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

COMMENTARY NUMBER 905
July Industrial Production, Retail Sales, Housing Starts, Freight Index

August 17, 2017

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For the Second Time, Industrial Production Has Regained Its Pre-Recession Peak of December 2007, Now Up by 0.14%, but Still Down 1.07% (-1.07%) from Its November 2014 Two-Month Recovery Peak

Once Again, the Production Recovery Reflected Tops in Oil and Gas Exploration and Extraction, Which Are Vulnerable to Low Oil Prices

In the Dominant but Still-Faltering Manufacturing Sector: A Record 115 Months of Continued Non-Expansion, with No End in Sight

July Manufacturing Was Shy of Recovering Its Pre-Recession Peak by 6.04% (-6.04%)

Non-Recovered Freight Growth Slowed Anew

Headline July Retail Sales Surged but Were Not Credible

Recession Signal Continued from Low Annual Real Retail Sales Growth

Building Permits and Housing Starts Showed Deepening Contractions: Permits Fell by 2.8% (-2.8%) in First Quarter, by 11.0% (-11.0%) in Second Quarter; Starts Fell by 3.4% (-3.4%) in First Quarter, by 21.9% (-21.9%) in Second Quarter; Both Series Trended Lower in Third Quarter, Based on July Detail

Activity Held Shy of Regaining Pre-Recession Peaks by 46.0% (-46.0%) for Building Permits, 49.2% (-49.2%) for Housing Starts and 53.0% (-53.0%) for Single-Unit Starts, While Multi-Unit Starts Have Fallen Back Anew by 33.6% (-33.6%)

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PLEASE NOTE: The next Regular Commentary*, planned for Friday, August 25th, will cover July New Orders for Durable Goods and New- and Existing-Home Sales.*

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

Today's *Opening Comments and Executive Summary* (August 17th). The ***Opening Comments*** update economic trends evident in the latest headline reporting, both government (production, sales and housing) and private (Cass Freight Index™), while the ***Executive Summary*** (page 7) highlights details and key graphs of the July Industrial Production, Retail Sales (nominal and real) and Housing Starts reporting.

The ***Reporting Detail*** (page 19) provides extended analysis and graphs tied to the latest reporting of Industrial Production, Retail Sales and New Residential Construction.

The ***Consumer Liquidity Watch*** (page 47) has not been revised from the version in the August 14th *Special Commentary*.

The ***Week, Month and Year Ahead*** (page 57) provides links to recent *Commentaries* and previews next week's releases of the July New Order for Durable Goods and New- and Existing-Home Sales.

OPENING COMMENTS AND EXECUTIVE SUMMARY

Despite Mixed Data, Economic Troubles Ahead Continued to Mount—Beware of Falling Oil Prices. In the context of Tuesday's (August 14th) *Special Commentary No. 904*, incorporated here by reference, the major economic indicators released this week showed mixed results, but the signals remained bleak for unfolding economic activity, including indications from a renewed faltering of growth in headline freight activity, covered in these *Opening Comments*.

A strong gain in headline July retail sales—exceeding consensus expectations—was not credible and is subject to downside revisions or offsetting declines in the months ahead. That said, real year-to-year change in the series continued to signal recession.

Notoriously-volatile housing starts and building permits took "unexpected" (as in below-consensus) hits in July, with both series still showing deepening quarterly contractions in first- and second-quarter 2017 activity, with third-quarter 2017 showing a highly tentative, initial early trend for contractions. Where none of the broad housing or construction measures has recovered its pre-recession peak activity, what had been low-level stagnation in recent activity has turned to a downtrend.

Oil Price Declines Offer Major Downside Risk to Production. Today's (August 17th) release of July 2017 industrial production showed a headline monthly gain of 0.2%, minimally below expectations (due only to a revised uptick in the level of June activity). Nonetheless, industrial production minimally regained its pre-recession high for the second time since December 2007, but that happy circumstance also served to highlight economic risks tied to the near-term direction of oil prices.

Reflected in the headline production details is continued non-growth in the dominant manufacturing sector, which still is shy of recovering its pre-recession high by 6.0% (-6.0%). The latest recovery in aggregate production was due to a recovery in oil and gas production and exploration, the same circumstance that also was the driving factor behind the prior production recovery in October and November of 2014, when manufacturing entered its current trend of low-level stagnation. Collapsing oil prices at that time, however, sank oil and gas exploration and, with a little lag, oil and gas extraction as well, sinking the aggregate production series.

A Policy Conundrum for the Federal Reserve? Headline U.S. consumer inflation numbers have been low since oil prices collapsed in the latter part of 2014. That drove industrial production lower and weakened broad headline growth, intensifying already-shaky systemic-solvency risks. Driving the oil prices and headline inflation lower was artificial strength in the U.S. dollar, a circumstance that was orchestrated heavily by the Fed and U.S. Treasury, most likely as part of covert financial sanctions imposed against Russia, tied to the Ukraine circumstance.

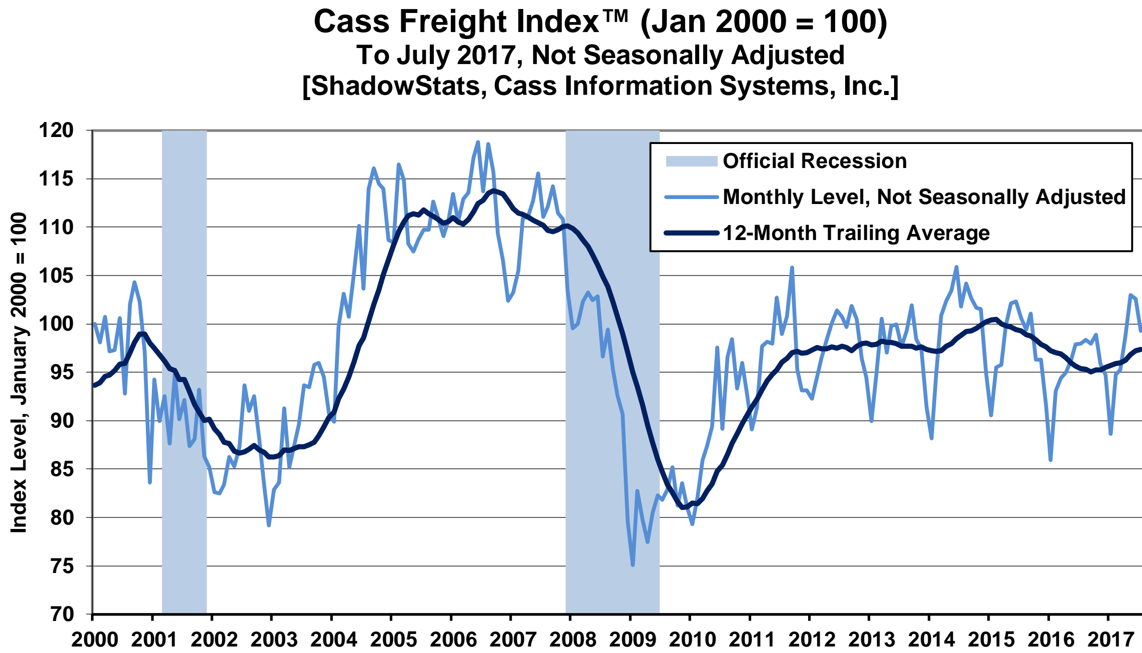
If the Fed wants higher inflation now, as it claims, in order to raise interest rates, all it has to do is allow or trigger a sharp decline in the U.S. dollar, which would spike oil prices and inflation. An easy way to do that would be for the Fed to pull back from its "tightening," moving increasingly, again, to debase the U.S. dollar. If the Fed creates enough headline inflation, market forces will push interest rates higher.

July 2017 Freight Index Growth "Wanes" Anew. The Cass Freight Index™ is an independent, reliable private indicator of real-world economic activity and shifting business patterns. Continued low-level stagnation and non-recovery in the broad economy and general business activity were reflected, once again, in the headline detail of the July 2017 Cass Freight Index™, albeit amidst faltering annual growth, as released August 16th.

Annual Growth Slowed Markedly, With the Series Holding in Low-Level Stagnation, Still Shy of Its Pre-Recession Peak by 11.6% (-11.6%). For the eighth consecutive month, the ninth month in the last ten, year-over-year monthly change in the index was positive, but with a marked slowing in annual growth (see *Opening Comments Graph OC-3*). The broad pattern of activity remained one of low-level stagnation, albeit shifting from minimally uptrending to flattening out. A consecutive string of nineteen months of annual contraction in the Freight Index began in March 2015 and was consistent with the "new" recession signal following the Industrial Production peak in November 2014. Headline industrial production showed a string of twenty-one consecutive months of year-to-year contraction beginning April 2015, a pattern never seen outside of formal economic recession in the 99-year history of the Industrial Production series (see today's *Reporting Detail – Industrial Production*).

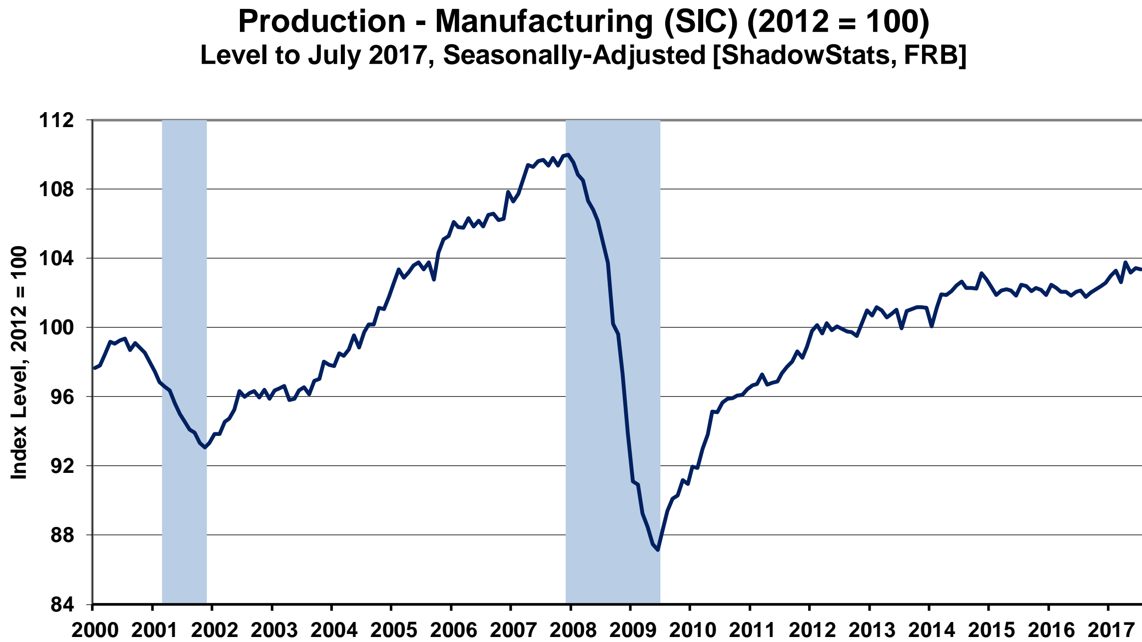
The recent, repeating pattern of year-to-year monthly gains in the Cass Index hag excited trucking industry speculation that the recession in freight activity had hit bottom. Nonetheless, the current pattern of year-to-year gains has yet to break out of the non-recovery pattern of the last six years and, again, as shown in *Graph OC-3* annual growth is slowing rapidly. Discussed in *Commentary No. 875* and expanded upon in *Commentary No. 876* on the nature of the business cycle, when economic activity recovers, such happy growth is not clocked formally as new economic expansion, until the series breaks above its pre-recession high.

Graph OC-1: CASS Freight Index ™ Moving-Average Level (2000 to July 2017)



Graph OC-2: Industrial Production - Manufacturing (2000 to July 2017)

(Same as Graph 17 in the Industrial Production Reporting Detail)



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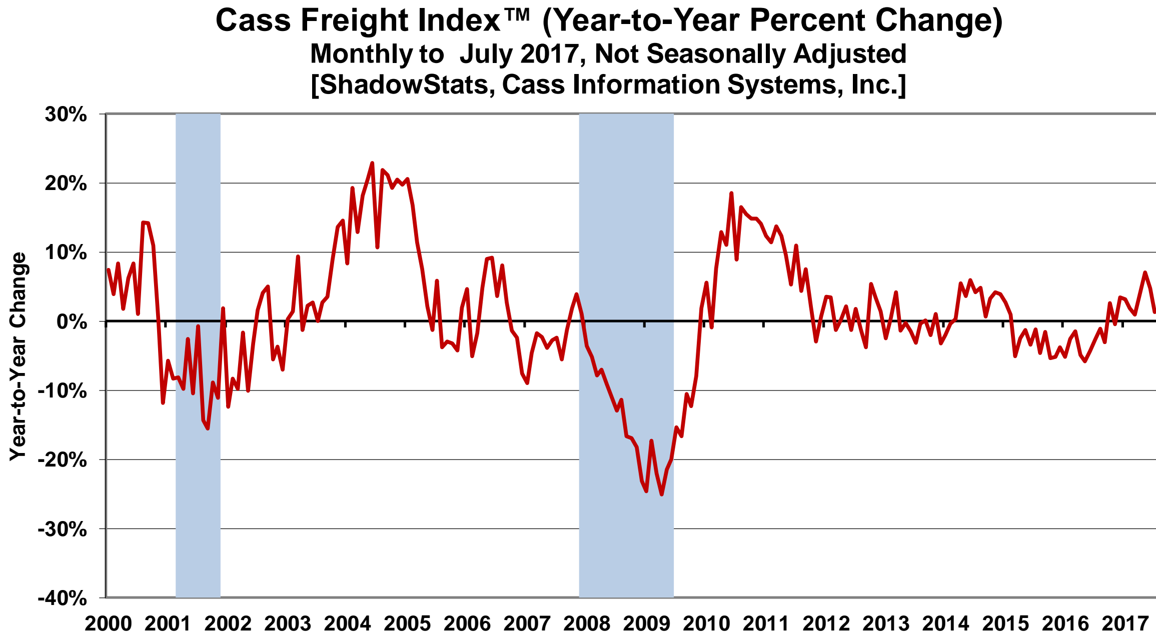
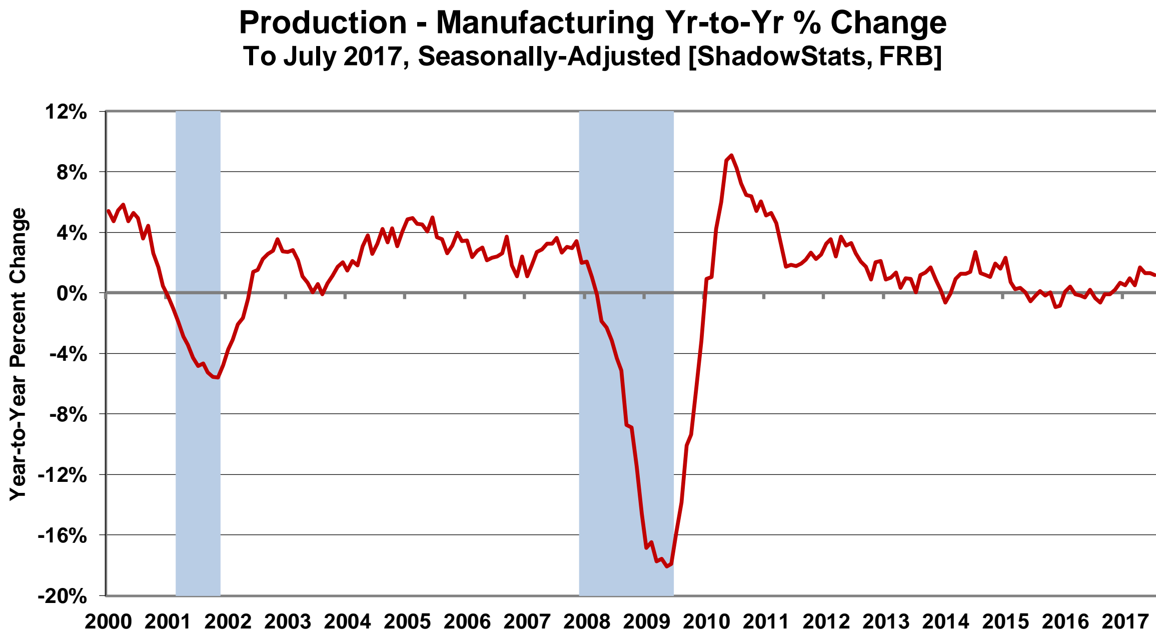
Graph OC-3: CASS Freight Index, Monthly Year-to-Year Percent Change (2000 to July 2017)



Graph OC-4: Industrial Production - Manufacturing, Year-to-Year Percent Change (2000 to July 2017)
(Same as Graph 18 in the Industrial Production Reporting Detail)



Specifically, the ShadowStats smoothed headline reading on the Cass Freight Index, through July 2017 (see *Graph OC-1*), remained down by 14.4% (-14.4%) from recovering its preliminary pre-recession peak

of September 2006, down by 11.6% (-11.6%) from recovering its formal pre-recession peak of December 2007. While the "Recovery" receives the benefit of growth off low levels of activity, the deficit in activity versus the prior-peak level has to be overcome before formal, economic "Expansion" begins to be tallied.

Economic downturns eventually hit bottom, and the current circumstance likely will not be an exception. The economic collapse that formally has been recognized from peak activity in December 2007 to a trough in June 2009 appears to be accurate in terms of timing the trough.

The official contention remains, though, that the headline economy (the real Gross Domestic Product) fully recovered thereafter, entering a period of new and ever-expanding economic growth in second- or third-quarter 2011. ShadowStats contends that the economy never recovered fully, moving instead into a period of protracted, low-level stagnation, which began to turn down anew in December 2014, as reflected in the recent reporting and benchmark revisions to production (*Commentary No. 877*) and durable goods (*Special Commentary No. 888*). This also is seen in *Graph OC-1* in comparison with *Graph OC-2* of Manufacturing Activity through July 2017 (*Same as Graph 17* in the later *Reporting Detail – Industrial Production*; see also the *Opening Comments* of *Commentary No. 901*).

General Background to the Freight Index. Beginning with *Commentary No. 782* (further information is available there), ShadowStats published the detail on the Cass Index, a measure of North American freight volume as calculated by, and used with the permission of Cass Information Systems, Inc. Freight activity is a basic, underlying indicator of commercial activity and broad GDP. Of the combined U.S. and Canadian (North American) GDP in 2014, roughly 91% was attributable to the United States. *Graph OC-1* reflects the monthly freight numbers updated through July 2017. While adjusted for factors such as days in a month, the headline monthly detail is not adjusted for broad seasonality patterns, such as retailers stocking for the holiday shopping season. Accordingly, ShadowStats plots the series using a trailing twelve-month average, which tends to neutralize regular seasonal patterns over the period of a year, along with the unadjusted monthly detail plotted in the background. ShadowStats also has re-indexed the series to January 2000 = 100, to be consistent with other graphs used here. The headline index published by Cass is based at January 1990 = 100.

The plot of the trailing twelve-month average of the freight index shows that it hit a near-term peak in February 2015, consistent with the onset of a "new recession" in December 2014, and had been slowing since, through September 2016, then flattening out and turning minimally to the upside (*Graph OC-1*). Another approach to assessing not-seasonally-adjusted monthly detail is to look at year-to-year change by individual month, as plotted in *Graph OC-3*. The unadjusted monthly detail had been in continual year-to-year decline since March of 2015, down at an intensified annual rate of 3.05% (-3.05%) in September 2016. It rallied to an annual gain of 2.66% in October 2016, but fell back into year-to-year contraction of 0.05% (-0.05%) in November 2016, coming back to the plus-side by 3.46% in December 2016, but easing anew to 3.18% in January 2017, to 1.89% in February 2017 to 0.93% in March 2017, and then turned higher to 3.99% in April 2017 and 7.06% in May 2017, falling back to 4.77% in June 2017 and now slowing to 1.35% in July 2017.

Consider for comparison purposes *Graph OC-4* (same as later *Graph 18* in the *Reporting Detail*) of the year-to-year change in the dominant Manufacturing sector of Industrial Production. Again, as reflected here and also in the *Opening Comments* of *Commentary No. 901*, New Orders for Durable Goods tends to lead Manufacturing Sector production activity, which is closely tied to and correlated with freight volume. Once again, with the headline, smoothed freight reading through July 2017 down by 11.6% (-11.6%)

versus its December 2007 pre-recession high, that is the growth deficit that has to be overcome before formal economic "Expansion" begins.

In combination, *Graphs OC-1* and *OC-3* remain consistent with a pattern of collapsing economic and business activity into 2009, low-level stagnation thereafter and a renewed downturn effectively coincident with a "new" recession, which, again, likely will be timed from December 2014, whether or not it has bottomed. Where freight activity also is heavily correlated with Retail Sales activity, it is not confirming the purported headline retail sales boom seen in July 2017 (see today's *Reporting Detail – Retail Sales*).

EXECUTIVE SUMMARY: Industrial Production—July 2017—Production Minimally Regained Its Pre-Recession Peak for a Second Time; Manufacturing Still Is Shy of Initial Recovery by 6.04% (-6.04%). July 2017 industrial production rose month-to-month by a headline 0.19% (up by 0.30% net of revisions), which was enough to push headline production detail above its pre-recession peak activity of December 2007 by 0.14%. That was the second such "recovery" for the series, which still is shy by 1.07% (-1.07%) from topping the brief, two-month recovery of October and November 2014. In contrast, the otherwise stagnant, but dominant Manufacturing Sector remained 6.04% (-6.04%) shy of recovering its pre-recession peak of December 2007, having completed a record 115 consecutive months of non-expansion, exceeding the duration of the production downturns tied to retooling post-World War II, and the initial down-leg of the Great Depression. See both the *Opening Comments* and the *Reporting Detail* for extended discussion of the "recovery" circumstance.

Headline Industrial Production. Headline July 2017 production gained month-to-month by 0.19% , following a revised gain of 0.35% in June, an unchanged 0.00% in May, a revised gains of 0.94% in April, 0.22% in March, an unrevised gain of 0.24% in February and an unrevised decline in January of 0.30% (-0.30%). Net of prior-period revisions, July 2017 production rose month-to-month by 0.30%, which also was the consensus outlook for the month.

Detailed by major industry group, the headline July 2017 monthly aggregate gain of 0.19% was composed of a monthly decline of 0.07% (-0.07%) in Manufacturing activity, a 1.56% gain in Utilities and a gain of 0.52% in Mining.

Year-to-year change in the aggregate July 2017 industrial production was a gain of 2.19%, versus revised monthly gains of 2.08% in June 2017, 2.09% in May 2017, 1.98% in April 2017, 1.37% in March 2017, an unrevised gain of 0.42% in February 2017 and an unrevised contraction of 0.02% (-0.02%) in January 2017.

Production Activity and Graphs—Corrected and Otherwise. In the context of the downside 2017 benchmark revisions to production of March 31st (see *Commentary No. 877*), and the subsequent regular monthly reporting through today's headline production activity for July 2017, index level and annual growth details are found in and plotted in the *Reporting Detail* (*Graphs 13* to *16*), along with the drill-down graphs of major subcomponents of the production series (*Graphs 17* to *24*).

The level of headline production showed a topping-out process in third- and fourth-quarter 2014, followed by deepening quarterly downturns into first- and second-quarter 2015, with the second-quarter 2015 also beginning a string of quarterly year-to-year contractions. Third-quarter 2015 showed some bounce, but activity in fourth-quarter 2015 and in first- and second-quarter 2016 turned down anew, dropping sharply

into negative quarter-to-quarter growth and continuing year-to-year decline. Third-quarter 2016 growth was positive on a quarter-to-quarter basis, but continued in annual contraction. That pattern repeated in fourth-quarter 2016. That seventh straight quarter of annual contraction was a circumstance never seen in industrial production surveying outside of periods that eventually were recognized formally as recessions.

With the reporting of first-quarter and second-quarter 2017 details, production showed both annual and quarterly gains, although the headline activity had remained below pre-recession highs seen in 2007, until the headline July 2017, which just took headline growth above the December 2007 peak for a second time as discussed in the *Opening Comments*.

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

Graph 1 shows official, headline industrial production reporting, but indexed to January 2000 = 100, instead of the Fed's formal index that is set at 2012 = 100. The 2000 indexing simply provides for some consistency in the series of revamped "corrected" graphics including real retail sales, new orders for durable goods and the GDP. Those "corrected" numbers are covered respectively in *Graphs 3* and *4* of the next section, *Commentary No. 901* and *Advance Commentary No. 902-A* (also see the *ECONOMY* section of *No. 859 Special Commentary*. The indexing does not affect the appearance of the graph or reported growth rates (as can be seen with a comparison of *Graph 1* here to *Graph 15* in the *Reporting Detail* section).

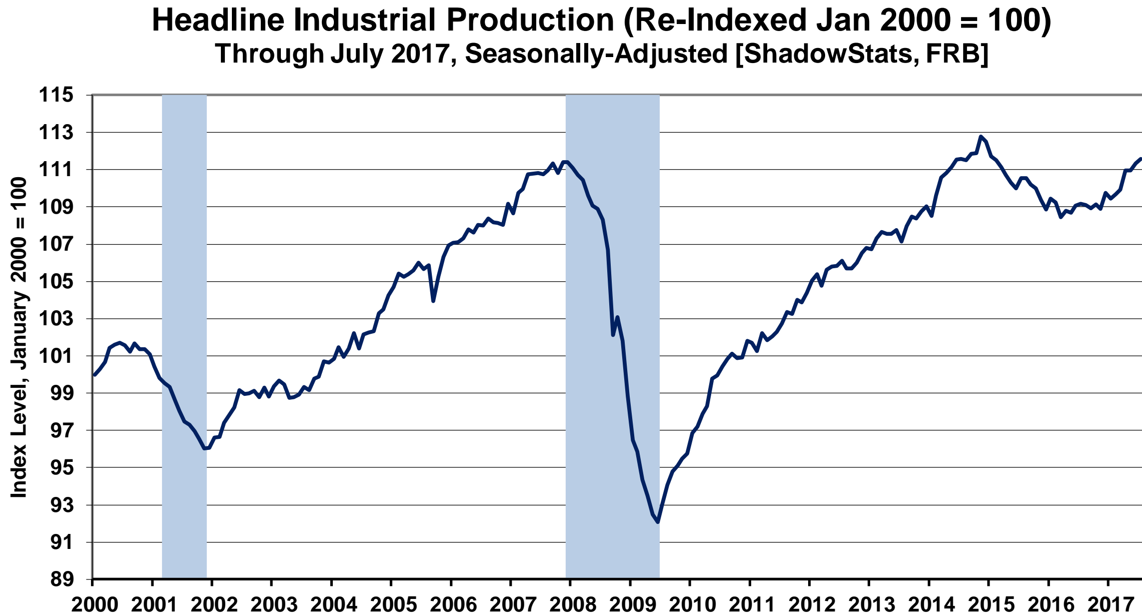
Graph 2 is a recast version of *Graph 1*, corrected for the estimated understatement of the inflation used in deflating certain components of the production index. Estimated hedonic-inflation adjustments have been backed-out of the official industrial-production deflators used for headline reporting.

This "corrected" *Graph 2* shows some growth in the period subsequent to the official June 2009 trough in production activity, but that upturn has been far shy of the short-lived full recovery and the renewed expansion reported in official GDP estimation (see *Commentary No. 869* and the *ECONOMY* section of *No. 859 Special Commentary*). Unlike the headline industrial production data and the headline GDP numbers, corrected production levels never recovered pre-recession highs, although the headline aggregate production index quickly backed off its official two-month "recovery" in October and November 2014, and the headline manufacturing sector still never has recovered its December 2007 pre-recession peak. Instead, the "corrected" series entered a period of protracted low-level, but up-trending, stagnation in 2010, with irregular quarterly contractions seen through 2013, an irregular uptrend into 2014, a topping-out in late-2014, generally turning lower through fourth-quarter 2016 and into early-2017, with a small uptick recent activity.

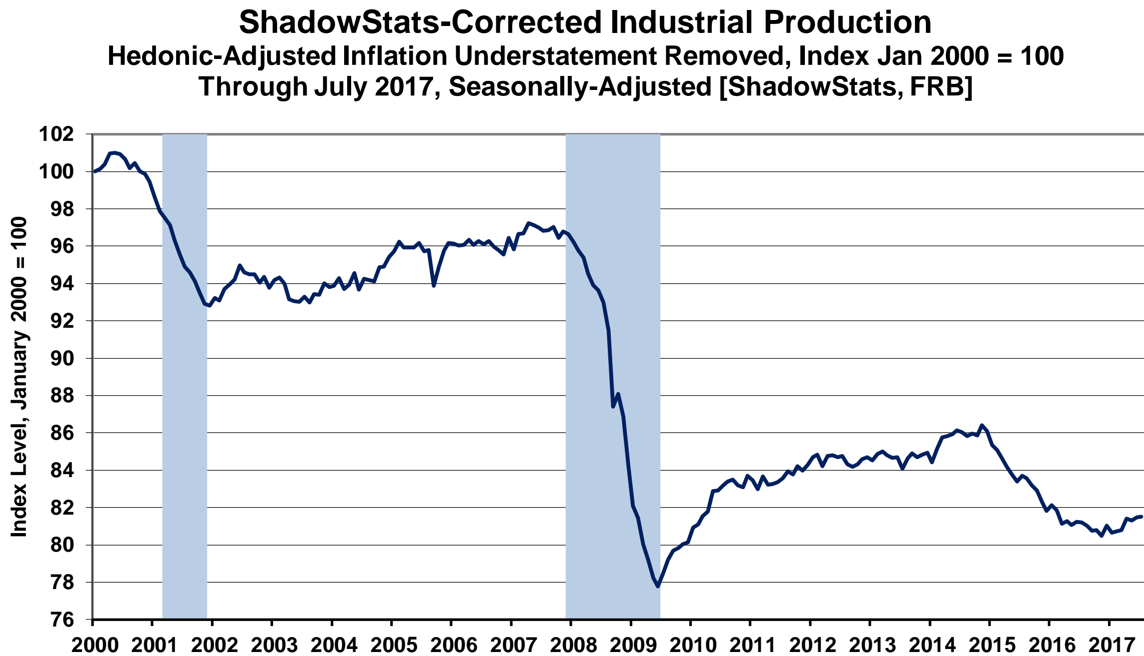
Where the corrected series has remained well shy of a formal recovery, both the official and corrected series suffered an outright contraction in both first- and second-quarter 2015; that is a pattern of severe economic weakness last seen during the economic collapse. Despite the brief third-quarter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

year contraction began in second-quarter 2015 and continued through fourth-quarter 2016. First-quarter 2017 GDP grew both quarter-to-quarter and year-to-year, as did second-quarter 2017, with July 2017 activity suggesting continued movement in that area, as discussed in the *Reporting Detail*.

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



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



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Retail Sales (Nominal and Real)—July 2017—Sales Surged Month-to-Month On Top of Upside Prior-Month Revisions, Yet the Recession Signal Remained in Play. Contrary to indications of much weaker activity, including soft auto sales, headline nominal real retail sales in July 2017 surged more than expected, up by 0.6% for the month, on top of upside revisions to June and May activity. Net of the prior-month's revisions, the headline July 2017 monthly gain would have been 1.1%.

Such growth and the magnitude of related revisions simply are not credible at this time (keep in mind that the series went through its annual benchmark revisions just shy of fourth months ago (see *Commentary No. 882*). A little closer to real-world activity, indications of currently declining auto sales, instead of headline gains, for example, have been suggested from a variety areas ranging from declining production, manufacturers' shipments and imports to soft industry reporting of July auto sales. The Census Bureau likely played some games with its often volatile reporting, and the unusual growth patterns are fair bets to be revised out of later headline July guesstimates, or to be offset by weaker headline reporting in the next month or two. Discussed in the *Reporting Detail*, financially-strapped consumers purportedly boosted their discretionary spending in recent months, at the same time they cut back on purchases of food, clothing and gasoline.

Nominal Retail Sales. The "advance" estimate of July 2017 Retail Sales showed nominal (before inflation adjustment) monthly growth of 0.60%, following revised monthly gains of 0.26% in June 2017 and 0.04% May 2017. Previously, monthly sales in June and May had been reported in contraction. Net of the upside revision to June activity, July 2017 sales surged month-to-month by 1.13%.

Nominal year-to-year growth in July 2017 Retail Sales was 4.22%, versus upwardly revised annual gains of 3.35% in June 2017 and 4.17% in May 2017.

Real Retail Sales—July 2017—In the Context of Strong Nominal Sales and Upside Revisions, Some Uptick in July Consumer Inflation Took Back a Bit of the Headline Surge. Adjusted for CPI-U inflation, real month-to-month retail sales rose by 0.50% in July 2017, versus 0.29% in June 2017 and 0.17% in May 2017. Real annual Retail Sales growth rose to 2.45% in July 2017 from 1.68% in June 2017 and 2.25% in May 2017. As previously reported, year-to-year growth in real June 2017 Retail Sales had dropped to 1.18%. Further analysis is found in the *Reporting Detail*.

<u>Solid Recession Signal Remained in Play, despite a Back-Up in the July Annual Real Growth Rate.</u> During normal economic times, annual real growth in Retail Sales at or below 2.0% signals an imminent recession. That signal broadly had been in play since February 2015 (the "new" recession likely still will be timed from December 2014, based on industrial production, retail sales and other indicators), suggesting a deepening, broad economic downturn.

Real annual Retail Sales growth rose to 2.45% in July 2017, up from revised gains of 1.68% in June 2017, 2.25% in May 2017 and an unrevised 2.23% in April 2017. Despite what likely will prove to be an exaggerated or errant 2.45% growth in July 2017, that monthly reading still is a borderline recession signal. The general recession signal, however, remained solidly in play, with annual growth in second-quarter 2017 real retail sales at 2.05%, down from 2.42% in first-quarter 2017.

Real Retail Sales Graphs, Corrected and Otherwise. In the *Reporting Detail*, *Graphs 31* and *33* show the level of real retail sales activity (deflated by the CPI-U), while *Graphs 32* and *34* show year-to-year percent change. The apparent "recovery" of headline real retail sales shown in the following *Graph 3*

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(again, see also *Graph 31* in the *Reporting Detail*) generally continued into late-2014. Although headline reporting turned down in December 2014, into first-quarter 2015, it turned higher into the third-quarter 2015, slowed to a near-standstill in fourth-quarter 2015 and contracted in first-quarter 2016, with an uptick in second-quarter 2016, renewed slippage into third-quarter 2016, a further uptick in fourth-quarter 2016 and into early-2017, turning down initially May and June but revising higher and jumping in July.

Nonetheless, headline real growth in retail sales continued to be overstated heavily, due to the understatement of CPI-U inflation used in deflating the retail sales series. Discussed more fully in *Chapter 9* of *2014 Hyperinflation Report—Great Economic Tumble – Second Installment* and *Public Commentary on Inflation Measurement*, deflation by too-low an inflation number (such as the CPI-U) results in the deflated series overstating inflation-adjusted economic growth.

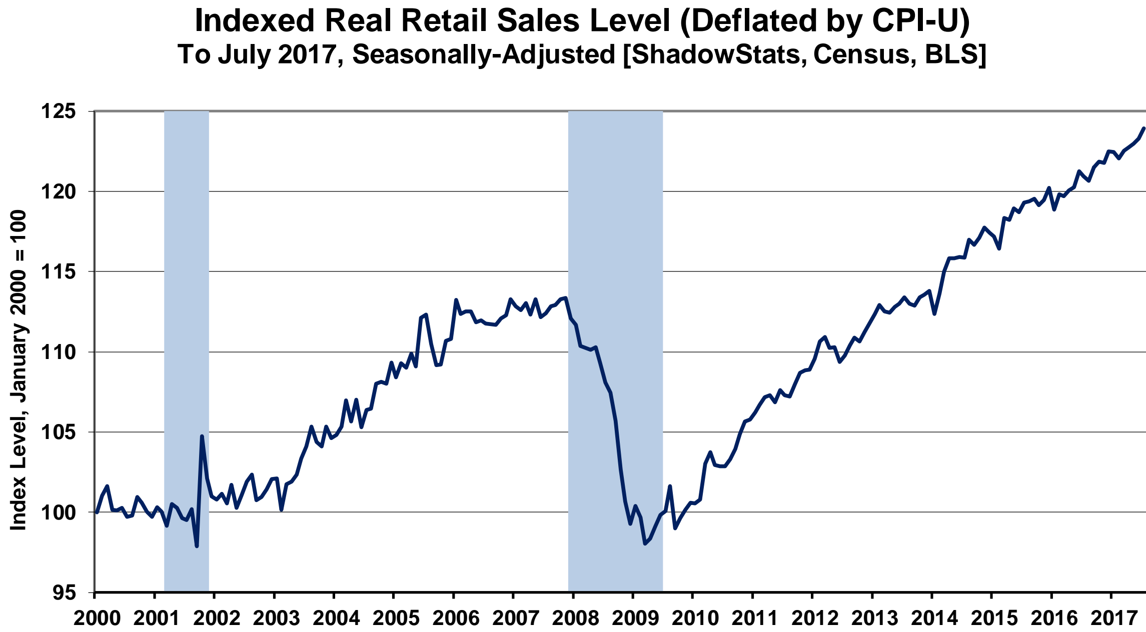
Both of the accompanying graphs are indexed to January 2000 = 100.0 to maintain consistency in the series of graphs related to corrected inflation-adjustment, including the regular plots of the "corrected" industrial production index, the "corrected" new orders for durable goods and the "corrected" GDP. Those "corrected" numbers are covered respectively in *Graphs 1* and *2* of the prior section, *Commentary No. 901* and *Advance Commentary No. 902-A*, and also in *No. 859 Special Commentary*).

The first graph here reflects the official real retail sales series, except that it is indexed, instead of being expressed in dollars. The plotted patterns of activity and rates of growth are exactly the same for the official series, whether the series is indexed or expressed in dollars, again, as is evident in a comparison of *Graph 3* with *Graph 31* in the *Retail Sales—Nominal and Real* in the *Reporting Detail* section.

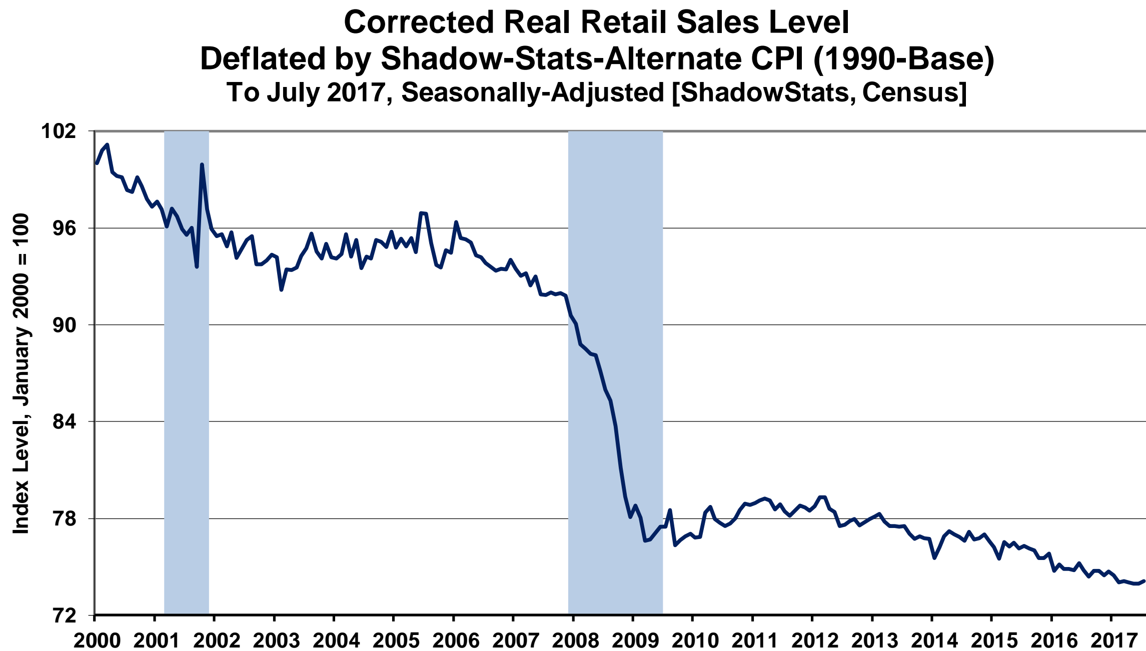
Instead of being deflated by the CPI-U, the "corrected" real retail sales numbers—in *Graph 4*—use the ShadowStats-Alternate Inflation Measure (1990-Base) for deflation. With the higher inflation of the ShadowStats measure, the revamped numbers show a pattern of plunge and stagnation and renewed downturn. That pattern generally is consistent with consumer indicators such as real average weekly earnings (see *Graph CL-7* in the *Consumer Liquidity Watch*) and faltering consumer liquidity conditions (again see the *Consumer Liquidity Watch* and the *ECONOMY* section of *No. 859 Special Commentary*). Extended coverage is found in the *Reporting Detail*.

[Graphs 3 and 4 follow on the next page.]

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



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



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New Residential Construction (Housing Starts)—July 2017—Starts and Permits Declined in the Month, First- and Second-Quarter 2017 Activity Held in Deepening Contractions; Early Third-Quarter Trend Is to the Downside. In the context of a minimal upside revisions to May and minimal downside revisions to June activity, July 2017 Housing Starts declined in the month by a statistically-insignificant 4.8% (-4.8%), while Building Permits dropped by a statistically-insignificant 4.1% (-4.1%). That started early-third-quarter 2017 negative trends for both series, following deepening quarter-to-quarter contractions in first- and second-quarter 2017, again, for both 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 has turned lower with the recent detail, as seen in accompanying *Graphs 5* to *12* (also in *Graphs 35* to *40* in the *Reporting Detail*).

Given the broad pattern of stagnation in both the aggregate starts and permits series, headline total July 2017 activity remained well below any recovery level, with aggregate Housing Starts down from their January 2006 pre-recession high by 49.2% (-49.2%) and Building Permits down by 46.0% (-46.0%) from their September 2005 pre-recession peaks in activity.

In the July 2017 housing starts monthly detail, the dominant (74.1% of total starts) single-unit housing starts sector of that series (*Graphs 9* and *10*) was down from its January 2006 pre-recession peak by 53.0% (-53.0%).

In contrast the smaller count in the multiple-unit category (two units or more), 25.9% 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 33.6% (-33.6%) as of July 2017.

Reflected in the smoothed graphs of this *Executive Summary*, the various housing-starts series generally are flat or downtrending, at a low level of stagnation (*Graph 8* for the aggregate). That reflected a blend of the low-level stagnation in the six-month-smoothed single-unit activity (*Graph 10*), with the more-volatile, smoothed multiple-unit starts (*Graph 12*), which had regained its pre-recession but now has turned lower in an intensifying downtrend.

Housing Starts, Headline Detail. July 2017 housing starts declined month-to-month by 4.8% (-4.8%) followed a downwardly-revised monthly gain of 7.4% in June and a revised and a narrower monthly decline of 2.2% (-2.2%) in May. Net of the prior-period revisions, headline July Housing Starts declined in the month by a still-statistically-insignificant 4.9% (-4.9%). Level-of-activity aggregate detail is plotted in *Graphs 5* to *8* (see also *Graphs 36*, *38*, *39* and *40* in the *Reporting Detail*.

Year-to-year change in the seasonally-adjusted, July 2017 aggregate housing-starts measure showed a statistically-insignificant decline of 5.6% (-5.6%), versus revised annual gains of 1.9% in June 2017 and 0.9% in May 2017.

The July 2017 headline decline of 4.8% (-4.8%) in total Housing Starts reflected declines of 0.5% (-0.5%) in the "one unit" category and 17.1% (-17.1%) in the "five units or more" category. There is a missing balance in the "two to four units" category, which increases month-to-month in July by 166.7%, discussed in the *Reporting Detail*. Graphs of the different sectors follow in accompanying *Graphs 5* to *12*, again, 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 1,155,000 in July 2017, versus a downwardly-revised 1,213,000 [previously 1,215,000] in June 2017. The scaling used in the aggregate housing starts and building permits *Graphs 35* to *40* in the *Reporting Detail* reflects those annualized numbers.

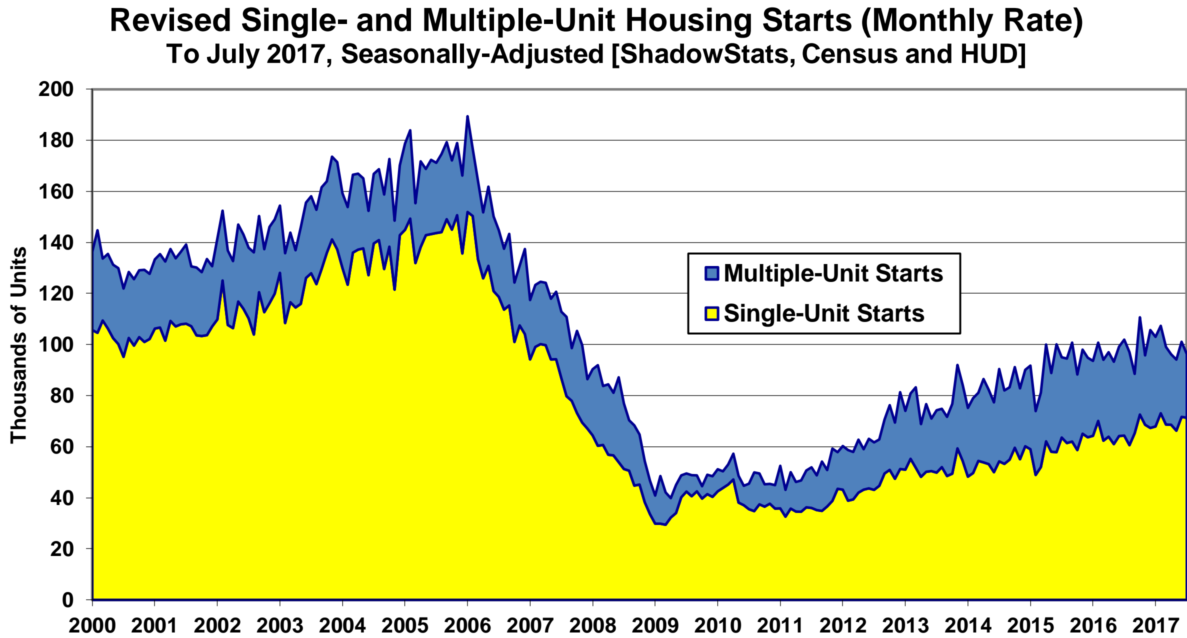
Nonetheless, given the nonsensical monthly volatility in reporting and the exaggerated effect of annualizing the monthly numbers in this unstable series, the magnitude of monthly activity and the changes in same, more realistically are reflected at the non-annualized monthly rate. Consider that the headline, 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 96,250 units in July 2017, instead of the annualized headline level of 1,155,000 units, is used in the scaling of accompanying *Graphs 5* to *12*. 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 7* versus *Graph 36* in the *Reporting Detail*.

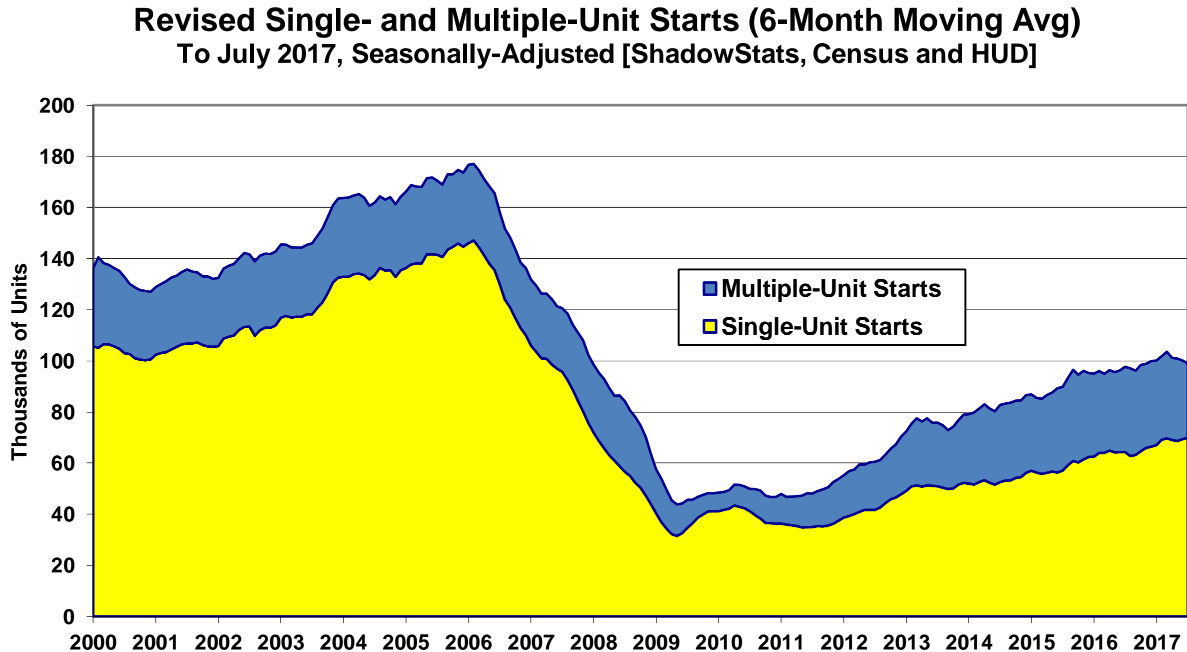
The record monthly low level of activity seen for the present aggregate series was in April 2009, where the annualized monthly pace of housing starts then was down by 79% (-79%) from the January 2006 pre-recession peak for the series. Against that downside-spiked low in April 2009, the July 2017 headline monthly number was up by 142%, but it still was down by 49% (-49%) 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 39* and *40* at the end of the *Reporting Detail*. In fact, as can be seen there in *Graph 40*, 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.

[Graphs 5 to 12 begin on the next page.]

Graph 5: Single- and Multiple-Unit Housing Starts (Monthly Rate of Activity)



Graph 6: Single- and Multiple-Unit Starts (Six-Month Moving Average, Monthly Rate of Activity)



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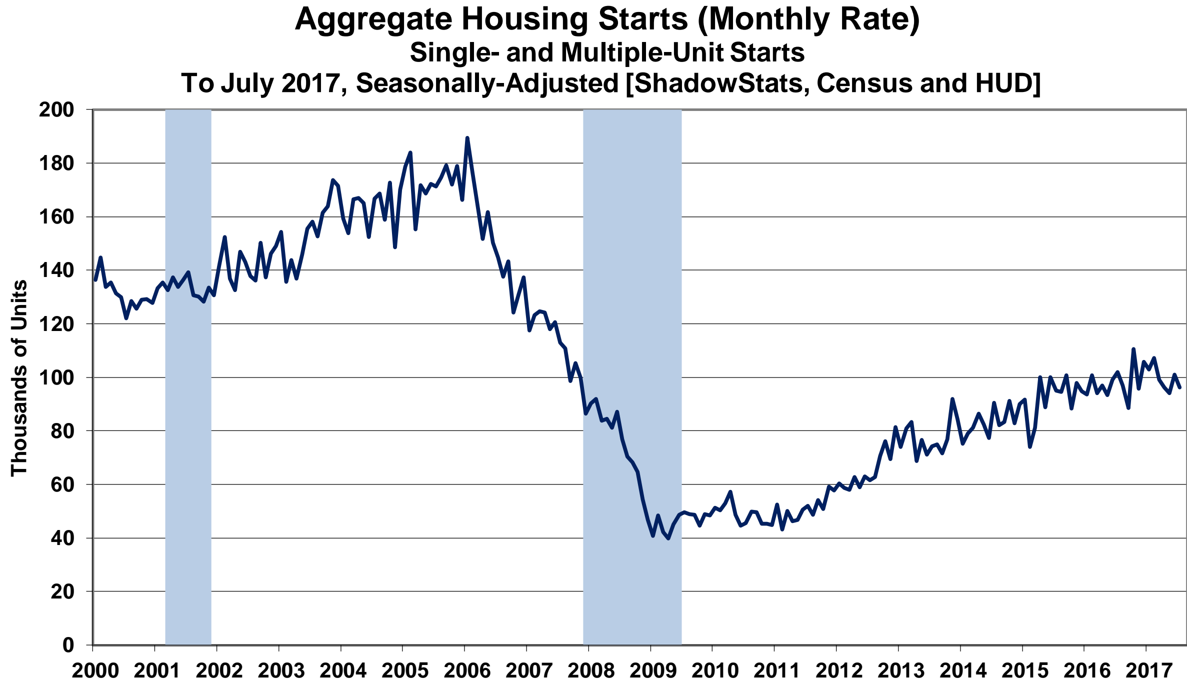
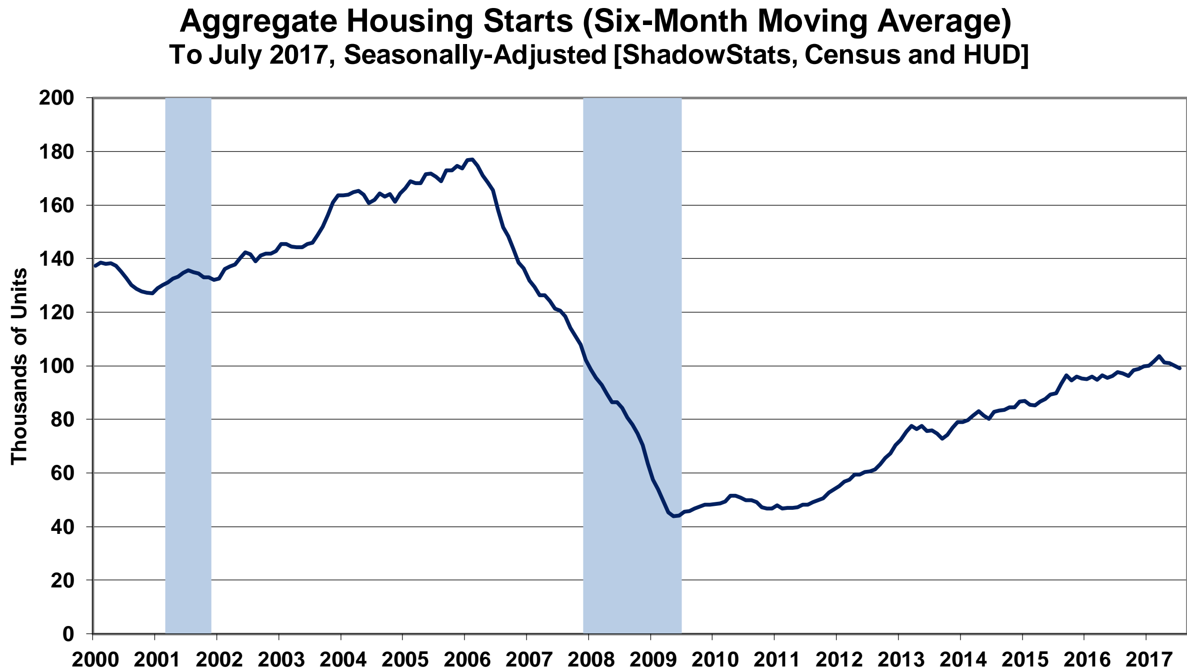
Graph 7: Aggregate Housing Starts (Monthly Rate of Activity)



Graph 8: Aggregate Housing Starts (Six-Month Moving Average, Monthly Rate of Activity)



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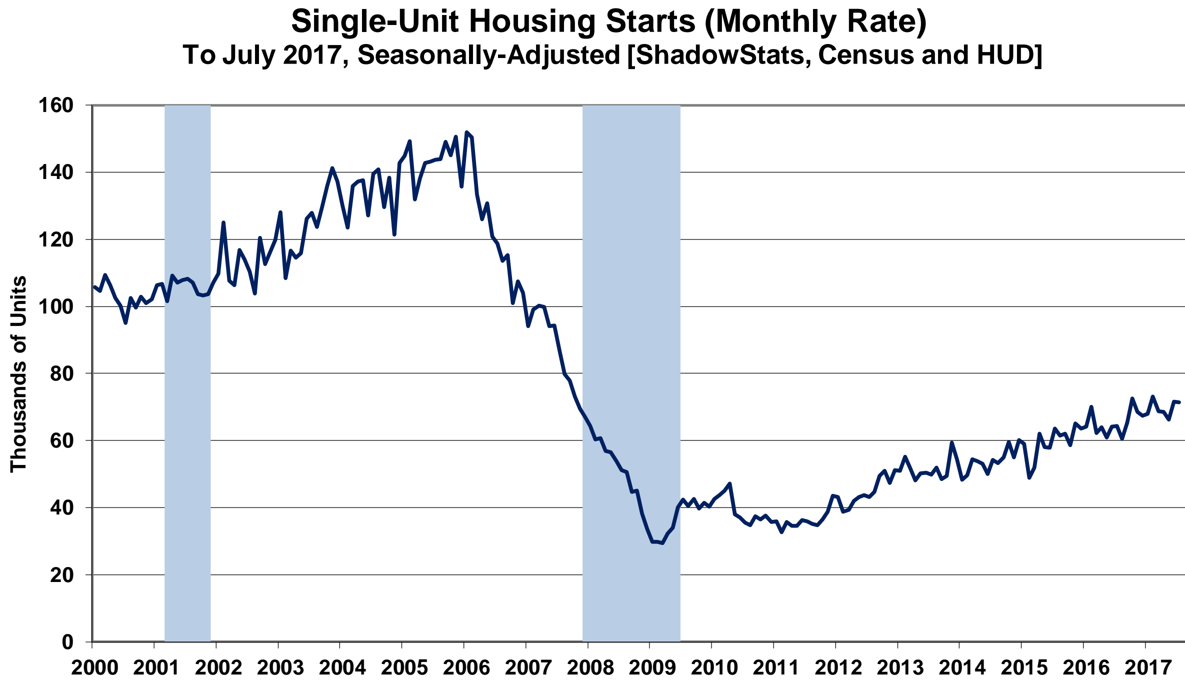
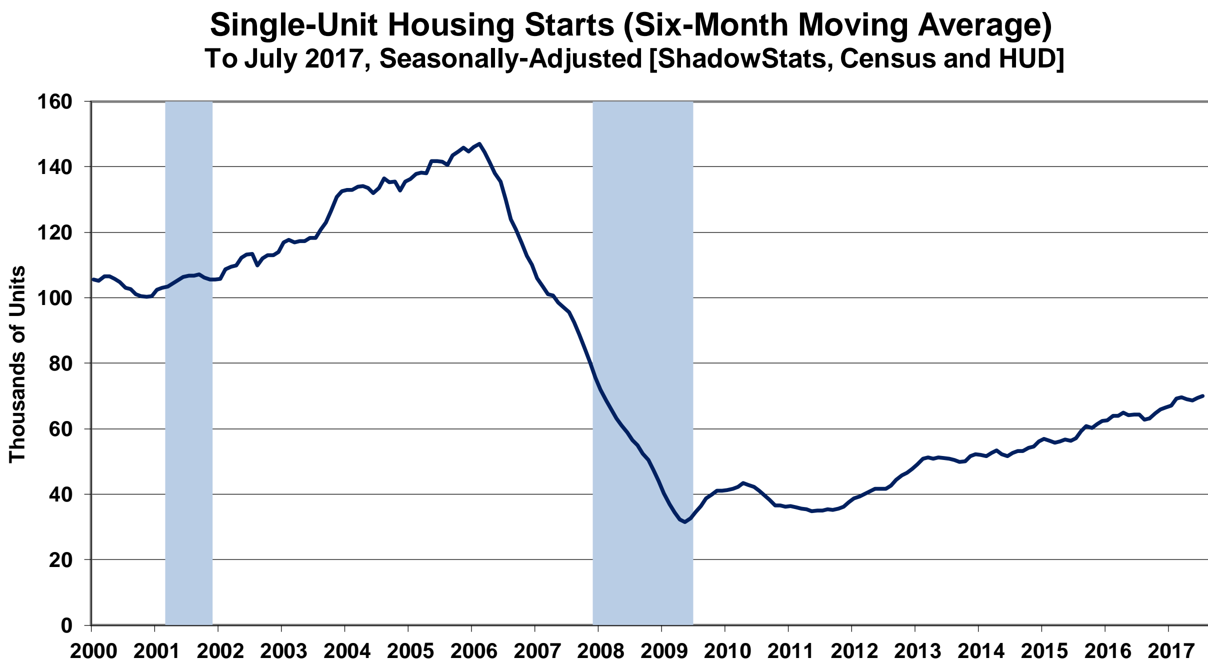
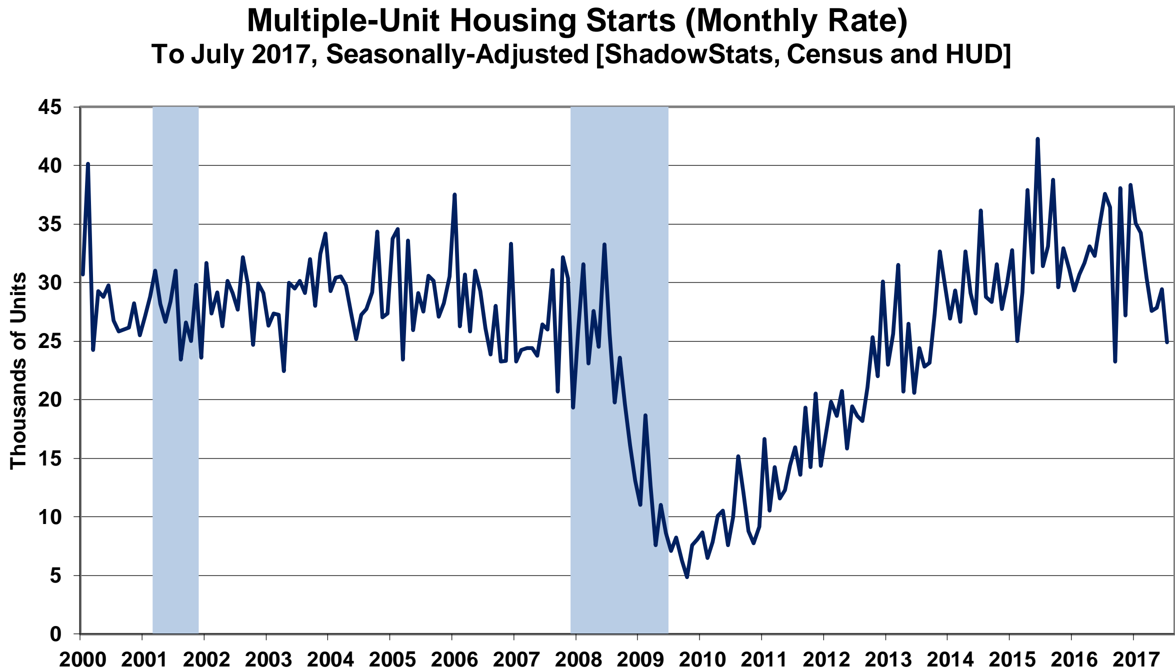
Graph 9: Single-Unit Housing Starts (Monthly Rate of Activity)



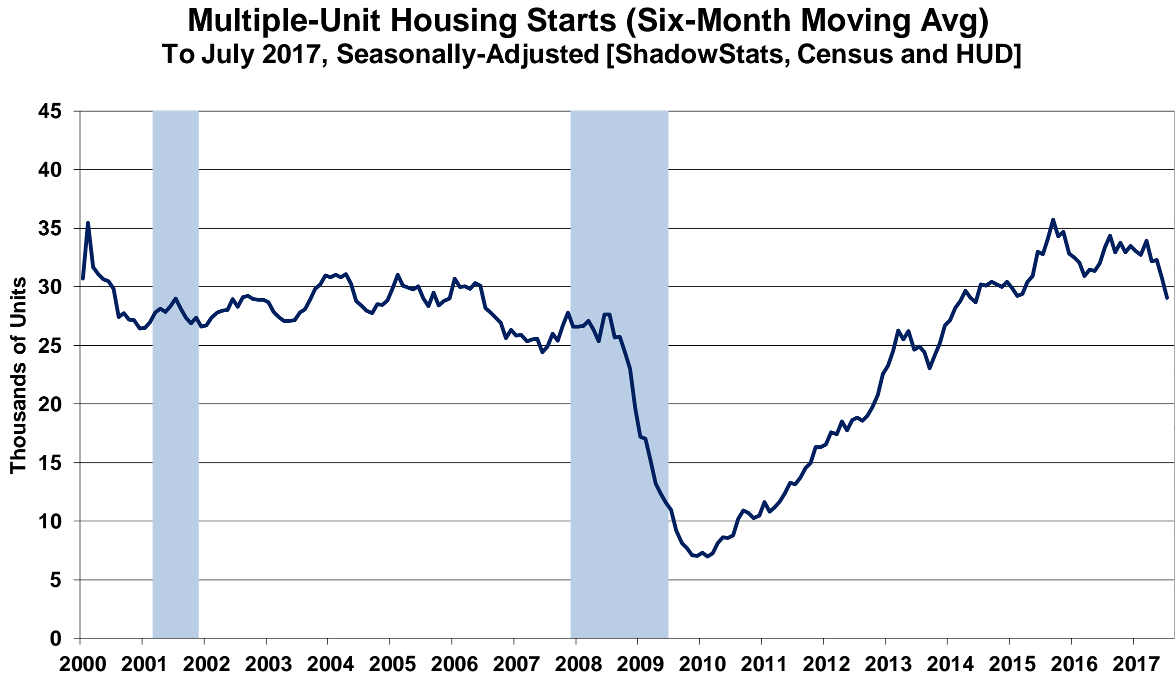
Graph 10: Single-Unit Housing Starts (Six-Month Moving Average, Monthly Rate of Activity)



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



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



[The **Reporting Detail** *follows, with extended graphs and analysis.]*

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REPORTING DETAIL

INDUSTRIAL PRODUCTION (July 2017)

Production Minimally Regained Its December 2007 Pre-Recession Peak for a Second Time; Manufacturing Still Was Shy of Initial Recovery by 6.04% (-6.04%). July 2017 industrial production rose month-to-month by a headline 0.19% (up by 0.30% net of revisions), which was enough to push the headline production detail above its pre-recession peak activity of December 2007 by 0.14%. That was the second such "recovery" for the series, which still is shy by 1.07% (-1.07%) from topping the brief, prior two-month recovery of October and November 2014 (see *Graph 15*). In contrast, the stagnant, but dominant Manufacturing Sector remained 6.04% (-6.04%) shy of recovering its pre-recession peak of December 2007, having completed a record 115 consecutive months of non-expansion (see *Graph 17*).

As was the case in the temporary 2014 recovery, the production gain reflected a effectively a near-term peak in Oil & Gas Extraction (*Graph 28*) and Drilling for Oil & Gas (*Graph 29*), with underlying activity in the dominant Manufacturing Sector holding then in low-level stagnation, just as it is today (see *Graph 17*). Discussed in the *Opening Comments* and the later text surrounding the Mining Sector, the collapse in oil prices during third-quarter 2014 hit the Mining Sector hard, with drilling activity and then lagging extraction activity falling off. With oil prices today more than 50% below the levels in 2014—although they now are off bottom—prices have been mixed, but generally lower than seen with recent near-term peaks. Those softer oil prices just generated the first-hit to drilling activity, since oil prices bottomed out in 2016. A renewed, further downturn in oil prices could pull aggregate production below its pre-2007 recession peak activity, once again.

One of the Better-Quality Series, Industrial Production Still Overstates Headline Activity. Despite the March 31st benchmark revisions (see *Commentary No. 877*), which hit historical production detail hard, current headline production reporting still overstates economic activity tied to understated inflation. With the benchmarked 2016 industrial production representing 59% of the real value of Gross Domestic Product (GDP), the broad economy remains in the harsh reality of ongoing recession, one that has continued from somewhat before 2007. Although just recovering anew by 0.14%, subsequent to briefly topping its pre-recession peak for two months in at the end of 2014, headline production remains troubled by its dominant Manufacturing Sector (76.4% of aggregate production), which never has recovered its pre-recession peak, continuing in low-level, non-recovered economic stagnation (again, see *Graph 17*).

That is irrespective of the continuing happy hype out of the Bureau of Economic Analysis (BEA), which has guesstimated second-quarter 2017 real GDP activity at 13.5% above its pre-recession peak (see *Commentary No. 902-B*). No other major economic series shows anything close to that purported level of activity (see also the discussions in *Commentary No. 877* and *No. 859 Special Commentary*).

Looking at the specific numbers, again, as of headline July 2017 reporting, the Industrial Production Index (2012 = 100) stood at 105.476, regaining for the second time its December 2007 pre-recession peak, by 0.14% at present. It still is below its one-month "expansion" peak level of November 2014 by 1.07% (-1.07%). As a point of clarity, expansion is counted from the first month above the prior high,

which in 2014 was October. Production turned down anew in December 2014. Current headline production will show its first month of expansion in August 2017, assuming it does not turn down anew next month.

Again, the dominant Manufacturing sector (76.4% of Industrial Production, 45% of GDP, as weighted in 2016) never has recovered, with July 2017 manufacturing activity still down by 6.04% (-6.04%) from reclaiming its pre-recession peak level of activity.

Those issues also were expanded upon in *Commentary No. 869*, where the pre-benchmark, but still-relevant pattern of industrial production, in the historical context of that series and broad domestic economic activity, demonstrated that headline GDP activity no longer has any meaningful relationship to underlying economic reality.

Even so, allowing for the merits of the Industrial Production series, the understatement of inflation used in estimating some components of production still results in overstatement of headline production growth, as discussed in the *Executive Summary* and plotted there in *Graphs 1* and *2*.

An overriding issue continuing to hamper policies of the Federal Reserve, as well as the dominant contributing factor behind the major political shift seen with the 2016 presidential election (see *Commentary No. 846*), is that the U.S. economy never really has recovered from the "2007 Recession." The unfolding "new" downturn, intensifying in recent headline data, remains no more than another down-leg in the economic collapse that began to surface in 2005 and 2006 (again, see *No. 859 Special Commentary*).

Headline Industrial Production—July 2017. The Federal Reserve Board released its first estimate of seasonally-adjusted, July 2017 Industrial Production on August 17th. Headline July 2017 production gained 0.19%, following a revised gain of 0.35% [previously 0.39%] in June, an unchanged 0.00% [previously a 0.06% gain, initially unchanged at 0.00%] in May, a revised gain of 0.94% [previously 0.84%, 1.13%, initially 0.98%] in April, a revised gain of 0.22% [previously 0.11%, earlier 0.41%, initially 0.55%] in March, an unrevised gain of 0.24% in February and an unrevised decline in January of 0.30% (-0.30%). Net of prior-period revisions, July 2017 production rose month-to-month by 0.30%, which also was the consensus outlook for the month.

Headline Monthly July 2017 Growth by Major Sector. Detailed by major industry group (see *Graphs 15*, *17*, *22* and *24*), the headline July 2017 monthly aggregate gain of 0.19% [up by 0.30% net of revisions] was composed of a monthly decline of 0.07% (-0.07%) [a gain of 0.09% net of revisions] in manufacturing activity, a 1.56% gain [2.19% net of revisions] in utilities activity and a gain of 0.52% [a gain of 0.03% net of revisions] in mining activity (including oil and gas production).

Year-to-Year Change. Year-to-year change in July 2017 industrial production was a gain of 2.19%, versus revised monthly gains of 2.08% [previously 1.97%] in June 2017, 2.09% [previously 1.95%, initially 2.21%] in May 2017, 1.98% [previously 1.77%, 2.10%, initially 2.19%] in April 2017, 1.37% [previously 1.26%, 1.30%, 1.54%, initially 1.53%] in March 2017, an unrevised 0.42% in February 2017 and an unrevised contraction in January 2017 of 0.02% (-0.02%).

Quarterly and Annual Production Changes. Year-to-year growth rates in quarterly production had continued to slow and then decline, ranging from a positive 1.72% in first-quarter 2015, to annual

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declines of 0.76% (-0.76%) in second-quarter 2015, 1.08% (-1.08%) in third-quarter 2015 and by 2.66% (-2.66%) in fourth-quarter 2015.

The annual declines continued, down by 2.17% (-2.17%) in first-quarter 2016, by 1.34% (-1.34%) in second-quarter 2016 and by 1.24% (-1.24%) in third-quarter 2016. Fourth-quarter 2016 production contracted year-to-year for the seventh-straight quarter by 0.14% (-0.14%).

Given the fourth revision to first-quarter 2017 detail, annual change by quarter rose by a revised 0.59% [previously 0.55%, 0.58%, 0.65%, initially 0.59%], the first annual gain since first-quarter 2015. The second estimate of second-quarter 2017 production gained year-to-year by a revised 2.05% [previously 1.90%]. The early trend for third-quarter activity, based only on initial July 2017 detail is for annual growth of 2.29%

Annualized Quarter-to-Quarter. Going back to first-quarter 2015 industrial production contracted at an annualized quarterly pace of 3.30% (-3.30%), having gained by 2.72% in fourth-quarter 2014. That was followed by a quarterly contraction of 3.97% (-3.97%) in second-quarter 2015, with a third-quarter 2015 production gain of 0.37%, followed by a fourth-quarter 2015 contraction of 3.66% (-3.66%).

The first-quarter 2016 declined by 1.34% (-1.34%), quarter-to-quarter, with a second-quarter 2016 quarterly decline of 0.68% (-0.68%). Third-quarter 2016 industrial production expanded at an annualized pace of 0.78%, with the fourth-quarter 2016 gain a 0.70%.

With the fourth revision to first-quarter 2017 detail, the annualized quarterly gain revised to 1.56% [previously 1.41%, 1.53%, 1.80%, initially 1.53%]. With the first revision to second-quarter 2017 detail, second-quarter 2017 production gained at a revised annualized pace of 5.24% [previously 4.74%].

Production Graphs. The regular two sets of long- and short-term plots of industrial production levels and annual growth rates (*Graphs 13* to *16*) set the background for the drill-down detail graphs of various components of the aggregate industrial series (*Graphs 17* to *30*).

Graphs 13 and *14,* and *Graphs 15* and *16* show headline industrial production activity to date. *Graph 14* shows the monthly year-to-year percent change in the aggregate series, in historical context since World War II. Post-benchmarking, activity was somewhat stronger coming into 2014, but much weaker going into 2015, as detailed in *Commentary No. 877*.

Graph 13 shows the monthly level of the production index post-World War II, with a topping-out and renewed downturn—deepening quarterly contractions in first- and second-quarter 2015, with a bounce in third-quarter 2015, followed by renewed and deeper contractions in fourth-quarter 2015 and first- and second-quarter 2016, a bounce back in third-quarter with gains into July 2017. Such patterns of monthly, quarterly and annual declines post late-2014 to the onset of 2017 (see *Graph 14*) were seen last in the economic collapse into 2009, and historically never seen outside of what would be recognized as formal recessions. *Graphs 15* and *16* show the same series in near-term detail, beginning in January 2000.

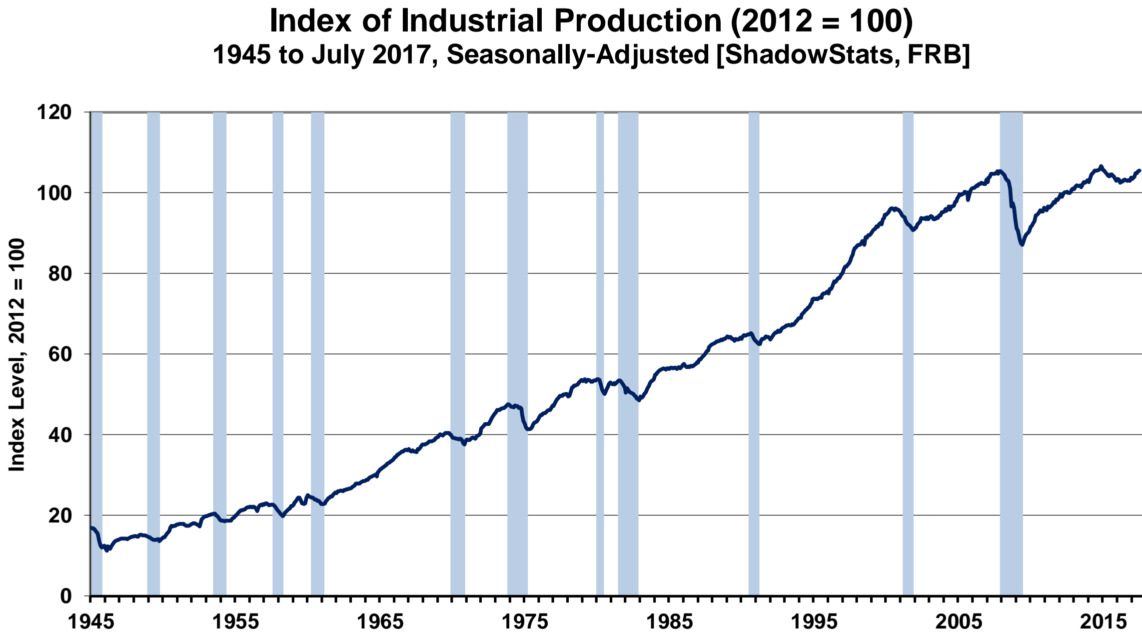
Seen most clearly in *Graph 16*, year-to-year activity dipped anew in 2013, to levels usually seen at the onset of recent recessions, bounced higher into mid-2014, fluctuated thereafter, turning negative, again, into 2015 and through 2016 as seen only in formal recessions. In the context of the 2017 benchmark revisions, year-to-year growth remains well off the recent relative peak for the series, which was 8.55% in June 2010, going against the official June 2009 trough of the economic collapse. Indeed, as shown in

Graph 14, the June 2009 (the end of second-quarter 2009) year-to-year contraction of 15.43% (-15.43%) was the steepest annual decline in production since the shutdown of wartime production following World War II.

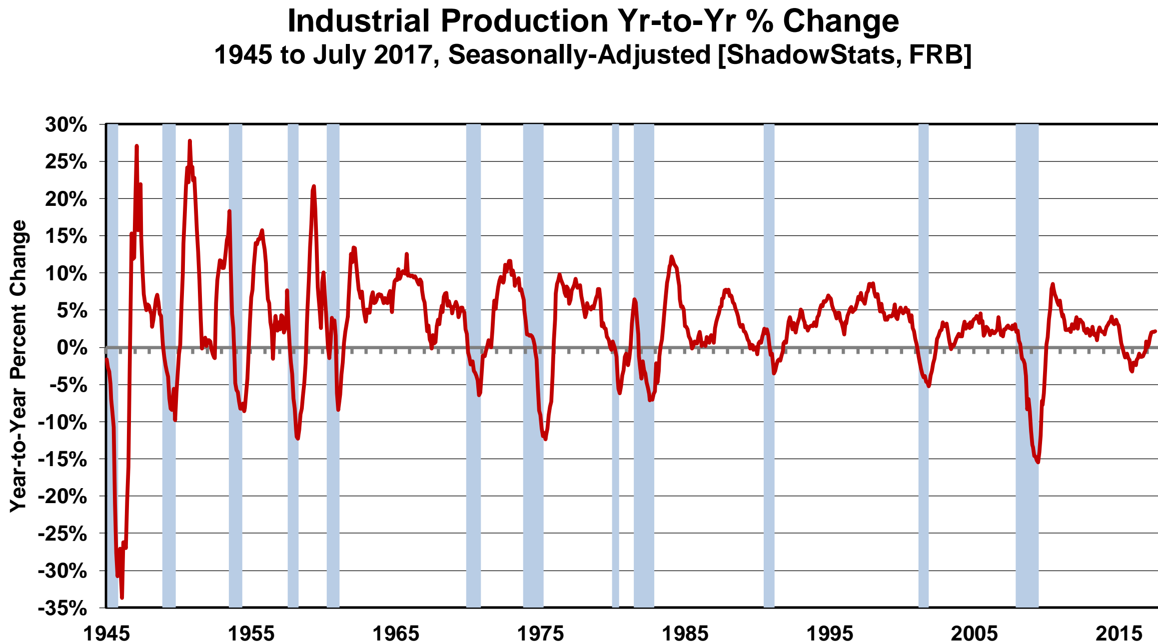
Although generally now in low-level stagnation, official production levels had moved higher since the June 2009 trough, corrected for the understatement of inflation used in deflating portions of the industrial production index (see the *Executive Summary* section, *Graph 2*). That series has shown more of a pattern of stagnation with a slow upside trend, since 2009, with irregular quarterly contractions interspersed. The slow uptrend continued into a topping out pattern in late-2014. Headline growth—purportedly already neutered of any inflation impact—contracted in both first- and second-quarter 2015, moved minimally higher into 2016 through mid-2017. The "corrected" series has contracted quarter-to-quarter throughout 2016 and with some leveling off and minimal uptick into 2017.

[Graphs 13 and 14 follow on the next page.]

Graph 13: Index of Industrial Production (Aggregate) since 1945



Graph 14: Industrial Production, Year-to-Year Percent Change since 1945



Drilling Down into the July 2017 U.S. Industrial Production Detail. *Graphs 15*, *17*, *22* and *23* show headline reporting of industrial production and its major components.

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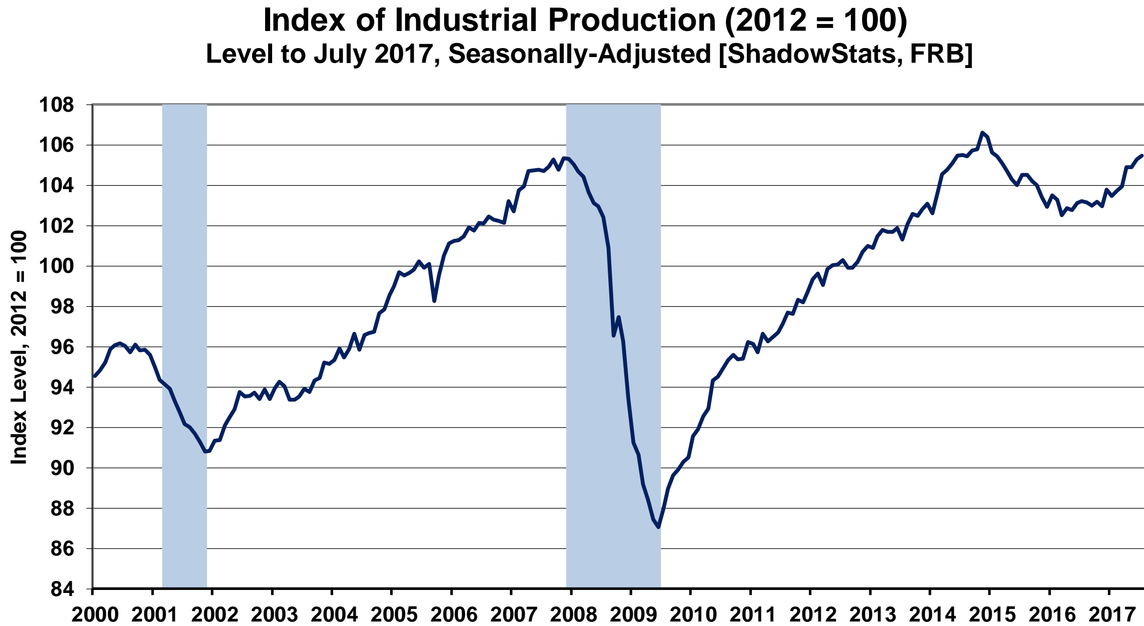
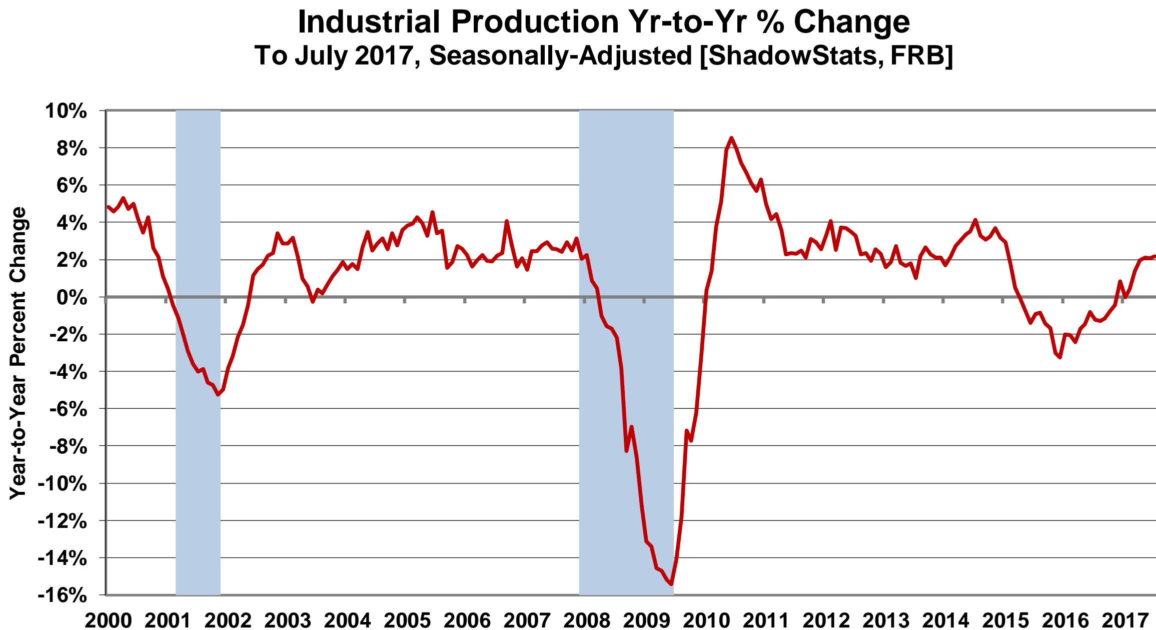
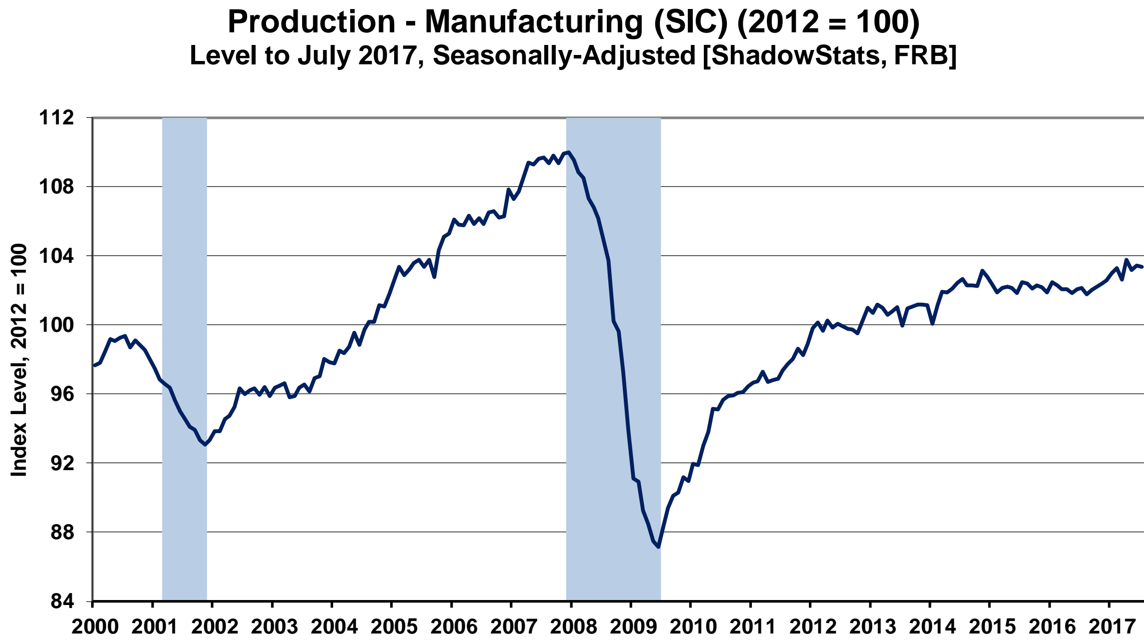
Graph 15: Index of Aggregate Industrial Production since 2000



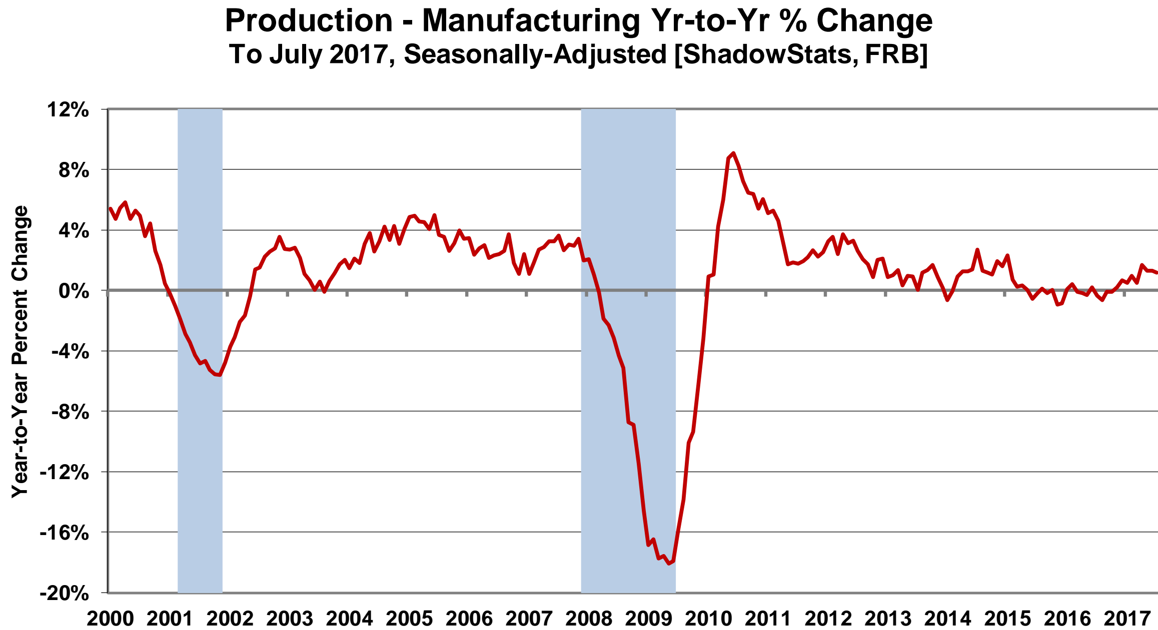
Graph 16: Aggregate Industrial Production, Year-to-Year Percent Change since 2000



Graph 17: Industrial Production - Manufacturing (76.4% of the IIP in 2016)
(Same as Graph OC-2 in the Opening Comments)



Graph 18: Industrial Production - Manufacturing, Year-to-Year Percent Change Since 2000
(Same as Graph OC-4 in the Opening Comments)



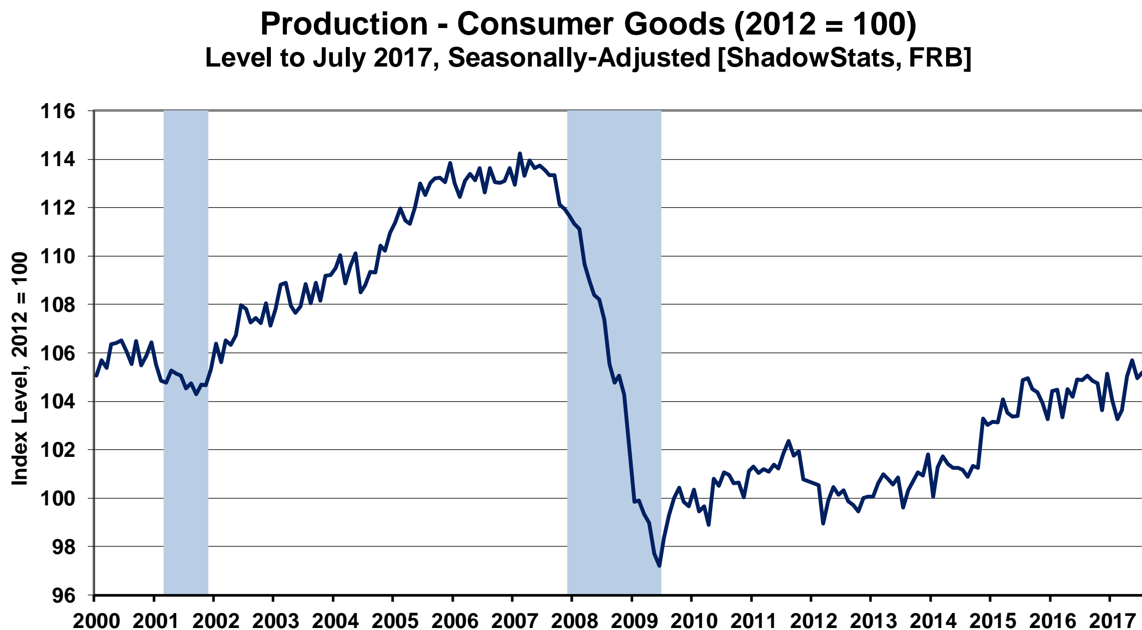
The aggregate index (*Graph 15*) contracted quarter-to-quarter in both first- and second-quarter 2015, with a third-quarter 2015 bounce, followed by ongoing, consecutive quarterly contractions from fourth-quarter 2015 through second-quarter 2016. Year-to-year declines by quarter were seen for seven consecutive quarters, from second-quarter 2015 through fourth-quarter 2016, with first-quarter 2017 activity positive on both a quarterly and annual basis, a trend continuing into third-quarter 2017. Production levels through June 2017 had held below the peak activity seen before the collapse into 2009, but minimally reclaimed that December 2007 level in July 2017.

Shown in *Graphs 17*, *22* and *24*, of the three major industry sectors, Manufacturing declined month-to-month in July 2017, with Utilities and Mining gaining for the month. Those monthly changes were boosted by revisions in Mining, and depressed by revisions to Manufacturing and Utilities.

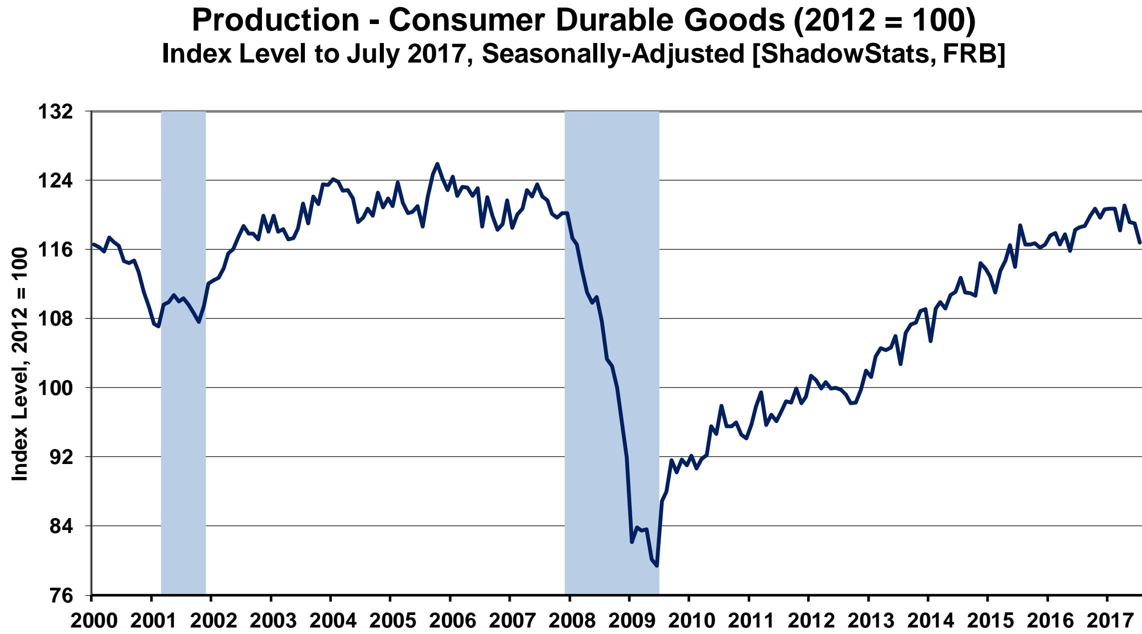
Graph 17 of the dominant Manufacturing sector showed a monthly decline of 0.07% (-0.07%) in July 2017, dominated by a 1.86% drop in durable goods (largely motor vehicles). Revised Manufacturing gained 0.24% in June, having declined by 0.57% (-0.57%) in May. *Graph 18* reflects annual growth patterns in July 2017 Manufacturing, which continued to back off a stronger showings in June 2017, May 2017 and April 2017. It had fluttered at low levels since an initial bounce off the 2009 trough, down year-to-year in the six months through October 2016, turning to the plus-side in November 2016 to date, although softening in recent months (see comparison with the Cass Freight Index™ in the *Opening Comments*).

Consumer Goods production gained 0.23% for the month, having declined by 0.70% (-0.70%) in June and having gained 0.64% in May (see *Graphs 19* to *21*). Headline July 2017 Consumer Goods detail reflected a monthly plunge of 1.86% (-1.86%) in Durable Goods, dominated by collapsing auto production, more than offset by a gain of 0.81% in Nondurable Goods, reflected in *Graph 20* and *Graph 21*.

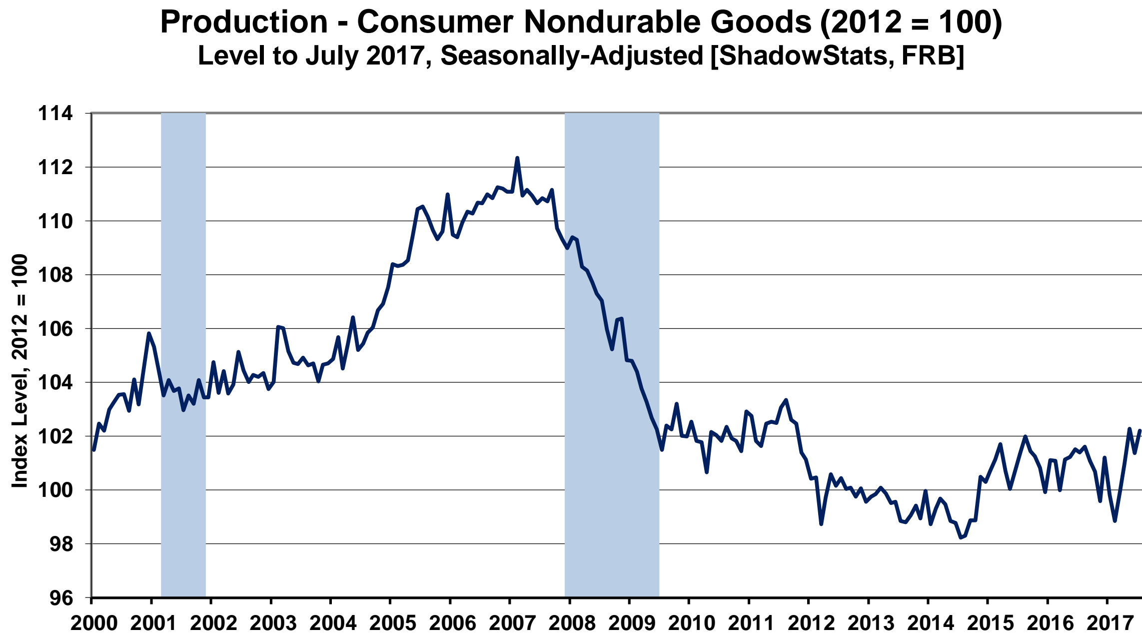
Graph 19: Consumer Goods (28.2% of the Aggregate in 2016)



Graph 20: Durable Consumer Goods (6.3% of the Aggregate in 2016)



Graph 21: Nondurable Consumer Goods (21.9% of the Aggregate in 2016)



Monthly volatility in the utilities sector (*Graph 22*) usually reflects unseasonable shifts in weather conditions and reversals of same. The headline gain of 1.56% in July 2017, was against a downwardly-revised 1.21% (-1.21%) contraction in June, an upwardly revised gain of 2.65% in May 2017 and an unrevised monthly gain of 0.13% in April, reflecting more-stable than usual activity, where the unrevised

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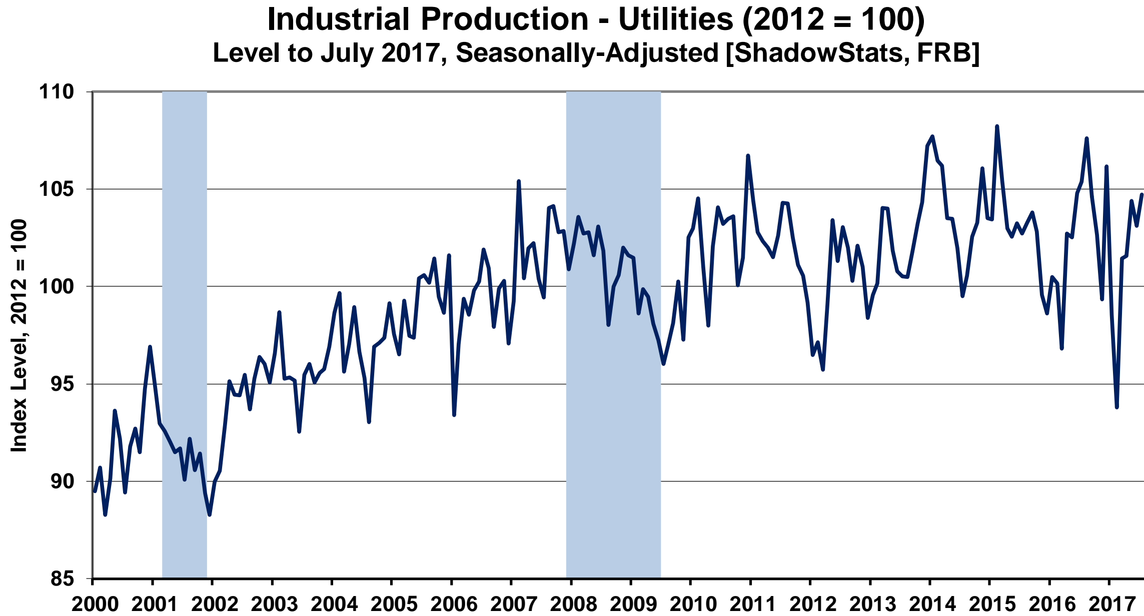
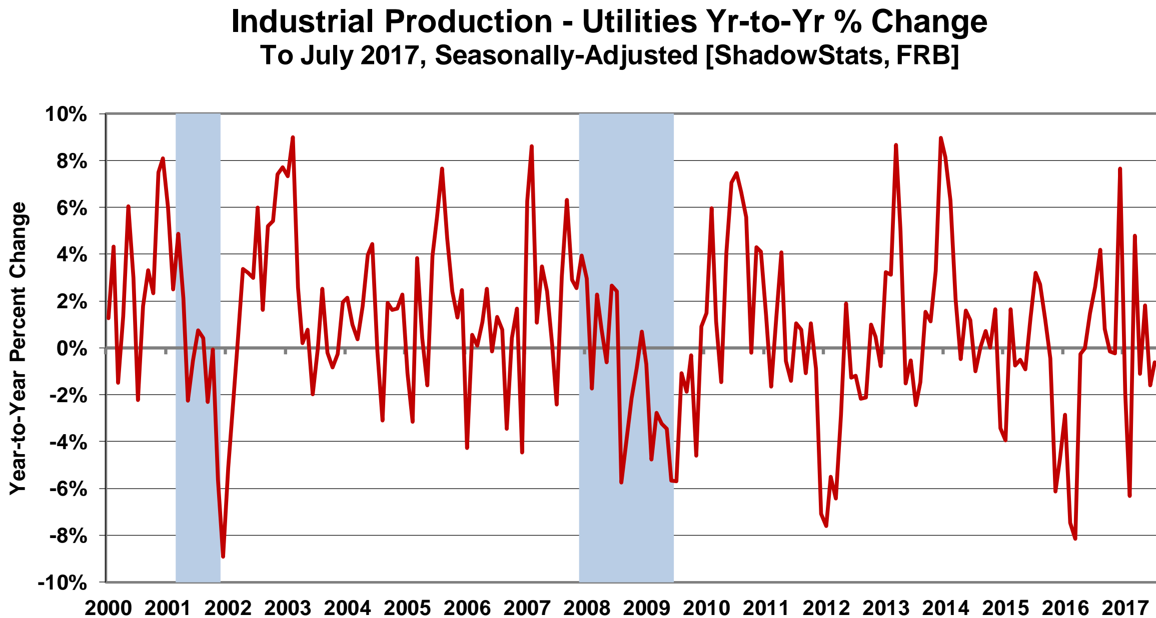
8.15% monthly gain in March had been the largest monthly gain in the history of the series, sharply offsetting a revised plunge of 4.80% (-4.80%) in February and an unrevised plunge of 7.18% (-7.18%) in January 2017. Such distortions tend to balance out over the period of a year.

Graph 22: Industrial Production - Utilities (10.6% of the Aggregate in 2016)

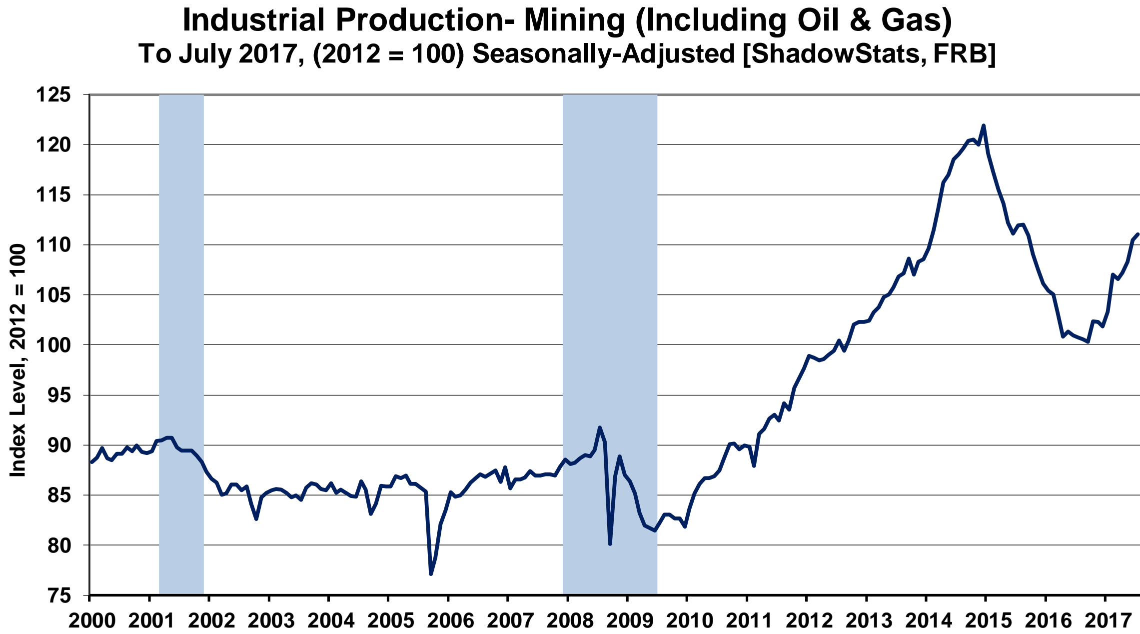


Graph 23: Industrial Production - Utilities, Year-to-Year Percent Change Since 2000

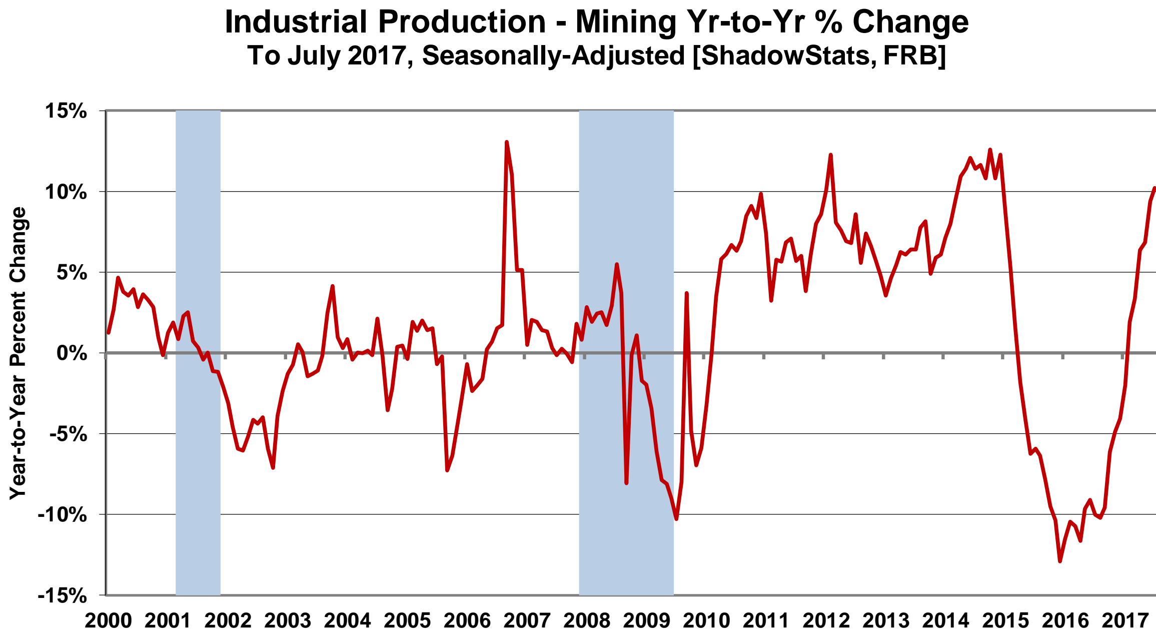


Activity in the mining sector (*Graph 24*), particularly in oil and gas exploration and production, and increasingly in gold and coal mining, remains the near-term focus of this analysis.

Graph 24: Industrial Production - Mining, Including Oil and Gas (12.9% of the Aggregate in 2016)



Graph 25: Industrial Production - Mining, Year-to-Year Percent Change

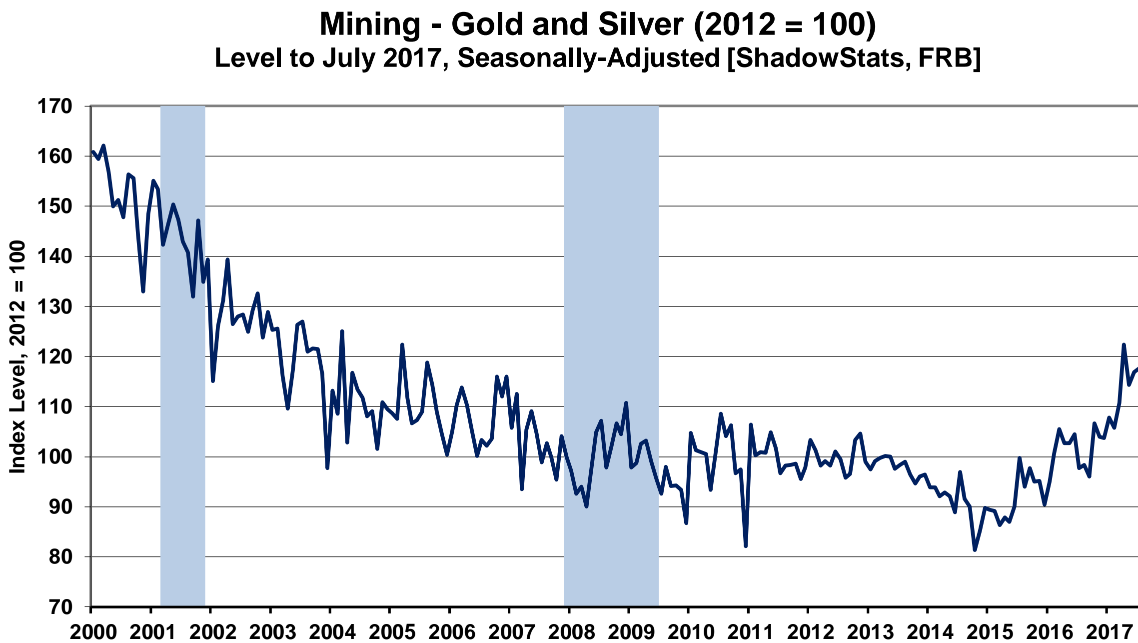


The mining sector, including oil and gas production, easily recovered its pre-recession high and accounted for the full "recovery," albeit extremely short-lived (just the months of October and November 2014), as seen in the aggregate Industrial Production detail since the economic collapse (see detail in *Commentary*

[No. 877](#) the opening remarks in the *Industrial Production* section and in today's *Opening Comments*). Since then, however, mining production turned down sharply, reflecting a number of factors, including the impact of largely orchestrated lower oil prices, which subsequently have fluctuated, tied to dollar and oil-supply issues, as well as U.S. government actions during the Obama Administration to limit coal consumption and production, now under some efforts at reversal. Year-to-year Mining Sector activity in (*Graph 25*) in February 2017 broke to the plus-side, to an upwardly revised 1.91%, for the first time since February 2015, up by an upwardly-revised gains of 3.34% in March 2017, 6.36% in April 2017, a downwardly revised 6.85% in May 2017, a downwardly-revised 9.37% in June 2017 and an initial headline gain of 10.20% in July 2017. Mining has moved off bottom, thanks to a general rebound in coal production and bottoming and broad monthly upturns in oil and gas extraction and exploration, and in gold and silver production (see *Graphs 26* through *30*).

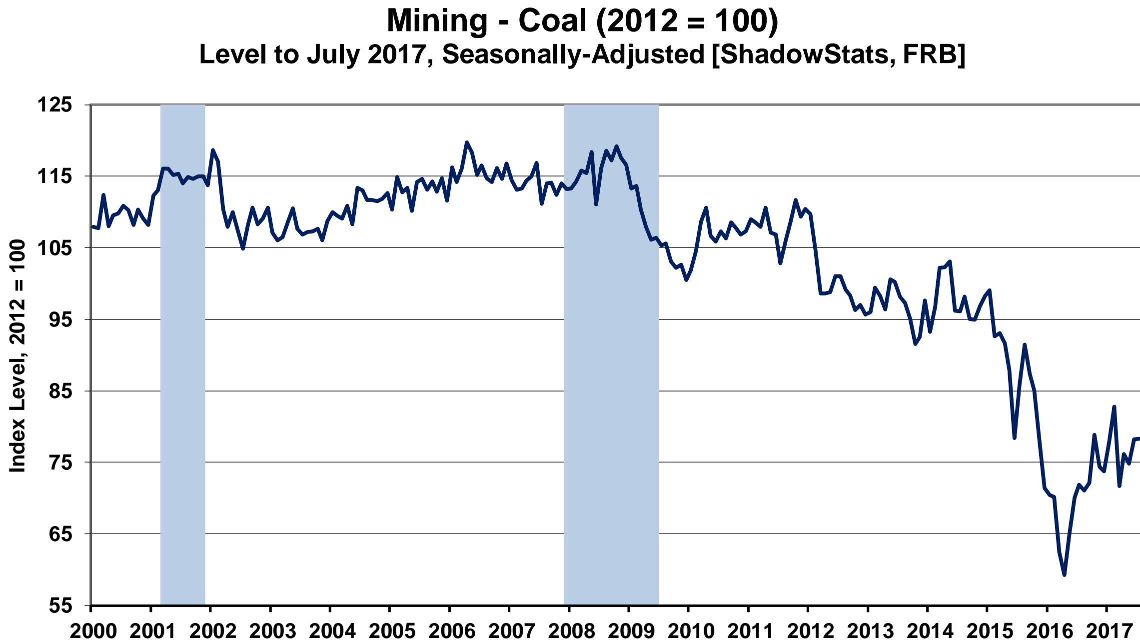
Graph 26 reflects generally increasing gold and silver mining activity. Headline July 2017 detail notched higher, but still held off its April peak, otherwise reflecting the strongest level of gold and silver mining in more than a decade, irrespective of the pummeling given the prices of precious metals in recent years with central-bank orchestrated market manipulations as well as recent price volatility in the markets.

Graph 26: Mining – Gold and Silver Mining (Since 2000)

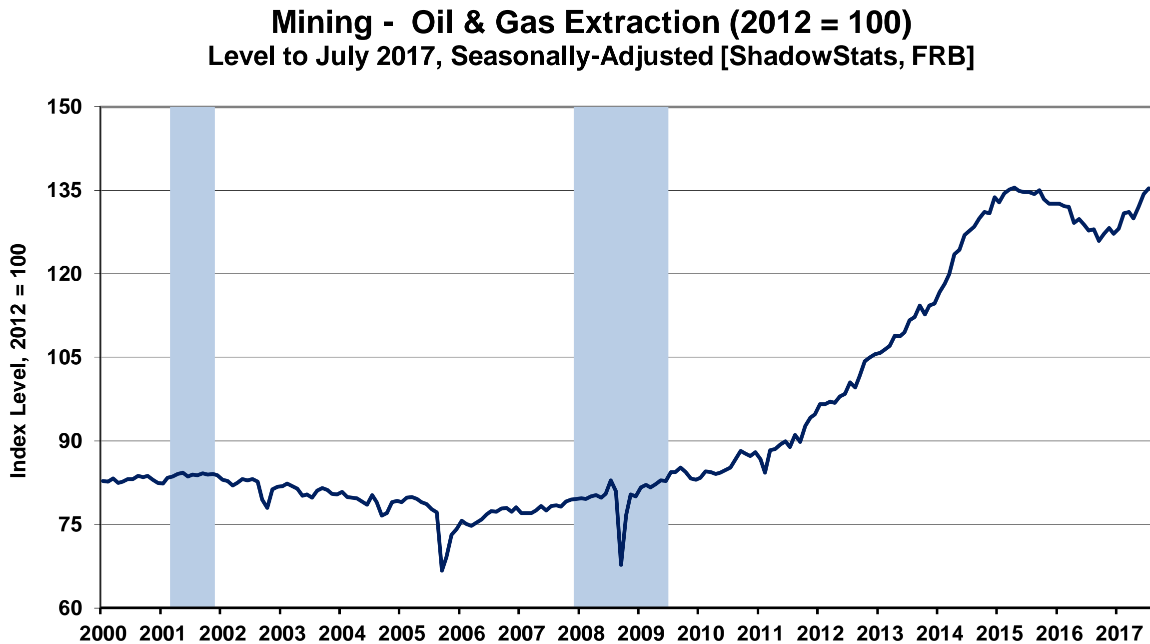


As with gold and silver mining, coal mining was benchmarked higher in recent years. *Graph 27* still shows a general rebound in the level of monthly coal production, with July 2017 activity virtually unchanged with a gain of 0.03% for the month, still shy of its February 2017 near-term peak, down by 24.10% (-24.10%), from its near-term production peak in May 2014.

Graph 27: Mining - Coal Mining (Since 2000)



Graph 28: Mining – U.S. Oil & Gas Extraction (Since 2000)



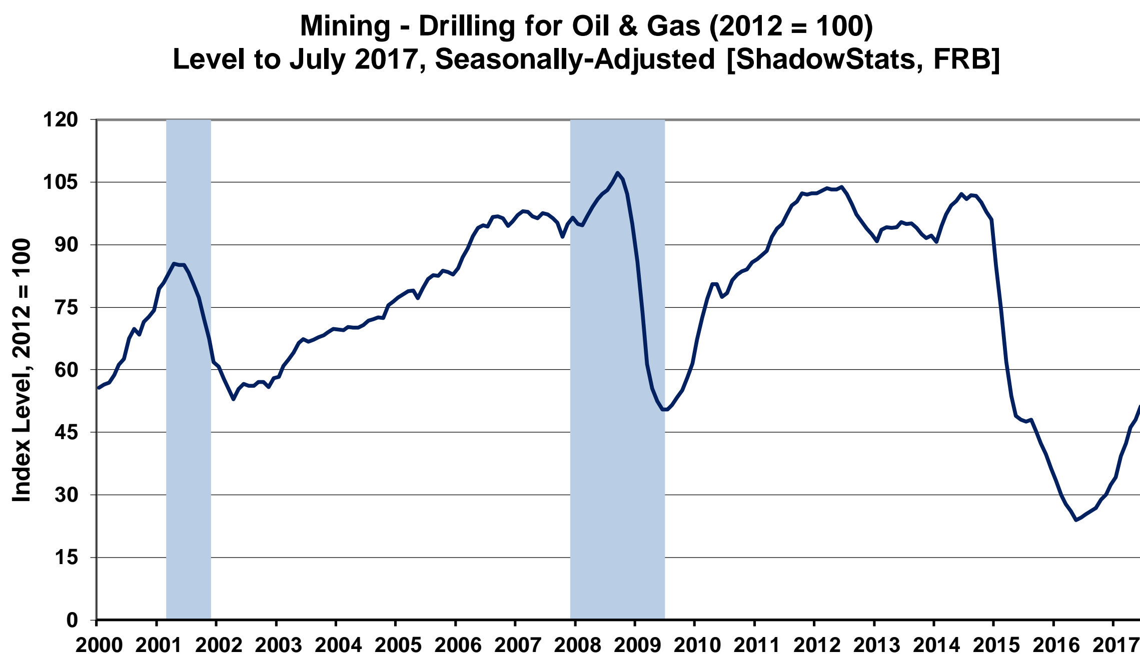
With oil prices still fluctuating above recent lows, but also below recent highs, July 2017 oil and gas extraction gained 0.77% in month, versus an upwardly revised 1.74% [previously 1.07%] in June, having gained a revised 1.57% [previously 2.67%] in May. July 2017 activity was effectively even with its all-

time high of April 2015, a key element behind headline industrial production breaking above of its December 2007 pre-recession high in October 2014 as well as in July 2017.

Exploration in terms of oil and gas drilling (*Graph 29*) faltered in July 2017, for the first time since oil prices bottomed out in 2016, down 0.90% (-0.90%) for the month, having gain 6.81% month-to-month in June. Seen in the graph, the series remains collapsed, although year-to-year growth broke to the plus-side by 2.42% in January 2017, soaring to 31.13% in February 2017, 52.46% in March 2017, 77.51% in April 2017, 100.53% in May 2017 and 108.18% in June 2017. It backed off to 100.34% in July 2017.

Regularly discussed here, the collapse in drilling largely was an artefact of the massive U.S. dollar rally and oil-price plunge that began in July 2014. Those shifts appeared, at least initially, to be U.S.-orchestrated covert actions designed to stress Russia, financially, in response the circumstance in Ukraine. From the related June 2014 peak in oil drilling, July 2017 activity was down by 50.34% (-50.34%).

Graph 29: U.S. Drilling for Oil & Gas (Since 2000)



Shown in *Graph 30*, with some lag following sharp movements in oil prices, oil and gas exploration tends to move in tandem, and an upswing in exploration, indeed, appeared to have been in place with what was at least a short-term bottoming in oil prices in early 2016. Prices rallied into mid-2016 then plateaued, and have been moving lower in the last five to six months, with oil and gas exploration easing in July 2017 versus June 2017, the first month without a sharp month-to-month gain since the boost from the 2016 upturn in oil prices. The oil price index used here is for the West Texas Intermediate (WTI) monthly average spot price, deflated using the ShadowStats Alternate CPI measure (1990 Base). The graph lines have been highlighted to show more clearly the price-level movement, which visually had coincided graphically with the movement in the drilling levels in some recent months.

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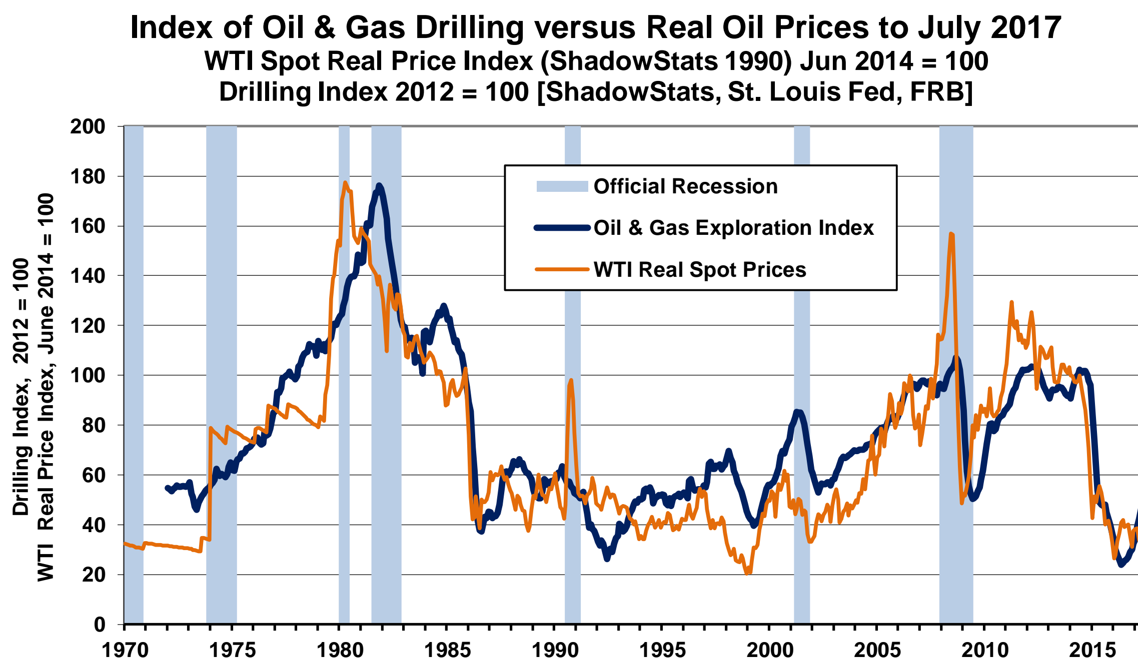
When the dollar weakens, dollar-denominated oil prices also begin to strengthen, even in a circumstance with excess supply conditions. At such time as the U.S. dollar declines meaningfully—ShadowStats looks for a massive sell-off in the dollar in the year ahead (see prior [Special Commentary No. 904](#))—U.S. dollar-denominated oil prices should rally sharply (see also [*General Commentary No. 811*](#)). That said, post-election, the U.S. dollar had rallied, but there had not been quite a commensurate decline in oil prices, and now the dollar has begun to pull back. Where supply had been tightened artificially (see the discussion in [*No. 859 Special Commentary*](#)), oil prices showed some increase and oil and gas extraction and exploration continued to pick up accordingly, again with some lag. As the dollar substantially weakens anew, artificial supply constraints likely will ease in tandem, although both the dollar and oil prices have backed off recent, relative peaks. See the discussion in today's *Opening Comments*.

Graph 30: Mining – U.S. Drilling for Oil & Gas versus Real Oil Prices (WTI ShadowStats 1990 Base)



RETAIL SALES—Nominal and Real (July 2017)

July Sales Surged Month-to-Month On Top of Upside Prior-Month Revisions, Yet the Recession Signal Remained in Play. Against consensus expectations for a monthly gain in the range of 0.3% to 0.4%, and contrary to indications of much weaker activity, including soft auto sales, headline nominal real retail sales in July 2017 surged more than expected, up by 0.6% for the month, and that was on top of upside revisions to June and May activity. Net of the prior-month's revision, the headline July 2017 monthly gain would have been 1.1%.

That growth and related revisions simply are not credible at this time (keep in mind that the series went through its annual benchmark revisions just shy of fourth months ago, in [*Commentary No. 882*](#)). A little closer to real-world activity, indications of currently declining auto sales, instead of headline gains, for example, have been suggested ranging from areas such as declining manufacturers' shipments and

imports to soft industry reporting of July auto sales. The Census Bureau likely played some games with its often volatile reporting. Such spikes are fair bets to be revised out of later estimates of headline July growth, or to be offset by weaker headline reporting in the next month or two.

Only two major categories showed declining seasonally-adjusted monthly sales in July. One was gasoline stations, which in theory should not have shown an adjusted decline because of declining unadjusted gasoline prices (adjusted gasoline prices effectively were unchanged, see *Special Commentary No. 904*), the other category was clothing and clothing accessories stores.

Further, the upside revisions to May were unusual, where all major categories revised higher, except for grocery stores, gasoline stations and electronics and appliance stores, which had their sales revised lower. Headline numbers usually are suspect, when liquidity-stressed consumers (see the *Consumer Liquidity Watch*) cut back on basics such as buying food, clothing and fuel, while at the same time substantially increasing more-discretionary consumption.

Separately, where headline growth in June activity had received a 0.35% growth spike from the inconsistent application of seasonal-factor adjustments (see discussion the *Reporting Detail - Retail Sales* section of *Commentary No. 899*), parallel factors appear to have reduced the headline nominal growth rate by a relatively small 0.04%. As with many series, such as employment and unemployment (see *Headline Distortions from Shifting Concurrent-Seasonal Factors* on page 29 of *Commentary No. 903*), concurrent seasonal adjustment factors are used with the retail sales. There is nothing wrong with using concurrent seasonal adjustments—where monthly seasonal adjustments are recalculated each-and-every month based on the current headline detail—so long as all data are reported on a consistent, historical basis. Government agencies do not report such detail, however, on a consistent basis.

Nominal Retail Sales—July 2017. The Census Bureau reported August 15th, its “advance” estimate of July 2017 Retail Sales. Headline nominal July 2017 activity jumped by 0.60%, following revised monthly gains of 0.26% [previously down by 0.16% (-0.16%)] in June 2017 and 0.04% [previously down by 0.06% (-0.06%), initially down by 0.25% (-0.25%)] in May 2017. Net of prior-month’s revisions, July 2017 sales surged month-to-month by 1.13%.

That said, the headline, seasonally-adjusted July 2017 nominal sales gain of 0.60% +/- 0.59% marginally was statistically-significant (all confidence intervals are expressed at the 95% level). In like manner, the revised headline June 2017 monthly retail sales gain of 0.26% +/- 0.23% also marginally was statistically-significant.

Year-to-Year Annual Change. The July 2017 nominal year-to-year change in Retail Sales showed a statistically-significant increase of 4.22% +/- 0.82%, versus revised annual gains of 3.35% [previously 2.85%] in June 2017 and 4.17% [previously 4.06%, initially 3.82%] in May 2017.

July Core Retail Sales, Net of Food and Gasoline. Reflecting a real-world environment that in theory should see rising, seasonally-adjusted food prices [up by 0.17% in the CPI-U per the Bureau of Labor Statistics (BLS)] and flat gasoline prices [up by 0.03% for the month on a seasonally-adjusted basis, per the BLS], seasonally-adjusted grocery-store sales rose month-to-month by a headline 0.30%, with gasoline-station sales down by 0.36% [-0.36%] in July 2017.

Under normal conditions, the bulk of non-seasonal variability in food and gasoline sales is in pricing, instead of demand. "Core" retail sales—consistent with the Federal Reserve's historical preference for ignoring food and energy prices when "core" inflation is lower than full inflation (when the Fed is looking to downplay inflation)—are estimated using two approaches:

Version I: Nominal July 2017 versus June 2017 seasonally-adjusted retail sales series—net of total grocery store and gasoline-station sales—gained 0.73%, versus the official headline aggregate sales gain of 0.60%.

Version II: Nominal July 2017 versus June 2017 seasonally-adjusted retail sales series—net of the monthly change in grocery store and gasoline-station revenues—gained 0.60%, the same as the official headline aggregate sales decline of 0.60%.

Real Retail Sales—July 2017—In the Context of Strong Nominal Sales and Upside Revisions, Some Uptick in July Consumer Inflation Took Back a Bit of the Headline Surge. Headline July 2017 CPI-U inflation (released August 11th, detailed in prior *Special Commentary No. 904*) showed a monthly gain in seasonally-adjusted consumer inflation of 0.11%, versus monthly declines of 0.02% (-0.02%) in June and 0.13% (-0.13%) in May, with year-to-year seasonally-adjusted CPI-U inflation of 1.73% in July 2017, versus 1.65% in June 2017 and 1.87% in May 2017.

Accordingly, real month-to-month retail sales rose by 0.50% in July 2017, versus 0.29% in June 2017 and 0.17% in May 2017. Real annual Retail Sales growth rose to 2.45% in July 2017 from 1.68% in June 2017 and 2.25% in May 2017. As previously reported, year-to-year growth in real June 2017 Retail Sales had dropped to 1.18%.

Solid Recession Signal Remained in Play, despite Back-Up in July Annual Real Growth Rate. During normal economic times, annual real growth in Retail Sales at or below 2.0% signals an imminent recession. That signal broadly had been in play since February 2015 (the "new" recession likely still will be timed from December 2014, based on industrial production, retail sales and other indicators), suggesting a deepening, broad economic downturn.

When that annual growth had moved higher, close to three-percent earlier in the year, ShadowStats had viewed that recession signal as in temporary abeyance. Post-2017 benchmarking (*Commentary No. 882* of April 27th), however, annual growth rates shifted lower, towards two-percent, and then below, reviving that recession signal. In June 2017 headline reporting (see *Commentary No. 899*), year-to-year real growth in sank to 1.18%, from 2.14% in May 2017 and 2.23% in April 2017.

Real annual Retail Sales growth rose to 2.45% in July 2017, up from revised gains of 1.68% [previously 1.18%] in June 2017, 2.25% [previously 2.14%] in May 2017 and an unrevised 2.23% in April 2017. Despite what likely will prove to be an exaggerated or errant 2.45% growth in July 2017, that monthly reading still is a borderline signal. The general recession signal, however, remained solidly in play, with annual growth in second-quarter 2017 real retail sales at 2.05%, down from 2.42% in first-quarter 2017.

Annual and Annualized Real Quarterly. First-quarter 2017 annualized quarter-to-quarter real growth in Retail Sales slowed sharply to 1.05%, versus 3.34% in fourth-quarter 2016, with annual year-to-year real growth for first quarter-2017 at 2.42%, versus 2.03% in fourth-quarter 2016.

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Based the second estimate of full reporting for second-quarter 2017, annualized real quarterly growth was 2.12% [previously 1.26%], with year-to-year quarterly change at 2.05% [previously 1.85%].

Based solely on what should be an unsustainable annualized real monthly growth rate of 6.11% in July 2017, the early trend for the third-quarter 2017 annualized real growth in Retail Sales was 3.01%, versus a trend for year-to-year third-quarter real growth of 2.30%.

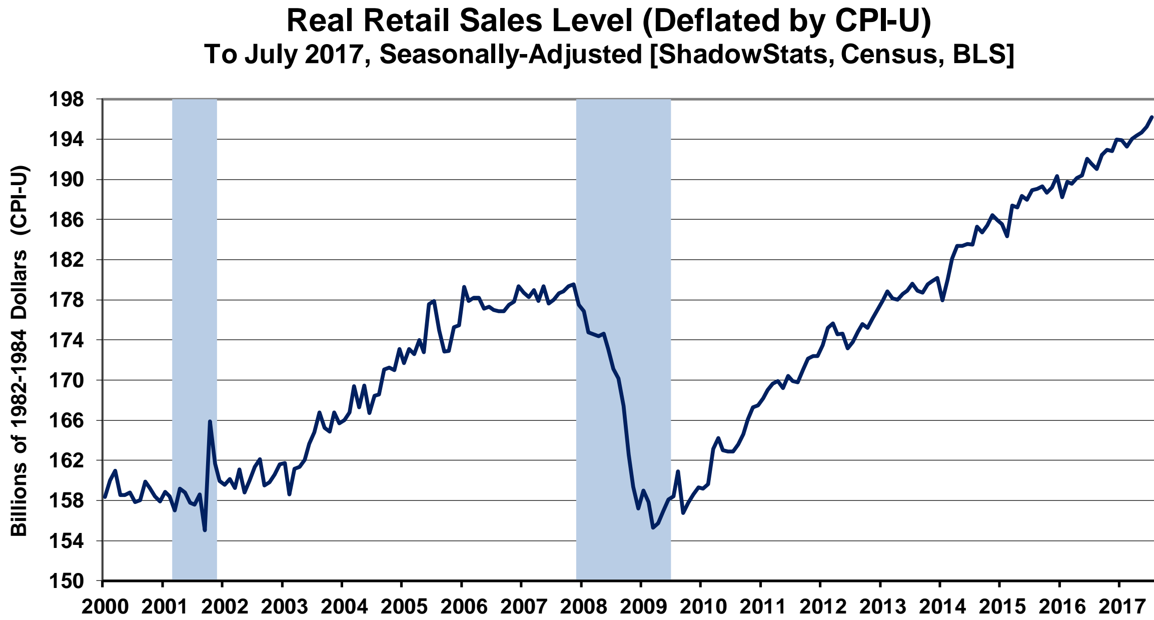
Structural Liquidity Issues Continue to Impair Retail Sales. An extreme consumer-liquidity bind increasingly constrains retail sales activity, as updated in the *Consumer Liquidity Watch* and fully detailed in the *Consumer Liquidity* section of *No. 859 Special Commentary*. Without sustainable growth in real income, and without the ability and/or willingness to take on meaningful new debt in order to make up for the income shortfall, the U.S. consumer remains unable to sustain positive growth in domestic personal consumption, including retail sales, real or nominal. That circumstance—in the last nine-plus years of economic collapse and stagnation—has continued to prevent a normal recovery in broad, inflation-adjusted U.S. economic activity, 73.1% of which is dependent on personal spending and residential real estate.

As headline consumer inflation generally resumes its upside climb in the year ahead, and as overall Retail Sales continue to suffer from the ongoing consumer liquidity squeeze, the real Retail Sales data generally should continue to trend meaningfully lower, in what eventually should gain recognition as a formal "new" recession, likely timed from December 2014.

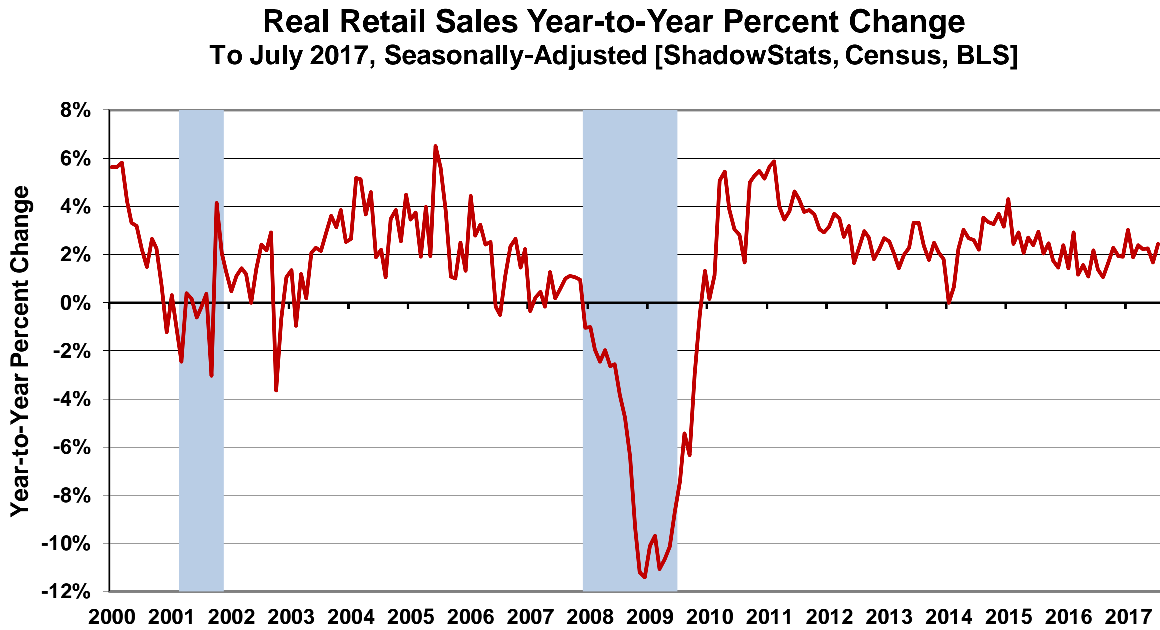
Real Retail Sales Graphs. The first of the four graphs following, *Graph 31* shows the level of real retail sales activity (deflated by the CPI-U) since 2000; *Graph 32* shows the year-to-year percent change for the same period. Annual real growth had slowed markedly into fourth-quarter 2015 and 2016, generating an intense recession signal, despite some near-term volatility and revisions with some recent mixed upturn in annual real growth. *Graphs 33* and *34* show the level of, and annual growth in, real retail sales (and its predecessor series) in full post-World War II detail.

[Graphs 31 to 34 begin on the next page.]

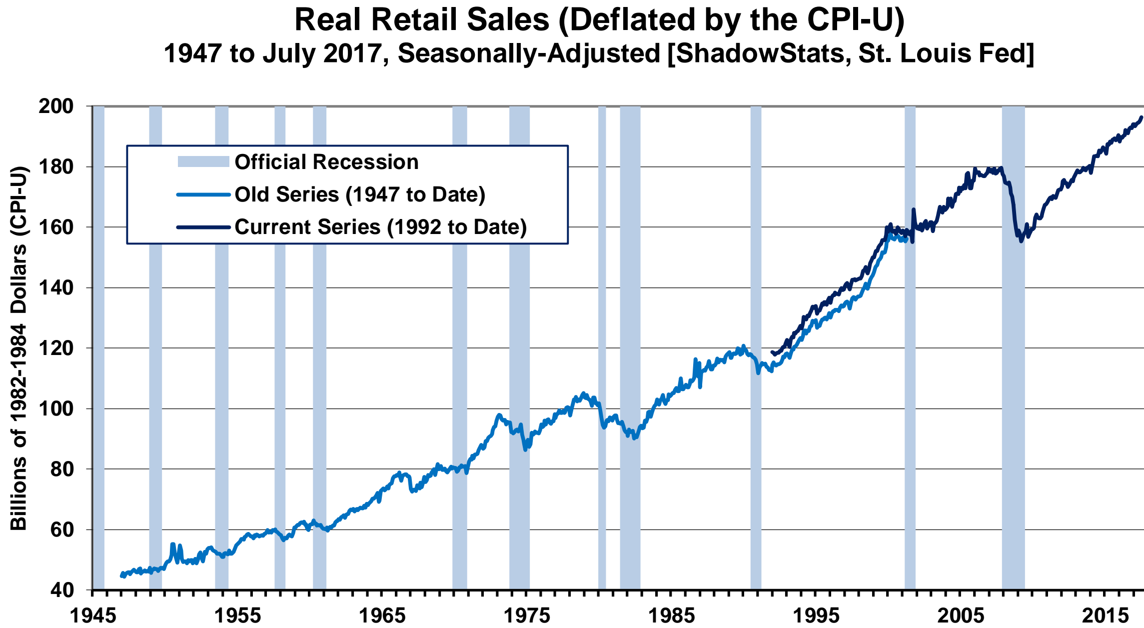
Graph 31: Level of Real Retail Sales (2000 to Date)



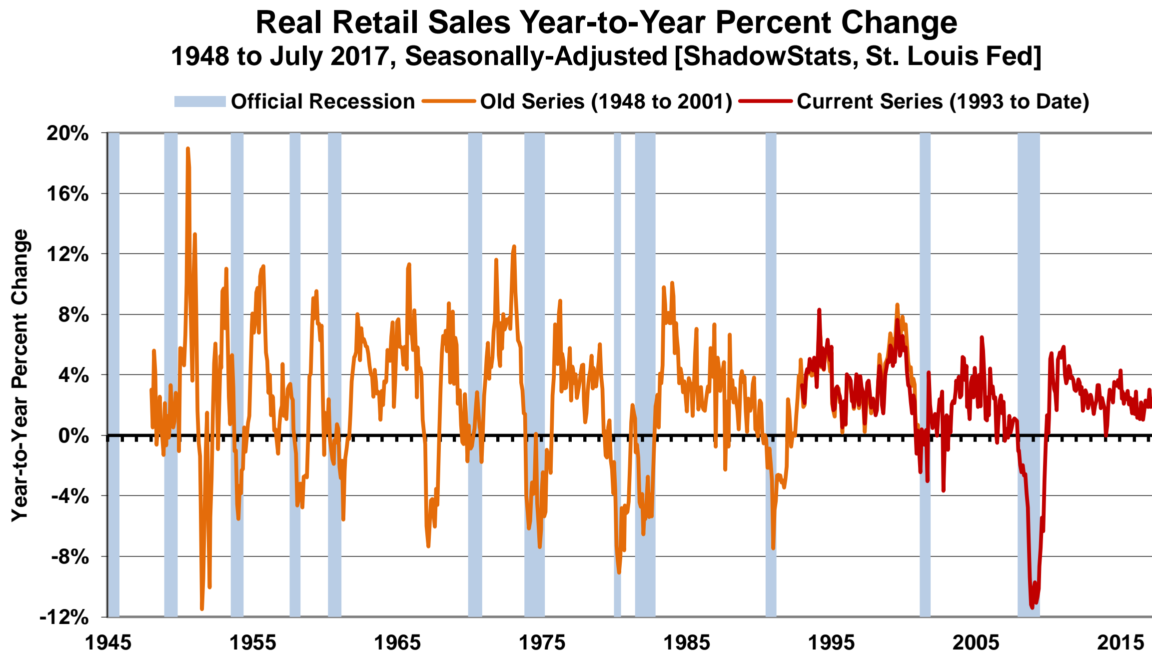
Graph 32: Real Retail Sales (2000 to Date), Year-to-Year Percent Change



Graph 33: Level of Real Retail Sales (1947 to Date)



Graph 34: Real Retail Sales (1948 to Date), Year-to-Year Percent Change



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

inflation number (such as the CPI-U) results in the deflated series overstating inflation-adjusted, real economic growth. Shown in the latest "corrected" real retail sales—*Graph 4* in the *Executive Summary* section—with the deflation rates corrected for the understated inflation reporting of the CPI-U, the recent pattern of real sales activity has turned increasingly negative. The corrected graph shows that the post-2009 period of protracted stagnation ended, and a period of renewed and ongoing contraction began in second-quarter 2012 and continues to date. The corrected real retail sales numbers use the ShadowStats-Alternate Inflation Measure (1990-Base) for deflation instead of the CPI-U.

NEW RESIDENTIAL CONSTRUCTION (July 2017)

Housing Starts and Building Permits Declined Sharply in July, with Continued Quarterly Downturns. In the context of a minimal downside revision to the level of June 2017 and minimal upside revision to May 2017 activity, July 2017 Housing Starts declined in the month by a statistically-insignificant 4.8% (-4.8%), while Building Permits dropped by a statistically-insignificant 4.1% (-4.1%). Such started early-third-quarter 2017 negative trends for both series, following deepening quarter-to-quarter contractions in first- and second-quarter 2017, again, for both 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 has turned lower with the recent detail, as seen in accompanying *Graphs 35* to *40* (also in *Graphs 5* to *12* in the *Executive Summary*).

Plotted with just the raw, seasonally-adjusted monthly data, the pattern of downtrending low-level stagnation, showed headline July 2017 building permits activity down by 46.0% (-46.0%) from recovering its pre-recession peak activity, with housing starts activity down similarly by 49.2% (-49.2%). Again, as usual, none of the related headline month-to-month changes was statistically significant, although the annual changes in the subsidiary series were meaningful. Lack of statistical significance remains a common denominator to nearly all the regular reporting each month of the month-to-month changes in Housing Starts, and to most of the year-to-year changes as well.

July 2017 Monthly Contractions Were Across-the-Board. In the context of a minimal downside revision to June and minimal upside to May aggregate April activity, headline July 2017 housing starts declined by 4.8% (-4.8%) month-to-month and by 5.6% (-5.6%) year-to-year. 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 increasing have shifted to downtrending, low-level stagnation (see *Graph 8* in the *Executive Summary* section, and *Graphs 37* and *38* here).

First- and Second-Quarter 2017 Housing Starts Held in Deepening Quarterly Contraction; Early Third-Quarter Trend Is to the Downside. 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%. Second reporting for second-quarter 2017, showed a revised annualized quarterly contraction of 21.4% (-21.4%) [previously 21.9% (-21.9%)], with year-to-year change slowing to 0.7% [previously 0.5%].

Based solely on initial headline reporting for July 2017, third-quarter 2017 Housing Starts activity is in an early trend for an annualized quarterly contraction of 3.5% (-3.5%).

In comparison/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%. The second estimate of second-quarter 2017 showed an annualized contraction of 11.0% (-11.0%) [previously down by 13.0% (-13.0%)], with year-to-year growth slowing to 3.9% [previously 3.3%].

Based solely on initial headline reporting for July 2017 Building Permits, third-quarter 2017 activity is in an early trend for an annualized quarterly contraction of 0.2% (-0.2%).

Smoothed Numbers. Despite the extreme volatility and instabilities in the housing-starts series, the general pattern of low-level stagnation continued. Again, where the six-month moving-average pattern for the aggregate series had remained about as flat as one ever sees in 2016, it now is downtrending in aggregate, in low-level stagnation (*Graphs 8* and *38*), with the same pattern of downtrending stability also seen broadly in raw monthly data (*Graphs 7* and *36*). That general pattern also can be viewed in terms of the longer-range historical graphs of aggregate activity (*Graphs 39* and *40*) at the end of this section. Parallel graphs of monthly and six-month moving-average Building Permits detail are found in *Graphs 35* and *37*.

Given the broad pattern of stagnation in both the aggregate starts and permits series, headline total July 2017 activity, again, remained well below any recovery level, with aggregate Housing Starts down from their January 2006 pre-recession high by 49.2% (-49.2%) and Building Permits down by 46.0% (-46.0%) from their September 2005 pre-recession peaks in activity.

Returning fully to the July 2017 housing starts monthly detail, the dominant (74.1% of total starts) single-unit housing starts sector of that series (*Graphs 9* and *10* in the *Executive Summary*) was down from its January 2006 pre-recession peak by 53.0% (-53.0%).

In contrast the smaller count in the multiple-unit category (two units or more), 25.9% 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 33.6% (-33.6%) as of July 2017.

Reflected in the smoothed graphs of the *Executive Summary*, the various housing-starts series generally are flat or downtrending, at a low level of stagnation (*Graph 8* for the aggregate). That reflected a blend of the low-level stagnation in the six-month-smoothed single-unit activity (*Graph 10*), with the more-volatile, smoothed multiple-unit starts (*Graph 12*), which had regained its pre-recession but now has turned lower in an intensifying 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, 73.1% of which is dependent on real personal spending, including residential construction.

July 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 a small upside revision to May and downside revision to April. The Census Bureau and Department of Housing and Urban Development (HUD) reported August 16th, a statistically-insignificant, seasonally-adjusted, headline monthly decline in July 2017 housing starts of 4.8% (-4.8%) +/- 11.9% (all confidence intervals are expressed at the 95% level). That followed a revised monthly gain of 7.4% [previously 8.3%] in June and a revised monthly decline of 2.2% (-2.2%) [previously 2.8% (-2.8%), initially down by 5.5% (-5.5%)] in May, and an unrevised monthly decline of 2.9% (-2.9%) in April. Net of the prior-period revisions, headline July Housing Starts declined in the month by a still-statistically-insignificant 4.9% (-4.9%).

Level-of-activity aggregate detail is plotted in *Graphs 5* to *8* of the *Executive Summary*, and in *Graphs 36*, *38*, *39* and *40* at the end of this section.

Year-to-year change in the seasonally-adjusted, July 2017 aggregate housing-starts measure was a statistically-insignificant decline of 5.6% (-5.6%) +/- 9.9%, versus revised annual gains of 1.9% [previously of 2.1%] in June 2017, 0.9% [previously up by 0.3%, initially a decline of 2.4% (-2.4%)] in May 2017, and a unrevised annual decline of 0.9% (-0.9%)in April 2017.

The July 2017 headline decline of 4.8% (-4.8%) in total Housing Starts encompassed monthly declines of 0.5% (-0.5%) in the "one unit" category and 17.1% (-17.1%) in the "five units or more" category. There is a missing balance in the "two to four units" category, which increases month-to-month in July by 166.7%. 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 annual headline changes was statistically meaningful, but, uncommonly, the headline annual gain in single-unit starts was significant, as was the annual decline in multiple-unit starts.

Housing Starts By-Unit Category. *[See* Graphs 5 *to* 12 *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 July 2017 declined month-to-month by a statistically-insignificant 0.5% (-0.5%) +/- 9.9%, following a revised monthly gain of 8.2% [previously 6.3%] in June, a revised decline of 3.4% (-3.4%) [previously 2.9% (-2.9%), initially down 3.9% (-3.9%)] in May and an unrevised decline of 0.1% (-0.1%) in April. July 2017 single-unit starts showed a statistically-significant annual gain of 10.9% +/- 10.5%, versus revised annual gains of 11.7% [previously 10.3%] in June 2017, 8.6% [previously 9.2%, initially 8.5%] in May 2017 and an unrevised gain of 7.3% in April 2017 (see *Graphs 5, 6, 9 and 10* in the *Executive Summary*).

Housing starts for apartment buildings, condominiums, etc. (generally 5-units-or-more) in July 2017 declined month-to-month by a statistically-insignificant 17.1% (-17.1%) +/- 34.9%, versus revised monthly gains of 8.1% [previously 15.4%] in June and 2.9% [previously a decline of 1.0% (-1.0%), initially down by 9.8% (-9.8%)] in May and an unrevised monthly drop of 11.5% (-11.5%) in April. A statistically-significant year-to-year decline of 35.2% (-35.2%) +/- 21.1% in July 2017, followed revised annual declines of 13.9% (-13.9%) [previously 10.7% (-10.7%)] in June 2017, 16.2% (-16.2%) [previously 18.6% (-18.6%), initially 25.7% (-25.7%)] in May 2017 and an unrevised annual decline of 18.3% (-18.3%) 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 5*, *6*, *11* and *12* in the *Executive Summary*).

Accordingly, the statistically-insignificant July 2017 monthly decline of 4.8% (-4.8%) in aggregate starts was composed of a statistically-insignificant decline of 0.5% (-0.5%) in one-unit structures and a statistically-insignificant decline of gain of 15.6% (-15.6%) in the multiple-unit structures categories (two-units-or-more, including the five-units-or-more category). In contrast, again, ex-two-units-or-more, the multiple-unit category contracted by 17.1% (-17.1%). Again, these series 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 1,155,000 in July 2017, versus a downwardly-revised 1,213,000 [previously 1,215,000] in June 2017. The scaling used in the accompanying aggregate housing starts and building permits *Graphs 35* to *40* 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.

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Accordingly, the monthly rate of 96,250 units in July 2017, instead of the annualized headline level of 1,155,000 units, is used in the scaling of the *Graphs 5* to *12* 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 36* versus *Graph 7* in the *Executive Summary*.

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 July 2017 headline monthly number was up by 142%, but it still was down by 49% (-49%) 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 39* and *40*. In fact, as can be seen in *Graph 40*, 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.

[Graphs 35 to 40 begin on the next page.]

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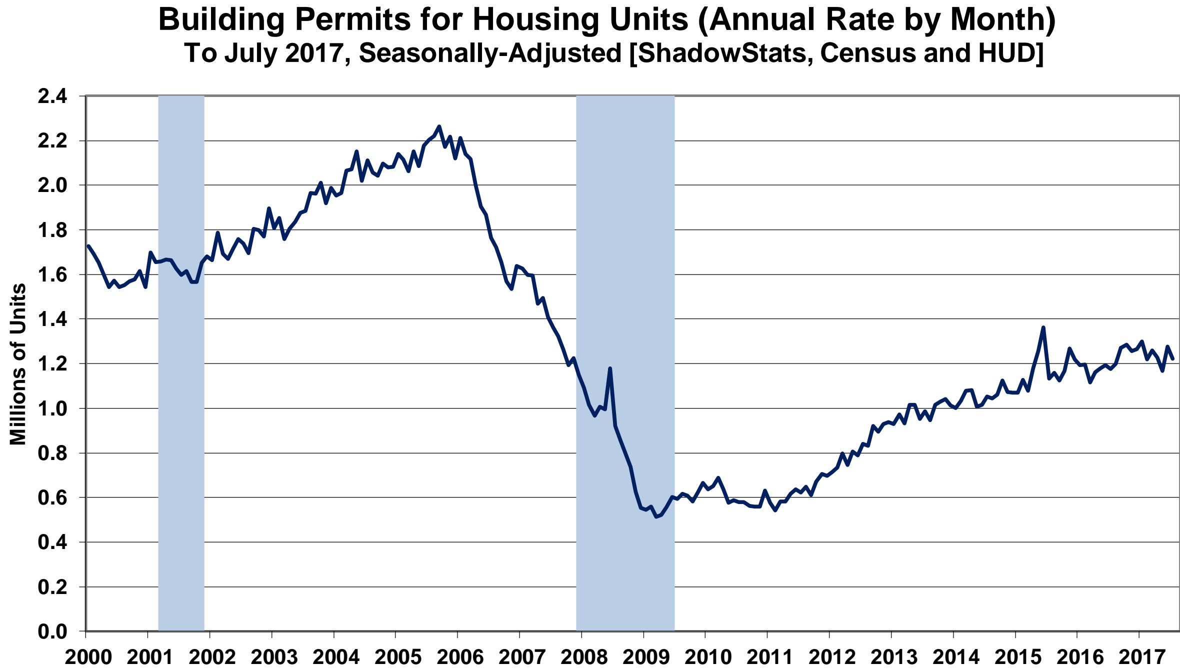
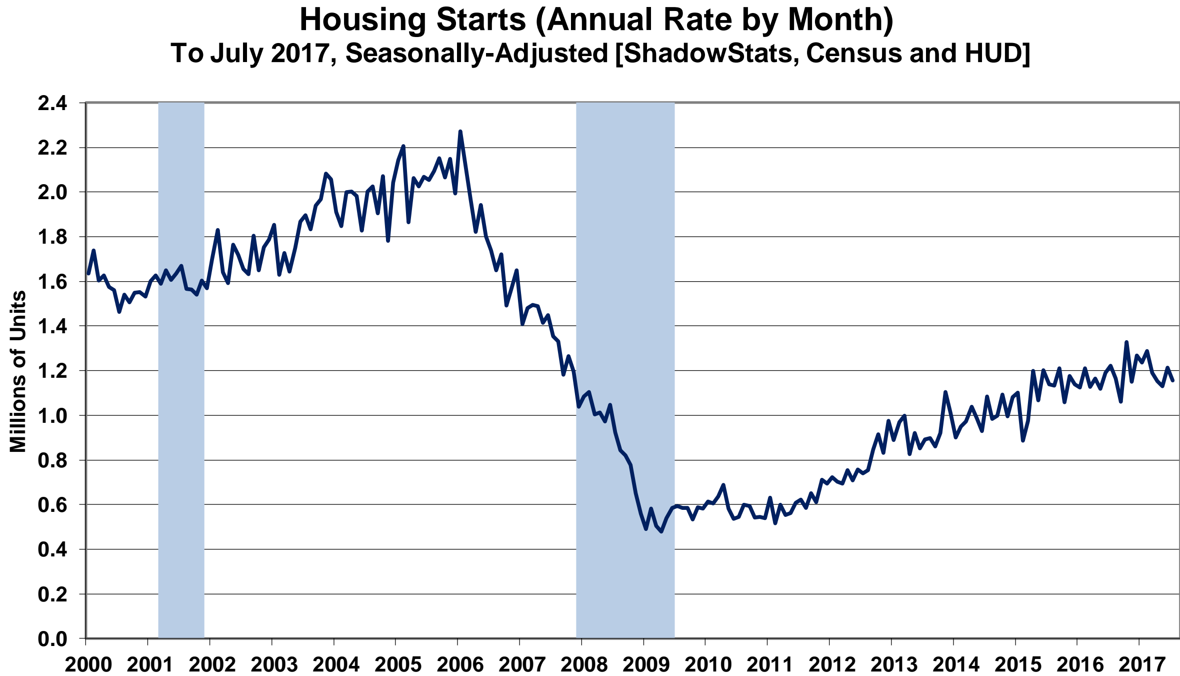
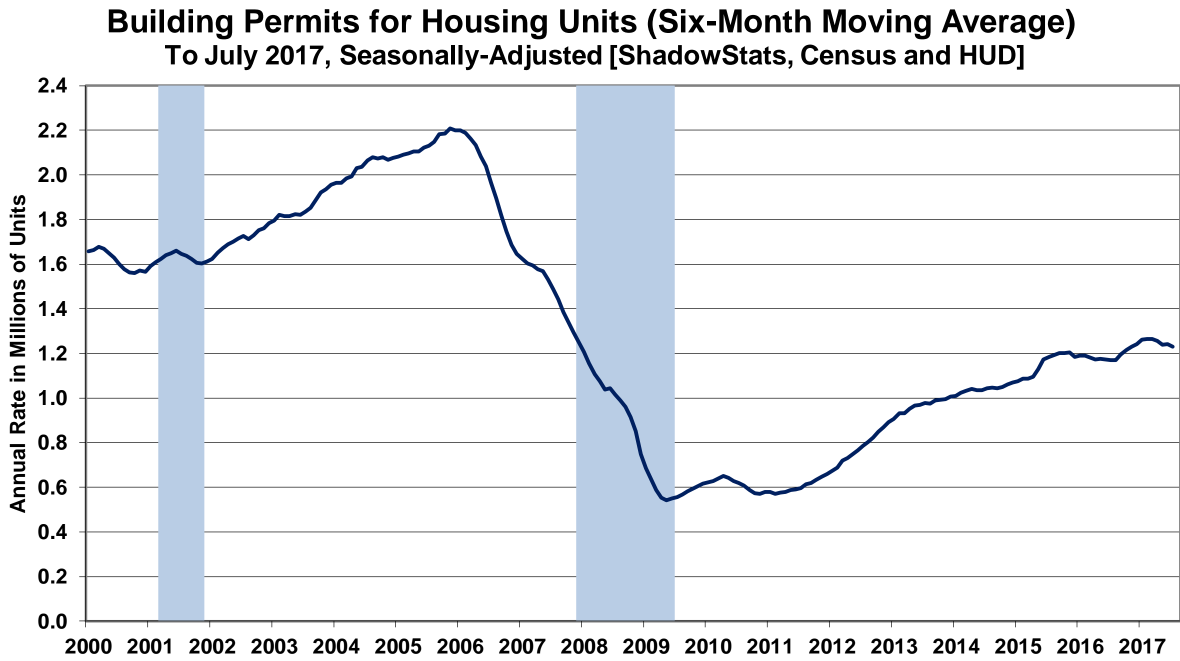
Graph 35: Building Permits (Annualized Monthly Rate of Activity), 2000 to Date



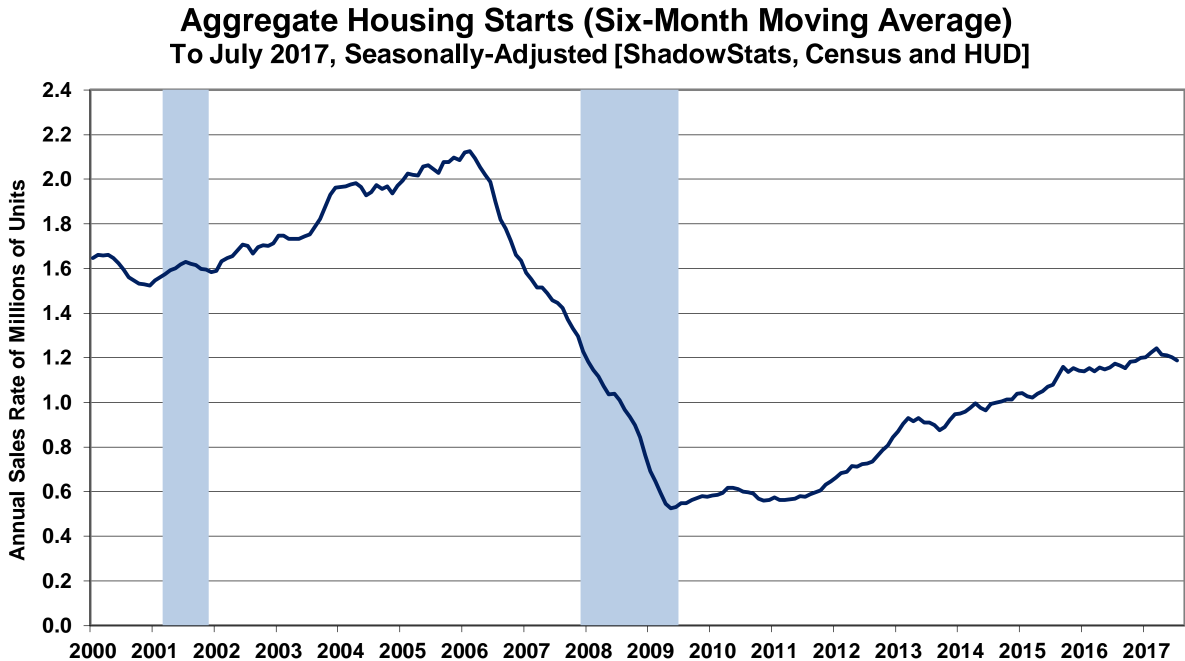
Graph 36: Housing Starts (Annualized Monthly Rate of Activity), 2000 to Date



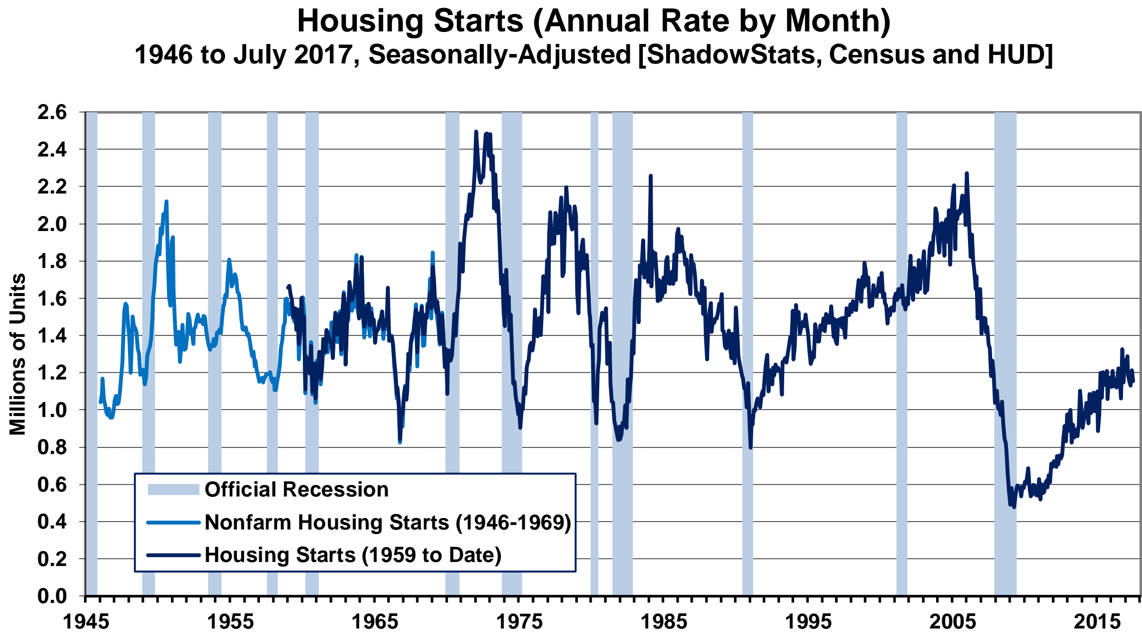
Graph 37: Building Permits (Six-Month Moving Average), 2000 to Date



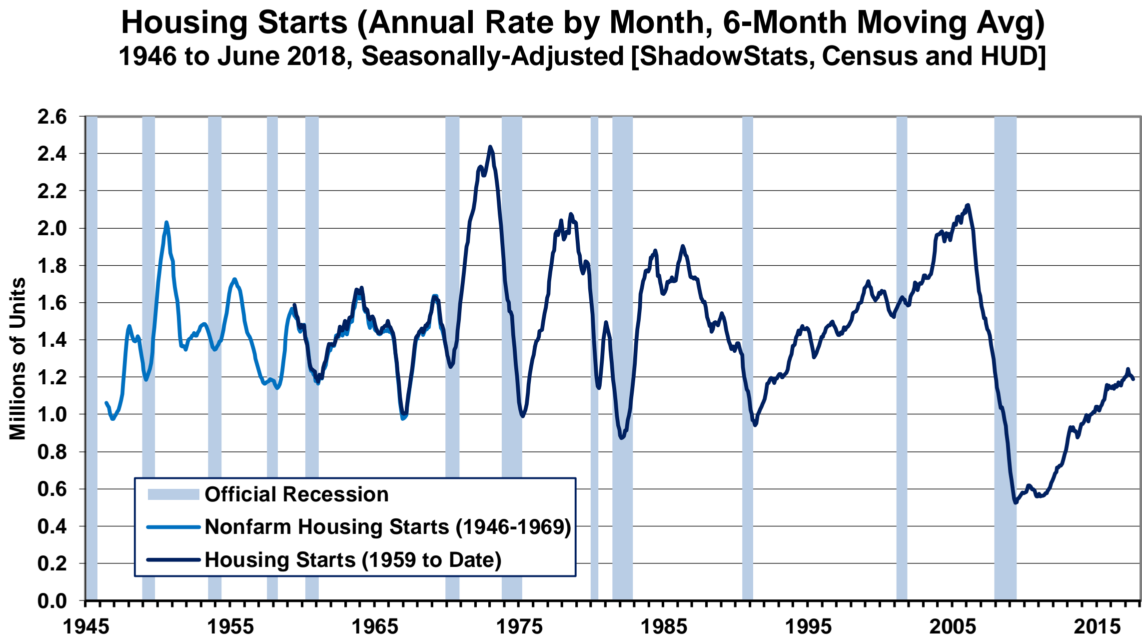
Graph 38: Housing Starts (Six-Month Moving Average), 2000 to Date



Graph 39: Housing Starts (Annualized Monthly Rate of Activity), 1946 to Date



Graph 40: Housing Starts (Annualized Monthly Rate of Activity, 6-Month Moving Avg), 1946 to Date



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

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CONSUMER LIQUIDITY WATCH

CONSUMER LIQUIDITY CONDITIONS: INCOME, CREDIT AND RELATIVE OPTIMISM.
[Other than for minor language adjustments, the Consumer Liquidity Watch *has not been updated from the prior version in* Special Commentary No. 904*.]*

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, Home Sales and impacted construction series and as reflected ultimately in affected broader-based economic series such as Industrial Production.

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*, broad, underlying consumer-liquidity fundamentals simply have not supported, and still do not support a turnaround in general economic activity—a post "Great Recession" expansion—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 73.1% of the headline real (73.0% of nominal), second-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. 902-B*.

Consumer Optimism: July Consumer Confidence and Sentiment Measures Were Mixed. This detail incorporates the full-month reporting of July 2017 for the University of Michigan's Consumer Sentiment Index (Sentiment) of July 28th, as well as the July 2017 reading of The Conference Board's Consumer-Confidence Index® (Confidence) of July 25th. 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 appeared to have topped and pulled back in June, but the July Confidence number rebounded anew, albeit on top of a downwardly-revised reading for June, while the full-July Sentiment number continued to pull back, although it was revised minimally higher versus the advance-July estimate. Nonetheless, both the Confidence and Sentiment levels remained off their respective post-election, euphoric peaks of March 2017 (Confidence) and January 2017 (Sentiment).

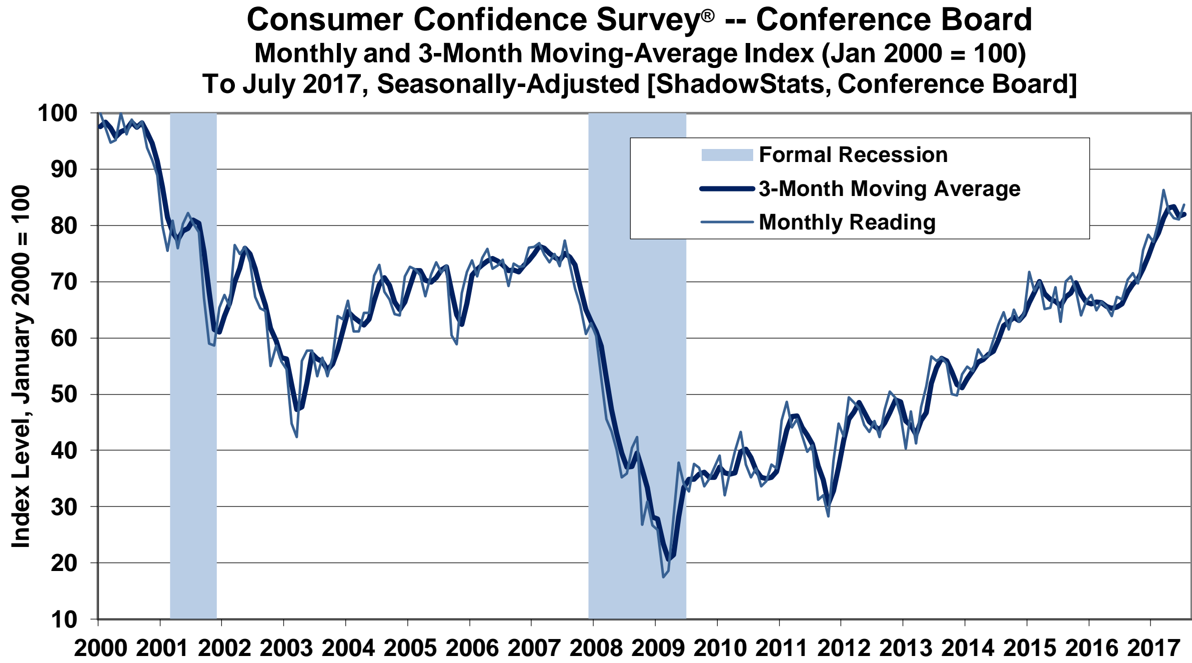
The Conference Board's seasonally-adjusted [unadjusted data are not available] Consumer-Confidence Index® (*Graph CL-1*), and the University of Michigan's not-seasonally-adjusted Consumer-Sentiment Index (*Graph CL-2*), again, both soared post-election, into early 2017, with Confidence booming into and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

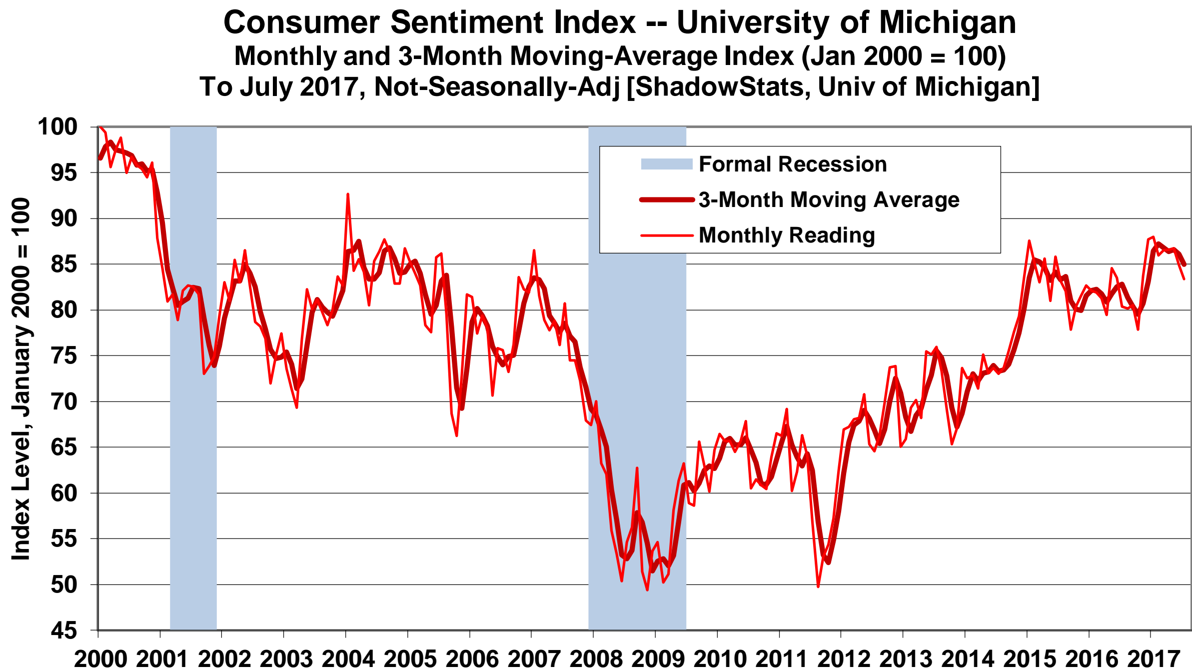
The Confidence and Sentiment series tend to mimic the tone of headline economic reporting in the press (see discussion in *Commentary No. 764*), and often are highly volatile month-to-month, as a result. With what should become increasingly-negative, unstable and uncertain headline financial and economic 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.

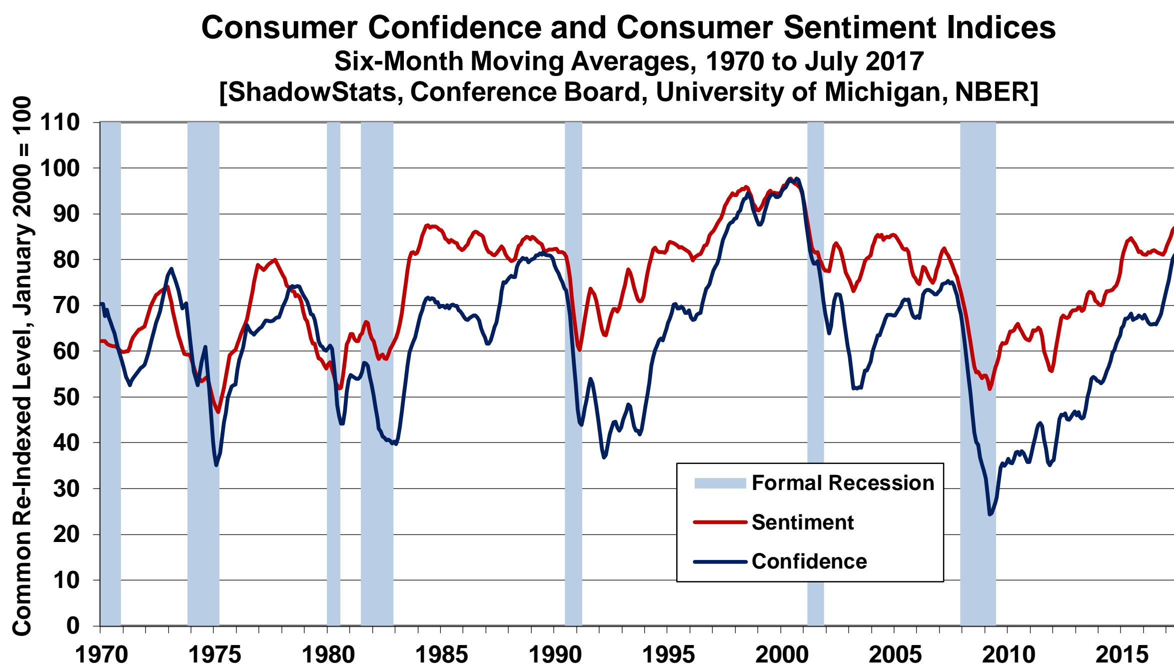
Graph CL-1: Consumer Confidence (2000 to 2017)



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



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



Consumer Income: May 2017 Real Median Household Income Was Statistically Unchanged, Despite a Boost from Falling Gasoline Prices. 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. Shown in *Graph CL-4*, such enabled May 2017 real monthly median household income to hold a level regained in April and otherwise last seen in February 2002. Year-to-year real median household income rose to 2.44% in May 2017, the highest level since June 2016, following an annual gain of 1.57% in April 2017 (see *Graph CL-5*). The May detail, however, may be the final reporting of the monthly series (see the following *Special Note*).

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 had the potential to resume turning down anew, as the headline pace of monthly consumer inflation picked up anew, with the July 2017 CPI.

Nonetheless, the most-recent recent "rebound" reported in the series still 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 was used to help pay down unsustainable debt or other

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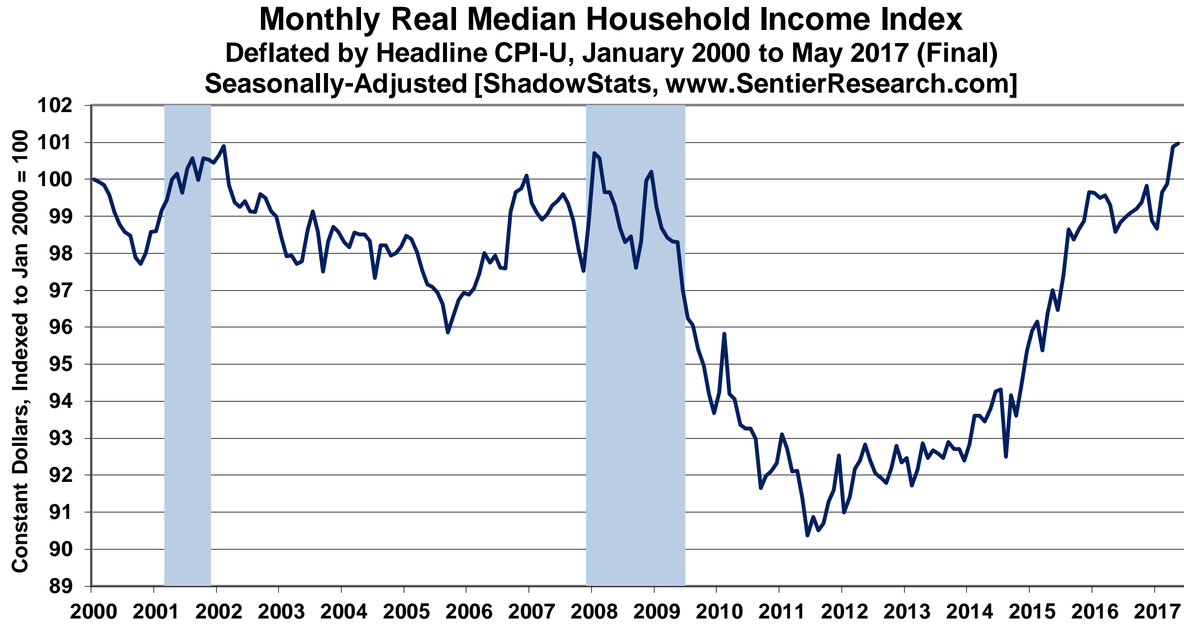
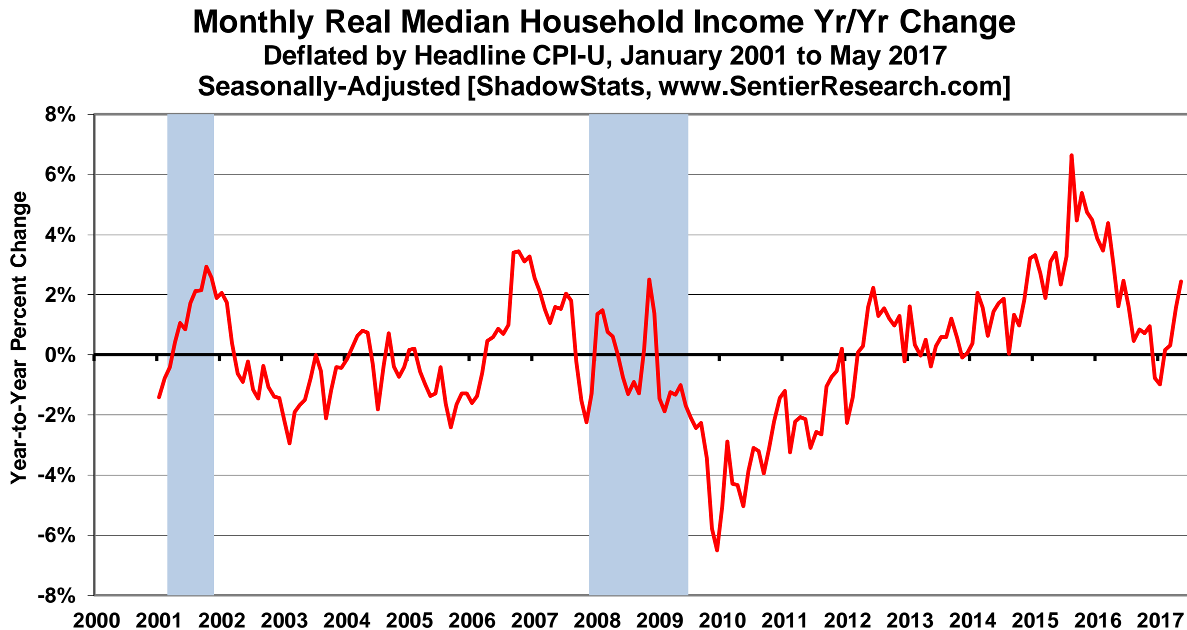
obligations, not to fuel new consumption. Except for mixed gyrations in first-half 2017, the effects of changing gasoline prices in the headline CPI-U generally had reversed, pushing headline consumer inflation higher and beginning to push real income lower.

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



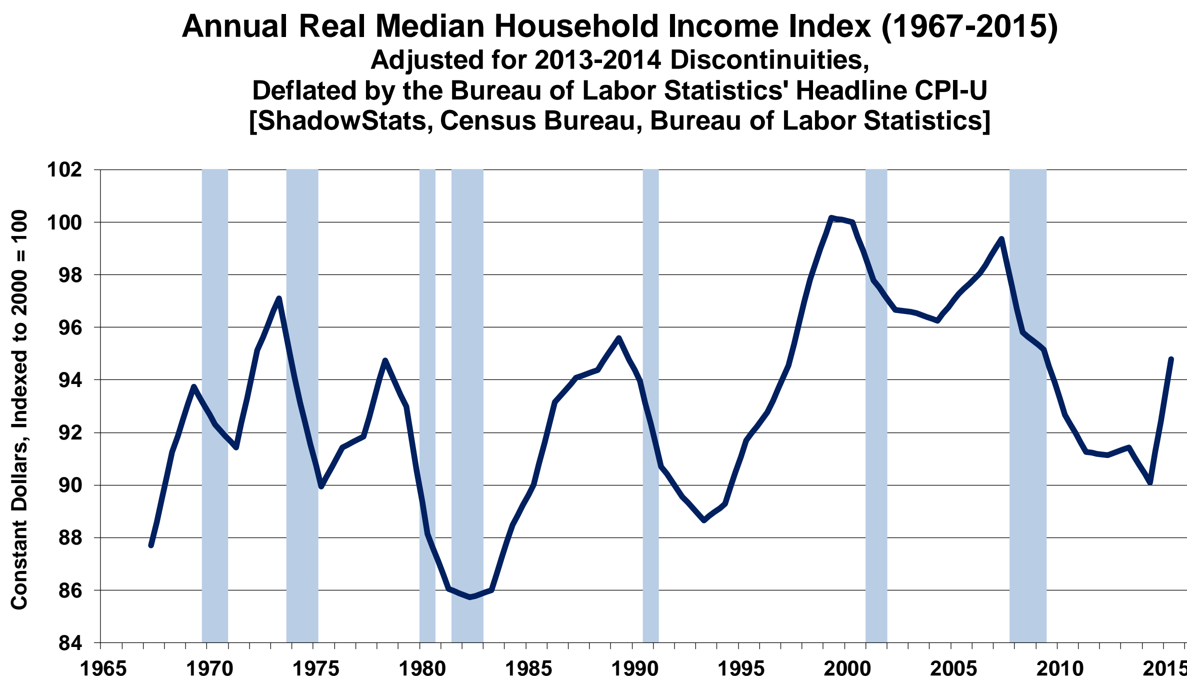
Graph CL-5: Monthly Real Median Household Income (2000 to 2017) Year-to-Year Change



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. The Census Bureau publishes a broadly-similar series on an annual basis, but with an extraordinary time lag. The 2016 Census annual detail is due for release and publication in September 2017. Again, see *Commentary No. 833* for the 2015 detail published in 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,

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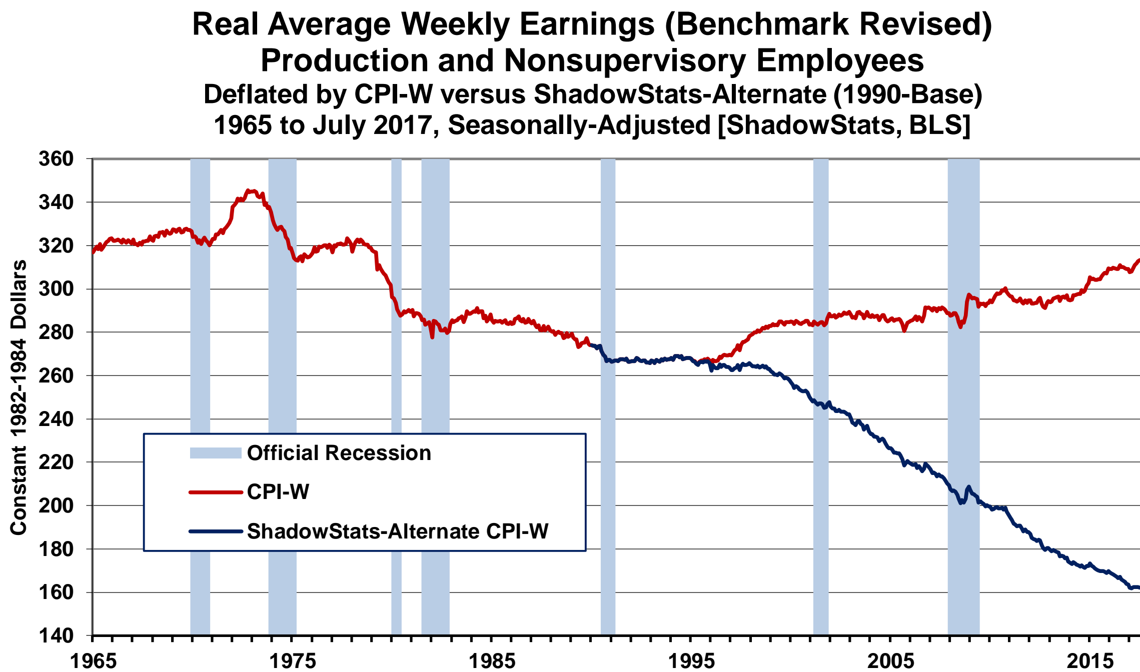
again, shown in preceding *Graph CL-6*, with 2014 real annual median household income having hit a ten-year low, and, again, with the historically-consistent 2015 annual number still holding below that seen when the collapsing economy hit its purported trough in 2009. The Sentier numbers had suggested 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 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—July 2017—Month-to-Month Real Earnings Rose. For the production and nonsupervisory employees category—the only series for which there is a meaningful history (see the full discussion on page 12 of *Special Commentary No. 904*), the regularly-volatile real average weekly earnings were up by 0.18% in July 2017 (as reported by the Bureau of Labor Statistics on August 11th). That was against a downwardly-revised 0.27% monthly gain in June and a revised 0.34% gain in May. The adjusted July 2017 year-to-year real change slowed to 0.71%, versus a revised 1.14% in June 2017 and a revised 0.89% gain in May 2017.

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



Based solely on volatile initial reporting for July 2017, the early-trend for real third-quarter 2017 activity was for an annualized real quarterly gain of 1.89%. Second-quarter 2017 activity reflected a revised, annualized real quarterly gain of 4.49%, following unrevised contractions in first-quarter 2017 of 1.13% (-1.13%), in fourth-quarter 2016 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%.

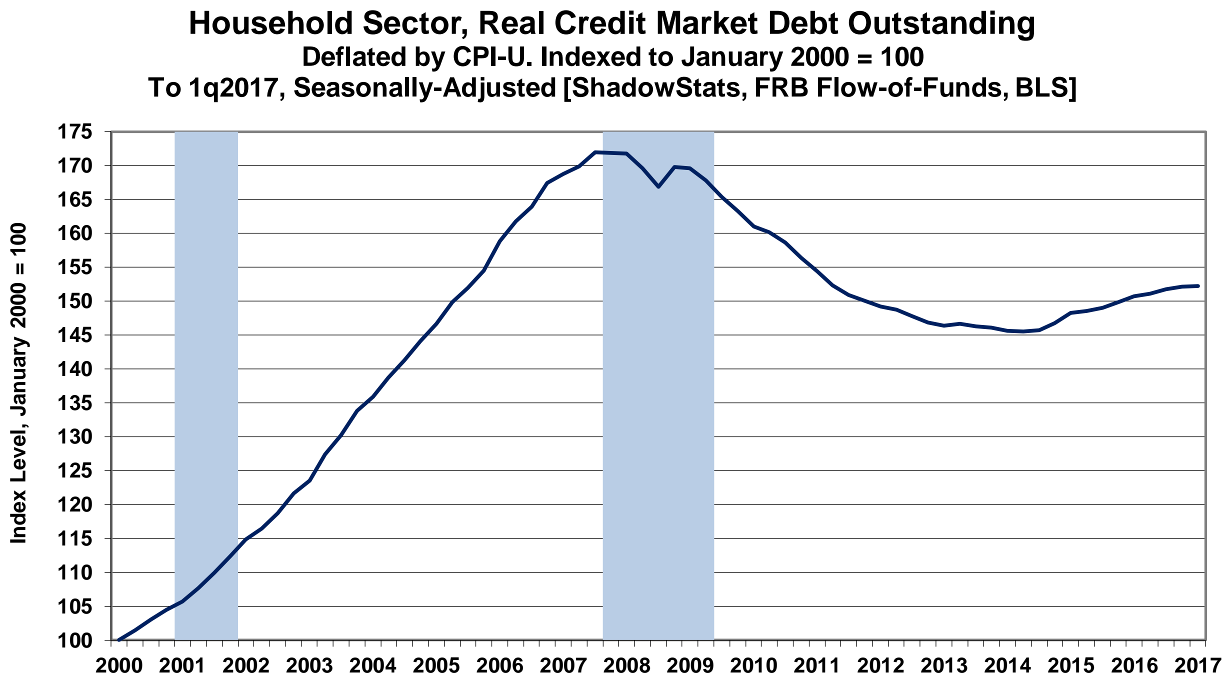
The early-trend for third-quarter 2017 year-to-year real earnings growth was 0.94%, while second-quarter 2017 earnings rose by a revised 0.84%, following an unrevised annual contraction of 0.29% (-0.29%) in first-quarter 2017, the first annual or year-to-year quarterly contraction since fourth-quarter 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.

The 2015 rally in real annual income and the subsequent slowdown in latter 2016 and pickup in 2017 pickup all were tied and continue to be tied directly to the impact of irregularly-collapsing/rising gasoline prices, with subsequent rebound/decline in inflation-adjusted income.

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.

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.

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



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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 *CL-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.

Shown through the latest reporting (June 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 June 2017 (released August 7th) was down from its December 2007 pre-recession peak by 12.3% (-12.3%). Year-to-year growth in *Graph CL-11* tends to resolve most of the monthly distortions in the not-seasonally-adjusted data.

[Graphs CL-9 to CL-11 begin on the next page.]

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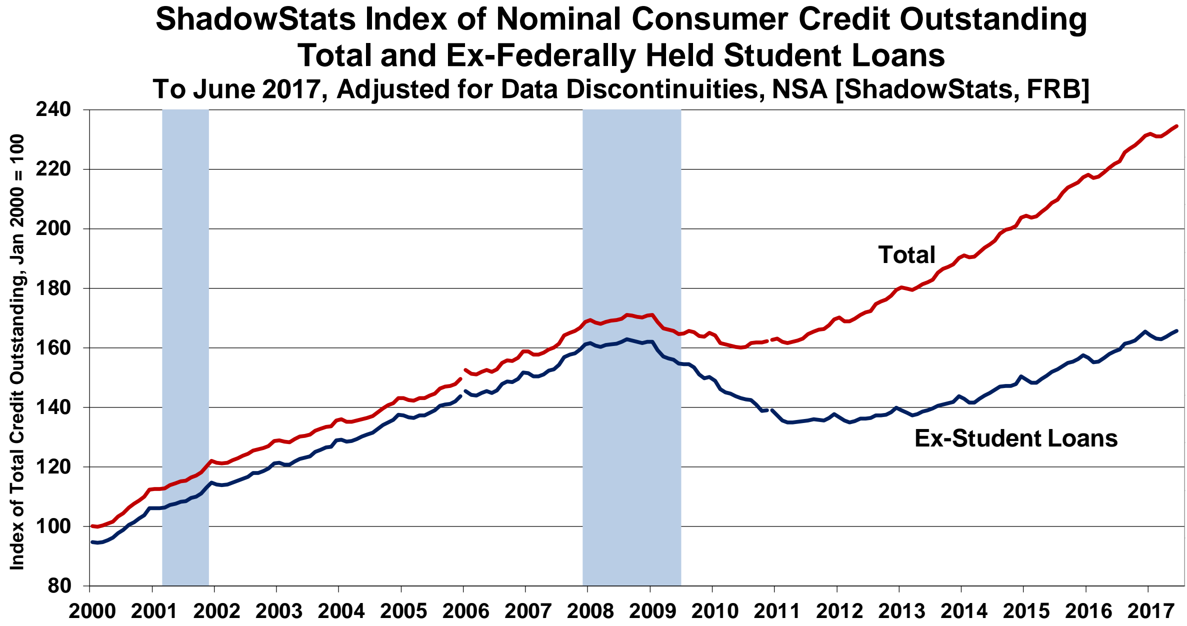
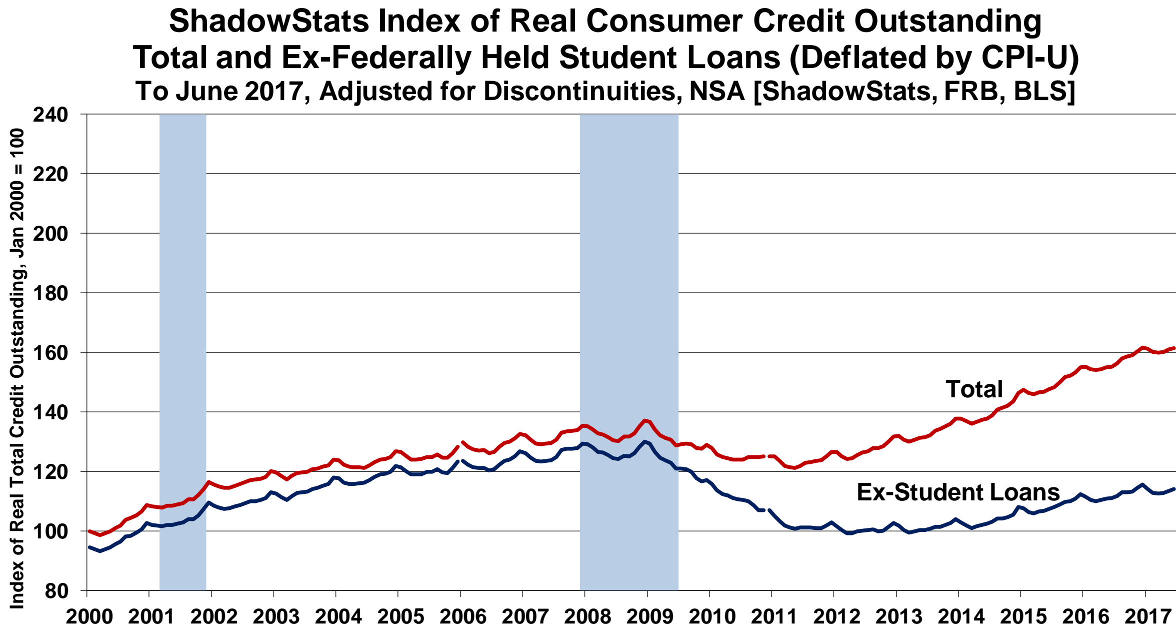
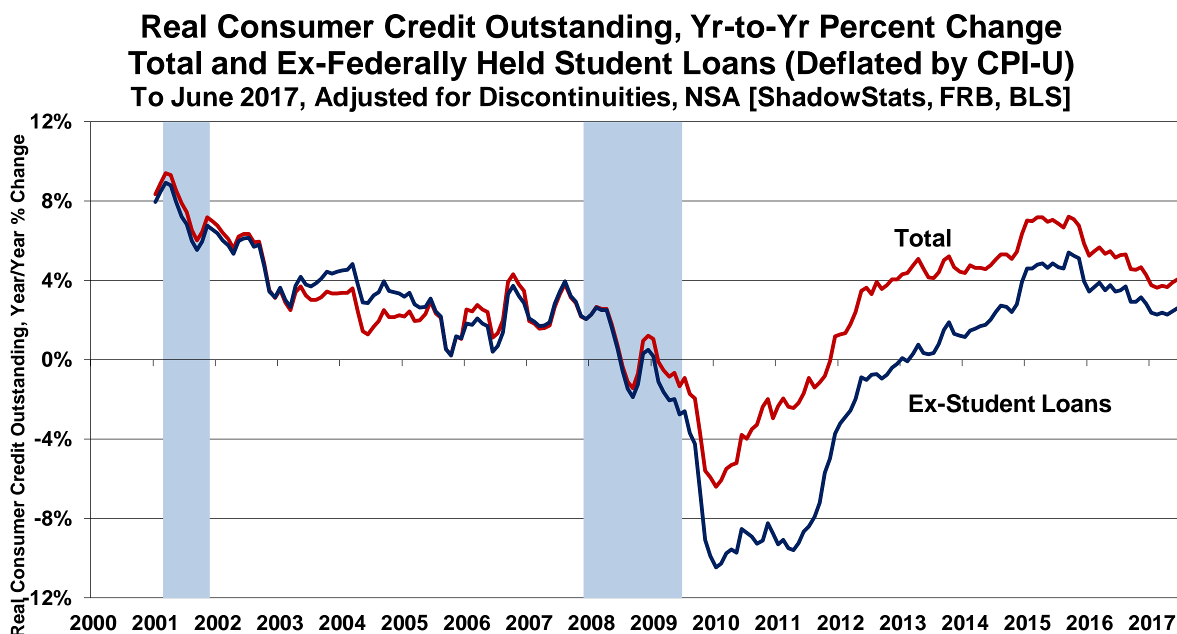
Graph CL-9: Nominal Consumer Credit Outstanding (2000 to 2017)



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

Exacerbated by Deteriorating Domestic and Global Political Circumstances, Continued Softening of Underlying Economic Activity Should Compromise Fed Policies, Pummel the Dollar, Boost the Price of Gold and Foster Other Financial-Market Tumult. Supplemental to and as discussed in the *Opening Comments* and *Hyperinflation Watch* of the August 14th *Special Commentary No. 904*, despite relatively-positive headline activity in initial reporting of second-quarter 2017 GDP, stronger-than expected labor-market and retail sales data for July (see today's *Opening Comments*), underlying reality remains a weakening and vulnerable, seriously-impaired U.S. economy. Key economic releases in the week and month ahead are at high risk of disappointing market expectations, where weaker-than-expected reporting likely would intensify/accelerate a negative shift in market economic outlook.

With that circumstance threatening a shift in FOMC policy, combined with the mounting political discord discussed in *Special Commentary No. 904* (see also the *Opening Comments* of *Commentary No. 901* and *Special Commentary No. 888*), odds continue to mount for financial-market turmoil in the near future, particularly as would be triggered by a market-related, heavy sell-off in the U.S. Dollar. Again, this

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circumstance is reviewed and updated in the *Hyperinflation Watch*, the detail of which shortly will be incorporated into this *Week, Month and Year Ahead* section. The balance of this text has been updated minimally from prior regular *Commentary No. 903*, other than for the *Pending Releases* section, which always is updated for the week ahead.

Irrespective of the GDP benchmarking and the heavily-gimmicked July labor numbers discussed in *Commentary No. 902-B* and *Commentary No. 903*, broad economic activity never has recovered fully recovered from its crash into 2009, and it has started to turn down anew. As explored previously in the *Hyperinflation Watches* of *Commentary No. 899* and *General Commentary No. 894*, and further to the *Opening Comments* and *Hyperinflation Watch* of *Commentary No. 892*, headline economic reporting during June, July and early August of 2017, has shown a marked downturn versus consensus forecasts. While these circumstances usually signal an unfolding, major downshift in underlying economic reality, at present, they also forewarn of a potential shift in FOMC activity. Where such an event remains well removed from consensus expectations, at this time, in terms of Fed policy, that would mean a cessation of incremental rate hikes and a shift back towards expanded quantitative easing.

Immediate effects of such a policy change likely would include 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. As consensus economic forecasts have begun to soften, so too has the U.S. dollar exchange rate, while gold prices generally have firmed.

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*), and reporting subsequent to the benchmarks, 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. Again, that 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, and the latest headline GDP detail.

The reporting patterns of the better-quality, less-gimmicked series 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 an otherwise unconfirmed economic expansion of 13.5%.

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. Increasing 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 they 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 not 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: *Commentary No. 902-B*, *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 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. *[Listed here are* Commentaries *of the last month, plus recent* Special Commentaries *and others covering a variety of issues, including annual benchmark revisions, back through the beginning of 2017. Pease Note: Complete ShadowStats archives back to 2004 are found at www.ShadowStats.com (left-hand column of home page).]*

Special Commentary No. 904 (August 14th) issued an "Alert" on the financial markets (including U.S. equities, the U.S. dollar gold and silver, as well as FOMC policy), in the context of historical activity and unfolding circumstances of deteriorating economic and political conditions. Separately, headline details were reviewed for the July Consumer Price Index (CPI) and the Producer Price Index (PPI).

Commentary No. 903 (August 7, 2017) discussed new signals of economic deterioration in terms of political and FOMC considerations, along with headline coverage of the July labor data, M3 and The Conference Board Help Wanted OnLine®, and June trade deficit and construction spending.

Commentary No. 902-B (July 31, 2017) reviewed the 2017 annual benchmark revisions of GDP and related series, along with the "advance" estimate of second-quarter 2017 GDP.

Advance Commentary No. 902-A (July 28, 2017) provided an initial assessment and highlights of the first-estimate of Second-Quarter 2017, along with the accompanying annual benchmark revisions, more-fully reviewed in today's *Commentary No. 902-A*.

Commentary No. 901 (July 27, 2017) discussed possible financial-market impact on continuing political discord in Washington, and reviewed the June 2017 Cass Freight Index, New Orders for Durable Goods and New- and Existing Home Sales.

Commentary No. 900 (July 19, 2017) reviewed June 2017 New Residential Investment (Housing Starts and Building Permits), and previewed the upcoming annual GDP benchmark revisions and the coincident "advance" estimate of second-quarter 2017 GDP.

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.

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. 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. 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.

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.

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. 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. 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™.

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.

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.

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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: New- and Existing-Home Sales (July 2017). Reporting of July 2017 Existing-Home Sales is due for release on Wednesday, August 23rd, from the National Association of Realtors (NAR), followed by release of July 2017 New-Home Sales on Thursday, August 24th, from the Census Bureau. Both home sales series will be covered in *Commentary No. 906* of August 25th.

The extreme liquidity bind besetting consumers continues to constrain residential real estate activity, as discussed the *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 residential real estate activity and related demand for residential construction, as seen in today's New Residential Construction reporting for July. 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.

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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 (July 2017). The Census Bureau will report July New Orders for Durable Goods on Friday, August 25th, to be covered in *Commentary No. 906* 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 month-to-month order activity this will not be affected heavily in July. Monthly inflation for July 2017 was "unchanged" at 0.00%, following a gain of 0.06% in June and an "unchanged" reading of 0.00% in May, while year-to-year annual inflation slowed to 1.56% in July 2017, versus 1.69% in June 2017 and 1.75% in May 2017 and 1.87% in April 2017 (see prior *Special Commentary No. 904*).

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