John Williams'

Shadow Government Statistics

Analysis Behind and Beyond Government Economic Reporting

COMMENTARY NUMBER 900
June Housing Starts, Preview of GDP Benchmarking

July 19, 2017

GDP Benchmark Revisions Should Weaken Headline Activity in 2014 and 2015

Outlook for Second-Quarter GDP Continues to Darken

Despite a Statistically-Insignificant Monthly Rebound in June Housing Starts, Activity Plunged at an Increasingly-Rapid Pace of Quarterly Downturn

Building Permits and Housing Starts Both Showed Deepening Quarterly Losses: Permits Fell by 2.8% (-2.8%) in First Quarter, by 13.0% (-13.0%) in Second Quarter; Starts Fell by 3.3% (-3.3%) in First Quarter, by 21.9% (-21.9%) in Second Quarter

Downtrending Activity Remained Shy of Recovering Pre-Recession Peaks by 46.5% (-46.5%) for Housing Starts and by 44.6% (-44.6%) for Building Permits

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PLEASE NOTE: The next regular Commentary, *scheduled for Thursday, July 27th, will cover June New Orders for Durable Goods, and New- and Existing-Home Sales, followed by a* Commentary *on Friday, July 28th, reviewing the initial estimate of Second-Quarter 2017 GDP and at least an initial assessment of accompanying Annual Benchmark GDP Revisions. Dependent on the complexity of the GDP revisions, a separate, a more-detailed* Commentary *on the revisions could follow over the weekend.*

Best wishes to all — John Williams (707) 763-5786

Today's ***Opening Comments and Executive Summary*** **(July 19th).** The ***Opening Comments*** focuses on the pending GDP benchmark revisions and the accompanying first-estimate of second-quarter 2017 GDP, in the context of a pattern of renewed faltering in broad, headline economic reporting. The ***Executive Summary*** (page 12) highlights the headline details of June 2017 New Residential Construction (Housing Starts).

The ***Reporting Detail*** (page 18) provides extended analysis of June New Residential Construction (Housing Starts and Building Permits).

The ***Consumer Liquidity Watch*** (page 25). Other than for a change in graph numbering (a CL- prefix for Consumer Liquidity) and a shift in positioning to before the *Week, Month and Year Ahead* section, there are no revisions of substance in today's *Liquidity* text, versus the prior *Regular Commentary*.

The ***Week, Month and Year Ahead*** (page 35) provides links to recent *Commentaries* and previews next week's releases of June Home Sales, New Orders for Durable Goods and Second-Quarter 2017 GDP.

OPENING COMMENTS AND EXECUTIVE SUMMARY

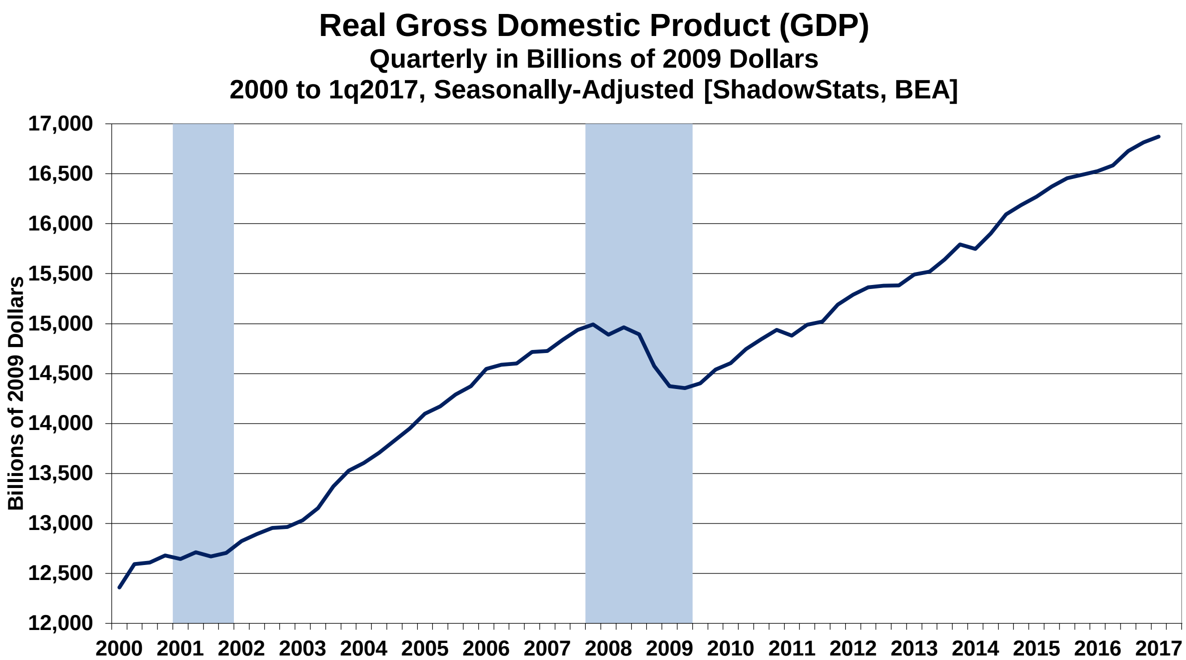
Pending GDP Revisions and the "Advance" Estimate of Second-Quarter Growth Should Reflect Weaker Economic History and Weaker-than-Expected Current Activity. The Bureau of Economic Analysis (BEA) has indicated its pending 2017 GDP Benchmark Revision "will cover the most recent 3 years (2014 through 2016) and the first quarter of 2017." Accompanying those revisions, the BEA also will release its "advance" estimate of second-quarter 2017 GDP. These *Opening Comments* assess some likely results of that revision, based on current-year benchmark revisions to underlying or related series, as discussed in previous *Commentaries.*

Incorporated here by reference as background are the most-recent ShadowStats GDP coverage, for the third estimate of first-quarter 2017 GDP in *Commentary No. 896* (June 29, 2017), and *Commentary No. 823* (July 31, 2016), which reviewed the 2016 GDP benchmark revisions.

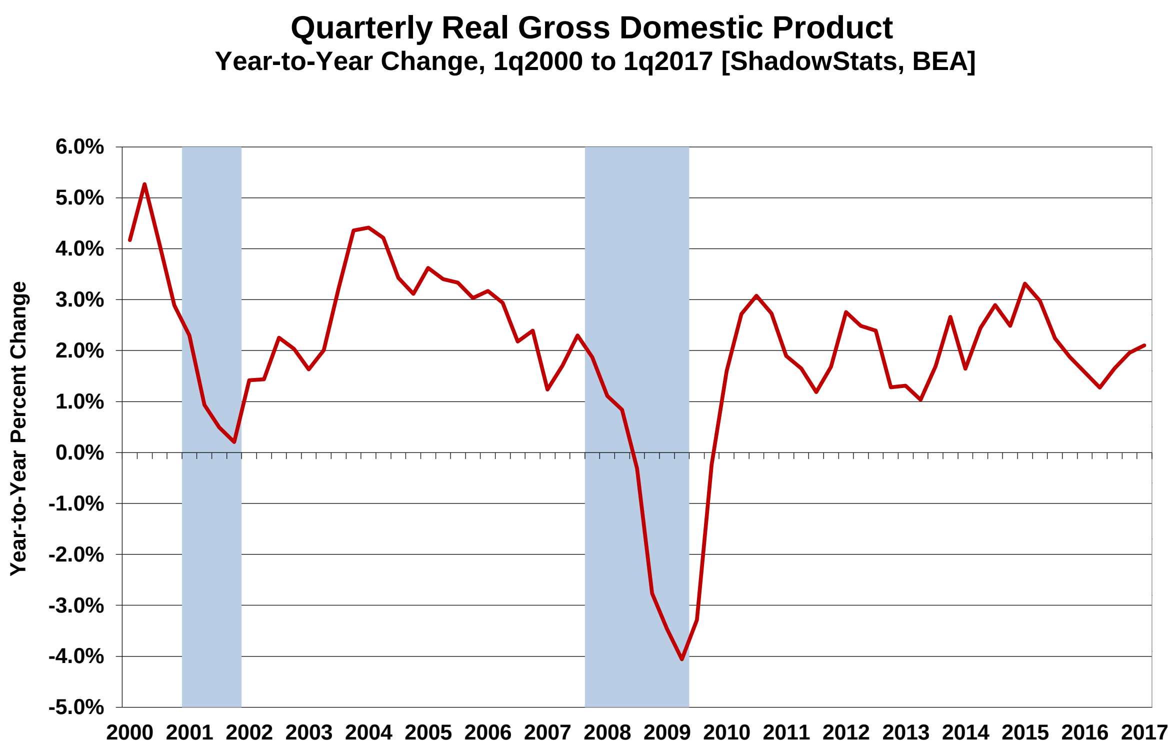
Pending Second-Quarter 2017 "Advance" Estimate. Also discussed in the *Week, Month and Year Ahead* section, the "advance" estimate of Second-Quarter 2017 GDP, likely will come in well on the downside of consensus expectations, currently around 2.8%. That reflects ongoing, broadly weaker headline economic detail of the last month that either has put forth softer-than-anticipated headline activity, and/or has reflected same in underlying revisions to recent activity. The latest supportive detail for this was seen in a pattern of deepening quarterly-contractions in today's headline June New Residential Construction (see the *Reporting Detail*). Consensus expectations for headline second-quarter GDP reporting should soften in closer proximity to the release date. Annualized real headline second-quarter growth easily could come in at 1.0%, or below.

Current headline GDP reporting is reflected in *Graphs 1* and *2*, lifted from *Commentary No. 896*, again, covering the third revision to first-quarter 2017. As last reported, headline annualized inflation-adjusted real quarterly growth the stood at 1.42%, with real year-to-year growth up by 2.10%, and with the level of real GDP activity 12.55% above its pre-recession peak. Expect that last growth rate to revise lower, along with some flattening of the growth line in *Graph 1*, post-2014.

Graph 1: Quarterly GDP in Billions of 2009 Dollars (2000 to 2017), Third Estimate of First-Quarter 2017



Graph 2: Quarterly GDP Real Year-to-Year Change (2000 to 2017), Third Estimate of First-Quarter 2017



Pending Annual Benchmark Revisions. The outlook for the pending annual GDP benchmark revisions is assessed based on related benchmark revisions to underlying series since January 2017. Those series are covered in sequence of publication, along with links to the related *ShadowStats Commentary*.

GDP activity likely will revise lower in 2014 and 2015, again where 2014 is the earliest period in this year's revisions. The bulk of underlying "better quality" updated data is in that 2014 and 2015 timeframe, with the result of a likely flatter path of rising GDP into the current period than is in place now.

The longer-term reporting issues that cover the formal onset of, and recovery from, the headline 2007 recession will not be addressed in this benchmarking. Discussed previously in the *GDP Commentaries*, that awaits the next comprehensive GDP benchmarking in July 2018, which will revise the GDP series back to 1929.

I apologize for some inconsistent variance in the color of the plotted lines in terms of the revised and prior reporting categories. Where these graphs are lifted from the *Commentaries*, they all should be handled on a consistent basis going forward. The accompanying legends are accurate.

Payroll Employment Benchmarking (Commentary No. 864, February 8, 2017). Reflected in *Graphs 3* and *4*, beyond seasonal-adjustment games going into 2017, which neutered some of the prior downside benchmarking, indications are for a weaker economy 2014-to-2016, with emphasis on second-half 2016.

Industrial Production and Manufacturing (Commentary No. 877, April 2, 2017). Shown in *Graphs 5* to *7*, thanks to the 2015 Census of Manufactures, not only production and manufacturing were revised lower from late-2014 on, but also related Manufacturers' Shipments and New Orders for Durable Goods were revised sharply lower, as shown later in *Graphs 10* to *14*. This series should have major, direct, underlying impact on the GDP series, particularly from late-2014 forward.

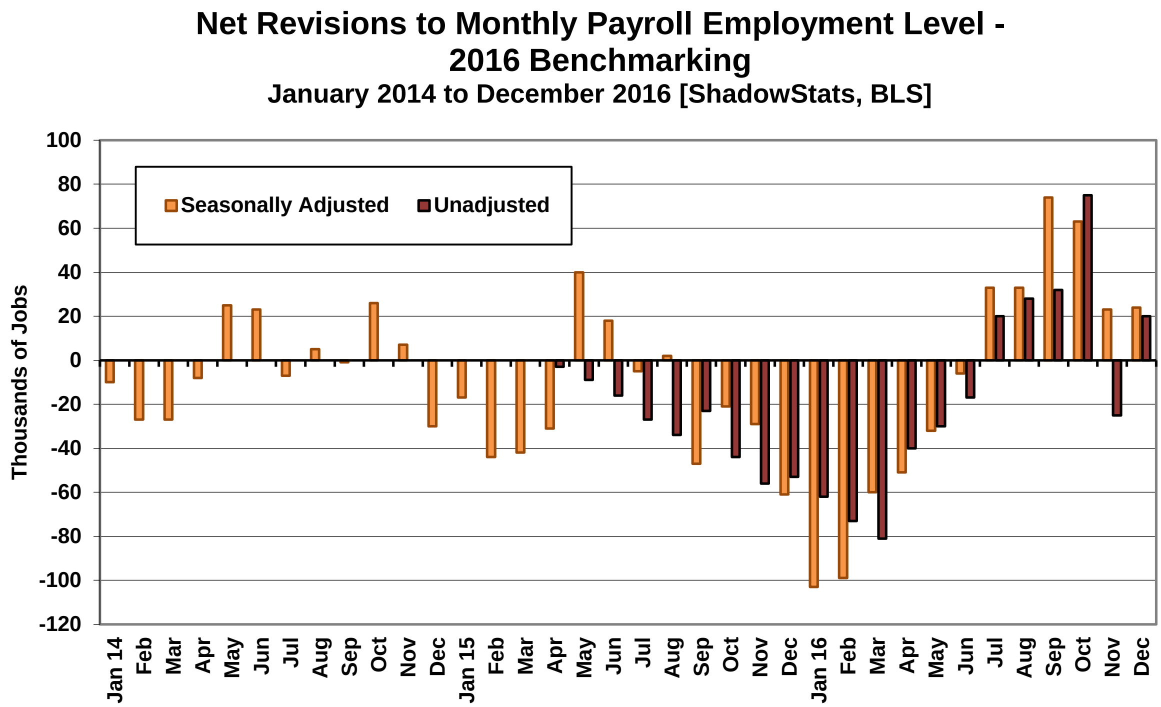
Retail Sales (Commentary No. 882, April 27, 2017). Reflected in *Graphs 8* and *9*, are the revisions to real retail sales based on the 2015 Census of Retailers. The revisions here went counter to manufacturing indicators as well as common experience. They should have some offsetting, albeit sporadic, but not dominant impact on the effects of the production series post-2014. Of note, sharp downside revisions in the latter part of 2016 could have negative impact on GDP reporting of the last year.

Manufacturers' Shipments, New Orders (Special Commentary No. 888, May 22, 2017). In parallel with the notes on Industrial Production, *Graphs 10* to *14* largely reflect the impact of the weakness seen in the 2015 Census of Manufactures. The first four graphs in this series also show the downside revisions from the prior year and year before that. Benchmark revisions usually are to the downside because the underlying assumptions built into the various series are happily on the upside (see the referenced *Commentary* here). The revision pattern seen in *Graph 14* should look something like the net pattern of revisions that will be seen in the GDP.

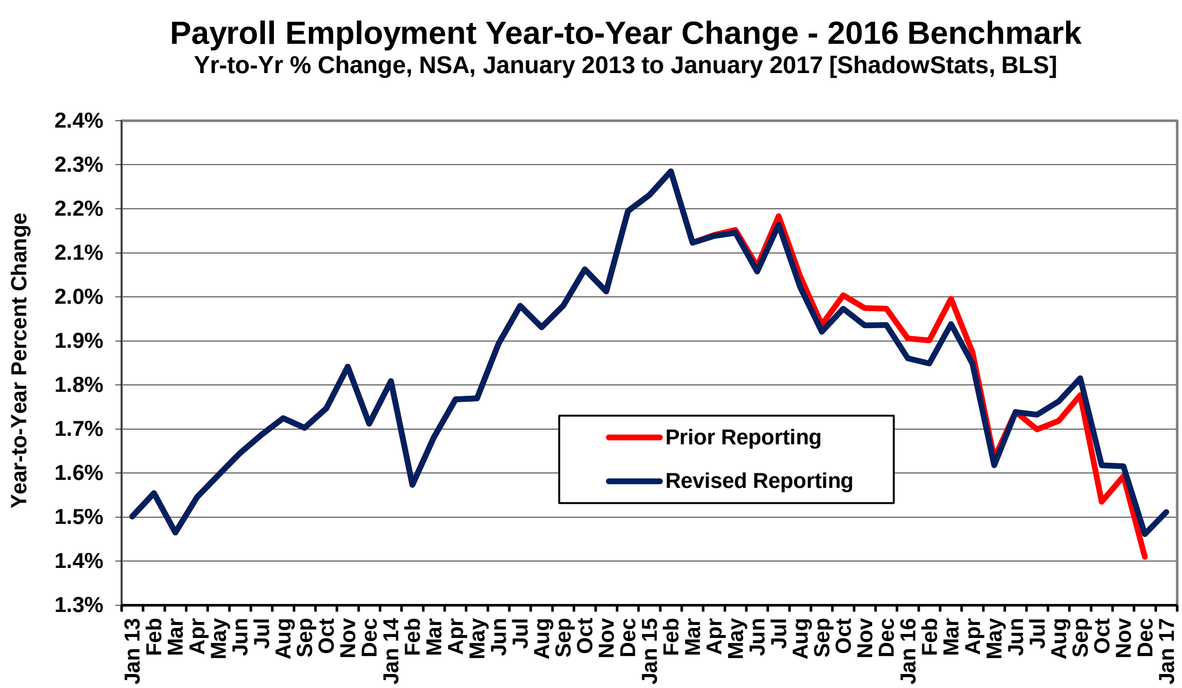
Merchandise Trade Deficit (Commentary No. 890, June 5, 2017). The trade-deficit revisions shown in *Graph 15*, should hit GDP growth from late-2014 on into providing a negative bias to the initial second-quarter 2017 GDP reporting.

Construction Spending (Commentary No. 897, July 6, 2017). The benchmark revisions to *Construction Spending* in *Graph 16*, suggest some downside pressure on the GDP revision in 2015, and to the upside in 2016, the quarterly growth patterns, however, look negative coming into the early quarters of 2017.

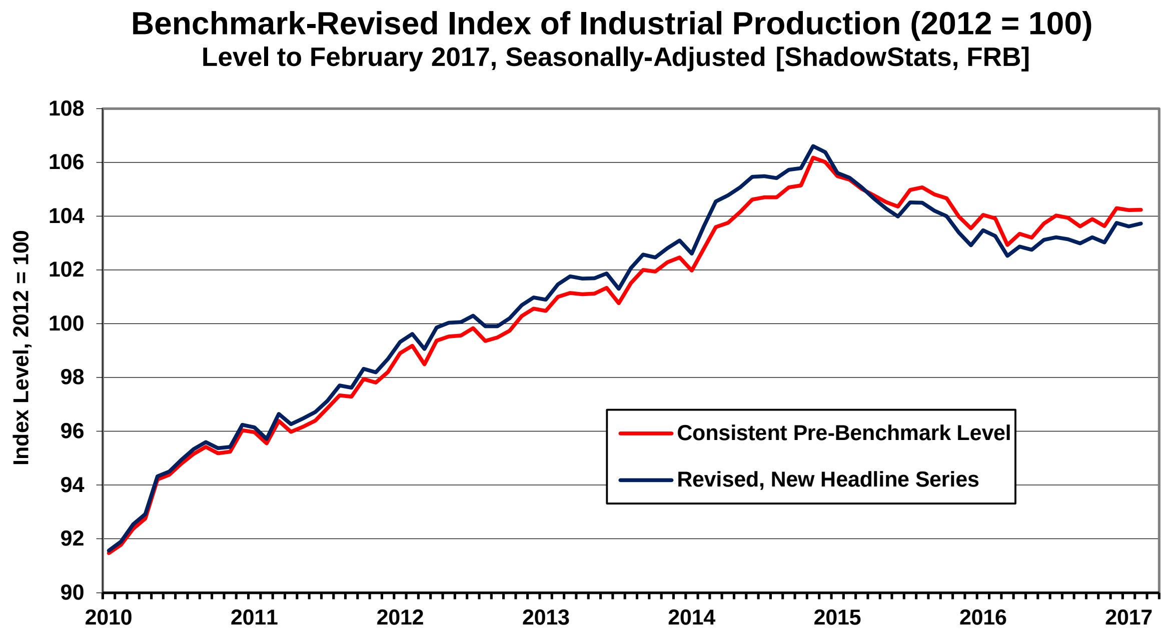
Graph 3: Payroll Employment Level, 2016 Benchmark Revision



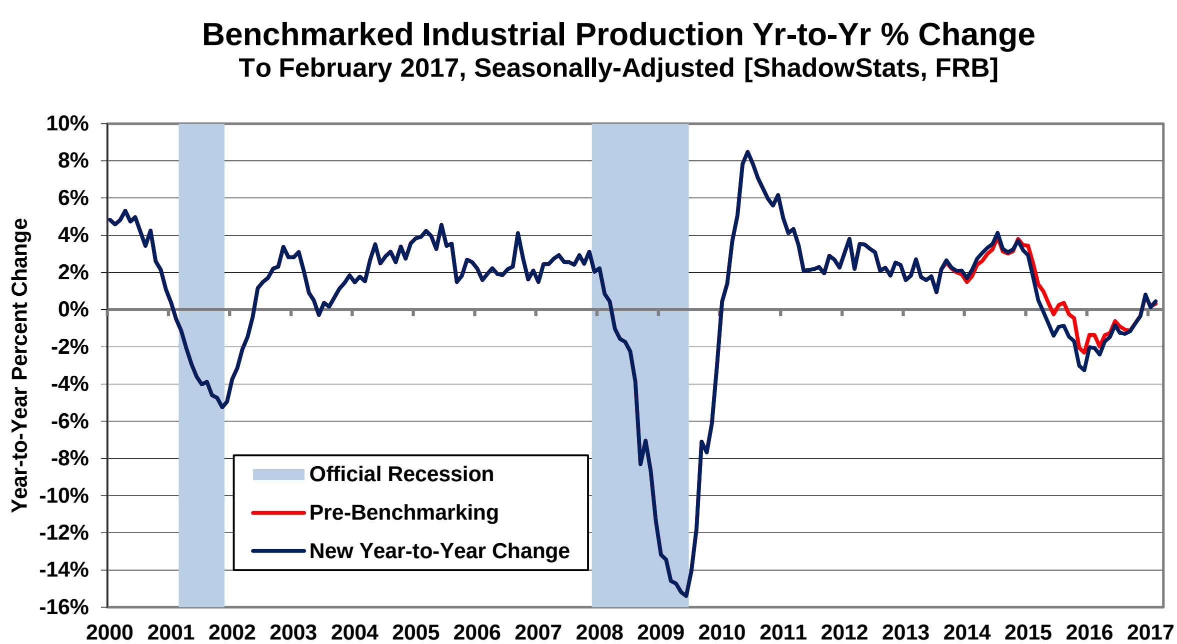
Graph 4: Payroll Employment Monthly Year-to-Year Percent Change, 2016 Benchmark Revision



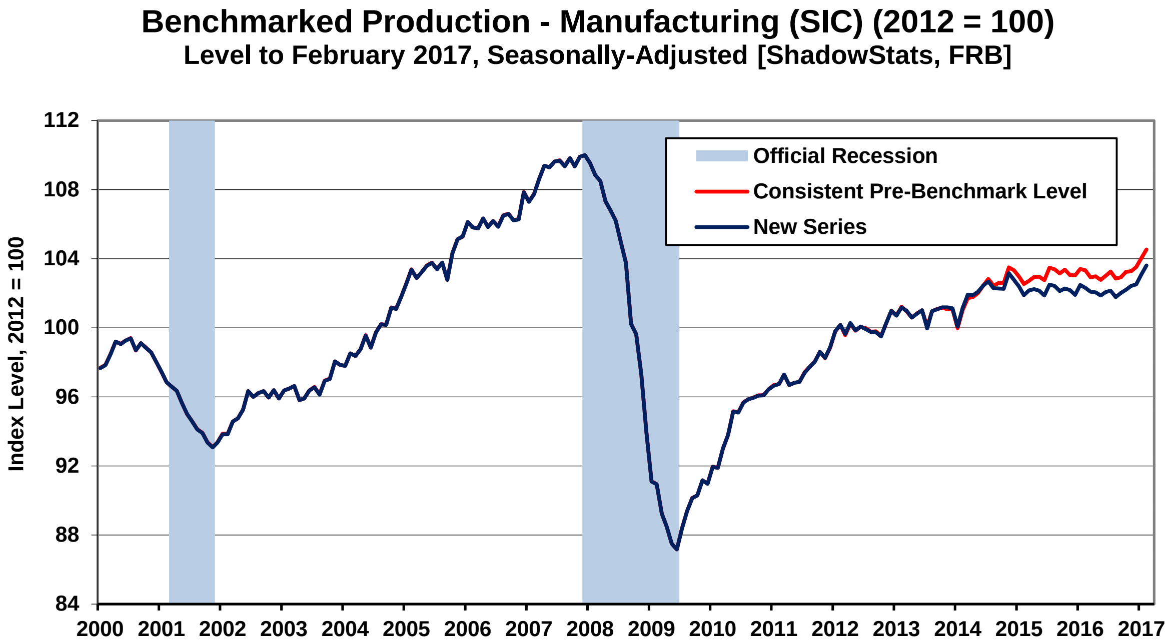
Graph 5: Benchmark-Revised Monthly Industrial Production (2010 to 2017)



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

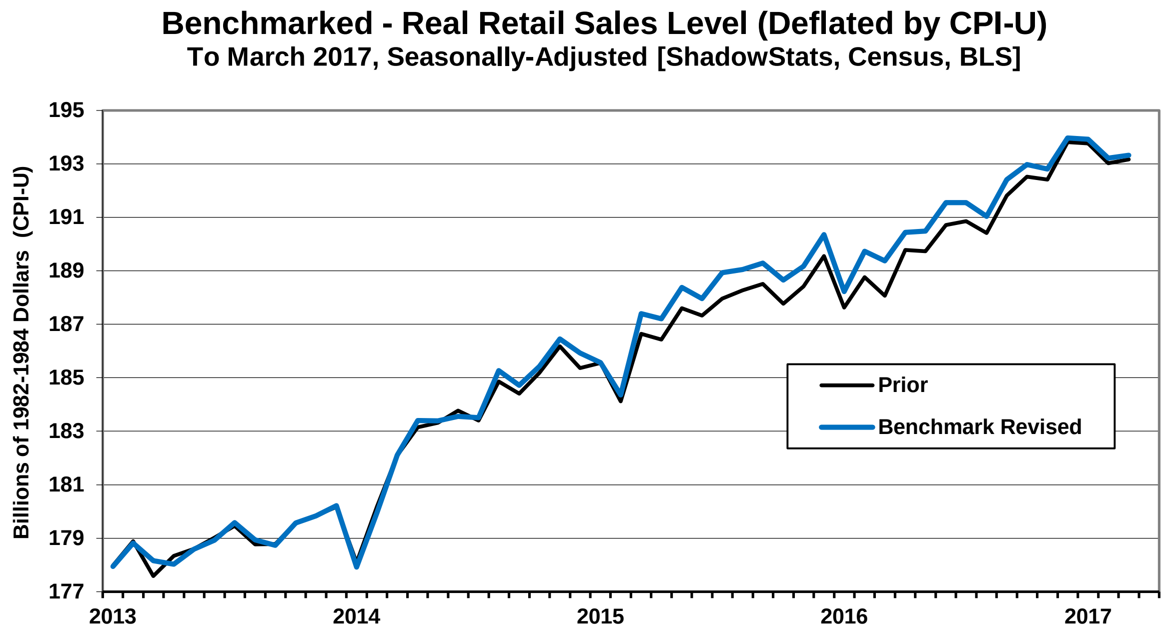


Graph 7: Benchmarked Production - Manufacturing (76.4% of the Aggregate in 2016)

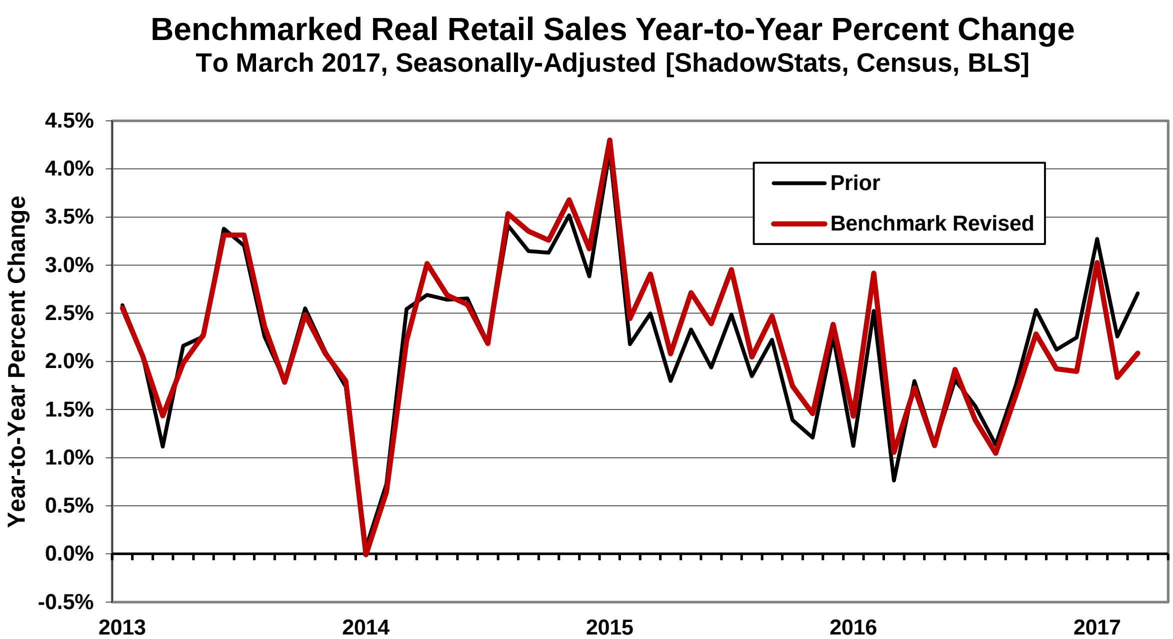


[Graphs 8 and 9 follow on the Next Page.]

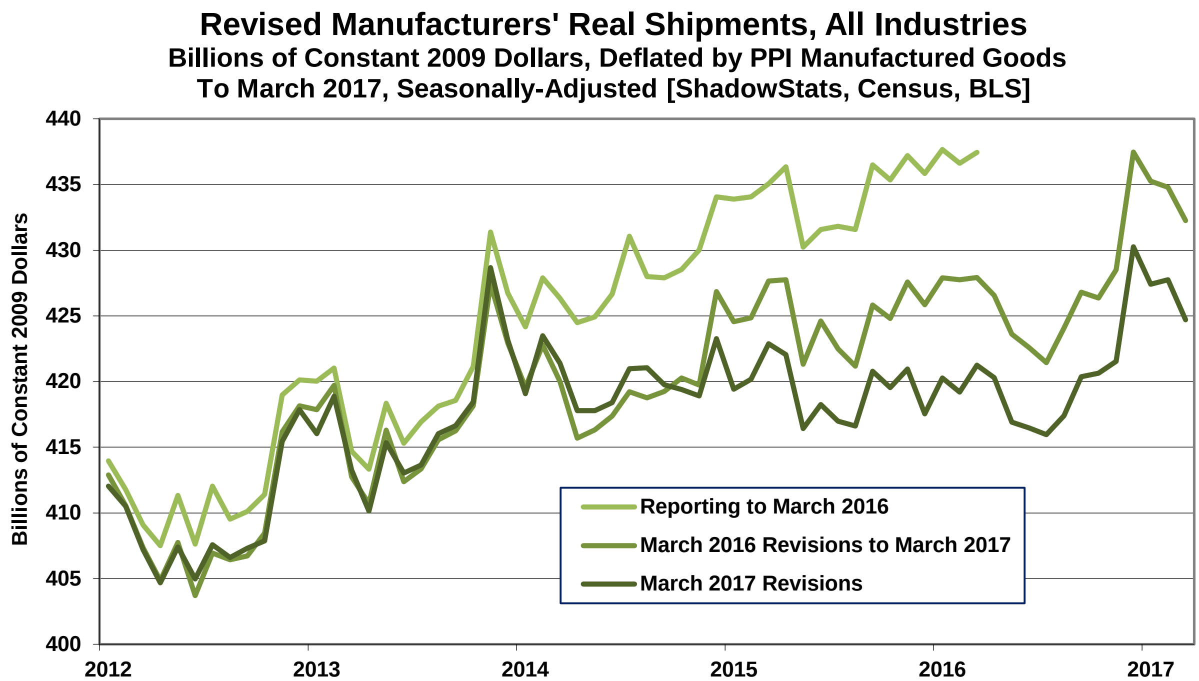
Graph 8: Near-Term Revisions to Real Retail Sales (2013 to March 2017)



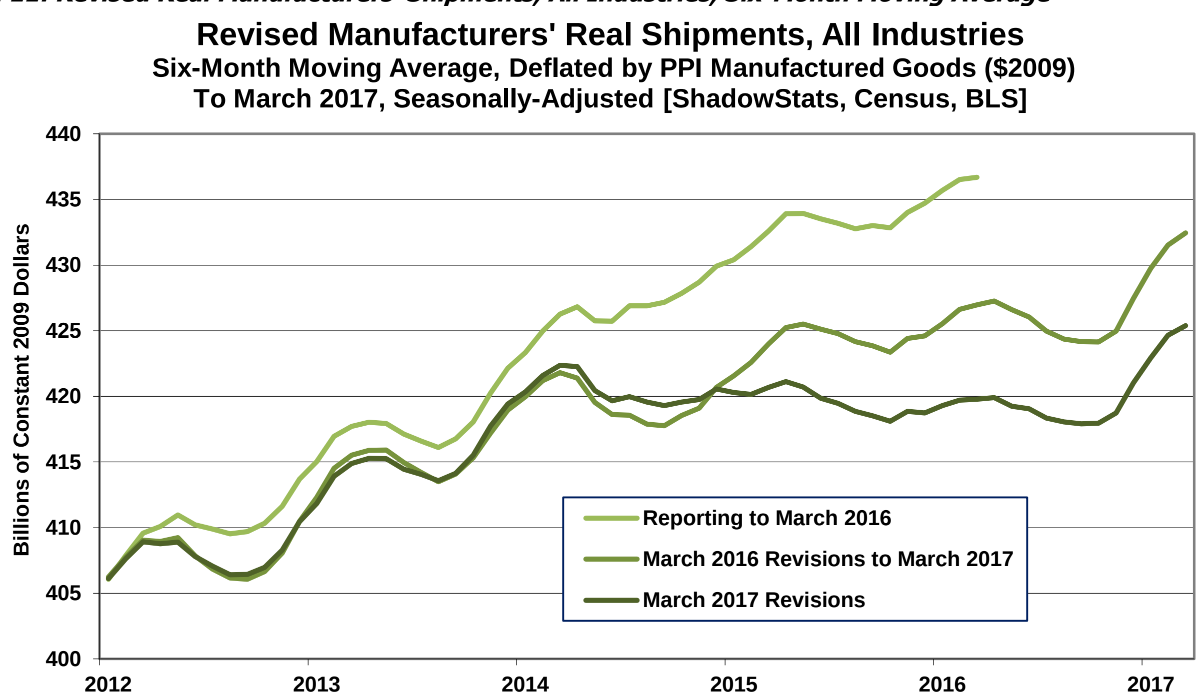
Graph 9: Near-Term Revisions to Real Retail Sales, Year-to-Year Change (2013 to March 2017)



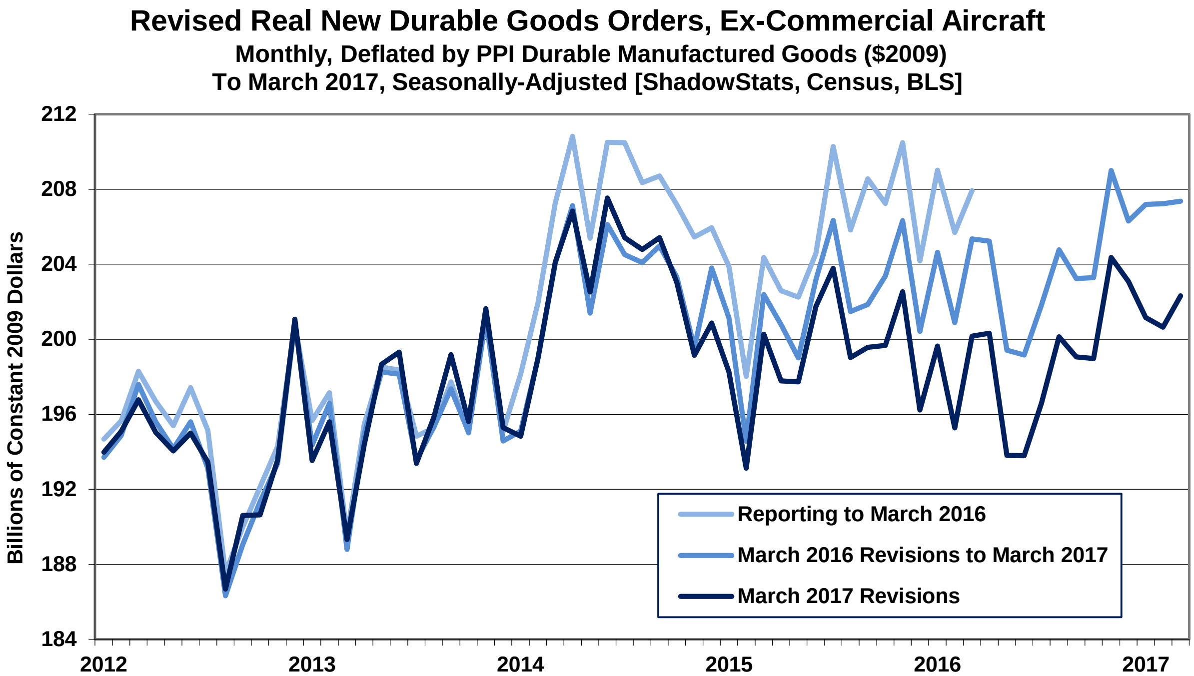
Graph 10: Revised Real Manufacturers' Shipments, All Industries, Monthly



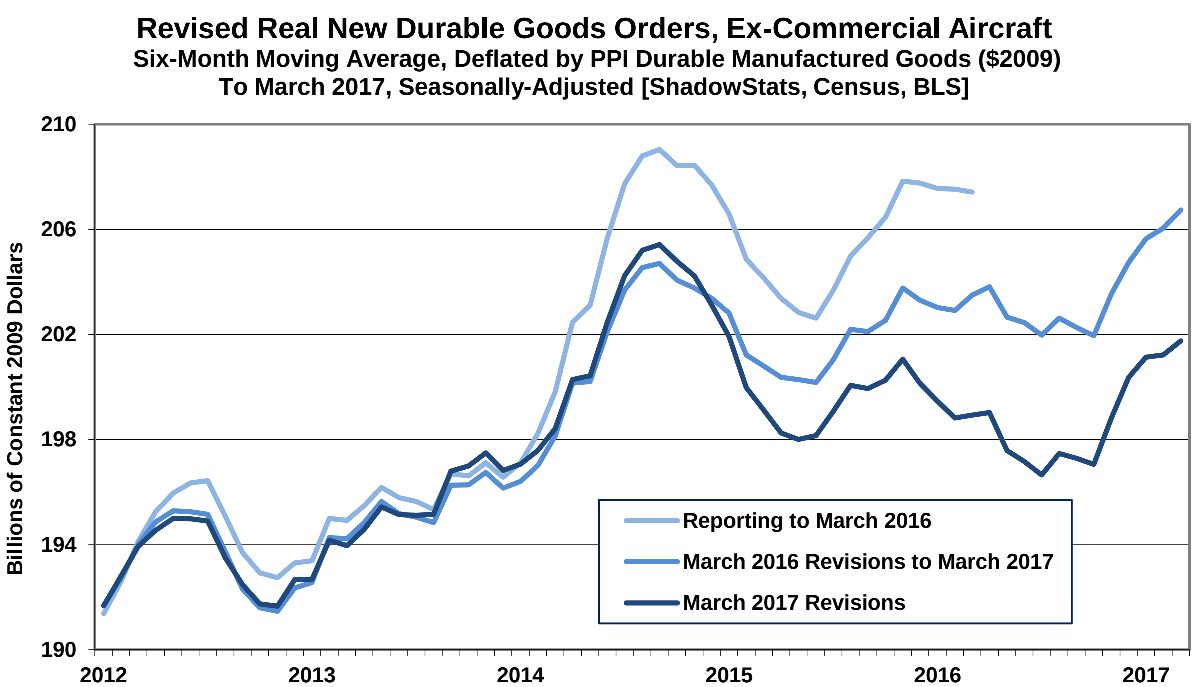
Graph 11: Revised Real Manufacturers' Shipments, All Industries, Six-Month Moving Average



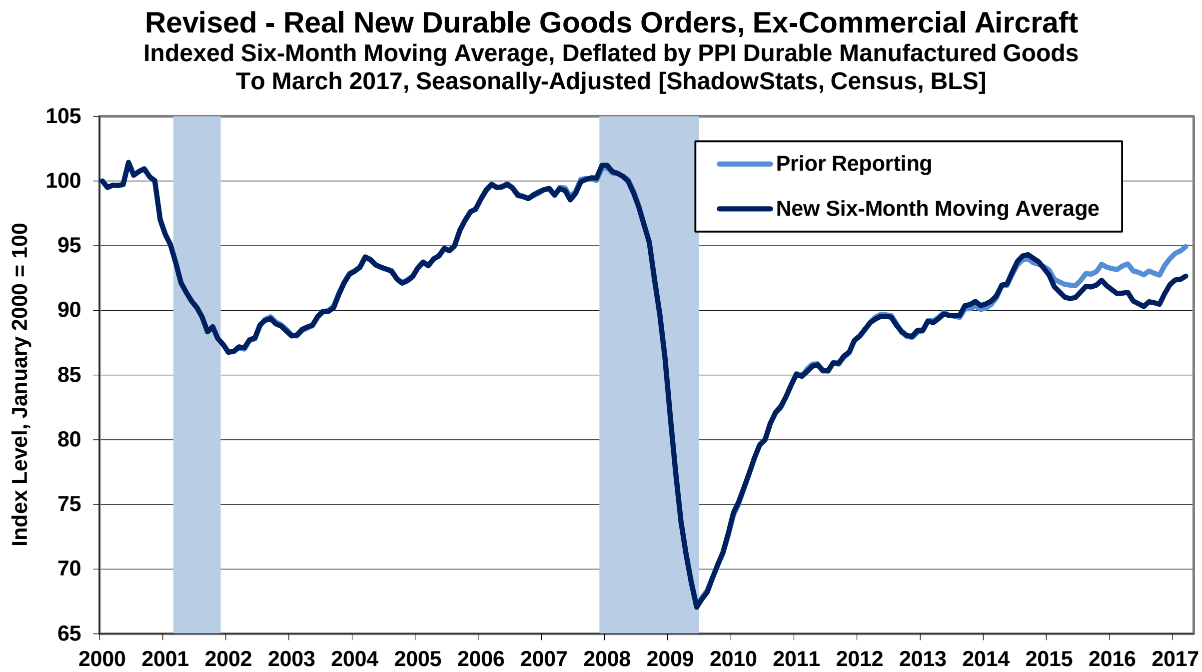
Graph 12: Revised Real New Orders for Durable Goods, Ex-Commercial Aircraft, Monthly



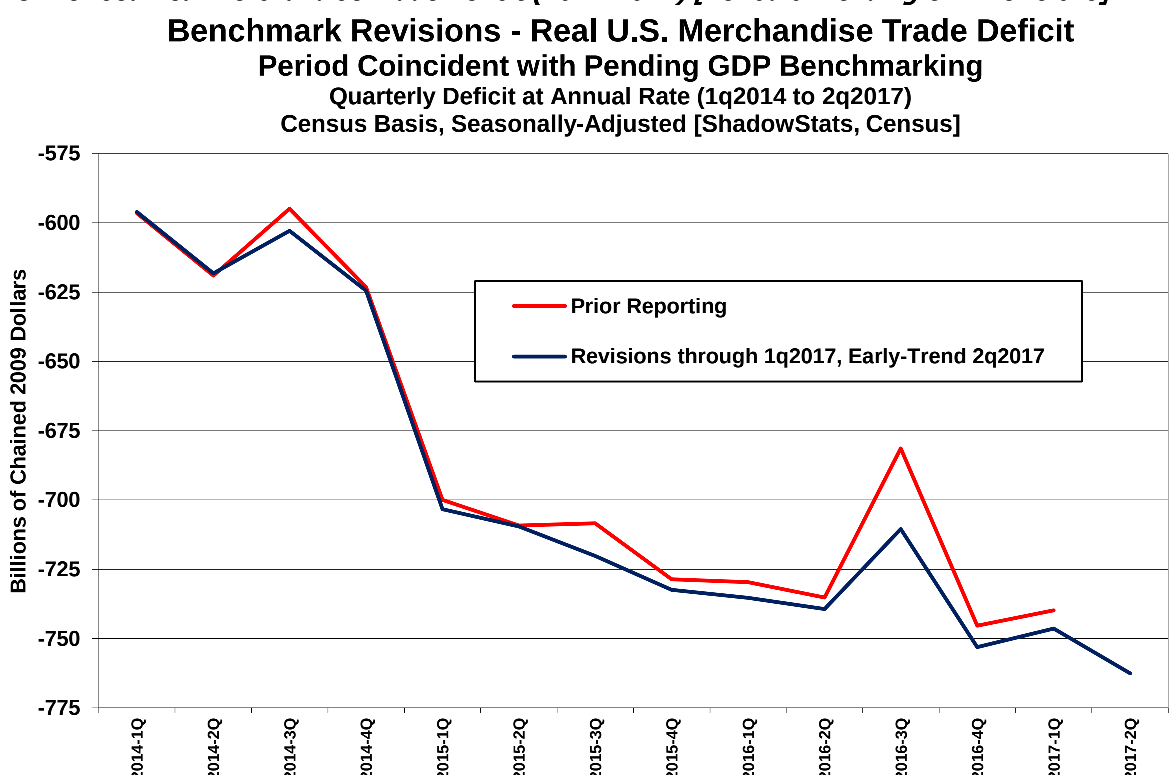
Graph 13: Revised Real New Orders, Ex-Commercial Aircraft, Six-Month Moving Average



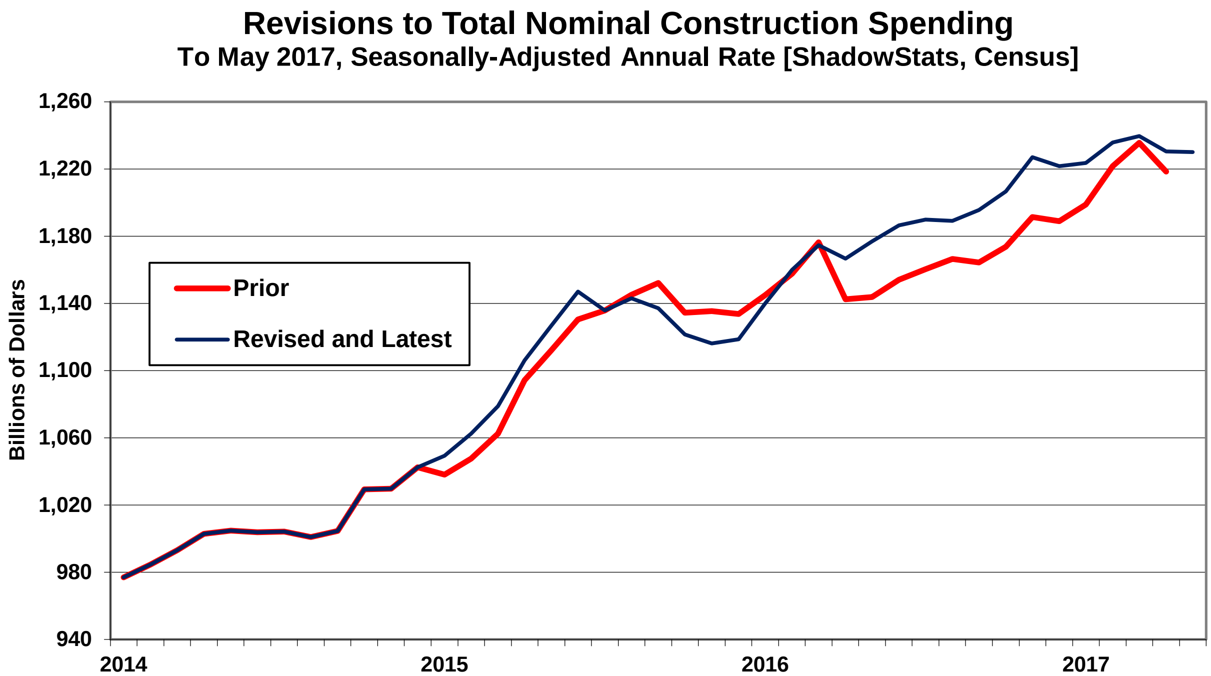
Graph 14: Real New Orders for Durable Goods, Ex-Commercial Aircraft, Six-Month Moving Average



Graph 15: Revised Real Merchandise Trade Deficit (2014-2017) [Period of Pending GDP Revisions]



Graph 16: Benchmark Revised Nominal Construction Spending, Aggregate



In combination, these various revisions suggest a somewhat flatter growth for the GDP in the revision period, with additional downside pressures in place not only for the benchmark revision to first-quarter 2017 GDP, but also for the "advance" estimate of second-quarter 2017 GDP. Further detail on the underlying revisions can be found in the respective *Commentaries* covering those releases.

Executive Summary: New Residential Construction—June 2017—Housing Starts Rebounded in June, but Continued Collapsing Quarterly at an Accelerating Rate of Decline. In the context of upside revisions to May 2017 activity that narrowed the monthly decline, and minimal downside revisions to April 2017 activity, June 2017 Housing Starts rebounded in the month by 8.3%, up by 2.1% year-to-year. Nonetheless, the series continued to plunge on a quarter-to-quarter basis, with second-quarter 2017 change falling at an annualized pace of 21.9% (-21.9%), versus an unrevised quarterly decline in first-quarter 2017 of 3.4% (-3.4%). Despite the headline detail topping optimistic, consensus expectations, none of the data, in aggregate or by component, was statistically-significant for this regularly unstable and highly-volatile series.

The broad pattern of collapsing residential construction activity from its 2006 pre-recession peak, to a trough in 2009, was followed by a protracted period of up-trending but non-recovering, low-level activity, which had flattened out in the last year or so, but now has turned lower, again, as seen in accompanying *Graphs 17* to *24*.

Plotted with just the raw, seasonally-adjusted monthly data, that pattern of now-downtrending low-level stagnation, showed headline June 2017 building permits activity down by 44.6% (-44.6%) from recovering its pre-recession peak activity.

June 2017 Monthly Gain Was Across-the-Board. The unstable housing starts series can show varying patterns of activity due to the reporting mix of residential construction products, with the largest physical-count category of one-unit structure starts—generally for individual consumption, resulting in new home sales—versus multi-unit structure starts that reflect the building of condominiums, rental and apartment units, etc.

Monthly gains were across-the-board in June. In the context of upside revisions to May and minimal downside revisions to April, aggregate June 2017 housing starts rose by 8.3% month-to-month, composed of statistically-insignificant gains of 6.3% in one-unit structures and 13.3% in the multiple-unit structures categories (2-units-or-more, including the 5-units-or-more category). The separate multiple-unit category (5-units-or more) rose by 15.4%. Again, as usual, none of the related headline changes was statistically significant.

Graphs of the different sectors follow in accompanying *Graphs 17* to *24*, with extended detail and graphs provided in the *Reporting Detail.*

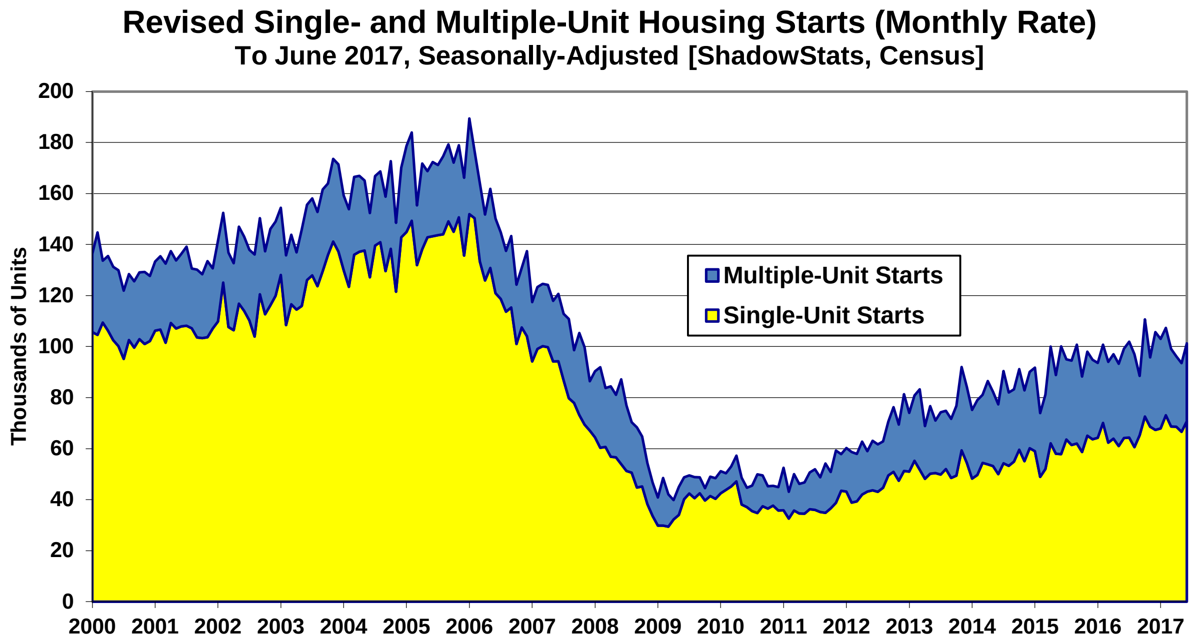
A Note on the Regular Housing Starts Graphs. *[With minor adjustment, this section has been repeated from the* Reporting Detail.*]* Headline reporting of Housing Starts activity is expressed by the Census Bureau as an annualized monthly pace of starts, which was 1,215,000 in June 2017, versus an upwardly-revised 1,122,000 in May 2017. The scaling used in the aggregate housing starts and building permits *Graphs 20* to *25* at the end of the *Reporting Detail* 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, month-to-month gain at an annualized rate of 266,000 in October 2016 was larger than any actual level of (not change in) monthly starts, ever (in units per month, not annualized), for a single month. That is since related starts detail first was published after World War II.

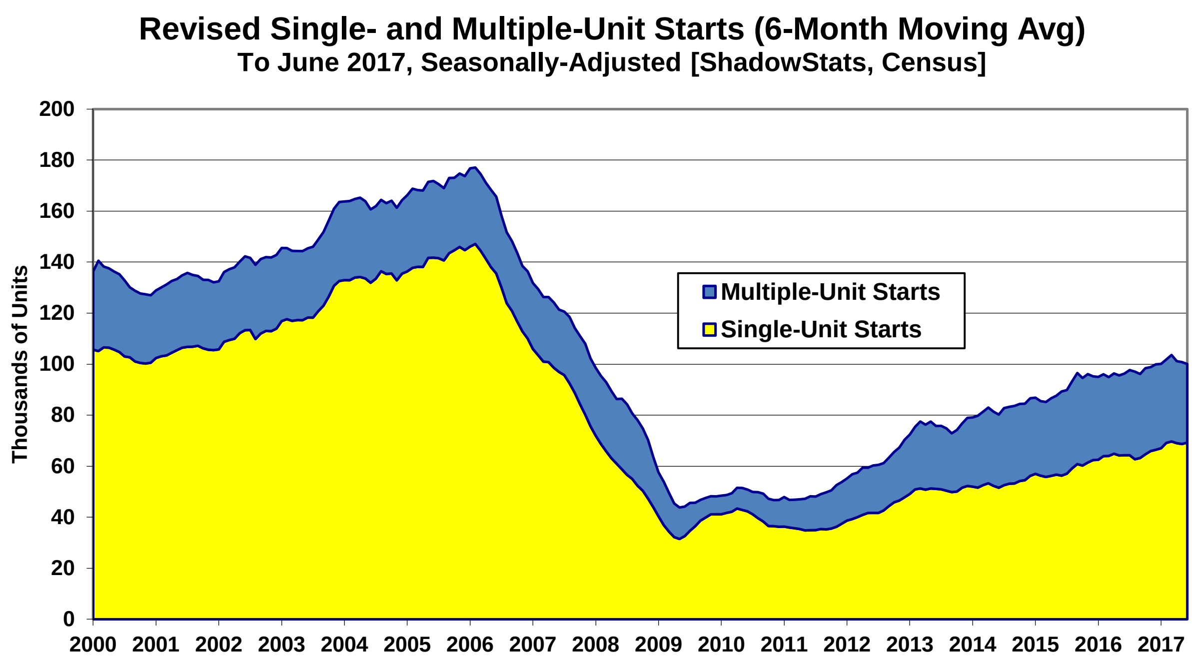
Accordingly, the monthly rate of 101,250 units in June 2017, instead of the annualized headline level of 1,215,000 units, is used in the scaling of the accompanying *Graphs 17* to *24*. With the use of either scale of units, though, appearances of the graphs and the relative monthly, quarterly and annual percentage changes are otherwise identical, as seen in a comparison of *Graph 19* versus *Graph 26* 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 for the series. Against that downside-spiked low in April 2009, the June 2017 headline monthly number was up by 154%, but it still was down by 47% (-47%) from the January 2006 pre-recession high. Shown in the historical perspective of the post-World War II era, current aggregate-starts activity is in relative stagnation, still at low levels that otherwise have been seen at or near the historical troughs of other recession activity of the last 70 years, as reflected in *Reporting Detail Graphs 29* and *30*. In fact, as can be seen in *Graph 30*, current housing starts activity not only has failed to recover the current pre-recession (pre-collapse into 2009) peak, but also has yet to recover to the level of any pre-recession peak activity seen in the entire post-World War II era.

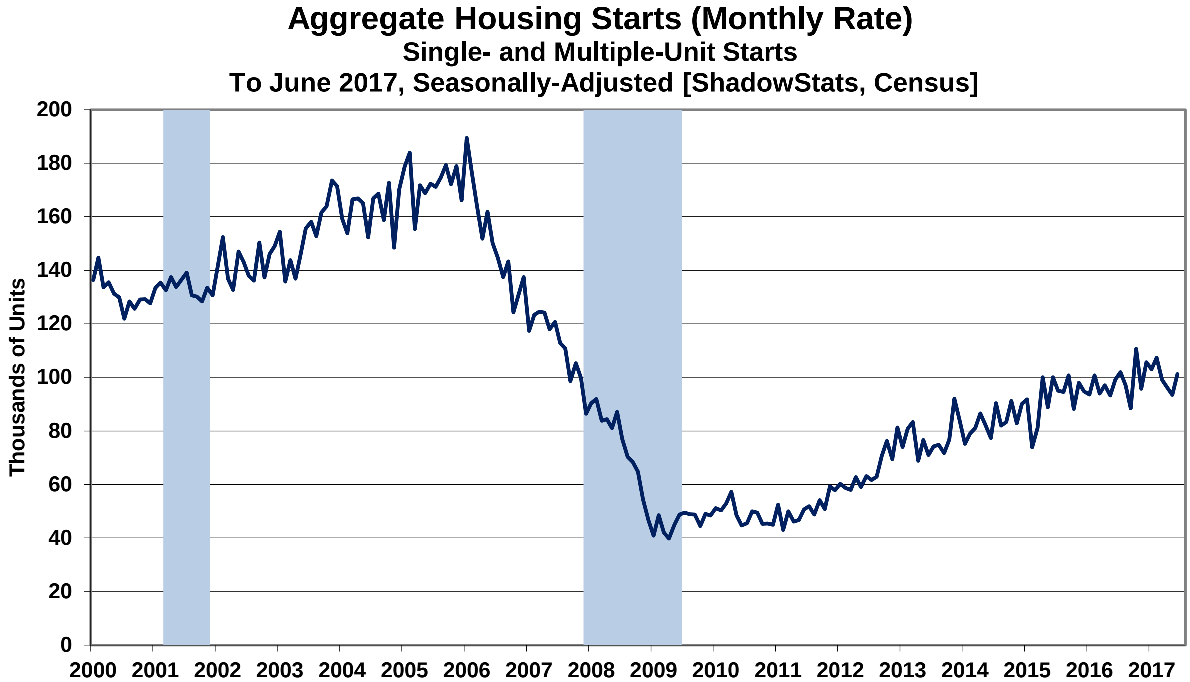
Graph 17: Single- and Multiple-Unit Housing Starts (Monthly Rate of Activity)



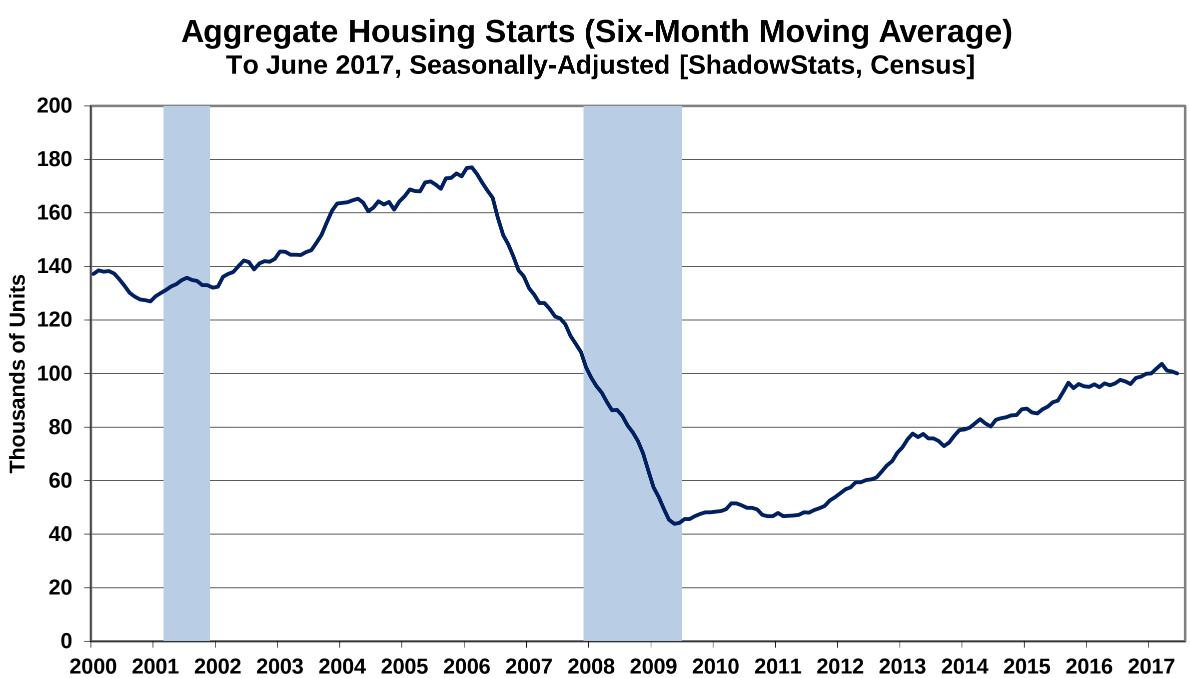
Graph 18: Single- and Multiple-Unit Starts (Six-Month Moving Average, Monthly Rate of Activity)



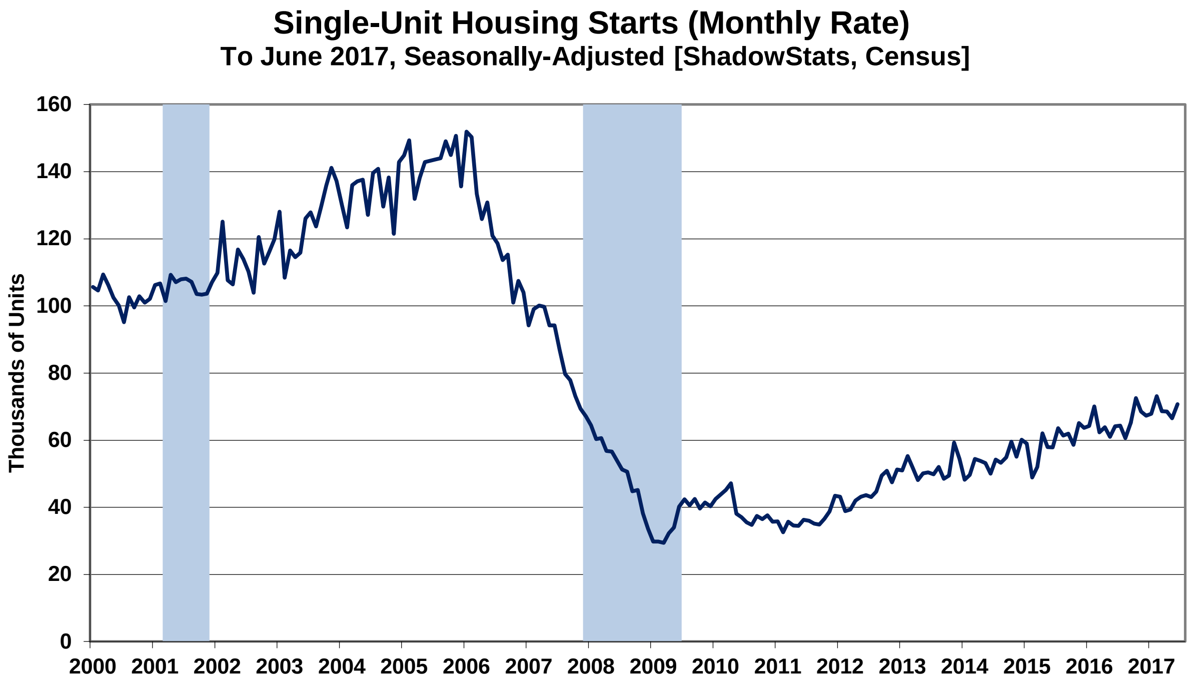
Graph 19: Aggregate Housing Starts (Monthly Rate of Activity)



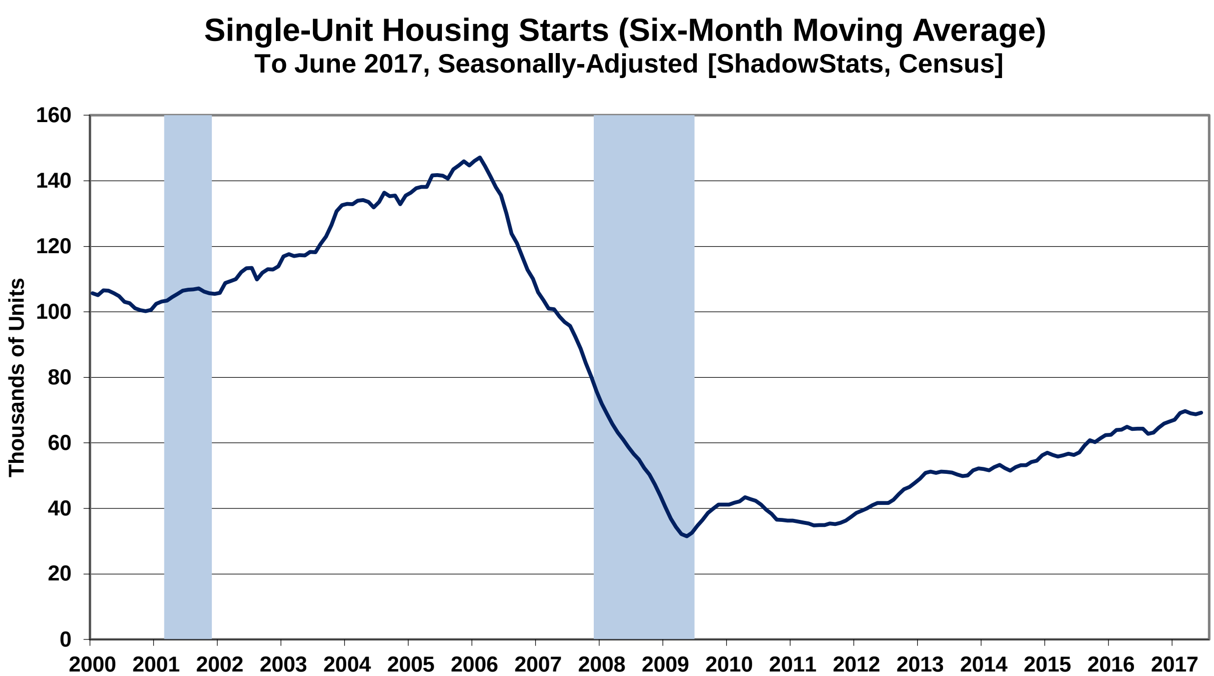
Graph 20: Aggregate Housing Starts (Six-Month Moving Average, Monthly Rate of Activity)



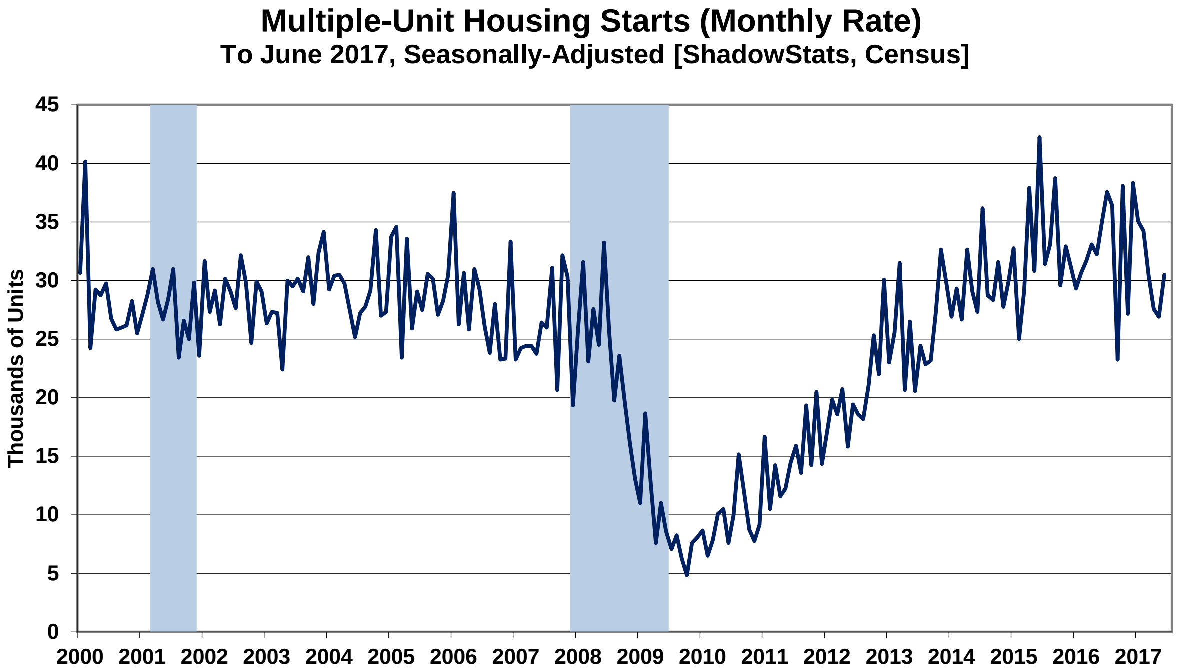
Graph 21: Single-Unit Housing Starts (Monthly Rate of Activity)



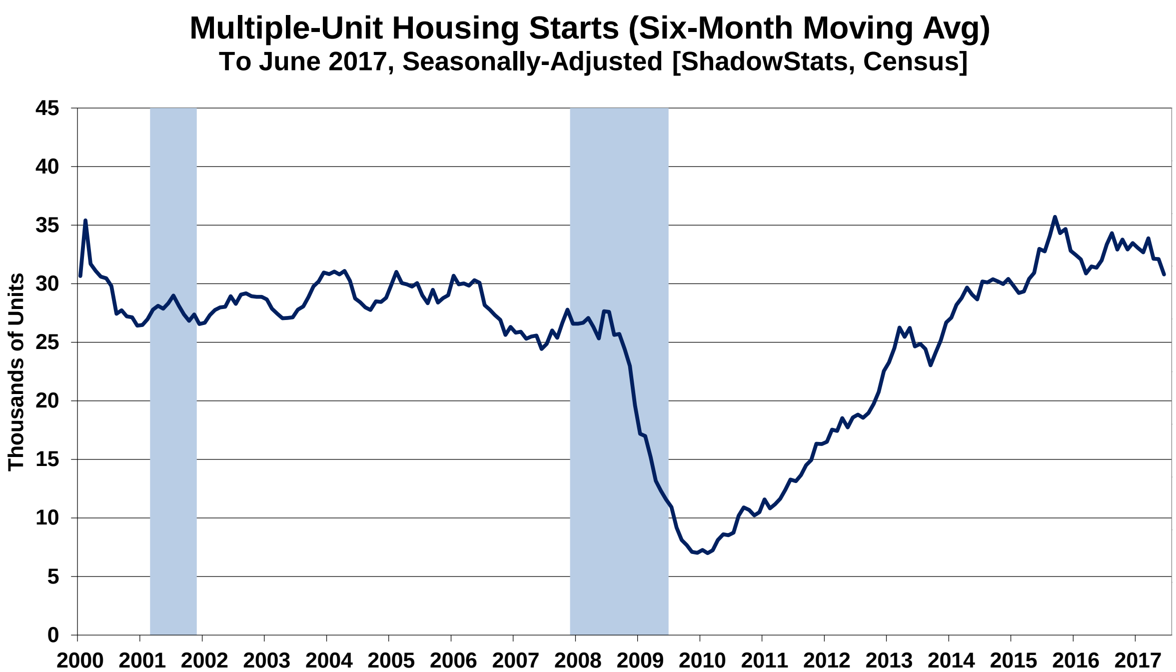
Graph 22: Single-Unit Housing Starts (Six-Month Moving Average, Monthly Rate of Activity)



Graph 23: Multiple-Unit Housing Starts (Monthly Rate of Activity)



Graph 24: Multiple-Unit Housing Starts (Six-Month Moving Average, Monthly Rate of Activity)



[The following* Reporting Detail *contains extended analysis and graphs.]

REPORTING DETAIL

NEW RESIDENTIAL CONSTRUCTION, HOUSING STARTS (June 2017)

Housing Starts and Building Permits Rebounded in June, but They Continued Collapsing Quarterly at Accelerating Rates of Decline. In the context of an upside revision to the level of May activity, and a downwardly-revised level in April 2017 activity, June 2017 Housing Starts rebounded in the month by a statistically-insignificant 8.3%. Nonetheless, the series continued to plunge on a quarter-to-quarter basis, with second-quarter 2017 growth falling at an annualized pace of 21.9% (-21.9%), versus an unrevised quarterly decline of 3.4% (-3.4%) in first-quarter 2017. Despite the headline detail topping optimistic, consensus expectations, none of the data, in aggregate or by component, was statistically-significant for this irregular, unstable and highly-volatile series.

The broad pattern of collapsing residential construction activity from its 2006 pre-recession peak, to a trough in 2009, was followed by a protracted period of up-trending but non-recovering, low-level activity. That flattened out in the last year or two in ongoing, low-level stagnation, and now it has turned lower, again, with the recent detail, as seen in accompanying *Graphs 25* to *30* (also in *Graphs 17* to *24* in the *Executive Summary*).

Plotted with just the raw, seasonally-adjusted monthly data, the pattern of now-downtrending low-level stagnation, showed headline June 2017 building permits activity down by 44.6% (-44.6%) from recovering its pre-recession peak activity, with housing starts activity similarly down by 46.5% (-46.5%). Again, as usual, none of the related headline month-to-month changes was statistically significant. Lack of statistical significance remains a common denominator to nearly all the regular reporting each month of the month-to-month and year-to-year Housing Starts changes.

June 2017 Monthly Gain Was Across-the-Board. In the context of upside revisions to May and minimal downside revisions to April activity, aggregate June 2017 housing starts rose by 8.3% month-to-month. Usually, these monthly numbers are highly unstable and of extremely limited short-term significance, with negligible leading indications of monthly change or relative volatility provided by the related building-permits series.

Smoothed with six-month moving averages, both the housing-starts and building-permits series had been in a flat-to-uptrending pattern into the April benchmarking, but now patterns have shifted to downtrending, low-level stagnation (see *Graph 20* in the *Executive Summary* section, and *Graphs 27* and *28* here).

First- and Second-Quarter 2017 Housing Starts Turned Down in Deepening Quarterly Contractions. In this highly volatile and unstable series of recent years, the total housing-starts count fell at an annualized quarter-to-quarter pace of 23.7% (-23.7%) in first-quarter 2015, rose at an annualized 87.7%

pace in second-quarter 2015, rose by 1.9% in third-quarter 2015 and then contracted at an annualized pace of 12.0% (-12.0%) in fourth-quarter 2015.

First-quarter 2016 activity showed an annualized quarterly gain of 10.7%, while second-quarter 2016 rose by 1.5%. Third-quarter 2016 activity contracted on both an annual and quarterly basis, down year-to-year by 1.0% (-1.0%), the first annual decline since first-quarter 2014, and down at an annualized quarterly pace of 2.7% (-2.7%). Fourth-quarter 2016 housing starts showed annualized quarterly growth of 39.0%, up by 11.0% year-to-year.

First-quarter 2017 annualized quarterly change was an unrevised contraction of 3.4% (-3.4%), with year-to-year change slowing to 7.3%. Initial full reporting for second-quarter 2017, showed an annualized quarterly contraction of 21.9% (-21.9%), with year-to-year change slowing to 0.5%.

In contrast, Building Permits, the theoretically-leading series to Housing Starts, showed an annualized quarterly contraction of 2.8% (-2.8%) in first-quarter 2017, with year-to-year change of 7.9%. Initial full reporting for second-quarter 2017 showed an annualized quarterly contraction of 13.0% (-13.0%), with year-to-year change slowing to 3.3%.

Smoothed Numbers. Despite the extreme volatility and instabilities in the housing-starts series, the general pattern of low-level stagnation continued. Again, the six-month moving-average pattern for the aggregate series remained about as flat as one ever sees, albeit now downtrending in aggregate in low-level stagnation (*Graphs 20* and *28*), with the same pattern of stability also seen broadly in raw monthly data (*Graphs 19* and *26*). That general pattern also can be viewed in terms of the longer-range historical graphs of aggregate activity (*Graphs 29* and *30*) at the end of this section. Parallel graphs of monthly and six-month moving-average Building Permits detail are found in *Graphs 25* and *27*.

Given the broad pattern of stagnation in both the aggregate starts and permits series, headline total June 2017 activity, again, remained well below any recovery level, with aggregate Housing Starts down from their January 2006 pre-recession high by 46.5% (-46.5%) and Building Permits down by 44.6% (-44.6%) from their September 2005 pre-recession peaks in activity.

Returning fully to the June 2017 housing starts monthly detail, the dominant (69.9% of total starts) single-unit housing starts sector of that series (*Graphs 21* and *22* in the *Executive Summary*) was down from its January 2006 pre-recession peak by 53.4% (-53.4%).

In contrast the smaller count in the multiple-unit category (two units or more), 30.1% of the total, hit its recent high in June 2015, topping its pre-recession January 2006 peak then by 12.7%. It had dropped back below that 2006 high by 18.7% (-18.7%) as of June 2017.

Reflected in the smoothed graphs in the *Executive Summary*, the various housing-starts series generally are flat-to-downtrending, at a low level of stagnation (*Graph 20* for the aggregate). That reflected a blend of the low-level stagnation in the six-month-smoothed single-unit activity (*Graph 22*), with the more-volatile, smoothed multiple-unit starts (*Graph 24*) that had regained its pre-recession peak, but which now shows recent downtrend.

Consumer Liquidity Problems Continue to Impair Residential Construction Activity. The extreme liquidity bind besetting consumers continues to constrain residential real estate activity, as discussed in the *Consumer Liquidity Watch* and as fully reviewed in the *Consumer Liquidity* section of *No. 859 Special*

Commentary. Without sustainable growth in real income, and without the ability and/or willingness to take on meaningful new debt in order to make up for an income shortfall, the U.S. consumer remains unable to sustain positive growth in domestic personal consumption, including aggregate real estate activity. That circumstance—in the last ten-plus years of economic collapse and stagnation—has continued to prevent a normal recovery in broad U.S. economic activity, 73% of which is dependent on personal spending, including residential construction.

June 2017 Housing Starts, Headline Detail. The always-unstable and highly-volatile aggregate Housing Starts series rose month-to-month in June 2017, in the context of an upside revision to May and downside revision to April. The Census Bureau reported this morning, July 19th, a statistically-insignificant, seasonally-adjusted, headline monthly gain in June 2017 housing starts of 8.3% +/- 18.5% (all confidence intervals are expressed at the 95% level). That followed revised monthly declines of 2.8% (-2.8%) [previously down by 5.5% (-5.5%)] in May, and 2.9% (-2.9%) [previously 2.8% (-2.8%), initially down by 2.6% (-2.6%)] in April. Net of the prior-period revisions, headline June Starts rose in the month by a still-statistically-insignificant 11.3%.

Level-of-activity aggregate detail is plotted in *Graphs 17* to *21* of the *Executive Summary*, and in *Graphs 26*, *28*, *29* and *30* at the end of this section.

Year-to-year change in the seasonally-adjusted, June 2017 aggregate housing-starts measure was a statistically-insignificant gain of 2.1% +/- 16.4%, versus a revised annual gain of 0.3% [previously a decline of 2.4% (-2.4%)] in May 2017 and a revised annual decline of 0.9% (-0.9%) [previously down by 0.7% (-0.7%), initially a gain of 0.7%] in April 2017.

The June 2017 headline gain of 8.3% in total Housing Starts encompassed headline gains of 6.3% in the "one unit" category and 15.4% in the "five units or more" category. There is a missing balance in the "two to four units" category, which declined month-to-month in June by 41.7% (-41.7%). Where that category is considered too small to be meaningful, it did affect the aggregates minimally, as discussed later in the broader, aggregate "multiple unit" category. As most commonly is the circumstance, not one of the monthly or annual headline changes by category was statistically meaningful.

Housing Starts By-Unit Category. *[See* Graphs 17 *to* 24 *in the* Executive Summary.*]* 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 condominiums, rental and apartment units.

Housing starts for single-unit structures in June 2017 rose month-to-month by a statistically-insignificant 6.3% +/- 15.8%, following a revised monthly decline of 2.9% (-2.9%) [previously down 3.9% (-3.9%)] in May and a revised decline of 0.1% (-0.1%) [previously a gain of 0.2%, initially up 0.4%] in April. June 2017 single-unit starts showed a statistically-insignificant annual gain of 10.3% +/- 11.9%, versus revised annual gains of 9.2% [previously 8.5%] in May 2017 and 7.3% [previously 7.7%, initially 8.9%] in April 2017 (see *Graphs 17, 18, 21 and 22* in the *Executive Summary*).

Housing starts for apartment buildings, condominiums, etc. (generally 5-units-or-more) in June 2017 rose month-to-month by a statistically-insignificant 15.4% +/- 49.3%, versus revised declines of 1.0% (-1.0%) [previously 9.8% (-9.8%)] in May and 11.5% (-11.5%) [previously 11.3% (-11.3%), initially down by

9.6% (-9.6%)] in April. A statistically-insignificant year-to-year decline of 10.7% (-10.7%) +/- 42.1% in June 2017, followed revised annual declines of 18.6% (-18.6%) [previously 25.7% (-25.7%)] in May 2017 and 18.3% (-18.3%) [previously 18.0% (-18.0%), initially 14.6% (-14.6%)] in April 2017.

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 17*, *18*, *23* and *24* in the *Executive Summary*).

Accordingly, the statistically-insignificant June 2017 monthly gain of 8.3% in aggregate starts was composed of a statistically-insignificant gain of 6.3% in one-unit structures and a statistically-insignificant gain of 13.3% in the multiple-unit structures categories (2-units-or-more, including the 5-units-or-more category). In contrast, again, ex-2-units-or-more, the multiple-unit category rose by 15.4%. These series all are graphed in the *Executive Summary*.

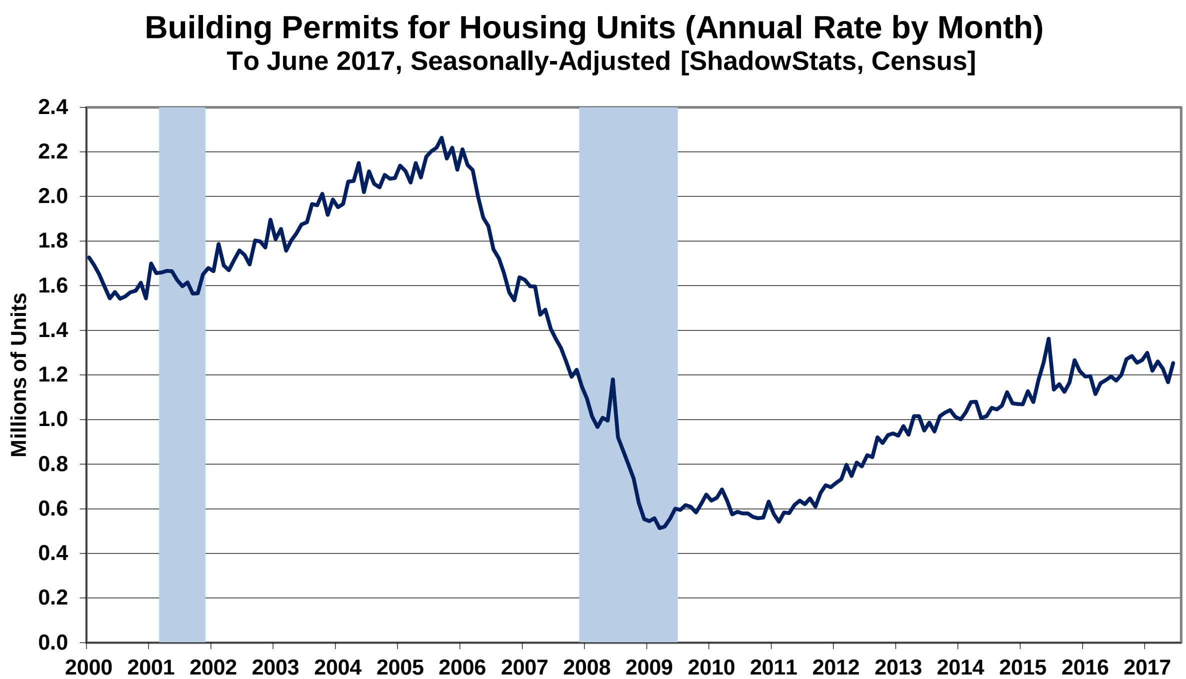
A Note on the Regular Housing Starts Graphs. *[With minor adjustment, this section is repeated in the* Executive Summary.*]* Headline reporting of Housing Starts activity is expressed by the Census Bureau as an annualized monthly pace of starts, which was 1,215,000 in June 2017, versus an upwardly-revised 1,122,000 [previously 1,092,000] in May 2017. The scaling used in the accompanying aggregate housing starts and building permits *Graphs 20* to *25* 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, month-to-month gain at an annualized rate of 266,000 in October 2016 was larger than any actual level of (not change in) monthly starts, ever (in units per month, not annualized), for a single month. That is since related starts detail first was published after World War II.

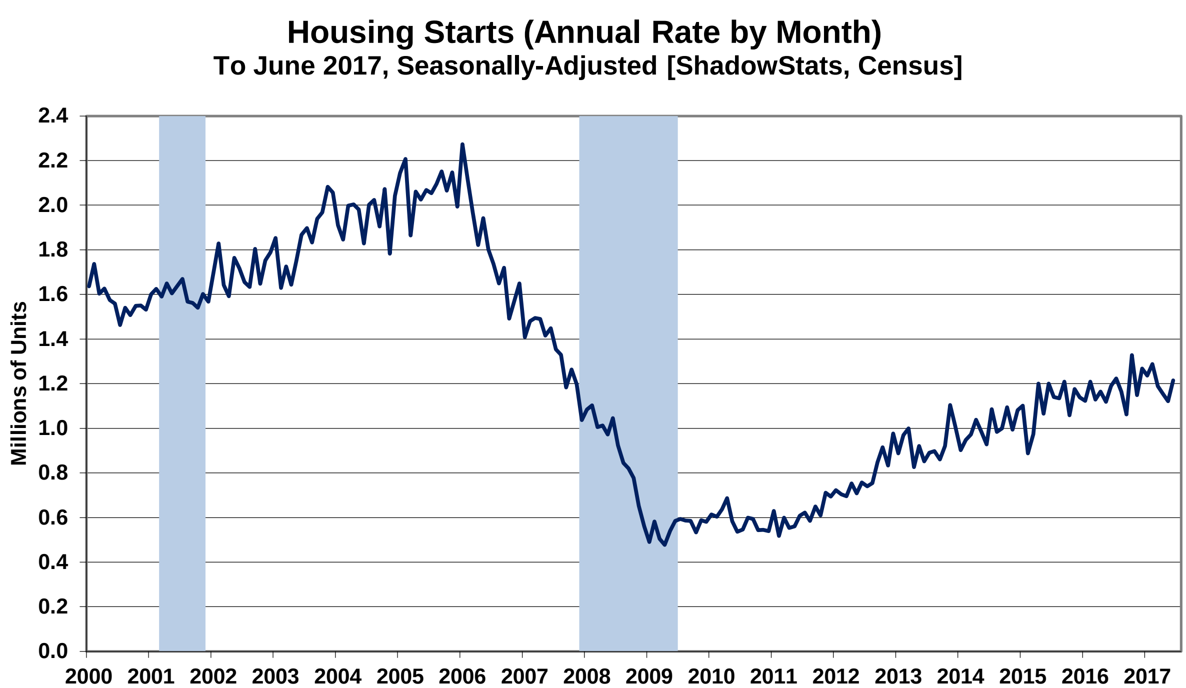
Accordingly, the monthly rate of 101,250 units in June 2017, instead of the annualized headline level of 1,215,000 units, is used in the scaling of the *Graphs 17* to *24* in the *Executive Summary*. With the use of either scale of units, though, appearances of the graphs and the relative monthly, quarterly and annual percentage changes are otherwise identical, as seen in a comparison of *Graph 26* versus *Graph 19* 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 for the series. Against that downside-spiked low in April 2009, the June 2017 headline monthly number was up by 154%, but it still was down by 47% (-47%) from the January 2006 pre-recession high. Shown in the historical perspective of the post-World War II era, current aggregate-starts activity is in relative stagnation, still at low levels that otherwise have been seen at or near the historical troughs of other recession activity of the last 70 years, as reflected in *Graphs 29* and *30*. In fact, as can be seen in *Graph 30*, current housing starts activity not only has failed to recover the current pre-recession (pre-collapse into 2009) peak, but also has yet to recover to the level of any pre-recession peak activity seen in the entire post-World War II era.

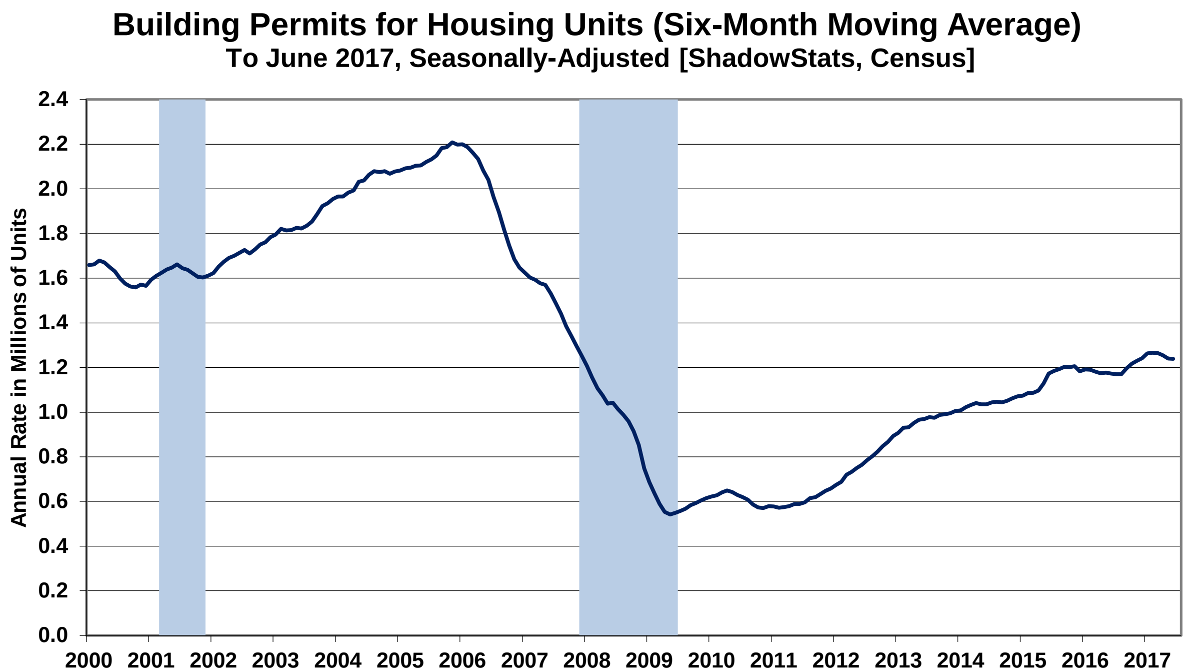
Graph 25: Building Permits (Annualized Monthly Rate of Activity), 2000 to Date



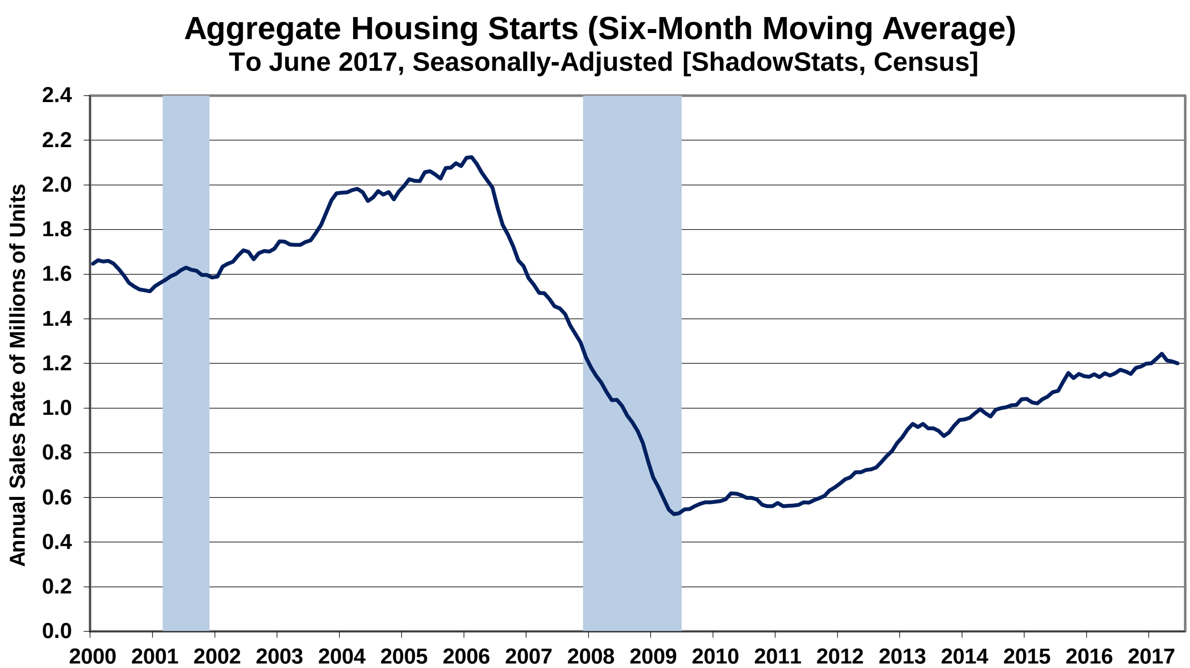
Graph 26: Housing Starts (Annualized Monthly Rate of Activity), 2000 to Date



Graph 27: Building Permits (Six-Month Moving Average), 2000 to Date

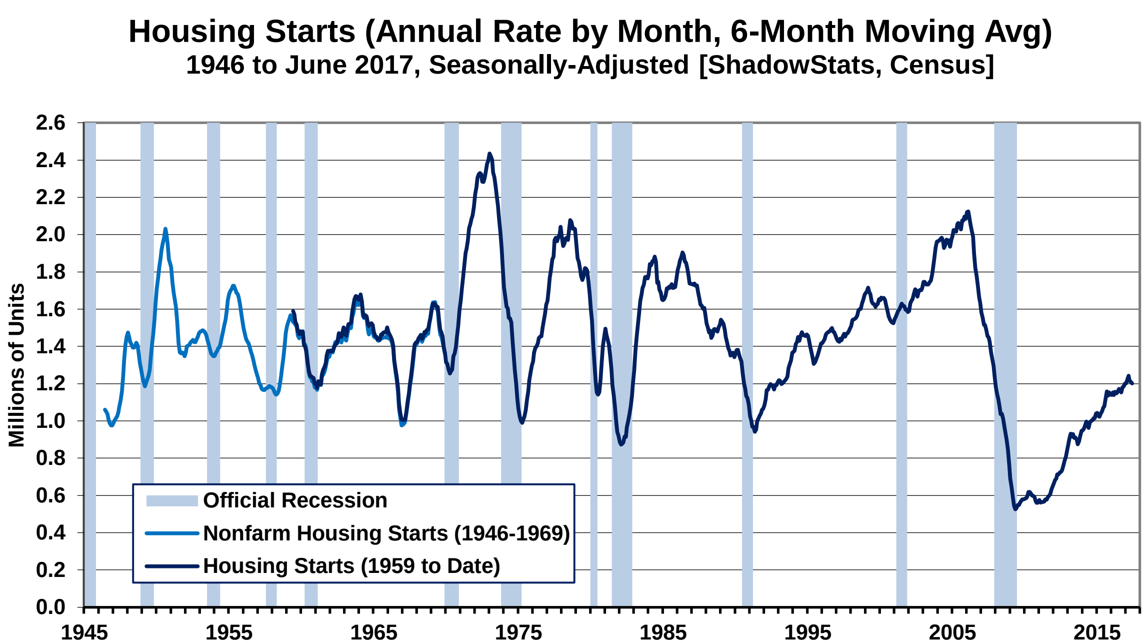


Graph 28: Housing Starts (Six-Month Moving Average), 2000 to Date



Graph 29: Housing Starts (Annualized Monthly Rate of Activity), 1946 to Date

Graph 30: Housing Starts (Annualized Monthly Rate of Activity, 6-Month Moving Avg), 1946 to Date



[The* Consumer Liquidity Watch *begins on the next page.]

CONSUMER LIQUIDITY WATCH

CONSUMER LIQUIDITY CONDITIONS: INCOME, CREDIT AND RELATIVE OPTIMISM.

[There are no substantive revisions to this section from prior regular Commentary No. 899, *other than for a change in graph number to be prefixed by CL-.]*

Liquidity Stresses Mounted Amidst Faltering Optimism. The U.S. consumer faces continuing financial stress, increasingly reflected in the renewed softening of headline economic activity, including Real Retail Sales and New Residential Construction (see today's Housing Starts discussion and prior *Commentary No. 899*), along with related, negative impact on the broad economy.

Liquidity Issues Limit Economic Activity. Severe and persistent constraints on consumer liquidity of the last decade or so drove economic activity into collapse through 2009, and those conditions have prevented meaningful or sustainable economic rebound, recovery or ongoing growth since. The limited level of, and growth in, sustainable real income, and the inability and/or unwillingness of the consumer to take on new debt have remained at the root of the liquidity crisis and ongoing economic woes.

These same pocket-book issues contributed to the anti-incumbent electoral pressures in the 2016 presidential race. The post-election environment showed a near-term surge in both the consumer confidence and sentiment measures to levels generally not seen since before the formal onset of the recession in 2002, let alone 2007. Yet, underlying liquidity conditions, economic reality and lack of positive actions out of the government to turn the economy meaningfully, all have continued to remain shy of consumer hopes. Not surprisingly, consumer optimism has begun to falter anew.

Including the various consumer income stresses discussed in *Special Commentary No. 888*, the broad underlying consumer liquidity fundamentals simply have not supported, and still do not support a turnaround in general economic activity and broadly are consistent with a "renewed" downturn in that non-recovered economic activity. Indeed, never truly recovering post-Panic of 2008, limited growth in household income and credit have eviscerated and continue to impair broad, domestic U.S. business activity, which is driven by the relative financial health and liquidity of consumers. These underlying liquidity conditions and reality—particularly income and credit—remain well shy of consumer hopes and needs.

The combined issues here have driven the housing-market collapse and ongoing, long-term stagnation in consumer-related real estate sales and construction activity, and have constrained both nominal and real retail sales. Related, personal-consumption-expenditure and residential-construction categories accounted for 73.0% of the headline real, first-quarter 2017 U.S. GDP.

With the better-quality economic indicators and underlying economic reality never having recovered fully from the collapse into 2009, consumers increasingly should pull back on consumption in the months ahead. Underlying reality is evident in more-meaningful economic indicators—not the GDP—irrespective of the transient, gimmicked boosts to, and current headline slowing in, that most worthless of economic series, discussed most recently in *Commentary No. 896*.

Consumer Optimism: June/Early-July Consumer Confidence and Sentiment Measures Continued to Falter. This detail incorporates June 2017 reporting (updated June 27th) for The Conference Board's Consumer-Confidence Index® (Confidence) and the early-July 2017 reporting (updated July 14th) for University of Michigan's Consumer-Sentiment Index (Sentiment). Reflected in *Graphs CL-1* and *CL-2*, both Confidence and Sentiment rose in September 2016 and plunged in October, likely reflecting concerns as to the direction of the presidential race. Post-election, both measures rallied sharply, reflecting a surge in consumer optimism into early 2017. Both series now, however, appear to have topped and have pulled back. The latest readings remain off their respective post-election, euphoric peaks of March 2017 (Confidence) and January 2017 (Sentiment).

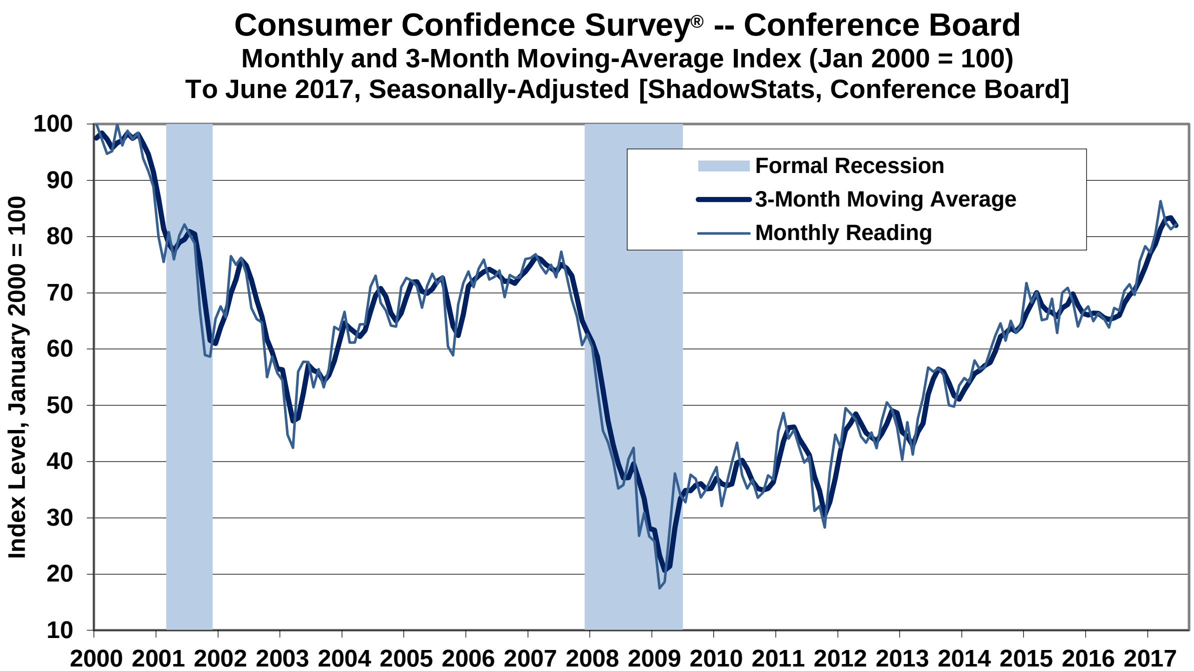
The Conference Board's seasonally-adjusted [unadjusted data are not available] Consumer-Confidence Index® (*Graph CL-1*), and the University of Michigan's not-seasonally-adjusted Consumer-Sentiment Index (*Graph CL-2*), again, both soared post-election, into early 2017, with Confidence booming into and topping in March and with sentiment booming into and topping in January 2017. The three-month moving averages in both series broke to pre-recession highs, with the Confidence hitting levels not seen since before the 2001 recession. The moving averages also have begun to falter, although still at high levels.

Showing the Consumer Confidence and Consumer Sentiment measures on something of a comparable basis, *Graphs CL-1* to *CL-3* reflect both measures re-indexed to January 2000 = 100 for the monthly reading. Standardly reported, the Conference Board's Consumer Confidence Index® is set with 1985 = 100, while the University of Michigan's Consumer Sentiment Index is set with January 1966 = 100.

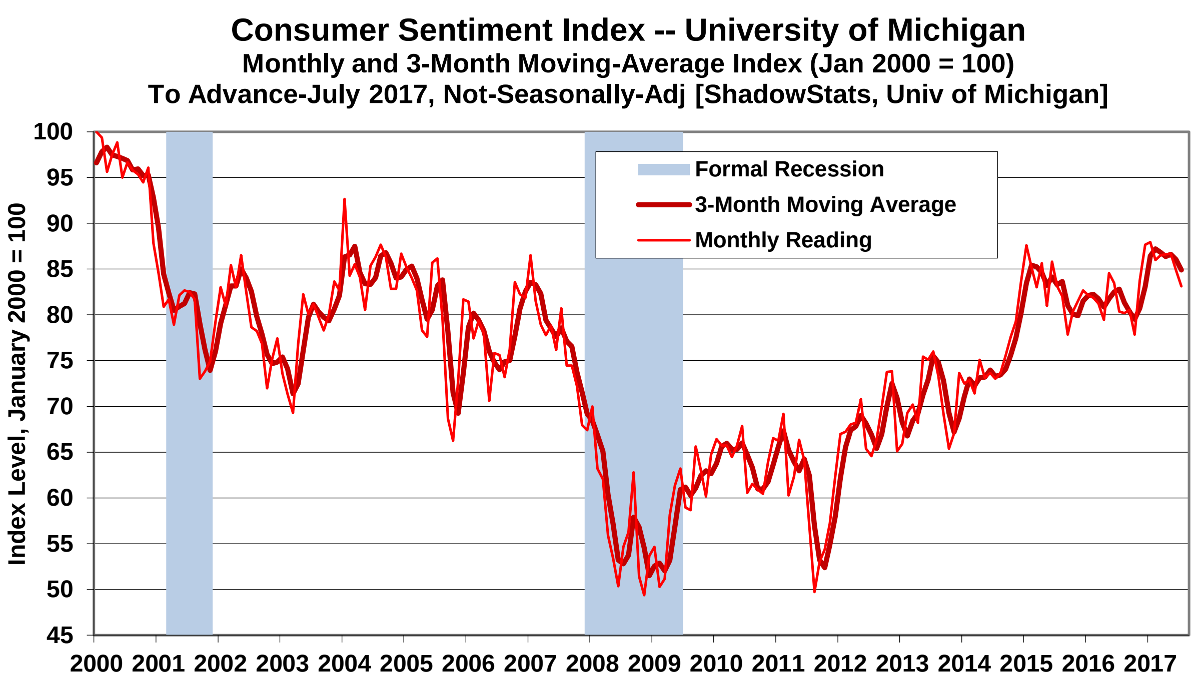
The Confidence and Sentiment series tend to mimic the tone of headline economic reporting in the press (see discussion in *Commentary No. 764*), and often are highly volatile month-to-month, as a result. With what should become increasingly-negative, unstable and uncertain headline financial and economic reporting in the months ahead—beyond the early change-in-government euphoria—continued, successive negative hits to both the confidence and sentiment readings remain increasingly likely in the near future.

Smoothed for irregular, short-term volatility, the two series still generally had held at levels seen typically in recessions, until the post-2016 election circumstance. Suggested in *Graph CL-3*—plotted for the last 47 years—the latest readings of Confidence and Sentiment recently have recovered levels seen in periods of normal, positive economic activity of the last four decades, with their six-month moving averages at levels last seen going into the 2001 recession, although they appear to be topping out. Broadly, though, the harder, financial consumer measures remain well below, or are inconsistent with, periods of historically-strong economic growth as suggested by headline GDP growth in 2014, for second-and third-quarter 2015 and for third-quarter 2016. Beyond having happy feelings about the future, consumers still need actual income, cash-in-hand or credit in order to increase their spending.

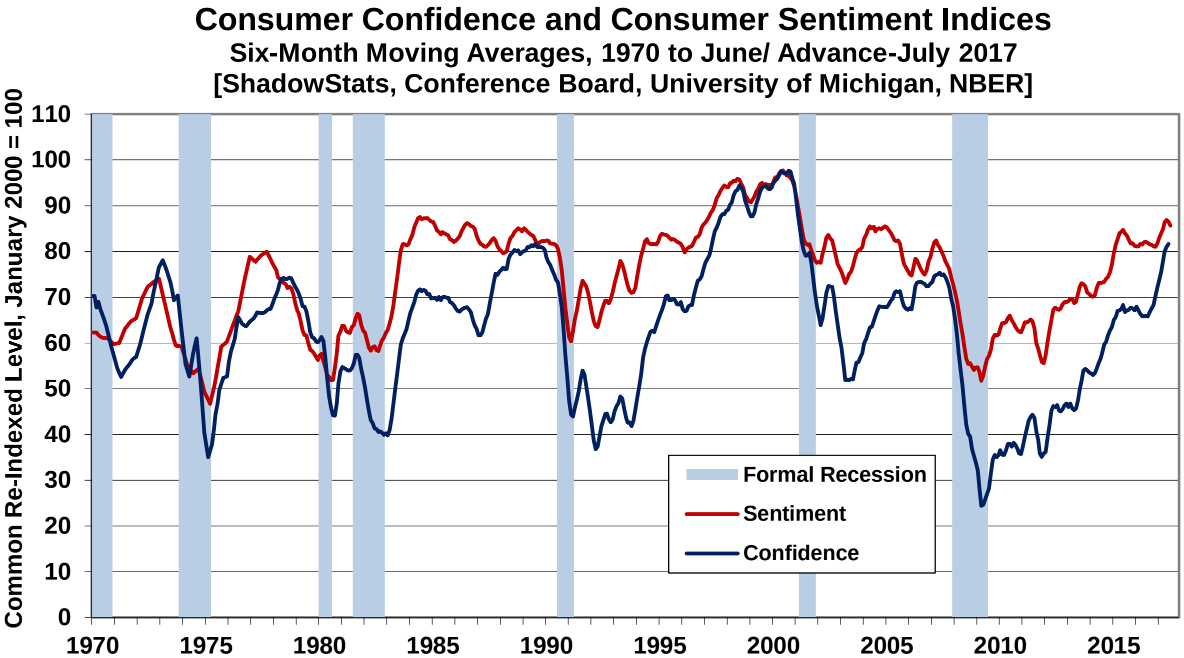
Graph CL-1: Consumer Confidence (2000 to 2017)



Graph CL-2: Consumer Sentiment (2000 to 2017)



Graph CL-3: Comparative Confidence and Sentiment (6-Month Moving Averages, 1970 to 2017)

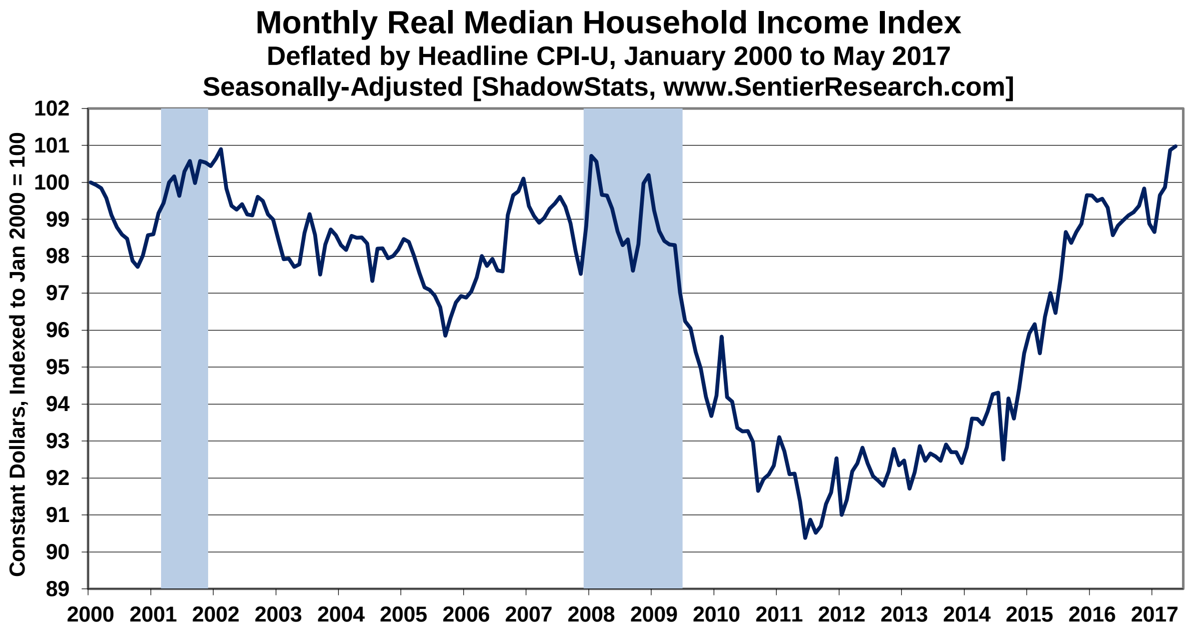


Updated Consumer Income: May 2017 Real Median Household Income Was Statistically Unchanged, Despite a Boost from Falling Gasoline Prices. Previously discussed in *General Commentary No. 894*, and in the contexts of continued, faltering gains in post-election consumer optimism, and inflation-adjusted activity boosted by declining headline Consumer Price Index (CPI-U) inflation (weakened by seasonally-adjusted gasoline price declines), May 2017 Real Median Monthly Household Income was "statistically unchanged" (a statistically-insignificant monthly gain of 0.10%), as reported by www.SentierResearch.com. That followed a statistically-significant monthly gain of 1.00% in April 2017. As shown in *Graph CL-4*, such enabled May 2017 real monthly median household income to hold a level regained last month and otherwise last seen fifteen years ago, in February 2002. Year-to-year real median household income rose to 2.44% in May 2017, the highest level since last June, following an annual gain of 1.57% in April 2017 (see *Graph CL-5*).

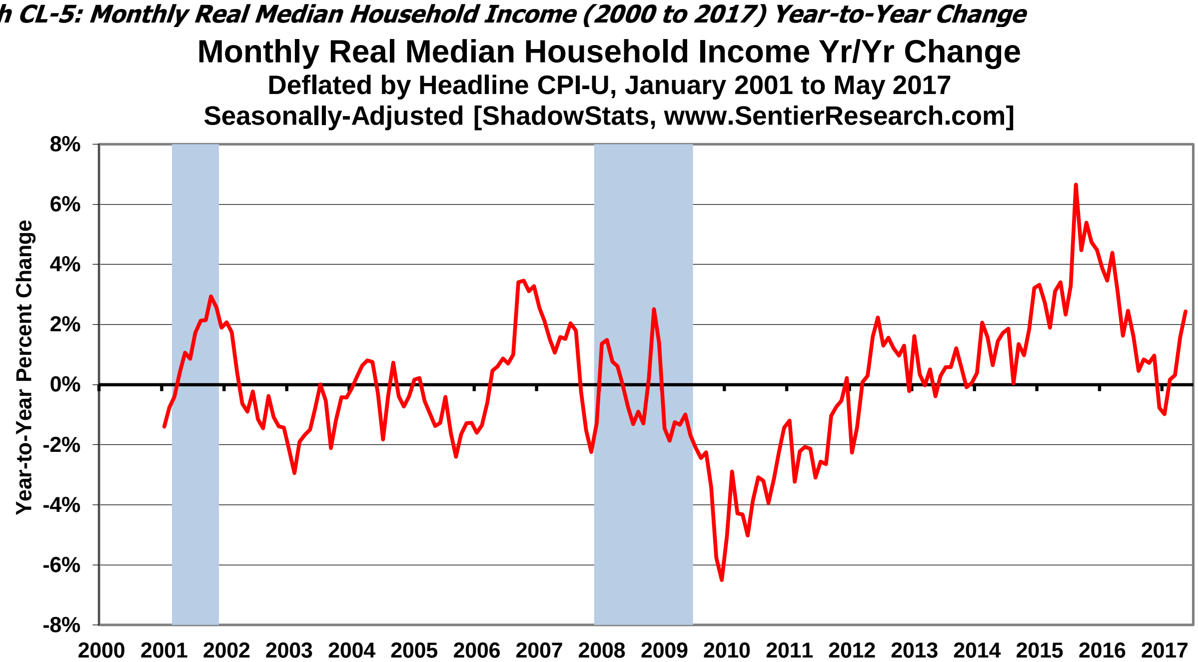
Where real median income plunged into the headline trough of the economic collapse in 2009, it did not then rebound in tandem with the headline GDP activity. When the GDP purportedly started its solid economic recovery in mid-2009, the monthly household income numbers nonetheless plunged to new lows, hitting bottom in 2011. The income series then held in low-level stagnation, until collapsing gasoline prices and the resulting negative CPI-U inflation drove a post-2014 uptrend in the inflation-adjusted monthly income index. The index approached pre-recession levels in the December 2015 reporting, but it remained minimally below the pre-recession highs for both the formal 2007 and 2001 recessions until recent months. Real median household income should resume turning down anew, as headline pace of monthly consumer inflation picks up anew, perhaps as early as the July CPI.

Nonetheless, the recent "rebound" in the series still has left consumers financially strapped. Where lower gasoline prices had provided some minimal liquidity relief to the consumer, indications are that any effective extra cash largely has been used to help pay down unsustainable debt or other obligations, not to fuel new consumption. Except for mixed gyrations in first-half 2017, the effects of changing gasoline prices in the headline CPI-U generally had reversed, pushing headline consumer inflation higher and beginning to push real income lower.

Graph CL-4: Monthly Real Median Household Income (2000 to 2017) Index, January 2000 = 100

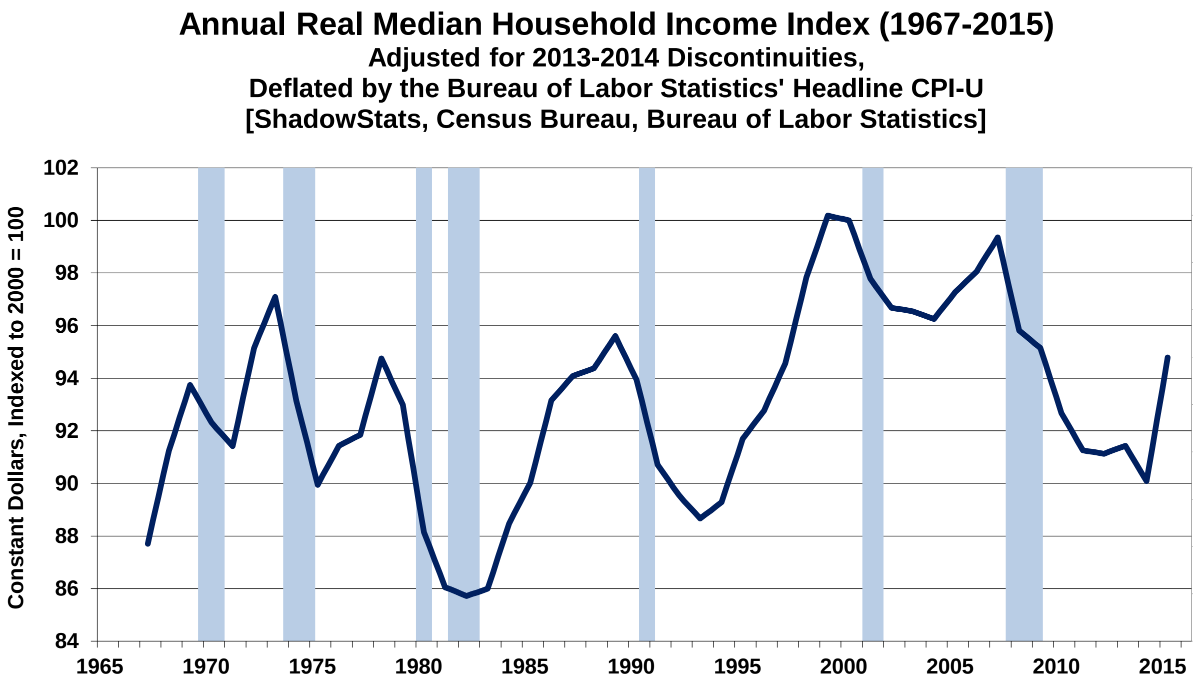


Graph CL-5: Monthly Real Median Household Income (2000 to 2017) Year-to-Year Change



This measure of real monthly median household income generally can be considered as a monthly version of the annual detail shown in *Graph CL-6*, which was updated ten months ago for 2015 detail (see the full analysis of the 2015 annual household income reporting in *Commentary No. 833*, including an analysis of annual detail on income variance or "inequality"). The relative jump seen in the headline annual 2015 median income, despite formal adjustment for discontinuities in the recent annual reporting, was due largely to series redefinitions, not due to a sudden change in consumer liquidity, other than as tied to the collapse in gasoline prices and a related spike in the inflation-adjusted numbers. The level of real annual median household income for 2015, not only was below that seen at the purported trough of the economic collapse into 2009, but also it was below levels seen in the early-1970s and the late 1980s.

Graph CL-6: Annual Real Median U.S. Household Income (1967 to 2015)



***Special Note*:** Accompanying the release of the May 2017 data by Sentier Research was this Notice of Final Report:

> Dear Friends, This will be our final report in the monthly series of median household income. We can no longer afford to provide these estimates given our current level of resources. We believe, as we hope you do, that these estimates provided an important new dimension regarding the economic situation of American households as we slowly climbed out of the Great Recession. The story continues but we must move on. Our hope is that someone will be able to continue this work. Should you or someone you know be interested please contact us. Thanks to all of you for your kind support.. John and Gordon

ShadowStats hopes a circumstance will unfold that enables continued reporting of this extraordinarily valuable and timely indicator of consumer liquidity. Gordon Green and John Coder, the authors of the monthly report, both are former senior officials at the U.S. Census Bureau and have a unique understanding of the underlying monthly data. At present, the Census Bureau publishes a broadly-similar series on an annual basis, but with an extraordinary time lag. The official Census annual version for 2016 is due for release and publication in September 2017. Again, see *Commentary No. 833* for the 2015 detail published in September 2016.

Differences in the Monthly versus Annual Median Household Income. The general pattern of relative historical weakness also has been seen in the headline reporting of the annual Census Bureau numbers, again, shown in preceding *Graph CL-6*, with 2014 real annual median household income having hit a ten-year low, and, again, with the historically-consistent 2015 annual number still holding below that seen when the collapsing economy hit its purported trough in 2009. The Sentier numbers had suggested a small increase in 2014 versus 2013 levels. Still, the monthly and annual series remain broadly consistent, although based on separate questions within the monthly Consumer Population Series (CPS), as conducted by the Census Bureau.

Where Sentier has used monthly questions surveying current annual household income, the headline annual Census Bureau detail is generated by a once-per-year question in the March CPS survey, as to the prior year's annual household income. The Median Household Income surveying results are broadly consistent with Real Average Weekly Earnings.

Real Average Weekly Earnings—June 2017—Month-to-Month Real Earnings Spiked by Declining Inflation. For the production and nonsupervisory employees category—the only series for which there is a meaningful history (see the full discussion in the *CPI* section of the *Reporting Detail* in *Commentary No. 899*), spiked monthly by lower inflation in the context of headline, seasonally-adjusted declines in gasoline prices, the regularly-volatile real average weekly earnings were up by 0.53% in June 2017 (as reported by the Bureau of Labor Statistics on July 14th. That was against an unrevised gain of 0.04% in May 2017 and a revised monthly gain of 0.39% in April 2017. Year-to-year, the adjusted June 2017 real change rose to 1.10%, versus revised annual gains of 0.59% in May 2017 and 0.49% in April 2017.

Initial reporting of second-quarter 2017 activity reflected an annualized real quarterly gain of 4.01%, following an unrevised first-quarter 2017 contraction of 1.13% (-1.13%), a fourth-quarter 2016 contraction of 1.36% (-1.36%), third-quarter 2016 growth of 1.48%, a second-quarter 2016 contraction of 0.11% (-0.11%) and first-quarter 2016 annualized growth of 1.81%.

Year-to-year change in second-quarter 2017 real earnings rose by 0.73%, following an unrevised annual contraction of 0.29% (-0.29%) in first-quarter 2017, the first annual or year-to-year quarterly contraction since fourth-quarter 2012, when the real GDP effectively was unchanged quarter-to-quarter. The signal there highlighted financial stresses on the consumer and major downside risk to headline real GDP reporting.

Graph CL-7 plots 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.

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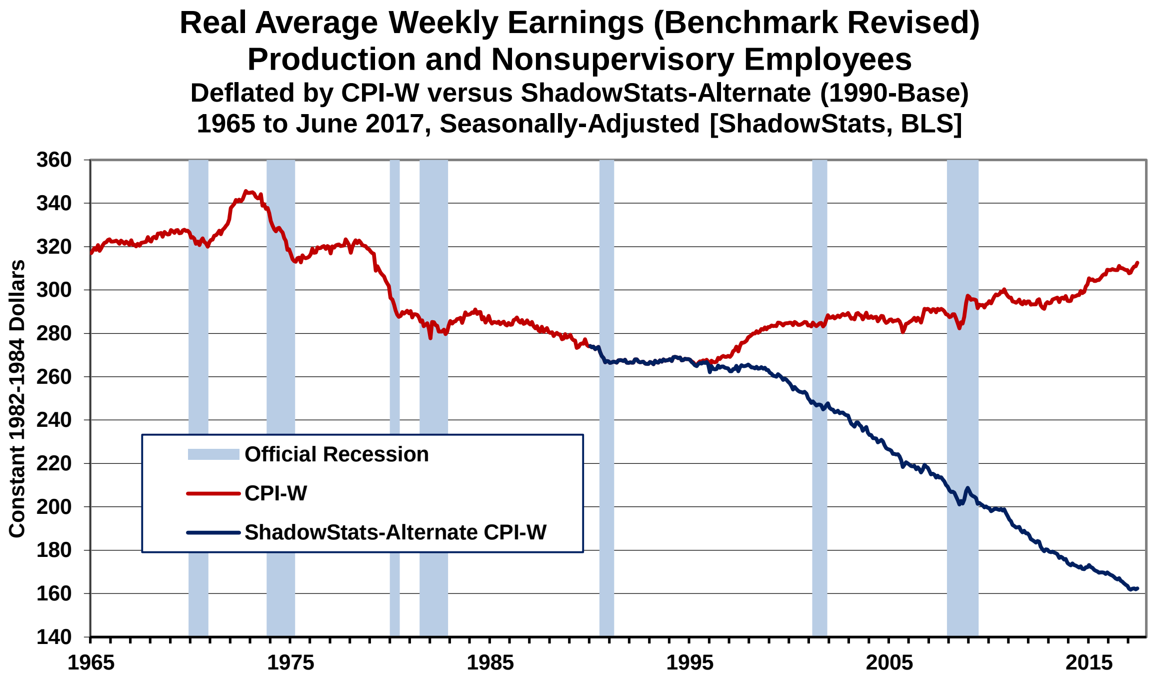
Graph CL-7: Real Average Weekly Earnings, Production and Nonsupervisory Employees, 1965-to-Date



Updated Consumer Credit: Lack of Meaningful Real Consumer Credit Growth Remains an Economic Constraint. The final four graphs on consumer conditions address consumer borrowing. Where debt expansion can help make up for a shortfall in income growth, adequate expansion of consumer debt, which would help fuel growth in personal consumption, has been lacking.

Consider *Graph CL-8* of *Household Sector, Real Credit Market Debt Outstanding*. The level of real household debt declined in the period following the Panic of 2008, reflecting loan defaults and reduced banking lending, and it has not recovered fully, based on the Federal Reserve's flow-of-funds accounting through first-quarter 2017. Household Sector, Real Credit Market Debt Outstanding in first-quarter of 2017 still was down by 11.5% (-11.5%) from its pre-recession peak of third-quarter 2007, the same as in fourth-quarter 2016.

The series includes mortgages, automobile and student loans, credit cards, secured and unsecured loans, etc., all deflated by the headline quarterly CPI-U. The level of real debt outstanding has remained stagnant for several years, reflecting, among other issues, lack of normal lending by the banking system into the regular flow of commerce. The slight upturn seen in the series through 2015 and into 2016 was due primarily to gasoline-price-driven, negative CPI inflation, which continued to impact the system through second-quarter 2016. Current activity also has reflected continued relative strength from student loans, as shown in the *Graphs CL-9* to *11*.

The ShadowStats analysis usually focuses on the particular current weakness in monthly levels of consumer credit, net of what has been rapidly expanding government-sponsored student loans. Where detail on that series is only available not-seasonally-adjusted, the following graphs are so plotted.

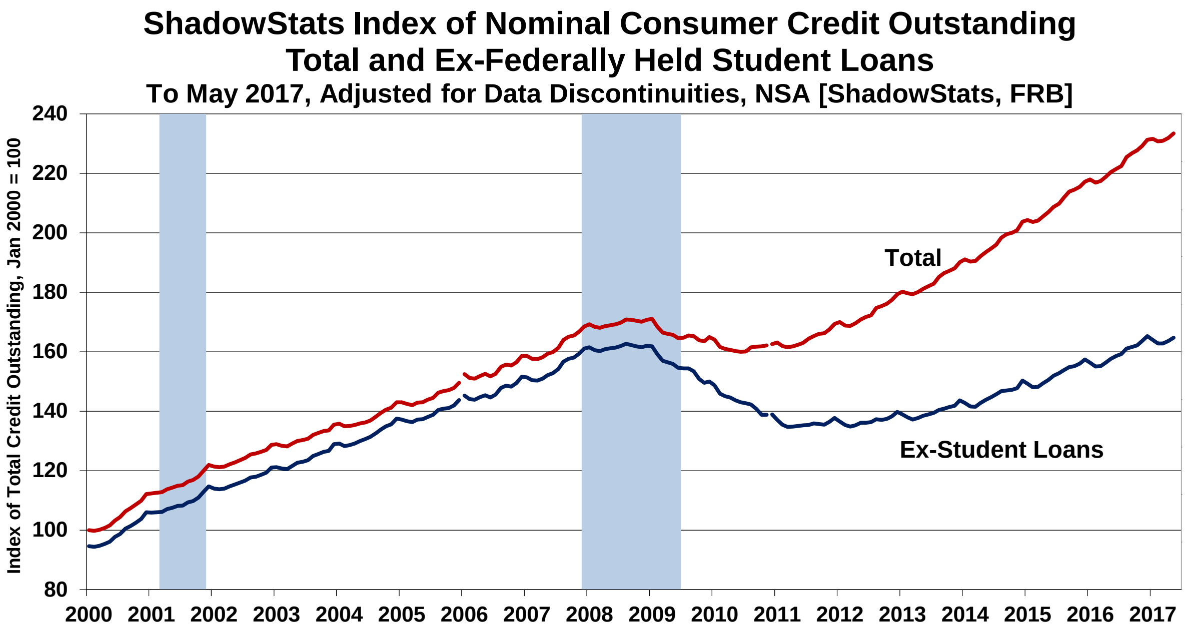
Graph CL-8: Household Sector, Real Credit Market Debt Outstanding (2000 through First-Quarter 2017)

Shown through the latest reporting (May 2017), *Graph CL-9* of monthly Consumer Credit Outstanding is a subcomponent of *Graph CL-8* on real Household Sector debt. Where *Graph CL-9* reflects the nominal reporting, not adjusted for inflation, inflation-adjusted real activity for monthly Consumer Credit Outstanding is shown in terms of both level (Graph CL-10) and year-to-year change (*Graph CL-11*).

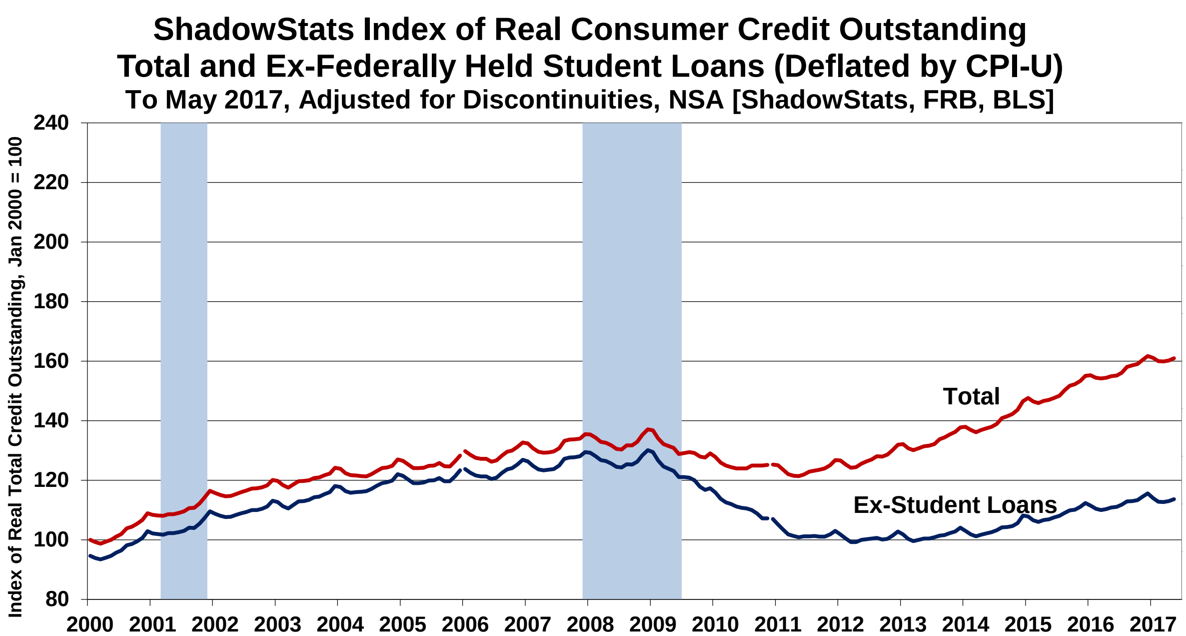
Post-2008 Panic, growth in outstanding consumer credit has continued to be dominated by growth in federally-held student loans, not in bank loans to consumers that otherwise would fuel broad consumption or housing growth. Although in slow uptrend, the nominal level of Consumer Credit Outstanding (ex-student loans) has not recovered since the onset of the recession. These disaggregated data are available and plotted only on a not-seasonally-adjusted basis, with the pattern of monthly levels during one year reflecting some regular, unadjusted seasonal dips or jumps.

Adjusted for inflation, the lack of recovery in the ex-student loan area is more obvious. Although the recent monthly dips in the not-seasonally-adjusted consumer credit reflect a seasonal pattern, the pace of year-to-year growth continues to slow, suggesting some tightening of credit conditions. Adjusted for discontinuities and inflation, ex-student loans, consumer credit outstanding in May 2017 was down from its December 2007 pre-recession peak by 15.5% (-15.5%). Year-to-year growth in *Graph CL-11* tends to resolve most of the monthly distortions in the not-seasonally-adjusted data

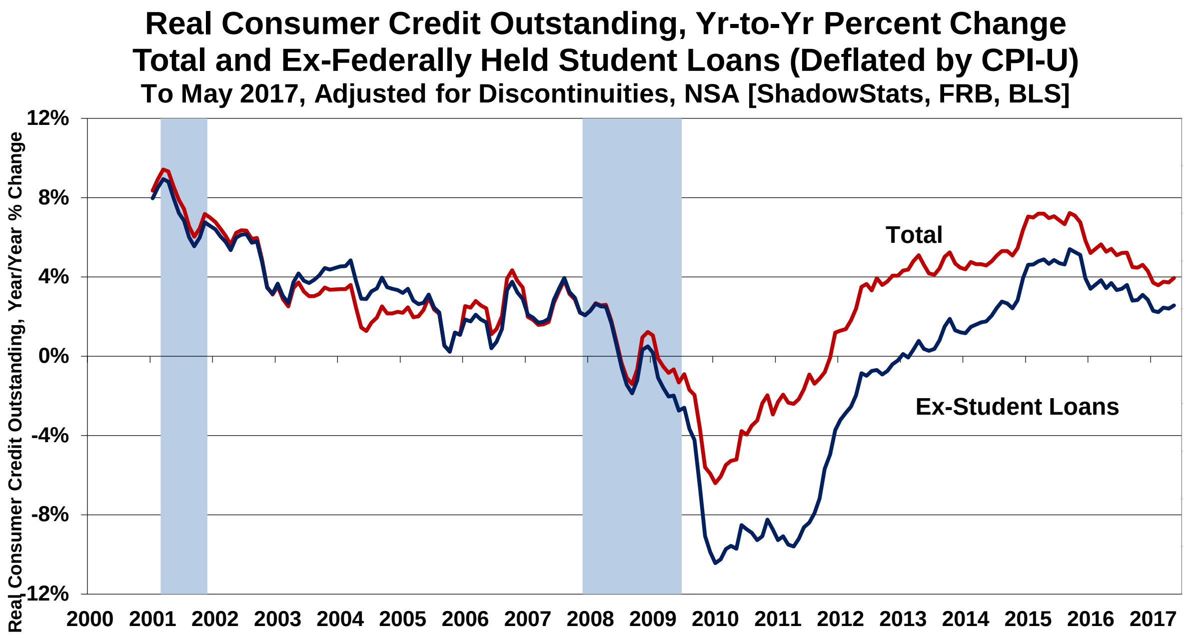
Graph CL-9: Nominal Consumer Credit Outstanding (2000 to 2017)



Graph CL-10: Real Consumer Credit Outstanding (2000 to 2017)



Graph CL-11: Year-to-Year Percent Change, Real Consumer Credit Outstanding (2000 to 2017)



WEEK, MONTH AND YEAR AHEAD

Continued Softening in Headline Economic Reporting Increasingly Should Compromise Fed Policies, Pummel the Dollar, Boost the Price of Gold and Foster Other Financial-Market Tumult. Discussed the *Hyperinflation Watches* of prior *Commentary No. 899* and *General Commentary No. 894*, and further to the discussions in the *Opening Comments* and *Hyperinflation Watch* of *Commentary No. 892*, headline economic reporting during June showed a marked downturn versus consensus forecasts. Though not as severe as the June shocks, similar patterns have continued to unfold in related reporting in July. While such circumstances usually signal an unfolding, major downshift in underlying economic reality, in the current circumstance that also forewarns of a potential shift in FOMC activity, a circumstance still well removed from consensus expectations, at this time. In terms of Fed policy, that would be a cessation of incremental rate hikes and a shift back towards expanded quantitative easing.

The immediate effect of such a policy change by the U.S. central bank likely would be a massive sell-off in the U.S. dollar, which otherwise has been propped by recent FOMC rate hikes and continual jawboning for same. In parallel, heavy selling in the U.S. equity and credit markets would follow. Consensus economic forecasts have begun to soften, as has the exchange rate for the U.S. dollar.

The circumstances here and the outlook still remain as broadly outlined in *No. 859 Special Commentary*; currently shifting headlines only reflect the continued movement and evolution forward in time of the Fed's difficulties discussed in that missive.

The problem for the Federal Reserve remains that faltering domestic economic activity stresses banking-system solvency. Aside from formal obligations of the Fed to maintain healthy domestic economic and inflation conditions, the central bank's primary function, in practice, always has been to keep the banking system afloat. The near-absolute failure of that function in 2008 remains the primary ongoing and unresolved problem for the Fed, and it continues as one of the ongoing primary issues preventing the return of U.S. economic activity to normal functioning. Contrary to the recent purported headline comments of "not in our lifetime" by Federal Reserve Chair Janet Yellen, the continued unfolding of "unexpected" economic deterioration suggests that the next major systemic financial crisis is likely to break in the next several months.

Separately, recent benchmark revisions to Construction Spending (see *Commentary No 897*), the Trade Deficit (*Commentary No. 890*), Industrial Production (*Commentary No. 877*), Manufacturers' Shipments (*Special Commentary No. 888*), Housing Starts (*Commentary No. 887*) and Retail Sales (*Commentary No. 882*) broadly have confirmed that historical activity in recent years has been overstated and/or that it is turning down anew, particularly in 2015, with the availability of better-quality historical detail. Such is despite recent near-term improvement in some headline details, such as the headline unemployment rate, which increasingly suffers from dysfunctional definitional and sampling issues. Again, reporting patterns likely will continue to weaken with increasing intensity in the weeks and months ahead. Adding a negative uncertainty to unfolding financial-market risks remains potential political surprise, discussed in *Special Commentary No. 888*. Otherwise, the broad outlook has not changed.

Reflected in common experience, actual U.S. economic activity generally continues in stagnation or downturn, never having recovered its level of pre-economic-collapse (its pre-2007-recession peak), while the latest GDP reporting shows economic expansion of 12.5% (see the *Executive Summary* of *Commentary No. 896* and *Commentary No. 869*).

Discussed in *No. 859 Special Commentary*, the Trump Administration continues to face extraordinarily difficult times, but has a chance to turn the tide on factors savaging the U.S. economy and on highly negative prospects for long-range U.S. Treasury solvency and stability. Any forthcoming economic stimulus faces a nine-month to one-year lead-time, once in play, before it meaningfully affects the broad economy. Delays from political discord continue to push targeted programs back in time. Needed at the same time are a credible plan for bringing the U.S. long-term budget deficit (sovereign solvency issues) under control and action to bring the Federal Reserve under control and/or to reorganize the banking system. These actions broadly are necessary to restore domestic-economic and financial-system tranquility (see *No. 859*), but cannot happen without the meaningful participation and cooperation of Congress. The financial crisis at hand likely will break well before the 2018 Congressional Election will have a chance to stabilize the outlook for economic policy objectives.

No. 859 Special Commentary updated the post-election, near-term economic and inflation conditions, including general economic, inflation and systemic distortions, which had evolved out of the Panic of

2008, have continued in play and, again, need to be addressed by the Trump Administration and Congress (see also the *Hyperinflation Watch* of *Commentary No. 862* and *Commentary No. 869*).

Contrary to the official reporting of an economy that collapsed from 2007 into 2009 and then recovered strongly into ongoing expansion, underlying domestic reality remained and remains that the U.S. economy started to turn down somewhat before 2007, collapsed into 2009 but never recovered fully. While the economy bounced off its 2009 trough, it entered a period of low-level stagnation and then began to turn down anew in December 2014, a month that eventually should mark the beginning of a "new" formal recession (see *General Commentary No. 867*). Formal economic expansion does begin until economic recovery breaks above its pre-recession high.

Coincident with and tied to the economic crash and the Panic of 2008, the U.S. banking system moved to the brink of collapse, a circumstance from which U.S. and global central-bank policies never have recovered. Unwilling to admit its loss of systemic control, the Federal Reserve has made loud noises in the last year or so of needing to raise interest rates, in order to contain an "overheating" economy, but that "overheating" activity—never recognized by Main Street, U.S.A.—has been fading quickly. As this ongoing crisis evolves towards its unhappy end, the U.S. dollar ultimately should face unprecedented debasement with a resulting runaway domestic inflation.

Broad economic and systemic conditions are reviewed regularly, with the following *Commentaries* of particular note: *General Commentary No. 894*, *Special Commentary No. 885*, *Commentary No. 869*, *No. 859 Special Commentary*, *No. 777 Year-End Special Commentary* (December 2015*)*, *No. 742 Special Commentary: A World Increasingly Out of Balance* (August 2015) and *No. 692 Special Commentary: 2015 - A World Out of Balance* (February 2015). Those publications updated the long-standing hyperinflation and economic outlooks published in *2014 Hyperinflation Report—The End Game Begins – First Installment Revised* (April 2014) and *2014 Hyperinflation Report—Great Economic Tumble – Second Installment* (April 2014). The two *Hyperinflation* installments remain the primary background material for the hyperinflation circumstance. Other references on underlying economic reality are the *Public Commentary on Inflation Measurement* and the *Public Commentary on Unemployment Measurement*.

Recent Commentaries (Covering Headline Details and/or Special Features). *[Pease Note: The complete ShadowStats archives, from 2004 forward, are found at www.ShadowStats.com (left-hand column of home page).]*

Commentary No. 899 (July 17, 2017) covered headline June 2017 Retail Sales, Industrial Production, the Consumer Price Index (CPI) and the Producer Price Index (PPI), along with a review of current circumstances affecting the markets, U.S. dollar, gold and silver and the FOMC.

Commentary No. 898 (July 7, 2017) covered the headline employment and unemployment detail for June 2017, along with the initial estimate of annual growth in the ShadowStats Ongoing M3 for June.

Commentary No. 897 (July 6, 2017) reviewed the headline May 2017 Construction Spending and the annual revisions to same, along the May Trade Deficit, and June The Conference Board Help Wanted OnLine® Advertising and the May Cass Freight Index™.

Commentary No. 896 (June 29, 2017) reviewed the third estimate of first-quarter 2017 GDP.

Commentary No. 895 (June 26, 2017) covered May 2017 New Orders for Durable Goods.

General Commentary No. 894 (June 23, 2017) reviewed unfolding economic, financial and political circumstances in the context of market expectations shifting towards an "unexpected" headline downturn in broad economic activity, along with headline details on May 2017 Real Median Household Income (Sentier Research) and New- and Existing-Home Sales.

Commentary No. 893 (June 16, 2017) assessed May 2017 New Residential Construction (Housing Starts) and updated *Consumer Liquidity Conditions*.

Commentary No. 892 (June 15, 2017) reviewed May 2017 Industrial Production and assessed current circumstances and likely pending shifts in FOMC policy, in the context of rapidly-deteriorating, headline economic data.

Commentary No. 891 (June 14, 2017) covered the May 2017 CPI and PPI, along with real and nominal retail sales, along with a quick comment on the FOMC rate hike.

Commentary No. 890 (June 5, 2017) covered the negative-downside annual benchmark revisions to the trade deficit, the May 2017 estimates of labor conditions, ShadowStats Ongoing Money Supply M3, The Conference Board Help Wanted OnLine® Advertising and April 2017 estimates of the Cass Freight Index™, and the monthly trade deficit and construction spending.

Commentary No. 889 (May 26, 2017) reviewed the second-estimate, first-revision to first-quarter 2017 GDP, and the April 2017 estimates of New Orders for Durable Goods and New- and Existing Home Sales and Sentier Research's April Real Median Household income.

Special Commentary No. 888 (May 22, 2017) discussed evolving political circumstances that could impact the markets and the economy, reviewed the annual benchmark revisions to Manufacturers' Shipments and New Orders for Durable Goods and updated Consumer Liquidity Conditions.

Commentary No. 887 (May 18, 2017) reported on the April 2017 detail for Industrial Production and Residential Construction (Housing Starts), with some particular attention to historic, protracted periods of economic non-expansion, of which the current non-recovery is the most severe.

Commentary No. 886 (May 16, 2017) reviewed the headline details of the April 2017 CPI and PPI detail, along with headline reporting of nominal and real Retail Sales, real Average Weekly Earnings and regular monthly review of U.S. dollar conditions and prospects.

Special Commentary No. 885, entitled *Numbers Games that Statistical Bureaus, Central Banks and Politicians Play*, (May 8, 2017) reviewed the unusual nature of the headline reporting of the April 2017 employment and unemployment details.

Commentary No. 884 (May 4, 2017) reviewed the March 2017 details for the U.S. Trade Deficit and Construction Spending and the Conference Boards' reporting of April 2017 Help Wanted OnLine.

Commentary No. 883 (April 29, 2017) covered the headline detail for the "advance" or first-estimate of first-quarter GDP, along with an update to *Consumer Liquidity Conditions*.

Commentary No. 882 (April 27, 2017) summarized the annual benchmark revisions to Retail Sales and reviewed the March 2017 releases of New Orders for Durable Goods and New- and Existing-Home Sales.

Commentary No. 881 (April 19, 2017) reviewed the prior March 2017 Industrial Production, Housing Starts and the Cass Freight Index™, along with an economic update in advance of the initial first-quarter 2017 GDP estimate.

Commentary No. 880 (April 15, 2017) detailed the prior March 2017 headline reporting the of both Real and Nominal Retail Sales, Real Earnings, the CPI, the PPI and updated Consumer Liquidity, where mounting stresses on consumer income and credit are signaling major economic issues ahead.

Commentary No. 879 (April 7, 2017) covered March 2007 Employment and Unemployment, Help-Wanted Advertising and an update on monetary policy and Money Supply M3 (the ShadowStats Ongoing Measure).

Commentary No. 877 (April 2, 2017) outlined the nature of the downside annual benchmark revisions to industrial production, along with implications for pending annual revisions to Retail Sales, Durable Goods Orders and the GDP.

Commentary No. 876 (March 30, 2017) current headline economic activity in the context of formal definitions of the business cycle (no other major series come close to the booming GDP, which is covered in its third revision to fourth-quarter activity. Also the February 2017 SentierResearch reading on real median household income was highlighted.

Commentary No. 875 (March 24, 2017) assessed and clarified formal definitions of the U.S. business cycle, which were expanded upon significantly, subsequently, in *No. 876*. It also provided the standard review of the headline February 2017 New Orders for Durable Goods, New- and Existing-Home Sales and the Cass Freight Index™.

Commentary No. 873 (March 16, 2017) discussed prospects for future tightening and/or a return to quantitative easing by the FOMC, along with the prior review of the February 2017 Residential Construction reporting.

Commentary No. 872 (March 15, 2017) offered some initial comment on the FOMC rate hike, in conjunction with the review of last month's February 2017 Retail Sales (real and nominal), Real Earnings and the CPI and PPI.

Commentary No. 871 (March 10, 2017) covered reporting of February Labor Conditions, updated Consumer Liquidity and the ShadowStats Ongoing M3 Measure for February 2017, and a revised FOMC outlook.

General Commentary No. 867 (February 24, 2017) assessed mixed signals for a second bottoming of the economic collapse into 2009, which otherwise never recovered its level of pre-recession activity. Such was in the context of contracting and faltering industrial production that now rivals the economic collapse in the Great Depression as to duration. Also covered were the prior January 2017 New- and Existing Home Sales.

Commentary No. 864 (February 8, 2017) analyzed January 2017 Employment and Unemployment detail, including benchmark and population revisions, and estimates of December Construction Spending, Household Income, along with the prior update to Consumer Liquidity.

Commentary No. 861 (January 13, 2017) covered the December 2016 nominal Retail Sales, the PPI, with a brief look at some summary GAAP reporting on the U.S. government's fiscal 2016 operations. The GAAP-detail will be reviewed in a *Special Commentary*.

No. 859 Special Commentary (January 8, 2017) reviewed and previewed economic, financial and systemic developments of the year passed and the post-election year ahead.

Note on Reporting-Quality Issues and Systemic-Reporting Biases. In the context of historical background provided in *Special Commentary No. 885*: *Numbers Games that Statistical Bureaus, Central Banks and Politicians Play*, 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 both to understate inflation and to overstate economic activity meaningfully—as generally viewed in the common experience of Main Street, U.S.A.—ongoing, near-term headline reporting issues often reflect systemic distortions of monthly seasonal adjustments.

Data instabilities—induced partially by the still-evolving economic turmoil of the last eleven years—have been without precedent in the post-World War II era of modern-economic reporting. The severity and ongoing nature of the downturn provide particularly unstable headline economic results, with the use of concurrent seasonal adjustments (as seen with retail sales, durable goods orders, employment and unemployment data). While historical seasonal-factor adjustments are revised every month, based on the latest, headline monthly data, the consistent, revamped historical data are not released or reported at the same time. That issue is 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 2016 surveys of earnings (Bureau of Labor Statistics) and construction spending (Census Bureau). This is suggestive of deteriorating internal oversight and control of the U.S. government's headline economic reporting. That construction-spending issue now appears to have been structured as a gimmick to help boost the July 2016 GDP benchmark revisions, aimed at smoothing the headline reporting of the GDP business cycle, instead of detailing the business cycle and reflecting broad economic trends accurately, as discussed in *Commentary No. 823*.

Combined with ongoing allegations in the last several years 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*). Investigative-financial/business reporter John Crudele of the *New York Post* has written extensively on such reporting irregularities: *Crudele Investigation*, *Crudele on Census Bureau Fraud* and *John Crudele on Retail Sales*.

PENDING ECONOMIC RELEASES: Existing- and New-Home Sales (June 2017). Reporting of June 2017 Existing-Home Sales is due for release on Monday, July 24th, from the National Association of Realtors (NAR), followed by release of June 2017 New-Home Sales on Wednesday, July 6th, from the Census Bureau. Both home sales series will be covered in *Commentary No. 901* of July 27th.

The extreme liquidity bind besetting consumers continues to constrain residential real estate activity, as discussed in today's *Consumer Liquidity Watch* and as reviewed in the *Consumer Liquidity* section of *No. 859 Special Commentary*. Without sustainable growth in real income, and without the ability and/or willingness to take on meaningful new debt in order to make up for income shortfall, the U.S. consumer remains unable to sustain positive growth in domestic personal consumption, including real estate activity and related demand for residential construction, as seen in today's construction details. That circumstance—in the last ten-plus years of economic collapse and stagnation—has continued to prevent a normal recovery in broad U.S. economic activity.

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 home-sales activity, without a fundamental upturn in consumer and banking-liquidity conditions. That does not appear to be in the offing.

Smoothed for regular extreme and nonsensical monthly gyrations, patterns of low-level stagnation should remain in play for both series. Monthly changes in New Home Sales activity rarely are statistically-significant, amidst otherwise unstable headline reporting and revisions.

New Orders for Durable Goods (June 2017). In the context of downside, annual 2017 benchmark revisions released on May 18th (see *Special Commentary No. 888* and the subsequent April detail published on May 26th (*Commentary No. 889*), and May detail published on June 26th 895, the Census Bureau will report June New Orders for Durable Goods on Friday, July 27th, to be covered in *Commentary No. 901* of that date. Net of irregular activity in commercial aircraft orders, aggregate orders likely continued a pattern of down-trending real stagnation.

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 broad economic activity and the GDP—is the activity in new orders, ex-commercial aircraft, adjusted for inflation.

In inflation-adjusted real terms, reflecting PPI-related inflation for "manufactured durable goods," relative order activity this month will not be affected heavily. Monthly inflation of 0.06% in June 2017, versus an "unchanged" 0.00% in May and a gain of 0.24% in April, while year-to-year annual inflation was 1.69% in June 2017, down minimally from 1.75% in May 2017 and 1.87% in April 2017 (see prior *Commentary No. 899*).

Gross Domestic Product (GDP)—Second-Quarter 2017, First or "Advance" Estimate, Annual Benchmarking. The Bureau of Economic Analysis (BEA) will publish its "advance" or first guesstimate of second-quarter 2017 Gross Domestic Product (GDP) on Friday, July 28th, accompanying, and in the context of the annual benchmark revisions to GDP series back to 2014. Detail will be covered in *Commentary No. 902* of that date, with a possible supplemental *Commentary* covering extended benchmark detail following over that weekend.

Today's *Opening Comments* preview in greater detail, the "advance" estimate of Second-Quarter 2017 GDP, which likely will come in well on the downside of consensus expectations, currently around 2.8%. Expectations likely will soften in closer proximity to the release. Annualized real headline second-quarter growth easily could come in at 1.0% or below.

Pending Annual Benchmark Revisions. The outlook for the annual benchmark GDP revisions is reviewed in today's *Opening Comments*. In the context of recent benchmark revisions to related or underlying series, the GDP benchmarking likely will deflate the pace of currently-estimated broad economic growth, particularly in 2014 and 2015 (2014 being the earliest year subject to revisions at this time). The more-significant, next "comprehensive" revision to the GDP series, back to 1929, is planned for next year in July 2018.

GNP and GDI. Although Gross Domestic Income (GDI), which is the theoretical income-side equivalent to the GDP's consumption side, and Gross National Product (GNP), which encompasses the narrower GDP measure, adding in the effects of trade flows in factor income (interest and dividend payments), will be included in the benchmarking, initial estimates of second-quarter 2017 GDI and GNP will not be published until August 30th, along second estimate of second-quarter GDP. The delayed release is standard, due to the lack of significance in available, underlying detail, a problem that also would argue for eliminating or delaying the particularly unreliable "advance" GDP detail.

