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

COMMENTARY NUMBER 882 March Durable Goods Orders and Home Sales, Retail Sales Annual Revisions April 27, 2017

Benchmarked Retail Sales Revised Higher with 2015 Survey Details, but Subsequent Annual Growth Revised Sharply Lower, to Date, Generating a New, Traditional Signal for Recession

Net of Inflation and Irregularly-Surging Commercial Aircraft Orders, the Headline Gain of 0.7% in March 2017 Durable Goods Orders Was 0.1%; Real Activity Continued in Low-Level, Non-Recovered Stagnation

Monthly New- and Existing-Home Sales Rose in March, In the Continuing Context of Low-Level, Non-Recovered Stagnation

Despite Big Boost from Headline Drop in March CPI, March Real Median Household Income Was Statistically Unchanged, Still Holding Below January 2000 and Signaling Consumer Liquidity Stresses

PLEASE NOTE: The next regular Commentary, tomorrow, Friday, April 28th, will cover the "advance" or first estimate of first-quarter 2017 GDP and updated Consumer Liquidity Conditions. Please telephone me at (707) 763-5786, if you have questions or if you would like to talk.

Best wishes to all — John Williams

OPENING COMMENTS AND EXECUTIVE SUMMARY

Heavily-Stressed Consumer Liquidity Conditions. The extreme liquidity bind besetting consumers generally continues unabated, reflecting ongoing income stresses and a topping in consumer optimism, albeit at high levels (also see the discussion in the *New- and Existing-Home Sales* section of the *Executive Summary*). In the context of faltering gains in April 2017 Consumer Confidence, released April 25th by the Conference Board, and in the context of the "statistically unchanged" monthly reading for March 2017 Real Median Household Income, released today (April 27th) by www.SentierResearch.com, Consumer Liquidity Conditions will be updated in tomorrow's *Commentary No.* 883. Such will follow the release by the University of Michigan of its full-April 2017 Consumer Sentiment reading.

In particular, despite a 0.29% monthly boost to real monthly income, from a headline monthly decline of 0.29% (-0.29%) in the March 2017 CPI-U inflation, the monthly gain in March 2017 real median monthly household income was "statistically unchanged," up by a statistically-insignificant 0.22% month-to-month, per Sentier Research. That means the corresponding change in nominal median monthly household income showed an outright decline of 0.07% (-0.07%) in March 2017. The headline real monthly income number not only remained minimally below pre-recession levels, but also below the January 2000 initial reading for the series. More-complete detail will follow in *Commentary No.* 883.

Benchmarked Retail Sales Revised Higher with 2015 Survey Details, but Subsequent Reporting of Annual Growth Revised Sharply Lower, Generating a Traditional Signal of Pending Recession. The Census Bureau published its <u>Annual Benchmark Revisions</u> to the monthly Retail Sales series, yesterday, April 26th, incorporating the results of the 2015 Annual Retail Trade Survey. Revised back through January 2008 on a not-seasonally-adjusted basis, and back through January 2005 seasonally adjusted, accompanying *Graphs BM-1* to *BM-6* plot the revamped detail.

The graphs and all growth or change references here are for Real Retail Sales, based on inflation adjustment using the Consumer Price Index (CPI-U). The headline real series traditionally is used as a broad indicator of aggregate Gross Domestic Product (GDP), and it is particularly sensitive to consumer liquidity conditions. Although the "advance" March 2017 Retail Sales detail was not included in the benchmarking, a consistent revision to that headline number was estimated for and plotted in the accompanying graphs, revised higher from its initial real detail by 0.08%, which is in parallel with the upside revisions just published for the several months of headline detail preceding it.

Headline Retail Sales detail published by the Census Bureau always is in nominal terms or current dollars, not adjusted for inflation. The Saint Louis Federal Reserve, however, regularly publishes the Real Retail Sales, using the CPI-U for deflating the Census Bureau series. That same series also is calculated and followed closely by ShadowStats.

Revisions Left the Revamped Current Detail More-Consistent with a Pending "New" Recession. The aggregate revisions were surprisingly small, and reflected an average three-month upside revision in the

annual growth rate, peaking at an incremental gain of 0.43% in the 2015 survey year, where I had expected a downside revision, more consistent with revisions seen in the 2015 Census of Manufactures (see *Commentary No. 877*). That still be may be the case with the pending May 16th benchmarking of quarterly e-commerce estimates.

The upside changes to 2015 were backed off, thereafter, with the latest average three-month incremental downside revision to annual growth dropping by 0.34% (-0.34%) from prior reporting, as of the formal February 2017 detail, and by 0.62% (-0.62%) given the initial indications for March 2017. That puts the latest annual real growth rates back into the recession-signal territory of two-percent, plus-or-minus, where those annual rates recently had risen above that level, temporarily putting that "recession signal" in abeyance (see *Graph BM-2* and prior discussion in *Commentary No. 880*).

The later-period benchmark revisions also showed a slowing pattern of annualized quarter-to-quarter real growth, where for example the initial estimate of annualized quarterly growth had slowed from 4.02% in fourth-quarter 2016 to 0.84% in first-quarter 2017, that growth now has slowed from 3.34% in fourth-quarter 2016 to 0.49% in first quarter 2017.

Additional background will follow with the monthly coverage of April 2017 Retail Sales, on May 12th, including a formally-revised estimate of March 2017 activity. For reference, the prior headline monthly detail for March 2017, again, is found in *Commentary No. 880* with last year's 2016 benchmarking detail found in *Commentary No. 804*.

The following six graphs show various elements of the benchmark revisions, with all series plotted in inflation-adjusted real-terms, albeit with *Graph BM-6* using a different inflation base. *Graphs BM-1* and *BM-2* show the detail in a narrow timeframe (2013-to-date), where most of the larger revisions took place, both in terms of level of activity and in year-to-year change.

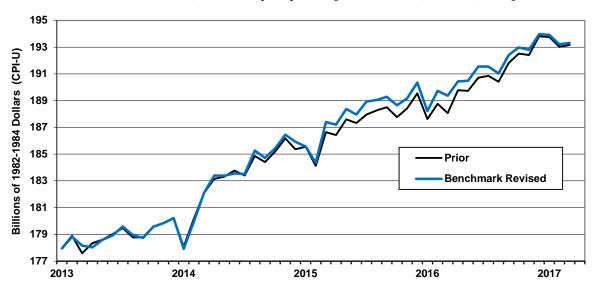
Graphs BM-3 and *BM-4* show the traditional near-term plots from 2000-to-date, both in terms of level and year-to-year change.

Graphs BM-5 and *BM-6* show comparisons of the revised detail, both in terms of the headline detail (*Graph BM-5*, which is just an indexed version of *Graph BM-3*), and the detail "corrected" for the understatement in headline CPI-U inflation (overstatement of real growth) versus ShadowStats Alternate Inflation Measure (1990-based) in *Graph BM-6*. Both *Graphs BM-5* and *BM-6* are plotted to the same scale. See further detail on these series in the *Executive Summary* of *Commentary No. 880*.

[Graphs BM-1 to BM-6 begin on the next page.]

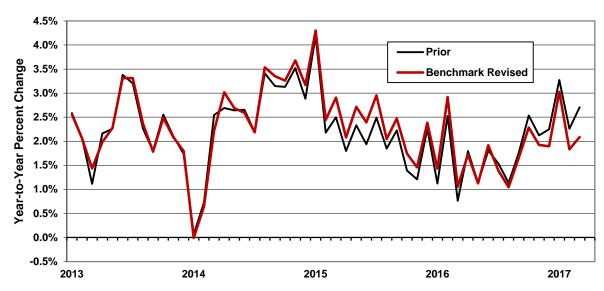
Graph BM-1: Near-Term Revisions to Real Retail Sales (2013 to March 2017)

Benchmarked - Real Retail Sales Level (Deflated by CPI-U) To March 2017, Seasonally-Adjusted [ShadowStats, Census, BLS]



Graph BM-2: Near-Term Revisions to Real Retail Sales, Year-to-Year Change (2013 to March 2017)

Benchmarked Real Retail Sales Year-to-Year Percent Change To March 2017, Seasonally-Adjusted [ShadowStats, Census, BLS]



Graph BM-3: Real Retail Sales Revisions (2000 to March 2017)

Benchmarked - Real Retail Sales Level (Deflated by CPI-U) Billions of 1982-1984 Dollars

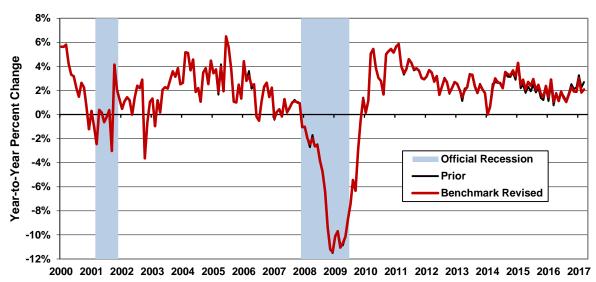
To March 2017, Seasonally-Adjusted [ShadowStats, Census, BLS]

195
190
185
180
175
170
160
155
150
150

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017

Graph BM-4: Real Retail Sales Revisions, Year-to-Year Change (2000 to March 2017)

Benchmarked Real Retail Sales Year-to-Year Percent Change To March 2017, Seasonally-Adjusted [ShadowStats, Census, BLS]



Graph BM-5: Real Retail Sales Revisions, Indexed (2000 to March 2017)

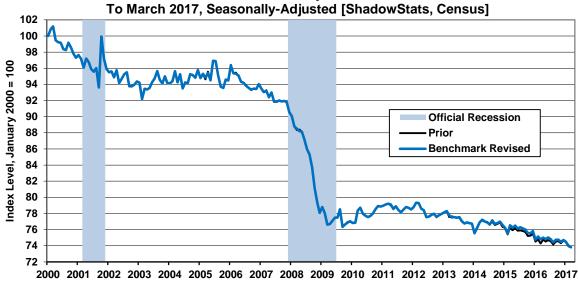
Benchmarked Real Retail Sales Level (Deflated by CPI-U)

Indexed to January 2000 = 100 To March 2017, Seasonally-Adjusted [ShadowStats, Census, BLS]



Graph BM-6: Real Retail Sales Revisions, ShadowStats Corrected (2000 to March 2017)

Benchmarked - Corrected Real Retail Sales Level Deflated by Shadow-Stats-Alternate CPI (1990-Base) Indexed to January 2000 = 100



Today's Commentary (April 27th). These Opening Comments and Executive Summary respectively discuss tomorrow's Consumer Liquidity update and the annual benchmark revisions to Retail Sales, and summarize the headline details of the March 2017 New Orders for Durable Goods and New- and Existing-Home Sales releases.

The *Reporting Detail* (beginning page 20) provides more-extensive analysis of the headline new-orders and home-sales series.

The *Week, Month and Year Ahead* (beginning page 26) updates the outlook for tomorrow's "advance" estimate of First-Quarter 2017 GDP.

Executive Summary: New Orders for Durable—March 2017—Nominal Orders Rose 0.7% for the Month, Up Just 0.1% Ex-Commercial Aircraft and Inflation. A combination of rising inflation, a monthly increase in March commercial-aircraft orders and upside revisions to February and January aircraft orders, accounted for the bulk of the headline gains and upside revisions to the March 2017 and the prior two months' orders. The headline monthly gain of 0.69% in March new orders was 0.31% net of commercial aircraft and 0.07% net of inflation. The headline monthly gain of 2.30% in February new orders was 0.19% net of commercial aircraft and 0.01% net of inflation, while the headline monthly gain of 2.44% in January new orders was 0.73% net of commercial aircraft and 0.40% net of inflation.

In this series, the best leading indicator to industrial production (particularly manufacturing) and to the general economy, is inflation-adjusted real new orders, ex-commercial aircraft, which, again, showed a March 2017 month-to-month gain of 0.07% versus a revised 0.01% gain in February, with real year-to-year real annual growth slowing to 0.98% in March 2017 from 3.16% in February 2017.

For fourth-quarter 2016, the annualized real series, ex-aircraft, showed a revised quarterly gain of 5.89%, up by 1.39% year-to-year, with initial first-quarter 2017 growth slowing to an annualized 2.07% quarterly pace, up by 1.79% year-to-year.

Despite the headline gains, the series remained in low-level, non-recovering stagnation, and it is a tentative, leading indicator to softening second-quarter 2017 industrial production, a series that has remained in definitive recession since December 2014 (see prior *Commentary No. 881*).

Smoothed with six-month moving averages, and adjusted for inflation, both of the highly volatile new orders series (total and ex-commercial aircraft) generally remained in non-recovering, low-level stagnation. Those patterns also remained consistent in signaling ongoing or non-recovering recession.

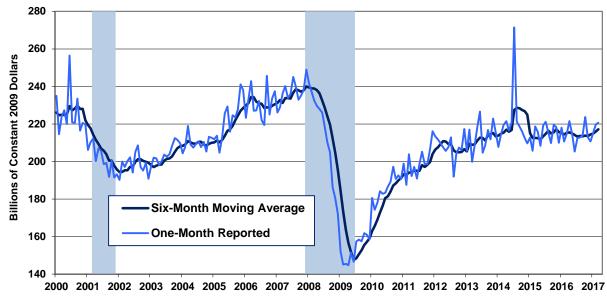
Graphs of Inflation-Adjusted and Smoothed Durable Goods Orders. Graphs 1 and 2 following show the headline monthly detail, as well as the six-month moving-average activity for both the aggregate new orders series and the series net of the irregularly-volatile commercial-aircraft orders.

The moving-average levels in both series had turned lower into year-end 2014, and after an uptick in mid-2015—some smoothed bounce-back—the smoothed trend turned down anew into late fourth-quarter 2015, with continued minor fluttering into third-quarter 2016, and a small uptick in fourth-quarter 2016 activity continuing on the upside into March 2017.

Graph 1: Real Total New Orders for Durable Goods to Date

Real New Orders for Durable Goods

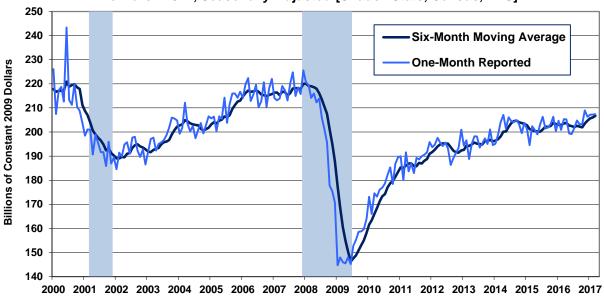
Billions of Constant \$2009, Deflated by PPI Durable Manufactured Goods To March 2017, Seasonally-Adjusted [ShadowStats, Census, BLS]



Graph 2: Real New Orders for Durable Goods - Ex-Commercial-Aircraft Orders to Date

Real Orders (Ex-Nondefense Aircraft)

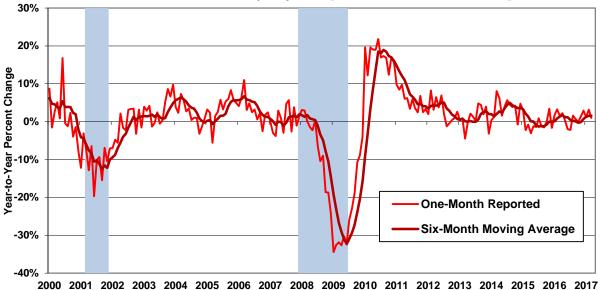
Billions of Constant \$2009, Deflated by PPI Durable Manufactured Goods To March 2017, Seasonally-Adjusted [ShadowStats, Census, BLS]



Graphs 3 and 4 show the annual year-to-year percent change in the real new orders series, net of commercial aircraft orders, on both monthly and six-month-smoothed moving-average bases, along with a comparative plot of year-to-year headline changes in the manufacturing sector of industrial production.

Graph 3: Year-to-Year Percent Change, Real New Orders for Durable Goods — Ex-Commercial Aircraft to Date

Real New Orders for Durable Goods (Ex-Nondefense Aircraft) Year-to-Year Percent Change, Deflated by PPI Durable Manufactured Goods To March 2017, Seasonally-Adjusted [ShadowStats, Census, BLS]



Graph 4: Industrial Production - Manufacturing, Year-to-Year Percent Change Since 2000 (See Graph 16 on page 21 of prior Commentary No. 881)

Production - Manufacturing Yr-to-Yr % Change To March 2017, Seasonally-Adjusted [ShadowStats, FRB]



The annual growth for March 2017 new orders slowed slightly, holding minimally in positive territory. That broadly was consistent with the fluttering low level of uptrending, non-recovered stagnation seen in the manufacturing series.

While that might suggest a near-term bottoming in orders (discussed in <u>General Commentary No. 867</u>), such partially is an artefact of roughly two-percentage-points understatement of the inflation used in deflating the headline durable goods series. Nonetheless, as shown in the graphs, the year-to-year change in the series ex-aircraft orders generally has led the broad pattern of annual growth reflected in the headline level of annual change in the manufacturing sector of industrial production, a series that also suffers inflation distortions.

Broadly, there has been a general pattern of stagnation or bottom-bouncing evident in the orders of recent years —clearly not the booming recovery seen in official GDP reporting, as will be updated with tomorrow's (April 28th) *Commentary No. 883*. The real monthly and six-month moving-average levels of new orders in March 2017 remained below both the pre-2007 recession high, as well as the pre-2000 recession high for the series. The pattern of low-level stagnation and fluctuating trend in the annual inflation-adjusted series since mid-2014—net of the irregular aircraft-order effects—again is one that most commonly precedes and/or coincides with a recession, as is the current circumstance. The series remains in non-recovered, low-level stagnation.

The Real New Orders Series "Corrected" for Inflation Understatement. As with other economic series deflated by official government inflation measures, headline estimates of inflation-adjusted growth in new orders for durable goods generally are overstated, due to the understatement of official inflation. That understatement comes from the government's use of hedonic-quality adjustments—quality issues usually not perceived by the users or consumers of the involved products—in justifying a reduced pace of headline inflation used in deflating some series (see <u>Public Commentary on Inflation Measurement</u>).

As done for other series such as Real Retail Sales (see *Graph BM-6* in the *Opening Comments*), Industrial Production (see *Graph 2* on page 7 of prior *Commentary No. 881*) and the GDP (see *Commentary No. 876*, *Graph 16*, page 18, to be updated in tomorrow's *Commentary No. 882*), ShadowStats publishes an experimental, corrected-inflation version of the graph of real New Orders for Durable Goods. Real activity, in this case, is corrected for the understatement of the inflation used in deflating the new orders series with the headline PPI inflation for manufactured durable goods (see the *Reporting Detail*).

Three sets of graphs follow. The first set (*Graph 5* and *Graph 6*) shows the aggregate series or total durable goods orders; the second set (*Graph 7* and *Graph 8*) shows the ex-commercial aircraft series. The aggregate orders series in *Graphs 5* and 6 includes the monthly commercial aircraft orders. Placed years in advance, aircraft orders are a better indicator of long-range production activity, than they are as a near-term leading indicator of production activity. Again, *Graphs 7* and 8 are shown net of those volatile commercial aircraft orders.

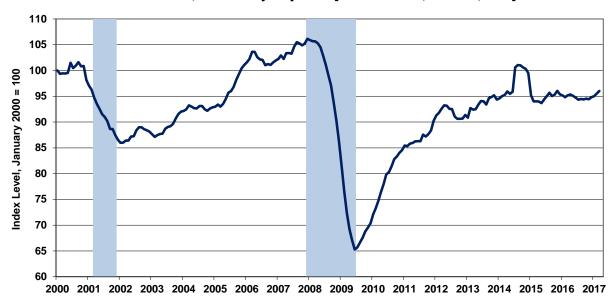
The first graph in each of the first two sets shows the official six-month moving average, the same heavy dark-blue line shown in $Graph\ 1$ and $Graph\ 2$, along with the light-blue thin line of monthly detail. The second graph in each set is the same six-month, moving-average series shown in the first graph, but it has been re-deflated to correct for the ShadowStats estimate of the understatement of the PPI manufactured durable goods inflation measure used in the headline-deflation process. The "corrected" graphs all are indexed to January 2000 = 100.

A third set (*Graphs 9* and *10*) allows for the comparison of the trailing twelve-month moving-average of the real durable goods series, ex-commercial aircraft, corrected for the understatement of inflation used in

the deflation process, with the twelve-month moving-average of the Cass Freight IndexTM (see the *Opening Comments* of prior *Commentary No. 881* for more-detailed coverage on the Cass Index).

Graph 5: Index of Real Total New Orders for Durable Goods, 6-Month Moving Average

Total Real New Orders for Durable Goods (6-Month Moving Avg) Monthly Index, Deflated by PPI--Durable Manufactured Goods To March 2017, Seasonally-Adjusted [ShadowStats, Census, BLS]



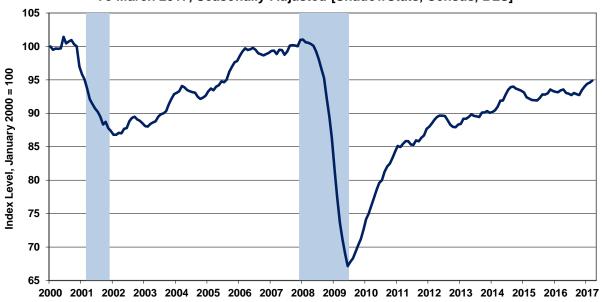
Graph 6: Corrected Index of Real Total New Orders for Durable Goods, 6-Month Moving Average

Corrected Total Real Durable Goods Orders 6-Month Moving Average, Deflation Corrected for Hedonic Adjustments To March 2017, Seasonally-Adjusted [ShadowStats, Census, BLS]



Graph 7: Index of Durable Goods Orders – Ex Commercial Aircraft, 6-Month Moving Average

Real Orders, Ex-Nondefense Aircraft (6-Month Moving Average) Monthly Index, Deflated by PPI--Durable Manufactured Goods To March 2017, Seasonally-Adjusted [ShadowStats, Census, BLS]



Graph 8: Corrected Index of Durable Goods Orders - Ex Commercial Aircraft, 6-Month Moving Average

Corrected Real Durable Goods Orders, Ex-Nondefense Aircraft 6-Month Moving Average, Deflation Corrected for Hedonic-Adjustments To March 2017, Seasonally-Adjusted [ShadowStats, Census, BLS]

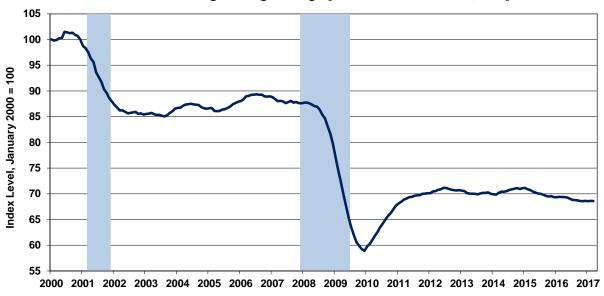


Graphs 9 and *10* look at the latest parallel reporting in the trailing twelve-month moving averages of the "corrected" New Orders for Durable Goods the Cass Freight Index in. While there certainly may be a

bottoming of broad activity in the works, recovering pre-collapse levels of activity remains well into the future, dependent heavily on the Administration and Congress putting some new economic stimulus in place.

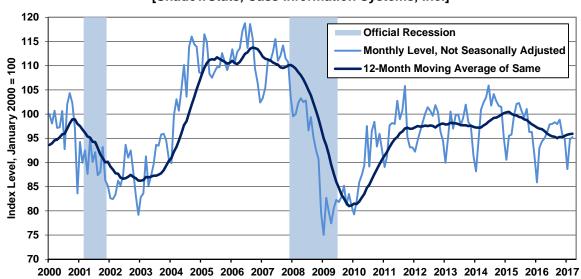
Graph 9: Corrected Durable Goods Orders Index – Ex Commercial Aircraft, Twelve-Month Trailing Average

Corrected Real Durable Goods Orders, Ex-Nondefense Aircraft Deflation Corrected for Hedonic Adjustment Distortions, to March 2017 12-Month-Trailing Moving Average [ShadowStats, Census, BLS]



Graph 10: CASS Freight Index ™ (2000-March 2017)

Cass Freight Index[™] (Jan 2000 = 100) To March 2017, Not Seasonally Adjusted [ShadowStats, Cass Information Systems, Inc.]



New- and Existing-Home Sales—March 2017—Despite Monthly Gains, Both Series Continued in Low-Level, Non-Recovering Stagnation. The March 2017 New- and Existing-Home Sales series both remained in "great depression" or "depression" territory (see *Commentary No. 754*), down respectively by 55.3% (-55.3%) and 21.5% (-21.5%) from their pre-recession peak levels of activity.

Usual reporting instabilities and distortions, involving extreme volatility and revisions, irregular seasonality and lack of statistical significance, continued to warp the New-Home Sales series. New sales gained month-to-month, in the context of a downside revision to February activity, but also on top of upside revisions to January and December activity, with resulting gains for both fourth-quarter 2016 and first-quarter 2017. Despite continued extreme, near-term volatility, albeit statistically-insignificant, as usual, the series remained in low-level, non-recovering stagnation. Shown in *Graphs 11* and *13*, that stagnation had a recent, minor flattening uptrend over time, a brief fluttering negative turn, with a renewed uptrend as of the March 2017 detail.

Headline March Existing-Home Sales increased month-to-month, with a pick-up in year-to-year change. In the context of shifting patterns in smoothed, low-level stagnation, Existing-Home Sales activity held in a pattern of shallow uptrend as seen in *Graphs 15* and *17*. March 2017 monthly existing-sales detail held below its pre-recession high by 21.5% (-21.5%).

These series never have fully recovered from the economic collapse into 2009. General housing construction and sales activity broadly have shown patterns of protracted, low-level, non-recovering stagnation, with related single-unit housing starts and aggregate housing starts in March 2017, also down from their pre-recession highs, respectively by 55.0% (-55.0%) and by 46.5% (-46.5%).

Consumer Liquidity Constraints (Update Tomorrow—April 28th). The extreme liquidity bind besetting consumers continues to constrain residential real estate activity, as updated in Commentary No. 880 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 income shortfall, the U.S. consumer remains unable to sustain positive growth in domestic personal consumption, including real estate activity. That circumstance—in the last nine-plus years of economic collapse and stagnation—has continued to prevent a normal recovery in broad U.S. economic activity. In the context of faltering, high-level April 2017 Consumer Confidence, released April 25th, "statistically unchanged" March 2017 Real Median Household Income, released today (April 27th) by www.SentierResearch.com (see the Opening Comments), and the April 28th release of April 2017 Consumer Sentiment, Commentary No. 883 will update Consumer Liquidity Conditions anew.

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.

New-Home Sales—Continued Unstable Reporting, with the Smoothed Series 55.3% (-55.3%) Below Its Pre-Recession Peak. Headline monthly reporting of New-Home Sales remained of no substance, short term, as seen most frequently here with massive, unstable and continuously shifting revisions to recent history, along with statistically-insignificant monthly and annual changes that just as easily could be a gain or a loss. In the latest reporting, the monthly reporting was to the upside, with the prior-month revised lower, but with earlier monthly revisions were to the upside.

March New-Home Sales (Census Bureau, counted based on contract signings) rose a statistically-insignificant 5.8%, following an downwardly-revised February gain of 0.3%, an upwardly revised gain of 6.2% in January, and a revised, shallower monthly contraction of 3.8% (-3.8%) in December. Year-to-year, March 2017 sales rose by a statistically-insignificant 15.6%, followed by a downwardly-revised annual gain of 11.8% in February 2017 and upwardly-revised annual changes of 11.2% in January 2017 and 2.4% in December 2016. This series remains extraordinarily unstable and consistently unreliable on a near-term, month-to-month basis and often on a long-term basis, as to whether headline sales actually increased or decreased.

ShadowStats assesses such unstable series by considering the gyrations in monthly activity in the context of a six-month moving-average of the headline numbers. With the otherwise meaningless monthly swings in these numbers smoothed out, New-Home Sales activity continued in a broad pattern of low-level—albeit somewhat up-trending—stagnation, which recently flattened out/turned down (*Graph 13*).

Existing-Home Sales—Continuing, Non-Recovering Stagnation: Monthly Sales Increased but Activity Remained Down from Pre-Recession Peak by 21.5% (-21.5%). Headline monthly Existing Home Sales rose by 4.39% in March 2017, in the context a revised, deeper monthly contraction of 3.87% (-3.87%) in February and an unrevised gain of 3.27% in January. Year-to-year growth in March 2017 existing sales was 5.94%, versus a downwardly-revised annual gain of 5.19% in February 2017 and an unrevised 3.83% annual gain in January 2017.

Despite the current March 2017 sales level having been at the highest monthly pace since February 2007—headline March 2017 activity still was down by 21.5% (-21.5%) from the pre-recession peak of the existing-sales series in August 2005. Smoothed with a six-month moving average, Existing-Home Sales activity held in low-level stagnation, albeit currently in a fluctuating uptrend.

New-Home Sales Graphs. The regular monthly graph of March 2017 New-Home Sales follows, along with a six-month moving-average version of the series (see *Graphs 11* and *13*). Added for purposes of comparison are parallel graphs of the headline and six-month moving-average versions of March 2017 Housing Starts for single-unit construction, *Graphs 12* and *14*, from prior *Commentary No. 881*.

Existing-Home Sales Graphs. Graph 15 plots the traditional headline Existing-Home Sales monthly detail. Such is supplemented by *Graph 17* of the six-month moving average of Existing-Home Sales. Accompanying the Existing-Home Sales plots are comparative graphs of March 2017 aggregate Housing Starts activity, again, from *Commentary No. 881*, where both series reflect activity in terms of single- and multiple-housing units (see *Graphs 16* and *18*).

[Graphs 11 to 18 begin on the following page.]

Graph 11: New-Homes Sales - Monthly Rate of Activity

New-Home Sales (Monthly Rate) To March 2017, Seasonally-Adjusted [ShadowStats, Census]



Graph 12: Single-Unit Housing Starts, Monthly Rate of Activity

Single-Unit Housing Starts (Monthly Rate) To March 2017, Seasonally-Adjusted [ShadowStats, Census]



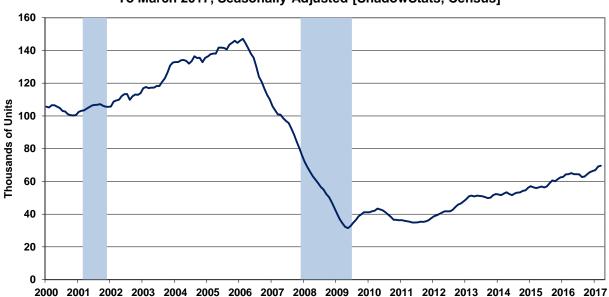
Graph 13: New-Homes Sales - Six-Month Moving Average, Monthly Rate of Activity





Graph 14: Single-Unit Housing Starts, Six-Month Moving Average, Monthly Rate of Activity

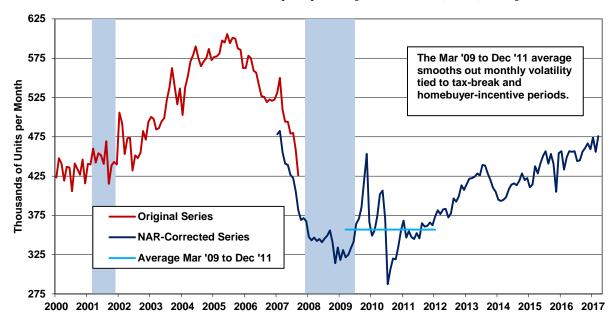
Single-Unit Housing Starts (Six-Month Moving Average) To March 2017, Seasonally-Adjusted [ShadowStats, Census]



Graph 15: Existing-Home Sales - Monthly Level

Existing-Home Sales (Monthly Rate)

Single- and Multiple-Unit Sales, Non-Annualized Monthly Level To March 2017, Seasonally-Adjusted [ShadowStats, NAR, HUD]



Graph 16: Total Housing Starts - Monthly Level

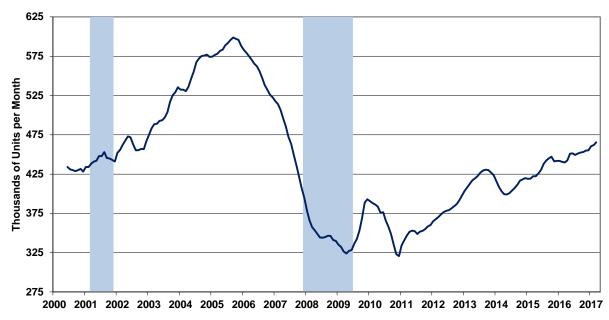
Aggregate Housing Starts (Monthly Rate) Single- and Multiple-Unit Starts

To March 2017, Seasonally-Adjusted [ShadowStats, Census]

175
150
75
200
200
2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017

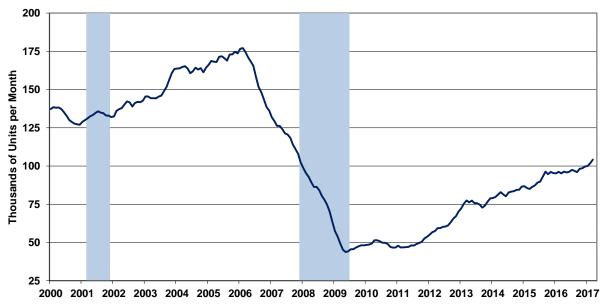
Graph 17: Existing-Home Sales (Six-Month Moving Average)

Existing-Home Sales (Six-Month Moving Average)
Single- and Multiple-Unit Sales, Non-Annualized Monthly Rate
To March 2017, Seasonally-Adjusted [ShadowStats, NAR, HUD]



Graph 18: Total Housing Starts (Six-Month Moving Average)

Aggregate Housing Starts (Six-Month Moving Average) To March 2017, Seasonally-Adjusted [ShadowStats, Census]



[The Reporting Detail contains extended analysis.]

REPORTING DETAIL

NEW ORDERS FOR DURABLE GOODS (March 2017)

Total Orders Rose Month-to-Month by 0.7%, Gained Just 0.1% Ex-Commercial Aircraft and Inflation. A combination of rising inflation, a monthly increase in March commercial-aircraft orders and upside revisions to February and January aircraft orders, accounted for the bulk of the headline gains and upside revisions to March 2017 and the prior two months. The headline monthly gain of 0.69% in March new orders was 0.31% net of commercial aircraft and 0.07% net of inflation. The headline monthly gain of 2.30% in February new orders was 0.19% net of commercial aircraft and 0.01% net of inflation, while the headline monthly gain of 2.44% in January new orders was 0.73% net of commercial aircraft and 0.40% net of inflation.

In this series, the best leading indicator to industrial production (particularly manufacturing) and to the general economy, is inflation-adjusted real new orders, ex-commercial aircraft, which, again, showed a March 2017 month-to-month gain of 0.07% versus a revised 0.01% gain in February, with real year-to-year real annual growth slowing to 0.98% in March 2017 from 3.16% in February 2017.

For fourth-quarter 2016, the annualized real series, ex-aircraft, showed a revised quarterly gain of 5.89%, up by 1.39% year-to-year, with initial first-quarter 2017 growth slowing to an annualized 2.07% quarterly pace, up by 1.79% year-to-year.

Despite the headline gains, the series remained in low-level, non-recovering stagnation, and it is a tentative, leading indicator for softening activity in second-quarter 2017 industrial production, a series that has remained in definitive recession since December 2014 (see prior *Commentary No. 881*).

Smoothed with six-month moving averages, and adjusted for inflation, both of the highly volatile new orders series (total and ex-commercial aircraft) generally remained in non-recovering, low-level stagnation. Those patterns also remained consistent in signaling ongoing or non-recovering recession (see *Graphs 5* to *10* in the *Executive Summary*).

Headline Nominal Detail. The Census Bureau reported this morning, April 27th, that the regularly-volatile, seasonally-adjusted, nominal level of aggregate new orders for durable goods rose in March 2017 by 0.69% month-to-month, having gained a revised 2.30% [previously 1.67%] in February and a revised 2.44% [previously 2.34%, initially 1.79%] in January. Net of prior-period revisions, March orders rose by 1.41%, instead of the headline 0.69%.

Year-to-year, March 2017 nominal durable goods rose by 4.47%, having gained a revised 5.83% [previously 5.05%] in February 2017 and having been a revised "unchanged" at 0.00% [previously down by 0.10% (-0.10%), initially down by 0.60% (-0.60%)] in January 2017. That headline detail, though, was before consideration of the irregular volatility in commercial-aircraft orders.

Before and after consideration of commercial-aircraft orders and other monthly irregularities in the headline reporting of new orders, the smoothed trends of broad activity generally continued to be flat, consistent with a downturn that had been holding in a continuing pattern of broad stagnation, albeit now somewhat uptrending. The inflation-adjusted real series, and that same series corrected for the understatement of official inflation, are discussed and graphed in the *Executive Summary* section in the *Opening Comments*.

The corrected series—net of commercial aircraft orders—has remained relatively flat, now somewhat uptrending, in a pattern of low-level stagnation. In parallel with the other plotted series, the corrected series still shows an unfolding economic contraction of a nature that usually precedes or coincides with a recession or deepening business downturn.

Detail Net of Volatility in Commercial-Aircraft Orders. The reporting of extreme contractions and surges in commercial-aircraft orders is seen in an irregularly-repeating process throughout the year, and that often dominates changes in headline monthly durable goods orders. These extremely volatile aircraft orders are booked years into the future and are indicative more of longer-term, rather than shorter-term prospects for manufacturing activity. In the current circumstance, a monthly 6.97% gain in March 2017 commercial aircraft orders boosted aggregate orders to a monthly gain of 0.69%, from what otherwise would have been a gain of 0.31%. Net of an upwardly-revised headline gain of 57.24% [previously 47.64%] in February 2017, commercial aircraft orders gained 0.19%. Net of an upwardly-revised headline monthly gain of 83.16% [previously 83.29%, initially 69.93%] in January 2017 commercial aircraft orders gained 0.73%.

Year-to-year and seasonally-adjusted, March 2017 new orders (net of commercial aircraft) rose by 2.75%, having gained a revised 4.65% [previously 4.24%] in February 2017 and a revised 2.60% [previously 2.49%] in January 2017.

Real Durable Goods Orders—March 2017. ShadowStats uses the PPI component inflation measure "Durable Manufactured Goods" for deflating the new orders for durable goods series. Published only on a not-seasonally-adjusted basis, the related March 2017 PPI series showed monthly inflation of 0.24%, versus 0.18% in February and 0.30% in January. Related year-to-year annual inflation has continued to rise, up to 1.75% in March 2017, versus 1.45% in February 2017 and 1.33% in January 2017 (see Commentary No. 880).

Adjusted for that 0.24% month-to-month inflation reading in March 2017, and as reflected in the graphs in the *Executive Summary* section, real month-to-month aggregate orders in March 2017 rose by 0.45%, having gained 2.12% in February and 2.13% in January. Ex-commercial aircraft, real month-to-month orders gained 0.07% in March 2017, 0.01% in February and 0.43% in January.

Real total new orders rose year-to-year by 2.67% in March 2017 and 4.29% in February 2017 and declined by 1.31% (-1.31%) in January 2017. Ex-commercial aircraft, March 2017 real orders rose year-to-year by 0.98%, having gained 3.16% in February 2017 and 1.25% in January 2017.

Real Quarterly Change, Ex-Commercial Aircraft. Where the inflation-adjusted series, ex-commercial aircraft, is the best leading economic indicator out of these data, following are the annualized real quarterly changes in that series. Beginning at the onset of eventually what should become recognized as a formal recession or renewed downturn, the real ex-commercial aircraft orders series showed annualized

quarterly declines of 4.44% (-4.44%) in fourth-quarter 2014, and 5.54% (-5.54%) in first-quarter 2015. Annualized real change for second-quarter 2015 was a gain of 3.31%, a gain of 4.52% in third-quarter activity, a gain of 0.31% in fourth-quarter 2015 activity.

First-quarter 2016 activity showed an annualized real gain of 0.48%, with the series declining at an annualized real pace of 4.53% (-4.53%) in second-quarter 2016. Third-quarter 2016 showed an annualized gain of 4.03%, with fourth-quarter 2016 up by 5.89% [revised from 5.88% due to a PPI inflation revision]. With initial reporting in place for first-quarter 2017, the annualized real quarterly gain slowed markedly to 2.07%.

Graphs of Inflation-Adjusted and "Corrected" Smoothed Durable Goods Orders. Four sets of inflation-adjusted graphs (Graphs 1 to 10) are displayed in the Executive Summary. The first set (Graphs 1 to 4) shows the headline monthly detail, as well as the six-month moving-average activity for both the aggregate new orders series and the series net of the irregular commercial-aircraft orders, as well as annual growth for the real series net of commercial aircraft, plus a plot of annual growth in the manufacturing sector, for comparison. The moving-average levels in both series had turned lower into year-end 2014 and the first two quarters of 2015, with some smoothed bounce-back into third-quarter 2015, followed by renewed downturn into 2016 with a late-year uptick continuing into March 2017.

The second set of graphs (*Graphs 5* and *6*) shows the patterns of six-month moving averages of historical, headline real new orders for durable goods, net of official inflation, as well as that pattern "corrected" for understatement of that inflation (and for the corresponding overstatement of official, inflation-adjusted growth). The third set of graphs (*Graphs 7* and *8*) shows the same patterns, but for the aggregate durable goods orders series, net of commercial aircraft orders. The fourth set of graphs (*Graphs 9* and *10*), shows the twelve-month moving average of the real series, ex-commercial aircraft side-by-side with parallel activity in the historical Cass Freight IndexTM. Those series show the general economy to be downtrending in recent years, never having recovered fully from the economic collapse into 2009 (see also *No. 859 Special Commentary*), never entering a post-recession period of economic expansion.

Caution: Current durable goods reporting remains subject to many of the same sampling and concurrent-seasonal-adjustment problems seen with retail sales, and payroll and unemployment reporting. Unusual seasonal-factor volatility raises issues as to the significance of reported seasonally-adjusted monthly and annual changes. While those issues were brought into balance, for a period of ten days, with the annual benchmark revision to durable goods orders on May 18, 2016 (Supplemental Commentary No. 807-A), for subsequent months of reporting up through the March 2017 detail, unpublished historical revisions calculated along with the March seasonal adjustments, have made all historical reporting prior to January 2017 inconsistent with the current headline numbers.

2017 Benchmark Revision. All historical data will be briefly consistent, once again, come the benchmark revision of May 18, 2017. Detailed in today's <u>Press Release</u>, the benchmarking will incorporate the 2015 Annual Survey of Manufactures and a variety of other data revisions, including revamped seasonal-adjustments back to February 2002. Irrespective of the net-upside revisions in the Retail Sales series from the 2015 Annual Retail Trade Survey detail (see the *Opening Comments*), the recent benchmark revisions to Industrial Production showed meaningful downside adjustments to recent manufacturing history. The durable goods benchmarking largely should parallel the manufacturing revisions, which were covered in <u>Commentary No. 877</u>.

NEW-HOME SALES (March 2017)

Despite an Unstable Monthly Gain and Net Upside Revisions to Recent Data, the Smoothed Series Remained 55.3% (-55.3%) Below Its Pre-Recession Peak. Headline monthly reporting of New-Home Sales remained of no substance, short term, as seen most frequently here with large, unstable and continuously shifting revisions to recent history, along with statistically-insignificant monthly and annual changes that just as easily could be gains or a losses. Despite a relative upturn in recent first-quarter reporting, the broad reporting trend remained flat, with the growth pattern of the smoothed six-month, moving-average holding flat, as seen in *Graph 13* in the *Executive Summary*.

The March 2017 headline reporting of 621,000 units in annualized sales (a 51,750 monthly rate as used in the graphs in the *Executive Summary*) was up by 5.8% month-to-month, following a weaker monthly gain of 0.3% in February, a stronger gain of 6.2% in January, and a narrowed decline of 3.8% (-3.8%) in December. As usual, neither the monthly nor annual headline change was statistically meaningful. The ongoing, short-term monthly volatility continued in the context of headline March 2017 activity holding below its never-recovered 2005 pre-recession peak by 55.3% (-55.3%), still deep in depression territory (see *Commentary No. 754*).

ShadowStats assesses such unstable series by considering the gyrations in monthly activity in the context of a six-month moving-average of the headline numbers. With the otherwise meaningless monthly swings in these data smoothed out, New-Home Sales activity continued in a broad pattern of low-level stagnation, which continued generally flat, in the context of the latest headline reporting and revisions smoothed for a six-month moving average (again, see *Graph 13* in the *Executive Summary*).

Graphed either way, smoothed or not, the various housing series generally have continued to show patterns of economic activity plunging from 2005 or 2006 into 2009, with some bounce off the bottom and then stagnation, with the stagnation continuing at a low level of activity to date. Including New-Home Sales, related real-estate activity never has recovered along with the purported rebound in real GDP, which stood at 12.2% above its pre-recession high, as of headline fourth-quarter 2016 reporting. For example, from the series' pre-recession peak of July 2005, March 2017 New-Home Sales, again, were down by 55.3% (-55.3%), while March 2017 Single-Unit Housing Starts were down by 55.0% (-55.0%) from the January 2006 pre-recession high of that series (see *Commentary No. 881*).

Discussed in the *Executive Summary* section, the extreme liquidity bind besetting consumers continues to constrain personal-consumption expenditures and related residential-real-estate sales 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.

Headline March 2017 New-Home Sales Reporting. Reported by the Census Bureau on April 25th, in the context of a downside monthly revision to February activity, and upside monthly revisions to January and December New-Home Sales (counted based on contract signings) March 2017 sales rose month-to-month by a headline, seasonally-adjusted and statistically-insignificant 5.8% +/- 18.1% (all confidence intervals are at the 95% level).

That followed a revised monthly gain of 0.3% [previously 6.1%] in February, a revised gain of 6.2% [previously 5.3%, initially 3.7%] in January, a revised December decline of 3.8% (-3.8%) [previously

down by 7.5% (-7.5%), initially down by 7.0% (-7.0%)]. Net of prior-period revisions, the month-to-month change in March 2017 was a gain of 4.9%, instead of the headline 5.8%, also well shy of being statistically significant.

Year-to-year, March 2017 sales rose by a statistically-insignificant 15.6% +/- 17.6%. That followed a revised annual gain of 11.8% [previously 12.8%] in February 2017, a revised annual gain of 11.2% [previously 6.1%, initially 5.5%] in January 2017, a revised annual gain of 2.4% [previously declines of 1.5% (-1.5%), 0.6% (-0.6%) and initially 0.4% (-0.4%)] in December 2016. This series is extraordinarily unstable and consistently unreliable on a near-term, month-to-month basis and often on a long-term basis, as to whether headline sales actually increased or decreased.

In the arena of continued extreme volatility, consider that the annualized quarterly pace of sales change gyrated from a sales gain in first-quarter 2015 of 50.1%, to a second-quarter 2015 annualized quarterly sales decline of 19.8% (-19.8%). Third-quarter 2015 new-home sales declined by 5.0% (-5.0%), with the fourth-quarter sales gain estimated at 18.7%.

First-quarter 2016 activity showed an annualized gain of 17.9%, with second-quarter 2016 up by 29.5%, and third-quarter activity at an annualized pace of 13.6%. Fourth-quarter 2016 sales contracted at a revised annualized pace of 12.4% (-12.4%) [previously 16.6% (-16.6%), 15.3% (-15.3%) and initially down by 9.7% (-9.7%)]. With initial first-quarter 2017 reporting in place, the series gained and at an annualized quarterly pace of 26.1%.

New-Home Sales Graphs. The regular monthly graph of New-Home Sales is included in the Executive Summary section, along with a six-month moving-average version of the series (Graphs 11 and 13). Added for comparison purposes are parallel graphs of the headline and six-month moving-average versions of March 2017 Housing Starts for single-unit construction, from Commentary No. 881, (Graphs 12 and 14) along with comparative graphs of the Existing-Home Sales and related series (see Graphs 15 to 18).

EXISTING-HOME SALES (March 2017)

Sales Activity Rose Month-to-Month and Year-to-Year, but It Still Held in Non-Recovering Stagnation, Down by 21.5% (-21.5%) from Its Pre-Recession Peak. In the context of a downside revision to February 2017 activity, Existing-Home Sales gained 4.4% month-to-month in March 2017. That was against a revised, deeper month-to-month decline in February of 3.9% (-3.9%) and an unrevised gain of 3.3% in January. March 2017 year-to-year growth rose to 5.9%, versus a downwardly revised 5.2% in February 2017 and an unrevised 3.8% in January 2017.

The series remained in depression (see *Commentary No. 754*). Although March activity was the highest monthly sales level since February 2007, headline March 2017 activity still was down by 21.5% (-21.5%) from the pre-recession peak of the series. Smoothed with a six-month moving average, Existing-Home Sales activity held in low-level stagnation, albeit currently in a fluctuating, minimal uptrend. All that said, the National Association of Realtors (NAR) has touted the aggregate 2016 sales level as the strongest since 2006. Yet the 2016 annual sales rate still was down by 15.9% (-15.9%) from 2006, and down by 22.8% (-22.8%) from the pre-recession peak annual-average sales rate of 2005.

Along with the broader real estate and construction measures and New-Home Sales, Existing-Home Sales never recovered from the economic collapse into 2009, a common issue for the industry. After going through a period of protracted, low-level stagnation and non-recovery, general housing construction and related smoothed sales activity continued broadly with minimal variation around flat-to-rising trends, but well below anything approaching formal recovery in economic activity, and well shy of approaching renewed economic expansion.

Discussed in the *Executive Summary*, the underlying problem remains that a U.S. consumer remains in an extreme liquidity bind, which prevents a meaningful recovery in national home-sales growth. 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 consumer has been unable to sustain positive growth in broad U.S. economic activity, particularly as tied to residential properties.

Specifically, Existing-Home Sales activity in March 2017, again, was down by 21.5% (-21.5%) from its June 2005 pre-recession peak, a high that has not been matched since the ensuing economic collapse into 2009. In like manner, headline monthly Housing Starts remained down by 46.5% (-46.5%) from their January 2006 pre-recession high (see *Commentary No. 881*).

Headline March Detail for Existing-Home Sales. Based on actual closings of home sales, the National Association of Realtors® reported April 21st a seasonally-adjusted, headline monthly gain of 4.39% in March 2017 Existing Home Sales, following a revised decline of 3.87% (-3.87%) [previously down by 3.69% (-3.69%)] in February and an unrevised gain of 3.27% in January.

Year-to-year growth in March 2017 existing sales was 5.94%, versus a revised annual gain of 5.19% [previously 5.38%] in February 2017 and an unrevised 3.83% annual gain in January 2017.

Going back a year on quarter-to-quarter activity, first-quarter 2015 Existing-Home Sales showed an annualized quarterly sales decline of 2.6% (-2.6%), with the second-quarter 2015 pace of annualized growth at 19.5%. Third-quarter 2015 growth slowed to an annualized pace of 9.7%, with fourth-quarter 2015 activity contracting at an annualized pace of 14.2% (-14.2%).

First-quarter 2016 sales expanded at an annualized 12.6% pace of growth, followed by 9.3% in second-quarter 2016, with an annualized contraction of 6.9% (-6.9%) in third-quarter 2016 activity and a 13.0% gain in fourth-quarter 2016 activity. With initial full, first-quarter reporting in place, the annualized growth slowed to 5.6%.

The quality of data underlying this series remains questionable, as seen in erratic reporting over the years (*Graph 15*). All that said, smoothed for irregular distortions, the reporting remained statistically consistent with a period of low-level, broad stagnation, moving from up-trending to flat and to up-trending, again, as indicated in *Graph 17* of the *Executive Summary*.

Proportion of Distressed Sales Eased to 6% in March, with All-Cash Sales Falling to 23%. The NAR estimated the portion of March 2017 sales in "distress" at 6% (5% foreclosures, 1% short sales) down from 7% (6% foreclosures, 1% short sales) in February 2017, and down from 8% (7% foreclosures, 1% short sales) in March. The 7% in foreclose in February 2017 had been the highest level since May 2016.

The September 2016 reading of existing-home sales in distress at 4% (3% in foreclosure, 1% short sales) had been the lowest level since the NAR began such surveying such numbers in October 2008. Consider, though, that October 2008 already was more than three years into the housing-market collapse.

Reflecting continued lending problems and stresses within the financial system, including related banking-industry and consumer-solvency issues, as well as the ongoing influx of speculative investment money into the existing-housing market, the NAR estimated that all-cash sales declined to 23% in March 2017, versus 27% in February 2017 and 25% in March 2016.

Existing-Home Sales Graphs. Shown in the Executive Summary, Graph 15 plots the traditional headline Existing-Home Sales monthly detail. Such is supplemented by Graph 17 of the six-month moving average of Existing-Home Sales. Accompanying the Existing-Home Sales plots are comparative graphs of March 2017 aggregate Housing Starts activity, from Commentary No. 881, where both series reflect activity in terms of single- and multiple-housing units (see Graphs 16 and 18). Graphs 11 to 14 show comparative graphs of New-Home Sales and related series.

WEEK, MONTH AND YEAR AHEAD

Intensifying Economic Woes Promise an Increasingly-Compromised, Frustrated Fed and Deteriorating U.S. Dollar Support. The outlook for future FOMC activity was updated in the *Opening Comments* and *Hyperinflation Watch* of *Commentary No. 880*, and previously reviewed in *Commentary No. 873*. Such will be looked at anew in tomorrow's *Commentary No. 883*, along with a late assessment of current economic activity, following the initial estimate of first-quarter 2017 GDP. Circumstances and outlook remain as broadly outlined in *No. 859 Special Commentary*.

The following discussion has changed little from recent comments, although it should be subject to some update tomorrow. As reflected in common experience, actual U.S. economic activity generally continues in stagnation or downturn, never having recovered fully its level of pre-economic-collapse (its pre-2007-recession peak). While the latest headline GDP shows economic expansion of 12.2% since that series recovered its 2007-pre-recession high in 2011, no other "recovered" economic series has come close to showing that expansion either in terms of magnitude or in the purported brevity of the depression. Most of the better-quality series have remained in continuing, not-recovered status, in a period of protracted downturn that now rivals that of the Great Depression (see <u>Commentary No. 869</u>). With new signals for intensifying, near-term economic woes continuing in hand, the FOMC soon should shift policies, once again, reverting to some form of quantitative easing, in an effort to address related, intensifying solvency risks in the domestic banking system.

Discussed in <u>No. 859 Special Commentary</u>, 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 prospects

for long-range U.S. Treasury solvency and for stability and strength in the U.S. dollar. Any forthcoming economic stimulus faces a nine-month to one-year lead-time—now moved fully into 2018—before it meaningfully affects the broad economy. Needed at the same time are a 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 (again, see *No.* 859).

Prior General Background. No. 859 Special Commentary also updated near-term economic and inflation conditions, and the outlook for same, including the general economic, inflation and systemic distortions evolving out of the Panic of 2008 that have continued in play, and which, again, need to be addressed by the new Administration in the immediate future (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 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*).

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 been making loud noises of continuing to raise interest rates, in order to contain an overheating economy. 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: *Commentary No. 869*, *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 (Most-Recent Coverage of Specific Series or with Special Features):

<u>Commentary No. 881</u> reviewed March 2017 Industrial Production, Housing Starts and the Cass Freight IndexTM, along with an economic update in advance of the initial first-quarter 2017 GDP estimate.

<u>Commentary No. 880</u> detailed the 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.

<u>Commentary No. 879</u> covered March 2007 Employment and Unemployment, Help-Wanted Advertising and Money Supply M3, the ShadowStats Ongoing Measure.

<u>Commentary No. 878</u> reviewed detail on the February 2007 Trade Deficit and Construction Spending, along with the latest update on Consumer Liquidity conditions.

<u>Commentary No. 877</u> 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.

<u>Commentary No. 876</u> 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.

<u>Commentary No. 875</u> 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 IndexTM.

<u>Commentary No. 873</u> 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.

<u>Commentary No. 872</u> 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.

<u>Commentary No. 871</u> covered prior reporting of February Labor Conditions, updated Consumer Liquidity and the ShadowStats Ongoing M3 Measure for February 2017, and a revised FOMC outlook.

<u>Commentary No. 869</u> reviewed and assessed underlying economic reality and a broad variety of indicators in the context of the second-estimate of fourth-quarter 2016 GDP.

<u>General Commentary No. 867</u> 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.

<u>Commentary No. 864</u> 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.

<u>Commentary No. 861</u> 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*.

<u>No. 859 Special Commentary</u> reviewed and previewed economic, financial and systemic developments of the year passed and the year or so ahead.

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 inflation and to overstate economic activity—as generally viewed in the common experience of Main Street, U.S.A.—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 eleven years—have been without precedent in the post-World War II era of modern-economic reporting. The severity and ongoing nature of the downturn provide particularly unstable headline economic results, with the use of concurrent seasonal adjustments (as seen with retail sales, durable goods orders, employment and unemployment data). That issue is discussed and explored in the labor-numbers related <u>Supplemental Commentary No. 784-A</u> and <u>Commentary No. 695</u>.

Further, discussed in <u>Commentary No. 778</u>, a heretofore unheard of spate of "processing errors" surfaced in 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 <u>Commentary No. 823</u>.

Combined with ongoing allegations in the last year or two of Census Bureau falsification of data in its monthly Current Population Survey (the source for the BLS Household Survey), these issues have thrown into question the statistical-significance of the headline month-to-month reporting for many popular economic series (see <u>Commentary No. 669</u>). John Crudele of the <u>New York Post</u> continues his investigations in reporting irregularities: <u>Crudele Investigation</u>, <u>Crudele on Census Bureau Fraud</u> and <u>John Crudele on Retail Sales</u> (worth a look in the context of the just-published 2017 benchmarking).

PENDING RELEASE: *Updated* - Gross Domestic Product (GDP)—First-Quarter 2017, "Advance" or First-Estimate. The Bureau of Economic Analysis (BEA) will publish its first guesstimate or "advance" estimate of first-quarter 2017 Gross Domestic Product (GDP) tomorrow, Friday, April 28th. Accordingly, detail will be covered in tomorrow's *Commentary No.* 883.

Noted in the *Opening Comments* of *Commentary No. 881*, consensus expectations were likely to settle in around 1.0% annualized real growth, which has happened. As a result, the consensus likely will be surprised on the downside. Seen in recent years, the BEA tends to target the consensus outlook with its initial estimate and likely will do its best to guide, but not to shock the market expectations lower, if it sees a contraction, or something close to contraction. In that circumstance, the BEA would tend to keep its initial headline reporting above zero, but well below consensus. When the initial headline detail comes in much below the consensus, such usually signals a downside first revision, with barely positive headline detail often a precursor to a headline contraction in the first revision.