagnation thereafter and renewed downturn effectively coincident with a “new” recession, which likely will be timed from December 2014. There is no evidence of an economic rebound or recovery in the works, based on this independent (as in non-government) and broadly-based indicator of business activity, or on other independent indicators such as S&P 500 revenues (again, see [Commentary No. 805](#)).

Today’s Commentary (May 19th). The balance of these *Opening Comments* provides summary coverage of the April 2016 Consumer Price Index (CPI) and related Real Retail Sales and Earnings, April Industrial Production, and April Housing Starts and the annual benchmark revisions to that series.

The *Hyperinflation Watch* updates the U.S. dollar and Gold graphs and the discussion that usually accompanies the monthly CPI *Commentary*, including potential FOMC activity. The most recent *Hyperinflation Outlook Summary* is found in [Commentary No. 783](#), with [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*.

The *Week Ahead* section previews next week’s reporting of the April New Orders for Durable Goods and New- and Existing-Home Sales. Prospects for the first revision to first-quarter 2016 GDP will be reviewed in tomorrow’s *Supplementary Commentary*.

Consumer Price Index (CPI)—April 2016—Headline Inflation Rallies with Higher Gasoline Prices. Passing into second quarter 2016, the seasonal adjustments used in battering first-quarter energy prices tend to soften a bit, before moving into the second half of the year and flipping, moving to boost unadjusted gasoline prices. With a continued increase in April 2016 gasoline prices, monthly and annual inflation both showed some rebound, although respective monthly and annual gains of 0.41% and 1.13% still remained well shy of common experience.

Discussed in other, recent CPI *Commentaries* (see [Commentary No. 793](#)), it is the unadjusted, not the seasonally-adjusted detail that tends to match consumer experience most closely, to the extent that these

numbers come close to matching actual experience at all. On an unadjusted basis, monthly CPI-U rose by 0.47% in April.

Separately, although official annual CPI-U inflation has been holding around 1.0%, year-to-year inflation is not and has not been quite as soft as indicated, when considered in the context of traditional CPI reporting and common experience. The ShadowStats-Alternate Inflation Measures showed annual inflation in April 2016 of 4.7% based on 1990 methodologies, and 8.8% based on 1980 methodologies.

Longer-Range Inflation Outlook. Reviewed in today's *Hyperinflation Watch* and discussed more generally in [No. 777 Year-End Special Commentary](#), high risk of extreme flight from the U.S. dollar—a massive dollar debasement—continues to threaten an increasingly rapid, upturn in energy and global-commodity inflation, which would drive headline U.S. consumer inflation much higher. That process continues, and it should accelerate in tandem with renewed tumbling in U.S. economic activity. Along with the ongoing downturn in business activity, global markets increasing should realize that the U.S. Federal Reserve and other major central banks have no effective idea as to how to boost current economic activity or to stabilize global banking-system solvency. That includes the latest round of bluffing on raising rates.

CPI-U. Headline, seasonally-adjusted April 2016 CPI-U rose by 0.41% for the month, following an increase of 0.09% in March, and a monthly decline of 0.17% (-0.17%) in February. On an unadjusted basis, monthly April 2016 CPI-U rose by 0.47%, following unadjusted monthly gains of 0.43% in March 2016 and 0.08% in February.

Encompassed by the seasonally-adjusted monthly gain of 0.41% in April 2016 [up by an unadjusted 0.47%], April food inflation rose by a seasonally-adjusted 0.18% [also up by an unadjusted 0.18%], April energy inflation rose by a seasonally-adjusted 3.45% [up by an unadjusted 3.71%], while the adjusted “core” (ex-food and energy) inflation rate rose by 0.19% [up by 0.26% unadjusted]. Separately, core CPI-U inflation showed unadjusted year-to-year inflation of 2.15% in April 2016, somewhat softer than the 2.19% in March 2016 and the 2.33% in February 2016.

Not seasonally adjusted, April 2016 year-to-year inflation for the CPI-U rebounded to 1.13% from 0.85% in March 2016 and versus 1.02% in February 2016.

CPI-W. The April 2016 seasonally-adjusted, headline CPI-W, which is a narrower series and has greater weighting for gasoline than does the CPI-U, rose month-to-month by 0.45%, following a monthly gain of 0.13% in March and a decline of 0.32% (-0.32%) in April. On an unadjusted basis, the monthly CPI-W rose by 0.53%, having gained by 0.54% in March and declined by 0.04% (-0.04%) in February.

Unadjusted, April 2016 annual CPI-W rose by 0.83%, having gained 0.50% in March 2016 and 0.68% in February 2016.

Chained-CPI-U. The headline C-CPI-U is not seasonally adjusted, and it is revised quarterly in an effort to accelerate the process of finalizing the monthly number, with the goal of using this rate as a low-ball inflation estimate to plug into the government's cost-of-living-adjustment calculations.

In the context of revisions back to April 2015 (with monthly year-to-year inflation revising lower by 0.08% (-0.08%) to 0.11% (-0.11%)), for the unadjusted April 2016 C-CPI-U, annual inflation came in at 0.71%, up from a revised 0.33% [previously up by 0.41%] in March 2016.

Alternate Consumer Inflation Measures. The ShadowStats-Alternate Consumer Inflation Measures are constructed on top of the unadjusted CPI-U series. For the ShadowStats-Alternate Consumer Inflation Measure (1990-Base)—year-to-year annual inflation was roughly 4.7% in April 2016, versus 4.4% in March 2016. The April 2016 ShadowStats-Alternate Consumer Inflation Measure (1980-Base), which reverses gimmicked changes to official CPI reporting methodologies back to 1980, was at about 8.8% year-to-year, versus 8.5% in March 2016.

Real Retail Sales April 2016—Second-Quarter Likely to Turn Down, Given an Unsustainable One-Month Jump in Auto Sales. Detailed in prior [Commentary No. 806](#), April 2016 nominal Retail Sales—before any adjustment for inflation—rose month-to-month by 1.26%, following a decline in March of 0.33% (-0.33%). April 2016 nominal year-to-year change was a gain of 3.00%, versus a revised 1.67% annual increase in March 2016.

Based on the headline seasonally-adjusted monthly CPI-U increase of 0.41% in April 2016, the gain of 0.09% in March, the decline of 0.17% (-0.17%) in February, April 2016 real Retail Sales rose by 0.85% for the month, following a revised decline of 0.42% (-0.42%) in March, and a revised monthly gain of 0.45% in February.

Intense Signal of Recession in Annual Real Growth. During normal economic times, annual real growth in Retail Sales at or below 2.0% signals an imminent recession. That signal basically has been in play since February 2015 (the “new” recession likely will be timed from December 2014, based on industrial production, retail sales and other indicators), suggesting a deepening, broad economic downturn.

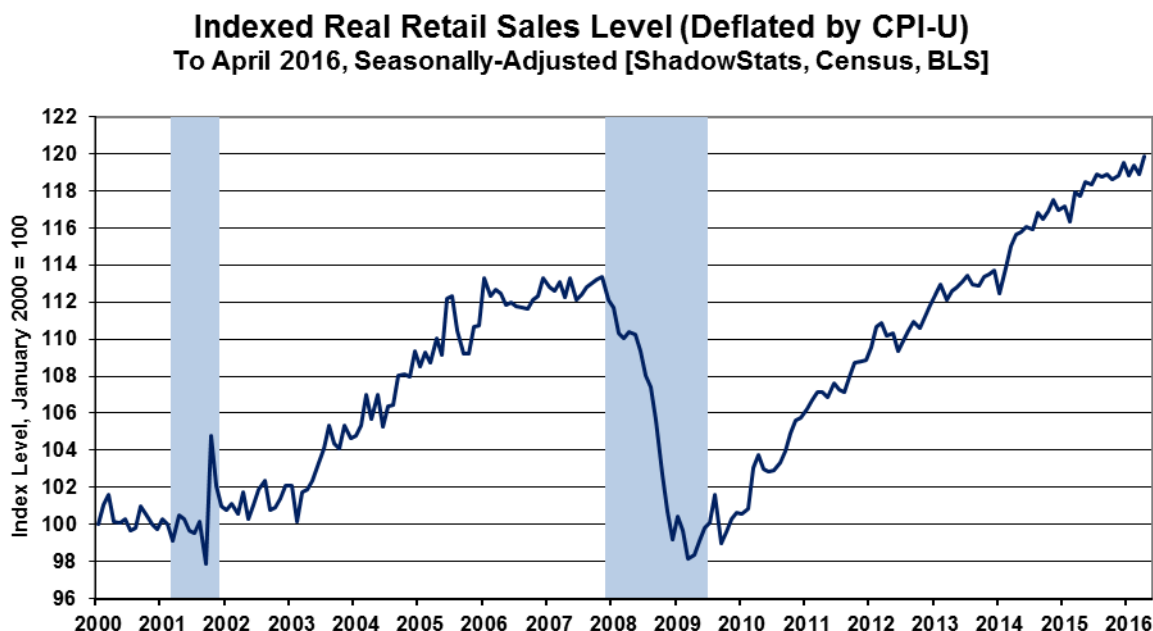
Year-to-year, April 2016 real retail sales rose by 1.83%, versus a downwardly revised 0.79% in March 2016, and a minimally-revised 2.63% in February 2016. With annual real growth on track for a 1.42% annual gain in second-quarter 2016, versus a revised 1.61% in first-quarter 2016, and at a revised 1.61% in fourth-quarter 2015, the recession signal remains intense, consistent with an unfolding recession. *Graphs 26 and 28 in the Reporting Detail*, show the latest patterns of headline annual real growth.

First-Quarter 2016 Annualized Real Growth Waffling Around “Unchanged.” Reflecting the latest reporting and revisions to the nominal retail sales detail, what had still been a post-benchmark annualized contraction in first-quarter 2016 real Retail Sales of 0.08% (-0.08%) revised to an annualized gain of 0.07%, along with the headline April 2016 detail.

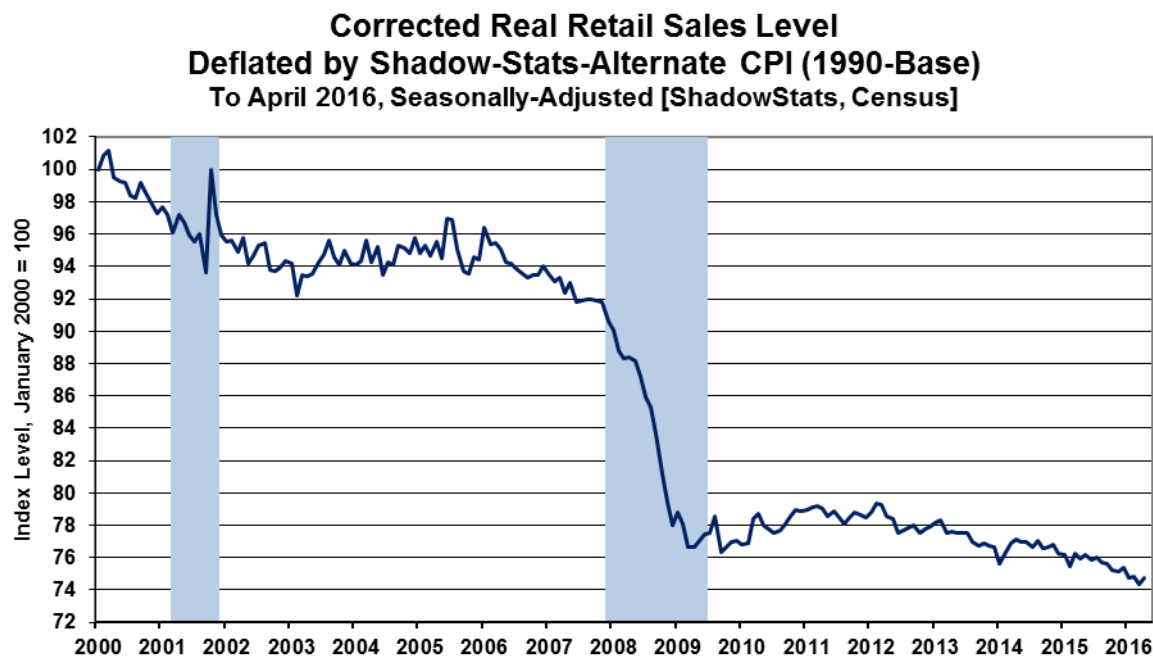
Based solely on the headline April 2016 number, second-quarter 2016 real Retail Sales was on track for a 2.88% annualized quarterly growth rate. Where the headline April monthly real gain of 0.85%, however, reflected an unsustainable monthly surge in automobile sales, subsequent reporting and/or revisions should take the annualized second-quarter real growth prospects into flat or negative territory.

As official consumer inflation continues its upside climb in the year ahead, and as overall retail sales continue to suffer from the ongoing consumer liquidity squeeze, these data should continue trending meaningfully lower, in what should be recognized soon as a formal “new” recession.

Graph 3: Headline Real Retail Sales Level, Indexed to January 2000 = 100



Graph 4: "Corrected" Real Retail Sales Level, Indexed to January 2000 = 100



Corrected Real Retail Sales—April 2016. The apparent “recovery” of headline real retail sales shown in *Graph 3* (see also *Graph 25* in the *Reporting Detail*) generally continued into late-2014, although headline reporting turned down in December 2014, into first-quarter 2015, turned higher into the third-

quarter 2015, slowed to a near-standstill in fourth-quarter 2015 and first-quarter 2016, with an uptick in April 2016. Nonetheless, headline real growth in retail sales continues to be overstated heavily, due to the understatement of the rate of CPI-U inflation used in deflating the retail sales series. Discussed more fully in *Chapter 9* of [2014 Hyperinflation Report—Great Economic Tumble – Second Installment](#) and [Public Commentary on Inflation Measurement](#), deflation by too-low an inflation number (such as the CPI-U) results in the deflated series overstating inflation-adjusted economic growth.

Both of the accompanying graphs are indexed to January 2000 = 100.0 to maintain consistency in the series of graphs related to corrected inflation-adjustment (including the regular plots of industrial production [see the next major section], new orders for durable goods and GDP). The first graph reflects the official real retail sales series, except that it is indexed, instead of being expressed in dollars. The plotted patterns of activity and rates of growth are exactly same for the official series, whether the series is indexed or expressed in dollars, again, as is evident in a comparison of *Graph 3* with *Graph 25* in the *Reporting Detail* section.

Instead of being deflated by the CPI-U, the “corrected” real retail sales numbers—in *Graph 4*—use the ShadowStats-Alternate Inflation Measure (1990-Base) for deflation. With the higher inflation of the ShadowStats measure, the revamped numbers show a pattern of plunge and stagnation and renewed downturn. That pattern is consistent with consumer indicators like real average weekly earnings (see *Graph 5*), broad unemployment series and most housing statistics (see respectively [Commentary No. 805](#), the accompanying Housing Starts detail, such as seen in *Graph 14*. Also, consider the detail tied to *Graph 7* of the “corrected” industrial production index, shown later in these *Opening Comments*.

A topping out in late-2011 and early-2012 reverted to renewed decline in second-quarter 2012 in this series (*Graph 4*), which had been bottom-bouncing at a low-level plateau of economic activity since the economic collapse into 2009. The renewed contraction has trended into and deepened on a monthly basis throughout 2015, and now through first-quarter 2016, allowing for the occasional and temporary upside blips, as seen in April 2016.

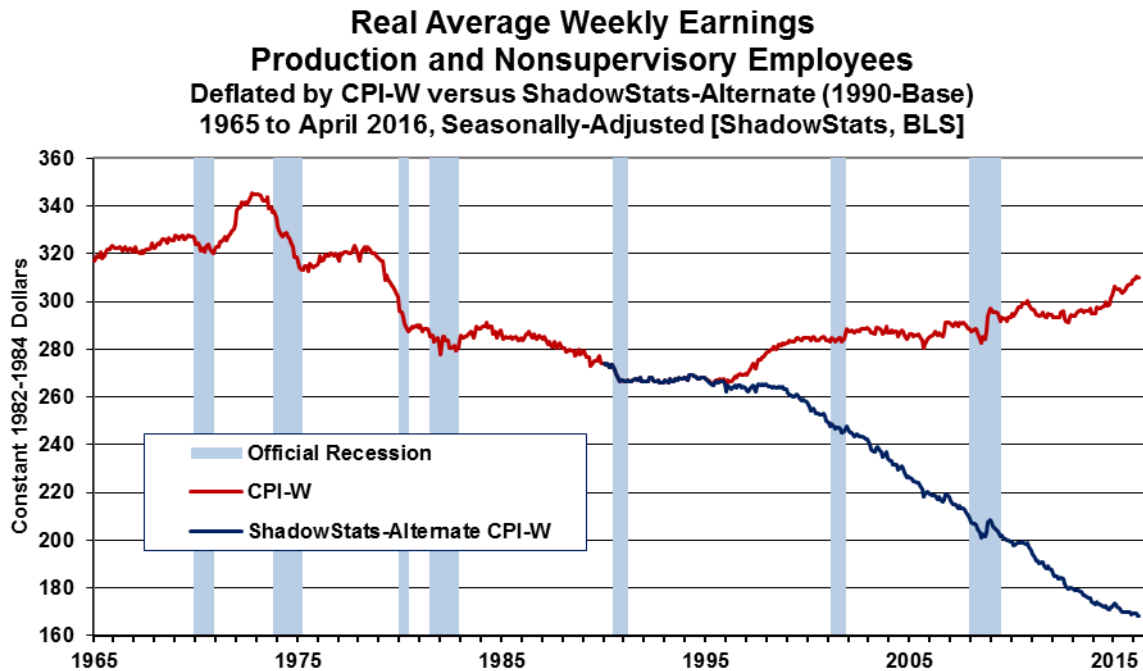
Real Average Weekly Earnings—April 2016— Real Average Hourly Earnings Fell by 0.22% (-0.22%), but Weekly Earnings Rose by 0.08%. The BLS published its estimates for real average weekly earnings for April 2016, coincident with the release of the April 2016 CPI-W. In the production and non-supervisory employees category—the only series for which there is a meaningful history—headline real average hourly earnings declined by 0.22% (-0.22%), as a 0.45% jump in the CPI-W overwhelmed a 0.23% increase in average hourly earnings. Yet, average weekly hours purportedly rose by 0.30% in April 2016, with the end result that average weekly earnings rose by 0.08% for the month.

That was against a revised month-to-month decline in real average weekly earnings of 0.19% (-0.19%) [previously up by 0.06%] in March 2016, following a revised gain of 0.41% [previously up by 0.02%] in February 2016. These heavily revised and seasonally-adjusted monthly changes are without much if any meaning in the near-term, although the longer term and benchmarked trend tends to be of some substance. As with the BLS reporting tied to the nonfarm payrolls, the headline seasonally-adjusted data here are not comparable due to reporting issues with concurrent seasonal factor adjustments.

Graph 5 plots this series, showing the seasonally-adjusted earnings as officially deflated by the BLS (red-line), and as adjusted for the ShadowStats-Alternate CPI Measure, 1990-Base (blue-line). When inflation-depressing methodologies of the 1990s began to kick-in, the artificially-weakened CPI-W (also

used in calculating Social Security cost-of-living adjustments) helped to prop up the reported real earnings. Official real earnings today still have not recovered their inflation-adjusted levels of the early-1970s, and, at best, have been in a minimal uptrend for the last two decades (albeit spiked recently by negative headline inflation). Deflated by the ShadowStats (1990-Based) measure, real earnings have been in fairly-regular decline for the last four decades, which is much closer to common experience than the pattern suggested by the CPI-W.

Graph 5: Real Average Weekly Earnings, Production and Nonsupervisory Employees, 1965-to-Date



Index of Industrial Production—April 2016—Deteriorating Economic Circumstances. But for a weather-related surge in monthly utility usage, headline industrial production would have contracted month-to-month in April 2016, instead of jumping by 0.7%. Production activity contracted year-to-year for the eighth consecutive month, with the second-quarter 2016 on an early track to show the third consecutive quarter of year-to-year contraction in industrial production.

Discussed in last month's production [Commentary No. 800](#), industrial activity then had contracted year-to-year in first-quarter 2016, for the second consecutive quarter. Since the creation of the Federal Reserve's Index of Industrial Production in 1919, that never has happened outside of a formal recession, and it is getting worse.

In the context of severely-negative benchmark revisions and subsequent revisions accompanying headline reporting through the April 2016 production detail, the industrial production series has continued to signal a deepening downturn, despite the occasional monthly uptick in headline detail. The headline 0.7% monthly in April 2016 production continued to suffer intensifying negative stresses from the mining sector—down by 2.3% (-2.3%) for the month—with oil and coal production hit with increasing severity by efforts out of Washington to discourage domestic consumption of fossil fuels. Positive production

offsets in the month reflected primarily a weather-related monthly surge of 5.8% in utility usage, accompanied by a 0.3% increase in manufacturing.

Aggregate industrial production regained its November 2007 pre-recession high, briefly, at its near-term peak of activity in October 2014, thanks then to surging mining activity, not to manufacturing output. Production fell back below its pre-recession high in March 2015 and was below its pre-recession 2007 peak by 1.50% (-1.50%) as of the April 2016 headline detail (see *Graph 6* and *Graph 33*; production graph numbers above 30 are found in the *Reporting Detail*). Manufacturing never has recovered its pre-recession peak of December 2007. As of April 2016, it remained 6.01% (-6.01%) shy of that unrealized milestone (see *Graph 34*).

Indeed, though, conditions were mixed in the three major production sectors of manufacturing, mining and utilities. Mining was hit hard, as usual, with collapsing coal production, oil and gas extraction and oil drilling (see *Graphs 41* to *47*), but Manufacturing showed modest upside activity, with increased production of machinery and automobiles (see *Graphs 34* to *38*). The large jump in utilities was within the normal range of high monthly volatility (see *Graphs 39* and *40*).

Quarterly and Annual Production Contractions. Again, annual growth in aggregate production held in negative territory for the eighth straight month, down by 1.07% (-1.07%) in April 2016, putting second-quarter 2016 production on an early track for an annual contraction of 0.86% (-0.86%). That would be the third-consecutive quarter of annual downturn, if the pattern holds. Again, this type of activity never has been seen outside of formal recessions. On a quarter-to-quarter basis, the early trend for second-quarter 2016 production is for a minimal, annualized quarterly growth rate of 0.11%.

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 revised fourth-quarter 2015 deeper contraction of 3.33% (-3.33%) and a revised, narrower first-quarter 2016 annualized quarterly decline of 1.60% (-1.60%).

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 a minimally revised annual decline of 1.62% (-1.62%) in fourth-quarter 2015, and a revised, narrower annual contraction of 1.55% (-1.55%) in first-quarter 2016. Again, second-quarter 2016 annual growth is on an early trend for a contraction of 0.86% (-0.86%).

Headline Industrial Production—April 2016. The headline monthly gain in April 2016 industrial production was 0.66%, versus a downwardly-revised monthly decline of 0.87% (-0.87%) in March 2016, a narrower, revised monthly decline of 0.21% (-0.21%) in February, and a minimally-revised gain of 0.53% in January. Net of prior-period revisions, April 2016 monthly activity rose by 0.75%.

Detailed in *Graphs 33*, *34*, *39* and *41*, by major industry groups, the headline April 2016 monthly aggregate production gain of 0.66% [a March decline of 0.87% (-0.87%)] was composed of a monthly April gain of 0.31% [a March contraction of 0.30% (-0.30%)] in manufacturing activity; an April decline of 2.26% (-2.26%) [a March decline of 2.97% (-2.97%)] in mining activity; and an April jump of 5.75% [a March decline of 3.29% (-3.29%)] in utilities activity.

Year-to-year change in April 2016 was a drop of 1.07% (-1.07%), following revised annual declines of 1.94% (-1.94%) in March 2016, 1.40% (-1.40%) in February 2016, and 1.32% (-1.32%) in January 2016.

Production Graphs—Corrected and Otherwise. The regular graphs of headline production level and annual growth detail are found in the *Reporting Detail (Graphs 30 to 33)*, along with the drill-down graphs of major subcomponents of the production series (*Graphs 34 to 47*). 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 the first-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.

Initial reporting for April 2016 has set second-quarter 2016 production growth on an initial trend of continuing year-to-year decline, but with flat quarter-to-quarter activity.

Graphs 6 and 7, 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 6 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, as discussed earlier with *Graph 4*). Similar plots are used with new orders for durable goods (see [Commentary No. 802](#) and tomorrow's *Special Commentary*) and the GDP (see [Commentary No. 803](#)); it does not affect the appearance of the graph or reported growth rates (as can be seen with a comparison to *Graph 33* in the *Reporting Detail* section).

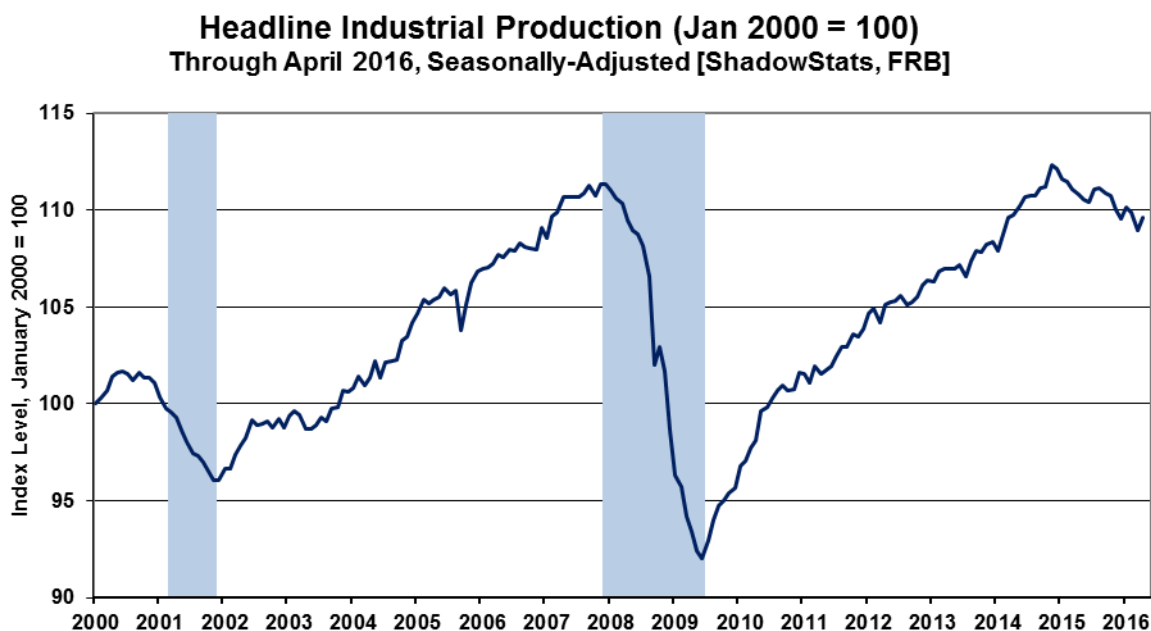
Graph 7 is a recast version of *Graph 6*, corrected for the estimated understatement of the inflation used in deflating certain components of the production index. Estimated hedonic-inflation adjustments have been backed-out of the official industrial-production deflators used for headline reporting.

This "corrected" *Graph 7* 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. 803](#) 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 the "recovery," 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 first-quarter 2016.

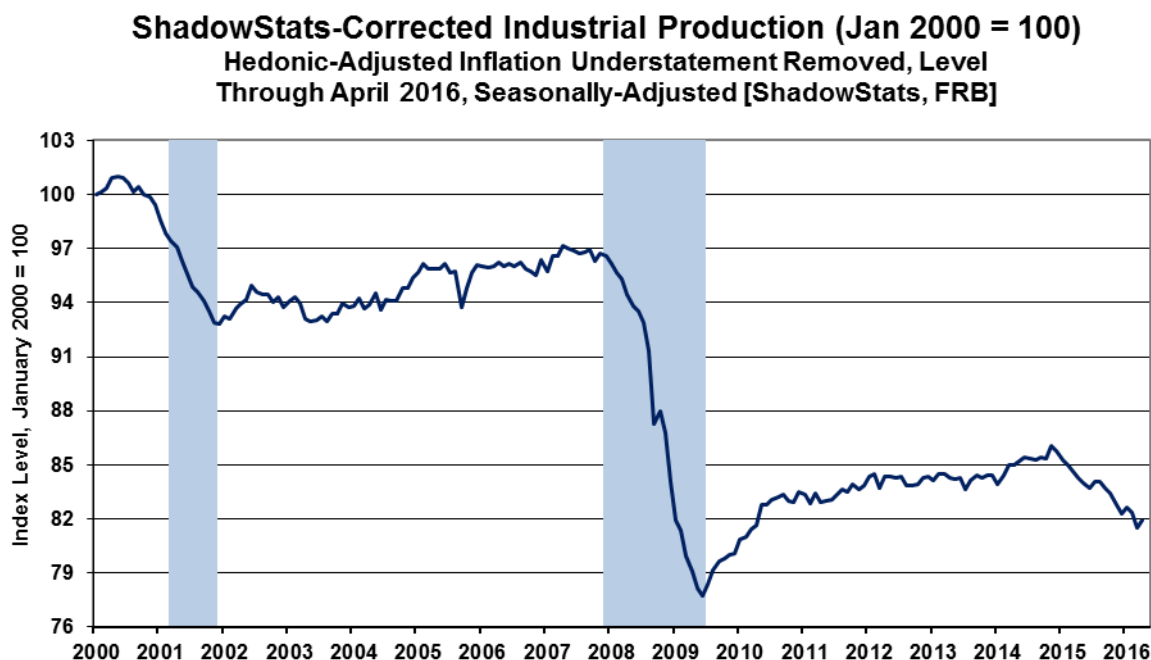
Where the corrected series has remained well shy of a formal recovery, both the official and corrected series suffered an outright contraction in both first- and second-quarter 2015; this is a pattern of severe economic weakness last seen during the economic collapse. Despite the brief third-quarter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

quarter 2015 and first-quarter 2016 industrial production both annual contractions, and second-quarter 2016 also appears headed in that direction.

Graph 6: Indexed Headline Level of Industrial Production (Jan 2000 = 100)

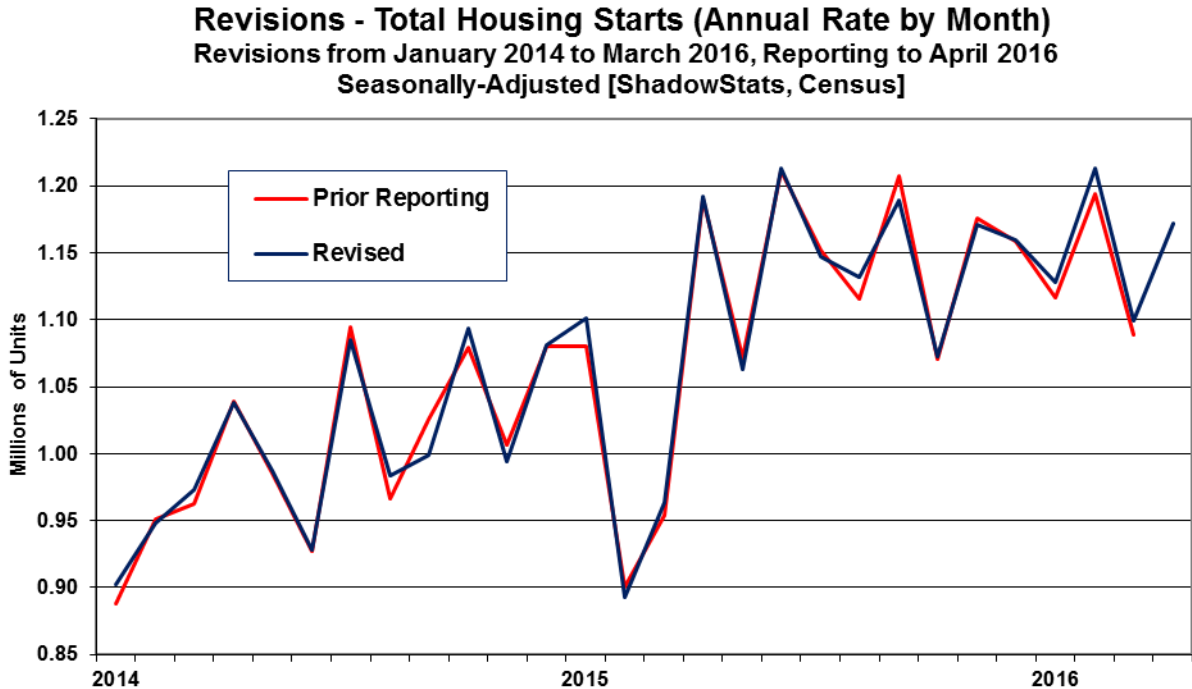


Graph 7: Headline ShadowStats-Corrected Level of Industrial Production (Jan 2000 = 100)

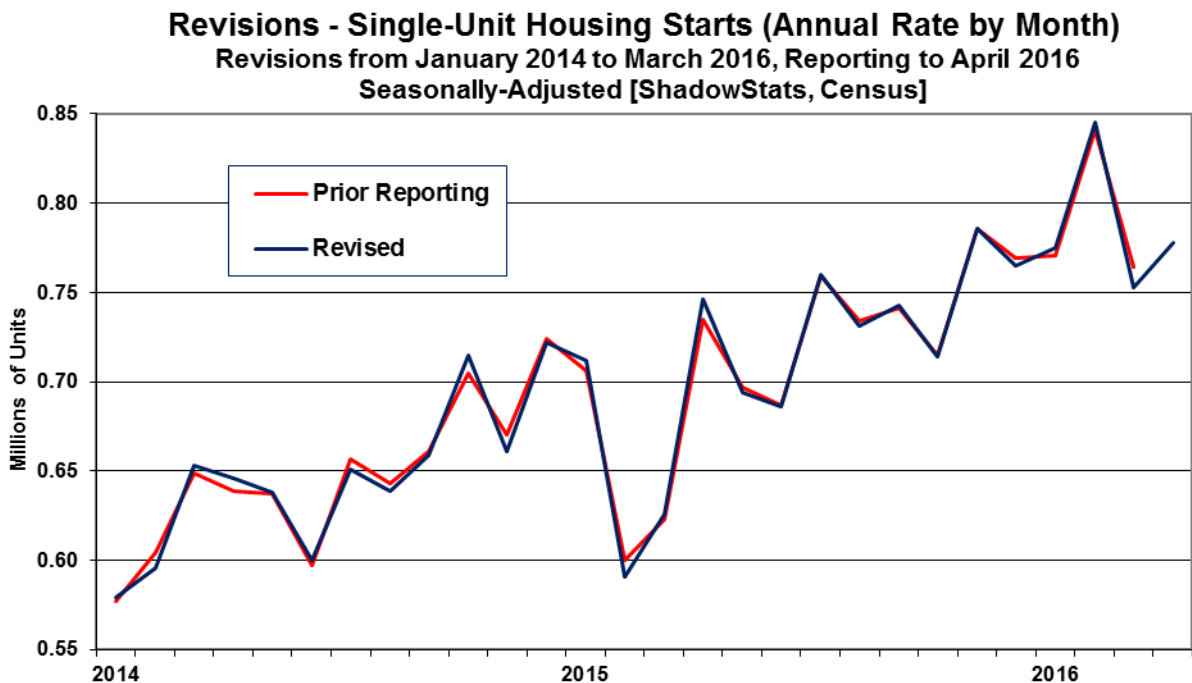


Housing Starts—April 2016 and Annual Revisions—Minimal Revisions, a Continuing Pattern of Smoothed, Low-Level Stagnation and Non-Recovery. Annual revisions to housing starts in 2014 and 2015 (published May 17th) were no more than shifted seasonal adjustments, as evident in *Graphs 8 to 10*.

Graph 8: Revisions to Aggregate Housing Starts

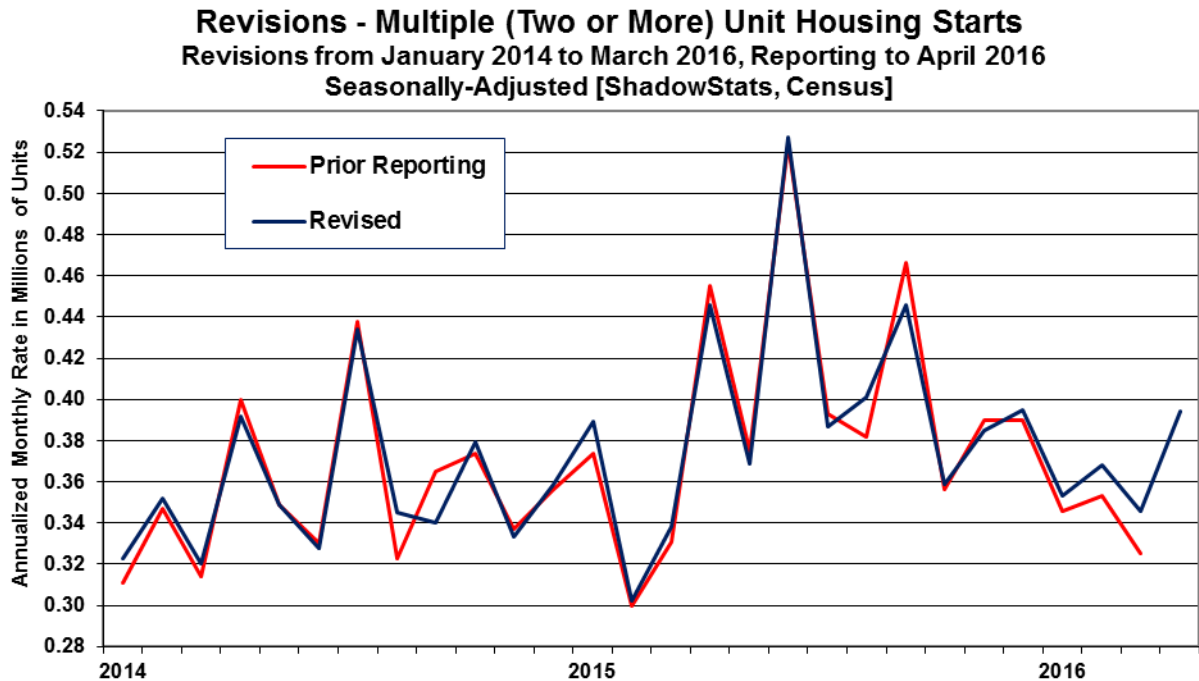


Graph 9: Revisions to Single-Unit Housing Starts



Estimated annual total starts activity was unrevised in aggregate, with activity shifting into headline first-quarter 2016 activity, particularly in the multiple-unit (two units or more) starts. The accompanying headline gain in April 2016 reflected seasonal-adjustment distortions from the year before.

Graph 10: Revisions to Multiple Unit (2 Units or More) Housing Starts



Distorted April 2016 Seasonals. April 2016 activity jumped sharply for the month, but that appeared to have been no more than distorted seasonal adjustments resulting from year-ago weather events, which had depressed February and March 2015 starts, relative to an extraordinary April 2015 monthly catch-up surge of 23.7%. As a result, revised monthly gains in February and March 2016 were up by 7.5% and down by 9.4% (-9.4%), respectively, followed by a headline April 2016 monthly gain of 6.6%, while annual changes for February through April 2016 went from plus 35.8% and 14.0%, to annual decline of 1.7% (-1.7%), respectively.

First-Quarter Housing Starts Reverse Trend, Again, Up at an Annualized Pace of 4.3%, Having Contracted Previously by 0.7% (-0.7%). In terms of annualized quarter-to-quarter change, and in the context of the annual benchmarking, the regularly-unstable aggregate housing-starts count fell at a narrower, revised annualized-quarterly pace of 24.1% (-24.1%) in first-quarter 2015, rose at an upwardly-revised annualized 96.3% pace in second-quarter 2015, flattened out to 0.0% in third-quarter 2015 and fell at a revised, narrower pace of 7.2% (-7.2%) in fourth-quarter 2015.

First-quarter 2016 activity, which had turned down with last month's initial full quarterly reporting, revised into positive territory, thanks largely to upside revisions to multiple-structure starts, as can be seen in *Graph 10*. Annualized quarterly growth now is 4.3%.

Based solely on the volatile headline April 2016 detail, housing starts are on an early track for an annualized 9.1% gain in second-quarter 2016. That outlook likely will dim sharply with the May 2016 reporting and revisions, as the monthly seasonal-adjustment distortions swing sharply to the downside.

Smoothed Numbers. Despite the regular volatility and instabilities in the Housing Starts series, the general pattern of low-level stagnation continued. The six-month moving-average pattern for the aggregate series continued to flatten, in low-level stagnation, reflecting both the revisions and the most-recent headline detail. That pattern is viewed best in terms of the longer-range historical graph of aggregate activity (*Graph 49* in the *Reporting Detail*), and particularly in the context of the headline activity—smoothed by a six-month moving average—as shown in accompanying *Graph 14*. Given the broad pattern of stagnation in the aggregate series, total April 2016 housing-starts activity remained well below any recovery level, down from its pre-recession high by 48% (-48%).

Separately, in April 2016, the dominant, single-unit housing starts component of the series (see *Graphs 15* and *16*) remained down by 57% (-57%) from its January 2006 pre-recession peak.

Reflected in the accompanying smoothed graphs, the aggregate housing-starts series held flat, at a low of stagnation (*Graph 14*), still reflecting up-trending, low-level stagnation in the six-month-smoothed single-unit activity (*Graph 16*), offset by down-trending, smoothed multiple-unit starts (*Graph 18*), which have continued to fall back from recent pre-recession levels.

April 2016 Housing Starts, Headline Reporting. The broadly unstable and highly volatile aggregate Housing Starts series jumped month-to-month, in the context of annual benchmark revisions and upside revisions to March 2016 and to first-quarter 2016 reporting. Previously discussed, the headline monthly gain largely was a function of distorted, upside seasonal adjustments. The statistically-insignificant, seasonally-adjusted, headline monthly gain in April 2016 housing starts was 6.6%.

Such followed a revised, deeper monthly decline of 9.4% (-9.4%) in March, and an upwardly-revised monthly gain of 7.5% in February. Net of the prior-period and benchmark revisions, April 2016 housing starts rose by a still statistically-insignificant 7.6%. Level-of-activity aggregate detail is plotted in *Graphs 11* to *14* (also see *Graphs 48* and *49* in the *Reporting Detail*).

Year-to-year change in the seasonally-adjusted, April 2016 aggregate housing-starts measure was a statistically-insignificant decline of 1.7% (-1.7%), versus a downwardly-revised gain of 14.0% in March 2016, and an upwardly-revised annual gain of 35.8% in February 2016.

The April 2016 headline gain of 6.6% in total housing starts encompassed headline monthly gains of 3.3% in the “one unit” category and 10.7% jump in the “five units or more” category. As most commonly is the case, not one of the headline changes was statistically significant, on a month-to-month or year-to-year basis.

By-Unit Category. Where the irregular housing starts series can show varying patterns, that partially is due to a reporting mix of residential construction products, with the largest physical-count category of one-unit structure housing starts—generally for individual consumption, resulting in new home sales—versus multi-unit structure starts that generally reflect the building of rental and apartment units.

Housing starts for single-unit structures in April 2016 rose month-to-month by a statistically-insignificant 3.3%, following a deeper, revised decline of 10.9% (-10.9%) in March, and a downwardly-revised

February gain of 9.0%. Single-unit starts for April 2016 showed a statistically-insignificant year-to-year annual gain of 4.3%, versus a downwardly-revised annual gain of 20.3% in March 2016, and an upwardly revised annual gain of 43.0% in February 2016 (see accompanying *Graphs 11, 12, 15 and 16*).

Housing starts for apartment buildings (generally 5-units-or-more) in April 2016 rose month-to-month by a statistically-insignificant 10.7%, versus a revised, narrowed monthly decline of 5.3% (-5.3%) in March, and an upwardly-revised gain of 6.3% in February. The statistically-insignificant year-to-year decline of 12.9% (-12.9%) in April 2016, followed an upwardly revised annual gain of 6.0% in March 2016, and an upwardly-revised annual gain of 21.1% in February 2016.

Expanding the multi-unit housing starts category to include 2-to-4-units plus 5-units-or-more usually reflects the bulk of rental- and apartment-unit activity. The Census Bureau does not publish estimates of the 2-to-4-units category, due to statistical significance problems (a general issue for the aggregate series). Nonetheless, the total multi-unit category can be estimated by subtracting the single-unit category from the total category (see accompanying *Graphs 11, 12, 17 and 18*).

Accordingly, the statistically-insignificant April 2016 monthly gain of 6.6% in aggregate starts was composed of statistically-insignificant gains of 3.3% in one-unit structures and 13.9% in the multiple-unit structures categories (2-units-or-more, including the 5-units-or-more category). Again, these series all are graphed in the *Opening Comments*.

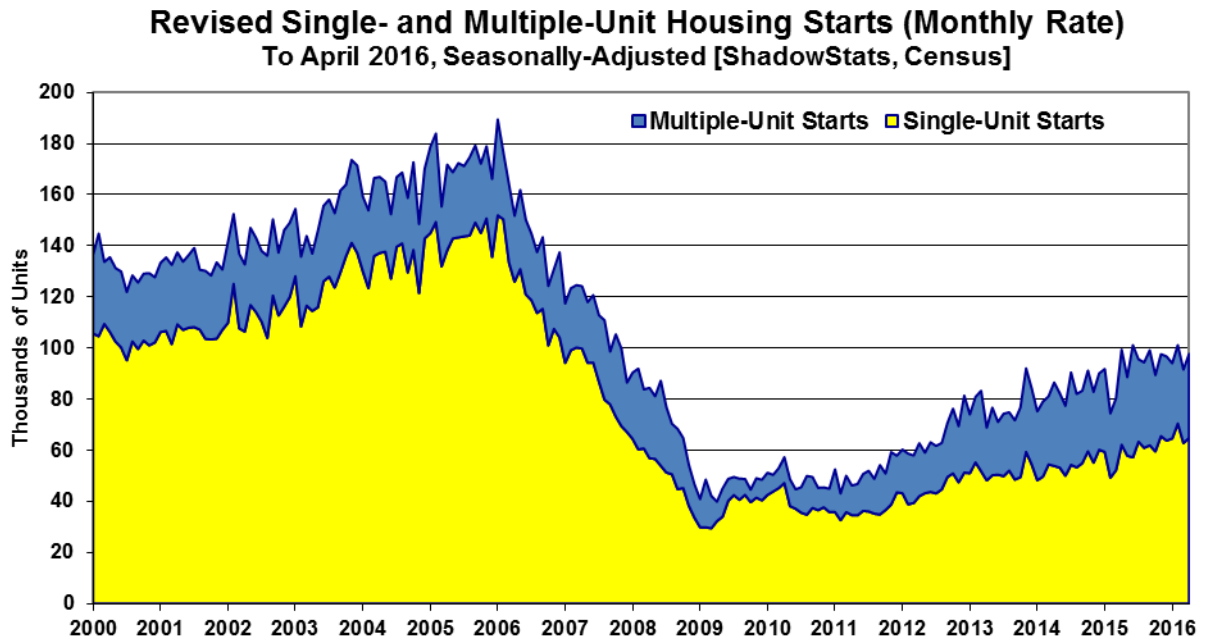
Regular Housing Starts Graphs. Headline reporting of housing starts activity is expressed by the Census Bureau as an annualized monthly pace of starts, which was 1,172,000 in April 2016, versus a revised 1,099,000 [previously 1,089,000] in March 2016. The scaling detail in the aggregate *Graphs 48 and 49* at the end of the *Reporting Detail* section reflects those annualized numbers.

Nonetheless, given the nonsensical monthly volatility in reporting and the exaggerated effect of annualizing the monthly numbers in this unstable series, the magnitude of monthly activity and the changes in same, more realistically are reflected at the non-annualized monthly rate. Consider that the headline 228,000 month-to-month gain in the annualized April 2015 housing starts was larger than any actual total (non-annualized) level of monthly starts ever, for a single month. That is since related starts detail first was published after World War II.

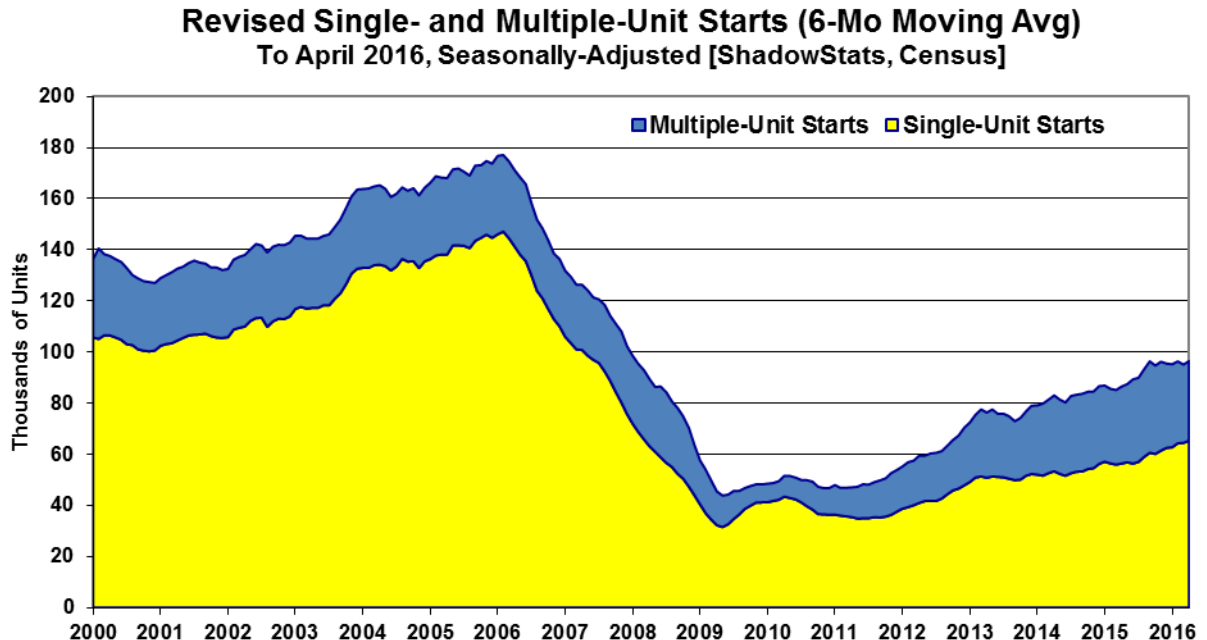
Accordingly, the monthly rate of 97,667 units in April 2016, instead of the annualized 1,172,000-headline number, is used in the scaling of the *Graphs 11 to 18* in these *Opening Comments*. With the use of either scale of units, though, appearances of the graphs and the relative monthly, quarterly and annual percentage changes are otherwise identical, as can be seen in a comparison of *Graph 13* versus *Graph 48* in the *Reporting Detail*.

The record monthly low level of activity seen for the present aggregate series was in April 2009, where the annualized monthly pace of housing starts then was down by 79% (-79%) from the January 2006 pre-recession peak. Against that downside-spiked low in April 2009, the April 2016 headline number was up by 145%, but it still was down by 48% (-48%) from the January 2006 pre-recession high for the series. Shown in the historical perspective of the post-World War II era, current aggregate-starts activity is in stagnation at low levels that otherwise have been at or near the historical troughs of less-severe recession activity of the last 70 years, as reflected in *Graph 49* at the end of the *Reporting Detail* section.

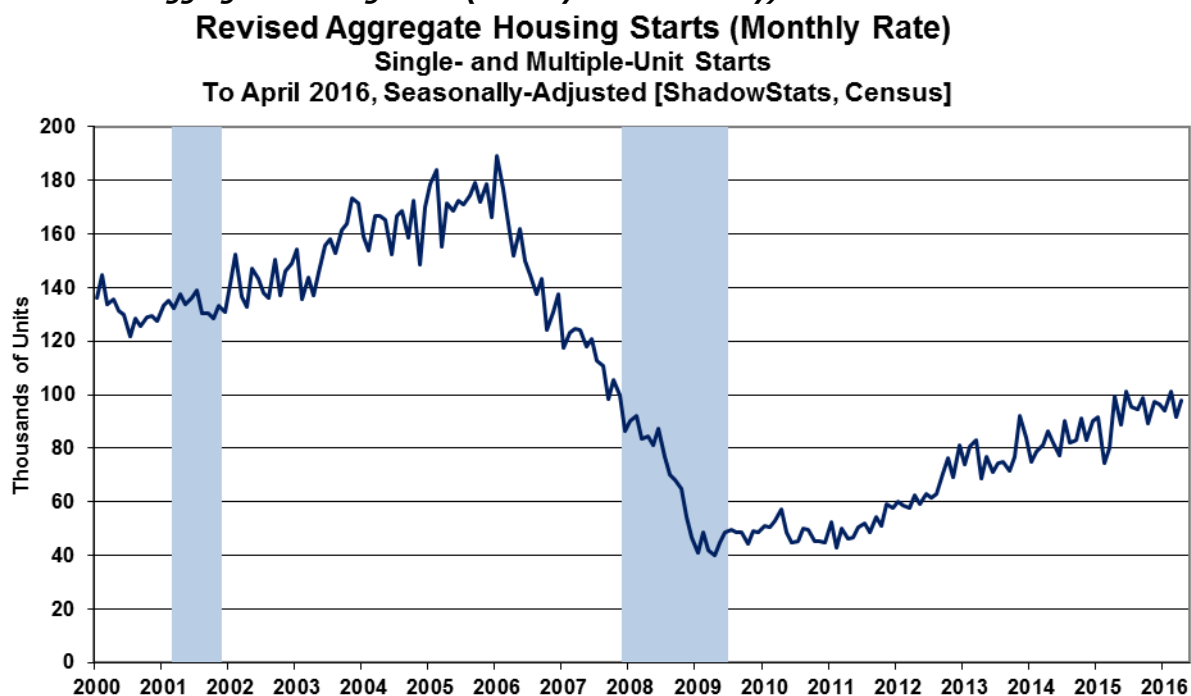
Graph 11: Revised Single- and Multiple-Unit Housing Starts (Monthly Rate of Activity)



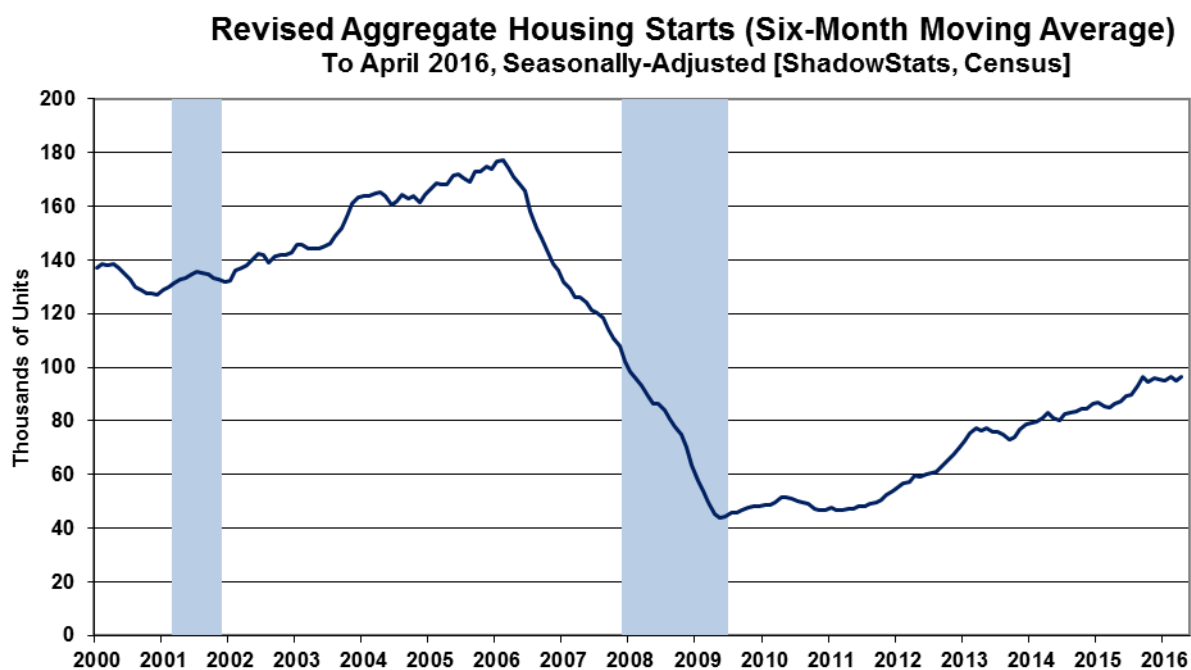
Graph 12: Revised Single- and Multiple-Unit Starts (Six-Month Moving Average, Monthly Rate of Activity)



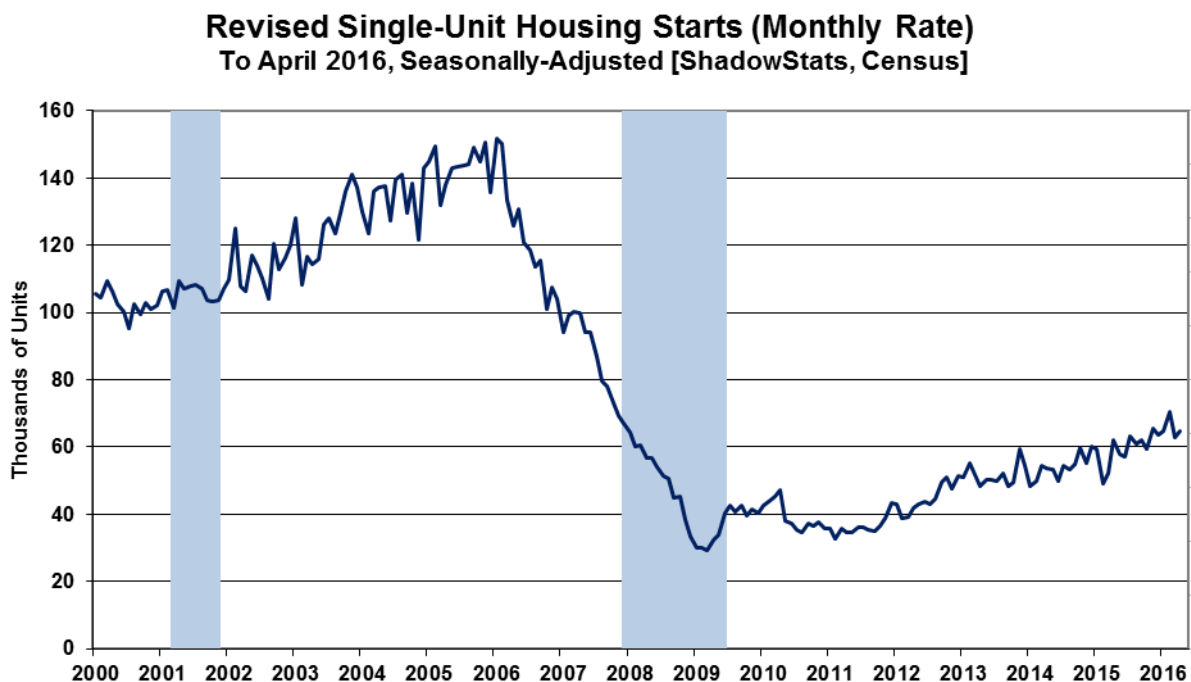
Graph 13: Revised Aggregate Housing Starts (Monthly Rate of Activity)



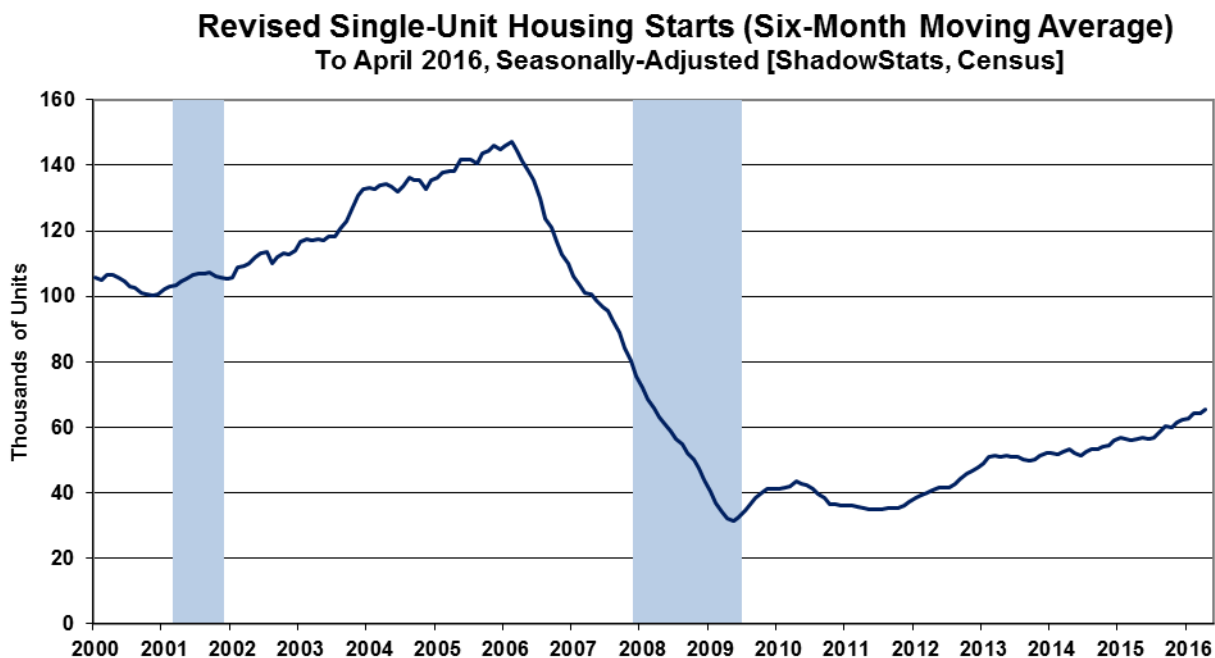
Graph 14: Revised Aggregate Housing Starts (Six-Month Moving Average, Monthly Rate of Activity)



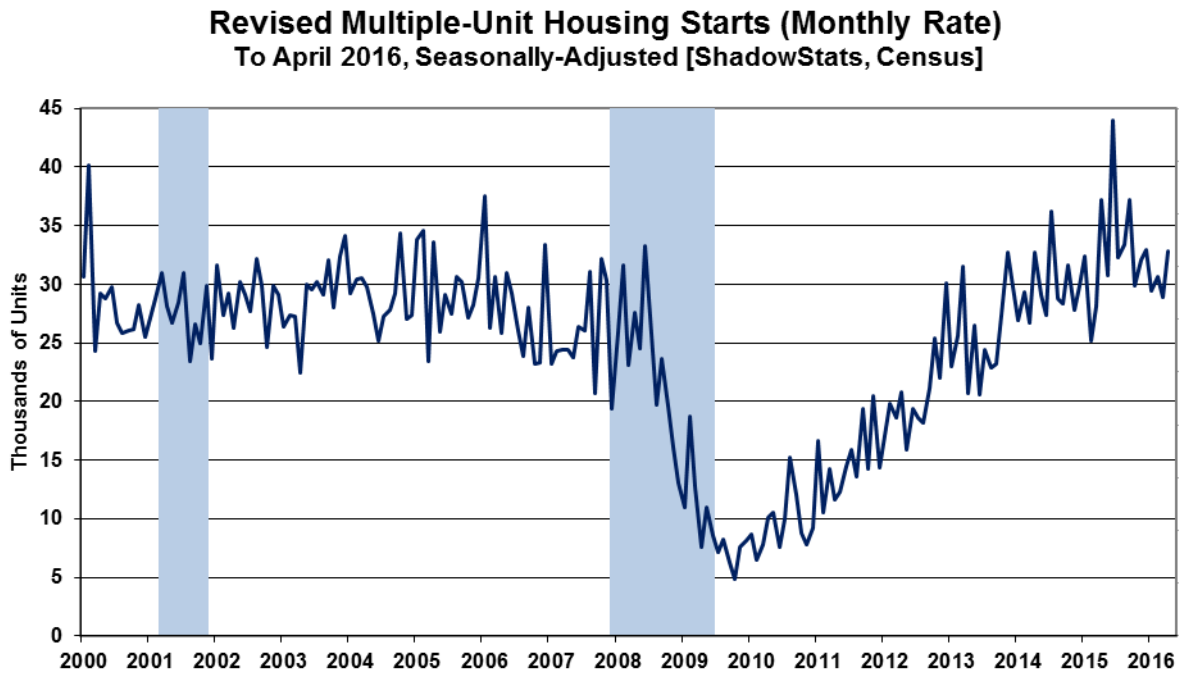
Graph 15: Single-Unit Housing Starts (Monthly Rate of Activity)



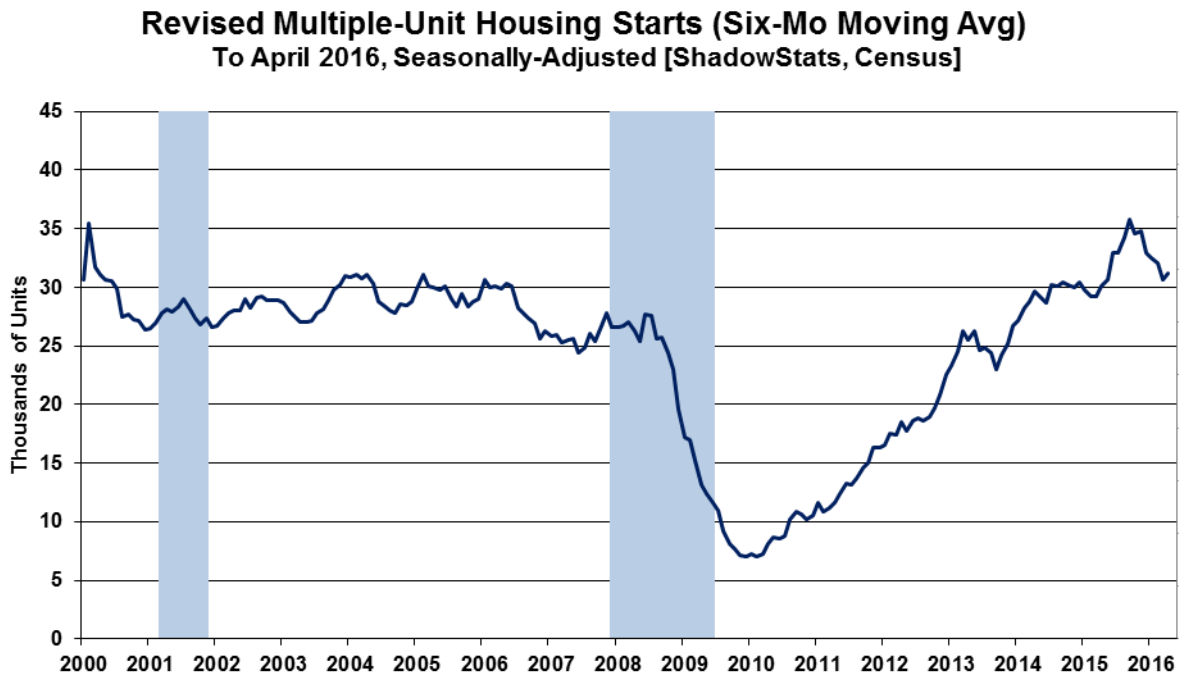
Graph 16: Single-Unit Housing Starts (Six-Month Moving Average, Monthly Rate of Activity)



Graph 17: Multiple-Unit Housing Starts (Monthly Rate of Activity)



Graph 18: Multiple-Unit Housing Starts (Six-Month Moving Average, Monthly Rate of Activity)



[The Reporting Detail section includes significant additional information related to April 2016 CPI, Production and Housing Starts reporting.]

HYPERINFLATION WATCH

UPDATED GOLD AND U.S. DOLLAR GRAPHS—SHIFTING FOMC CIRCUMSTANCE

Waffling Federal Reserve and FOMC Continue to Play Games with the Markets. While minutes of the April FOMC meeting, released yesterday (May 19th), suggested another round of Fed tightening looms at the June FOMC meeting—assuming economic improvement—and where various Fed officials still are talking out of both sides of their mouths, although temporarily more on the tighter side, there is no credibility whatsoever with these people.

Nonetheless, as a result of the games played in the last several days, expectations appear to be shifting once again towards a “tightening,” with the dollar strengthening and gold and silver prices selling off.

The economy is not improving, and seriously-negative economic data loom in the month ahead; the FOMC will have available (although not all released) the next round of trade, employment, retail sales, industrial production and CPI at its June 14-15 meeting. Further, the domestic and global systemic solvency crises have not improved, and the Fed finds itself in the middle of an unusual election year.

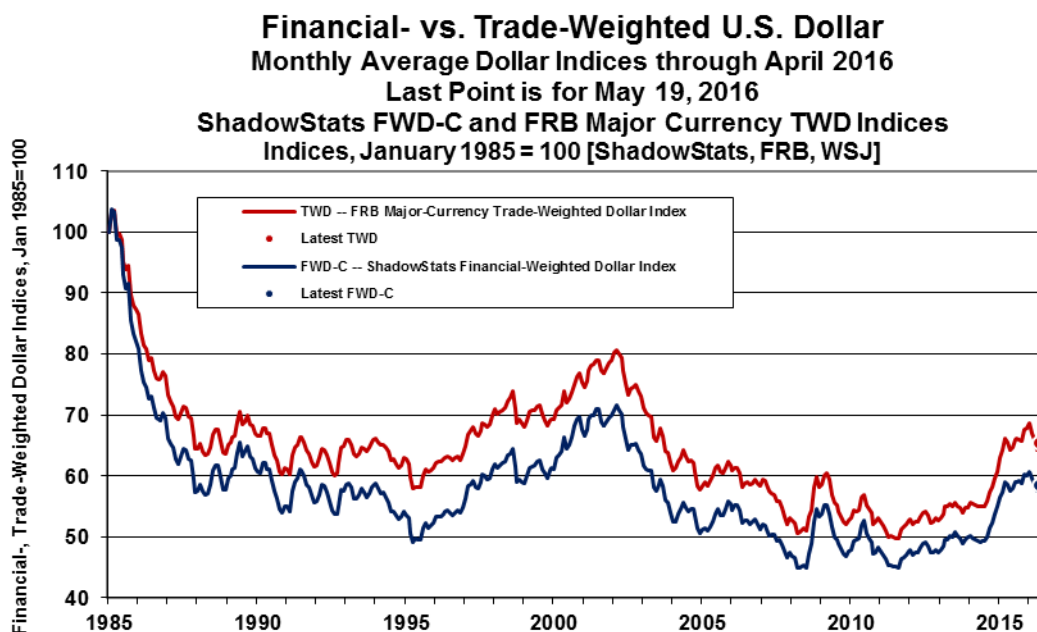
Fed action before the November election remains unlikely, but global conditions remain extraordinarily fluid and unstable. Most anything could happen here, ranging from a tightening to a new round of quantitative easing. Yet, as global central bankers continue to fight the Panic of 2008, they still have no way out (see [No. 777 Year-End Special Commentary](#)). Inaction and jawboning appear to be their favored and safest approaches to the crises.

Deteriorating U.S. Economic Circumstances Still Should Intensify U.S. Dollar Selling. Domestic financial markets should be assessing the U.S. economy in the context of a renewed and rapidly deteriorating economic contraction, no later than within a month of the July 29th GDP benchmark revisions, very possibly by the end of June.

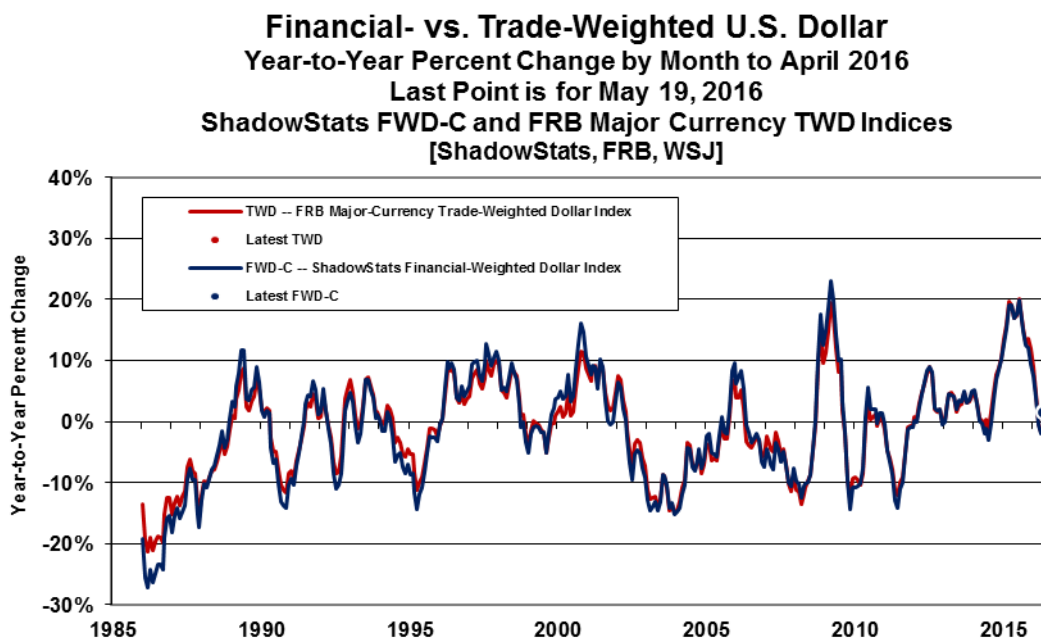
In response to a variety factors, led by a seriously troubled domestic economy and exacerbated by the Fed and other central banks moving towards ever-expanding easing and currency debasement, risk of extreme flight from the U.S. dollar is high. A massive dollar debasement continues to threaten an increasingly rapid, upturn in energy and global-commodity inflation, which would drive headline U.S. consumer inflation much higher. That process increasingly appears to be underway, and it should accelerate in tandem with the renewed tumbling in U.S. economic activity.

For reasons mentioned in the opening paragraphs of this section, the dollar has rallied in the last day or so, with some selling of gold and silver. Yet, the dollar generally has weakened and gold, silver and oil prices generally have rallied. Those general patterns should accelerate as domestic economic weakness takes increasing hold of financial-market concerns.

Graph 19: Financial- versus Trade-Weighted U.S. Dollar



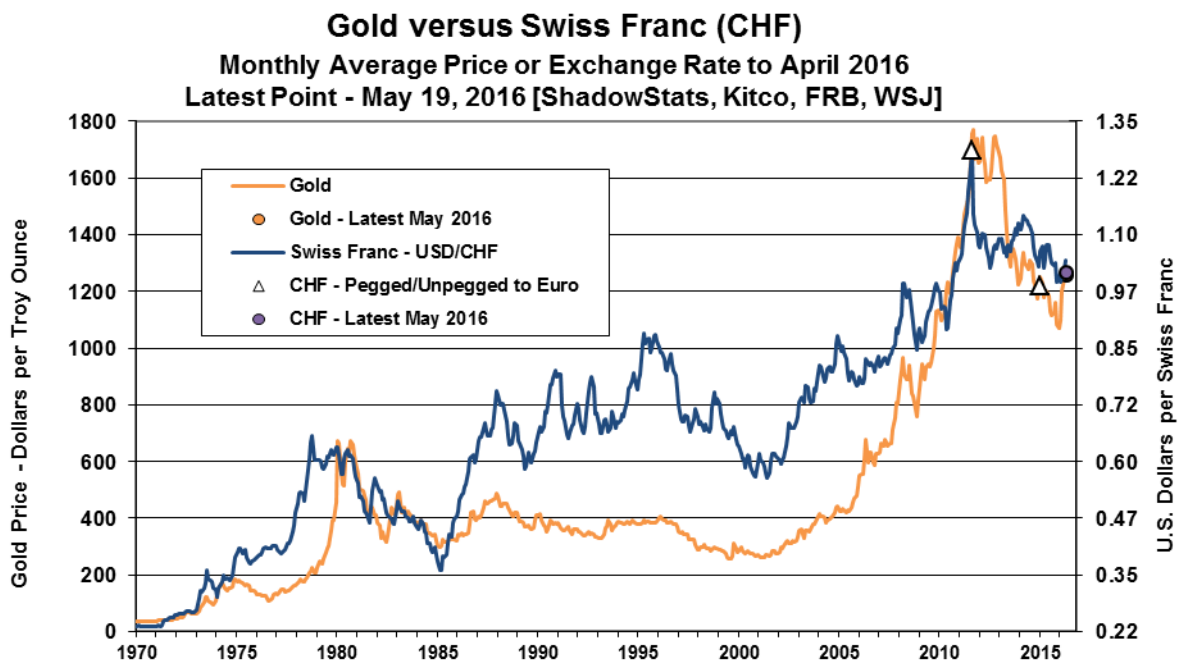
Graph 20: Year-to-Year Change, Financial- versus Trade-Weighted U.S. Dollar



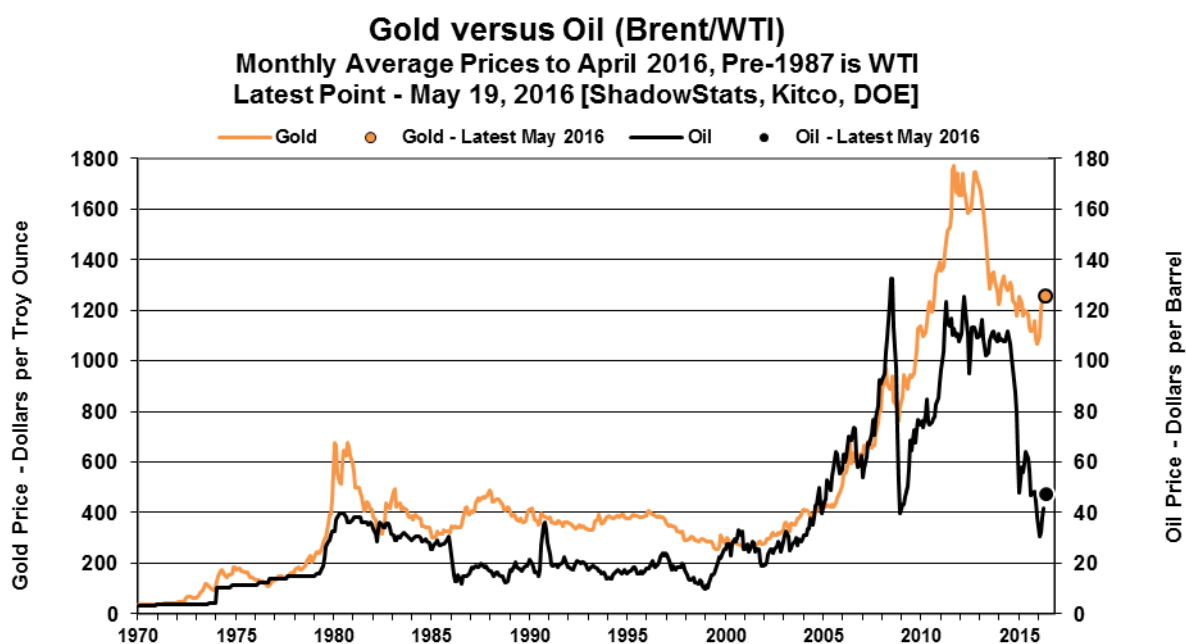
The monthly plots of the U.S. Dollar (*Graphs 19 and 20*) precede, while the three gold graphs (*Graphs 21, 22 and 23*) that regularly accompany the *CPI Commentaries*, follow. The trade- and financial-weighted dollar measures have shown increased volatility, as global markets increasingly appear not to buy the concept that all is right with the U.S. financial system, economy and political system. The “Latest May” points in these graphs reflect late-afternoon New York prices for May 19th.

Please note, detailed in [Commentary No. 772](#), the ShadowStats Financial-Weighted Dollar measure recently was expanded to incorporate that Chinese Yuan (CNY)/Renminbi (RMB). Also, the latest points on gold and the Swiss franc (*Graph 21*) overlap, with the franc's price sitting on top of the gold price.

Graph 21: Gold versus the Swiss Franc



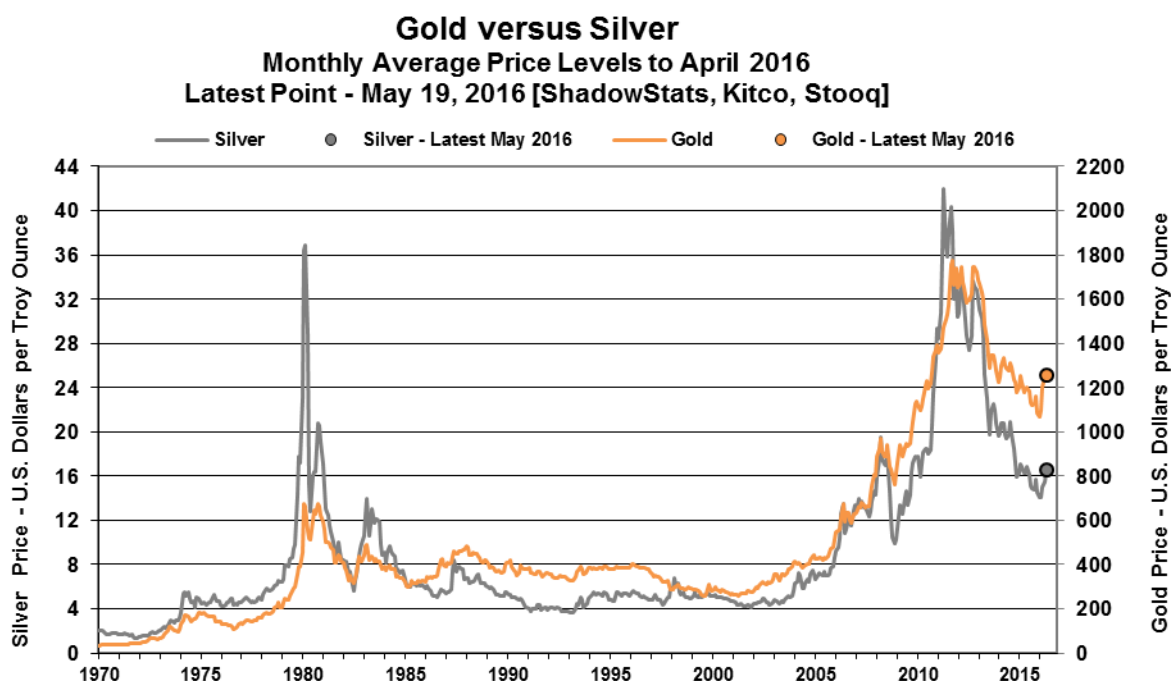
Graph 22: Gold versus Oil



Oil prices have rebounded further—despite little if any relief from the oil glut—in response to the weakening U.S. dollar. Supply and demand issues aside, U.S. dollar-denominated oil prices have a negative correlation of eighty-percent with the trade- or financial-weighted dollar. That means that when the U.S. dollar declines, oil prices rally about eighty-percent of the time in response. In reverse, a dollar rally tends to depress oil prices.

Heavy dollar selling threatens to rekindle headline U.S. inflation. As the U.S. dollar faces continued, fundamental debasement, holdings of physical gold and silver will continue to offer the strongest options for preserving the purchasing power and desired liquidity for one's wealth and assets, through the difficult times ahead. To be effective, such protection needs to be held in place through the peak of the crisis.

Graph 23: Gold versus Silver



REPORTING DETAIL

CONSUMER PRICE INDEX—CPI (April 2016)

Headline CPI-U Inflation Has Begun to Respond to Gasoline Prices. *[These first three paragraphs largely are repeated from the Opening Comments section.]* Passing into the second quarter, the seasonal adjustments used in battering first-quarter energy prices tend to soften a bit, before moving into the second half of the year, when the seasonals boost unadjusted gasoline prices. With a continued increase in April 2016 gasoline prices, monthly and annual inflation both showed some rebound, although respective monthly and annual gains of 0.41% (headline 0.4%) and 1.13% (headline 1.1%), still remained well shy of common experience.

Discussed in other, recent CPI *Commentaries* (see [Commentary No. 793](#)), it is the unadjusted, not the seasonally-adjusted detail that tends to match consumer experience most closely, to the extent that these numbers come close to matching actual experience at all. On an unadjusted basis, monthly CPI-U rose by 0.47% (headline 0.5%) in April.

Separately, although official annual CPI-U inflation has been holding around 1.0%, year-to-year inflation is not and has not been quite as soft as indicated, when considered in the context of traditional CPI reporting and common experience. The ShadowStats-Alternate Inflation Measures showed annual inflation in April 2016 of 4.7% based on 1990 methodologies, and 8.8% based on 1980 methodologies.

Longer-Range Inflation Outlook. Reviewed in today's *Hyperinflation Watch* and discussed more broadly in [No. 777 Year-End Special Commentary](#), high risk of extreme flight from the U.S. dollar—a massive dollar debasement—continues to threaten an increasingly rapid, upturn in energy and global-commodity inflation, which would drive headline U.S. consumer inflation much higher. That process continues, and it should accelerate in tandem with renewed tumbling in U.S. economic activity. Along with the ongoing downturn in business activity, global markets increasing should realize that the U.S. Federal Reserve and other major central banks have no effective idea as to how to boost current economic activity or to stabilize global banking-system solvency. That includes the latest bluffing on raising rates.

Notes on Different Measures of the Consumer Price Index

The Consumer Price Index (CPI) is the broadest inflation measure published by the U.S. Government, through the Bureau of Labor Statistics (BLS), Department of Labor:

*The **CPI-U (Consumer Price Index for All Urban Consumers)** is the monthly headline inflation number (seasonally adjusted) and is the broadest in its coverage, representing the buying patterns of all urban*

consumers. Its standard measure is not seasonally-adjusted, and it never is revised on that basis except for outright errors.

The **CPI-W (CPI for Urban Wage Earners and Clerical Workers)** covers the more-narrow universe of urban wage earners and clerical workers and is used in determining cost of living adjustments in government programs such as Social Security. Otherwise, its background is the same as the CPI-U.

The **C-CPI-U (Chain-Weighted CPI-U)** is an experimental measure, where the weighting of components is fully substitution based. It generally shows lower annual inflation rate than the CPI-U and CPI-W. The latter two measures once had fixed weightings—so as to measure the cost of living of maintaining a constant standard of living—but now are quasi-substitution-based. Since it is fully substitution based, the series tends to reflect lower inflation than the other CPI measures. Accordingly, the C-CPI-U is the “new inflation” measure being proffered by Congress and the White House as a tool for reducing Social Security cost-of-living adjustments by stealth. Moving to accommodate the Congress, the BLS introduced changes to the C-CPI-U estimation process with the February 26, 2015 reporting of January 2015 inflation, aimed at finalizing the C-CPI-U estimates on a more-timely basis, and enhancing its ability to produce lower headline inflation than the traditional CPI-U.

The **ShadowStats Alternative CPI-U Measures** are attempts at adjusting reported CPI-U inflation for the impact of methodological change of recent decades designed to move the concept of the CPI away from being a measure of the cost of living needed to maintain a constant standard of living. There are two measures, where the first is based on reporting methodologies in place as of 1980, and the second is based on reporting methodologies in place as of 1990.

CPI-U. The Bureau of Labor Statistics reported on May 17th that the headline, seasonally-adjusted April 2016 CPI-U rose by 0.4% month-to-month, up by 0.41% at the second decimal point. That followed a headline March increase of 0.1% month-to-month, up by 0.09% at the second decimal point, and a monthly decline of 0.2% (-0.2%), down by 0.17% (-0.17%) in February.

The adjusted headline April 2016 inflation gain marginally was reduced by negative seasonal adjustments to the energy and “core” (net of food and energy) sectors, but otherwise received a neutral seasonal contribution from the positive foods sector. On an unadjusted basis, monthly April 2016 CPI-U rose by 0.47%, following unadjusted monthly gains of 0.43% in March 2016 and 0.08% in February 2016.

Seasonal adjustments for monthly gasoline inflation were minimally negative in April 2016, turning an unadjusted headline gain of 9.07% into an adjusted increase of 8.06%. A headline, unadjusted monthly gain of 7.00% for the month had been estimated by the Department of Energy (DOE), with some apparent catch-up from the understatement of last month’s headline adjusted CPI-U.

Major CPI-U Groups. Encompassed by the seasonally-adjusted monthly gain of 0.41% in April 2016 [up by an unadjusted 0.47%], April food inflation rose by a seasonally-adjusted 0.18% [also up by an unadjusted 0.18%], April energy inflation rose by a seasonally-adjusted 3.45% [up by an unadjusted 3.71%], while the adjusted “core” (ex-food and energy) inflation rate rose by 0.19% [up by 0.26% unadjusted].

Separately, core CPI-U inflation showed unadjusted year-to-year inflation of 2.15% in April 2016, somewhat softer than the 2.19% in March 2016 and the 2.33% in February 2016.

Year-to-Year CPI-U. Not seasonally adjusted, April 2016 year-to-year inflation for the CPI-U rebounded to 1.1% (1.13% at the second decimal point) from 0.9% (0.85%) in March 2016 and versus 1.0% (1.02%) in February 2016.

Year-to-year, CPI-U inflation would increase or decrease in next month's May 2016 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, another seasonally-adjusted, headline monthly gain of 0.4%, which appears within reason for the May 2016 CPI-U, would boost the annual CPI-U inflation rate for May 2016 to about 1.2%, plus-or-minus, depending on rounding.

CPI-W. The April 2016 seasonally-adjusted, headline CPI-W, which is a narrower series and has greater weighting for gasoline than does the CPI-U, rose month-to-month by 0.45%, following a monthly gain of 0.13% in March and a decline of 0.32% (-0.32%) in April. On an unadjusted basis, the monthly CPI-W rose by 0.53%, having gained by 0.54% in March and declined by 0.04% (-0.04%) in February.

Year-to-Year CPI-W. Unadjusted, April 2016 annual CPI-W rose by 0.83%, having gained 0.50% in March 2016 and 0.68% in February 2016.

Chained-CPI-U. The headline C-CPI-U is not seasonally adjusted, and it is revised quarterly in an effort to accelerate the process of finalizing the monthly number, with the goal of using this rate as a low-ball inflation estimate to plug into the government's cost-of-living-adjustment calculations.

In the context of revisions back to April 2015 (with monthly year-to-year inflation revising lower by 0.08% (-0.08%) to 0.11% (-0.11%), for the unadjusted April 2016 C-CPI-U, annual inflation came in at 0.71%, up from a revised 0.33% [previously up by 0.41%] in March 2016.

See discussions in the earlier CPI [Commentary No. 721](#) and in the opening notes in the *CPI Section* of [Commentary No. 699](#) as to recent changes in the series. More-frequent revisions and earlier finalization of monthly detail are designed to groom the C-CPI-U series as the new Cost of Living Adjustment (COLA) index of choice for the budget-deficit-strapped federal government, as discussed in the [Public Commentary on Inflation Measurement](#).

Caution: Artificially-low inflation numbers estimated by the U.S. Government and used in fields ranging from Social Security COLAs to determining income-tax brackets, have been redesigned in recent decades specifically to help reduce the federal deficit. They are harmfully misleading to anyone using a government CPI estimate as a meaningful cost-of-living measure for guidance on income or investment purposes.

Alternate Consumer Inflation Measures. The ShadowStats-Alternate Consumer Inflation Measures are constructed on top of the unadjusted CPI-U series. Adjusted to pre-Clinton methodologies—the ShadowStats-Alternate Consumer Inflation Measure (1990-Base)—year-to-year annual inflation was roughly 4.7% in April 2016, versus 4.4% in March 2016.

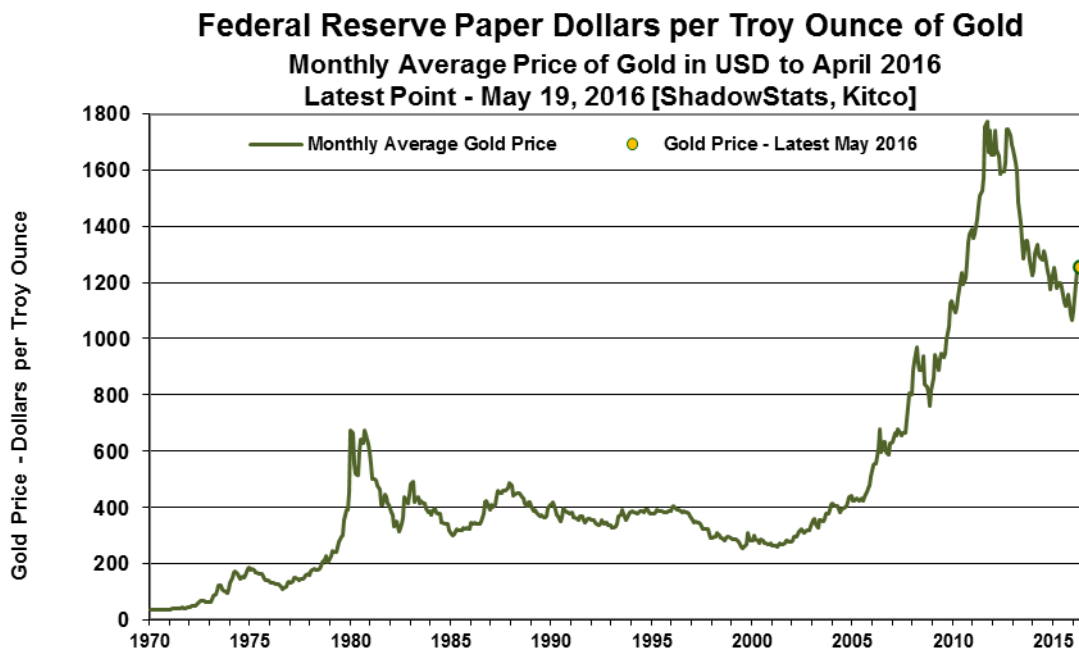
The April 2016 ShadowStats-Alternate Consumer Inflation Measure (1980-Base), which reverses gimmicked changes to official CPI reporting methodologies back to 1980, was at about 8.8% (8.79% for those using a second decimal point) year-to-year, versus 8.5% in March 2016.

Note: The ShadowStats-Alternate Consumer Inflation Measures largely have been reverse-engineered from BLS estimates of the anticipated impact on annual CPI inflation from various changes made to CPI reporting methodology since the early 1980s, as also incorporated in the CPI-U-RS series. That series provides an official estimate of historical inflation, assuming that all current methodologies were in place going back in time. The changes reflected there are parallel with and of the same magnitude of change as estimated by the BLS, when a given methodology was changed.

The ShadowStats estimates are adjusted on an additive basis for the cumulative impact on the annual inflation rate from the various BLS changes in methodology (reversing the net aggregate inflation reductions by the BLS). The series are adjusted by ShadowStats for those aggregate changes, but the series otherwise are not recalculated.

Over the decades, the BLS has altered the meaning of the CPI from being a measure of the cost of living needed to maintain a constant standard of living, to something that neither reflects the constant-standard-of-living concept nor measures adequately what most consumers view as out-of-pocket expenditures. Roughly five percentage points of the additive ShadowStats adjustment since 1980 reflect the BLS's formal estimate of the annual impact of methodological changes; roughly two percentage points reflect changes by the BLS, where ShadowStats has estimated the impact not otherwise published by the BLS. For example, the BLS does not consider more-frequent weightings of the CPI series to be a change in methodology. Yet that change has had the effect of reducing headline inflation from what it would have been otherwise (See [Public Commentary on Inflation Measurement](#) for further details.)

Graph 24: Monthly Average Gold Price in Dollars (Federal Reserve Notes)



Gold and Silver Historic High Prices Adjusted for April 2016 CPI-U/ShadowStats Inflation—

***CPI-U: GOLD at \$2,614 per Troy Ounce, SILVER at \$152 per Troy Ounce
ShadowStats: GOLD at \$12,842 per Troy Ounce, SILVER at \$747 per Troy Ounce***

Despite the September 5, 2011 historic-high gold price of \$1,895.00 per troy ounce (London afternoon fix), and despite the multi-decade-high silver price of \$48.70 per troy ounce (London fix of April 28, 2011), gold and silver prices have yet to re-hit their 1980 historic levels, adjusted for inflation. The earlier all-time high of \$850.00 (London afternoon fix, per Kitco.com) for gold on January 21, 1980 would be \$2,614 per troy ounce, based on April 2016 CPI-U-adjusted dollars, and \$12,842 per troy ounce, based on April 2016 ShadowStats-Alternate-CPI (1980-Base) adjusted dollars (all series here are not seasonally adjusted).

In like manner, the all-time high nominal price for silver in January 1980 of \$49.45 per troy ounce (London afternoon fix, per silverinstitute.org)—although approached in 2011—still has not been hit since 1980, including in terms of inflation-adjusted dollars. Based on April 2016 CPI-U inflation, the 1980 silver-price peak would be \$152 per troy ounce and would be \$747 per troy ounce in terms of April 2016 ShadowStats-Alternate-CPI (1980-Base) adjusted dollars (again, all series not seasonally adjusted).

As shown in Table 1, on page 31 of [2014 Hyperinflation Report—The End Game Begins – First Installment Revised](#), over the decades, the increases in gold and silver prices have compensated for more than the loss of the purchasing power of the U.S. dollar as reflected by CPI inflation. They also effectively have come close to fully compensating for the loss of purchasing power of the dollar based on the ShadowStats-Alternate Consumer Price Measure (1980-Methodologies Base).

Real (Inflation-Adjusted) Retail Sales—April 2016—Second-Quarter Likely to Turn Down, Given an Unsustainable One-Month Jump in Auto Sales. Detailed in prior [Commentary No. 806](#), and in the context of the April 29th annual benchmark revisions (see [Commentary No. 804](#)) and a subsequent upside revision to March 2016 activity, nominal Retail Sales—before any adjustment for inflation—rose month-to-month by 1.26% in April 2016, following a decline of 0.33% (-0.33%) in March. April 2016 nominal year-to-year change was a gain of 3.00%, versus a revised 1.67% annual increase in March 2016.

Based on the headline seasonally-adjusted monthly CPI-U increase of 0.41% in April 2016, the gain of 0.09% in March, the decline of 0.17% (-0.17%) in February, April 2016 real Retail Sales rose by 0.85% for the month, following a revised decline of 0.42% (-0.42%) [down by 0.39% (-0.39%) pre-benchmarking] in March, and a revised monthly gain of 0.45% [up by 0.20% pre-benchmarking] in February.

Intense Signal of Recession in Annual Real Growth. During normal economic times, annual real growth in Retail Sales at or below 2.0% signals an imminent recession. That signal basically has been in play since February 2015 (the “new” recession likely will be timed from December 2014, based on industrial production, retail sales and other indicators), suggesting a deepening, broad economic downturn.

Year-to-year, April 2016 real retail sales rose by 1.83%, versus a revised 0.79% [up by 0.87% pre-benchmark] in March 2016, and a revised 2.63% [up by 2.66% pre-benchmark] in February 2016. With annual real growth on track for a 1.42% annual gain in second-quarter 2016, versus a revised 1.61% [1.72% pre-benchmark] in first-quarter 2016, and at a revised 1.61% [1.50% pre-benchmark] in fourth-

quarter 2015, the recession signal remains intense, consistent with an unfolding recession. *Graphs 26 and 28*, following, show the latest patterns of headline annual real growth.

First-Quarter 2016 Annualized Real Growth Waffling Around “Unchanged.” Reflecting the latest reporting and revisions to the nominal retail sales detail, what had still been a post-benchmark annualized contraction in first-quarter 2016 real Retail Sales of 0.08% (-0.08%) [down by 0.23% (-0.23%) pre-benchmark], revised to an annualized gain of 0.07%, along with the headline April 2016 detail.

Based solely on the headline April 2016 number, second-quarter 2016 real Retail Sales was on track for a 2.88% annualized quarterly growth rate. Where the headline April monthly real gain of 0.85%, however, reflected an unsustainable monthly surge in automobile sales, subsequent reporting and/or revisions should take the annualized second-quarter real growth prospects into flat or negative territory.

Adjusted for realistic inflation (see *Graph 4* in the *Opening Comments*, [Commentary No. 803](#) and [No. 777 Year-End Special Commentary](#)), however, real retail sales and the broad economy never truly recovered from the economic collapse into 2008 and 2009.

Consumer Liquidity Problems Continue to Impair Retail Sales. Fully updated in [Commentary No. 806](#) and [No. 777 Year-End Special Commentary](#), the consumer remains in an extreme liquidity bind, constraining retail sales (both real and nominal), as well as residential real estate activity.

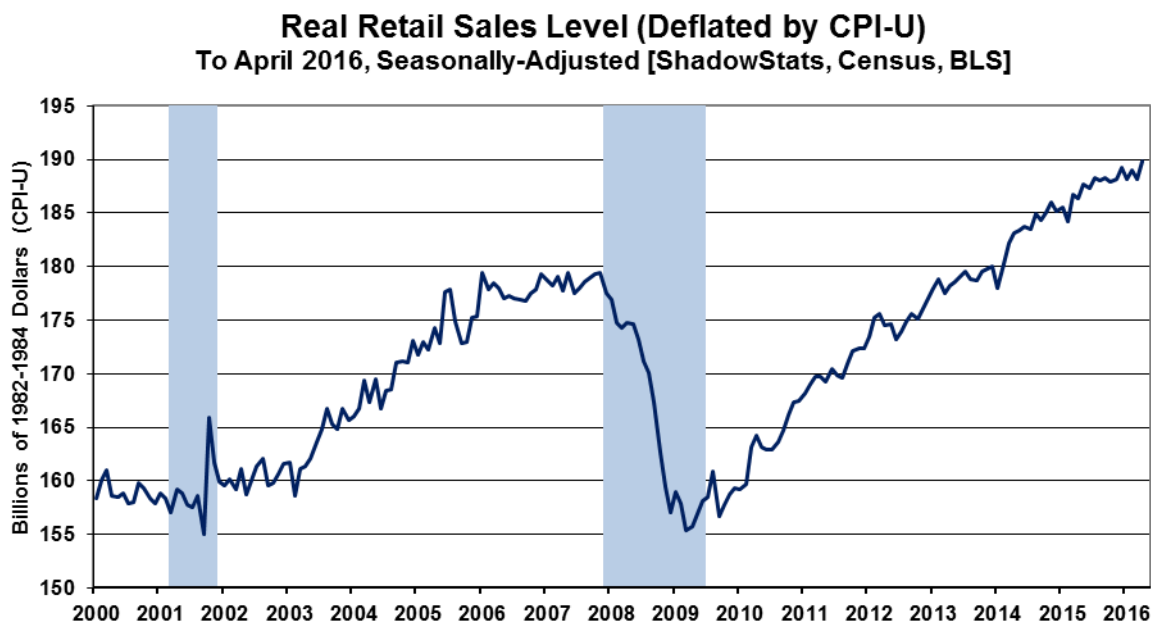
Without sustained growth in real income, and without the ability and/or willingness to take on meaningful new debt in order to make up for an income shortfall, the U.S. consumer has been unable to sustain positive consumption growth, which represents more than 70% of broad U.S. economic activity, as defined by the GDP. There remains no chance of a near-term, sustainable turnaround in general economic activity, without a fundamental upturn in consumer and banking-liquidity conditions. That has not happened and does not appear to be in the offing.

As official consumer inflation continues its upside climb in the year ahead, and as overall retail sales continue to suffer from the ongoing consumer liquidity squeeze—reflected partially by the general pattern of ongoing real earnings difficulties discussed in the next section—these data should continue trending meaningfully lower, in what should be recognized soon as a formal “new” recession.

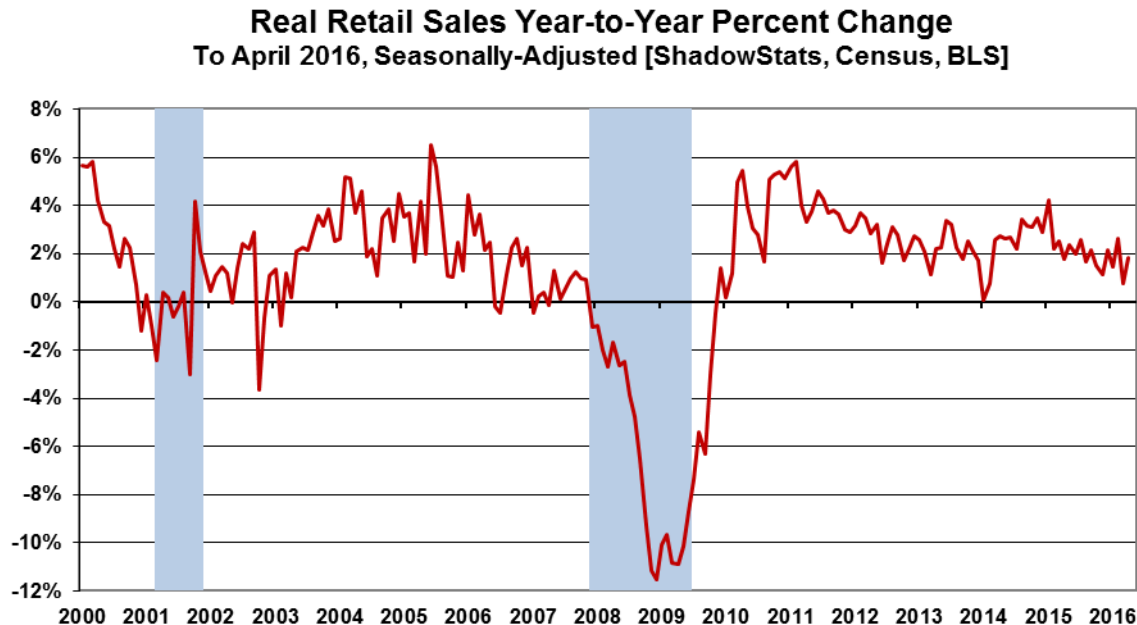
Real Retail Sales Graphs. *Graph 25*, the first of the four graphs following, shows the level of real retail sales activity (deflated by the CPI-U) since 2000; *Graph 26* shows the year-to-year percent change for the same period. Where the aggregate headline fourth-quarter 2015 growth largely had dissipated in various revisions, and flattened out, real first-quarter 2016 activity also has flattened out, with the April 2016 detail showing what likely will be a short-lived spike.

Annual real growth had slowed markedly into fourth-quarter 2015, and tumbled into a 25-month low of 0.79% in March 2016, the weakest showing since February 2014, generating an intense recession signal, with a rebound to 1.83% in initial reporting for April. *Graphs 27 and 28* show the level of, and annual growth in, real retail sales (and its predecessor series) in full post-World War II detail.

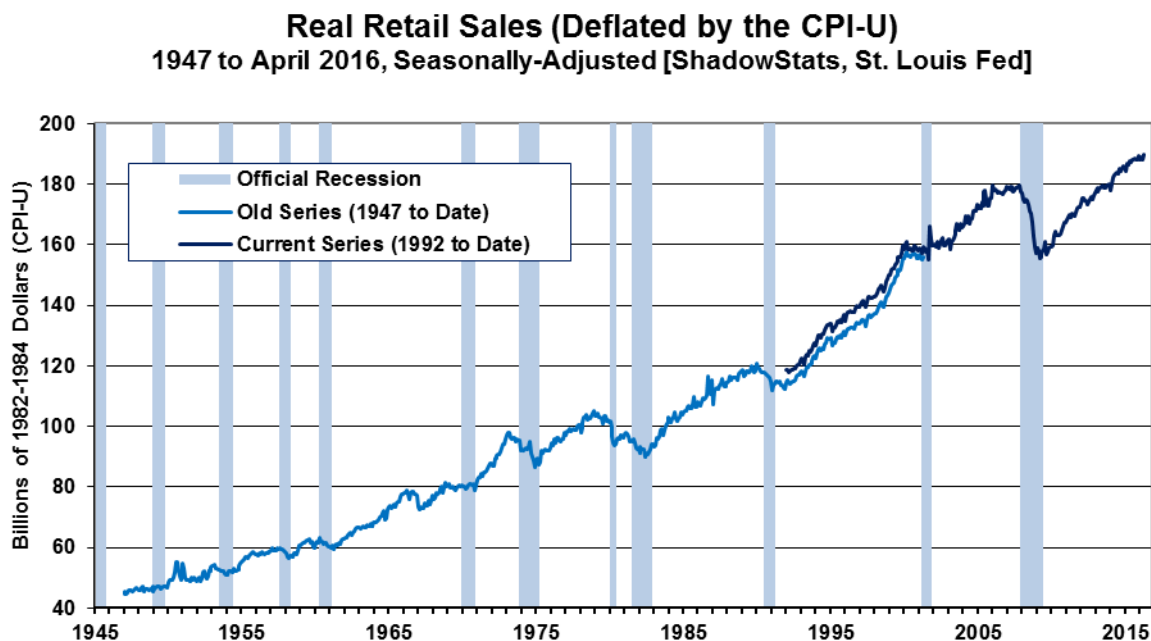
Graph 25: Level of Real Retail Sales (2000 to 2016)



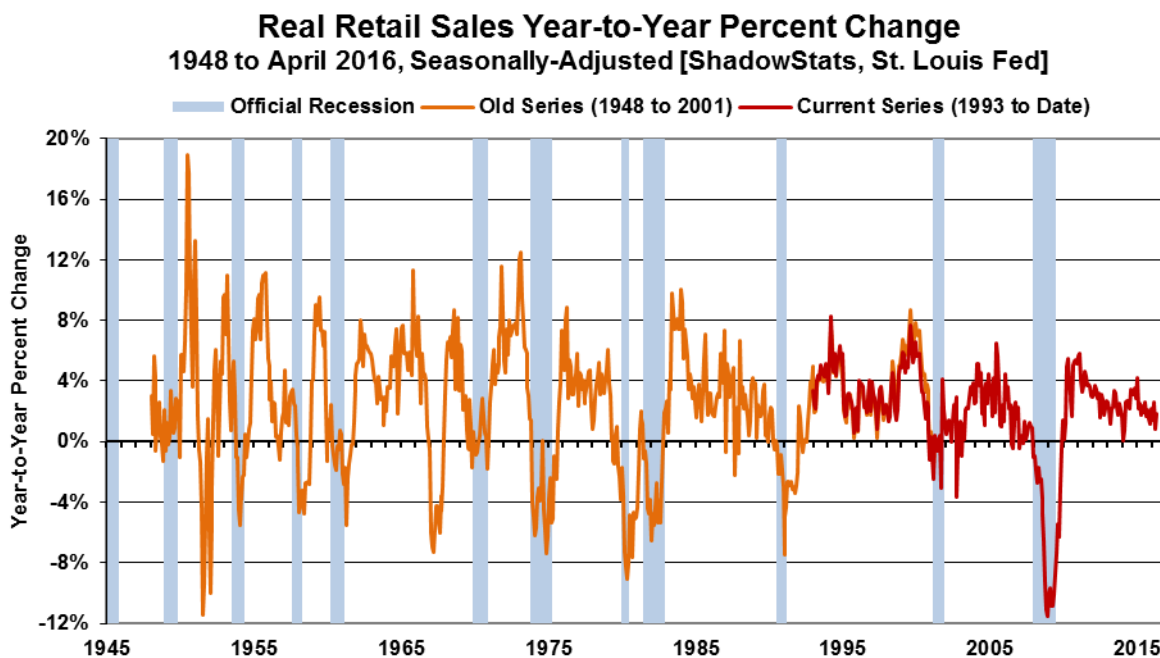
Graph 26: Real Retail Sales (2000 to 2016), Year-to-Year Percent Change



Graph 27: Level of Real Retail Sales (1947 to 2016)



Graph 28: Real Retail Sales (1948 to 2016), Year-to-Year Percent Change



The relative strength seen in the real retail series since the economic trough in 2009 largely has reflected the understatement of the rate of inflation used in deflating the series. Discussed more fully in *Chapter 9* of [2014 Hyperinflation Report—Great Economic Tumble – Second Installment](#), deflation by too low an

inflation number (such as the CPI-U) results in the deflated series overstating inflation-adjusted, real economic growth.

Shown in the latest “corrected” real retail sales—*Graph 4* in the *Opening Comments* section—with the deflation rates corrected for the understated inflation reporting of the CPI-U, the recent pattern of real sales activity has turned increasingly negative. The corrected graph shows that the post-2009 period of protracted stagnation ended, and a period of renewed and ongoing contraction began in second-quarter 2012 and continues to date. The corrected real retail sales numbers use the ShadowStats-Alternate Inflation Measure (1990-Base) for deflation instead of the CPI-U.

Real (Inflation-Adjusted) Average Weekly Earnings—April 2016—Real Average Hourly Earnings Fell by 0.22% (-0.22%), Weekly Earnings Rose by 0.08%. The BLS published its estimates for real average weekly earnings for April 2016, coincident with the release of the April 2016 CPI-W. In the production and nonsupervisory employees category—the only series for which there is a meaningful history—headline real average hourly earnings declined by 0.22% (-0.22%), as a 0.45% jump in the CPI-W overwhelmed a 0.23% increase in average hourly earnings. Yet, average weekly hours purportedly rose by 0.30%, with the end result that average weekly earnings rose by 0.08% in April 2016.

That was against a revised month-to-month decline in real average weekly earnings of 0.19% (-0.19%) [previously up by 0.06%] in March 2016, following a revised gain of 0.41% [previously up by 0.02%] in February 2016. These heavily revised and seasonally-adjusted monthly changes are without much if any meaning in the near-term, although the longer term and benchmarked trend tends to be of some substance. As with the BLS reporting tied to the nonfarm payrolls, the headline seasonally-adjusted data here are not comparable due to reporting issues with concurrent seasonal factor adjustments (see *Headline Distortions from Shifting Concurrent-Seasonal Factors* in [Commentary No. 805](#)).

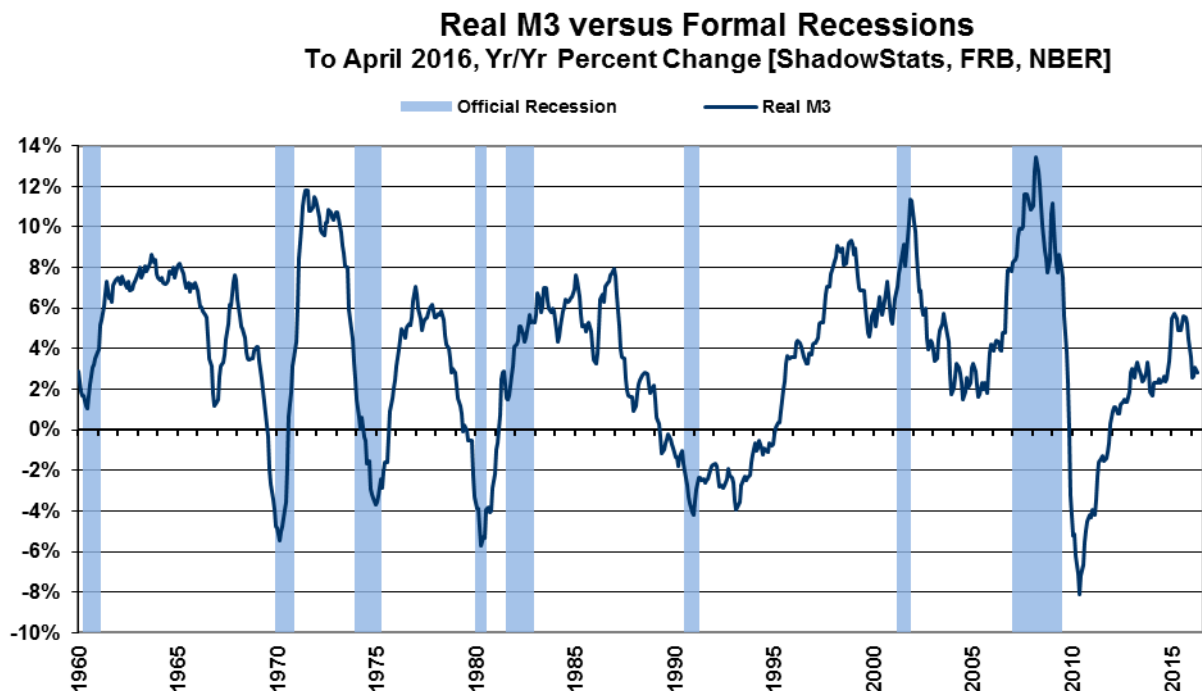
For those not living in a seasonally-adjusted world, real average weekly earnings rose month to month by 0.14%, having declined month-to-month by a revised 0.28% (-0.28%) [previously 0.37% (-0.37%)] in March 2016. Year-to-year growth, not seasonally adjusted, real average weekly earnings for April 2016 was 1.68%, versus a revised 0.20% [previously 0.06%] in March 2016. Again, even with the unadjusted series, the magnitude of monthly revisions throws the significance of the headline detail into question.

The CPI-W deflated reporting here also is distorted versus the CPI-U-deflated series, where the CPI-W—more heavily weighted with gasoline prices—tends to have much deeper, negative headline inflation, with resulting weaker headline, inflation-adjusted growth than would be seen with the CPI-U, when gasoline prices are falling. The reverse was true, for the second month, with rising gasoline prices.

Found in the *Opening Comments* section, *Graph 5* plots this series, showing the seasonally-adjusted earnings as officially deflated by the BLS (red-line), and as adjusted for the ShadowStats-Alternate CPI Measure, 1990-Base (blue-line). When inflation-depressing methodologies of the 1990s began to kick-in, the artificially-weakened CPI-W (also used in calculating Social Security cost-of-living adjustments) helped to prop up the reported real earnings. Official real earnings today still have not recovered their inflation-adjusted levels of the early-1970s, and, at best, have been in a minimal uptrend for the last two decades (albeit spiked recently by negative headline inflation). Deflated by the ShadowStats (1990-Based) measure, real earnings have been in fairly-regular decline for the last four decades, which is much closer to common experience than the pattern suggested by the CPI-W. See the [Public Commentary on Inflation Measurement](#) for further detail.

Real (Inflation-Adjusted) Money Supply M3—April 2016—Renewed Faltering Annual Growth. The signal for a double-dip, multiple-dip or simply protracted, ongoing recession, based on annual contraction in the real (inflation-adjusted) broad money supply (M3), remains in place, despite real annual M3 growth having rallied in positive territory for several years. The economic downturn never evolved into a sustainable recovery. As shown in the accompanying graph—based on April 2016 CPI-U reporting and the latest ShadowStats-Ongoing M3 Estimate (including annual Federal Reserve Board money supply revisions)—annual inflation-adjusted growth in April 2016 M3 resumed its decline, easing to 2.8%, down from an revised gain of 3.1% in March 2016, but it still was up from an unrevised 2.6% in February 2016, which is tied with January 2016 as the lowest level since September 2014. The 0.3% (-0.3%) decline in the monthly rate of year-to-year change reflected a 0.3% jump in annual CPI-U inflation and an unchanged level of annual M3 growth (see [Commentary No. 805](#)).

Graph 29: Real M3 Annual Growth versus Formal Recessions



The signal for a downturn or an intensified downturn is generated when annual growth in real M3 first turns negative in a given cycle; the signal is not dependent on the depth of the downturn or its duration. Breaking into positive territory does not generate a meaningful signal one way or the other for the broad economy. The current “new” downturn signal was generated in December 2009, even though there had been no upturn since the economy purportedly hit bottom in mid-2009. Again, when real M3 growth breaks above zero, there is no signal; the signal is generated only when annual growth moves into negative territory. The broad economy tends to follow in downturn or renewed deterioration roughly six-to-nine months after the signal. Weaknesses in a number of economic series have continued to the present, with significant new softness in recent reporting. Actual post-2009 economic activity has remained at relatively low levels of activity—in protracted stagnation, with no actual recovery (see *Graph 2* in the *Opening Comments* and [No. 777 Year-End Special Commentary](#)).

Despite the purported, ongoing recovery shown in headline GDP activity, a renewed downturn in official data is underway that still should gain official recognition in the next several months as a “new” or multiple-dip recession. Reality remains that the economic collapse into 2009 was followed by a plateau of low-level economic activity—no meaningful upturn, no recovery from or end to the official 2007 recession—and the unfolding renewed downturn remains nothing more than a continuation and re-intensification of the downturn that began unofficially in 2006.

INDEX OF INDUSTRIAL PRODUCTION (April 2016)

Deteriorating Economic Circumstances. But for a weather-related surge in monthly utility usage, headline industrial production would have contracted month-to-month in April 2016, instead of jumping by 0.7%. Production activity contracted year-to-year for the eighth consecutive month, with the second-quarter 2016 on an early track to show the third consecutive quarter in year-to-year contraction.

Discussed in last month’s production [Commentary No. 800](#), production then had contracted year-to-year in first-quarter 2016 for the second consecutive quarter. Since the creation of the Federal Reserve’s Index of Industrial Production in 1919, that never has happened outside of a formal recession, and it is getting worse.

In the context of severely-negative benchmark revisions (see [Commentary No. 796-A](#) for specifics) and subsequent revisions accompanying headline reporting through the April 2016 production detail, the industrial production series has continued to signal a deepening downturn, despite the occasional monthly uptick in headline detail. The headline 0.7% monthly in April 2016 production continued to suffer intensifying negative stresses from the mining sector—down by 2.3% (-2.3%) for the month—with oil and coal production hit with increasing severity by efforts out of Washington to discourage domestic consumption of fossil fuels. Positive production offsets in the month reflected primarily a weather-related monthly surge of 5.8% in utility usage, accompanied by a 0.3% increase in manufacturing.

Aggregate industrial production regained its November 2007 pre-recession high, briefly, at its near-term peak of activity in October 2014, thanks then to surging mining activity, not to manufacturing output. Production fell back below its pre-recession high in March 2015 and was below its pre-recession 2007 peak by 1.50% (-1.50%) as of the April 2016 headline detail (see *Graph 33*).

Manufacturing has never recovered its pre-recession peak of December 2007, standing 6.01% (-6.01%) below that still-unrealized milestone as of April 2016 (see *Graph 34*).

Indeed, though, conditions were mixed in the three major production sectors of manufacturing, mining and utilities. Mining was hit hard, as usual, with collapsing coal production, oil and gas extraction and oil drilling (see *Graphs 41 to 47*), but Manufacturing showed modest upside activity, with increased production of machinery and automobiles (see *Graphs 34 to 38*). The large jump in utilities was within the normal range of high monthly volatility (see *Graphs 39 and 40*).

Quarterly and Annual Production Contractions. Again, annual growth in aggregate production held in negative territory for the eighth straight month, down by 1.07% (-1.07%) in April 2016, putting second-quarter 2016 production on an early track for an annual contraction of 0.86% (-0.86%). That would be the third-consecutive quarter of annual downturn, if the pattern holds. Again, this type of activity never

has been seen outside of formal recessions. On a quarter-to-quarter basis, the early trend for second-quarter 2016 is for a minimal, annualized quarterly growth rate of 0.11%.

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 revised fourth-quarter 2015 deeper contraction of 3.33% (-3.33%) [previously down by 3.26% (-3.26%)], and a revised, narrower first-quarter 2016 annualized quarterly decline of 1.60% (-1.60%) [previously 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 a minimally revised annual decline of 1.62% (-1.62%) [previously down by 1.60% (-1.60%)] in fourth-quarter 2015, and a revised, narrower annual contraction of 1.55% (-1.55%) [previously down by 1.70% (-1.70%)] in first-quarter 2016.

Headline Industrial Production—April 2016. The Federal Reserve Board released its first estimate of seasonally-adjusted, April 2016 industrial production on May 17th. In the context of the April 1st benchmark revisions (see [Commentary No. 796-A](#)) and continued prior-period revisions with subsequent headline reporting for March 2016, the monthly gain in April 2016 was 0.66%, versus a downwardly-revised monthly decline of 0.87% (-0.87%) [previously down by 0.60% (-0.60%)] in March 2016, a narrower, revised monthly decline of 0.21% (-0.21%) [previously down by 0.59% (-0.59%)], benchmarked at down 0.52% (-0.52%) in February, and a minimally-revised gain of 0.53% [previously up by 0.52%, benchmarked up by 0.64%] in January. Net of prior-period revisions, April 2016 monthly activity rose by 0.75%.

Detailed in *Graphs 33, 34, 39 and 41*, by major industry groups, the headline April 2016 monthly aggregate production gain of 0.66% [a March decline of 0.87% (-0.87%)] was composed of a monthly April gain of 0.31% [a March contraction of 0.30% (-0.30%)] in manufacturing activity; an April decline of 2.26% (-2.26%) [a March decline of 2.97% (-2.97%)] in mining activity (including oil and gas production); and an April jump of 5.75% [a March decline of 3.29% (-3.29%)] in utilities activity.

Year-to-year change in April 2016 was a drop of 1.07% (-1.07%), following revised annual declines of 1.94% (-1.94%) [previously down by 2.03% (-2.03%)] in March 2016, 1.40% (-1.40%) [previously down by 1.76% (-1.76%)], benchmarked down by 1.58% (-1.58%) in February 2016, and 1.32% (-1.32%) [previously down by 1.31% (-1.31%)], benchmarked down by 1.19% (-1.19%) in January 2016.

Production Graphs. The regular two sets of plots for long- and short-term industrial production levels and annual growth rates (*Graphs 30 to 33*) set the background for the drill-down detail graphs of various components of the aggregate industrial series (*Graphs 34 to 47*).

Graphs 30 and 31, and *Graphs 33 and 34* show headline industrial production activity to date. *Graph 30* 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 1.07% (-1.07%) in April 2016, with headline annual contractions in place for the last eight months, the pattern is one never seen outside of formal recessions, post-World War II or otherwise.

Graph 31 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

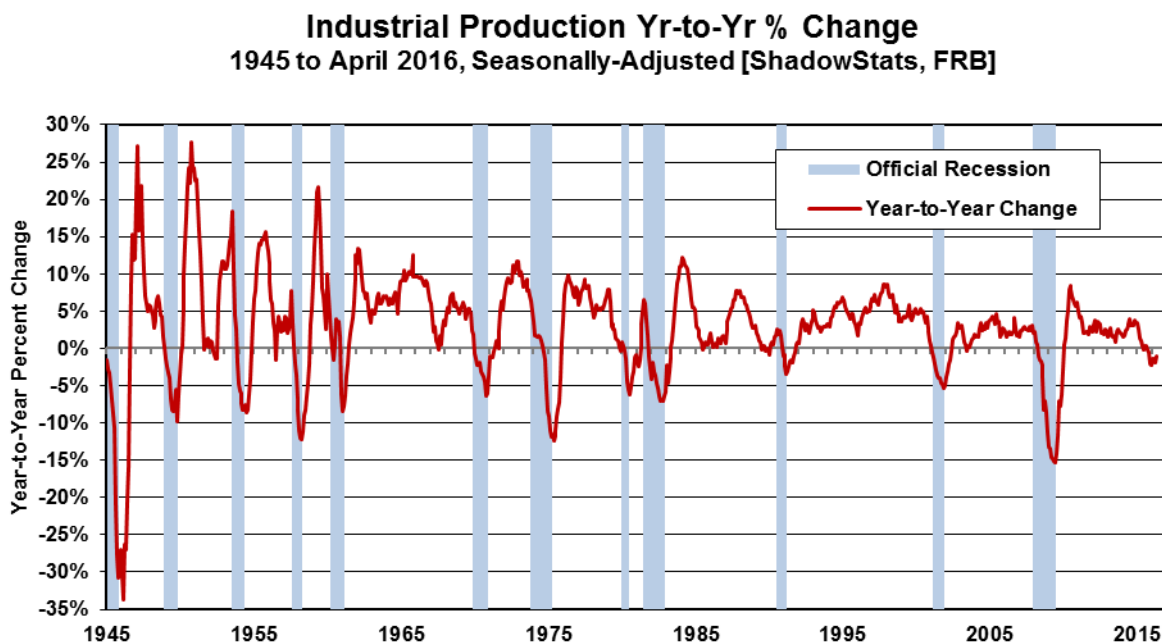
third-quarter 2015, followed by a renewed and deeper contraction in fourth-quarter 2015 and first-quarter 2016. Second-quarter 2016 is showing an early trend of minimal growth, a pattern likely to move negative in headline May 2016 reporting. Such patterns of monthly and quarterly declines and stagnation were seen last in the economic collapse into 2009. *Graphs 32 and 33* show the same series in greater near-term detail, beginning in January 2000.

Seen most clearly in *Graph 32*, 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. 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 30*, 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.

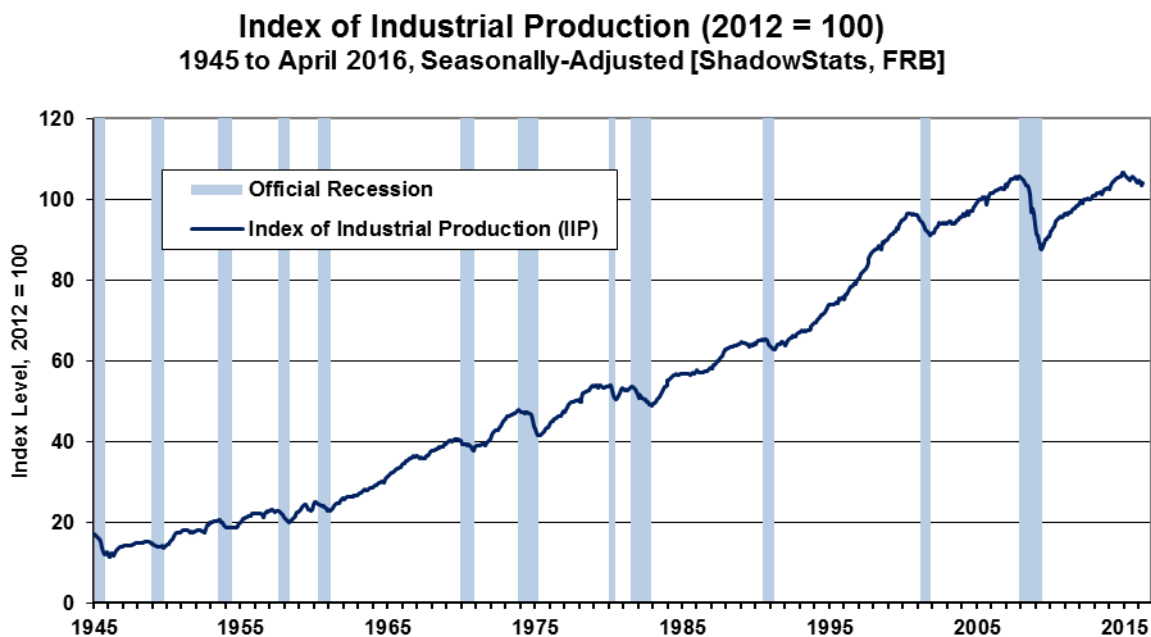
Although now-faltering official production levels had moved higher since the June 2009 trough, corrected for the understatement of inflation used in deflating portions of the industrial production index (see the *Opening Comments* section, *Graph 7*) the series has shown more of a pattern of stagnation 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 neutered of any inflation impact—contracted in both first- and second-quarter 2015, with monthly activity moving 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 30 to 33 begin on the following page]

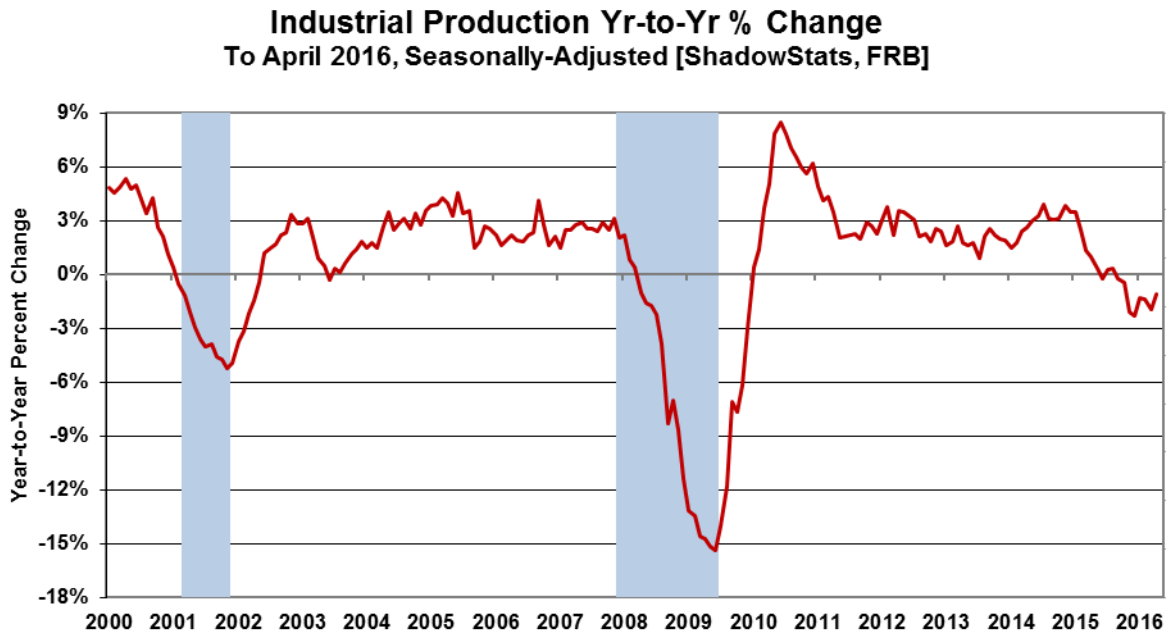
Graph 30: Industrial Production, Year-to-Year Percent Change since 1945



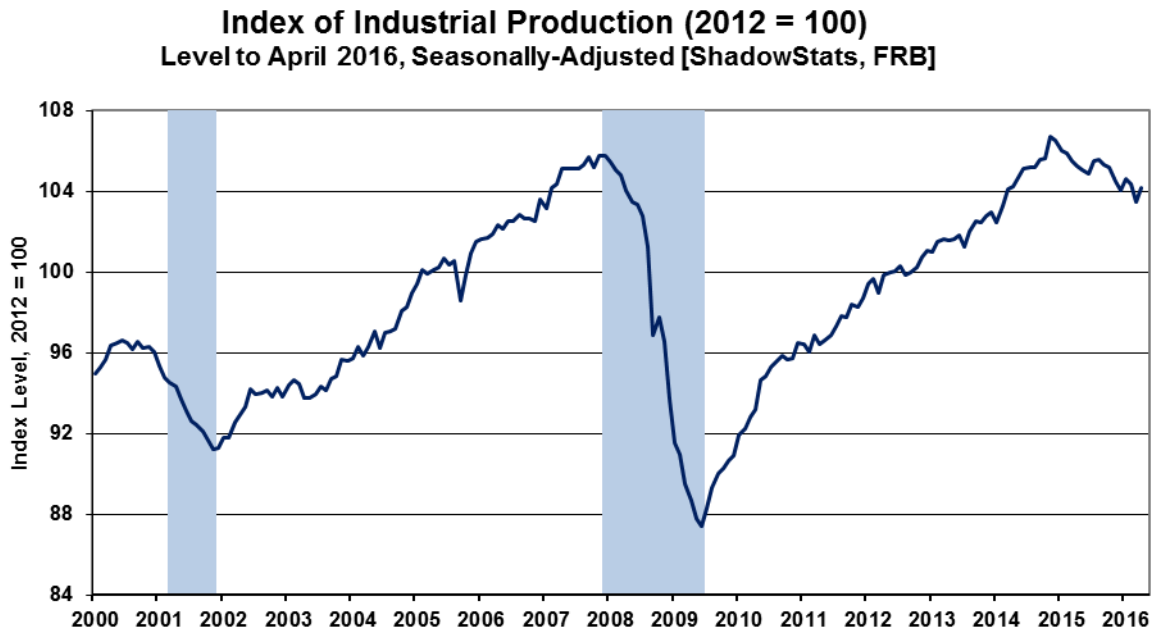
Graph 31: Index of Industrial Production (Aggregate) since 1945



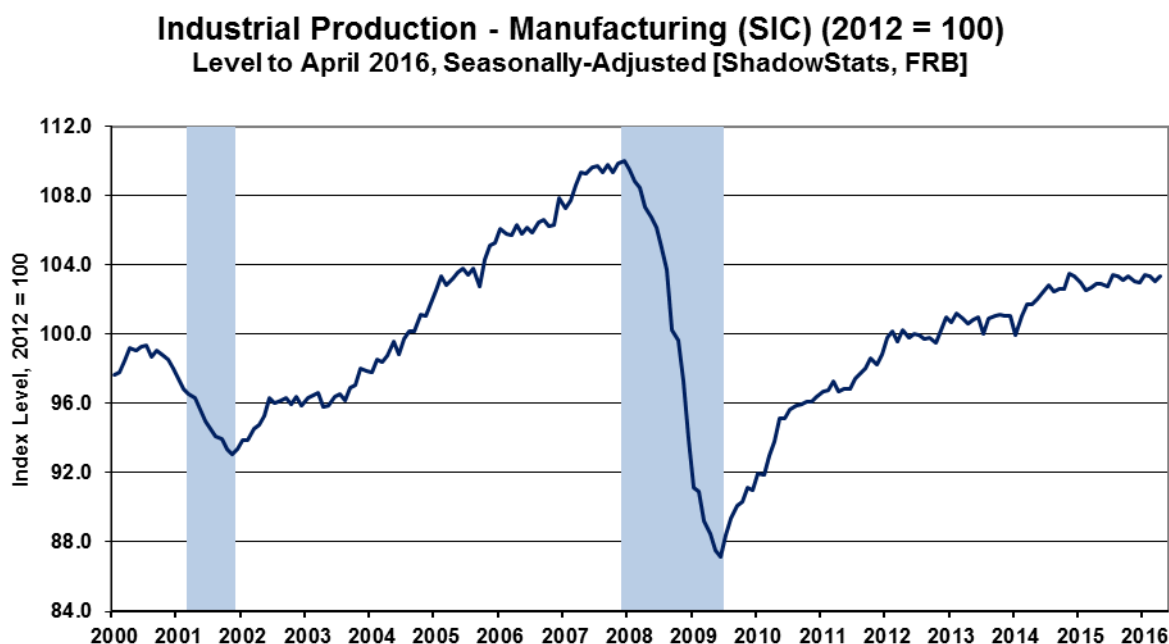
Graph 32: Aggregate Industrial Production, Year-to-Year Percent Change since 2000



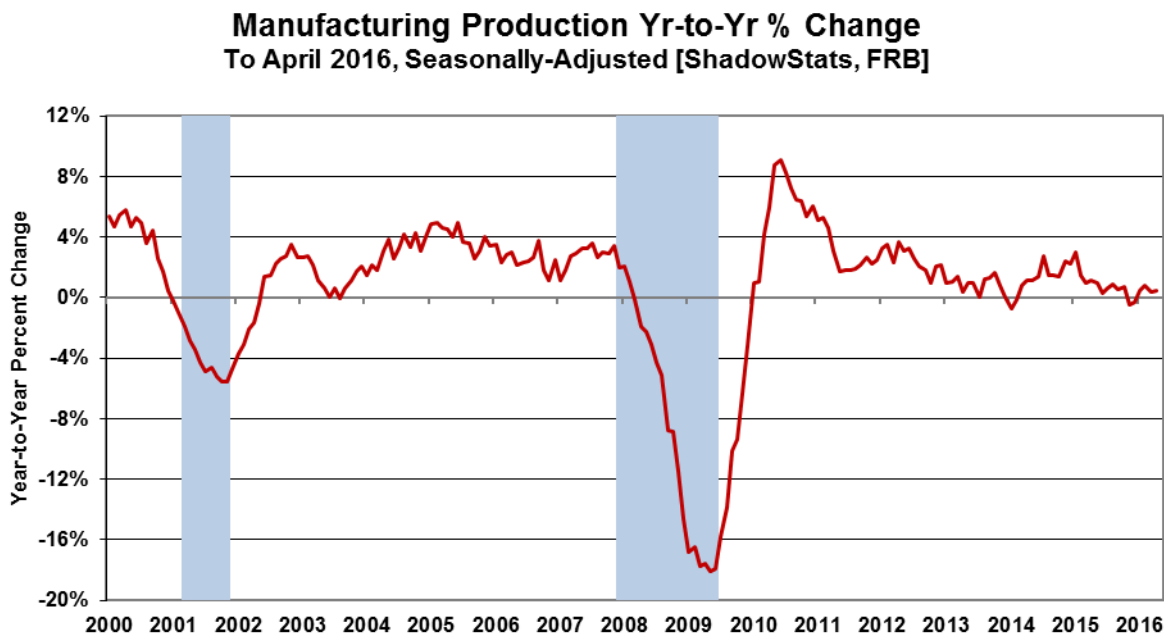
Graph 33: Index of Aggregate Industrial Production since 2000



Graph 34: Industrial Production - Manufacturing (78.48% of the Aggregate in 2015)



Graph 35: Industrial Production - Manufacturing , Year-to-Year Percent Change Since 2000



Drilling Down into the April 2016 U.S. Industrial Production Detail. Graphs 33, 34, 39 and 41 show headline reporting of industrial production and its major components. The broad, aggregate index (Graph 33) 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 first-quarter 2016. Such circumstances simply are not seen outside of recessions, discussed in the regular reporting of headline production earlier in this section.

Again, in headline April 2016 reporting, manufacturing showed a small monthly gain, utilities surged and mining sank anew, as reflected in *Graphs 34, 39 and 41*, respectively.

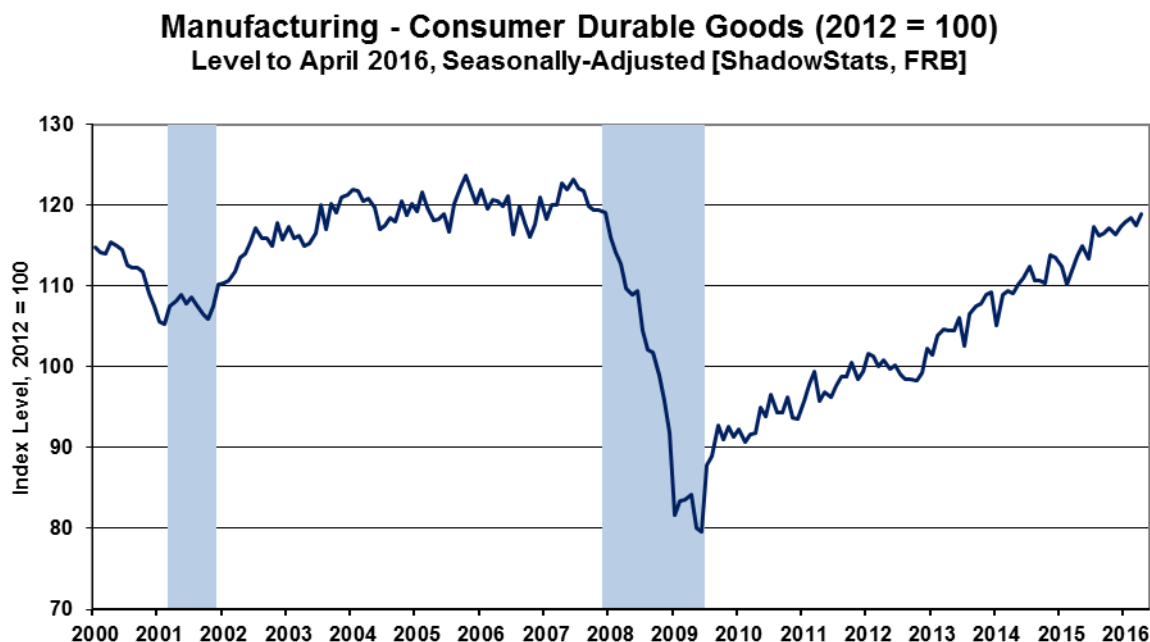
Graph 34 of the dominant manufacturing sector showed a month-to-month gain in April 2016 of 0.31%, versus a decline of 0.30% (-0.30%) in March. The series remains down by 6.01% (-6.01%) from reclaiming its pre-recession high of December 2007. *Graph 35* reflects annual growth patterns in manufacturing, which have been fluttering at low levels since an initial bounce off the 2009 trough.

The story with consumer goods remains bleak, in line with troubled real retail sales irrespective of the unsustainable auto sales increase in nominal April 2016 retail sales (see [Commentary No. 806](#)), which remains heavily representative of conditions underlying roughly 70% of the GDP. Seen in *Graphs 36 to 38*, total consumer goods have remained in low-level stagnation since the economic collapse, with the only upside movement seen in durable goods (including April 2016 gains in automobile production). The dominant nondurables sector, also never recovered, but it continues to falter. Yet, both the durable and nondurable sectors gained in April, with durables up by 1.27%, having declined by a minimally revised 0.77% (-0.77%) [previously down by 0.76% (-0.76%)] on a monthly basis in March. Nondurables rose by 1.12% in April, having declined by a revised 0.82% (-0.82%) [previously down by 0.24% (-0.24%)] in March.

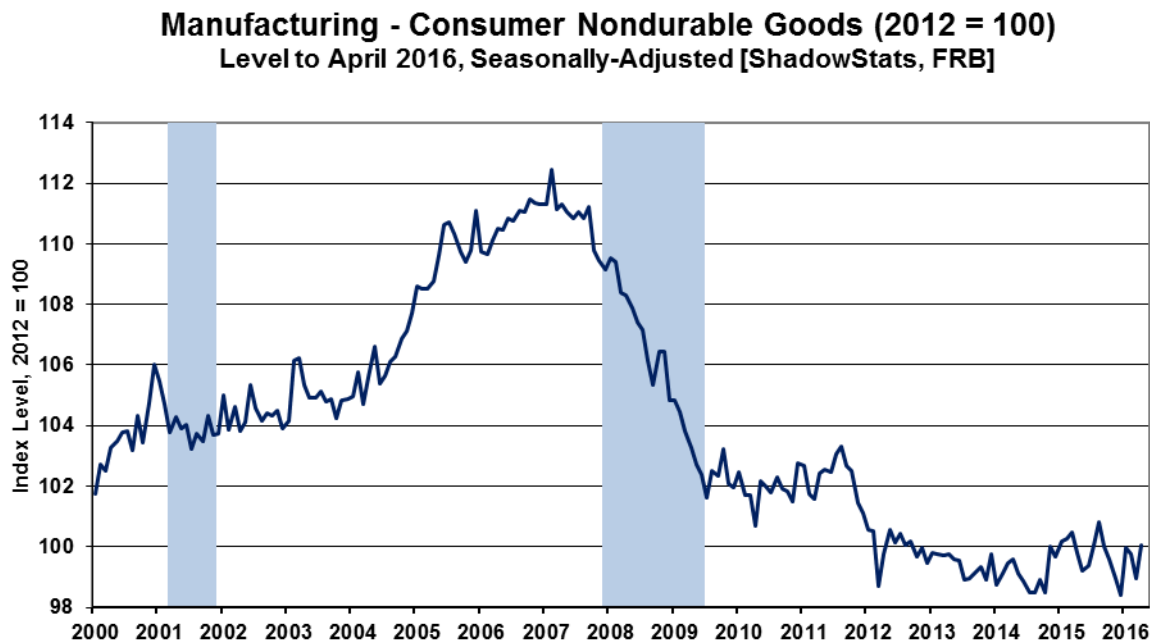
Graph 36: Consumer Goods (27.08% of the Aggregate in 2015)



Graph 37: Durable Consumer Goods (6.36% of the Aggregate in 2015)



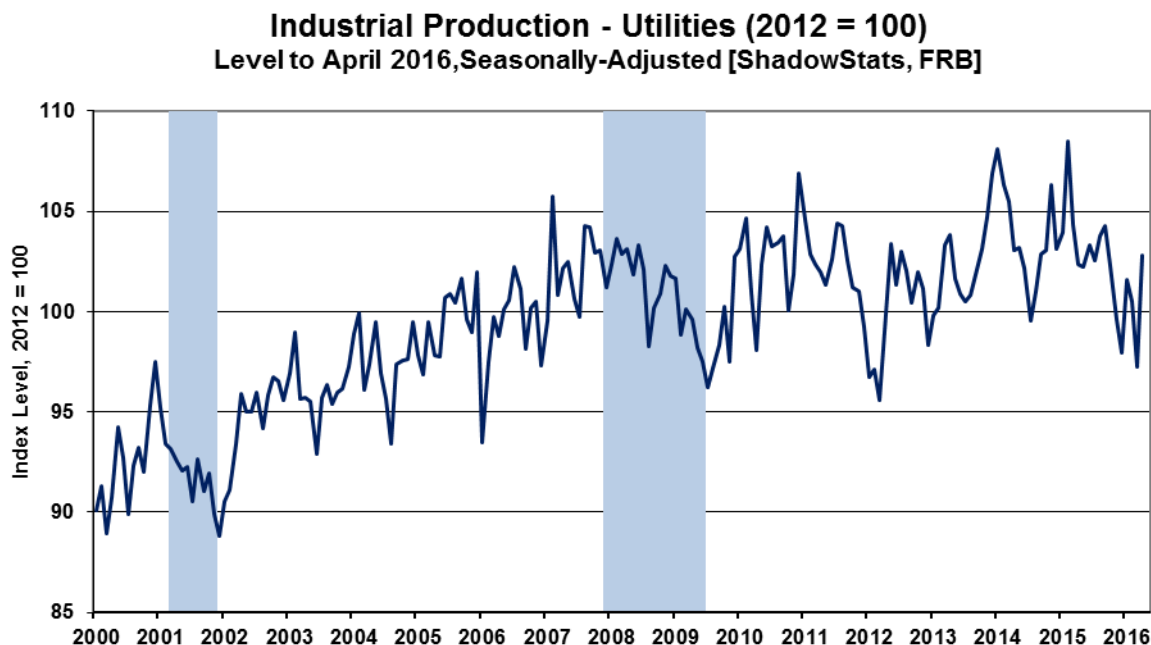
Graph 38: Nondurable Consumer Goods (20.73% of the Aggregate in 2015)



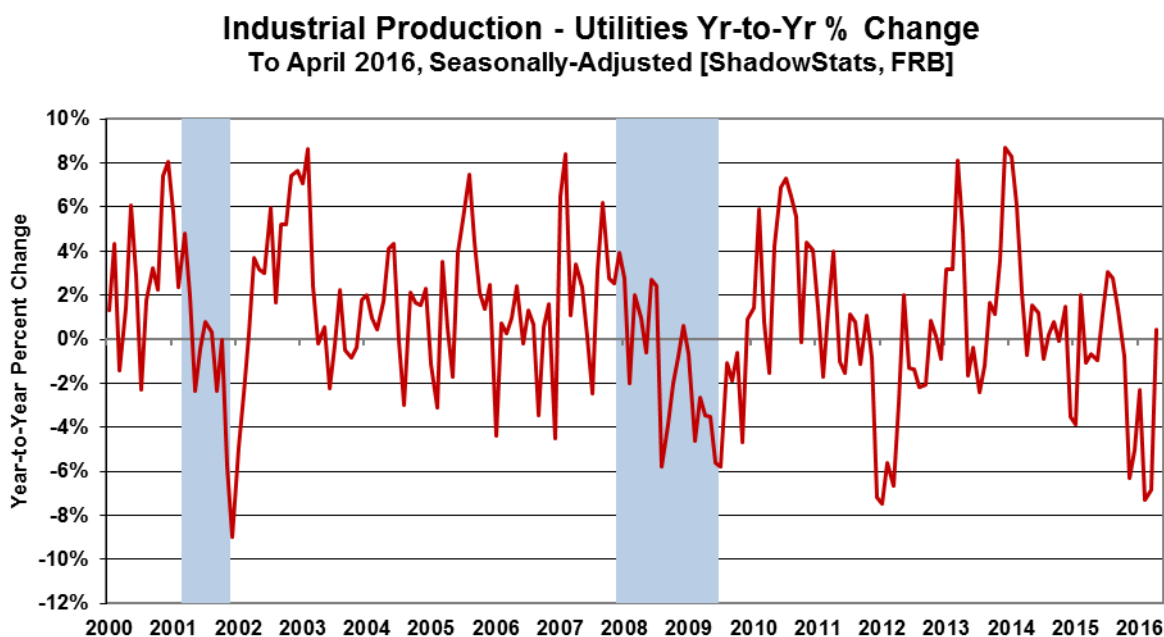
Monthly volatility seen the utilities sector (*Graph 39*) usually reflects unseasonable shifts in weather conditions and reversals of same, as was the case in the headline 5.75% monthly utilities surge in April

2016, following a monthly decline of 3.29% (-3.29%) in March. Added this month is a new *Graph 40*, showing the volatility in the year-to-year change in utilities.

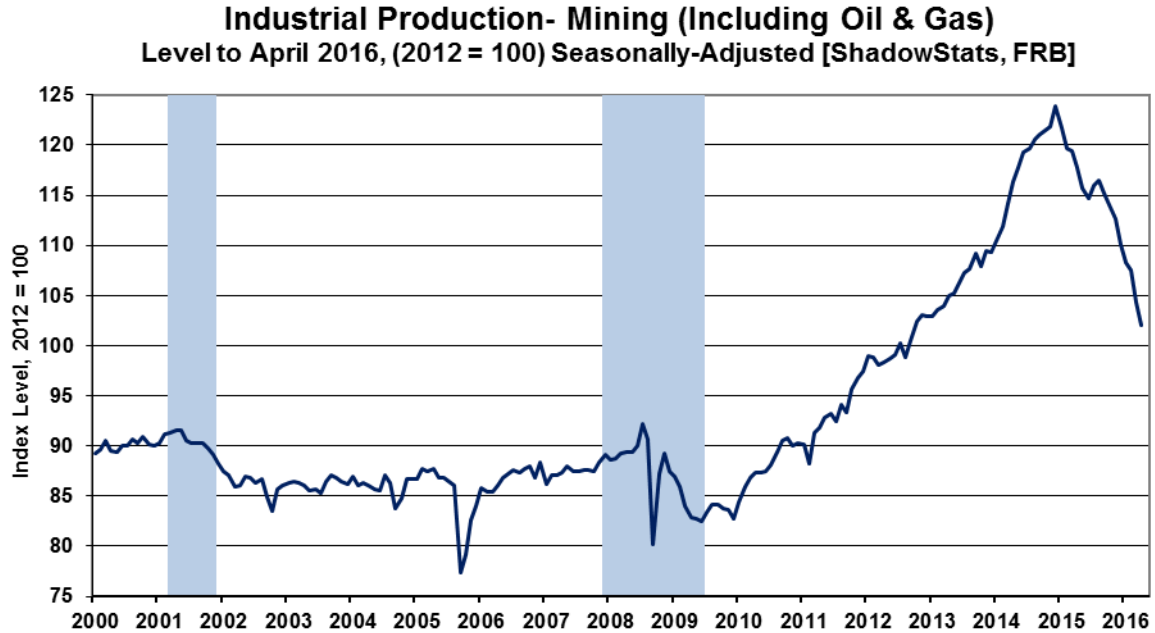
Graph 39: Industrial Production - Utilities (10.76% of the Aggregate in 2015)



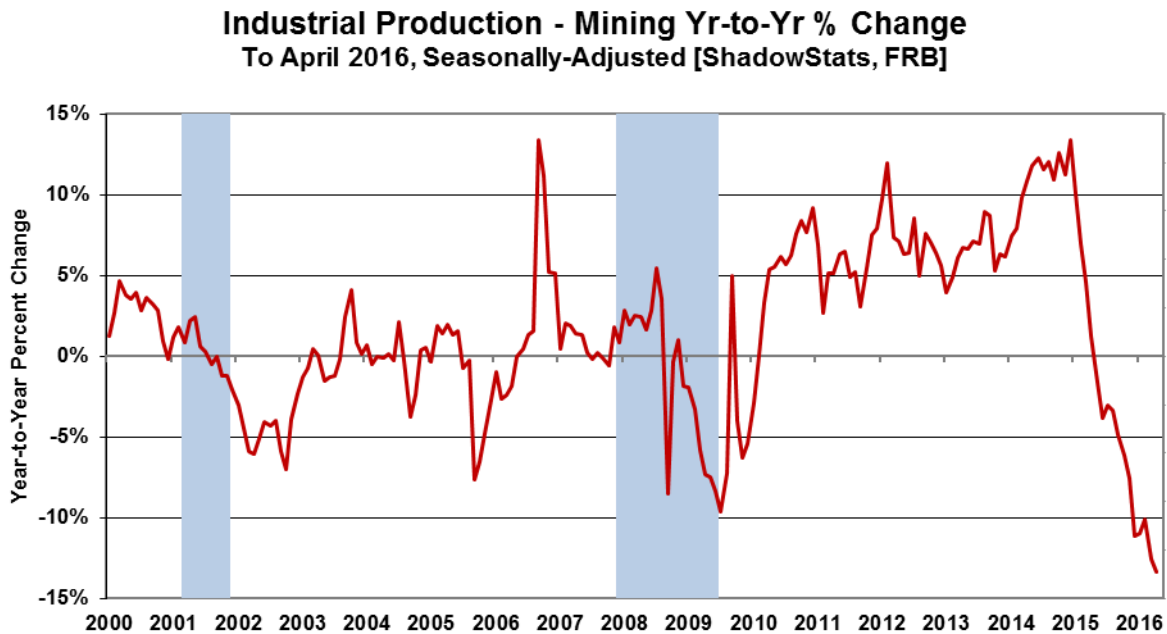
Graph 40: Industrial Production - Utilities, Year-to-Year Percent Change Since 2000



Graph 41: Industrial Production - Mining, Including Oil and Gas (10.76% of the Aggregate in 2015)



Graph 42: Industrial Production - Mining, Year-to-Year Percent Change

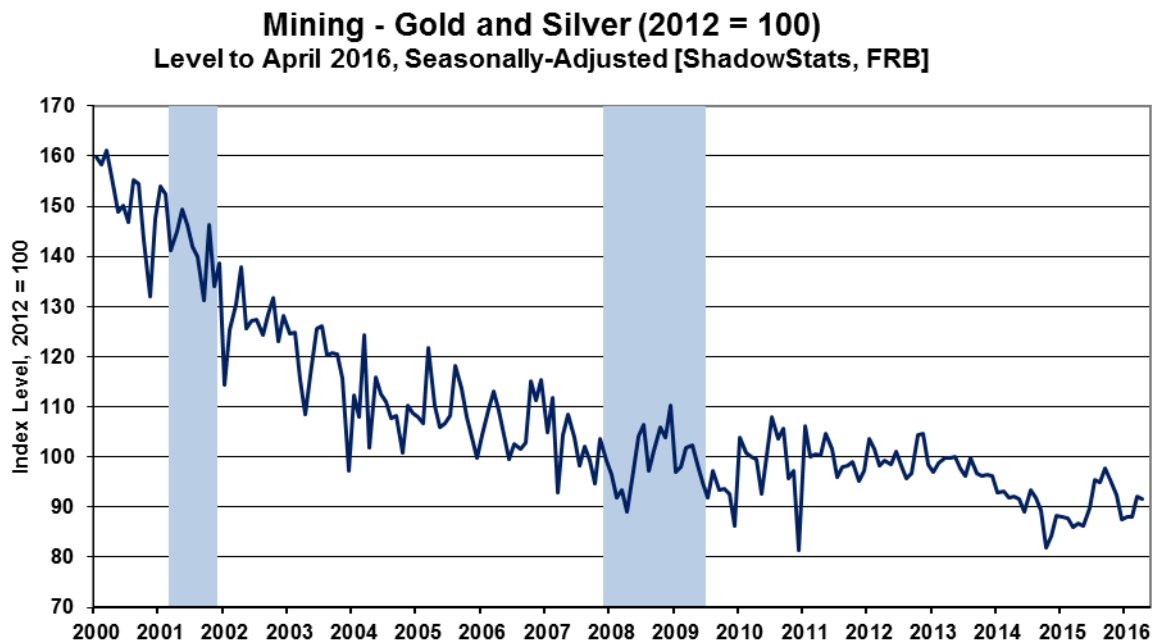


Mining-sector activity (*Graph 41*) continued its decline in April 2016, dropping month-to-month by 2.36% (-2.36%), which followed a revised 2.97% (-2.97%) downturn in March. Showing year-to-year change in this sector is a new chart, *Graph 42*, and it also reflects rapidly falling production. Activity

here, particularly in oil and gas exploration and production, and in coal production, remains the near-term focus of this analysis, where oil and gas pricing issues increasingly have taken a toll on aggregate production and broad economic activity. This sector easily recovered its pre-recession high and accounts for the full “recovery,” albeit short-lived, seen in the aggregate production detail since the economic collapse. Mining production, however, has turned down sharply recently, 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 government actions to limit coal consumption and production. Year-to-year April 2016 mining activity was down by 13.37% (-13.37%).

Graph 43 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 today’s *Hyperinflation Watch*, however, pricing circumstances may be shifting to the upside for gold and silver, as well as for oil.

Graph 43: Mining – Gold and Silver Mining (Since 2000)



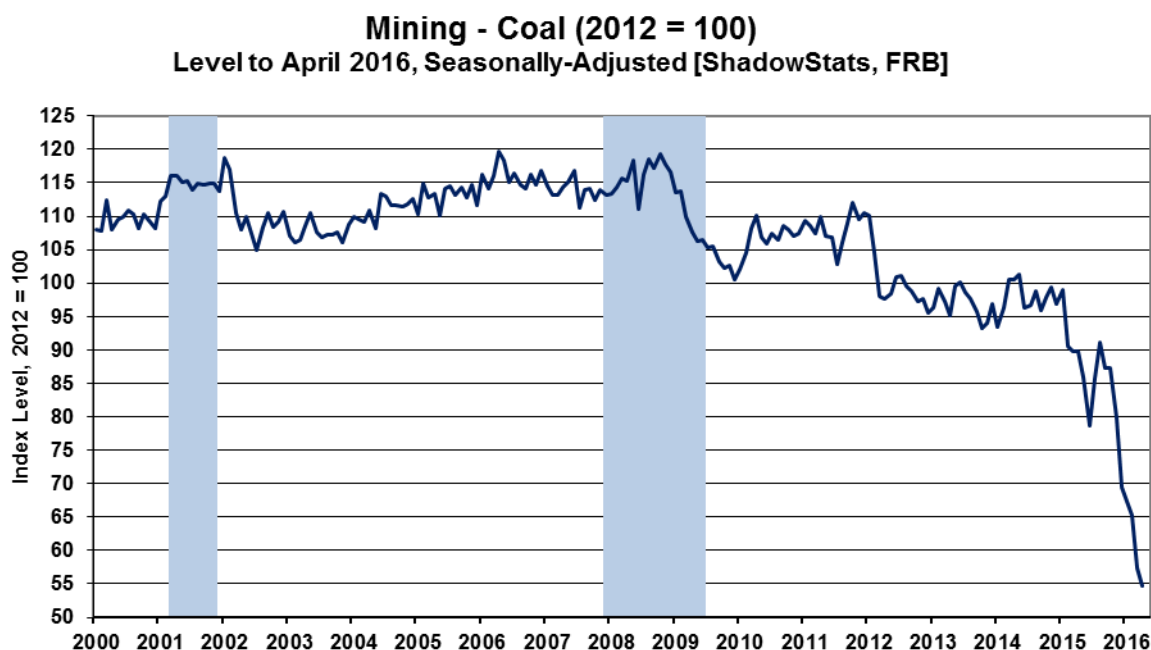
Graph 44 shows a continuing, extraordinarily sharp headline drop in monthly coal production, which declined by 4.72% (-4.72%) month-to-month in April 2016, and plunged by 39.15% (-39.15%) year-to-year.

With oil prices moving off recent lows, oil and gas extraction still has remained well off its all-time high, down in April 2016 by 2.13% (-2.13%) for the month, down by 5.92% (-5.92%) year-to-year, as seen in *Graph 45*. Exploration in terms of oil and gas drilling (*Graph 46*) also continued to plunge, down in April 2016 by 6.82% (-6.82%) for the month, down by 51.70% (-51.70%) year-to-year.

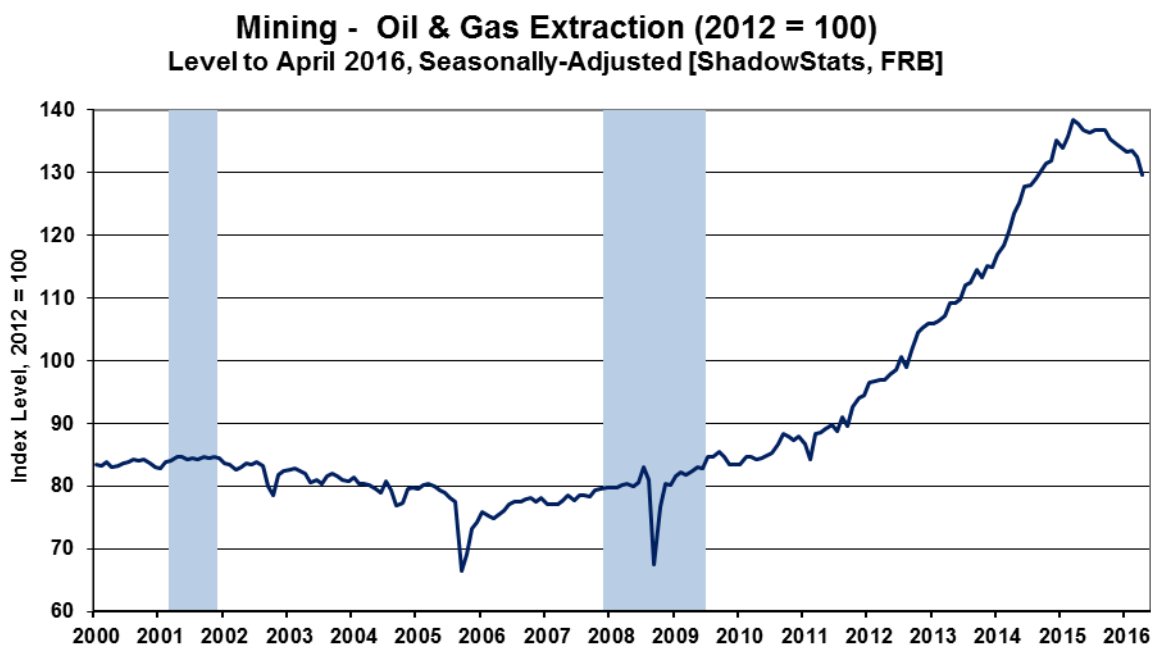
The recent collapse in drilling largely is an artefact of the massive U.S. dollar rally and oil-price plunge that began in July 2014. Those shifts appeared, at least initially, to be U.S.-orchestrated covert actions

designed to stress Russia, financially, in response the circumstance in Ukraine. Since the related September 2014 peak in oil drilling, activity has collapsed by 74.84% (-74.84%).

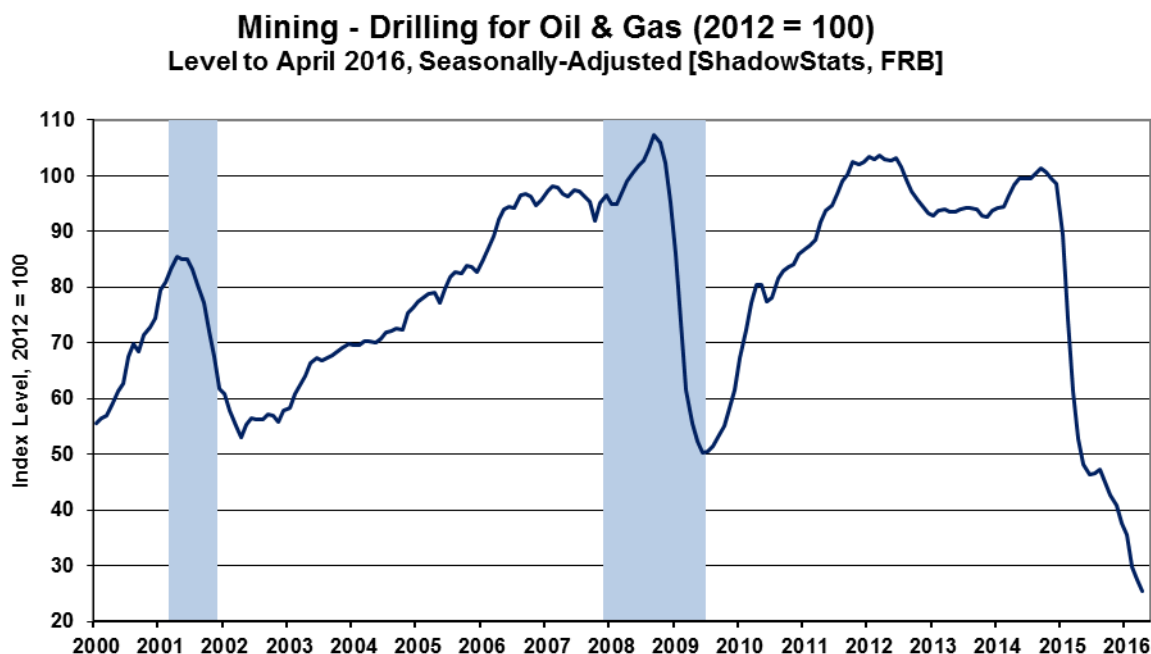
Graph 44: Mining - Coal Mining (Since 2000)



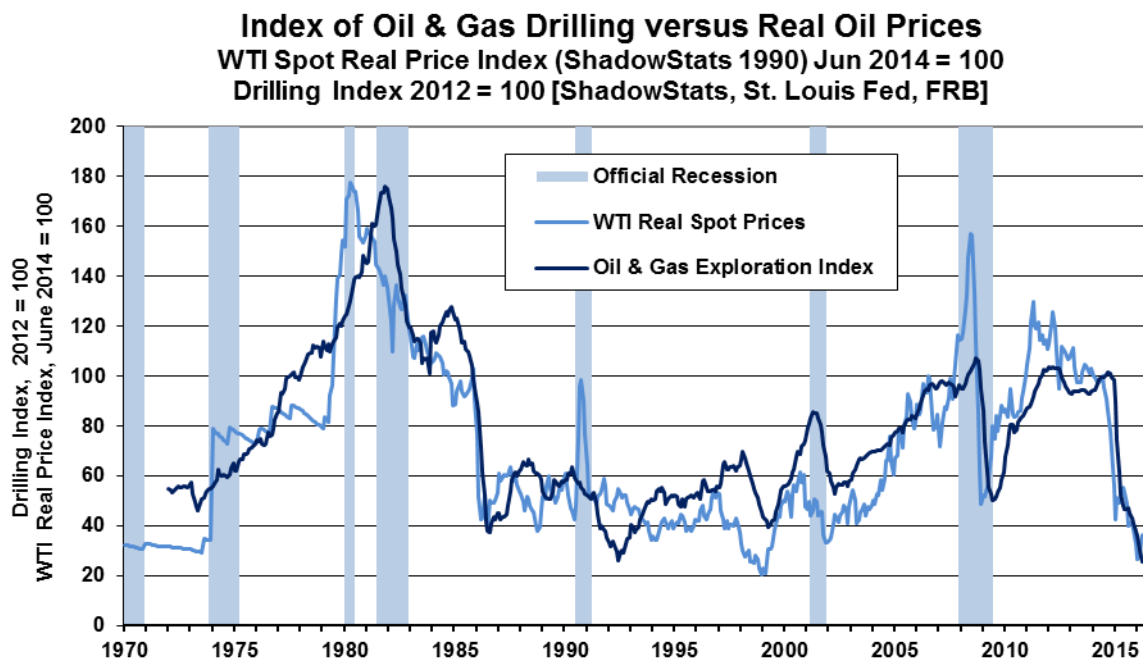
Graph 45: Mining – U.S. Oil & Gas Extraction (Since 2000)



Graph 46: U.S. Drilling for Oil & Gas (Since 2000)



Graph 47: Mining – U.S. Drilling for Oil & Gas versus Real Oil Prices (WTI ShadowStats 1990 Base)



Shown in *Graph 47*, 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 the *Hyperinflation Watch*).

RESIDENTIAL INVESTMENT (April 2016)

Unusual Seasonal Swings Boost Headline Data Amidst Innocuous Annual Revisions. Discussed in the *Opening Comments*, the annual revisions to Housing Starts largely were no more than a re-shifting of monthly seasonal factors in this unusually-unstable economic series (see *Graphs 8 to 10*). In the context of those changes and the latest monthly detail, Housing Starts remained in a smoothed pattern of low-level stagnation.

April 2016 activity jumped sharply for the month, but that appeared to have been no more than distorted seasonal adjustments resulting from year-ago weather distortions, which had depressed February and March 2015 starts, relative to an extraordinary April 2015 monthly catch-up surge of 23.7%. As a result, revised monthly gains in February and March 2016 were up by 7.5% and down by 9.4% (-9.4%), respectively, followed by a headline April 2016 monthly gain of 6.6%, while annual changes for February through April 2016 went from plus 35.8% and 14.0%, to minus 1.7% (-1.7%), respectively.

First-Quarter Starts Reverse Trend, Again, Up at an Annualized Pace of 4.3%, Having Contracted Previously by 0.7% (-0.7%). In terms of annualized quarter-to-quarter change, and in the context of the annual benchmarking, the regularly-unstable aggregate housing-starts count fell at a narrower, revised annualized-quarterly pace of 24.1% (-24.1%) [down by 26.2% (-26.2%) pre-benchmark] in first-quarter 2015, rose at an upwardly-revised annualized 96.3% pace [up by 88.9% pre-benchmark] in second-quarter 2015, flattened out to 0.0% [up by 0.2% pre-benchmark] in third-quarter 2015, and fell at a revised, narrower pace of 7.2% (-7.2%) [down by 7.7% (-7.7%) pre-benchmark] in fourth-quarter 2015.

First-quarter 2016 activity, which had turned down with last month's initial full quarterly reporting, revised into positive territory thanks largely to upside revisions to multiple-structure starts, as can be seen in *Graph 10* in the *Opening Comments*. Annualized quarterly growth now is 4.3% [previously down by 0.7% (-0.7%) pre-benchmark and regular headline revisions].

Based solely on the volatile headline April 2016 detail, housing starts are on an early track for an annualized 9.1% gain in second-quarter 2016. That outlook likely will dim sharply with the May 2016 reporting and revision, as the monthly seasonal-adjustment distortions swing sharply to the downside.

Smoothed Numbers. Despite the regular volatility and instabilities in the Housing Starts series, the general pattern of low-level stagnation continued. The six-month moving-average pattern for the aggregate series continued to flatten, in low-level stagnation, reflecting both the revisions and the most-recent headline detail. That pattern is viewed best in terms of the longer-range historical graph of aggregate activity (*Graph 49*) at the end of this section, and particularly in the context of the headline activity—smoothed by a six-month moving average—as shown in *Graph 14* in the *Opening Comments*. Given the broad pattern of stagnation in the aggregate series, total April 2016 housing-starts activity remained well below any recovery level, down from its pre-recession high by 48% (-48%).

Separately, in April 2016, the dominant, single-unit housing starts component of the series (*Graphs 15 and 16 in the Opening Comments*) remained down by 57% (-57%) from its January 2006 pre-recession peak.

Reflected in the smoothed graphs in the *Opening Comments*, the aggregate housing-starts series held flat, at a low of stagnation (*Graph 14*), still reflecting up-trending, low-level stagnation in the six-month-smoothed single-unit activity (*Graph 16*), offset by down-trending, smoothed multiple-unit starts (*Graph 18*), which have continued to fall back from recent pre-recession levels.

Consumer Liquidity Problems Continue to Impair Housing Activity. Constraining residential real estate activity and personal consumption, the consumer remains in an extreme liquidity bind, as fully updated in prior [Commentary No. 806](#). Without sustained 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 has been unable to sustain positive growth in broad U.S. economic activity, particularly as tied to residential real estate. The private-housing sector never has recovered from the business collapse of 2006 into 2009.

There remains no chance of a near-term, sustainable turnaround in the housing market, without a fundamental upturn in consumer and banking-liquidity conditions. That has not happened and does not appear to be in the offing.

April 2016 Housing Starts, Headline Reporting. The broadly unstable and highly volatile aggregate Housing Starts series jumped month-to-month, in the context of annual benchmark revisions and upside revisions to March 2016 and to first-quarter 2016 reporting. Previously discussed, the headline monthly gain largely was a function of distorted, upside seasonal adjustments. The Census Bureau reported May 17th, a statistically-insignificant, seasonally-adjusted, headline monthly gain of 6.6% +/- 11.9% (all confidence intervals are expressed at the 95% level) in April 2016 housing starts.

Such followed a revised, deeper monthly decline of 9.4% (-9.4%) [down by 8.8% (-8.8%) pre-benchmark] in March, and an upwardly-revised monthly gain of 7.5% [up by 6.9% pre-benchmark] in February. Net of the prior-period and benchmark revisions, April 2016 housing starts rose by a still statistically-insignificant 7.6%. Level-of-activity aggregate detail is plotted in *Graphs 11 to 14* of the *Opening Comments*, and in *Graphs 48 and 49* at the end of this section.

Year-to-year change in the seasonally-adjusted, April 2016 aggregate housing-starts measure was a statistically-insignificant decline of 1.7% (-1.7%) +/- 11.8%, versus a downwardly-revised gain of 14.0% [up by 14.2% pre-benchmark] in March 2016, and an upwardly-revised annual gain of 35.8% [up by 32.7% pre-benchmark] in February 2016.

The April 2016 headline gain of 6.6% in total housing starts encompassed headline monthly gains of 3.3% in the “one unit” category and 10.7% jump in the “five units or more” category. As most commonly is the case, not one of the headline changes was statistically significant, on a month-to-month or year-to-year basis.

By-Unit Category (See Graphs in the Opening Comments). Where the irregular housing starts series can show varying patterns, that partially is due to a reporting mix of residential construction products, with the largest physical-count category of one-unit structure housing starts—generally for individual

consumption, resulting in new home sales—versus multi-unit structure starts that generally reflect the building of rental and apartment units.

Housing starts for single-unit structures in April 2016 rose month-to-month by a statistically-insignificant 3.3% +/- 14.2%, following a deeper, revised decline of 10.9% (-10.9%) [down by 9.2% (-9.2%) pre-benchmark] in March, and a downwardly-revised February gain of 9.0% [up by 9.1% pre-benchmark]. Single-unit starts for April 2016 showed a statistically-insignificant year-to-year annual gain of 4.3% +/- 11.0%, versus a downwardly-revised annual gain of 20.3% [up by 22.6% pre-benchmark] in March 2016, and an upwardly revised annual gain of 43.0% [up by 40.2% pre-benchmark] in February 2016 (see *Graphs 11, 12, 15 and 16 in the Opening Comments*).

Housing starts for apartment buildings (generally 5-units-or-more) in April 2016 rose month-to-month by a statistically-insignificant 10.7% +/- 27.0%, versus a revised, narrowed monthly decline of 5.3% (-5.3%) [down 8.5% (-8.5%) pre-benchmark] in March, and an upwardly-revised gain of 6.3% [up 4.0% pre-benchmark] in February. The statistically-insignificant year-to-year decline of 12.9% (-12.9%) +/- 26.1% in April 2016, followed an upwardly revised annual gain of 6.0% [up 0.3% pre-benchmark] in March 2016, and an upwardly-revised annual gain of 21.1% [up 16.8% pre-benchmark] in February 2016.

Expanding the multi-unit housing starts category to include 2-to-4-units plus 5-units-or-more usually reflects the bulk of rental- and apartment-unit activity. The Census Bureau does not publish estimates of the 2-to-4-units category, due to statistical significance problems (a general issue for the aggregate series). Nonetheless, the total multi-unit category can be estimated by subtracting the single-unit category from the total category (see *Graphs 11, 12, 17 and 18 in the Opening Comments*).

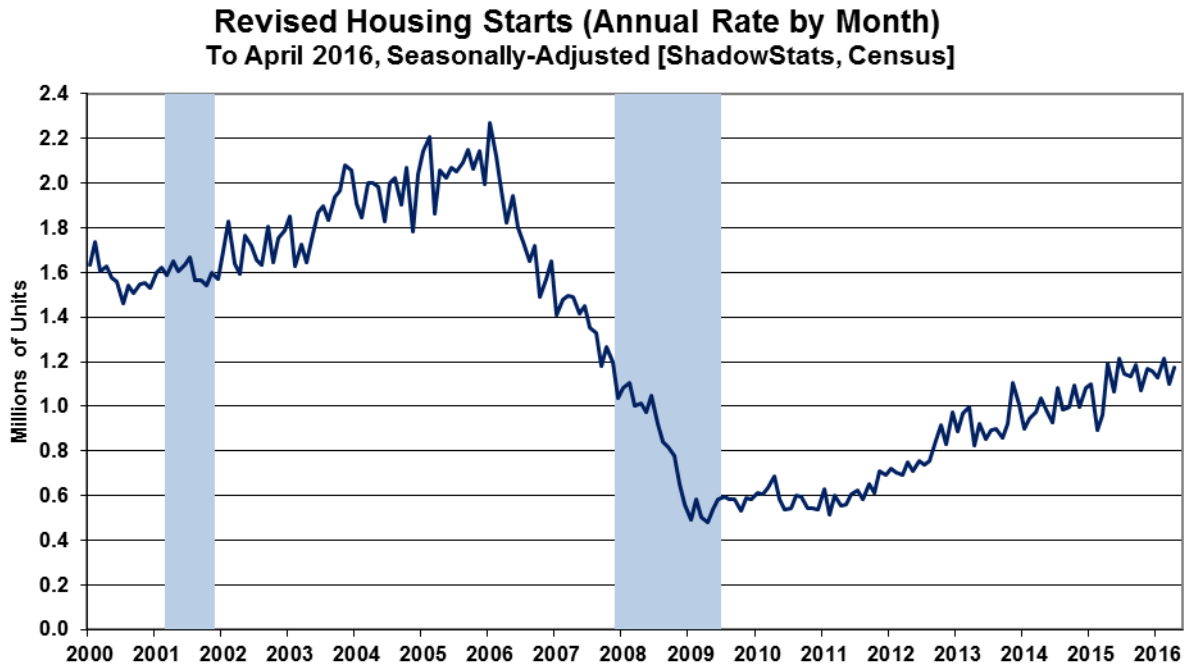
Accordingly, the statistically-insignificant April 2016 monthly gain of 6.6% in aggregate starts was composed of statistically-insignificant gains of 3.3% in one-unit structures and 13.9% in the multiple-unit structures categories (2-units-or-more, including the 5-units-or-more category). Again, these series all are graphed in the *Opening Comments*.

Housing Starts Graphs. Headline reporting of Housing Starts activity is expressed by the Census Bureau as an annualized monthly pace of starts, which was 1,172,000 in April 2016, versus a revised 1,099,000 [previously 1,089,000] in March 2016. The scaling detail in the aggregate *Graphs 48 and 49* at the end of this section reflects those annualized numbers.

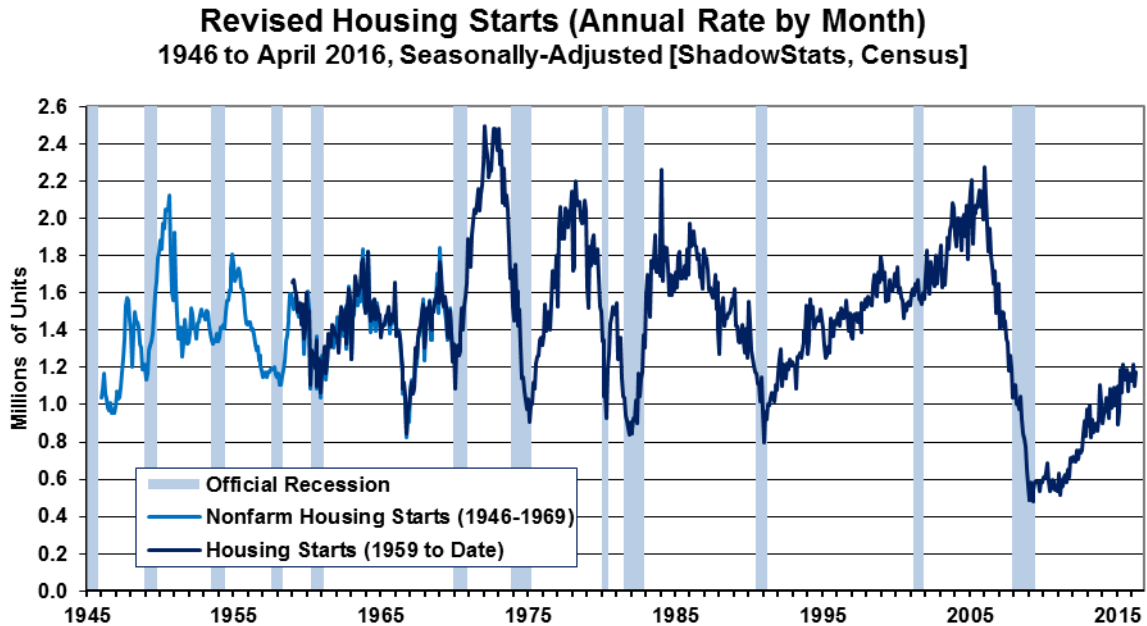
Nonetheless, given the nonsensical monthly volatility in reporting and the exaggerated effect of annualizing the monthly numbers in this unstable series, the magnitude of monthly activity and the changes in same, more realistically are reflected at the non-annualized monthly rate. Consider that the revised headline 228,000 [previously 236,000] month-to-month gain in the annualized April 2015 housing starts was larger than any actual total (non-annualized) level of monthly starts ever, for a single month. That is since related starts detail first was published after World War II.

Accordingly, the monthly rate of 97,667 units in April 2016, instead of the annualized 1,172,000-headline number, is used in the scaling of the *Graphs 11 to 18 in the Opening Comments*. With the use of either scale of units, though, appearances of the graphs and the relative monthly, quarterly and annual percentage changes are otherwise identical, as can be seen in a comparison of *Graph 48* versus *Graph 13 in the Opening Comments*.

Graph 48: Revised Housing Starts (Annualized Monthly Rate of Activity), 2000 to Date



Graph 49: Revised Housing Starts (Annualized Monthly Rate of Activity), 1946 to Date



The record monthly low level of activity seen for the present aggregate series was in April 2009, where the annualized monthly pace of housing starts then was down by 79% (-79%) from the January 2006 pre-

recession peak. Against that downside-spiked low in April 2009, the April 2016 headline number was up by 145%, but it still was down by 48% (-48%) from the January 2006 pre-recession high for the series. Shown in the historical perspective of the post-World War II era, current aggregate-starts activity is in stagnation at low levels that otherwise have been at or near the historical troughs of other recession activity of the last 70 years, as reflected in accompanying *Graph 49*.

WEEK AHEAD

Economic Deterioration Should Intensify, 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 Fed-policy waffling in the weeks and months ahead. The broad trend in weakening expectations for business activity, and in movement towards looming recession recognition, continues, as discussed in the *Opening Comments*, [Commentary No. 806](#), [Commentary No. 805](#), [Commentary No. 804](#), [Commentary No. 803](#), [Commentary No. 802](#), [Commentary No. 801](#), [Commentary No. 800](#), [Commentary No. 799](#), [Commentary No. 796](#) and in [No. 777 Year-End Special Commentary](#).

In response to perpetual non-recovery and an 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, as seen in recent market activity and as discussed in [Commentary No. 799](#). These reactions reflect, at least in part, a solidifying sense of Federal Reserve impotence. Any further tightening by the Fed before the election is unlikely—despite any continued “good cop” versus “bad cop” games played by Fed officials with the stock market—and renewed quantitative easing could become a target of intensified market speculation as the deepening recession unfolds.

Increasingly-weak headline reporting of the regular monthly economic numbers should be accompanied by much worse-than-expected—negative—reporting for at least the next several quarters of GDP (and GDI and GNP). That includes goods odds of an outright quarterly contraction for first-quarter 2016 GDP activity in the next week’s May 27th monthly revision, as well as pending downside revisions to GDP history (including headline quarterly contractions in first-quarter 2015, fourth-quarter 2015 and first-quarter 2016, should it still be in positive territory) come the July 29th annual GDP benchmark revisions.

Consistent with the relatively neutral benchmark revisions to retail sales and housing starts, and in line with recent downside revisions to industrial production and durable goods orders, and likely pending negative benchmark revisions to construction spending and trade, expectations for the GDP benchmarking

also should fall sharply in the weeks ahead. That GDP benchmarking now is 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 March and April 2016 detail moved into positive headline territory, in tandem with rising gasoline prices. CPI inflation is on track to rise still further in May, and likely going forward, boosted by the 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 has been 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 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](#).

PENDING RELEASES:

Existing- and New-Home Sales (April 2016). April 2016 Existing-Home Sales are due for release on Friday, May 20th, from the National Association of Realtors (NAR), with the April 2016 New-Home Sales report due from the Census Bureau on Wednesday, May 25th. Both Existing- and New-Home Sales will be covered in the *Commentary No. 808* of May 26th.

Discussed in today’s *Housing Starts* detail and updated in [Commentary No. 806](#), the consumer remains in an extreme liquidity bind, constraining residential real estate activity. Without sustained 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 has been unable to sustain positive growth in broad U.S.

economic activity, particularly as tied to residential real estate, as well as to retail sales and personal consumption.

Where the private housing sector never recovered from the business collapse of 2006 into 2009, there remains no chance of a near-term, sustainable turnaround in the home-sales activity, without a fundamental upturn in consumer and banking-liquidity conditions. That has not happened and does not appear to be in the offing.

Headline Existing-Home Sales data may remain subject to unusual month-to-month volatility as the NAR continues to adjust and account for a de-stabilizing pattern of delayed headline monthly closings of home sales, in the context of regulatory-induced timing disruptions on mortgage closings. That circumstance led to a misleading collapse of headline sales in November a misleading sales explosion in December and questionable numbers in first-quarter 2016. When those factors fully are resolved, Existing-Home Sales should continue their current general pattern of down-trending, low-level stagnation.

Further, smoothed for regular extreme and nonsensical monthly gyrations, a continuing pattern of stagnation or downturn in New-Home Sales also is likely. Its pattern of low-level stagnation turned from up-trending to down-trending or flat in September 2015. Monthly changes in activity here rarely are statistically-significant, amidst the otherwise unstable headline monthly reporting and revisions.

New Orders for Durable Goods (April 2016). The Census Bureau will report April 2016 New Orders for Durable Goods on Thursday, May 26th, which will be covered in *Commentary No. 808* of that date. Net of irregular activity in commercial aircraft orders, aggregate orders likely continued a pattern of down-trending stagnation. That reporting also will be in the context of annual benchmark revisions released on May 18th, which were sharply to the downside, a will be detailed in tomorrow's *Supplementary Commentary*.

Commercial aircraft orders are booked for the long-term—years in advance—so they have only limited impact on near-term production. Further, by their nature, these types of orders do not lend themselves to seasonal adjustment. As a result, the durable goods measure that best serves as a leading indicator to broad production—a near-term leading indicator of economic activity and the GDP—is the activity in new orders, ex-commercial aircraft.

Gross Domestic Product (GDP)—First-Quarter 2016, First Revision, Second Estimate. The Bureau of Economic Analysis (BEA) will publish its first revision to, second estimate of first-quarter 2016 Gross Domestic Product (GDP) on Friday, May 27th, which will be covered in *Commentary No. 809* of that date. Initial estimates of the broader measure of first-quarter 2016 Gross National Product (GNP) and the theoretical GDP equivalent of the Gross Domestic Product (GDI) also are scheduled for release.

The outlook for the first revision will be detailed in tomorrow's *Supplementary Commentary No. 807-A*. Chances remain good for downside revision to the initial growth estimate of 0.54%, but the BEA still may keep the headline detail in positive territory for this revision.