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

COMMENTARY NUMBER 956

May 2018 Retail Sales, Production, Freight, Housing Starts, Home Sales

June 27, 2018

Some Hit Likely to Historical GDP Growth in Pending Revisions

5.0% Jump in May Housing Starts Was Not Statistically Significant, but the 4.6% (-4.6%) Drop in the Leading Building-Permits Series Was

May Existing-Home Sales Tumbled Again, On Top of Downside Revisions to April, Down by 0.4% (-0.4%) Month-to-Month, 3.0% (-3.0%) Year-to-Year and Shy of Recovering Its Pre-Recession Peak by 25.3% (-25.3%)

May New-Home Sales Gain of 6.7% Was in the Context of Usual Nonsense-Volatility, Still Shy of Recovering Its Pre-Recession High by 50.4% (-50.4%)

May Manufacturing Took a Heavy Hit, Even Allowing for Major Supply Disruptions, Still Shy by 6.0% (-6.0%) of Recovering Its Pre-Recession High, Faltering in a Record 125 Months of Economic Non-Expansion

Real Retail Sales Were Strong in May, Thanks to a Post-Benchmarking Return to Underlying Positive Assumptions and to Lack of Inflation-Adjustment Consistency

Declining Consumer Goods Production, Declining Goods Consumption and Intensifying Liquidity Stresses Put the Lie to "Booming" Real Retail Sales

May Freight Index Rose to a Post-Recession High, With Strong Annual Growth, Albeit Off Peak, with Activity Still Shy by 5.7% (-5.7%) of a Full Recovery

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PLEASE NOTE: The next Regular Commentary on Saturday, June 30th, will cover May 2018 New Orders for Durable Goods and the third estimate, second revision of First-Quarter 2018 GDP.

SPECIAL NOTE ON THE COMMENTARY-TRANSITION UPDATE. Previously noted, ShadowStats is transitioning to publishing more-concise, more-frequent and more-timely Commentaries. All material, analysis and commentary standardly covered and reviewed will continue.

Today's Commentary incorporates most of the new formatting and structural changes needed to make the regular missives more concise and easier to follow. Included is a Table of Contents that links to the key Reporting Detail sections and graphs. The prior Executive Summary section has been replaced with opening summary paragraphs in each major section of the Reporting Detail. Increased usage of tables should help with clarity of new headline detail.

Going forward, the Regular Commentaries will be more frequent and generally much shorter than today's missive. Today's length reflects coverage of the large number of economic series being reformatted, as well as to the large number of graphs, seen particularly with the Industrial Production and New Residential Construction series.

The regular Consumer Liquidity Watch (CLW) and Hyperinflation Watch (HW) sections are being updated and posted as separate entities, as meaningful new data become available or circumstances change. The June 20th transition of the CLW can be accessed by clicking on this link: Consumer Liquidity Watch. The first standalone Hyperinflation Watch will follow on Thursday, July 5th, covering June 2018 Monetary Conditions. The latest Watches always will be available on the ShadowStats Web site and by link from the current Commentaries, with updates advised by e-mail.

Your comments and suggestions always are invited. Best wishes, John Williams (707) 763-5786

Today's (June 27th) ***Opening Comments*** (1) provides a brief overview of the latest headline reporting, (2) explores a possible downside hit to the historical GDP in the pending Comprehensive Benchmark Revisions, including some suggestions of a heretofore unrecognized double-dip in the economy, and (3) reviews the May 2018 Cass Freight Index™.

The ***Reporting Detail*** reviews the May Retail Sales, Industrial Production, New Residential Construction and Existing- and New-Home Sales. Headline details for the May 2018 Retail Sales, Industrial Production and the CASS Freight Index™ had been discussed in the *Opening Comments* of prior *Commentary No. 955*.

The transitioned ***Consumer Liquidity Watch*** was posted on the *ShadowStats* Web Site as a standalone entity on June 20th, available here by link at the *Consumer Liquidity Watch*.

The ***Week, Month and Year Ahead*** provides background on recent *Commentaries* and previews releases of May 2018 New Orders for Durable Goods and the third estimate (second-revision) of First-Quarter 2018 GDP.

Commentary No. 956 contents, including graphs and tables, are indexed and linked on following page.

Contents – Commentary No. 956 Major Sections and Graphs

OPENING COMMENTS

Mixed Reporting Holds Shy of an Economic Boom

Headline Economic Reporting Broadly Remained Consistent with Stagnant to Slowing Activity. May 2018 economic reporting showed strong monthly retail sales activity, although the levels of inflation-adjusted real growth appear to have been bloated by unusual volatility in seasonal-adjustments to monthly gasoline prices. At the same time, a sharp drop in the June 2018 Conference Board Consumer Confidence Index suggested mounting consumer difficulties. The *Consumer Liquidity Watch* (June consumer outlook) will be updated following the June 29th revision to the University of Michigan's June Consumer Sentiment Survey.

Separately, declining production of both consumer durable and non-durable goods in May did not support surging retail sales. The same can be said for declining consumption of Consumer Goods in First-Quarter 2018 GDP (see *Commentary No. 952*).

Faltering industrial production in May was dominated by a drop in manufacturing, which in turn was hit by a supply disruption to parts needed for truck assemblies. Allowing for that disruption, manufacturing still was down sharply in the month, including automobiles, still down 6.0% (-6.0%) from recovering its pre-recession high, and having completed a record, 125th consecutive month of economic non-expansion.

Although there was a strong monthly pick-up in the ever-volatile and unstable Census Bureau reporting of Housing Starts, the May 2018 monthly gain—largely offsetting an April decline—was not statistically-significant, as is usual. Activity held shy by 40.6% (-40.6%) of regaining its pre-recession high. In contrast, Building Permits, a leading indicator to Housing Starts, declined by a statistically-significant 4.6% (-4.6%) month-to-month, down by 42.5% (-42.5%) from recovering its pre-recession peak.

The Census Bureau's May New-Home Sales (contract signings as opposed to closings), were equally unstable, showing a statistically-insignificant 6.7% gain, in the context of a sharp downside revision to April activity. New sales activity held shy by 50.4% (-50.4%) of recovering its pre-recession peak.

The more-meaningful National Association of Realtors (NAR) survey of Existing-Home Sales (closings as opposed to contract signings) showed May sales down for a second month, with a deepening annual contraction, holding shy of its pre-recession peak by 25.3% (-25.3%).

Combine the latest detail here with faltering consumer liquidity indicated in the *Consumer Liquidity Watch*, and with the extreme stress indicated in current labor-market conditions (see the discussion in the *Opening Comments* of *Commentary No. 953-B*), headline economic conditions remain far from suggesting or supporting a "booming" U.S. economy.

Belated Recognition of a Double-Dip?

One Month from Today, the 2018 Comprehensive Benchmark Revisions to Gross Domestic Product Will Restate U.S. Economic History Back to 1929, With the Last Decade or So Likely Taking a Hit. On July 27th, the Bureau of Economic Analysis (BEA) will recast its broadest economic measure, the Gross Domestic Product (GDP), and the purportedly equivalent Gross Domestic Income (GDI) and the broader Gross National Product (GNP) in a *Comprehensive Benchmark Revision*, back to 1929. Aside from restating the inflation-adjusted, constant-dollar basis from 2009 to 2012, a large number of revisions and redefinitions loom, ranging from missed historical postings in earlier, less-comprehensive benchmarkings, to seasonally-adjusting "seasonal adjustments" in a continuing effort to smooth out the uncomfortable reality of regular business cycles, particularly on the downside.

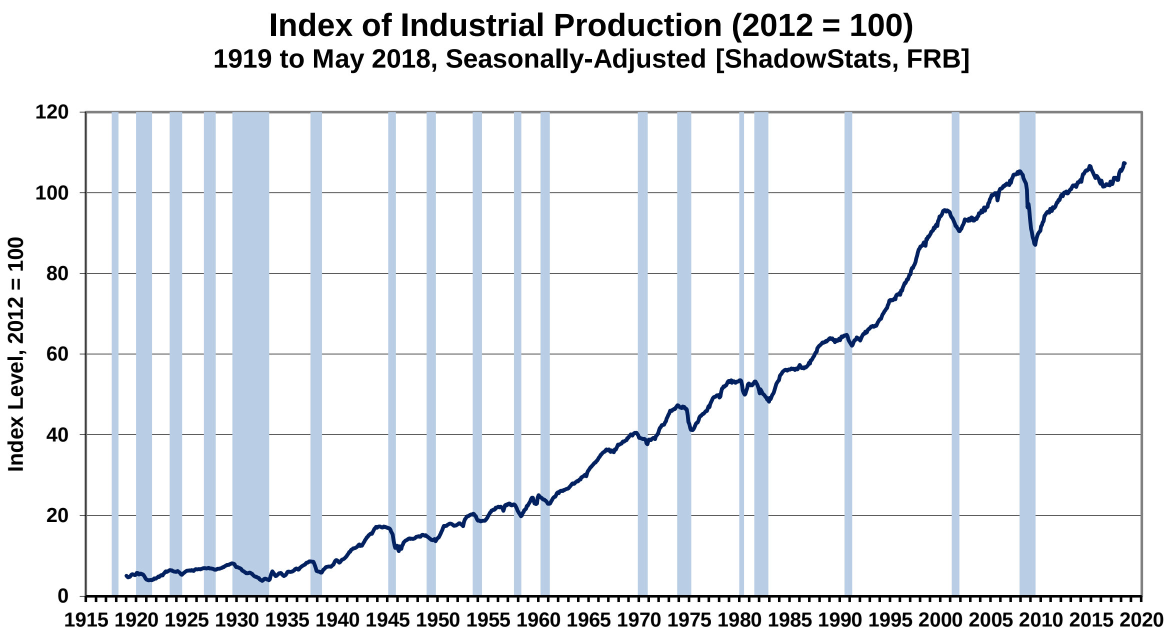
Will the GDP Benchmarking Provide Belated Recognition to Something Approaching a Double-Dip Recession in 2015? Reflected in *Graphs OC-1* and *OC-2* are the historical patterns of the dominant Industrial Production component of the U.S. economy. At no time in the 100-year history of the series has there been a dip in the level of activity, or a decline in year-to-year change, without the economy being in formal recession, except after fourth-quarter 2014. Discussed in the later *Industrial Production* section, such is suggestive of a double-dip recession, although not commonly reported in existing headline, U.S. economic activity.

What Happened? Discussed in *Commentary No. 942-B*, a major downside, benchmark revision to the Industrial Production series never was tallied in the regular, annual GDP benchmarkings. Reflected in *Graph OC-3*, the top, but shortest red line shown as the "Original 2014 Data to Benchmark," reflected a headline recovery in manufacturing that was consistent with the GDP recovery of the time. Yet, the downside benchmark revisions shown in the lower orange line—indicated as the 2015 benchmark revision—largely never made it into the related GDP benchmarking, due to a U.S. government shutdown. That should be caught up, at least in theory, in the 2018 Comprehensive Benchmark Revisions to the GDP, back to 1929.

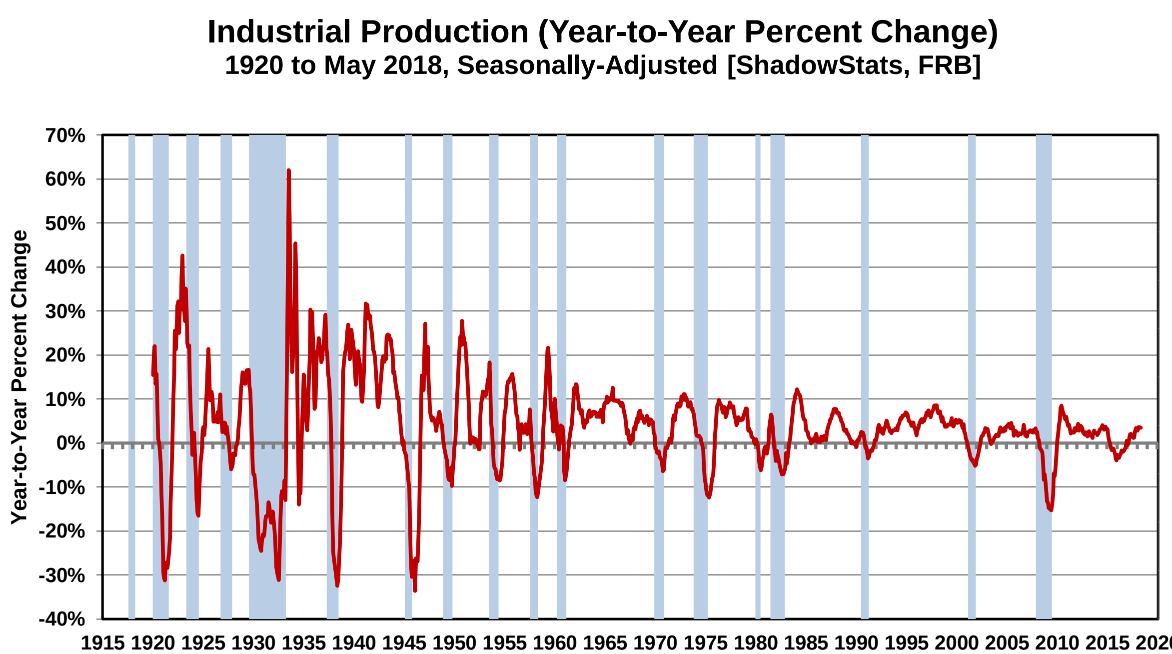
"The benchmarking of March 2014 (not plotted) actually was net to the plus-side, because significant surveying of underlying economic reality did not take place or was not available for that benchmarking, due to the government shutdown in 2013. As noted in related *Commentary No. 737*, "... the 2014 benchmark revision to industrial production largely was incomplete, lacking detail from the regular Census of Manufactures (2012), which had been delayed in its release by the government shutdown of October 2013. As a result, what could have been major downside revisions to 2011 and 2012 industrial production activity (and broader GDP activity) never took place (see *Commentary No. 613*). This [2015] benchmarking at least partially corrected that, although 2011 will not face needed revisions in this year's [2015] GDP benchmarking, because of that delayed detail." (Text continues on page 8.)

Graphs OC-1 and OC-2 plot the entire monthly history of U.S. Industrial Production, 1919 to date. At no time in the 100-year history of this series, has there been a dip in the level of activity, or a decline in year-to-year change, without the economy being in formal recession (blue bars), except for post-fourth-quarter 2014. The high volatility in annual growth, shown in the purported 1933 to 1937 break in the Great Depression (1929 to 1938), generally is considered as part of that great economic collapse.

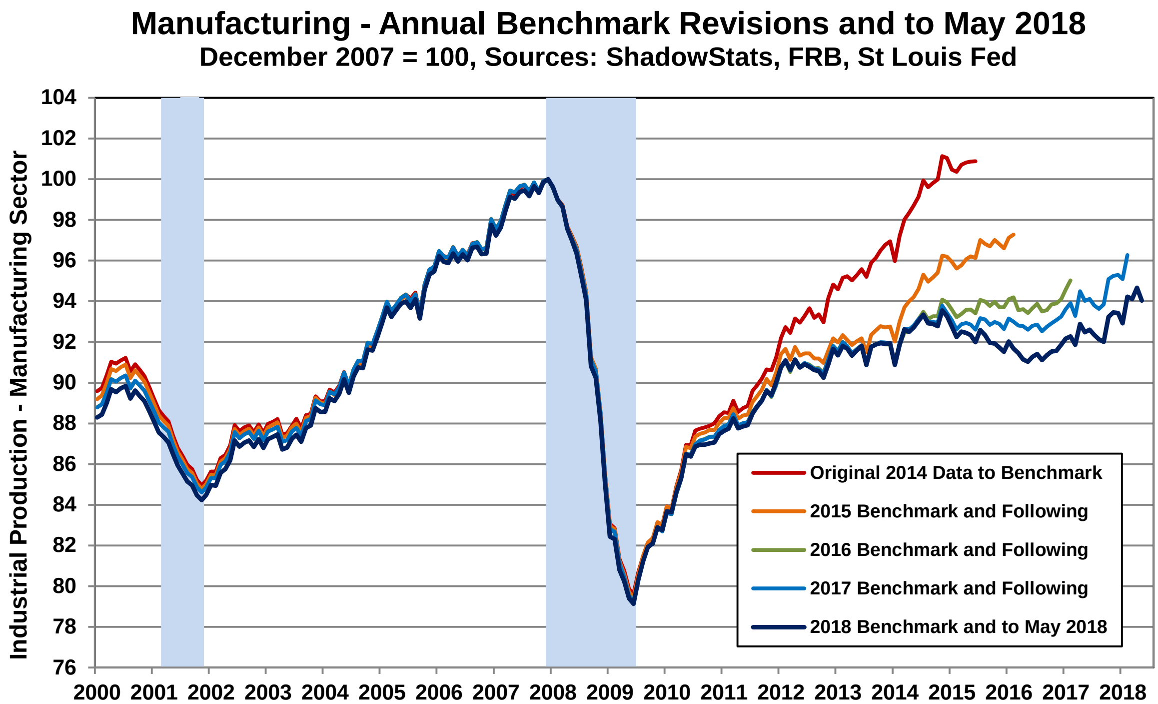
Graph OC-1: Index of Industrial Production, Full Historical Series 1919 to Date



Graph OC-2: Industrial Production, Year-to-Year Percent Change, Full Historical Series Since 1920



Graph OC-3: Manufacturing –Annual Benchmark Revisions and to May 2018



That missing downside GDP revision of 2011 should be picked up, in theory, among other major corrections, in the 'comprehensive' GDP benchmarking pending for July 27, 2018.

As of May 2018 production reporting, first-quarter 2018 Industrial Production had fallen back below its fourth-quarter 2014 peak by 0.39% (-0.39%). Headline industrial production showed a string of twenty consecutive months of year-to-year contraction beginning April 2015, a pattern never seen outside of formal economic recession in the 100-year history of the Industrial Production series. With the 2018 GDP benchmarking picking up the "missed" production benchmarking, the broad circumstance has some chance now of being recognized as a much-weakened period of economic activity, conceivably even a possible, formal double-dip recession.

Reflecting the broadly and likely increasingly negative GDP comprehensive benchmark revisions back to 1929 (see *Commentary No. 954*), what conceivably could make these negative revisions politically acceptability is that the "unrecognized" double-dip downturn in earlier Administrations effectively has ended, given the current headline Industrial Production detail. In any event, the GDP economic "recovery" coming out of the economic collapse likely will appear weaker, post benchmarking, than it does at present, with some slowing, and again, even the possibility of a headline "double dip" recession after fourth-quarter 2014.

Cass Freight Index™ (May 2018)

Freight Index Trending Higher at a Post-Recession Peak High, but Still Non-Expanding; Shy by 5.7% (-5.7%) of Recovering Its Pre-Recession Peak. An independent, reliable private indicator of real-world economic activity and shifting business patterns, the May 2018 Cass Freight Index™ was published June 15th. Although uptrending, the improving series remains shy of full economic recovery. The headline detail here remains as published, not seasonally adjusted and not subject to annual benchmark revisions, unlike some of the better-quality government numbers, such as Industrial Production and New Orders for Durable Goods that still are heavily modeled and gimmicked (see *Commentary No. 942-B* and *Commentary No. 950*).

The May 2018 Cass Freight Index numbers continued in low-level economic non-expansion as otherwise reflected in some elements of broad economic and general business activity, although showing a pattern of positive, uptrending headline activity. The pace of year-to-year growth remained strong at 11.9%, albeit slightly weaker than the near-term January 2018 peak. The unadjusted monthly level of activity hit a new post-recession high, but still held below its pre-recession peak activity.

The 12-month trailing average of activity also hit a post-recession high, yet it remained meaningfully shy of recovering its pre-recession peak. Activity reflected in the 12-month trailing average—used to eliminate seasonality in the unadjusted series (see the *General Background to the Freight Index*)—remained in low-level, albeit uptrending stagnation, down by 5.72% (-5.72%) from recovering its formal pre-recession high, and down by 8.71% (-8.71%) from its precursor peak (see *Graph OC-4*).

For the eighteenth consecutive month, the nineteenth month in the last twenty, year-over-year change in the unadjusted monthly index was positive. It notched higher in May 2018 to a robust 11.90%, from 10.18% in April 2018, still down from its near-term peak of 12.54% in January 2018, which had surged, having started to pick up in year-to-year change with November 2017, after several months of slowing growth (see *Graph OC-6*). Annual growth had hit a near-term peak of 7.06% in May 2017, falling back to 4.77% in June 2017, slowing to 1.35% in July 2017, rebounding to 3.86% in August 2017, falling back anew to 3.24% in September 2017 and to 2.85% in October 2017. It began rebounding in November 2017 to 6.26%, to 7.17% in December 2017, peaking at 12.54% in January 2018, easing back to 11.44% in February 2018, then 11.94% in March 2018, 10.18% in April 2018 and 11.90% in May 2018.

A consecutive string of nineteen months of annual contraction in the Freight Index began in March 2015. That was consistent with the "new" recession signal following the near-term Industrial Production peak in November 2014 (recovered anew in initial March 2018, reporting, lost again with the annual benchmark revisions, only to be regained once more with the headline April 2018 level, yet easing back, though still recovered in headline May 2018 detail as discussed in the prior section).

Comparative growth patterns of the Freight Index versus the never-recovered, dominant Manufacturing Sector of Industrial Production are shown in *Graphs OC-4* and *OC-5* as to level and in *Graphs OC-6* and *OC-7* as to year-to-year change.

The recent, strengthening pattern of monthly year-to-year gains in the Cass Index has excited the trucking-industry that the recession in freight activity has hit bottom, and that activity is moving higher, once again. That certainly appears to be the case. Even with the high levels of positive annual gain in the first five months of 2018, though, the current patterns of smoothed levels of activity and year-to-year gains have yet to break out of the non-recovery pattern of the last ten-plus years and to enter a period of new economic expansion. Again, as shown in *Graphs OC-4* and *OC-5*, monthly activity is uptrending, although not yet fully recovered.

No Economic Expansion. When economic activity starts to recover, such happy growth traditionally is not clocked formally as new economic "Expansion," until the level of the series breaks above its prior, pre-recession high. This is reviewed in *Commentary No. 875* and expanded upon in *Commentary No. 876*, on the nature of the business cycle.

Noted earlier, the ShadowStats smoothed (12-month trailing average) headline reading on the Cass Freight Index, through May 2018 (*Graph OC-4*) remained down by 8.71% (-8.71%) from "Recovering" its preliminary pre-recession peak of September 2006, down by 5.72% (-5.72%) from recovering its formal "Pre-Recession Peak" of December 2007 (Fourth-Quarter 2007). That also was the formal peak for the Industrial Production, Manufacturing and GDP series. While the "Recovery" receives the benefit of growth off low levels of activity—the recession "Trough"—the deficit in current activity versus the pre-recession peak has to be overcome, before formal, economic "Expansion" begins.

Economic downturns eventually hit bottom. The official collapse in aggregate economic activity (as measured by the inflation-adjusted, real Gross Domestic Product or GDP), which 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 GDP fully recovered thereafter, entering a period of new and ever-expanding economic growth, "Expansion," in second- or third-quarter 2011. ShadowStats contends that the broad economy never recovered fully, moving instead into a period of protracted, low-level stagnation, which began to turn down anew in December 2014. Such still was reflected in the latest Industrial Production Benchmarking and subsequent reporting (see *Commentary No. 942-B*, as well as the recent benchmark revisions to Manufacturers' Shipments and New Orders for Durable Goods in *Commentary No. 950*). The following charts of freight activity also will be compared to, and contrasted with, the May 2018 New Orders for Durable Goods in the next *Commentary No. 957*.

General Background to the Freight Index. *[This section largely is repeated from its prior version in Commentary No. 950.]* 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 2017, roughly 92% was attributable to the United States.

Graph OC-4 reflects the monthly freight numbers updated through May 2018. 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 re-indexed the series to January 2000 = 100, consistent with other graphs used here. The headline Cass Index plot is based on January 1990 = 100. The plot of the trailing twelve-month average of the freight index shows it hit a near-term peak in February 2015, consistent with the onset of a "new recession" in December 2014. It slowed through September 2016, then flattened out and turned back to the upside through the current May 2018 reading, its highest level of the post-recession period, although still shy of its pre-recession peak (again, see *Graph OC-4*).

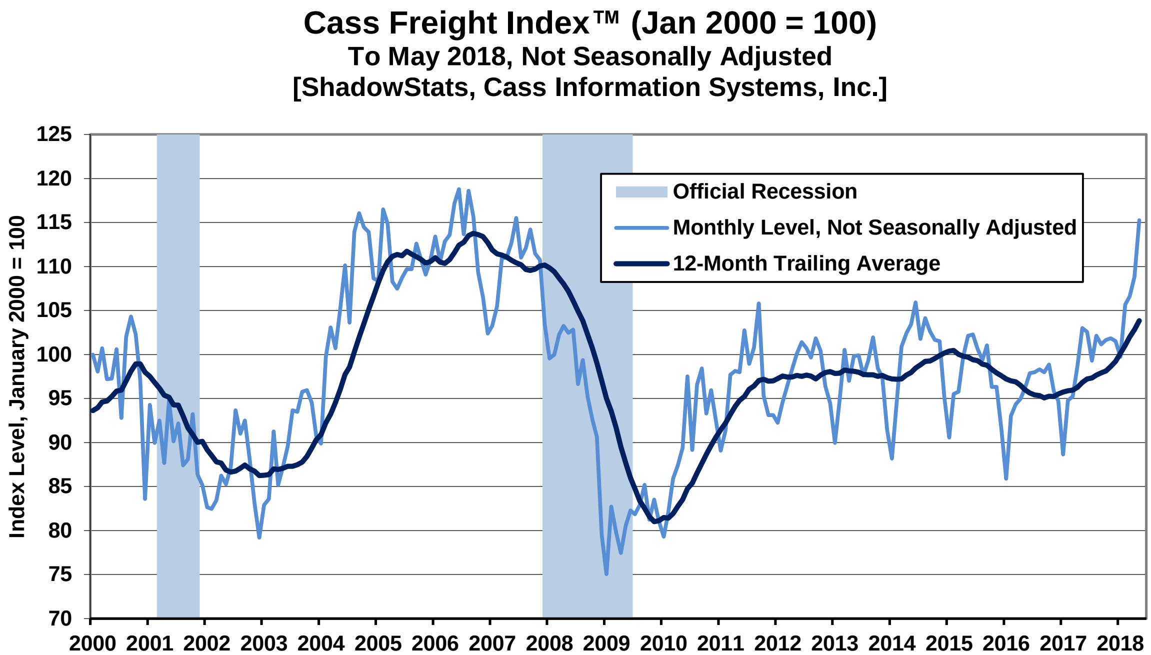
Another approach to assessing not-seasonally-adjusted monthly detail is to look at year-to-year change by individual month, as plotted in *Graph OC-6*. The unadjusted monthly detail had been in continual year-to-year decline since March of 2015, down at an intensified annual rate of 3.05% (-3.05%) in 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. Annual growth fluctuated thereafter in direction until rebounding to 6.26% in November 2017, 7.17% in December 2017, 12.54% in January 2018, with easing back 10.18% in April 2018 and up to 11.90% in May 2018.

In parallel, seasonally-adjusted May 2018 Manufacturing was down by 6.0% (-6.0%) from its December 2017 pre-recession peak; seasonally-adjusted First-Quarter 2018 Manufacturing also was down by 6.0% (-6.0%) from its Fourth-Quarter 2007 peak. In happy, ever-incredulous conflict, headline First-Quarter 2018 real GDP detail was up by 15.7%, over the same period, against its fourth-quarter 2007 pre-recession peak.

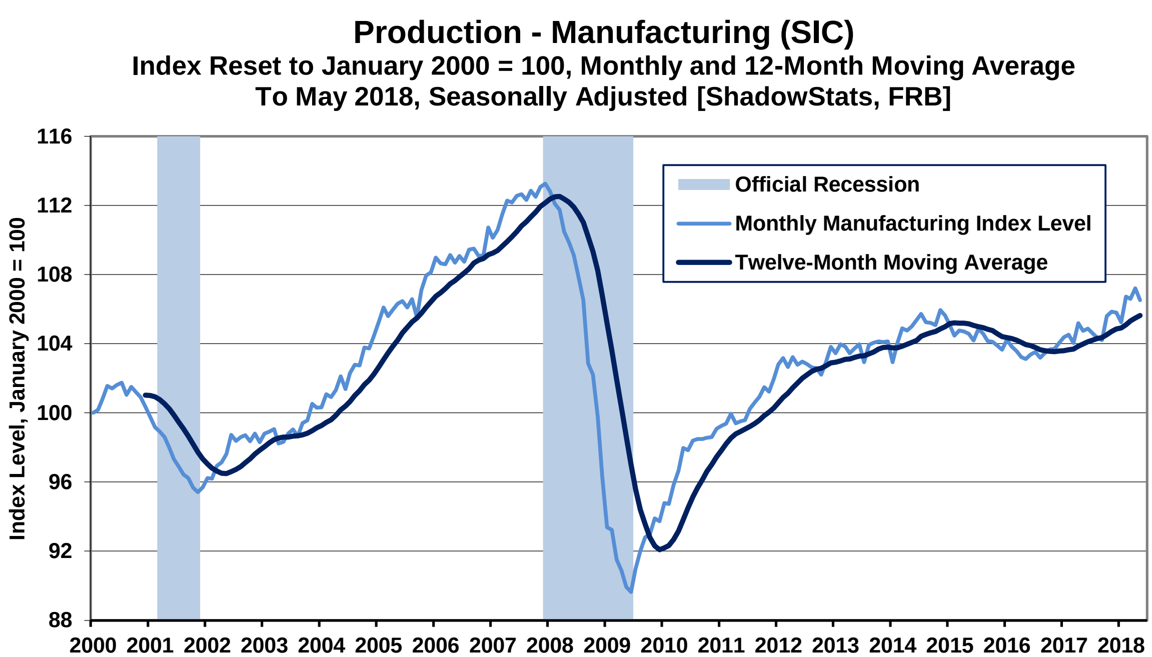
In combination, *Graphs OC-4* to *OC-7* remain consistent with a pattern of collapsing economic and business activity into 2009, low-level, non-recovering stagnation thereafter and a renewed downturn effectively coincident with a "new" recession, which, again, likely will be timed from December 2014, whether or not it has bottomed and currently is uptrending. There was nothing in recently-published benchmark revisions to the Manufacturing sector in Industrial Production (again, see *Commentary No. 942-B*) or to Manufacturers' Shipments that alters that near-term, double-dip recession story, other than possibly intensifying it, once again.

[Graphs OC-4 to OC-7 begin on the next page.]

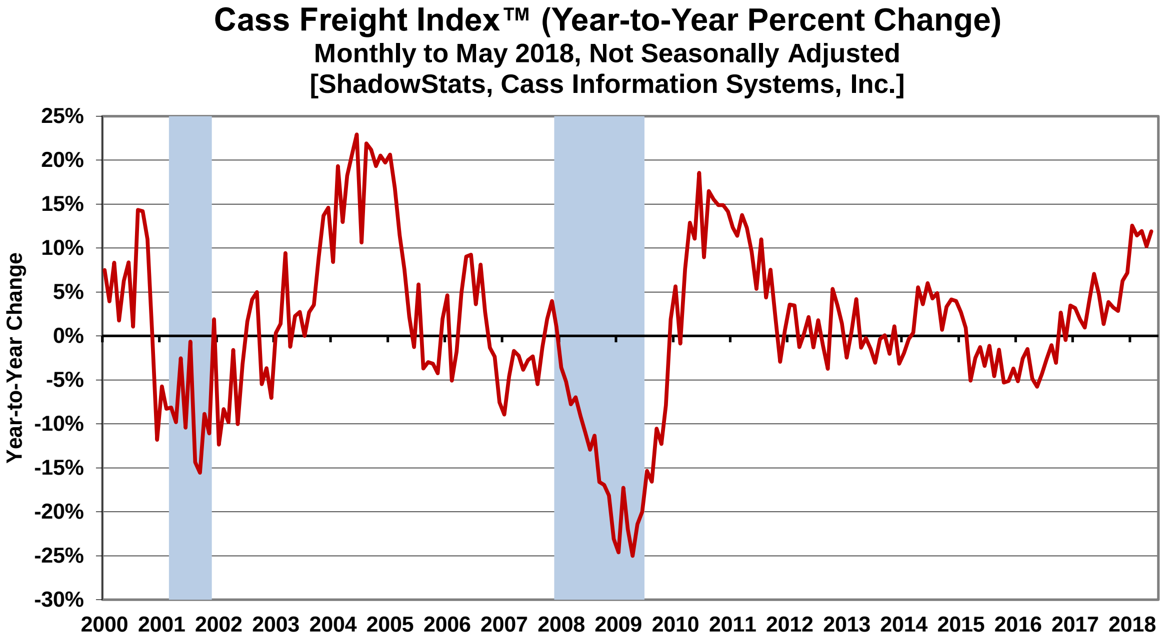
Graph OC-4: CASS Freight Index ™ Moving-Average Level (2000 to May 2018)



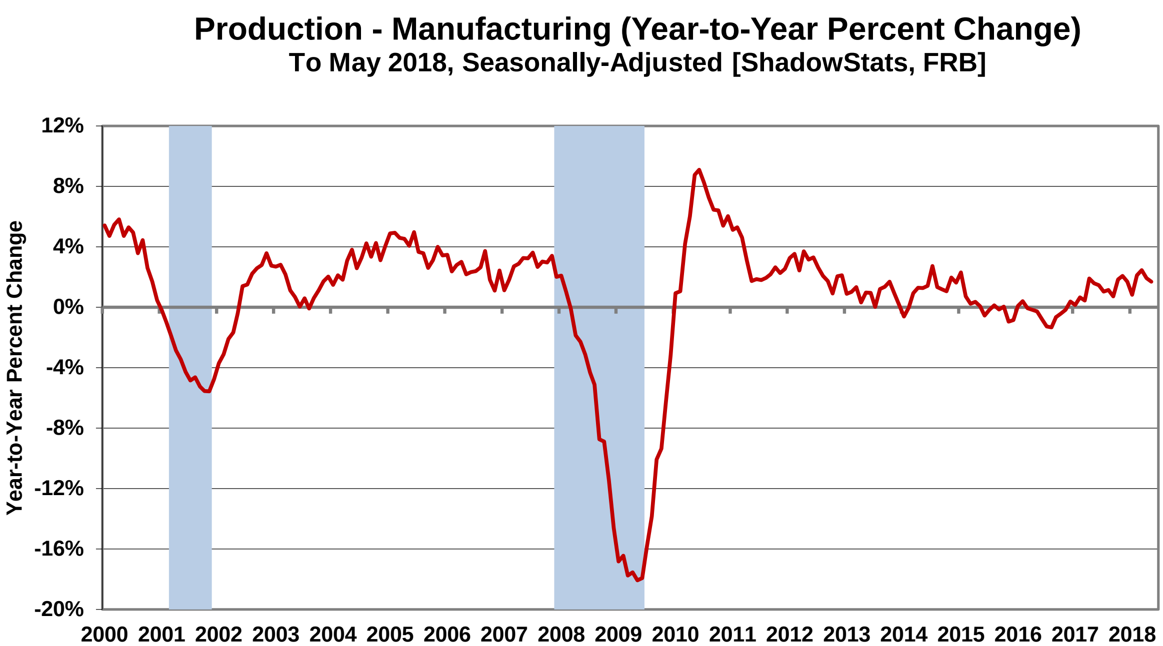
Graph OC-5: Industrial Production-Manufacturing, 12-Month Moving-Average Level (2000 to May 2018)



Graph OC-6: CASS Freight Index, Monthly Year-to-Year Percent Change (2000 to May 2018)



Graph OC-7: Manufacturing, Year-to-Year Percent Change (2000 to May 2018)
(Same as Graph 15 in the Reporting Detail)



REPORTING DETAIL

Retail Sales (May 2018)

Headline Monthly Gains in May 2018 Real Retail Sales Appear Boosted by Some Inconsistent Seasonal Adjustments. Before inflation adjustment, nominal, seasonally-adjusted Retail Sales in March, April and May 2018, respectively rose month-to-month by 0.7%, 0.4% and 0.8%. Net of headline, seasonally-adjusted CPI-U inflation, real changes in those same month-to-month periods were 0.8% in March, 0.1% in April and 0.6% in May. Yet, those real monthly gains, likely were closer to 0.5% in March, a contraction of 0.1% (-0.1%) in April and a gain 0.6% in May, adjusting for heavily distorted seasonal adjustments to gasoline prices in those months (see *Commentary No. 955*).

Nonetheless, where the headline real monthly sales gains were respectable, they tended to run counter to declining consumption of consumer goods in first-quarter GDP. They also ran counter to May Industrial production showing a broadly-based decline in consumer goods production, as well as counter to a variety of faltering indicators of consumer liquidity (see the *Consumer Liquidity Watch*), including the just-published (June 26th) monthly plunge in the June 2018 Conference Board Consumer Confidence Index.

Headline Nominal Retail Sales—May 2018. The Census Bureau reported its "advance" estimate of May 2018 *Retail Sales* on Tuesday, June 14th, in the context of annual benchmark revisions to the series on May 25th (see *Commentary No. 952*). The headline, seasonally-adjusted monthly gain of 0.83% +/- 0.59% was statistically-significant (all confidence intervals are expressed at the 95% level). The revised headline April monthly gain of 0.36% [previously 0.23%] +/- 0.23%, also was statistically-significant.

That April gain was on top of the revised monthly gain of 0.72% [previously 0.69%] in March and against an unrevised gain of 0.10% in February and a decline of 0.12% (-0.12%) in January. Net of the prior-month's revision, the May 2018 nominal monthly sales gain was 0.98% instead of the headline 0.83%.

Year-to-Year Annual Nominal Change. The May 2018 nominal year-to-year change in Retail Sales showed a statistically-significant increase of 5.87% +/- 0.82%, versus revised annual gains of 4.78% [previously 4.64%] in April 2018 and 5.09% [previously 5.07%] in March 2018 and unrevised annual gains of 4.53% in February 2018 and 3.95% in January 2018.

May 2018 "Core" Retail Sales, Net of Food and Gasoline. In theory, the May 2018 environment should have been neutral for grocery stores, with seasonally-adjusted food prices declining by 0.01% (-0.01%), and positive for gasoline stations, with seasonally-adjusted gasoline prices up by 1.72%, per the Bureau of Labor Statistics (BLS). Adjusted retail sales grocery-store sales gained month-to-month by 0.03%, per the Census Bureau, with seasonally-adjusted gasoline-station sales up by 1.72% (but unadjusted price gained by 5.87% in the month). Given the extreme volatility in headline gasoline prices, seasonally-adjusted and otherwise, one has to wonder as to the nature and consistency of the headline reporting and seasonal adjustments being used between these two series, as combined by the Saint Louis Fed in its monthly calculations of Real Advance Retail Sales. Consistent reflection of headline gasoline prices versus gasoline-station sales would have resulted in weaker Real Retail Sales growth.

That said, under normal conditions, the bulk of non-seasonal variability in fundamental food and gasoline sales is in pricing, instead of demand. Consistent with the Federal Reserve's historical preference for ignoring food and energy prices (as though people can live without consuming same), when "Core" inflation is lower than full inflation (at times when the Fed is looking to downplay inflation), "Core" retail sales are estimated using two approaches:

Version I: Nominal May versus April 2018 seasonally-adjusted retail sales series—net of total grocery store and gasoline-station sales—rose by 0.82%, versus the official headline aggregate sales gain of 0.83%.

Version II: Nominal May versus April 2018 seasonally-adjusted retail sales series—net of the monthly *change* in grocery store and gasoline-station revenues—rose by 0.66%, versus the official headline aggregate sales gain of 0.0.83%.

Structural Liquidity Issues Continue to Impair Retail Sales**.** An extreme consumer-liquidity bind increasingly constrains retail sales and other consumer activity (see particularly the earnings and consumer credit details in the *Consumer Liquidity Watch*). Without sustainable growth in, and with intensified patterns of consecutive quarterly contractions in real earnings, and without the ability and/or willingness to take on meaningful new credit 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 ten-plus years of economic collapse and stagnation—has continued to prevent a normal recovery in broad, inflation-adjusted U.S. economic activity, a declining 72.9% of which (first-quarter 2018 real GDP activity) is dependent on personal spending and residential real estate investment.

Of note, the consumer-dependent 72.9% portion of first-quarter GDP shrank from 73.1% of fourth-quarter 2017 real GDP activity, reflecting mounting constraints on consumer consumption and investment. The consumer drives the economy, and pullback there will increasingly be reflected in almost all other sectors.

As headline consumer inflation continues its upside climb in the year ahead, and as overall headline Retail Sales continue to suffer from the ongoing consumer liquidity squeeze, real Retail Sales growth should trend meaningfully lower. That likely still will gain recognition as a formal "new" recession, another down-leg in the economic collapse that began in 2006, known formally as the 2007 recession or the Great Recession.

Real Retail Sales Corrected for Understated Inflation and Otherwise. *Graphs 3* and *5* show the headline levels of inflation-adjusted Real Retail Sales activity (deflated by the CPI-U), while *Graphs 4* and *6* show year-to-year percent change. Headline real retail sales peaked with the broad economy (GDP) in fourth-quarter 2007 (December 2007) and collapsed into 2009. The March 2009 trough was followed by a "recovery" into 2012, recovering its pre-recession high, and an "expansion" 2013-to-date, with headline activity moving beyond its pre-recession peak level. Those patterns also are reflected here in *Graph 1*.

That "recovery" and "expansion" shown in the headline graphs, however, largely reflected the U.S. government's deliberate understatement of headline CPI-U inflation. Most economic numbers are viewed net of inflation, so as to get a sense of underlying physical activity and volume in the economy.

For example, if a retail storeowner noted that sales in May 2018 were up year-to-year by 4.0% from the year-before, there would be some value in knowing that 2.8% of that gain was in inflation, with physical sales (real sales) volume up by 1.2%.

If the inflation estimate used were understated, the resulting "real" or "inflation-adjusted" growth would be overstated. Using the prior example, if sales were up by 4.0%, but inflation was really 5.0%, instead of 2.8%, physical sales volume would have declined by 1.0% (-1.0%) instead of having gained 1.2%.

Discussed in the *Public Commentary on Inflation Measurement*, the U.S. government began changing CPI reporting methodologies back in 1980s so as to reduce headline inflation and inflation-adjusted government outlays, such as Cost of Living Adjustments for Social Security recipients. Also see *Chapter 9* of *2014 Hyperinflation Report—Great Economic Tumble – Second Installment*. These inflation issues are separate from the adjustment issues mentioned in the opening paragraph of this section,

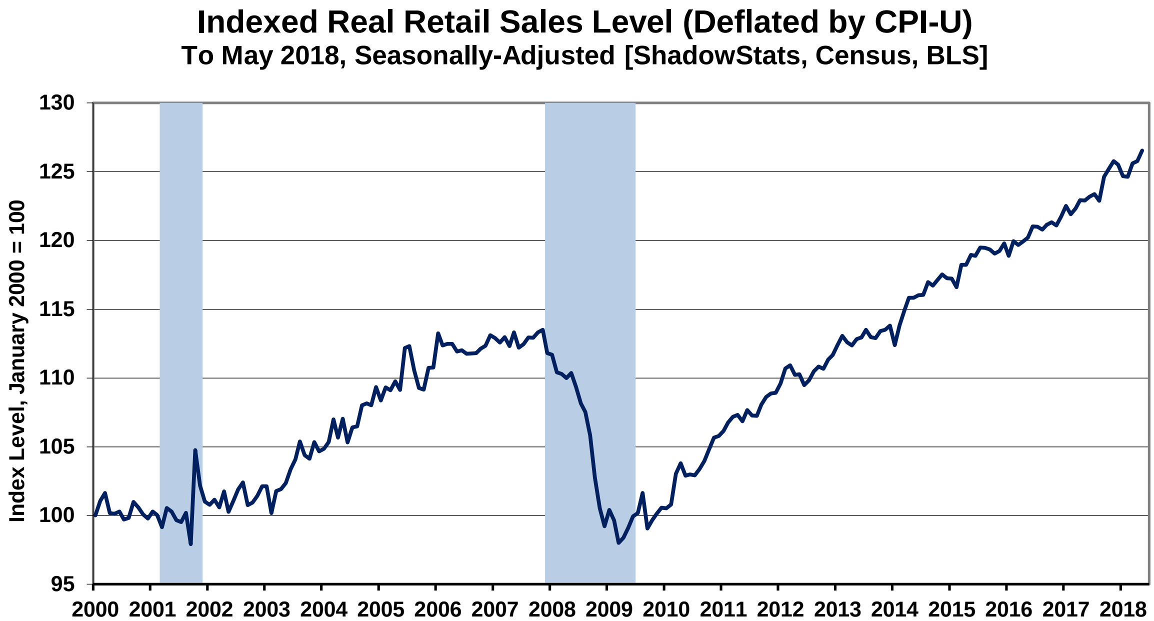
Both of the accompanying *Graphs 1* and *2* of Real Retail Sales are indexed to January 2000 = 100.0, so as to maintain consistency with the series of graphs related to corrected inflation-adjustment. Parallel, regular plots of the ShadowStats "corrected" Industrial Production Index are found in the next section (see *Graphs 7* and *8*), and in *Commentary No. 951* and *Commentary No. 952* for graphs of the "corrected" New Orders for Durable Goods and the "corrected" real GDP series.

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, as is evident in a comparison of *Graph 1* with *Graph 3* plotted in with headline CPI-U deflated dollars.

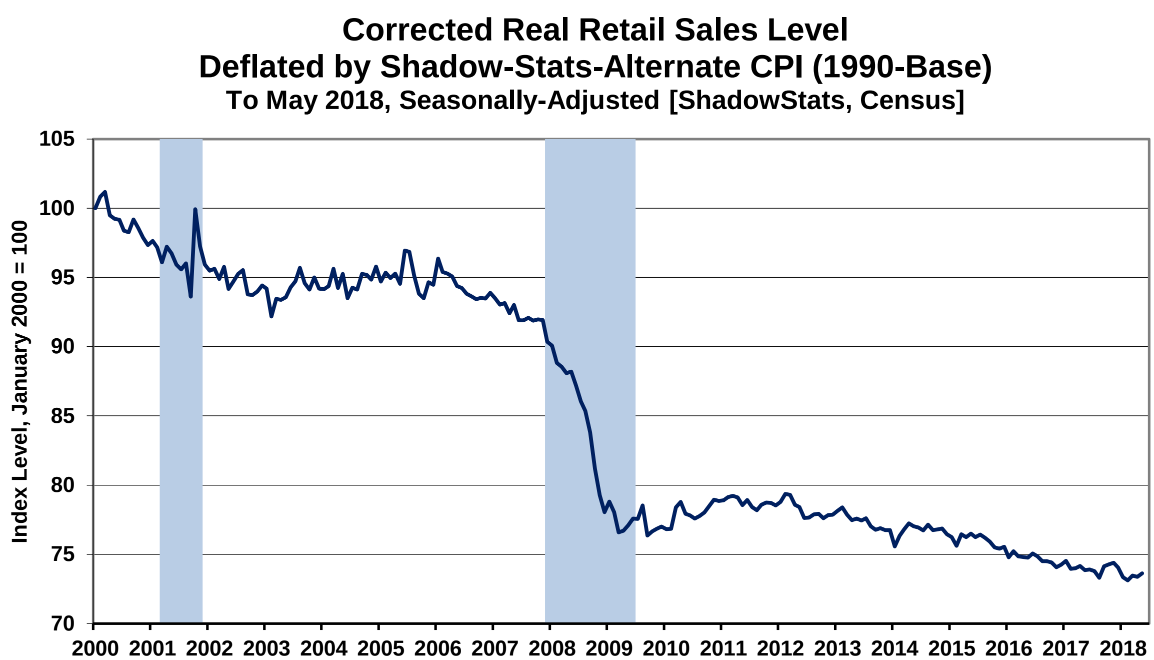
Instead of being deflated by the CPI-U, the "corrected" Real Retail Sales numbers—in *Graph 2*—use the ShadowStats-Alternate Inflation Measure (1990-Base) for deflation. With the higher inflation of the ShadowStats measure, the revamped numbers show a pattern of plunge and stagnation and renewed downturn. That pattern generally is more consistent with consumer indicators such as Real Average Weekly Earnings (see *Graph CLW-7* in the *Consumer Liquidity Watch*) and faltering consumer liquidity conditions, than is seen with headline Real Retail Sales detail.

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

Graph 1: Headline Real Retail Sales Level, Indexed to January 2000 = 100



Graph 2: "Corrected" Real Retail Sales Level, Indexed to January 2000 = 100



Formal Headline Real Retail Sales—May 2018—Despite Some Pickup in Headline CPI-U Inflation, Real Sales Gained by 0.62% in the Month with Annual Growth at 3.07%. Calculated by the Saint Louis Federal Reserve, *Real Retail Sales* deflates the Commerce Department's Nominal Retail Sales numbers using the headline *Consumer Price Index CPI-U*, as published by the Bureau of Labor Statistics on June 12th (see *Commentary No. 955*). The headline levels of, and year-to-year change in, the monthly Real Retail Sales are plotted in *Graphs 3* to *6.*

The May 2018 Consumer Price Index showed the seasonally-adjusted CPI-U up month-to-month by 0.21%, versus 0.22% in April, a decline of 0.06% (-0.06%) in March and gains of 0.15% in February and 0.54% in January (see the *Consumer Price Index* section of prior *Commentary No. 955* for detail).

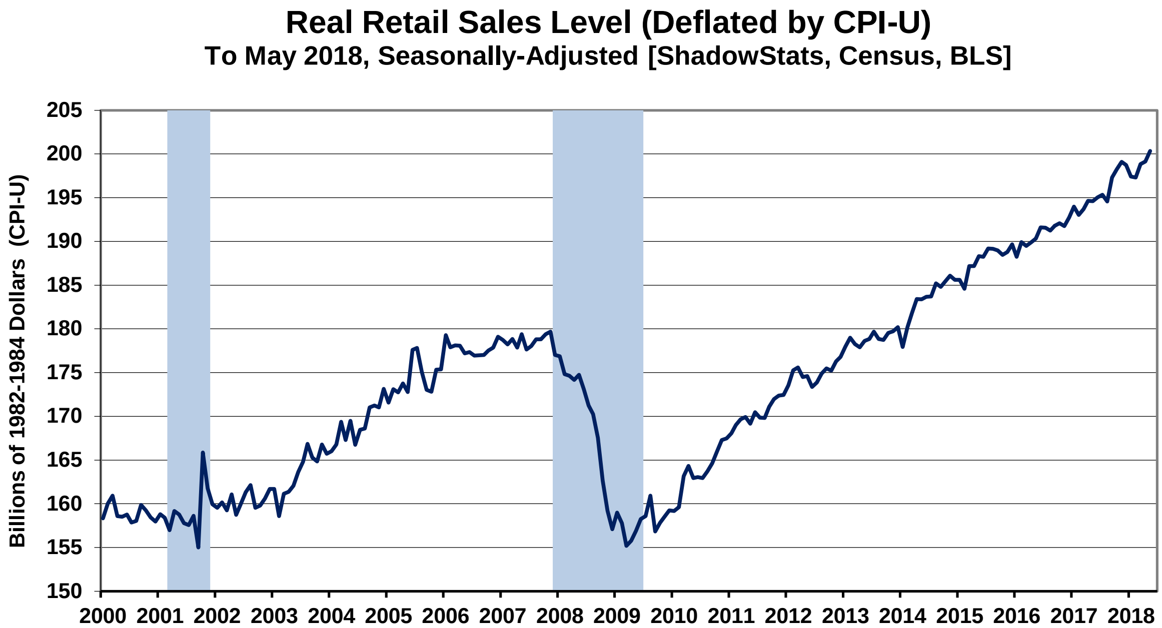
Deflated by the CPI-U, May 2018 Real Retail Sales gained by 0.62% month-to-month, following a real monthly gains of 0.14% in April, 0.78% in March and declines of 0.05% (-0.05%) in February and 0.66% (-0.66%) in January. That headline real monthly gain in May 2018 Retail Sales of 0.62%, was a gain of 0.77% net of prior-period revisions.

In the context of year-ago revisions for April 2017 (upside) and May 2017 (downside), year-to-year real growth was 3.07% in May 2018, versus 2.50% in April 2018, 2.67% in March 2018, 2.22% in February 2018 and 1.77% in January 2018, 3.10% in December 2017 and what was a three-year high of 3.85% in November 2017. Accordingly, as discussed in *Commentary No. 936*, the upside boost to real retail sales activity from the late-2017 natural-disaster-recovery distortions appeared to have peaked in November 2017. The underlying ShadowStats outlook of non-recovering broad economic activity and renewed downturn in recent years, based on partially on key headline reporting being systematically overstated, has not changed (again, see *Real Retail Sales Corrected for Inflation Understate and Otherwise*).

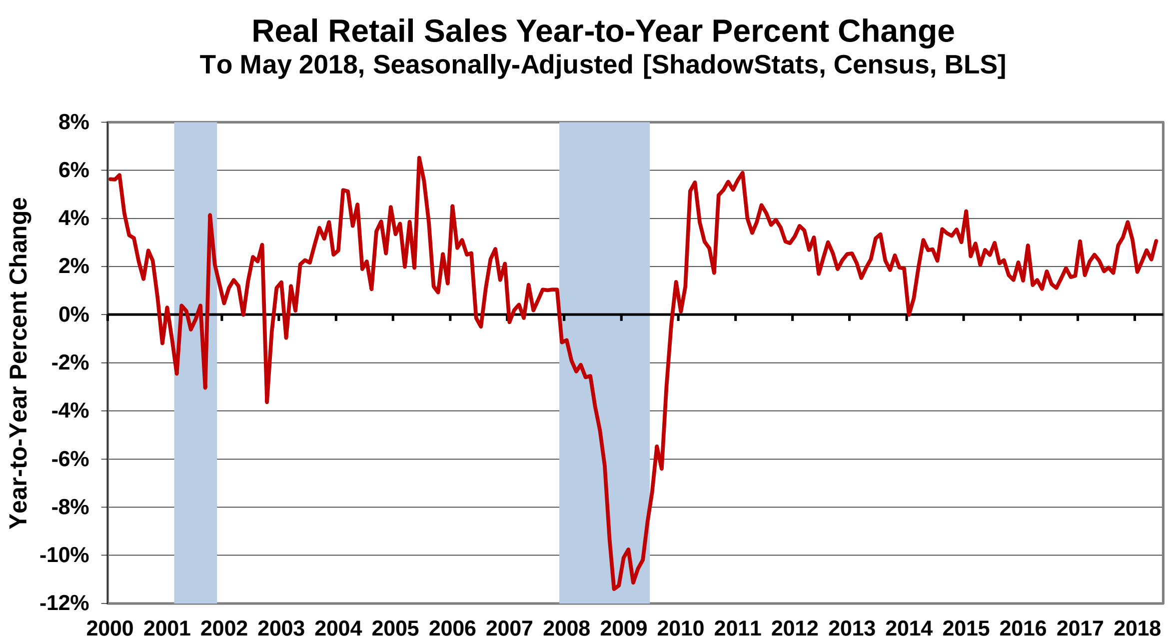
Real Retail Sales Graphs. The first of the four graphs following, *Graph 3* shows the level of real retail sales activity (deflated by the CPI-U) since 2000; *Graph 4* shows the year-to-year percent change for the same period. Annual real growth had slowed markedly into fourth-quarter 2015 and 2016, generating an intense recession signal. Again, with recent volatility, including natural-disaster-recovery activity and the near-term peak in annual real growth in November 2017, that recession signal had been put in temporary abeyance. Yet, with first-quarter 2018 real annual growth now at a benchmark revised 2.2% (pre-benchmark of 2.0%), a solid recession signal has been restored. *Graphs 5* and *6* show the level of, and annual growth in, real retail sales (and predecessor series) in full post-World War II detail.

[Graphs 3 to 6 begin on the next page.]

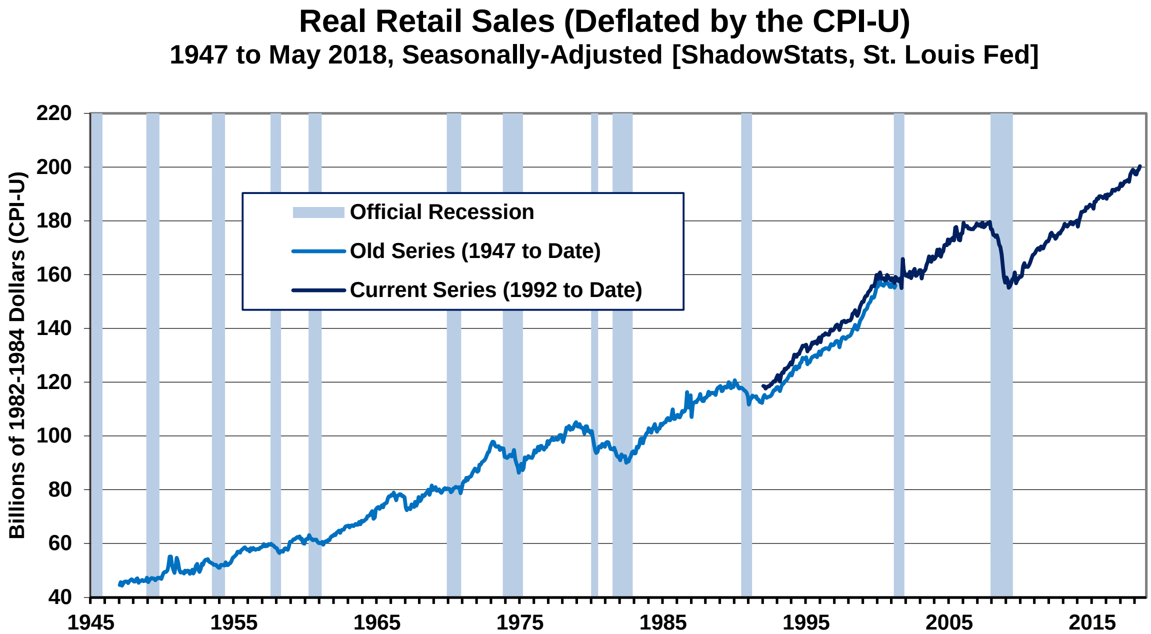
Graph 3: Level of Real Retail Sales (2000 to Date)



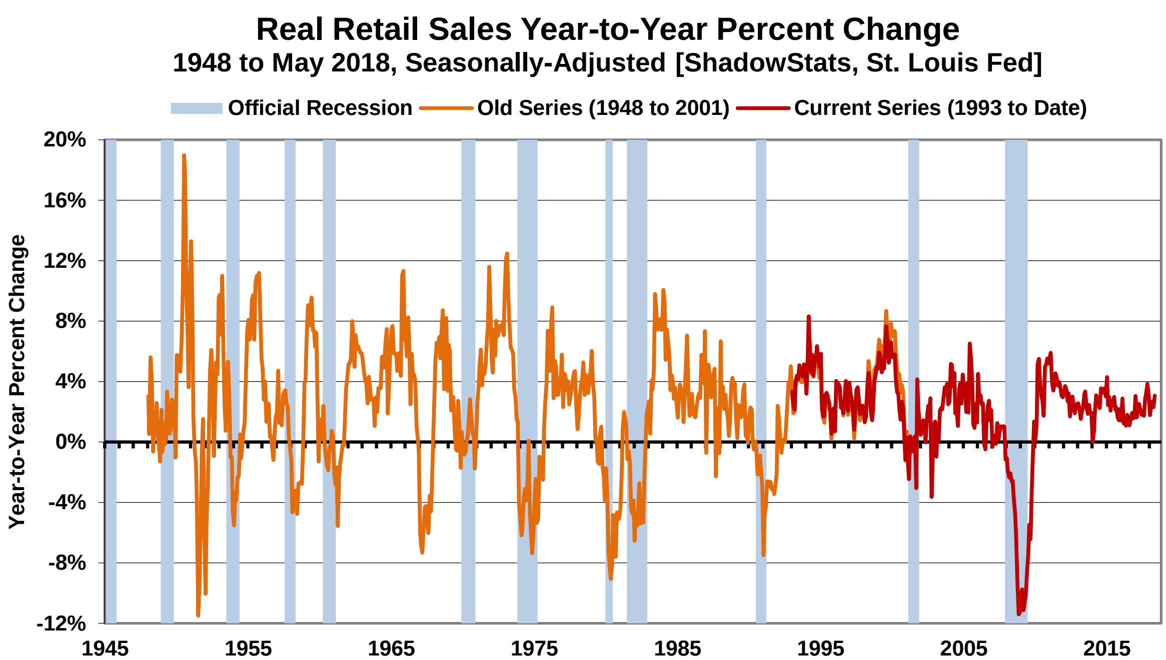
Graph 4: Real Retail Sales (2000 to Date), Year-to-Year Percent Change



Graph 5: Level of Real Retail Sales (1947 to Date)



Graph 6: Real Retail Sales (1948 to Date), Year-to-Year Percent Change



Inflation-Adjusted Series Still Showed a Sharp Quarterly Contraction in First-Quarter 2018, on Top of a Renewed Recession Signal. As reported by the Saint Louis Federal Reserve in its regular deflation of nominal retail sales using the CPI-U, the headline, inflation-adjusted or real first-quarter 2018 Retail Sales contracted at a revised, annualized quarterly pace of 1.67% (-1.67%) [previously: post-benchmarking 1.71% (-1.71%), pre-benchmarking 2.61% (-2.61%)], the weakest quarter since second-quarter 2012. While the earlier benchmarked years were adjusted against new, downwardly revised hard data, the current numbers are based on the regular month-to-month fluff of underlying, ongoing happy assumptions.

The contraction in quarter-to-quarter real growth at least partially reflected a sharp easing from fourth-quarter natural-disaster-recovery boosts, discussed here previously. Ignoring the disaster-boosted annual real growth in fourth-quarter 2017, for the moment, the slowing of annual first-quarter 2018 real growth to 2.22%, back into recession signal territory, from 3.39% in fourth quarter 2017, and versus 2.30% in the disaster-free first-quarter 2017, was based solely on the relative merits of first-quarter 2018 activity. Even so, first-quarter 2018 retail sales activity likely included some lingering spike from disaster-recovery effects.

[Coverage of May 2018 Industrial Production begins on the next page.]

Industrial Production (May 2018)

Declining May Industrial Production Reflected a Sharply Contracting Manufacturing Sector, Which Held in Non-Economic Expansion for a Record 125th Straight Month. Total production declined in the month of May 2018 by 0.1% (-0.1%), where Manufacturing dropped by 0.7% (-0.7%). Manufacturing held shy by 6.0% (-6.0%) of recovering its pre-cession peak, both on monthly basis, and for first-quarter 2018 versus fourth-quarter 2007. May 2018 Production actually was up by 0.6% versus its November 2014 post-recession high on a monthly basis, but still was shy by 0.4% (-0.4%) in first-quarter 2018, versus its fourth-quarter 2014 interim peak (see the *Opening Comments*).

On a year-to-year basis, production growth slowed from 3.6% in April 2018 to 3.5% in May 2018, while Manufacturing slowed year-to-year from 1.9% in April to 1.7% in May.

Manufacturing was hit by a one-time supply disruption in parts needed for truck assemblies, net of which the sector still contracted sharply. The disruption primarily was in the production of medium and heavy trucks, where assemblies were down by 15.6% (-15.6%). In contrast, unaffected automobile assemblies declined 6.9% (-6.9%) in the month, with the consumer-oriented light trucks assembles down in May by 9.7% (-9.7%).

With May Manufacturing held shy of recovering its precession peak by 6.0% (-6.0%), the series now has logged a record string of 125 straight months of economic non-expansion, a circumstance never seen in the 100-year history of Industrial Production reporting.

On the plus-side for aggregate production, oil and gas exploration and extraction continued to boost the Mining Sector, while Utility usage also gained in the month.

Headline Monthly and Annual Details. The June 15th publication of headline May 2018 Industrial Production activity by the *Federal Reserve Board*, included related downside revisions to the prior five months (back to November 2017) reflected in *Table 1*. Those revisions also affected aggregate production activity for both fourth-quarter 2017 and first-quarter 2018. Headline May 2018 production declined by 0.09% (-0.09%), following an upwardly-revised gain of 0.91% in April 2018 and a downwardly-revised monthly gain of 0.52% in March. Net of prior-period revisions, May 2018 industrial production was unchanged instead of down by 0.09% (-0.09%).

Year-to-year, May 2018 industrial production gained 3.46%, down from an upwardly-revised 3.55% in April 2018, and down from a downwardly-revised annual gain of 3.61% in March 2018.

Growth by Major Sector. Detailed by major industry group (see *Graphs 12*, *14*, *19* and *21*),, the May 2018 aggregate industrial production monthly contraction of 0.09% (-0.09%) [unchanged at 0.00% net of prior-period revisions] reflected a monthly decline of 0.66% (-0.66%) [down by 0.56% (-0.56%) net of prior period revisions] in the dominant Manufacturing Sector, and monthly gains of 1.83% [up by 2.41%

net of prior period revisions] in the Mining Sector (including oil and gas production) and 1.06% [0.43% net of prior period revisions] in Utilities.

Table 1: Industrial Production

Table 1: Index of Industrial Production (IIP) and Major Sectors to May 2018 by Month, 2012 = 100.000 for All Indices								
Measure	**Weight**	**May '18**	**Apr**	**Mar**	**Feb**	**Jan**	**Dec '17**	**Nov**
IIP Index	**100.0%**	**107.301**	**107.400**	**106.429**	**105.874**	**105.432**	**105.770**	**105.294**
- Prior		--	107.305	106.539	105.747	105.314	105.718	105.294
Mo/Mo		**-0.09%**	**0.91%**	**0.52%**	**0.42%**	**-0.32%**	**0.45%**	**0.51%**
- Prior		--	0.72%	0.75%	0.41%	-0.38%	0.40%	0.51%
Yr/Yr		**3.46%**	**3.55%**	**3.61%**	**3.64%**	**2.82%**	**2.90%**	**3.40%**
- Prior		--	3.46%	3.71%	3.51%	2.71%	2.85%	3.40%
Manufacturing	**75.5%**	**103.528**	**104.210**	**103.611**	**103.734**	**102.294**	**102.836**	**102.886**
- Prior		--	104.115	103.615	103.579	102.145	102.771	102.886
Mo/Mo		**-0.66%**	**0.58%**	**-0.12%**	**1.41%**	**-0.53%**	**-0.05%**	**0.25%**
- Prior		--	0.48%	0.04%	1.40%	-0.61%	-0.11%	0.25%
Yr/Yr		**1.68%**	**1.92%**	**2.46%**	**2.11%**	**0.83%**	**1.69%**	**2.06%**
- Prior		--	1.83%	2.46%	1.96%	0.68%	1.62%	2.06%
Mining	**14.1%**	**122.149**	**119.952**	**118.763**	**117.169**	**113.900**	**115.073**	**113.862**
- Prior		--	119.275	118.025	117.107	113.866	115.064	113.862
Mo/Mo		**1.83%**	**1.00%**	**1.36%**	**2.87%**	**-1.02%**	**1.06%**	**1.99%**
- Prior		--	1.06%	0.78%	2.85%	-1.04%	1.06%	1.99%
Yr/Yr		**12.59%**	**11.21%**	**11.32%**	**10.09%**	**9.40%**	**12.19%**	**11.18%**
- Prior		--	10.59%	10.63%	10.03%	9.37%	12.18%	11.18%
Utilities	**10.4%**	**106.903**	**105.782**	**102.491**	**98.426**	**108.842**	**106.610**	**103.312**
- Prior		--	106.446	104.447	98.426	108.842	106.610	103.312
Mo/Mo		**1.06%**	**3.21%**	**4.13%**	**-9.57%**	**2.09%**	**3.19%**	**0.34%**
- Prior		--	1.91%	6.12%	-9.57%	2.09%	3.19%	0.34%
Yr/Yr		**4.03%**	**5.39%**	**1.91%**	**6.73%**	**9.53%**	**0.85%**	**4.03%**
- Prior		--	6.05%	3.85%	6.73%	9.53%	0.85%	4.03%
Sources: Federal Reserve Board, ShadowStats								

For the same sectors, the May 2018 year-to-year aggregate industrial production gain of 3.46% was down from a revised 3.55% [previously 3.46%] in April 2018.

The May 2018 annual gain of 1.68% in the dominant Manufacturing Sector was down from a revised 1.92% [previously 1.83%] in April 2018.

The May 2018 annual gain of 12.59% in Mining (including oil and gas production) was up from 11.21% [previously 10.59%] in April 2018.

The May 2018 annual gain of 4.03% in Utilities was down from 5.39% [previously 6.05%] in May 2018.

Production Activity and Graphs—Corrected and Otherwise. Reflecting the broadly-negative, March 23rd annual benchmark revisions to Industrial Production, and subsequent monthly revisions through the headline May 2018 detail of June 15th, index-level and annual-growth production details are found in and plotted in *Graphs 10* to *13*, along with the drill-down graphs of major subcomponents of the production series (*Graphs 14* to *27*).

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 into second-quarter 2016, 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 reporting outside of periods that eventually were recognized formally as recessions. Looking at the accompanying post-benchmarking *Graph 7*, and the longer-term *Graphs 10* and *11* in the reporting detail, it looks like there is a missing recession call beginning at the end of 2014 (see the discussion in today's *Opening Comments* as to how this might affect the pending GDP benchmarking).

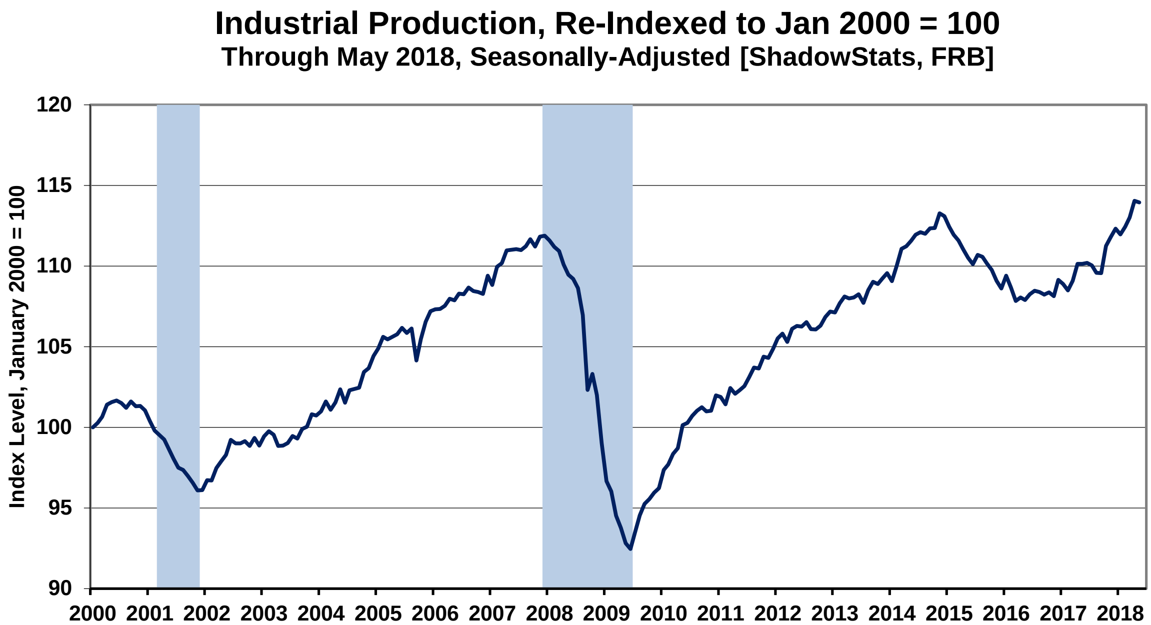
With the reporting of quarterly details in 2017 and first-quarter 2018, production showed both annual and quarterly gains, except for a hurricane-disrupted quarterly contraction in third-quarter 2017. The headline activity still remained below pre-recession highs seen in 2007, except for a brief recovery in third-quarter 2014, and one-quarter's expansion in fourth-quarter 2014, below which first-quarter 2018 just fell anew in April and held below in May.

On a monthly basis, the pre-recession high of November 2007 was recovered briefly in June of 2014, with October and November 2014 a short-lived peak. October 2017 reporting recovered the monthly pre-recession high, for a second time, with a reset to December 2017, in the context of the recent benchmark revisions. Given that benchmarking and subsequent reporting, the initial first-quarter 2018 Industrial Production reporting, the series had regained the fourth-quarter 2014 recovery peak for second time, albeit only by 0.12%, having lost that status in the March 2018 benchmarking. Yet, first-quarter 2018 reporting lost that recovery, again with the headline April 2018 revisions, down by 0.43% (-0.43%) versus that fourth-quarter 2014 peak, and it still is holding at down by 0.39% (-0.39%) as of the just-published May 2018 detail.

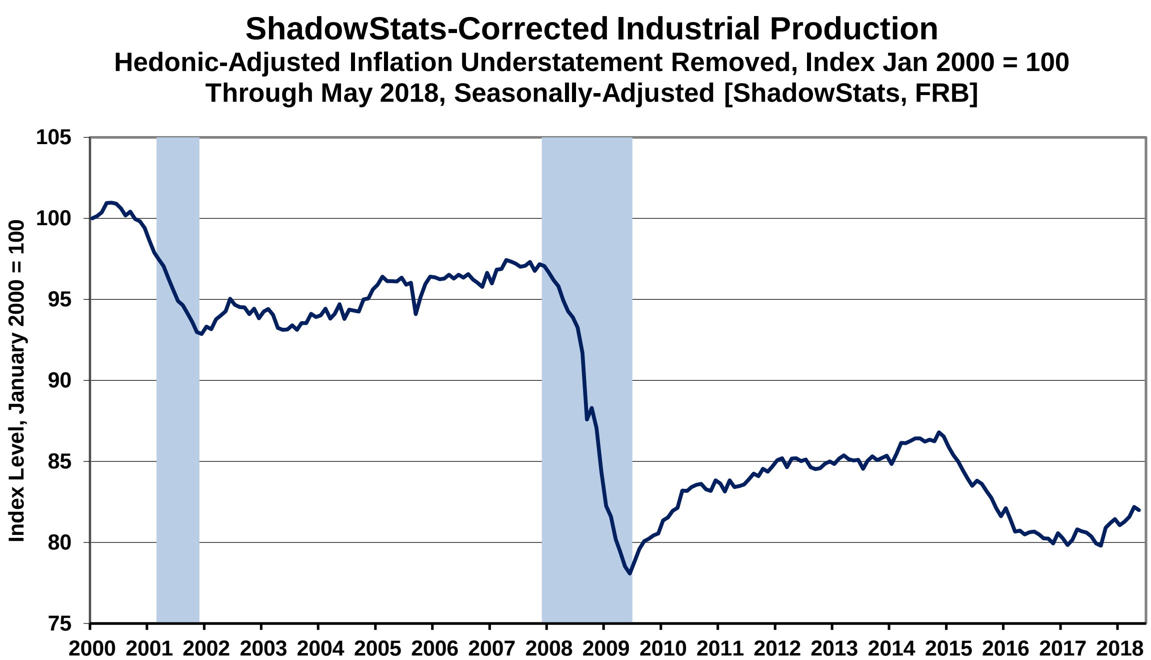
Graphs 7 and *8* address reporting-quality issues tied just to the overstatement of headline growth in the total Industrial Production series that results directly from the Federal Reserve Board using too-low an estimate of inflation in deflating some components of its production estimates into real-dollar 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; this overstates 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 7 shows official, headline industrial production reporting, but indexed to January 2000 = 100, instead of the Fed's formal index that is set at 2012 = 100. The 2000 indexing simply provides for some consistency in the series of revamped "corrected" graphics including, Real Retail sales (see *Graphs 1* and *2* in the prior *Retail Sales* section), and *Commentary No. 951* and *Commentary No. 952* for graphs of "corrected" New Orders for Durable Goods and the "corrected" real GDP series. The indexing does not affect the appearance of the graph or reported growth rates (as can be seen with a comparison of *Graph 7* here to later *Graph 13*, which has the standard, headline indexing).

Graph 7: Indexed Headline Level of Industrial Production (Jan 2000 = 100)



Graph 8: Headline ShadowStats-Corrected Level of Industrial Production (Jan 2000 = 100)



Graph 8 is a recast version of *Graph 7*, 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 8* 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 *Special Commentary No. 935*). Unlike the headline Industrial Production data and the headline GDP numbers, "corrected" Industrial Production levels never recovered their 2007 pre-recession highs, although, again, the headline aggregate Production index quickly backed off its official "recovery" in late-2014 in last month's benchmarking, only to recovery the 2014 highs again with the headline March 2018, and to lose them anew with the April and May 2018 detail. That said, the dominant manufacturing sector of industrial production never has recovered its December 2007 pre-recession peak, a record period of 10-plus years of economic non-expansion in the 100-year history of the Industrial Production series.

As of May 2018, the now 125 straight months of economic non-expansion, indeed remains unprecedented in its duration within the 100-year history of the Industrial Production series. While first-quarter 2018 real GDP reporting (second estimate) showed that series to have expanded by 15.9% above its pre-recession peak, the dominant manufacturing sector of industrial product still held shy of shy of recovering its pre-recession high by 6.0% (-6.0%) as of first-quarter 2018.

Quarterly and Annual Production Changes. In the context of March 23, 2018 benchmark revisions sharply to the downside for annual growth and annualized quarterly growth, and the initial first-quarter 2018 numbers, year-to-year growth rates in quarterly production had continued to slow and then decline, ranging from a positive 1.76% in first-quarter 2015, to year-to-year declines of 0.92% (-0.92%) in second-quarter 2015, 1.49% (-1.49%) in the third-quarter 2015 and 3.37% (-3.37%) in fourth-quarter 2015.

Annual declines continued, down by 2.99% (-2.99%) in first-quarter 2016, by 2.25% (-2.25%) in second-quarter 2016 and by 1.91% (-1.91%) in third-quarter 2016. Fourth-quarter 2016 production contracted year-to-year for the seventh-straight quarter by 0.55% (-0.55%).

First-quarter 2017 annual change rose by 0.16%, the first annual gain since first-quarter 2015. Second-quarter 2017 production gained year-to-year by 1.93%, with third-quarter 2017 showing a hurricane impaired at annual gain of 1.20%.

Reflecting new detail published with the headline May 2018 numbers, fourth-quarter 2017 growth was a revised hurricane-boosted 2.99% [previously 2.97%, with first-quarter 2018 reporting showing revised annual growth of 3.36% [previously 3.31%].

Annualized Quarter-to-Quarter. Going back to first-quarter 2015 industrial production contracted at an annualized quarterly pace of 3.22% (-3.22%), having gained by 2.74% in fourth-quarter 2014. That was followed by a quarterly contraction of 5.04% (-5.04%) in second-quarter 2015, with a third-quarter 2015 contraction of 0.27% (-0.27%) [previously a gain], followed by a fourth-quarter 2015 contraction of 4.71% (-4.71%).

The first-quarter 2016 annualized quarterly contraction was 1.86% (-1.86%), with second-quarter 2016 down at an annualized 2.09% (-2.09%). Third-quarter 2016 gained at an annualized pace of 1.11%, the first quarterly gain in seven quarters, followed by a gain of 0.70% in fourth-quarter 2016.

The first-quarter 2017 annualized quarterly gain was 0.98%. The second-quarter 2017 gain was 5.01%, with hurricane-disrupted third-quarter 2017 growth now showing an annualized quarterly contraction of 1.54% (-1.54%).

Reflecting new detail published with the headline May 2018 numbers, the fourth-quarter activity was up by a revised, disaster-recovery-boosted 7.75% [previously 7.68%], with the first-quarter 2018 a revised 2.44% [previously 2.33%].

Production Graphs. The regular two sets of long- and short-term plots of industrial production levels and annual growth rates (*Graphs 10* to *13*) set the background for the drill-down detail graphs of various components of the aggregate industrial series (*Graphs 14* to *27*).

Graphs 10 and *11*, and *Graphs 12* and *13* show headline industrial production activity to date. *Graph 11* shows the monthly year-to-year percent change in the aggregate series, in historical context since World War II. Post annual benchmarking revisions of recent years, annual growth has slowed consistently as seen in *Graphs Benchmark-1* to *4* in *Commentary No. 942-B*.

Graph 10 here 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 and now, benchmark-revised into second-quarter 2016, turning to the plus-side in second-half 2016 into second-quarter 2017 and the recent third-quarter 2017 hurricane disruptions and accompanying near-term volatility, with relative boosted activity into April 2018, flattening out in May 2018. Such patterns of monthly and quarterly year-to-year declines post late-2014 to the onset of 2017 (see *Graph 11*) were seen last in the economic collapse into 2009, and historically never seen outside of what would be recognized as formal recessions, as discussed in today's *Opening Comments* (see *Graphs OC-1* and *OC-2 there*). *Graphs 12* and *13* show the same series in near-term detail, beginning in January 2000. Such remains in the context of a hurricane-impaired third-quarter reading and a hurricane-boosted fourth-quarter 2017 into slowing first-quarter 2018 activity.

Seen most clearly in *Graph 13*, 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 previously only in formal recessions. Such suggests a "missing recession call" with a pre-recession peak of fourth-quarter 2014. Such well may surface in the July 27th comprehensive GDP benchmark revisions back to 1929 (see the discussion in today's *Opening Comments*). In the context of the 2018 production benchmark revisions, year-to-year growth remains well off the recent relative peak for the series, which was 8.46% in June 2010, going against the official June 2009 trough of the economic collapse. Indeed, as shown in *Graph 11*, the June 2009 (the end of second-quarter 2009) year-to-year contraction of 15.33% (-15.33%) was the steepest annual decline in production since the shutdown of wartime production following World War II.

Still Fighting the Great Recession. Headline May 2018 Industrial Production currently is stagnant at a minimally-recovered level, versus its pre-Great Recession peak. May 2018 activity was up by 1.90% versus its December 2007 pre-recession peak.

First-quarter 2018 production activity stood 0.75% above its fourth-quarter 2007 pre-recession peak. Following the fourth-quarter 2007 peak, the quarterly production series declined through its cycle trough of second-quarter 2009. That was down by 16.68% (-16.68%) from its pre-recession high. The GDP quarterly trough had the same timing, down by 4.24% from its pre-recession high.

Production first recovered its pre-recession high in third-quarter 2014, rising to a near-term peak in fourth-quarter 2014. Yet, production then dropped anew, below its pre-recession peak in second-quarter 2015, not regaining the pre-recession high again until fourth-quarter 2017. Where first-quarter 2018 Industrial Production currently stands at 0.75% above its 2007 pre-recession high, consider, it still is below its interim fourth-quarter 2014 peak by 0.39% (-0.39%), never having recovered same, except for temporary gains that revised away in later revisions.

Again, Industrial Production recovered its pre-recession, fourth-quarter 2007 peak activity, temporarily in fourth-quarter 2014, only to decline anew and regain that earlier peak in fourth-quarter 2017. Production now stands at 0.75% above its pre-recession high.

In contrast, the heavily gimmicked Gross Domestic Product (GDP) recovered its pre-recession peak of fourth-quarter 2007 in third-quarter 2011 and currently stands above that peak by 15.93% (second estimate of first-quarter 2018 GDP), having never turned back.

Production and Underestimated Headline Inflation. Versus the pre-Great Recession peak, official headline production levels have moved higher since their June 2009 trough, showing a pattern of stagnation in 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, with hurricane hit quarterly contraction, then generally boosted into late-year, by hurricane-recovery boosted activity, with a slowing uptrend into May 2018.

Yet, corrected for the understatement of inflation used in deflating portions of the industrial production index, as shown earlier in *Graphs 7* and *8*), that series contracted quarter-to-quarter throughout 2016 and with some bottoming, leveling off and minimal uptick in 2017, with an upturn/uptrend in the post-disaster recovery into 2018, but still well shy of recovery or expansion.

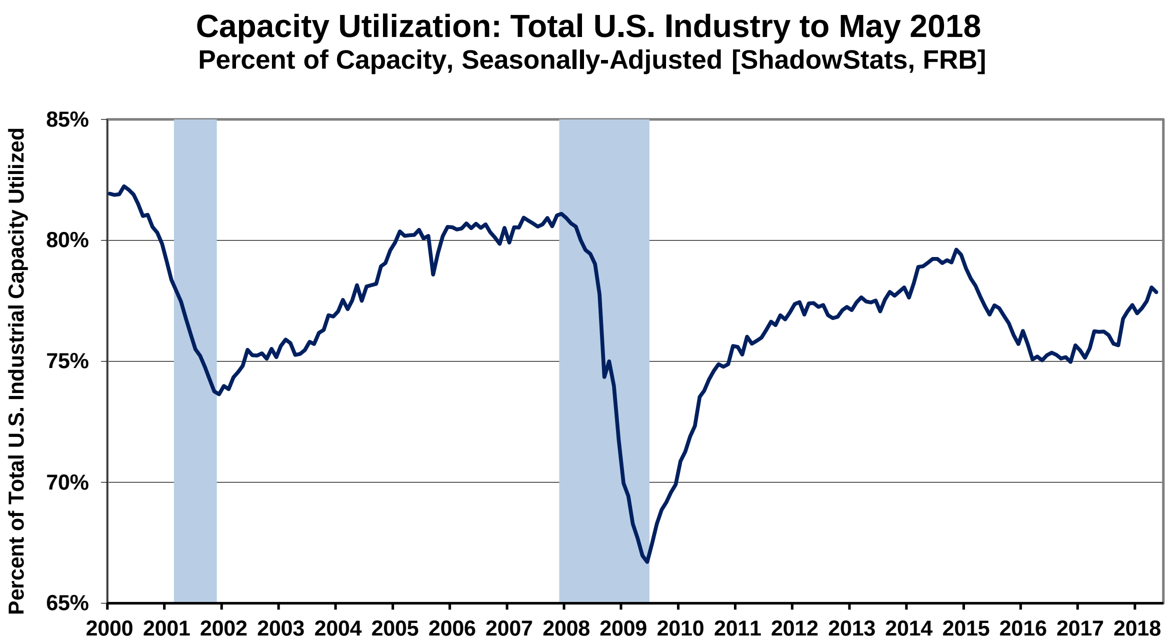
Having Improved in April, Revised Total U.S. Industrial Capacity Utilization Also Took a Relative Hit in May. The Federal Reserve's measure of Capacity Utilization is an estimate of total Industrial Production versus total Productive Capacity of the United States. ShadowStats has reservations as to the Fed's ability to measure or estimate productive capacity accurately, as reinforced recently by the nature of the revised plots of Capacity Utilization in the benchmark revisions of *Commentary No. 942-B*. Accompanying *Graph 9* of the series has been updated for the May 2018 Capacity Utilization Rate of 77.86%, which was down from the revised 78.06% [previously 77.99%] in April, versus 77.48% [previously 77.56%] in March, 77.19% [previously 77.10%] in February, with minimal upside monthly revisions back to November 2017.

Against its December 2007 pre-recession peak level of 81.10%, the May 2018 Capacity Utilization reading held shy of recovering that peak *level* by 4.00% (-4.00%), or by 324 (-324) basis points in terms of the peak *percentage number*. That is despite May 2018 Industrial Production holding at 1.90% above its re-recession peak, and with the Manufacturing Sector holding shy of recovering its December 2007 pre-recession peak by 5.96% (-5.96%).

Sharp Downturns in Capacity Utilization Usually Signal the Onset of a Recession. Where sharp downturns in Utilization historically usually mark onsets of formal recessions, such would support the concept of a renewed "headline" recession, a double-dip downturn that began at the end of 2014, as indicated by the Industrial Production series and discussed in today's *Opening Comments*. That is ShadowStats' estimate of the timing of a likely "headline" double-dip recession, which formally began at the end of 2007, bottomed in 2009, peaked in late in 2014 and then bottomed anew in 2016.

That recognition could come out of the pending July 27th comprehensive benchmark revisions—back to 1929—for Gross Domestic Product (GDP). Contrary to consensus hype of fully recovered and expanding economic activity, as seen in the Manufacturing Sector, much of the headline U.S. economy never has recovered fully from the 2007 downturn.

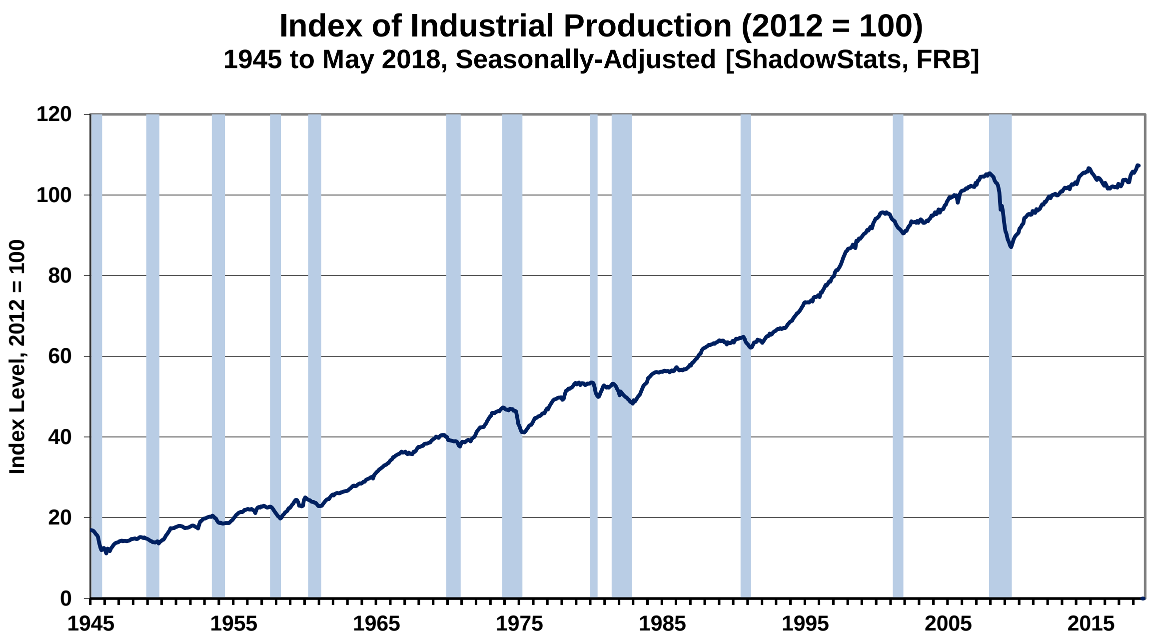
Graph 9: Utilization of Total U.S. Industrial Production and Manufacturing Capacity (2000 to Date)



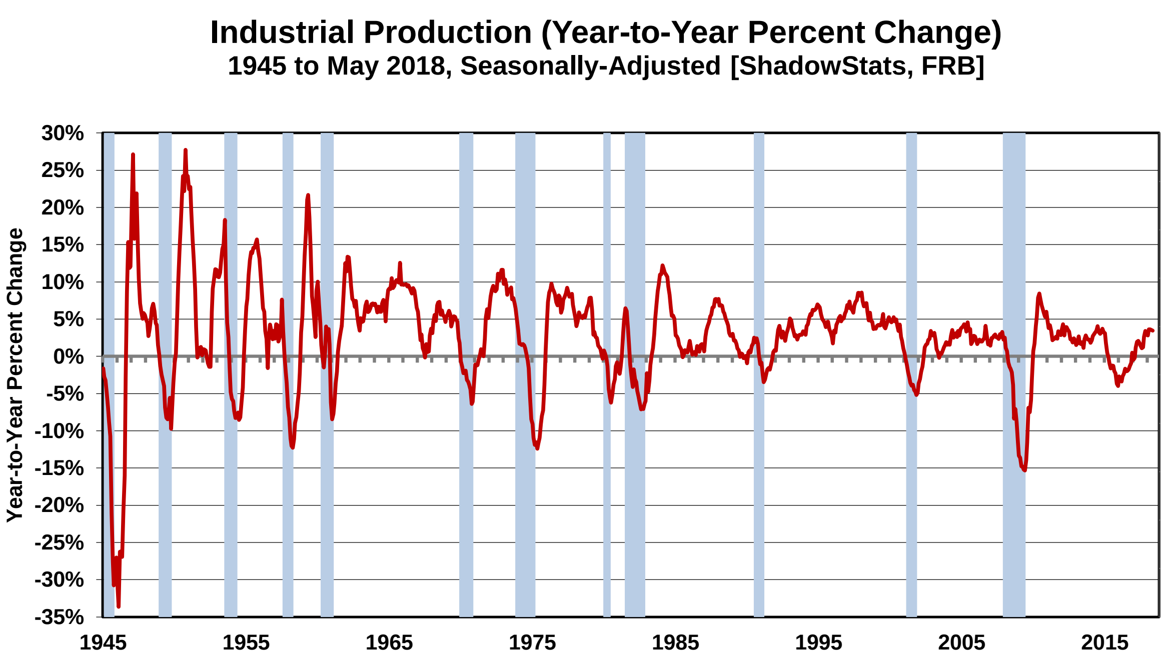
[Graphs 10 to 13 begin on the next page.]

Graphs 10 and 11 plot the monthly history of U.S. Industrial Production, post-World War II. They will be replaced next month with Graphs OC-1 and OC-2 shown in today's *Opening Comments*, which show the entire series since its creation post-World War I. Discussed in the Opening Comments, and as shown here, at no time in the history of this series, has there been a dip in activity (Graph 10), or a year-to-year contraction (Graph 11), without the economy in formal recession (blue bars). Implications for the pending GDP comprehensive benchmark revision back to 1929 is discussed in the Opening Comments.

Graph 10: Index of Industrial Production, 1945 to Date

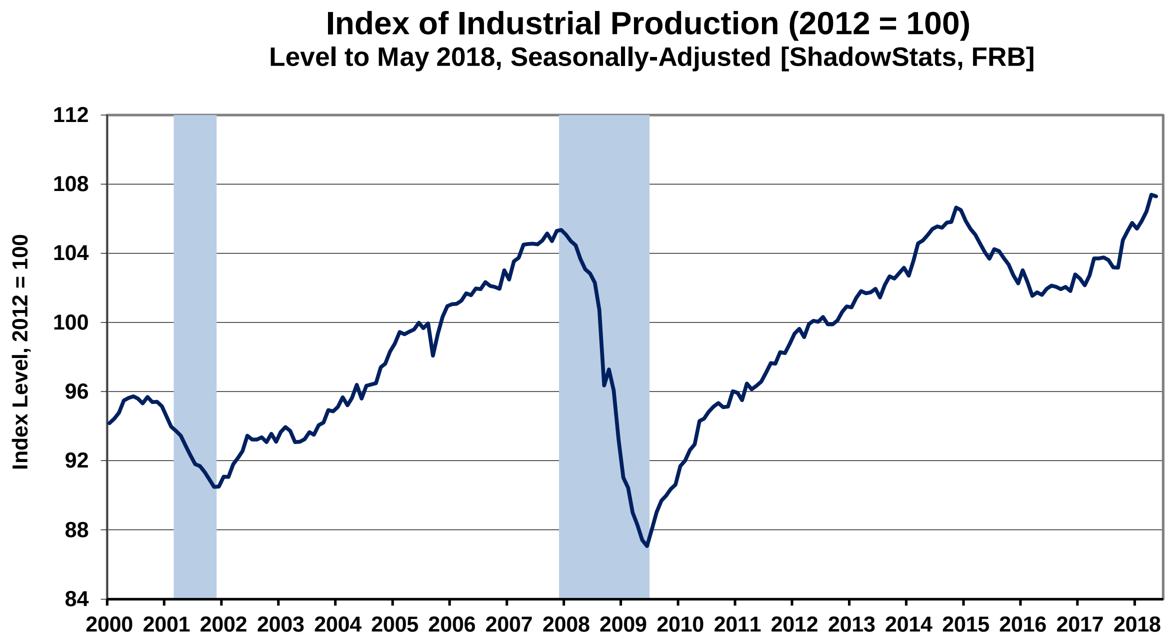


Graph 11: Industrial Production, Year-to-Year Percent Change, 1945 to Date

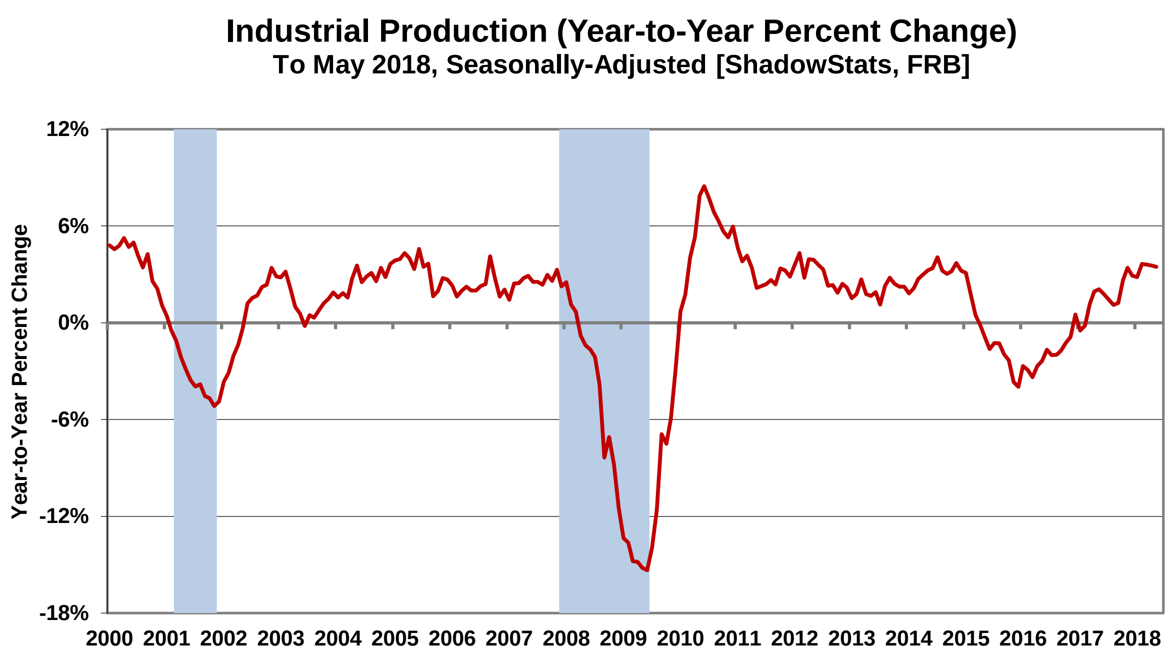


Drilling Down into the May 2018 U.S. Industrial Production Detail. *Graphs 12*, *14*, *19* and *21* show headline reporting of industrial production and its major components.

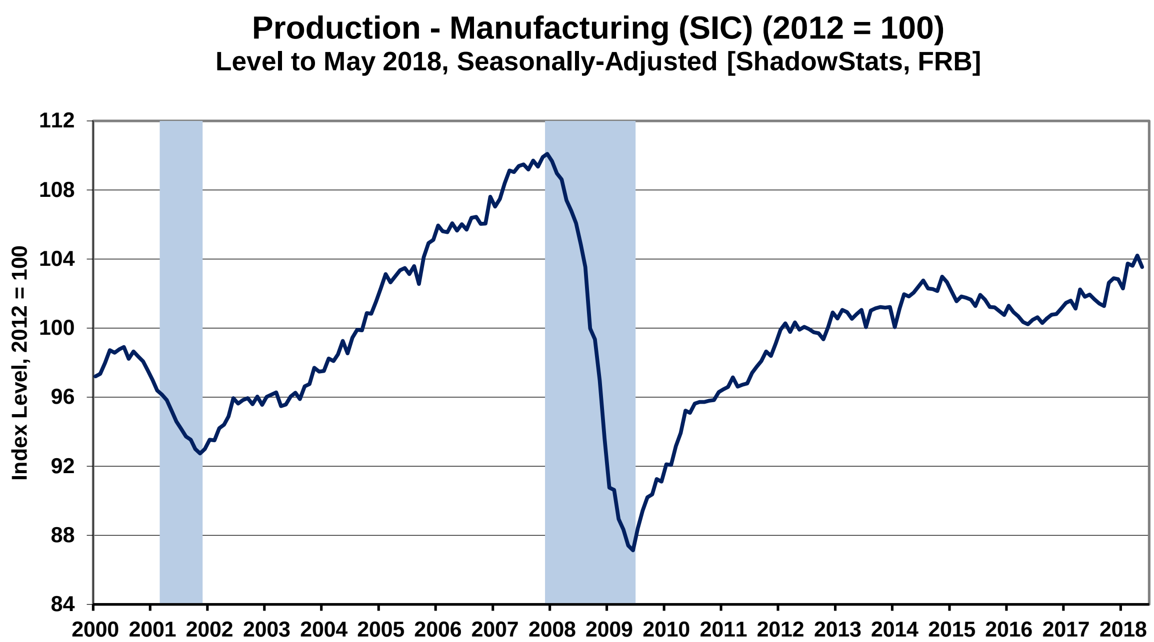
Graph 12: Index of Aggregate Industrial Production, Since 2000



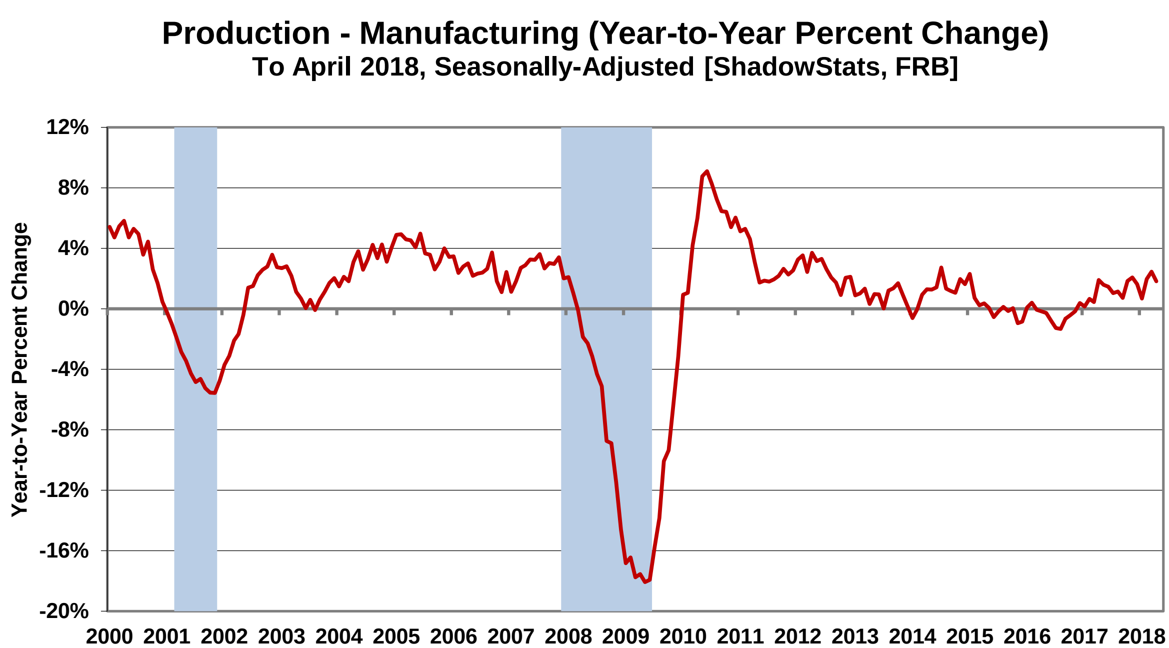
Graph 13: Aggregate Industrial Production, Year-to-Year Percent Change, Since 2000



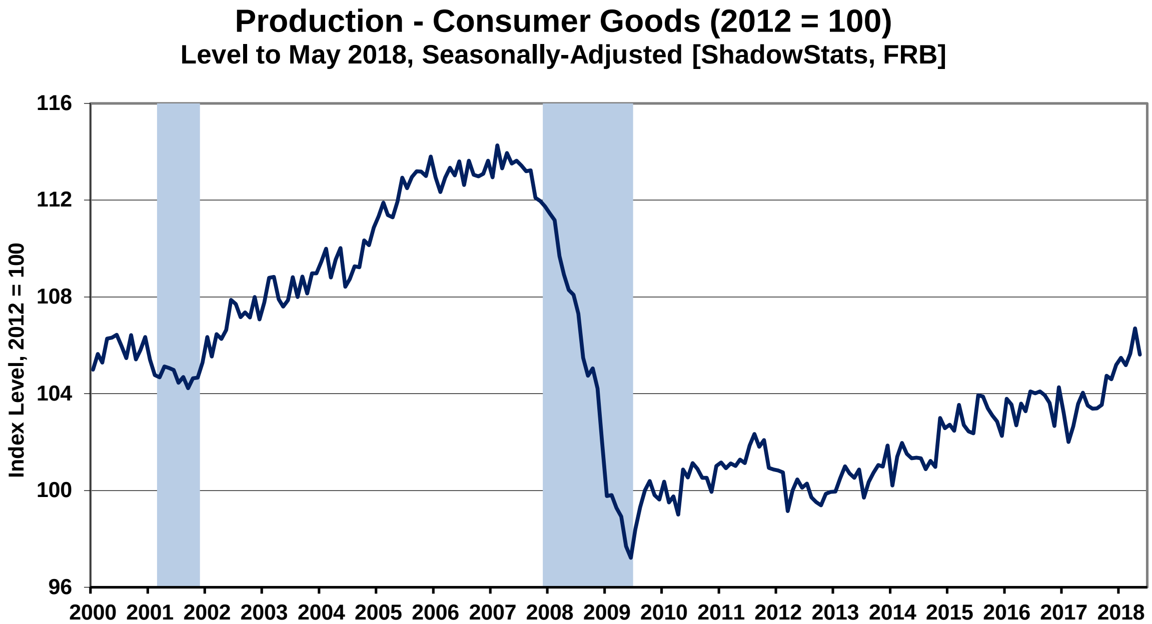
Graph 14: Industrial Production - Manufacturing (75.5% of the IIP in 2017), Since 2000



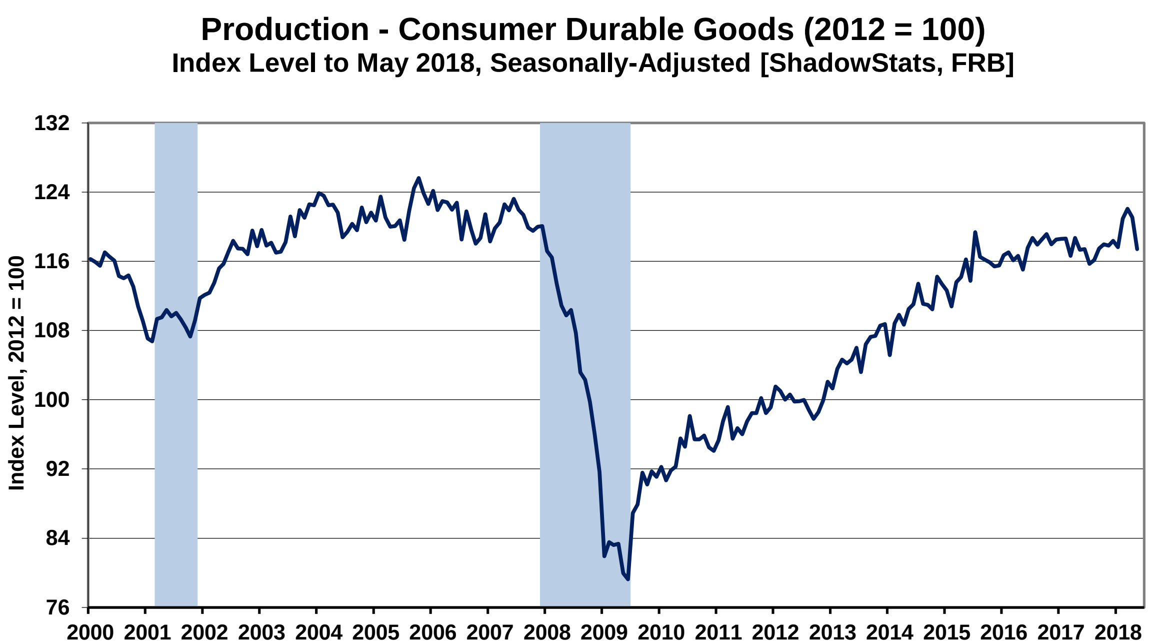
Graph 15: Industrial Production - Manufacturing, Year-to-Year Percent Change, Since 2000
(Same as Graph OC-7 in the Opening Comments)



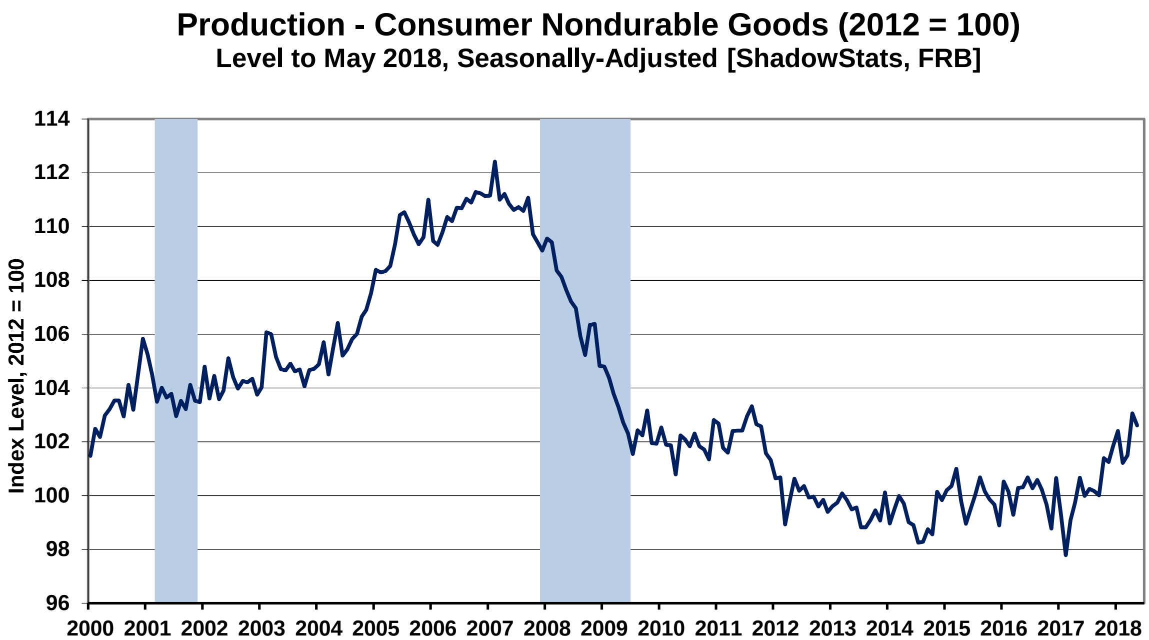
Graph 16: Consumer Goods (28.0% of the Aggregate in 2017), Since 2000



Graph 17: Durable Consumer Goods (6.3% of the Aggregate in 2017), Since 2000



Graph 18: Nondurable Consumer Goods (21.7% of the Aggregate in 2017), Since 2000



The aggregate production index (*Graph 12*) contracted quarter-to-quarter for six consecutive quarters, from first-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, flipped to fluctuating monthly and quarterly volatility and gains by lingering and varied hurricane disruptions and the now-waning recovery from same. Nonetheless, the headline monthly downturn in May 2018 reflected no more than an upside revision to April activity.

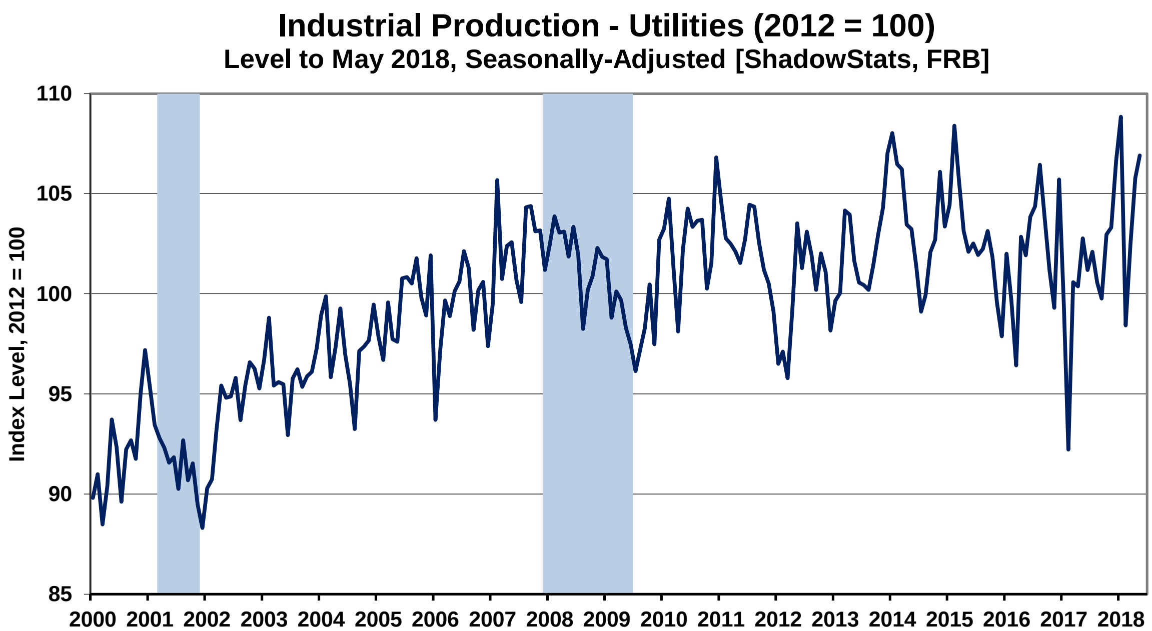
Shown in *Graphs 14*, *19* and *22* are the levels of activity in the three major industry sectors, Manufacturing, Utilities and Mining, where all but Utilities reflected month-to-month changes that also were weakened by relative upside revisions to April 2018 activity. Consider again, the May 2018 aggregate Industrial Production monthly decline of 0.09% (-0.09%) was unchanged net of prior-period revisions, Manufacturing reflected a headline monthly decline of 0.66% (-0.66%), which, net of revisions, was down by 0.56% (-0.56%). The Mining sector (including oil and gas production) gained a headline 1.83%, which was 2.41% net of prior-period revisions, while Utilities gained 1.06%, which was 0.43% net of prior period revisions.

For those same sectors, the May 2018 year-to-year aggregate industrial production gain of 3.46% was down from a revised 3.55% [previously 3.46%] in April 2018, the annual gain of 1.68% in the dominant Manufacturing Sector was down from a revised 21.92% [previously 1.83% in April, the annual gain of 12.59% in Mining (including oil and gas production) was up from a revised 11.21% [previously 10.59%] in April 2018, and the annual gain of 4.03% in Utilities was down from a revised 5.39% [6.05%] in April 2018.

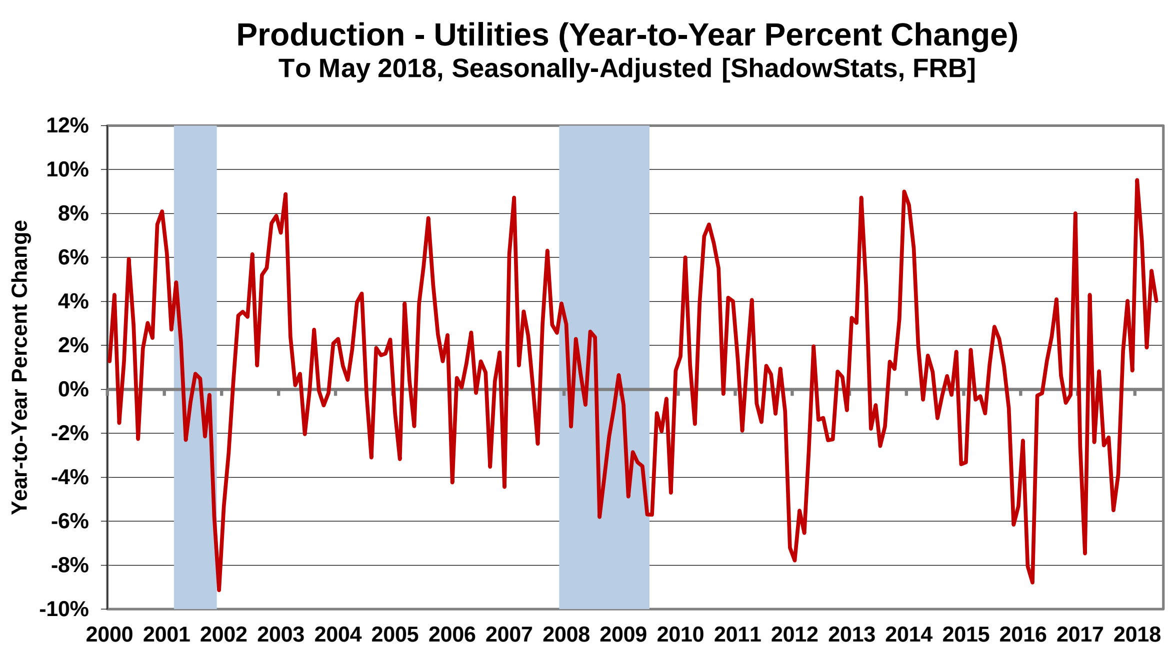
The Manufacturing graphs precede this, while the graphs of Utilities and Mining follow, all updated for the latest detail. *Graphs 15*, *20* and *22,* show the respective plots of year-to-year change for those series.

The preceding Manufacturing *Graphs 14* to *18* include various levels of consumer goods production (*Graphs 16* to *28*). The next two *Graphs 19* and *20* reflect Utilities activity massively distorted by unseasonably-cold weather this winter and perhaps by unusually warm weather coming into the summer.

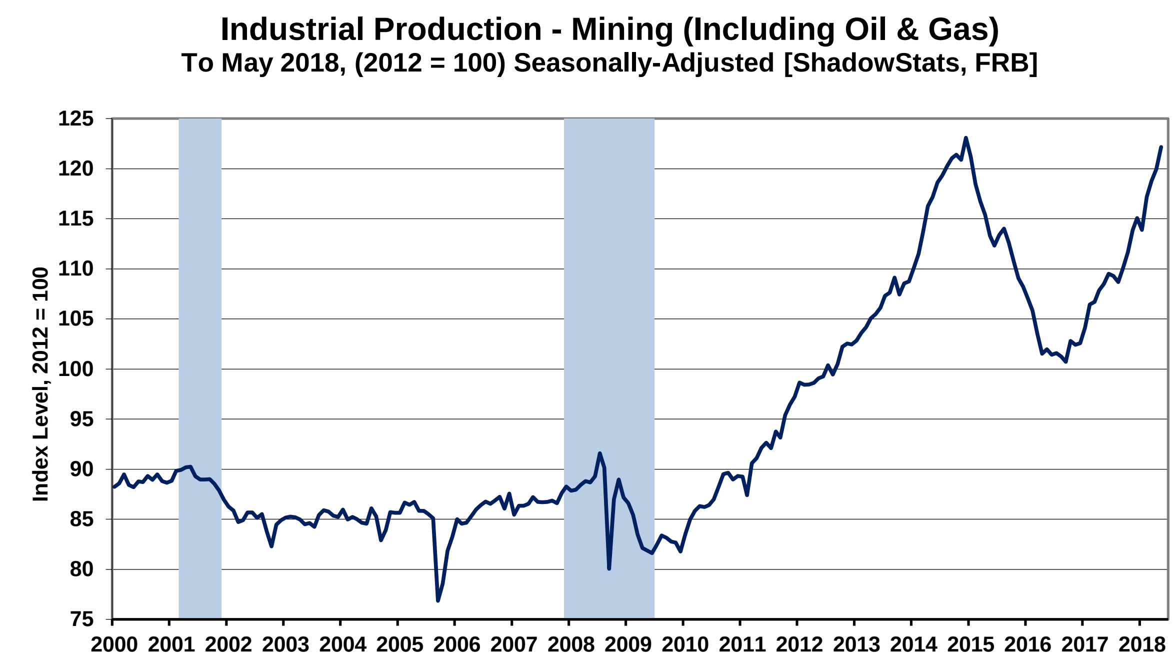
Graph 19: Industrial Production - Utilities (10.4% of the Aggregate in 2017), Since 2000



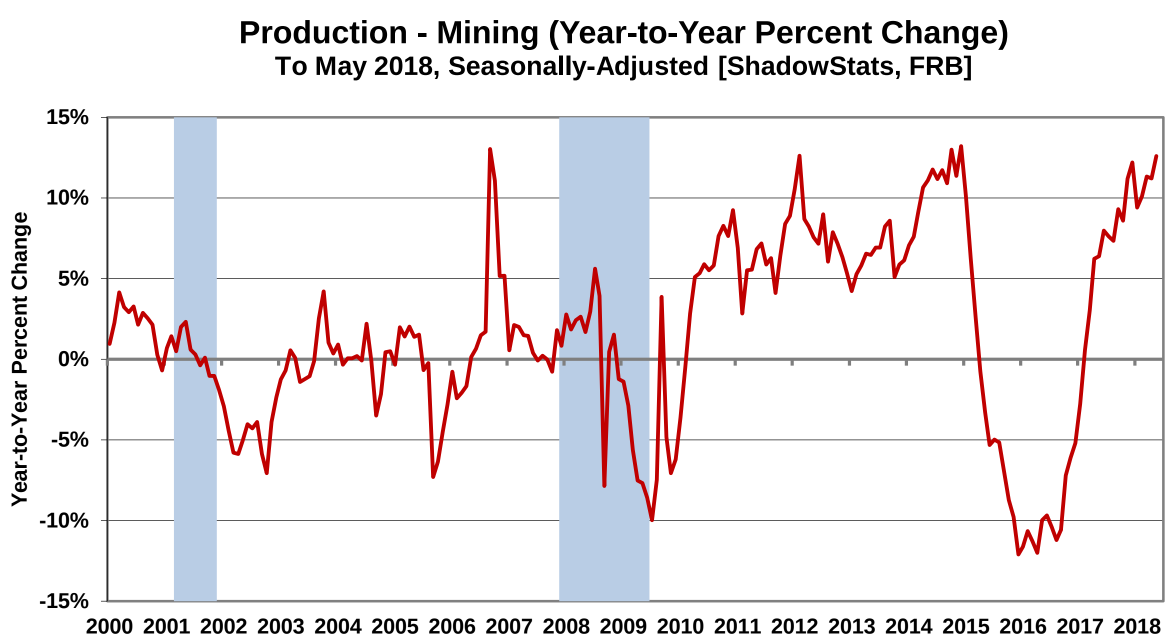
Graph 20: Industrial Production - Utilities, Year-to-Year Percent Change, Since 2000



Graph 21: Industrial Production - Mining, Including Oil and Gas (14.1% of the Aggregate in 2017), Since 2000



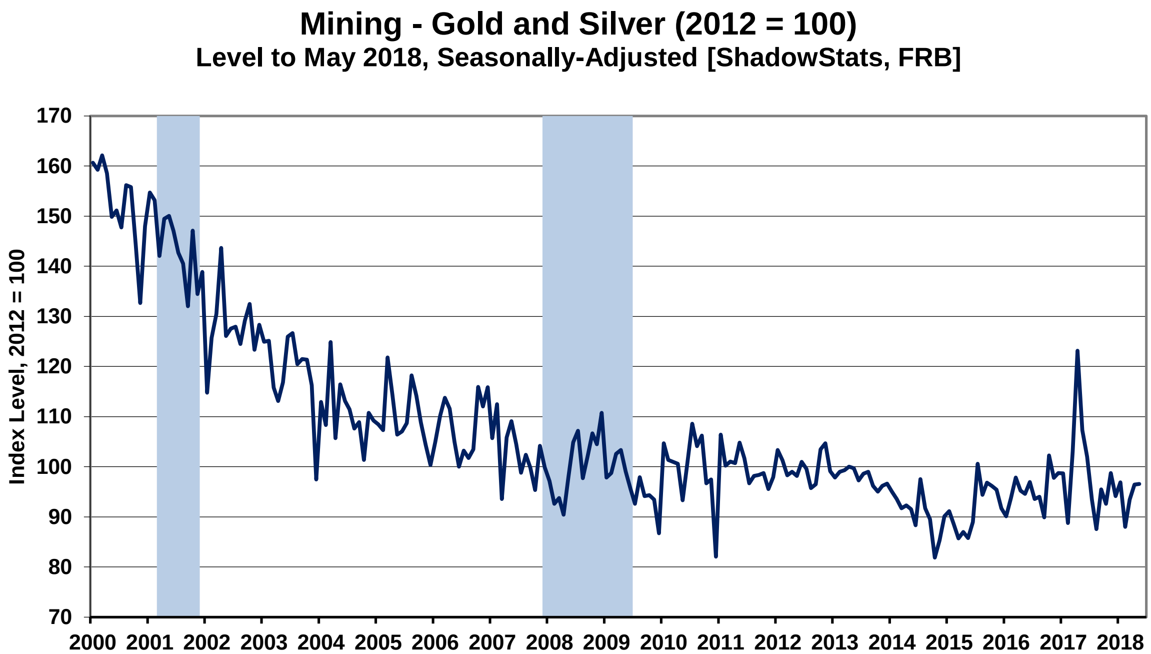
Graph 22: Industrial Production - Mining, Year-to-Year Percent Change, Since 2000



The final set of Mining *Graphs 21* to *27*, encompasses plots of related mining/oil production or exploration activity. Gold and Silver mining was flat, at a 0.13% monthly gain in May 2018, but down by 10.03% (-10.03%) year-to-year, that was in the context of a series of upside revisions to monthly activity beginning in January 2018. April 2018 activity was up by a revised 3.22% [previously up by 0.01%]

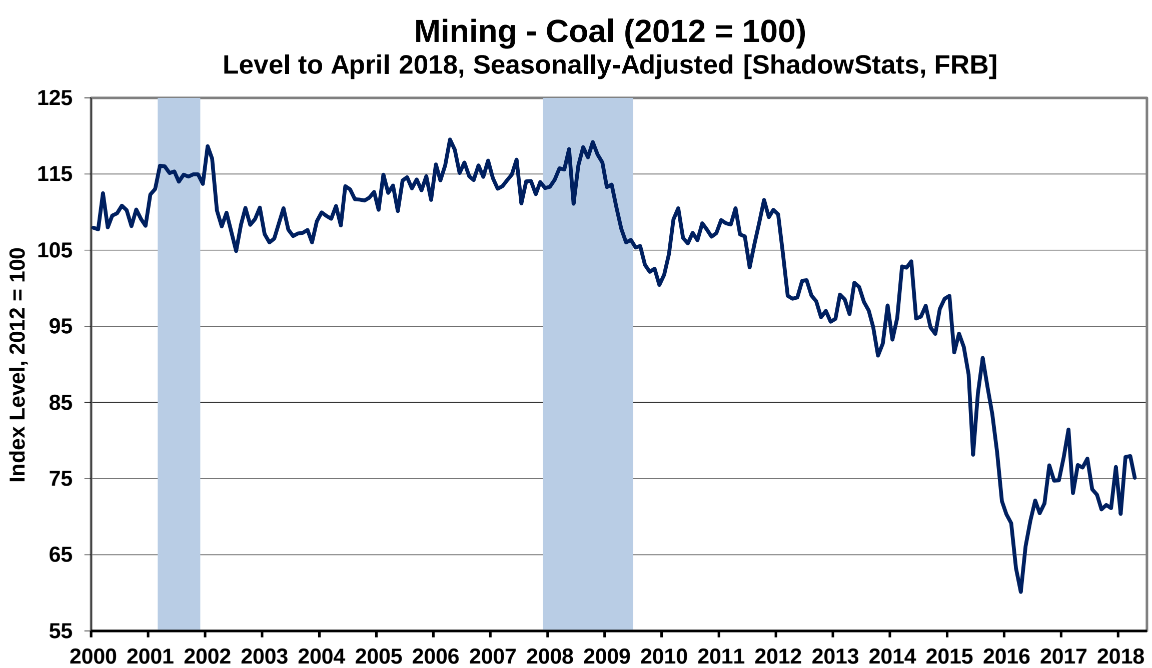
month-to-month, down by 21.68% (-21.68%) [previously 23.23% (-23.23%)] year-to-year. The FRB has gone to reporting Coal Mining activity (*Graph 24*), with a one month's lag, down by 3.7% (-3.7%) month-to-month in April 2018, versus an unrevised monthly gain of 0.2% in March. Respective rates of annual change were down by 2.2% (-2.2%) in April 2018, up by 6.6% in March 2018.

Graph 23: Mining – Gold and Silver Mining (0.2% of the Aggregate in 2017), Since 2000



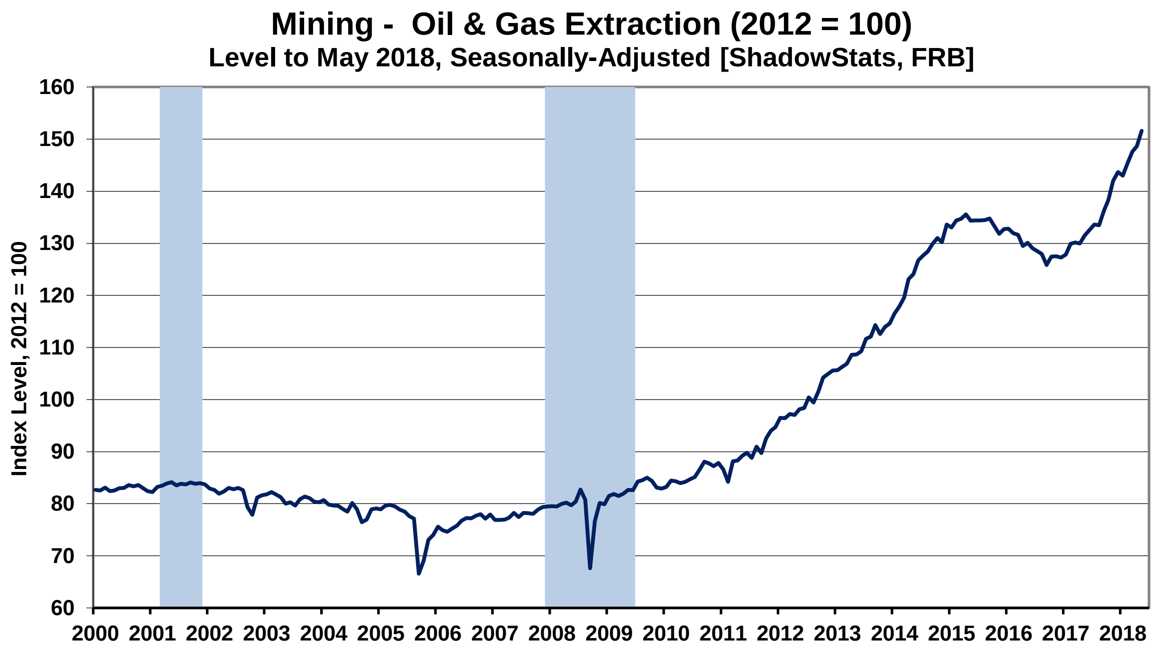
Graph 24: Mining - Coal Mining (0.8% of the Aggregate in 2017), Since 2000

The Federal Reserve Board is delaying its Coal Mining detail by one month, hence the April 2018 data here.

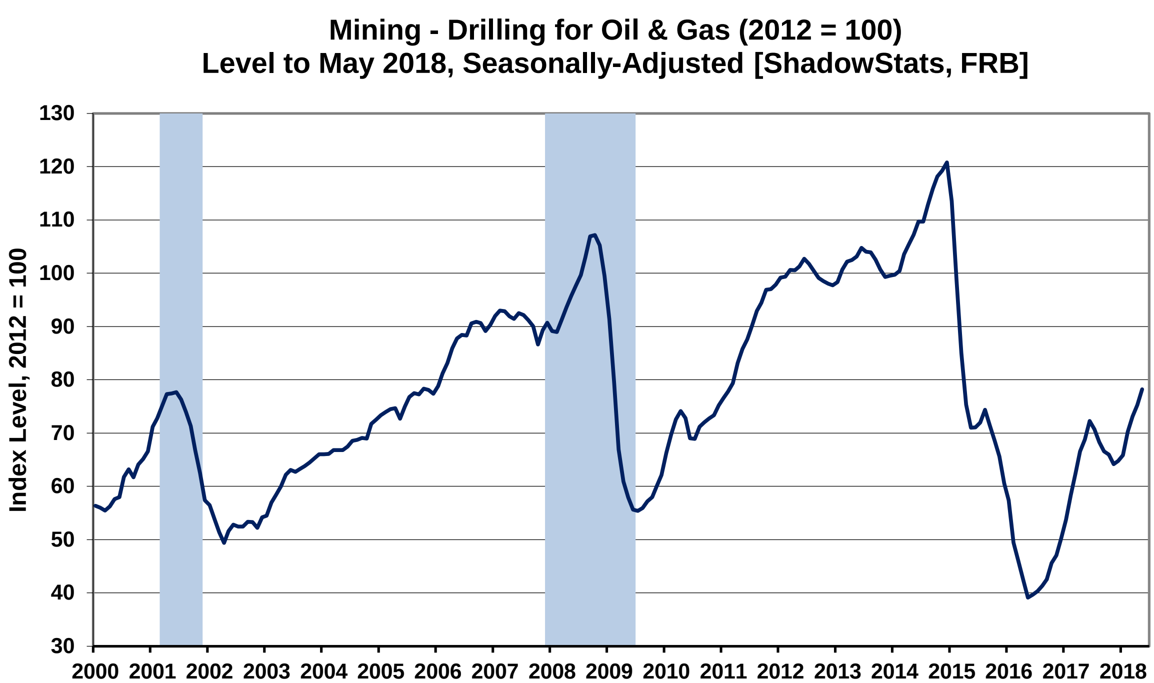


The May 2018 mining sector jumped by 1.83% month-to-month and 12.59% year-to-year, dominated by Oil and Gas Extraction and Exploration. Likely boosted by rising oil prices, the dominant oil and gas mining sector rose across-the-board in May activity (see *Graphs 25* to *27*), with Oil and Gas Extraction up by 2.01% for the month 15.30% year-to-year, while Oil and Gas Drilling was up by 3.00% for the month, 13.7% year-to-year.

Graph 25: Mining – U.S. Oil & Gas Extraction (10.3% of the Aggregate in 2017), Since 2000

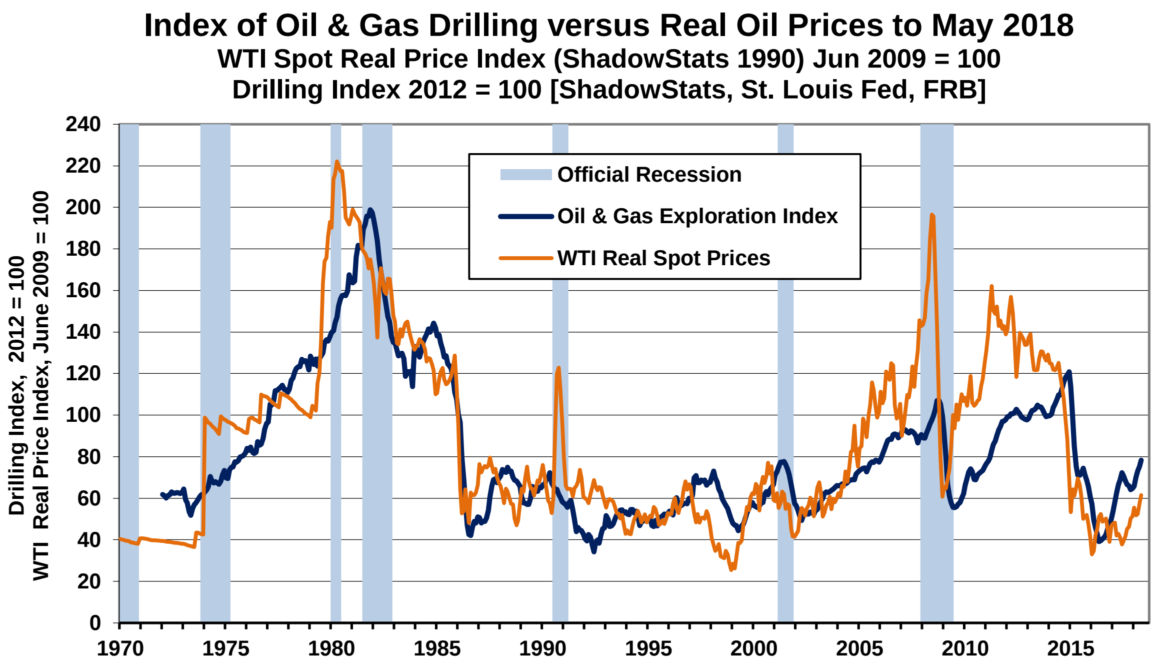


Graph 26: U.S. Drilling for Oil & Gas - Exploration (0.5% of the Aggregate in 2017), Since 2000



With some lag following sharp movements in oil prices (*Graph 27*), oil and gas exploration tends to move in tandem, and an upswing in exploration had been in place with what was at least a short-term bottoming in oil prices in early-2016. Prices rallied into mid-2016, but moved lower into 2017, 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. Yet, oil prices have risen strongly in recent months and are in an uptrend, at present. Nonetheless, hurricanes and their after effects disrupted exploration in August through November 2017. That turned with an uptick in exploration in December 2017, with surging monthly growth into May 2018. 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).

Graph 27: Mining – U.S. Drilling for Oil & Gas versus Real Oil Prices (WTI ShadowStats 1990 Base), Since 1970



Indeed, rising oil prices tend to increase oil and gas exploration. When the dollar weakens, dollar-denominated oil prices also begin to strengthen, as had been seen recently, even in circumstances with excess supply conditions. With the U.S. dollar currently off a recent bottom, oil prices still have been firming, now more heavily impacted by intensified global political tensions, particularly in the Middle East. At such time as the U.S. dollar meaningfully resumes its decline—ShadowStats looks for a massive sell-off in the dollar in the year ahead—U.S. dollar-denominated oil prices should rally sharply in response (see the *Hyperinflation Watch* of *Commentary No. 955*). Yet, again, beyond the dollar, recent movement in oil prices appears most-heavily impacted by, and reflective of political developments at home and abroad. Oil prices have risen sharply at the moment, on top of having rallied enough and for a long-enough period to induce continuing increases in domestic exploration and extraction activity, in the near future, as also has been seen at present.

New Residential Construction (May 2018)

Boosted Starts and Weaker Permits Held Shy of Recovering Their Respective Pre-Recession Peaks by 40.6% (-40.6%) and 42.5% (-42.5%). In the context of last month's April 2018 headline reporting, and coincident, albeit negligible annual revisions and benchmarking (see *Commentary No. 950*), nonsense monthly volatility continued in the Housing Starts sector of May 2018 New Residential Construction. Despite indications from the Census Bureau that its new, extended seasonal-adjustment pattern analysis would tend to stabilize the month-to-month reporting in the Starts-related series, there still is no indication of a significant tightening in the confidence intervals placed around the reported headline monthly changes, although prior months' revisions were unusually small in the current detail.

The ever-unstable Housing Starts series gained a large, albeit statistically-insignificant 5.0% month-to-month in May 2018. In contrast, the more-stable, but not always historically-consistent Building Permits series declined month-to-month by a statistically-significant 4.6% (-4.6%).

The headline reporting-quality of the Housing Starts series remains as bad as it gets. Where none of the headline monthly or annual changes in April 2018 Housing Starts or its major components were statistically-significant at the 95% confidence level, the most common experience, only the annual changes in the May 2018 aggregate starts and single-unit starts categories were large enough and volatile enough to exceed their 95% confidence intervals.

Consumer Liquidity Problems Continue to Impair Residential Construction Activity. Discussed in the *Consumer Liquidity Watch*, the extreme liquidity bind besetting consumers continues to constrain residential real estate activity. Without sustainable growth in real income or credit, including mortgages, and without the ability and/or willingness to take on meaningful new debt in order to make up for an income shortfall, the U.S. consumer remains unable to sustain positive growth in domestic personal consumption, including aggregate real estate activity. That circumstance—in the last ten-plus years of economic collapse and stagnation—has continued to prevent a normal recovery in broad U.S. economic activity, 73% of which is dependent on real personal spending, including residential construction.

May 2018 Housing Starts, Headline Detail. The always-unstable and highly-volatile reporting in the aggregate Housing Starts series was disrupted and then boosted in the last third of 2017 and into early 2018 by natural disasters—major hurricanes and California wildfires—and recovery from same. Those distortions most likely have worked out of the system, despite the ongoing data gyrations, although recovery from the late-2017 California wildfires still could be kicking in.

The Census Bureau and Department of Housing and Urban Development (HUD) reported June 19th, a statistically-insignificant, seasonally-adjusted, headline monthly gain in May 2018 Housing Starts of 5.0% +/- 11.9% (all confidence intervals are expressed at the 95% level). That followed a revised decline of 3.1% (-3.1%) [previously 3.7% (-3.7%)] in April, a revised gain of 2.9% [previously 3.6%] in March, and an unrevised decline of 3.3% (-3.3%) in February. Level-of-activity aggregate detail is plotted in *Graphs 28* to *31*, and in *Graphs 37*, *39*, *40* and *41*.

Year-to-year change in the seasonally-adjusted, May 2018 aggregate housing-starts measure was a statistically-significant gain of 20.3% +/- 16.8%, versus revised gains of 10.4% [previously 10.5%] in April 2018, 12.6% [previously 13.3%] in March 2018 and an unrevised gain of 0.1% in February 2018.

Though Not Strong, Sampling Statistics Favored Housing Starts Monthly Activity Gaining in May 2018. As standardly has been the circumstance, the headline monthly changes in Housing Starts tend to reflect the extraordinary volatility and uncertainty in the series, with the 95% confidence intervals around all of the current monthly headline monthly and some of the annual changes encompassing zero or "no change." Those intervals account only for sampling error. As defined by the Census Bureau, "If a range does not contain zero, the change is statistically significant. If it does contain zero, the change is not statistically significant; that is, it is uncertain whether there was an increase or a decrease [within the probability estimate of the confidence interval]." The Census Bureau uses a 90% confidence interval by choice (outside the prescribed range on average 1-in-10 months), ShadowStats uses a 95% confidence interval by choice (outside the prescribed range on average 1-in-20 months).

With the indicated confidence interval (ShadowStats always uses a 95% confidence interval, for purposes of consistency, unless otherwise indicated), such allows for the potential of an actual gain or a loss, being weighted in favor of the indicated direction of change, when the confidence includes zero, as seen in the current circumstance.

Such means that the actual monthly change for headline May 2018 Housing Starts, indicated at a gain of 5.0% +/- 11.9%, was within a range from a contraction of 6.9% (-6.9%) to a gain of 16.9% with 95% confidence, with the headline gain of 5.0% the most likely increase, although not a very solid bet. The recently revised and benchmarked system has not done much, yet, to narrow those confidence intervals.

Housing Starts by Unit Category. The May 2018 headline monthly decline of 5.0% in total Housing Starts encompassed a monthly gain of 3.9% in Single-Unit starts and a gain of 11.3% in the Multiple-Unit "Five Units or More" starts category. There is a missing balance in the "Two to Four Units" category, which declined by 54.5% in May. Where that latter category is considered too small to be meaningful and is not reported directly, it did affect the aggregates to the extent that total multiple units actually gained by 7.5%, as discussed later in the broadest, aggregate "multiple unit" category. As usual, none of the monthly headline changes was statistically significant, but the annual changes in both the aggregate and single-unit series were. These numbers are reflected in *Graphs 28* to *35*.

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 multiple-unit structure starts that generally reflect the building of condominiums, rental and apartment units.

Housing starts for single-unit structures in May 2018 gained month-to-month by a statistically-insignificant 3.9% +/- 12.4%, following a revised gain of 2.2% [previously 0.1%] in April, a revised decline of 2.0% (-2.0%) [previously 0.8 (-0.8%)] in March and an unrevised gain of 1.6% in February. May 2018 single-unit starts showed a statistically-significant annual gain of 18.3% +/- 16.0%, versus revised annual gains of 8.0% [previously 7.2%] in April 2018, 7.0% [previously 8.4%] in March 2018 and unrevised 2.9% in February 2018 (see *Graphs 28, 29, 32 and 33*).

Housing starts for apartment buildings, condominiums, etc. (generally 5-units-or-more) rose month-to-month in May 2018, by a statistically-insignificant 11.3% +/- 30.9%, versus a revised decline in April of 15.8% (-15.8%) [previously 12.6% (-12.6%)], a revised gain of 15.9% [previously] 15.1% in March, and an unrevised decline of 14.5% (-14.5%) in February. A statistically-insignificant annual gain of 27.4% +/- 43.1% in May 2018, followed a revised 15.6% [previously 19.0%] in April 2018, a revised 24.6% [previously 23.7%] in March 2018 and an unrevised annual of 5.8% (-5.8%) in February 2018.

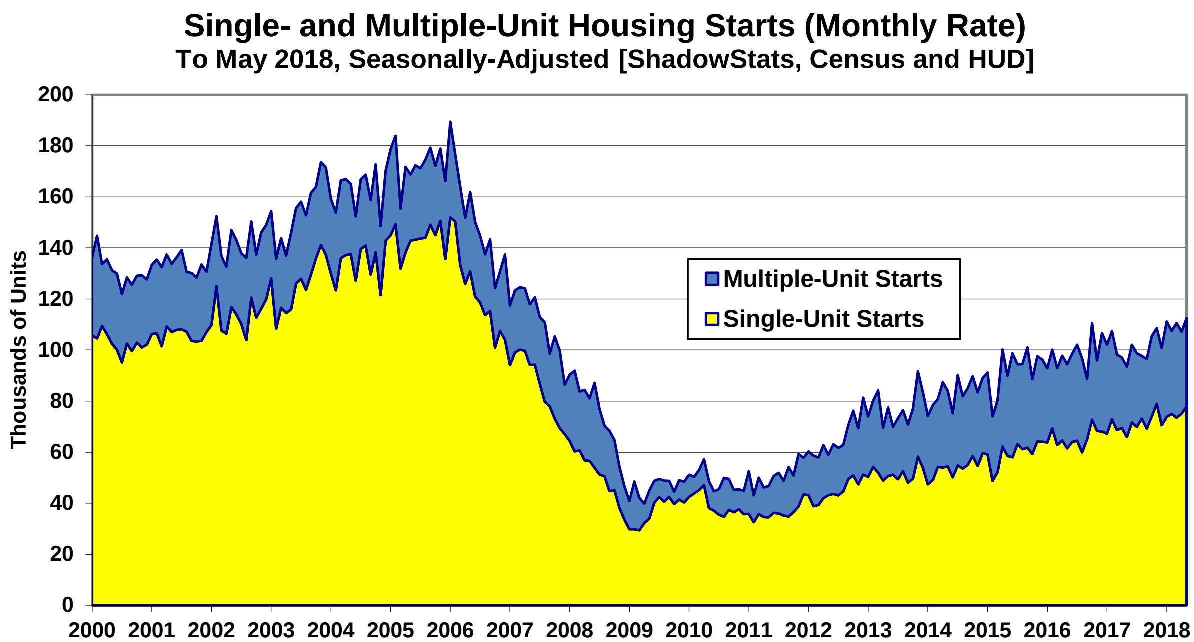
Expanding the multiple-unit housing starts category to include 2-to-4-units plus 5-units-or-more usually reflects the bulk of rental- and apartment-unit activity. The Census Bureau does not publish monthly estimates of the 2-to-4-units category, due to statistical significance problems (a general issue for the aggregate series). Nonetheless, the total multiple-unit category can be estimated by subtracting the single-unit category from the total category (see *Graphs 28, 29*, *34* and *35*).

Accordingly, the statistically-insignificant May 2018 monthly gain of 5.0% in aggregate starts was composed of a statistically-insignificant gain of 3.9% in one-unit structures and a statistically-insignificant gain of 7.5% in the multiple-unit structures category (two-units-or-more, including the five-units-or-more category). In contrast, ex-two-units-or-more, the multiple-unit category gained by 11.3%.

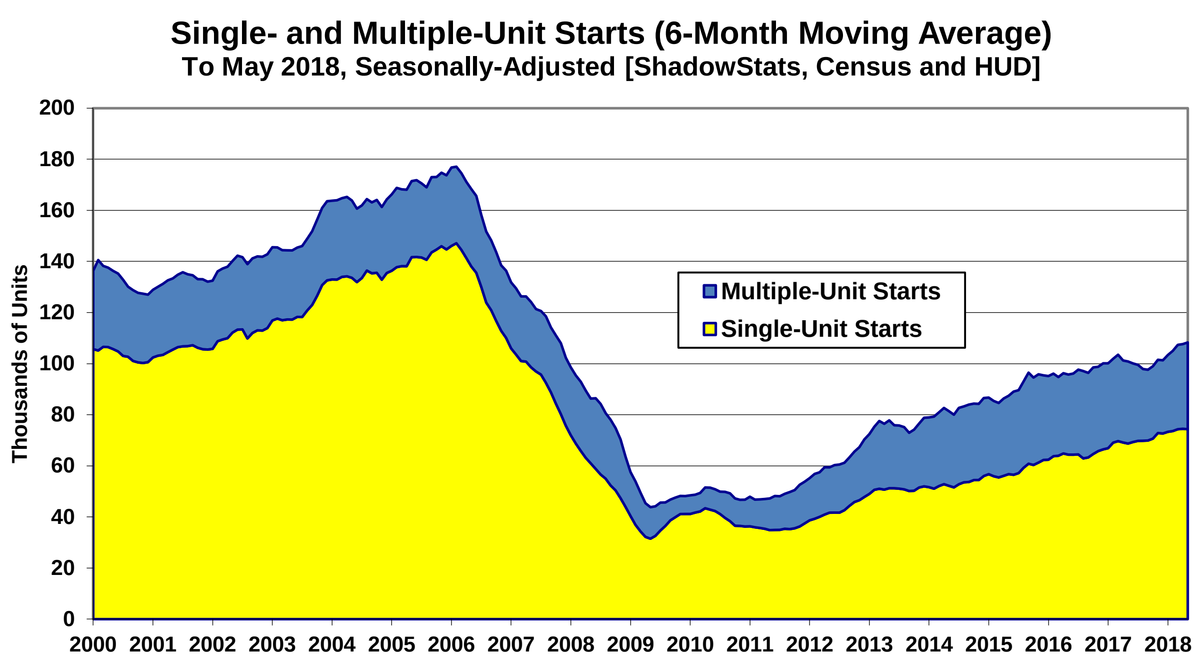
[Graphs 28 to 35 begin on the next page.]

Housing Starts Graphs by Sector, Scale in Thousands of Units per Month
(See Following Notes on the Housing Starts Graphs)

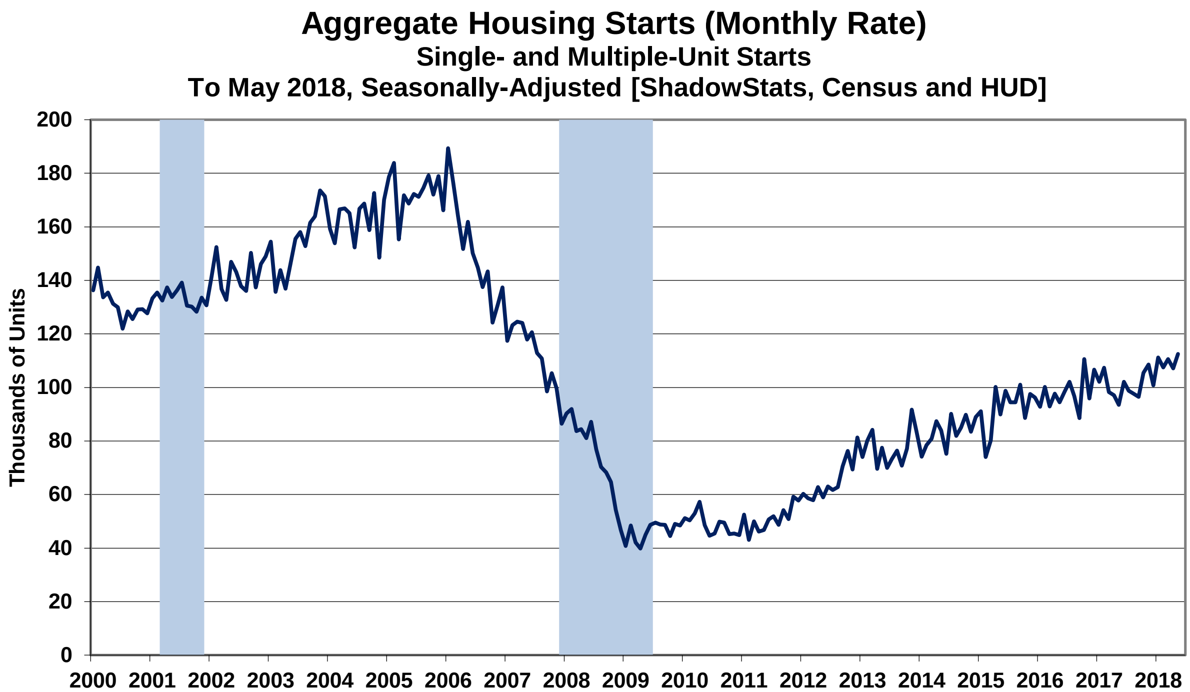
Graph 28: Single- and Multiple-Unit Housing Starts (Monthly Rate of Activity, 2000 to May 2018)



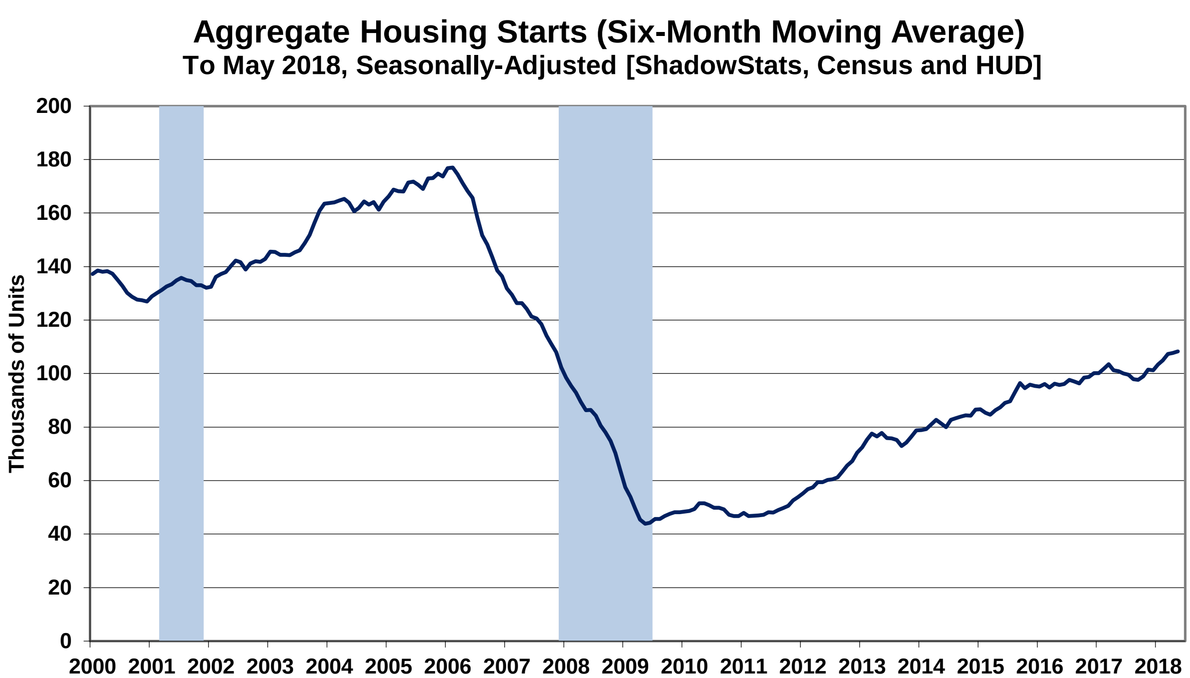
Graph 29: Single- and Multiple-Unit Starts (Six-Month Moving Average, Monthly Rate of Activity)



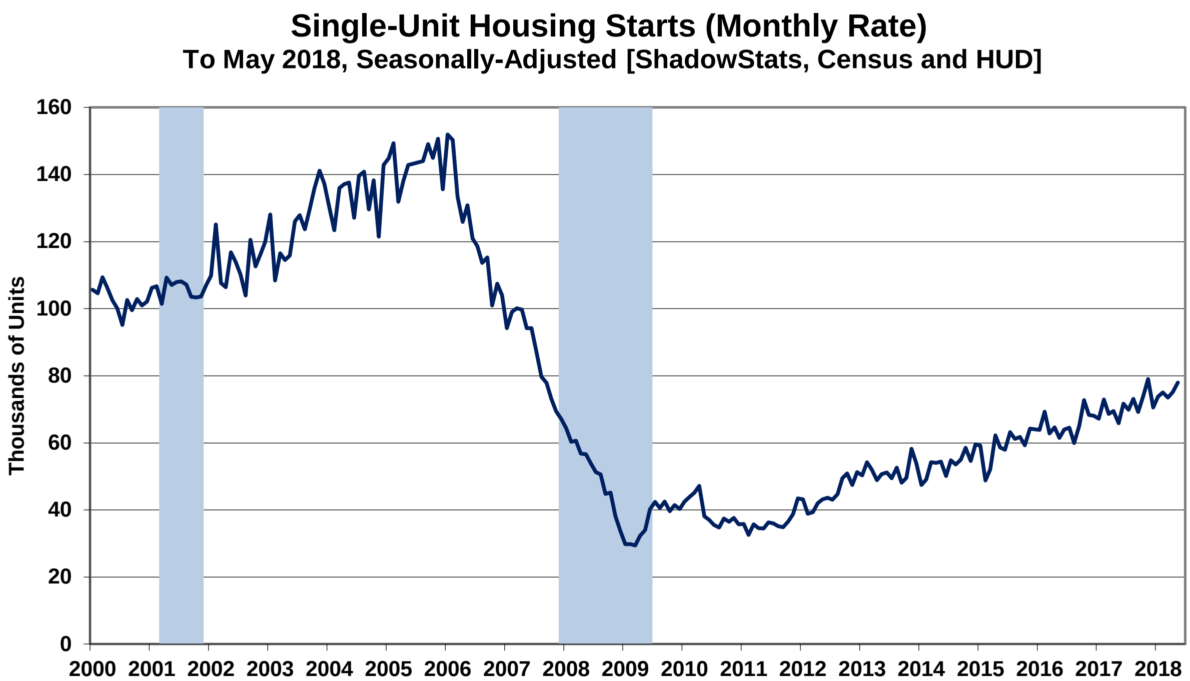
Graph 30: Aggregate Housing Starts (Monthly Rate of Activity, 2000 to May 2018)



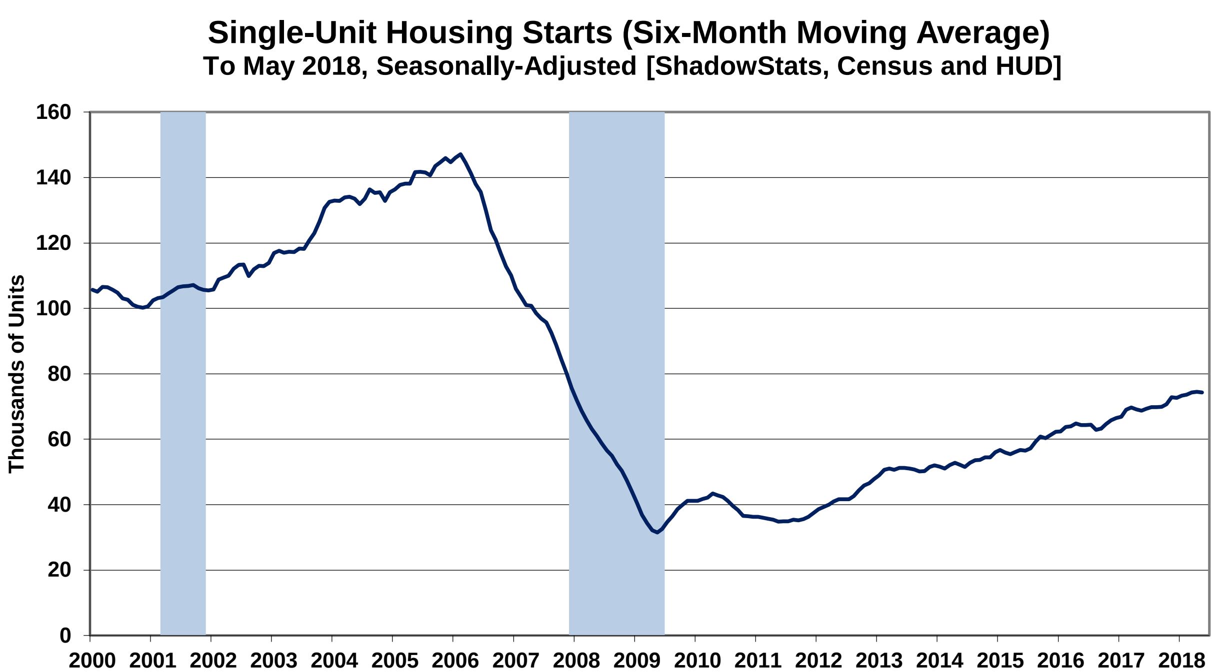
Graph 31: Aggregate Housing Starts (Six-Month Moving Average, Monthly Rate of Activity)



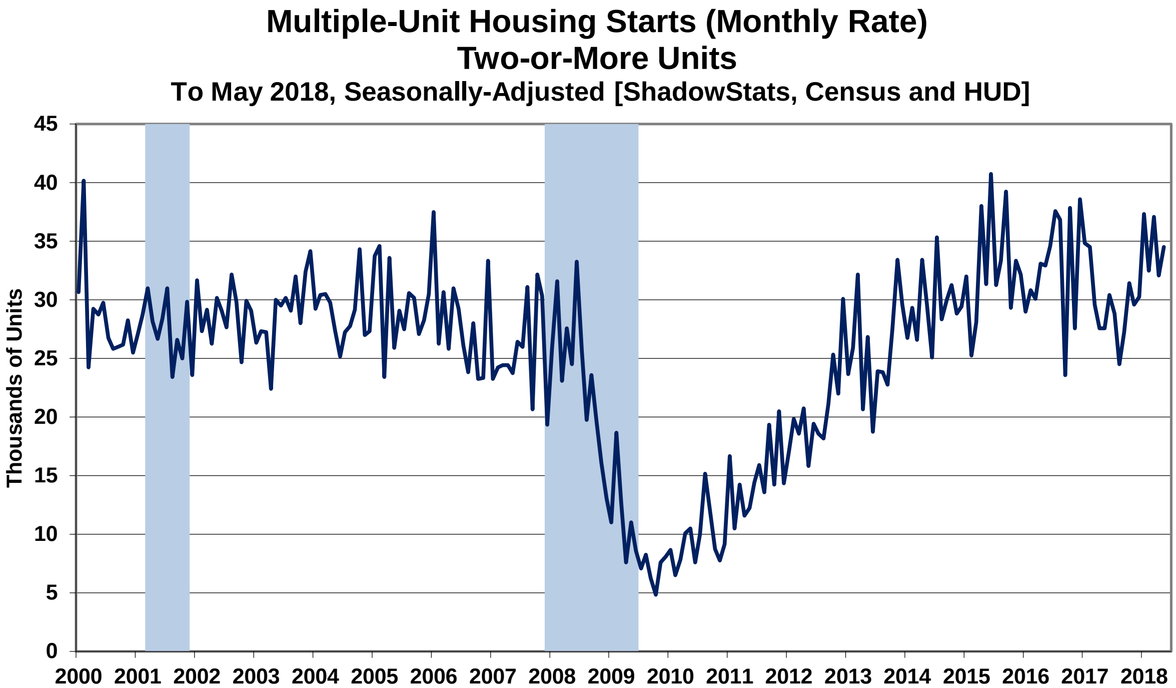
Graph 32: Single-Unit Housing Starts (Monthly Rate of Activity, 2000 to May 2018)



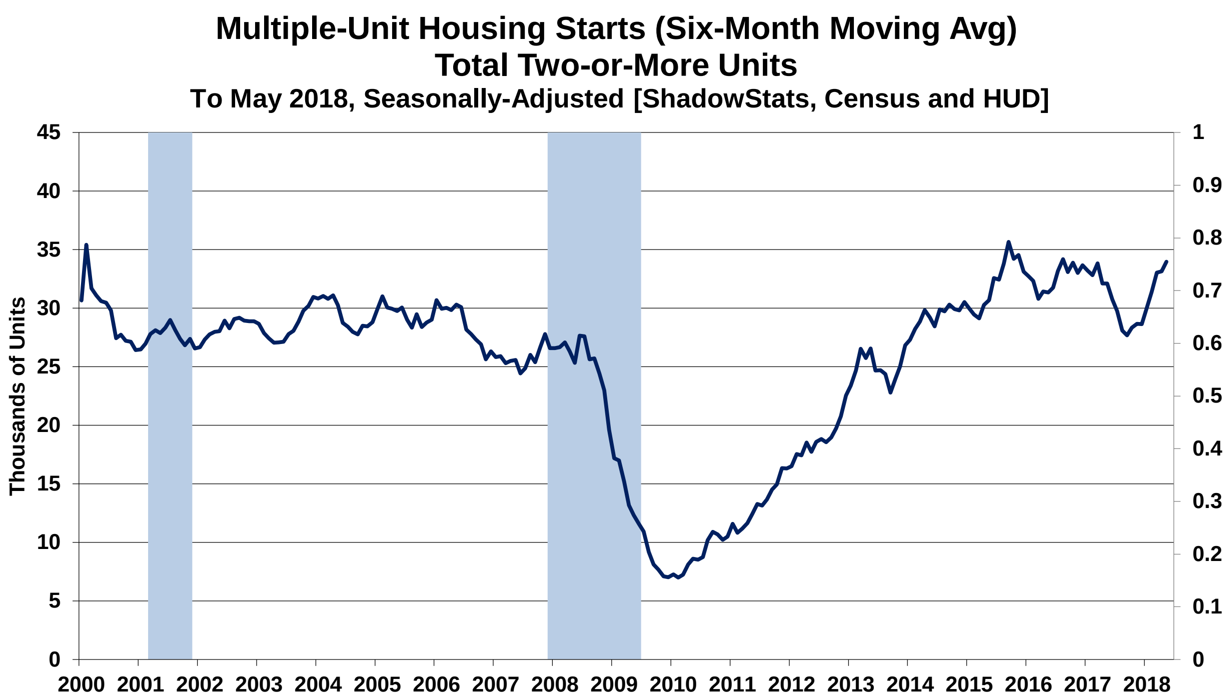
Graph 33: Single-Unit Housing Starts (Six-Month Moving Average, Monthly Rate of Activity)



Graph 34: Multiple-Unit Housing Starts, Two-or-More Units (Monthly Rate of Activity, 2000 to 2018)



Graph 35: Multiple-Unit Housing Starts (Six-Month Moving Average, Monthly Rate of Activity)



A Note on the Housing Starts Graphs. Headline reporting of Housing Starts activity is expressed by the Census Bureau as an annualized monthly pace of starts, which was 1,350,000 in May 2018, versus a revised 1,286,000 [previously 1,287,000] in April 2018. The scaling used in the aggregate historical Housing Starts and Building Permits *Graphs 36* to *41* (following) reflects those annualized numbers in millions.

Nonetheless, given the frequent 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 112,500 units in May 2018, instead of the annualized headline level of 1,350,000 units, is used in the scaling (monthly units in thousands) of the preceding *Graphs 28* to *35*, which plot the detail by the aggregate and major-sector series, on both a monthly and six-month smoothed basis. 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 30* versus *Graph 37*.

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 May 2018 headline monthly number was up by 182%, but it still was down by 41% (-41%) 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-plus years, as reflected in *Graphs 40* and *41* at the end of the *Reporting Detail*. In fact, as can be seen there in *Graph 41*, 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.

Headline Activity Has Not Recovered, Starts and Permits Have Yet to Enter a Period of Economic Expansion. Broadly, the various series (including the often, statistically-significant Building Permits) remain in low-level, relatively flat (mixed-trend) stagnation, non-recovery and non-expansion.

With the headline May 2018 reporting, the six-month smoothed trends are now relatively flat across-the-board for Housing Starts and Building Permits. While aggregate Housing Starts are slightly uptrending, thanks to the Multiple Units trend, Single Units are now downtrending, when smoothed over six months. Likewise, Building Permits now are downtrending, smoothed over six months.

Nonetheless, those still-broadly stagnant New Construction activity series, showed May 2018 Building Permits activity down by 42.5% (-42.5%) from recovering its pre-recession peak (see *Graphs 36* and *37*). Aggregate Housing Starts activity (see *Graphs 30* and *31*) is down similarly by 40.6% (-40.6%), with Single-Unit Starts (*Graphs 32* and *33*) down by 48.7% (-48.7%).

Multiple-Unit Starts (*Graphs 34* and *35*) had fallen back sharply, after first having recovered its 2005 pre-recession peak in early-2015. A temporary jump in January 2018 monthly activity wiped out virtually all of the most-recent deficit, but activity fell off sharply, again, with May 2018 total multiple-unit starts now down 8.0% (-8.0%) from its pre-recession peak on a monthly basis. As see in *Graph 35*, however, on a smoothed six-month moving average basis, multiple-unit starts are operating a level above its pre-recession peak.

In the context of a headline monthly gains in the aggregate May 2018 housing-starts detail (in both single-unit and multiple-unit starts), on top a of limited revisions to aggregate and April 2018 details, the six-month smoothed, moving averages of these series, as seen in *Graphs 29*, *31*, *33* and *35*, have tended to flatten out, with mixed trends. Irrespective of near-term reporting instabilities, the six-month trends in Housing Starts has remained broadly stagnant-to-uptrending, while Single-Unit Starts and Building Permits now are slightly downtrending. Current levels of headline monthly activity, however, still hold well below pre-recession peaks for the aggregate and single-unit series.

The exception has been the extraordinarily-volatile, Multiple-Units Starts category, which has been fluttering around its monthly pre-recession high in recent months, having backed off that peak in 2017. On a headline, volatile, monthly basis, multiple starts were below their pre-recession levels in May 2018 by 8.0% (-8.0%). Smoothed on a six-month moving basis (*Graph 35*), however, multiple starts are holding above their pre-recession peak levels and moving higher, having dipped below that smoothed peak for the better part of 2017.

Indeed, 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 generally up-trending but non-recovering, low-level activity. That largely remained flat in the last several years, in ongoing, low-level stagnation, with nascent downtrends now beginning to unfold (see accompanying *Graphs 36* to *41* of the Building Permits and Housing Starts series). Again, also see *Graphs 28* to *35*, covering all of the major Housing Starts series.

Specifically, the more-stable bit sometimes inconsistent Building Permits activity also has seen a broad pattern of non-recovery. The headline, monthly decline of 4.6% (-4.6%) +/- 1.6% in May 2018 was statistically-significant at the 95% confidence interval (again, all confidence intervals expressed here are at the 95% level). While the ***Building Permits series remains more stable in its reporting month-to-month than the Housing Starts series, the problem with Building Permits remains that the data are not reported on a consistent basis over time.***

The size and nature of the sampling base is revised frequently, without offsetting adjustments to the historical data, as discussed in Commentary No. 950. This is why ShadowStats concentrates on the more-consistent Housing Starts series, despite its extreme month-to-month volatility and frequent, massive monthly revisions. The current headline monthly decline in Permits has turned the broadly stagnant six-month moving average of the Building Permits series to minimally-downtrending (see *Graph 38*).

Plotted with just the seasonally-adjusted monthly data in *Graphs 36* and *37*, the pattern of low-level, uptrending stagnation in the various New Construction Activity series, showed headline May 2018 Building Permits activity still down by 42.5% (-42.5%) from recovering its pre-recession peak. Aggregate Housing Starts activity (see also *Graphs 30* and *31*) is down similarly by 40.6% (-40.6%), with Single-Unit Starts (*Graphs 32* and *33*) down by 48.7% (-48.7%).

Multiple-Unit Starts (*Graphs 34* and *35*) had fallen back sharply in 2017, after first having recovered its 2005 pre-recession peak in early-2015, recovering again in recent months. Where the series has been gyrating between near pre-recession peak activity, on monthly basis it was down by 8.0% (-8.0%) with the headline May 2018 detail. Based on its smoothed six-month moving average, however, the multiple-units category indeed is operating above its pre-recession peak.

Annualized First-Quarter 2018 Growth in Housing Starts Boomed by 19.6%, if the Numbers Could Be Believed, with Second-Quarter 2018 Growth on Track to Slow to an Annualized Pace of 0.3%. In this highly volatile and unstable series of recent years, the total Housing-Starts count fell at an annualized quarterly pace of 23.2% (-23.2%) in first-quarter 2015, rose at a 92.1% pace in second-quarter 2015, by 1.4% in third-quarter 2015 and contracted at an annualized pace of 9.8% (-9.8%) in fourth-quarter 2015.

First-quarter 2016 activity showed to an annualized quarterly gain of 4.9%, while second-quarter 2016 rose by 6.9%. Third-quarter 2016 activity contracted on both an annual and quarterly basis, down year-to-year by 0.8% (-0.8%), the first annual decline since first-quarter 2014, and down at an annualized quarterly pace of 4.4% (-4.4%). Fourth-quarter 2016 housing starts showed annualized quarterly growth of 40.8%, up by 10.9% year-to-year.

First-quarter 2017 annualized quarterly change was a contraction of 6.7% (-6.7%), with year-to-year change slowing to 7.6%. Second-quarter 2017 showed an annualized quarter-to-quarter contraction of 18.2% (-18.2%), with year-to-year change slowing further to 0.7%. Third-quarter 2017 Housing Starts activity reflected an annualized gain of 0.3%, with annual growth of 1.9%. Fourth-quarter 2017 activity surged with an annualized gain of 33.5%, with a year-to-year gain of 0.5%.

First quarter 2018, annualized quarterly growth slowed to 19.6% [previously 20.7%], with annual growth up to 7.2% [previously 6.5%]. Given the meaningless volatility in the headline April and May 2018 details, the early trend is for an annualized second-quarter 2018 gain 0.3%, up year-to-year by 12.6%.

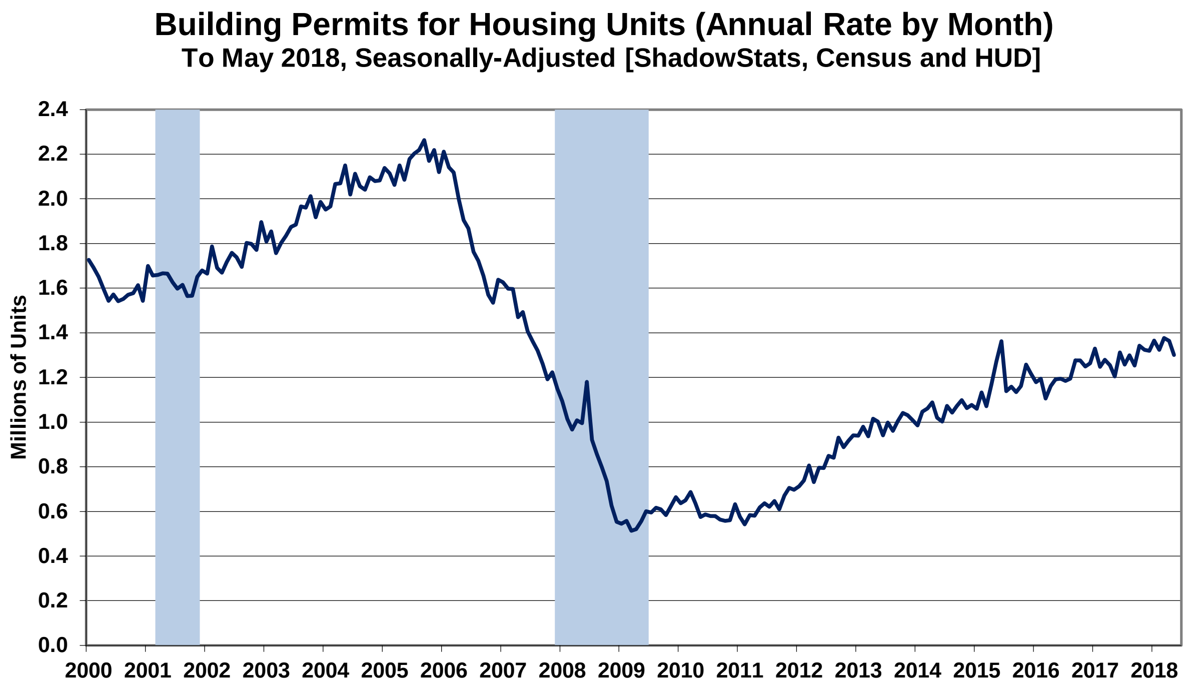
Building Permits. In comparison/contrast, Building Permits (the theoretically-leading series to Housing Starts) showed an annualized quarterly gain of 7.4% in first-quarter 2017 (earlier numbers are not consistent, as discussed in *Commentary No. 950*), with year-to-year change of 10.8%. Second-quarter 2017 showed an annualized contraction of 8.4% (-8.4%), with year-to-year growth of 6.3%. Third-quarter 2017 showed an annualized gain of 4.3%, with a year-to-year gain of 4.3%. Fourth-quarter 2017 showed an annualized gain of 19.5%, with annual gain of 5.4%.

First-Quarter 2018, annualized quarterly growth was an unrevised 8.3%, up by 5.4% year-to-year. The early-trend, based just on the April and May 2018 detail, was for annualized an second-quarter 2018 contraction of 6.6% (-1.0%), up year-to-year by 6.0%.

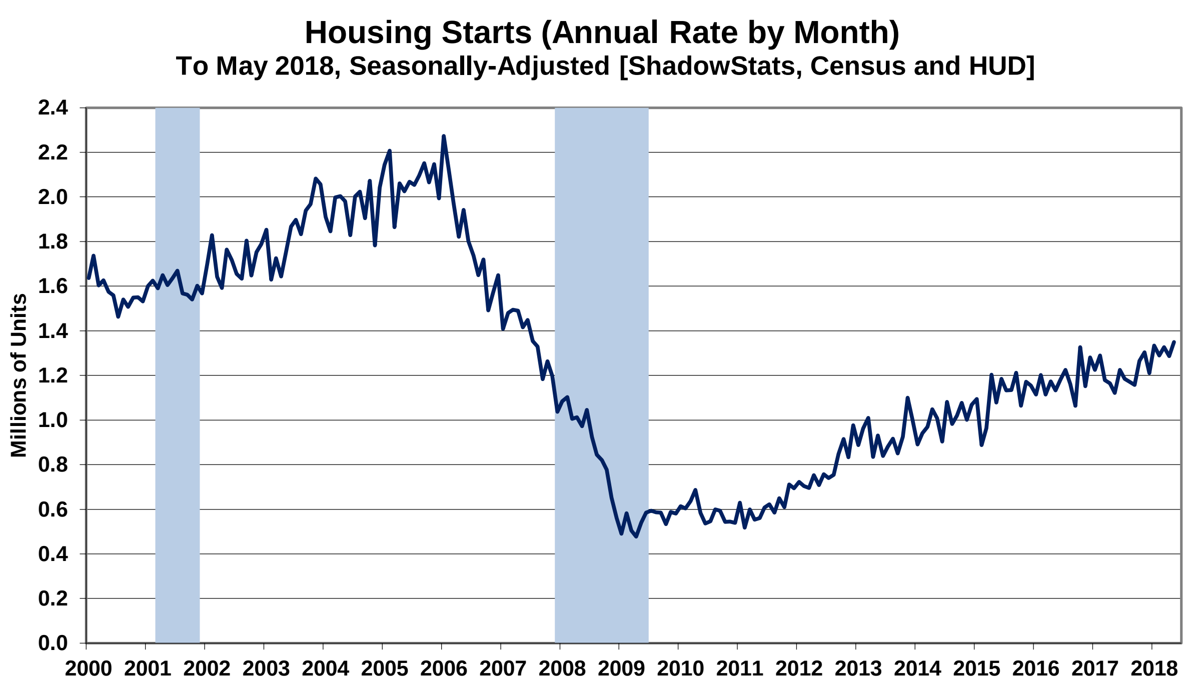
[Graphs 36 to 41 begin on the next page.]

Housing Starts and Building Permits, Historical Plots,
Scale Reflects Annualized Monthly Rate in Millions of Units
(See Preceding Notes on the Housing Starts Graphs)

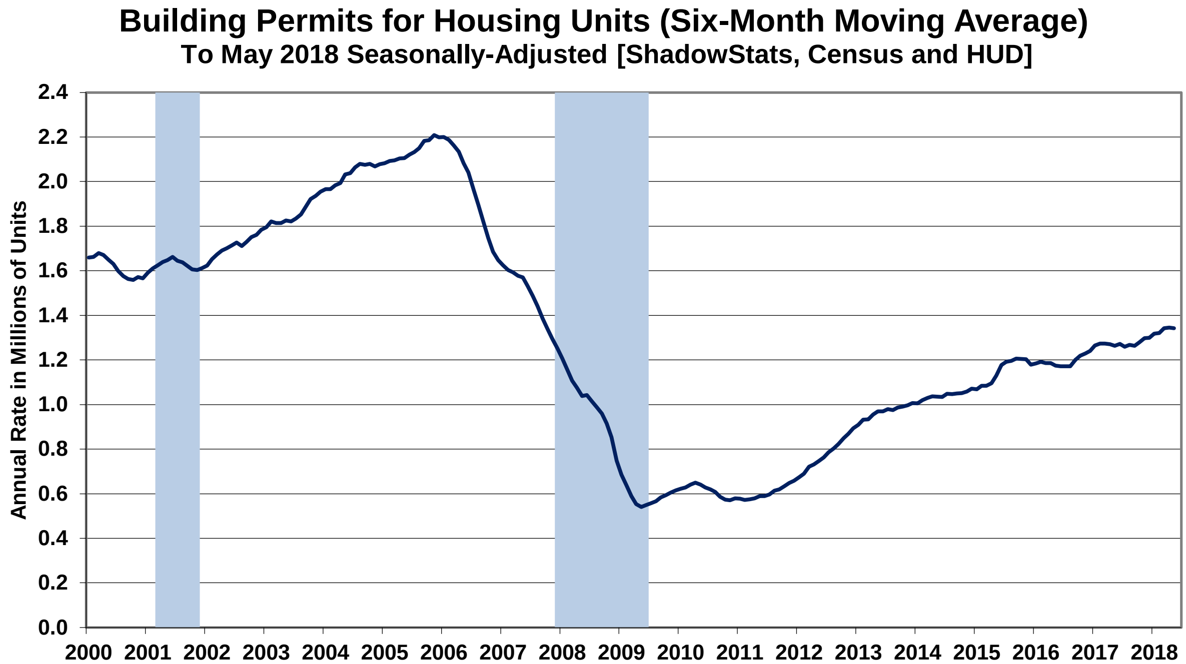
Graph 36: Building Permits (Annualized Monthly Rate of Activity), 2000 to Date



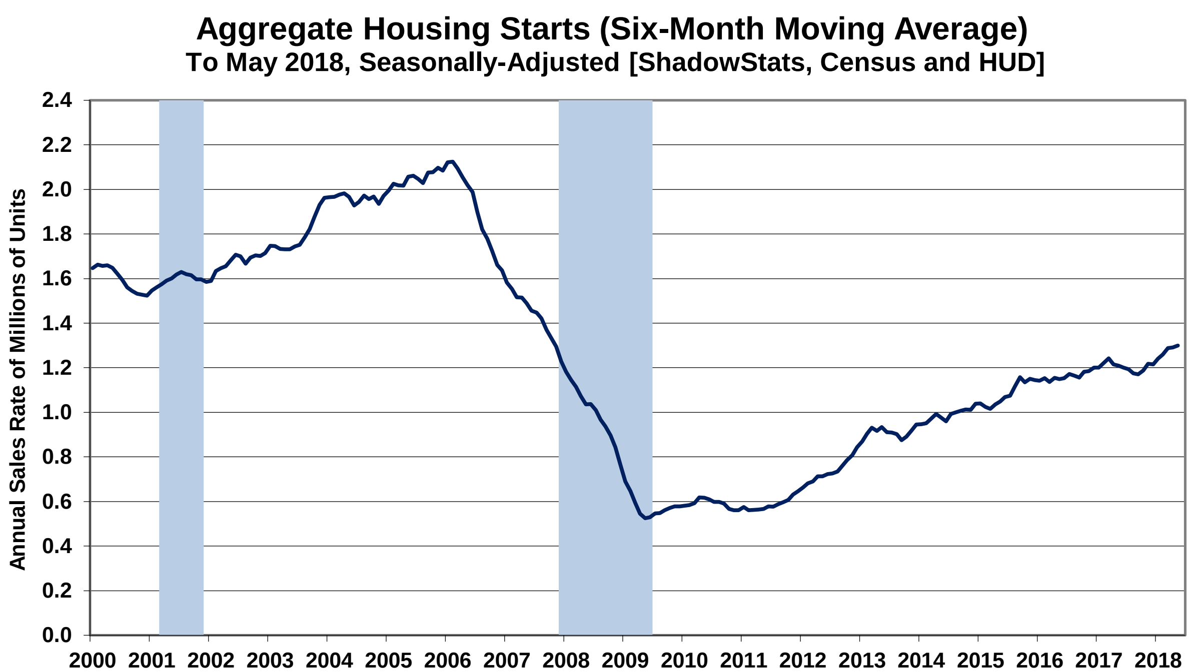
Graph 37: Housing Starts (Annualized Monthly Rate of Activity), 2000 to Date



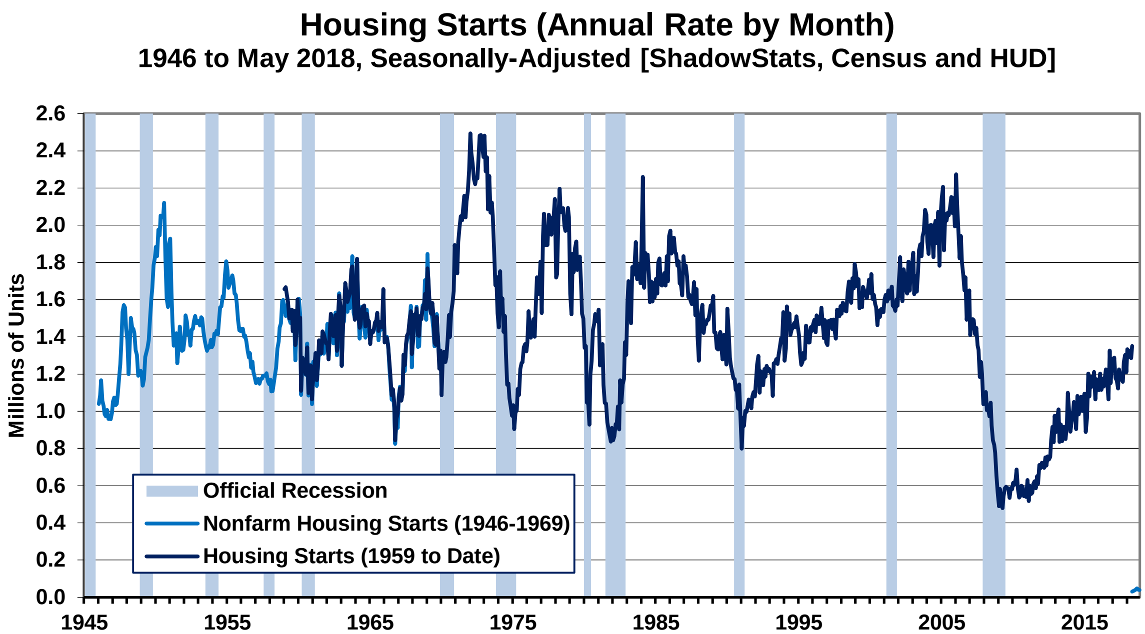
Graph 38: Building Permits (Six-Month Moving Average), 2000 to Date



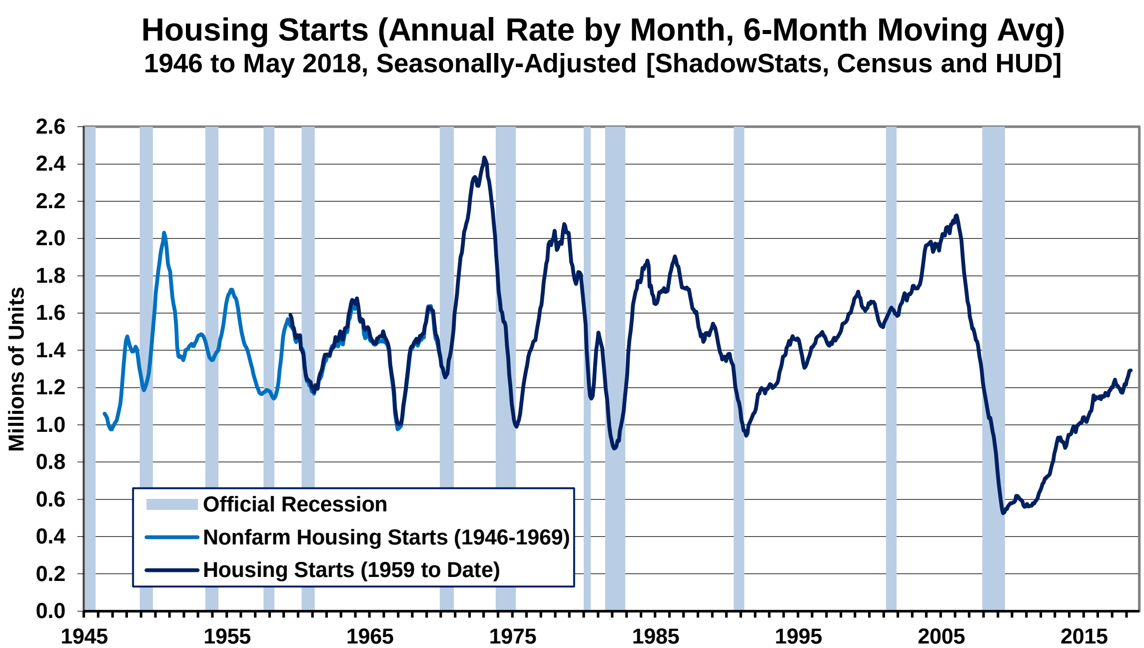
Graph 39: Housing Starts (Six-Month Moving Average), 2000 to Date



Graph 40: Housing Starts (Annualized Monthly Rate of Activity), 1946 to Date



Graph 41: Housing Starts (Annualized Monthly Rate of Activity, 6-Mo Moving Avg), 1946 to Date



Existing- and New-Home Sales (May 2018)

May 2018 Existing-Home Sales Fell by 0.4% (-0.4%), versus Deepened, Negative April Sales, Down Year-to-Year by 3.0% (-3.0%), Shy by 25.3% (-25.3%) of Recovering Its Pre-Recession Peak. Monthly Existing-Home Sales declined by 0.4% (-0.4%) in May 2018, following a revised decline of 2.7% (-2.7%) [previously 2.5% (-2.5%)] in April and unrevised gains of 1.1% March and 3.0% in February, but those gains never offset the recent sales decline of 3.2% (-3.2%) in January 2018 and 2.8% (-2.8%) in December 2017. Annual change contracted in May 2018 by 3.0% (-3.0%), versus a revised decline of 1.6% (-1.6%) [previously 1.4% (-1.4%)] in April 2018, having declined by 1.2% (-1.2%) in March 2018, having gained 1.1% in February 2018, having dropped year-to-year by 4.8% (-4.8%) in January 2018 and gained by 0.9% in December 2017. The January 2018 annual drop was the steepest since August 2014.

Nonetheless, as shown in accompanying *Graph 42*, November 2017 Existing-Home Sales was close to the highest level of the post-2006 revamped series (blue line), but still well below the pre-recession peak in the original series (red line). That said, smoothed for six-month moving averages, the Existing-Home Sales series had been in uptrending stagnation into 2017, which recently shifted to fluttering, relatively-flat and now down-trending stagnation, reflected in *Graph 43*.

Existing-Home Sales Continued in Smoothed, Downtrending Stagnation. Released by the National Association of Realtors (NAR) on June 20th, Existing-Home Sales (closings of home sales, as opposed to the count of contract signings for New-Home Sales, reported by the Census Bureau) declined month-to-month by 0.37% (-0.37%) in May 2018, having decline by a revised 2.68% (-2.68%) [previously down by 2.50% (-2.50%)] in April, having gained 1.08% in March, 2.97% in February, having declined month-to-month by 3.24% (-3.24%) in January and by 2.80% (-2.80%) in December 2017, following monthly gains of 4.00% in November and 2.42% in October.

May 2018 year-to-year change was a contraction of 3.04% (-3.04%), versus a downwardly revised annual contraction of 1.62% (-1.62%) [previously 1.44% (-1.44%)] in April 2018, an unrevised drop in March 2018 of 1.23% (-1.23%), an annual gain of 1.09% in February 2018, an annual plunge in January 2018 of 4.78% (-4.78%), and annual gains of 0.91% in December 2017, 2.14% in November 2017 and an annual decline of 0.54% (-0.54%) in October 2017.

First-quarter 2018 Existing Homes Sales contracted at an unrevised annualized pace of 6.06% (-6.06%), which followed an annualized quarterly gain of 14.82% in fourth-quarter 2017 and unrevised consecutive quarterly contractions of 9.94% (-9.94%) and 3.97% (-3.97%) respectively in third-quarter 2017 and second-quarter 2017. Based just on April and May 2018 reporting, second-quarter 2018 activity was on early trend for an annualized quarterly contraction of 4.8% (-4.8%).

Distressed Sales Dropped to 3.0% of Total Sales, With March All-Cash Sales Holding at 21%. In the context of continuing consumer liquidity constraints, the NAR estimated the portion of May 2018 sales in "distress" at 3% (2% in foreclosure, 1% short sales), versus 3.5% (3% in foreclosure, 0.5% short sales) in April 2018, down from 5% (4% in foreclosure, 1% short sales) in May 2017. While such was the lowest level of distress reported since the NAR began surveying such detail in October 2008, consider that October 2008 conditions already were more than three years into the housing-market collapse.

Reflecting ongoing lending problems and continuing stresses within the financial system, including related banking-industry and consumer-solvency issues, as well as the ongoing influx of speculative investment money into the existing-housing market, the NAR estimated all-cash sales held at to 21% of transactions in May 2018, the same as in April, but down from 22% in May 2017.

May New-Home Sales Gained an Insignificant 6.7%, in Usual Nonsense Volatility, Against a Sharp Downside Revision to April, Still Shy by 50.4% (-50.4%) of Recovering Its Pre-Recession High. Miserable reporting quality continued with headline May 2018 New-Home Sales, despite indications from the Census Bureau that last month's annual benchmark revisions would improve the stability and significance of the headline reporting detail (see *Commentary No. 951*).

Released June 25th by the Census Bureau and the Department of Housing and Urban Development, the highly volatile and unstable New-Home Sales series, which counts new-home sales contracts signed (as opposed to the count of home sales closed in the Existing-Home Sales series), rose month-to-month in May 2018 by a statistically-insignificant 6.7% +/- 16.5% (again, all confidence intervals are expressed at the 95% level).

That was against a deeper monthly decline in April of 3.7% (-3.7%) [previously down by 1.5% (-1.5%)], revised monthly gains of 1.2% [previously 2.0%] in March and 4.7% [previously 4.1%] in February and an unrevised decline of 0.5% (-0.5%) in January (see *Graph 44*).

The year-to-year change in April 2018 sales was a statistically-insignificant gain of 14.1% +/- 23.3%, versus revised annual gains of 8.9% [previously 11.6%] in April 2018, 4.4% [previously 4.5%] in March 2018, 7.3% [previously 6.6%] in February 2018 and an unrevised 6.2% in January 2018.

Reflecting unstable and broadly meaningless monthly and quarterly swings, Fourth-Quarter 2017 activity surged at an annualized pace of 58.9%, with First-Quarter 2018 showing an annualized contraction of 0.4% (-0.4%). Disaster-recovery effects may have exacerbated the usual extreme volatility in this series.

Smoothed with a six-month moving average, however, this series, continued in low-level, non-recovering stagnation, which recently has turned new to a slight downtrend with the latest headline details (see *Graph 45*).

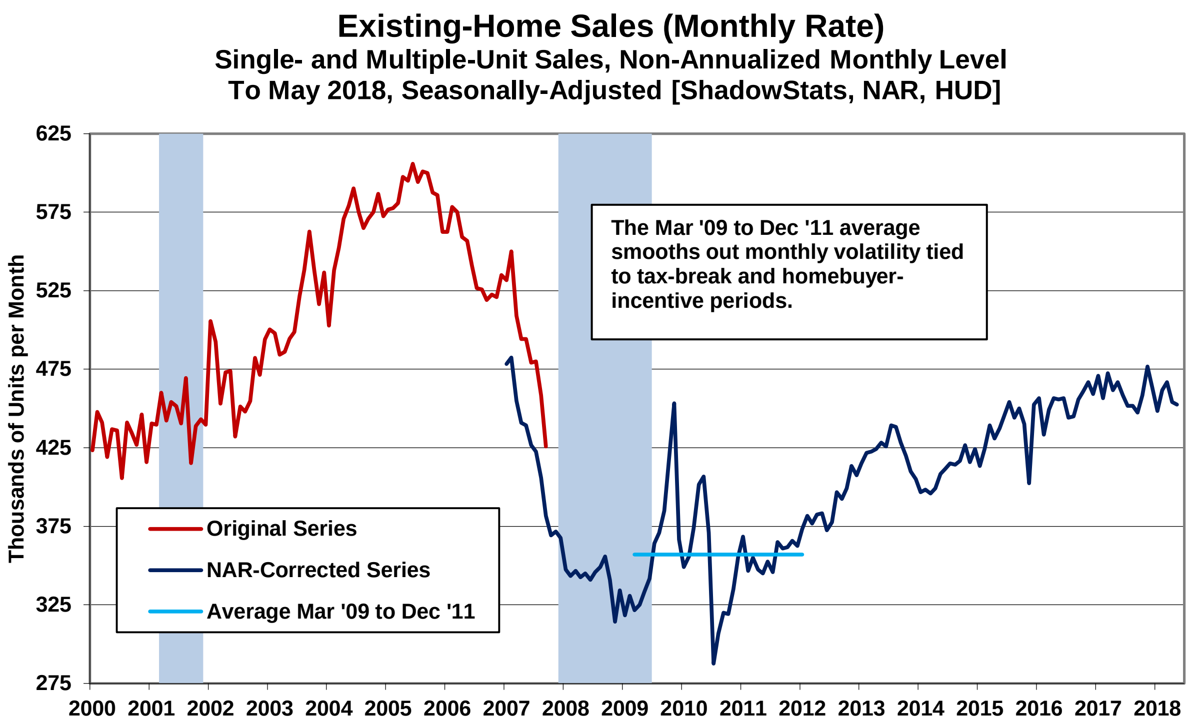
Consumer Liquidity Constraints Impair Residential Real Estate Activity, Both Existing- and New-Home Sales. The liquidity bind besetting consumers continues to constrain residential real estate activity, as reviewed in the *Consumer Liquidity Watch*. Without sustainable growth in real income, and without the ability 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 residential real estate activity and related demand for residential construction. That circumstance—in the last twelve-plus years of economic collapse and stagnation—has prevented a normal recovery in broad U.S. economic activity.

Graphs 42 and *43* plot the Existing-Home Sales series. Comparative graphs of the related Housing Starts series (both cover single and multiple-unit activity) are found with *Graphs 30* and *31* on page 44.

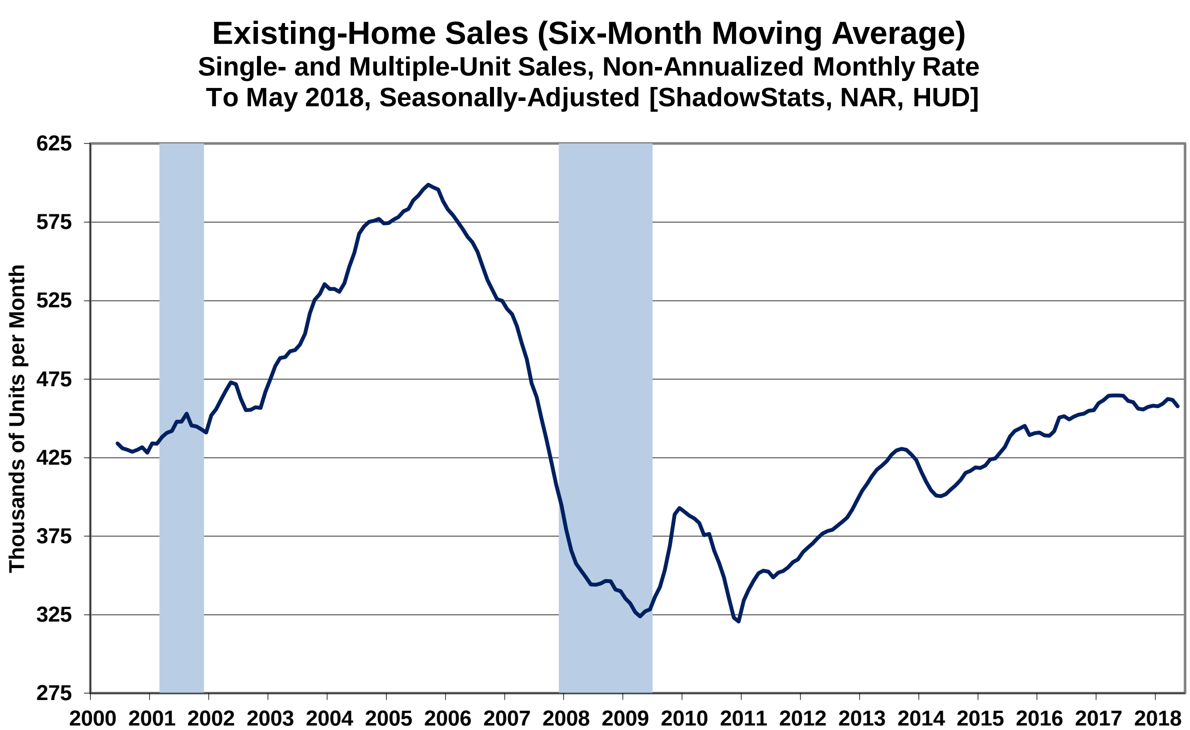
Graphs 44 and *45* plot the New-Home Sales series. Comparative graphs of the related Single-Unit Housing Starts (both series reflect single-unit activity) are found with *Graphs 32* and *33* on page 45.

[Graphs 42 to 45 begin on the next page.]

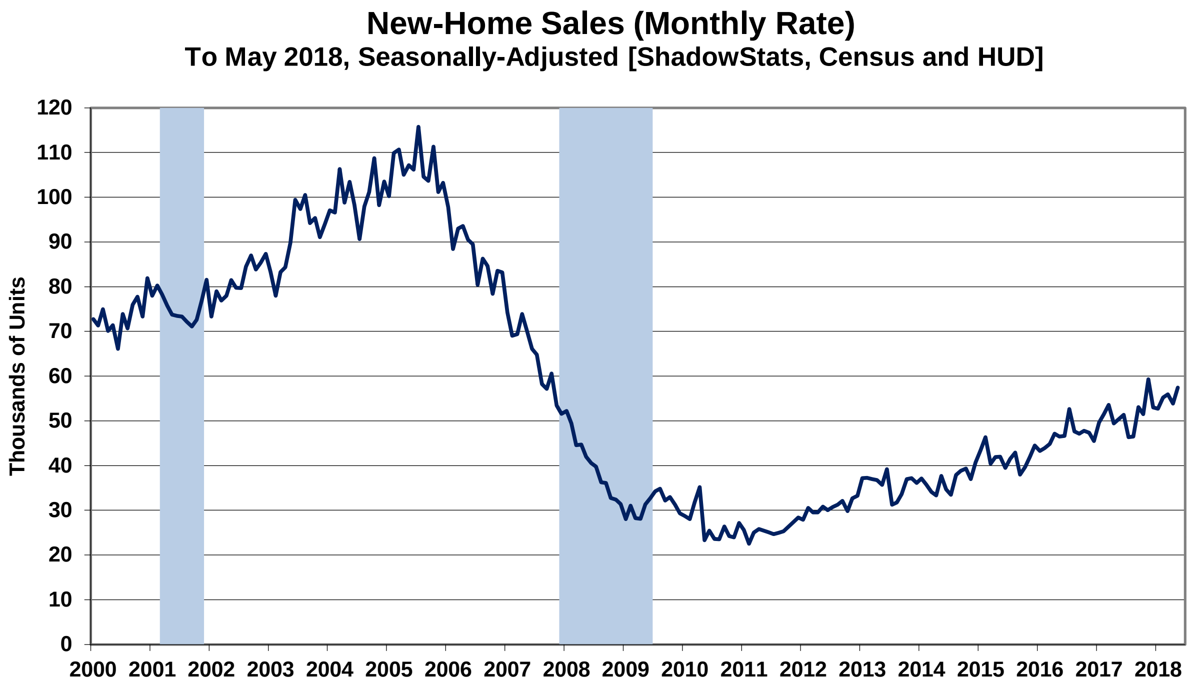
Graph 42: Existing-Home Sales (Monthly Rate of Activity)



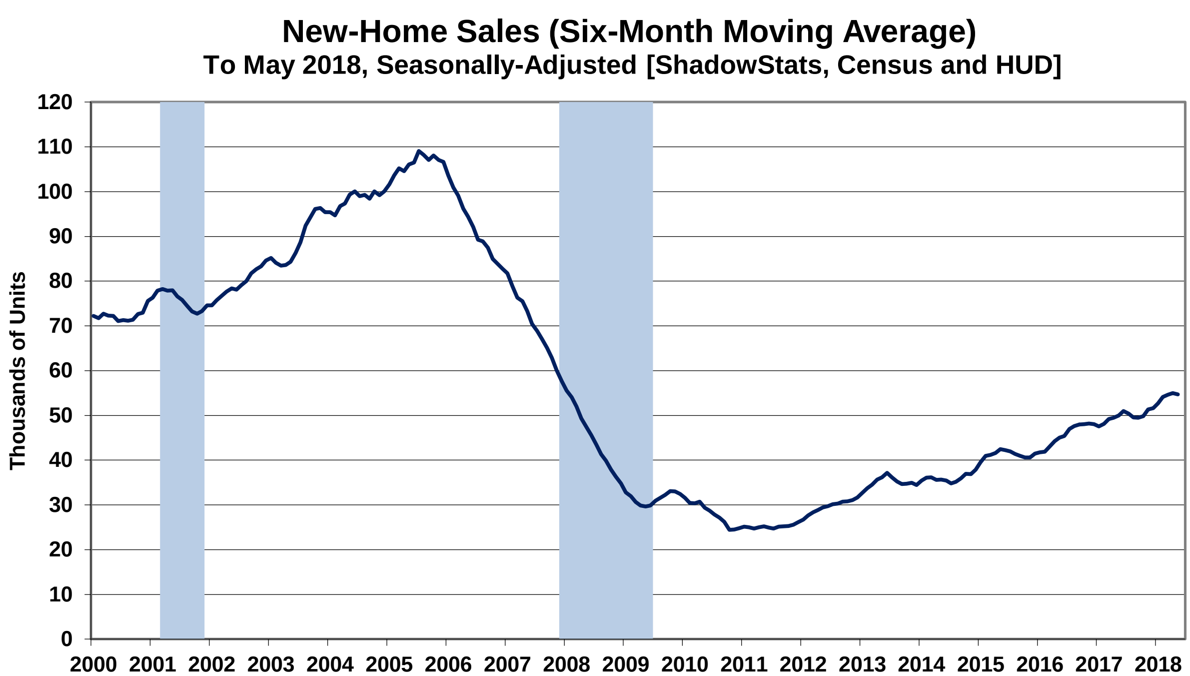
Graph 43: Existing-Home Sales (Six-Month Moving Average)



Graph 44: New-Home Sales (Monthly Rate of Activity)



Graph 45: New -Home Sales (Six-Month Moving Average)



***[Week, Month and Year Ahead** begins on the next page.]*

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WEEK, MONTH AND YEAR AHEAD

U.S. Dollar and Financial-Market Turmoil at Intensified High Risk, Amidst Mounting Fiscal Concerns, Consumer Liquidity Issues and Non-Expanding, Real-World Economic Activity. *[Other than for links or references, the text in these opening paragraphs is minimally changed from Commentary No. 955 of June 18th.]* In the context of intensified weakening of key indicators and negative stresses on basic consumer-liquidity conditions, discussed respectively in the *Opening Comments* and the *Consumer Liquidity Watch*, headline First-Quarter 2018 GDP reflected difficult economic times beginning to hit U.S. consumer activity. The U.S. consumer remains the primary and fundamental driving force behind domestic business activity. Continuing negative surprises likely will follow in the regular economic reporting and remaining annual benchmark revisions of key economic series (Construction Spending on July 2nd and GDP on July 27th) in the next couple of weeks and month. The broad outlook on the economy has not changed. Weaker economic growth and renewed, faltering economic headlines should follow, as discussed in today's *Opening Comments*.

The *Opening Comments* and *Hyperinflation Watch* of prior *Commentary No. 955* reviewed the broad outlooks for the U.S. economy, the U.S. dollar, gold, silver and the financial markets. Such updated and expanded upon annual review covered in *Special Commentary No. 935* (see the *Executive Summary*, with *Contents* and links to *Major Sections* and *Graphs* beginning there on page 6). The broad, faltering economic outlook also was reviewed in the *Opening Comments* and *Industrial Production Benchmark Revisions* sections of *Commentary No. 942-B*. The fundamental outlook for U.S. dollar and related market circumstances broadly have not changed from the related vulnerabilities discussed in those earlier missives.

In the context of last week's strong U.S. dollar rally, the dollar and financial markets remain at extraordinarily-high risk of intense, panicked declines, still likely in the very near term. Holding physical gold and silver remain the ultimate hedges—stores of wealth—for preserving the purchasing power of one's U.S. dollar assets, during times of high inflation and currency debasement, and/or political- and financial-system upheaval. Please call (707) 763-5786, if you would like to discuss current circumstances, or otherwise.

Best wishes – John Williams

PENDING ECONOMIC RELEASES

New Orders for Durable Goods (May 2018). Likely before you get to read this section, the Census Bureau will have reported May 2018 New Orders for Durable Goods on Wednesday, June 27th, which will be covered in *Commentary No. 957* of June 29th. Where expectations usually are positive for this series, net of the volatile commercial aircraft orders, chances for a downside "surprise" remain strong. Net of those aircraft orders, orders likely continued in a pattern of intensifying, downtrending real stagnation, as seen in the recent benchmarking (*Commentary No. 950*).

Where commercial aircraft orders are booked for the long-term—years in advance—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. Again, with expectations likely on the plus-side, ex-aircraft, the headline change in month-to-month activity remains a fair bet to be in unexpected contraction, particularly in real terms, net of rapidly-spiking headline inflation.

In inflation-adjusted or real terms, reflecting PPI-related inflation for "manufactured durable goods," relative month-to-month and year-to-year New Orders activity will be dampened sharply on both a monthly and annual basis, by the largest inflation adjustments seen month-to-month since January 2011 and year-to-year since November 2011. Month-to-month related inflation for May 2018 was a gain of 0.52%, following gains of 0.41% in April and March, 0.23% in February and 0.41% in January. Year-to-year annual inflation rose to 2.66% in May 2018, versus 2.13% in April 2018, 1.96% in March 2018, 1.72% in February 2018 and 1.79% in January 2018 (see prior *Commentary No. 955*).

Gross Domestic Product—GDP (First-Quarter 2018, Third Estimate, Second Revision). The Bureau of Economic Analysis (BEA) will release its third estimate of, second revision to First-Quarter 2018 GDP on Thursday, June 28th. That estimate will be accompanied by the second estimates of First-Quarter 2018 Gross Domestic Income (GDI) [theoretical income-side equivalent to the GDP's consumption side] and Gross National Product (GNP) [the broadest National Income measure, GDP plus trade flows in factor income (interest and dividend payments)]. Details will be covered in *Commentary No. 957* of that July 29th. These will be the last estimates of GDP, GDI and GNP in the current reporting system.

The GDP "advance" estimate for second-quarter 2018 on July 27th, will coincide with the Comprehensive Benchmark Revision, restatement and redefinitions (including price deflation) to the series, back through 1929. Discussed in today's *Opening Comments* the GDP economic "recovery" coming out of the economic collapse into 2009 likely will appear weaker, post-benchmarking, than it does at present, with the possibility of some slowing or "double dip" in the economy showing up after fourth-quarter 2014.

Against fourth-quarter 2017 annualized real GDP growth of 2.89%, first-quarter 2018 growth slowed to 2.32% in its first estimate, revising to 2.17% in its second estimate. Against fourth-quarter 2017 growth of 1.05%, GDI jumped to 2.80% annualized growth in first-quarter 2018. Against fourth-quarter 2017 growth of 2.71%, GNP dropped to 2.00% annualized in first-quarter 2018.

While all those first-quarter growth rates will revise on June 28th, the directions of the revisions is a coin-toss. The GDP revisions should be minimal, where the GDI and GNP revisions likely will be larger. Consensus expectations appear to be for no net revision to the GDP, with growth holding at 2.2%.

LINKS TO PRIOR COMMENTARIES, SPECIAL REPORTS AND OTHER WRITINGS

New: The ***Consumer Liquidity Watch*** has become a standalone entity, updated June 20th and posted on the *ShadowStats* Web Site, available there by link at *Consumer Liquidity Watch*.

The first standalone ***Hyperinflation Watch*** will follow on Thursday, July 5th, covering June 2018 Monetary Conditions.

The latest Watches always will be available on www.ShadowStats.com and by link from current Commentaries, with updates advised by e-mail.

Prior Writings Underlying the Current *Special Commentaries* and a Sampling of Recent *Regular Commentaries*. Underlying the recent *Special Commentary No. 935* *(Part One)* and the pending *Special Commentaries (Part Two)* on Inflation, and *(Part III)* on the Federal Reserve and U.S. banking system, are *Commentary No. 899* and *General Commentary No. 894*, along with general background from regular *Commentaries* throughout 2017.

These missives also are built upon writings of prior years, including *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). In turn, they updated the long-standing hyperinflation and economic outlooks published in *2014 Hyperinflation Report—The End Game Begins – First Installment Revised* (April 2014) and *2014 Hyperinflation Report—Great Economic Tumble – Second Installment* (April 2014).

The two *Hyperinflation* installments remain the primary background material for the hyperinflation circumstance. Other references on underlying economic reality are the *Public Commentary on Inflation Measurement* and the *Public Commentary on Unemployment Measurement*.

Recent Commentaries. *[Listed here are* Commentaries *of the last several months or so, plus recent* Special Commentaries *and others covering a variety of non-monthly issues, including annual benchmark revisions, dating back through the beginning of 2017. Please Note: Complete ShadowStats archives back to 2004 are found at www.ShadowStats.com (left-hand column of home page).]* These regular *Commentaries* and now *Consumer Liquidity* and *Hyperinflation Watches* usually are published least weekly, or updated every two weeks for the *Watches*, updating general economic and financial-market circumstances as they develop.

Commentary No. 955 (June 18th) analyzed May 2018 inflation as reported with the May 2018 Consumer and Producer Price Indices (CPI and PPI), Real Average Weekly Earnings, along with the latest *Hyperinflation Watch* covering FOMC policy, the U.S. dollar and financial markets. Summary headline details also were provided for May Retail Sales, Industrial Production and the Cass Freight Index™.

Commentary No. 954 (June 8th) reviewed the comprehensive annual benchmark revisions to the Trade Deficit, in the context of recent benchmark revisions to other major economic series and implications for the pending GDP benchmark revisions. Such also covered the headline reporting of the April 2018 headline Trade Deficit detail and an updated Consumer Liquidity Watch.

Commentary No. 953-B (June 5th) analyzed the discrepancies between the record-low headline unemployment rate and near-record-high readings of labor-market stress, in the context of extended coverage the May 2018 Employment and Unemployment and April 2018 Construction Spending, previously headlined in *No. 953-A*.

Commentary No. 953-A (June 1st) provided flash headlines and summary details of the May 2018 Employment and Unemployment and April 2018 Construction Spending, expanded upon in the supplemental coverage of *Commentary No. 953-B*. Current monetary conditions were reviewed, along with the initial estimate of annual growth in the May 2018 ShadowStats Ongoing Estimate of Money Supply M3.

Commentary No. 952 (May 30th) reviewed the second estimate of First-Quarter 2018 GDP, initial estimates of first-quarter GNP and GDI, extended detail on the annual benchmarking of the Retail Sales series, and headline coverage of the May 2018 Conference Board Help Wanted OnLine® Advertising.

Commentary No. 951 (May 25th) reviewed April 2018 New Orders of Durable Goods, in the context of the annual revisions (see prior *No. 950*), New- and Existing-Home Sales and brief coverage of the annual benchmarking of the Retail Sales series.

Commentary No. 950 (May 20th) reviewed April Retail Sales, Industrial Production, New Residential Construction (Housing Starts, Building Permits and annual revisions), the Cass Freight Index™ and annual benchmark revisions to Manufacturers' Shipments, including New Orders for Durable Goods.

Commentary No. 949 (May 11th) reviewed inflation as reported with the April 2018 Consumer and Producer Price Indices (CPI and PPI), Real Average Weekly Earnings, along with the latest *Hyperinflation Watch* on the U.S. dollar and financial markets.

Commentary No. 948 (May 9th) explored unusual circumstances with April 2018 Employment and Unemployment numbers, along with the April Conference Board Help Wanted OnLine® Advertising, April Monetary Conditions, the March Trade Deficit and Construction Spending, along with the reintroduction of Sentier Research's monthly Real Median Household Income to March 2018.

Commentary No. 947 (April 27th) detailed the first estimate of Frist-Quarter 2018 GDP and the related Velocity of Money, March New Orders for Durable Goods, New- and Existing-Home Sales and the "advance" estimate of the March 2018 merchandise goods deficit.

Commentary No. 946 (April 22nd) covered March 2018 Retail Sales, Industrial Production, New Residential Construction (Housing Starts and Building Permits), the Cass Freight Index™ and a review of the current state of the GDP reporting and an outlook for first-quarter 2018 activity.

Commentary No. 945 (April 11th) reviewed the March 2018 Consumer and Producer Prices Indices (CPI and PPI), Real Average Weekly Earnings, along with the latest *Hyperinflation Watch* on the U.S. dollar and financial markets.

Commentary No. 944 (April 8th) covered March 2018 Employment and Unemployment, the March Conference Board Help Wanted OnLine® Advertising, March Monetary Conditions and the full February Trade Deficit and Construction Spending.

Commentary No. 943 (March 29th) covered the third-estimate of, second-revision to Fourth-Quarter 2017 GDP and the only estimates to be made in current reporting of the GDI and GDP, as well as the "advance" estimate of the February merchandise trade deficit.

Commentary No. 942-B (March 27th) reviewed the Industrial Production annual benchmark revisions, general reporting-quality issues, February 2018 New Orders for Durable Good, New- and Existing-Home Sales and the Cass Freight Index™.

Commentary No. 942-A (March 23rd) provided a very brief summary of the much more extensive details covered in *Commentary 942-B*.

Commentary No. 941 (March 19th) covered February Industrial Production and New Construction Spending (Housing Starts and Building Permits), along with a general discussion in the *Opening Comments* on economic conditions and a preview of the Industrial Production benchmark revisions.

Commentary No. 940 (March 15th) covered February 2018 Retail Sales, CPI, PPI and related Real Average Weekly Earnings, real Annual Growth in M3 and updated financial market prospects.

Commentary No. 939 (March 9th) covered the February 2018 Employment and Unemployment details, the full-reporting of the January 2018 Trade Deficit, February Conference Board Help Wanted OnLine® Advertising and February Monetary Conditions.

Commentary No. 938 (March 1st) reviewed January 2018 Construction Spending and the second estimate of Fourth-Quarter 2017 GDP.

Commentary No. 937 (February 27th) covered January 2018, New Orders for Durable, New- and Existing-Home Sales, the "advance" estimate of the January 2018 Merchandise Trade Deficit and the Cass Freight Index™.

Commentary No. 936 (February 19th) covered the January 2018 CPI and PPI, Retail Sales, Industrial Production and New Residential Construction (Housing Starts and Building Permits).

Special Commentary No. 935 (February 12th) was the first part of a three part-series reviewing economic and financial conditions of 2017 and the year-ahead, inflation and the U.S. government's balance sheet and conditions in the U.S. banking system and Federal Reserve options.

Commentary No. 934-B (February 6, 2018) provided extended coverage on the January 2018 Employment and Unemployment details, the 2017 benchmark revisions to Payroll Employment and the January annual recasting of population, along with coverage of the December 2017 Trade Deficit.

Commentary No. 934-A (February 2, 2018) provided initial detail on the January 2018 Employment and Unemployment details and the 2017 benchmark revisions to Payroll Employment, along with coverage of January Conference Board Help Wanted OnLine® Advertising, January Monetary Conditions and December 2017 Construction Spending.

Commentary No. 933 (January 26, 2018) covered December New Orders for Durable Goods, the Cass Freight Index™ and the first estimate of Fourth-Quarter 2017 GDP.

Commentary No. 932 (January 18, 2018) covered December Industrial Production and New Residential Construction (Housing Starts and Building Permits).

Commentary No. 931 (January 15, 2018) reviewed December 2017 Retail Sales and the CPI and PPI, along with an update on the U.S. dollar, the financial markets and gold graphs.

Commentary No. 930-B (January 8th) expanded upon the December 2017 Employment and Unemployment numbers and Household Survey benchmarking, Conference Board Help Wanted OnLine® Advertising, December Monetary Conditions and the November 2017 Trade Deficit and Construction Spending, otherwise headlined in *No. 930-A*.

Advance Commentary No. 930-A (January 5, 2018) provided a brief summary and/or comments (all expanded in *Commentary No. 930-B*) on December 2017 Employment and Unemployment numbers, Household Survey benchmarking, Conference Board Help Wanted OnLine® Advertising, December Monetary Conditions and the November 2017 Trade Deficit and Construction Spending.

General Commentary No. 929 (December 28, 2017) reviewed current economic and market conditions at year-end 2017.

Commentary No. 926 (December 15, 2017) reviewed the headline November 2017 numbers for Retail Sales (both real and nominal), and Industrial Production, along a discussion on the dampening economic impact of business and consumer "uncertainty."

Commentary No. 909 (September 14, 2017) assessed the annual release of 2016 Real Median Household Income, along with a review of August Consumer Price Index (CPI) and the Producer Price Index (PPI) and an updated *Alert* on the financial markets.

Special Commentary No. 904 (August 14, 2017) 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. 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.

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. 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™.

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. 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.