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

COMMENTARY NUMBER 981

Retail Sales, Production, New Orders, Residential Construction, GDP and Stocks

January 3, 2019

FOMC-Driven Consumer Slowdown Signals Onset of a New Recession, as Nominal Monetary Base Drops to a Five-Year Low

Effects of Ongoing Federal Reserve Tightening Increasingly Have Pummeled Real Retail Sales, Production and Construction Activity

Intensifying Consumer-Liquidity Squeeze Reflected in Downside Revisions to Previously Estimated Auto Sales, Housing and Third-Quarter GDP

Third-Quarter 2018 Final Sales (GDP Net of an Increasing Inventory Buildup) Slowed to a Revised 1.03% (Initially 1.43%) from a Second-Quarter 5.33%

Annual Growth in November Freight Activity Plunged to a Two-Year Low

November 2018 Residential Construction and Sales Continued in Deepening Downtrends, Well Shy of Ever Recovering Pre-Recession Highs

November Manufacturing in Record 131st Straight Month of Non-Expansion, Still Shy by 4.7% (-4.7%) of Recovering Its Pre-Recession Peak; Unlike Anything Ever Seen in the 100-Year History of the Production Series

2008 Banking-System Insolvency Arose Under the Watchful Eye of the Banking-System-Owned Federal Reserve

Subsequent FOMC Actions in the Last Decade Centered on Propping the Banks, Not on Restoring a Healthy Economy

Stock Market Turmoil Has Begun to Respond to the Intensifying Effects of Financial-System Distortions and Instabilities

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PLEASE NOTE: Developments in the increasingly unstable financial markets will be updated as needed. *Special Commentary No. 982* will review 2018 and preview 2019. It currently is targeted for Wednesday, January 9th. Noted in the *Pending Releases* of the *Week, Month and Year Ahead* section, most government economic reporting has been suspended/delayed by the temporary government shutdown, yet reporting of December 2018 labor detail appears set for release, as scheduled for tomorrow, January 4th. Headline details will be posted to the *Daily Update* section on the *ShadowStats* home page, as usual, with a full review in a subsequent *Commentary*.

Hyperinflation and Consumer Liquidity Watches. *Special Editions* for both *Watches* are available: *Hyperinflation Watch No. 4* of December 11th, and *Consumer Liquidity Watch No. 5* of November 21st. Both *Watches* will be updated in mid-January, subsequent to *No. 982*, reflecting at least new private and Federal Reserve reporting, which are not affected by the government shutdown.

Daily Update Coverage. Summary *ShadowStats* insights and highlights of just-released economic data are posted in real time in the ***Daily Update*** section of the *www.ShadowStats.com* home page, usually within two hours of the issuing agency's data release. The tentative *ShadowStats* Publication Schedule, Schedule Revisions and Notes to Subscribers, also are posted regularly in that ***Daily Update*** column.

Your comments and suggestions always are invited.

Best Wishes to All for an Extraordinarily Happy, Healthy and Prosperous New Year!
— John Williams (707) 763-5786, johnwilliams@shadowstats.com

Today's (January 3rd) ***Opening Comments*** section highlights unfolding financial-market and economic circumstances, along with coverage of the November 2018 CASS Freight Index™.

The ***Reporting Detail*** reviews November 2018 Retail Sales, Industrial Production, New Residential Construction and Home Sales, New Orders for Durable Goods and the "Final" revision to Third-Quarter 2018 Gross Domestic Product (GDP).

The ***Week, Month and Year Ahead*** provides background on recent *Commentaries*, previews pending economic releases and notes those regular series currently delayed, or likely facing delayed publication due to the temporary government shutdown.

Commentary No. 981 contents and features are indexed and linked on following page.

Contents – Commentary No. 981 Major Sections and Graphs

OPENING COMMENTS

A Not-So-Independent FOMC Roils the U.S. Financial Markets

Tightening Consumer Liquidity Already Has Triggered a New Recession

"Escape" from the Effective Banking System Collapse of 2008 Still Is Playing Out

Consumer Liquidity Conditions Continue to Weaken; Economic Data Soften in Revision; Stock Market Turmoil, Dollar Selling and Flight to Gold Likely Have Just Begun As headline economic releases flowed through December 2018, patterns of consumer activity continued to slow and revise lower. At the same time, the Federal Reserve not only hiked interest rates, but also promised even higher interest rates in 2019, while measures of systemic and consumer liquidity continued to tighten, with the Fed's targeted Monetary Base dropping to a five-year low.

These various factors rattled both consumers and investors, as reflected in a sharp slowing in real third-quarter GDP Final Sales, along with a month-end December collapse in consumer optimism, and intense selling in the U.S. stock market. Such has been accompanied by some selling of the U.S. dollar, along with an increasing flight to safety in gold and silver.

Day of Reckoning Looms for 2007/2008 Banking Crisis. Extraordinary domestic economic turmoil and financial-market difficulties and instabilities have been festering since the still-unresolved banking crisis of a decade ago. The fundamental issues look like they finally have begun to break to the surface, a circumstance that needs to unfold for the health of Main Street, U.S.A. economic activity. To be discussed extensively in next-week's ***Review of 2018 and Preview of 2019*** (*Special Commentary No. 982*), the issues here do not face an easy resolution. Yet, the markets and circumstances could tend to right themselves if not so heavily manipulated by the U.S. Congress and/or the Federal Reserve.

Keep in mind that the 2008 banking-system insolvency arose under the watchful eye of the Federal Reserve System, which is owned by the banks. Subsequent to the effective systemic collapse, the Federal Reserve's Federal Open Market Committee (FOMC) actions centered on salvaging and propping a broken banking system, at the deliberate cost of not restoring a healthy economy. Circumstances at the time had the open and aggressive support of Congress, which bailed out other elements of the financial system, and business community, including some major corporations. The issue with the banking system, however, remains the dominant factor still pitting the FOMC against Main Street U.S.A.

Main Street rebelled at the circumstance with the election of President Trump in 2016. The unresolved systemic, economic and political issues still are being felt and played out, and increasingly are reflected in the stock market. The President's recent criticism of the Federal Reserve Chairman and FOMC policies highlights the still-unresolved systemic conflicts of 2008. The year ahead of 2019 likely will not be a happy one, from a headline standpoint for equities; it most likely will offer some significant financial-market and economic turmoil and surprises, but perhaps along with some resetting of healthier economic and systemic-liquidity conditions going forward.

Note: *Some Thoughts on the Stock Market (No. 980-A)* of December 26th, addressed unfolding stock-market turmoil, supplemental to *Hyperinflation Watch No. 4* – *Special Edition* of December 11th, which incorporated and expanded upon *Special Commentary No. 973 – ALERT* of October 14, 2018, all in the context of the *Squirrelly Season* and likely tipping point for the markets reviewed in *Commentary No. 970*. Pending *Special Commentary No. 982* will encompass and expand upon the various issues raised here and in these earlier missives.

The Cass Freight Index™ (November 2018) Versus Manufacturing, Orders and GDP

November 2018 Freight Index Annual Growth Plunged to a Two-Year Low, Lowest Since Its Last Annual Contraction, Holding Shy of Recovering Its Adjusted Pre-Recession Peak by 2.8% (-2.8%). An independent, reliable private indicator of real-world economic activity and shifting business patterns, unadjusted annual growth in the November 2018 Cass Freight Index™ pulled back sharply to 0.61% in November 2018, having pulled back to 6.16% in October 2018 from 8.20% in September 2018. The November 2018 reading was the weakest annual growth since an annual drop of 0.05% (-0.05%) in November 2016, the last time the series showed an annual contraction. It reflected a particularly steep unadjusted monthly decline in November 2018 activity, at the height of the Holiday Shopping Season.

Published December 12th, by Cass Information Systems, we thank Cass for their permission to use the Cass Freight Index™ data.

Patterns Reflected in Other Key Economic Measures. Although in a slowing uptrend, based on its 12-month moving average, the unadjusted freight series held below—still shy of recovering—its post-recession high, amidst rapidly slowing year-to-year change in the raw, unadjusted headline monthly reading (see accompanying *Graphs OC-1* and *OC-2*). The still minimally improving smoothed series remained shy of full economic recovery, holding shy of recovering its pre-recession peak activity by 2.8% (-2.8%) for a second month. The headline detail here remains as published, not seasonally adjusted and is not subject to annual benchmark revisions, unlike some of the purportedly better-quality government numbers, such as the Manufacturing Sector of Industrial Production (*Graphs OC-3* and *OC-4*) and New Orders for Durable Goods (*Graphs OC-5* and *OC-6*). Although those series are among the better-quality headline government economic releases, they still are heavily modeled and gimmicked as discussed in today's *Reporting Detail* (see also *Commentary No. 942-B* and *Commentary No. 950*).

Similar broad patterns are seen in a variety of major economic measures, including the heavily upside-biased headline GDP, when it is corrected for the understatement of the headline inflation used in deflating the series, as discussed in today's *Reporting Detail* and as plotted here in *Graphs OC-7* and *OC-8*. See also the *Opening Comments* of *Commentary No. 976*, and the discussion there involving *Graphs OC-3* to *OC-23* of that document. Other related series include U.S. Petroleum Consumption, Real Construction Spending and the Employment-Population Ratio, as reviewed in *Commentary No. 976*.

The November 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, yet they also showed a pattern of positive, albeit now flattened-to-uptrending headline activity. The pace of year-to-year growth had plunged to 0.6% in November 2018, having pulled back to 6.2% in October 2018, having gained 8.2% in September 2018, versus 6.0% in August 2018, 10.6% in July 2018, 7.2% in June 2018, 11.9% in May 2018, all versus a near-term peak in January 2018 of 12.5% (*Graph OC-2*). The unadjusted monthly level of November 2018 (thin line in *Graph OC-1*) dropped sharply, holding below the May 2018 post-recession high and still holding below its pre-recession peak activity.

The 12-month trailing average of activity, however, stalled at its prior month's post-recession high (at the first decimal point 107.1 (107.11) in November, versus 107.1 (107.06) in October, yet it remained well 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, flattened-uptrending stagnation, down by 2.76% (-2.76%) in November, versus 2.81% (-2.81%) in October from recovering its formal pre-recession high, down by 5.84% (-5.84%) in November, versus 5.89% (-5.89%) in October from its precursor peak (see *Graph OC-1*).

For the twenty-fifth consecutive month, the twenty-sixth month in the last twenty-seven, year-over-year change in the unadjusted monthly index was positive, albeit nearly flat at plus 0.61%, having dropped relative to 6.16% in October 2018, which was down from 8.20% in September 2018, still holding off its near-term peak growth of 12.54% in January 2018 (see *Graph OC-2*).

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 production reporting, lost again with the annual benchmark revisions to production, only to be regained once more with the headline April 2018 (see the discussion in the *Industrial Production* section of the *Reporting Detail*).

Comparative growth patterns of the Freight Index (*Graph OC-1* of level and *Graph OC-2* of annual change) versus the never-recovered, dominant Manufacturing Sector of Industrial Production, real New Orders for Durable Goods and the ShadowStats Corrected-Inflation GDP Measure are shown in *Graphs OC-3*, *OC-5* and *OC-7* as to level and in *Graphs OC-4*, *OC-6* and *OC-8* as to year-to-year change. More-extensive comparisons with other indicators of U.S. economic activity, again, are found in the *Opening Comments* of *Commentary No. 976*.

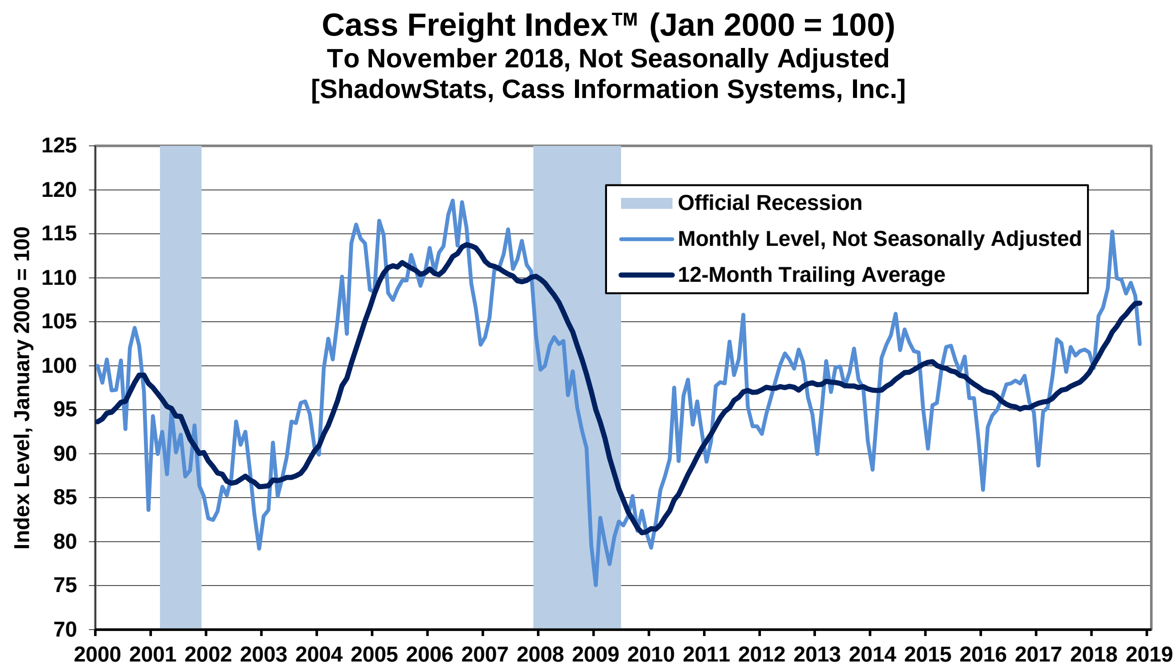
The continuing albeit flattening uptrend in the smoothed series, and the ongoing positive, albeit sharply reduced annual growth in the Cass Index, indicate that the recession in freight activity had bottomed out, but still has not recovered its pre-recession peak activity. Even with a positive annual gain in 2017 and in the first eleven months of 2018, current patterns of smoothed levels of activity have yet to break out of the not-recovered pattern of the last ten-plus years, to enter a period of new economic expansion. Shown in *Graph OC-1*, uptrending monthly activity has not yet recovered fully.

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

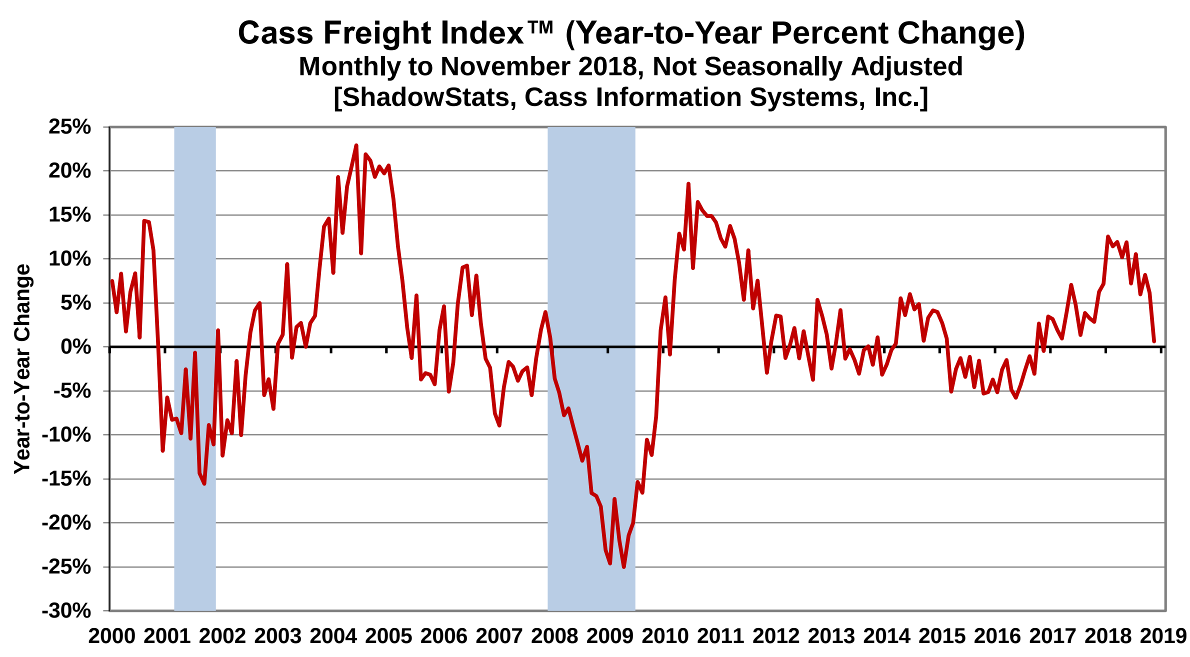
Noted earlier, the ShadowStats smoothed (12-month trailing average) headline reading on the CASS Freight Index, through November 2018 (*Graph OC-1*) remained down by 5.84% (-5.84%) from "Recovering" its preliminary pre-recession peak of September 2006, down by 2.76% (-2.76%) from recovering its formal "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 2007 recession and related collapse in broad economic activity has been recognized formally from a peak in December 2007 to a trough in June 2009, which appears to be fairly consistent with a number of series, in terms of timing the trough.

[Graphs OC-1 to OC-8 begin on the next page.]

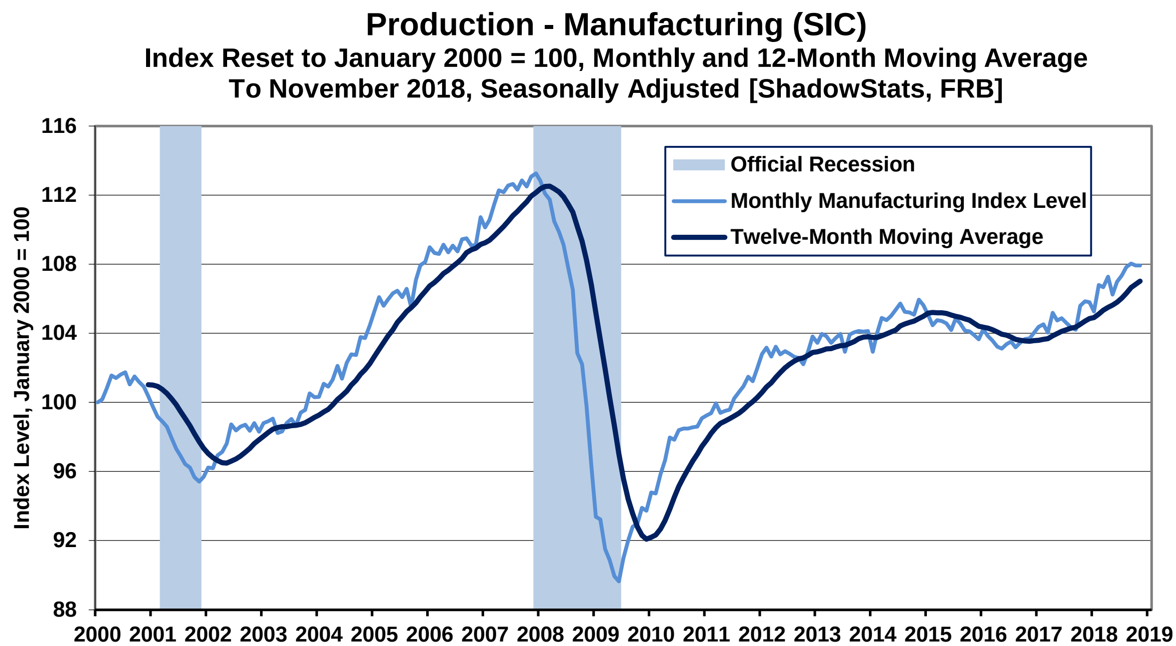
Graph OC-1: CASS Freight Index™ Moving-Average Level (2000 to November 2018)



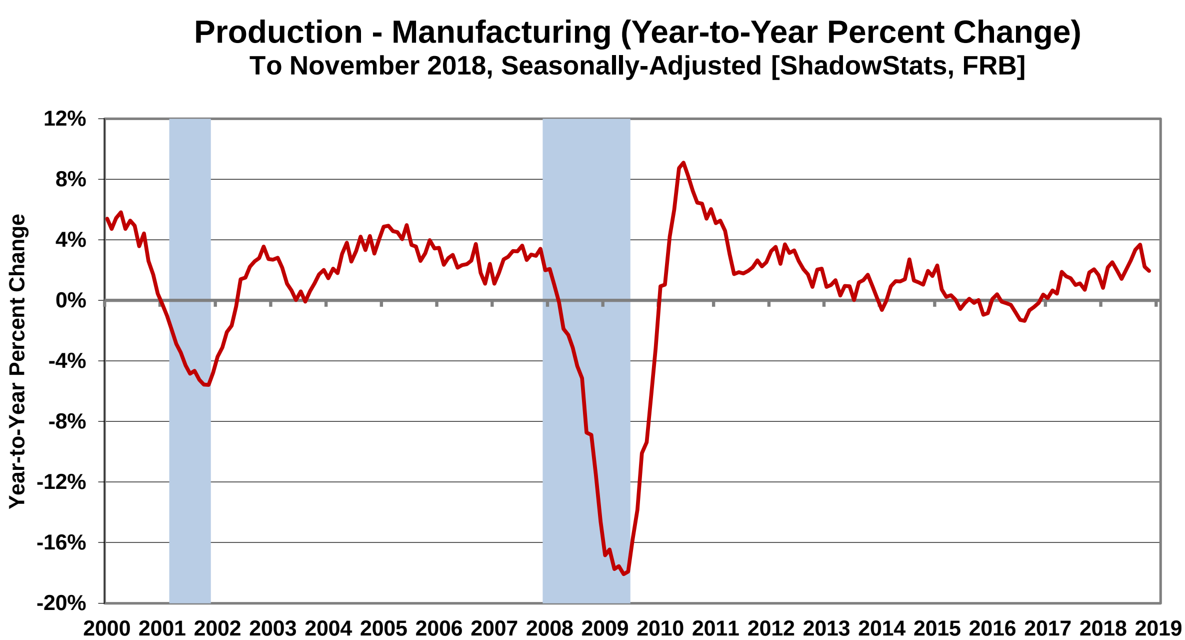
Graph OC-2: CASS Freight Index, Monthly Year-to-Year Percent Change (2000 to November 2018)



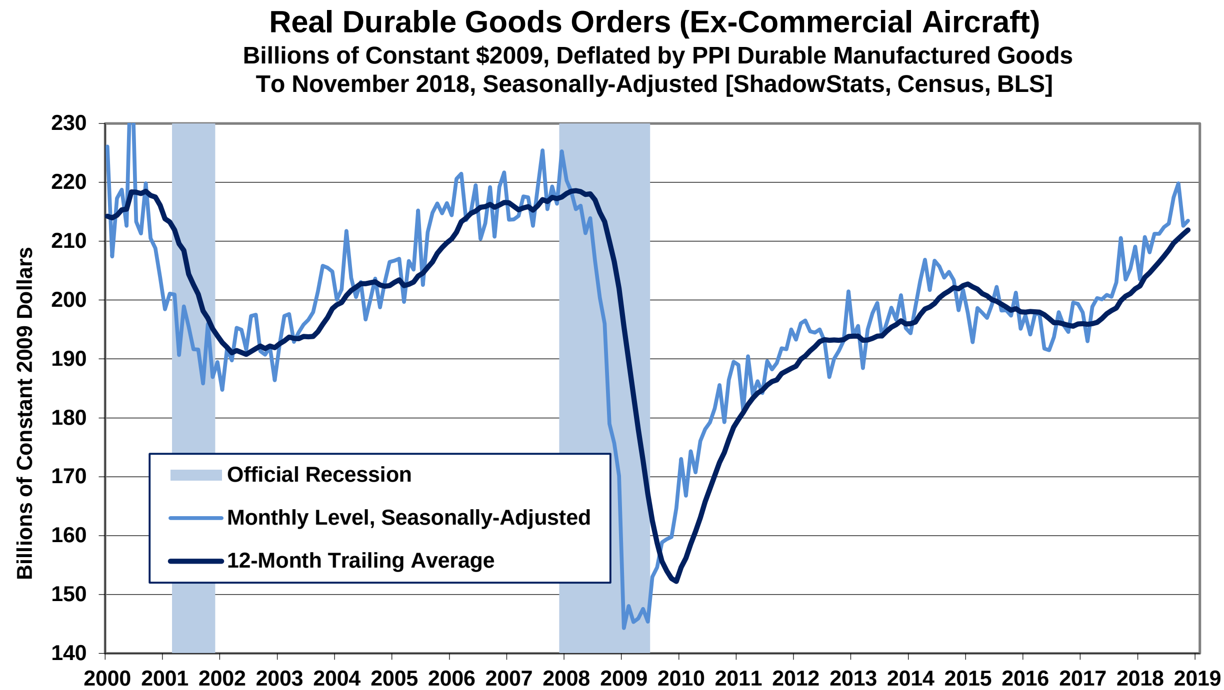
Graph OC-3: Industrial Production-Manufacturing, 12-Month Moving-Average Level (2000 to November 2018)



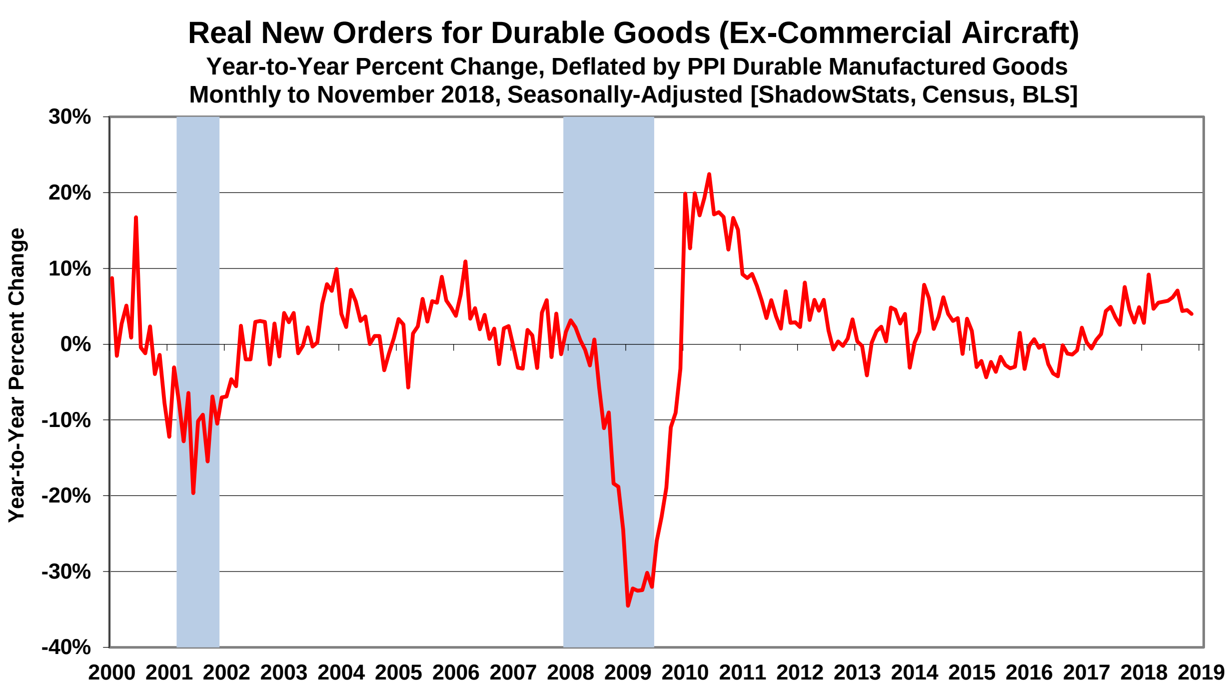
Graph OC-4: Manufacturing, Year-to-Year Percent Change (2000 to November 2018)
(Same as Graph 16 in the Reporting Detail)



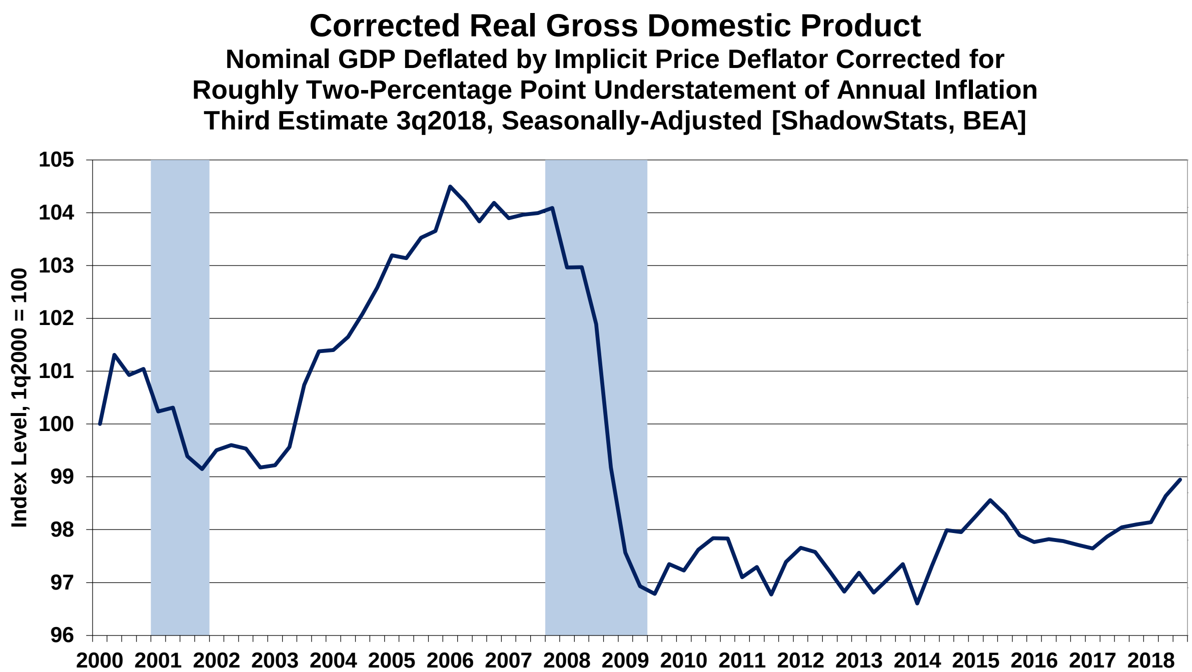
Graph OC-5: Real Durable Goods, Ex-Commercial Aircraft, 12-Month Moving-Average (2000 to November 2018)



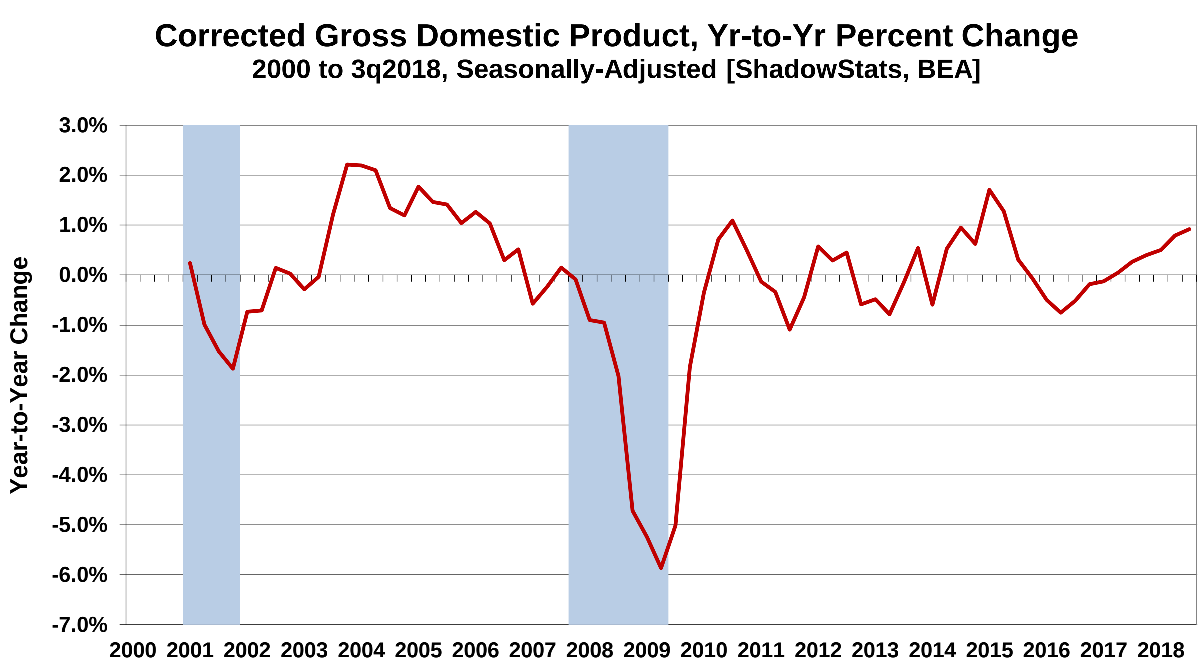
Graph OC-6: Real New Orders, Ex-Commercial Aircraft, Year-to-Year Percent Change (2000 to November 2018)
(Same as Graph 53 in the Reporting Detail)



Graph OC-7: Corrected-Inflation Based GDP (2000 to Third-Estimate "Final" Third-Quarter 2018)
(Same as Graph 71 in the Reporting Detail)



Graph OC-8: Corrected-Inflation Based GDP, Year-to-Year Percent Change (2000 to "Final" Third-Quarter 2018)
(Same as Graph 72 in the Reporting Detail)



General Background to the Freight Index. [*This section largely is repeated from* Commentary No. 975.] 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 the broad GDP. Of the combined U.S. and Canadian (North American) GDP in 2017, roughly 92% was attributable to the United States.

Graph OC-1 reflects the monthly freight numbers updated through November 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, where 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 what appears to have been a "new recession" in December 2014. It slowed through September 2016, then flattened out and turned back to the upside through the current November 2018 reading, marginally its highest level of the post-recession period, although still shy of its pre-recession peak (again, see *Graph OC-1*).

The pattern here is broadly consistent with the Industrial Production (Manufacturing) series, although no signs of an aggregate 2015 economic contraction came out of the 2018 comprehensive annual benchmark revisions to the GDP (see *Special Commentary No. 968-Extended*), despite indications of a double-dip recession in the Industrial Production benchmarking (see *Graph 7* in today's *Reporting Detail*).

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-2*. 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, eventually hitting a near-term peak of 12.54% in January 2018, with fluctuating activity through 6.16% in October 2018, now plunging to a still-positive 0.61% in November 2018, albeit the weakest reading since that 0.05% (-0.05%) in November 2016. In combination, *Graphs OC-1* to *OC-8* remain consistent with a pattern of collapsing economic and business activity into 2009, with subsequent low-level, non-expanding (defined as still holding below prior peak activity), albeit currently in uptrending economic activity.

REPORTING DETAIL

Retail Sales (November 2018)

Amidst Intensifying Consumer Liquidity Woes, Downside Revisions to Third-Quarter Real Retail Sales Foreshadowed Continuing Downside Revisions to Third-Quarter Real GDP and Final Sales. Released Friday December 14th by the Census Bureau, the November 2018 Retail Sales nominal monthly gain of 0.23% was slightly stronger than consensus expectations, yet it was 0.40% net of an upside revision to still-weak activity in October, while September sales revised lower. Net of negligible (gasoline-price softened) monthly CPI inflation, as calculated by the Saint Louis Fed, headline November Real Retail Sales gained 0.21%, 0.38% net of revisions. Those numbers were in the context of a sharp slowing in November freight activity (see the *Opening Comments*), suggestive of a less-than-robust start to the dominant Holiday Shopping Season.

Net of inflation, the annualized third-quarter gain in Real Retail Sales revised lower to 2.27%, previously 2.50%, initially 3.05%, indicating a downside revision to the final estimate of third-quarter 2018 Gross Domestic Product (GDP). Discussed in the later GDP section, that indicated GDP revision did take place, along with a second downside revision to motor vehicle consumption and some continuing upside revision to inventories. As a result, real annualized third-quarter 2018 Final Sales (GDP net of inventory change) slowed to 1.03% in its third or "final" estimate (previously 1.23%, initially 1.43%), versus 5.33% in second-quarter 2018.

Real annual growth in Retail Sales slowed to 1.96% in November 2018, versus 2.24% (previously 1.98%) in October 2018, and 1.72% (previously 1.89%, initially 2.39%) in September 2018, a pattern of slowing growth most commonly seen at the onset of recessions.

Headline Nominal Retail Sales—November 2018. The Census Bureau reported its "advance" estimate of November 2018 *Retail Sales* on Friday, December 14th. The headline, seasonally-adjusted month-to-month gain of 0.23% +/- 0.59% formally was statistically-insignificant (all confidence intervals are expressed at the 95% level). Where that monthly gain was in the context of a net upside revision to

October activity, net of that revision, what otherwise would have been a monthly gain of 0.40% also was not significantly different from zero.

The November 2018 nominal monthly gain of 0.23%, followed an upwardly revised 1.11% [previously 0.76%] gain in October, and a negatively revised monthly contraction of 0.22% (-0.22%) [previously down by 0.05% (-0.05%), initially a gain of 0.10%] in September. That revamped activity followed an unrevised monthly decline of 0.07% (-0.07%) in August and unrevised nominal monthly gains of 0.61% in July, 0.24% in June, 1.24% in May, 0.34% in April, 0.72% in March, 0.10% in February and a contraction of 0.12% (-0.12%) in January.

Year-to-Year Annual Nominal Change. The November 2018 nominal year-to-year change in Retail Sales showed a statistically-significant increase of 4.22% +/- 0.82%, versus an upwardly revised annual gain of 4.80% [previously 4.57%] in October 2018, a downwardly revised 4.03% [previously 4.21%, initially 4.72%] in September 2018, and unrevised nominal annual gains of 6.37% in August 2018, 6.62% in July 2018, 6.11% in June 2018, 6.38% in May 2018, 4.76% in April 2018, 5.09% in March 2018, 4.53% in February 2018 and 3.95% in January 2018.

November 2018 "Core" Retail Sales, Net of Food and Gasoline. In theory, the nominal November 2018 retail sales environment should have been positive for grocery stores, with seasonally-adjusted CPI-U food prices rising by 0.23% in November, but sharply negative for gasoline stations, with seasonally-adjusted gasoline prices down by 4.20% (-4.20%), per the Bureau of Labor Statistics (BLS). That said, adjusted retail sales grocery-store sales rose by 0.39%, per the Census Bureau, with seasonally-adjusted gasoline-station sales down by 2.27% (-2.27%).

Given the continuing extreme volatility in headline gasoline prices and sales volume, seasonally-adjusted and otherwise, one has to wonder as to the nature, consistency and significance 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 [this area will be explored in the near future]. Consistent reflection of headline gasoline prices versus gasoline-station sales would have resulted in weaker Real Retail Sales growth in May, June and July and stronger sales growth in August and September, about right for October and weaker growth in November.

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 here using two approaches:

Version I: Nominal November versus October 2018 seasonally-adjusted retail sales series—net of total grocery store and gasoline-station sales—gained 0.49%, versus the official headline aggregate sales gain of 0.23%.

Version II: Nominal November versus October 2018 seasonally-adjusted retail sales series—net of the monthly *change* in grocery store and gasoline-station revenues—gained by 0.38%, versus the official headline aggregate sales gain of 0.23%.

Frequently discussed, here the seasonal adjustments commonly are unstable, particularly tied to the volatile gasoline-station sales, where neither the Bureau of Labor Statistics (BLS) nor the Commerce Department (Commerce) seems able to come up with meaningful, consistent or stable seasonal adjustments tied to the otherwise erratic gasoline prices.

Structural Liquidity Issues Continue to Impair Retail Sales. An extreme and intensifying consumer-liquidity bind increasingly appears to be constraining retail sales and other consumer activity (see particularly the earnings and consumer credit details in *Consumer Liquidity Watch No. 5* and updates in today's *Opening Comments*). Without sustainable growth in, with ongoing patterns of consecutive contractions or no growth 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, at least in theory. 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.

Of note, the consumer-dependent 72.7% portion of third estimate of third-quarter GDP held even versus the second-quarter 2018, but was down from 72.8% in first-quarter 2018, and from 73.1% in fourth-quarter 2017 real GDP activity, reflecting mounting constraints on both consumer consumption and investment. The consumer drives the economy, and a pullback there increasingly should be reflected in almost all other sectors of the economy.

As headline consumer inflation resumes its upside climb in the year ahead, and as overall headline Retail Sales should continue to suffer from the intensifying consumer liquidity squeeze, real Retail Sales growth broadly should trend meaningfully lower as seen in recent detail.

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, with headline real retail sales 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*.

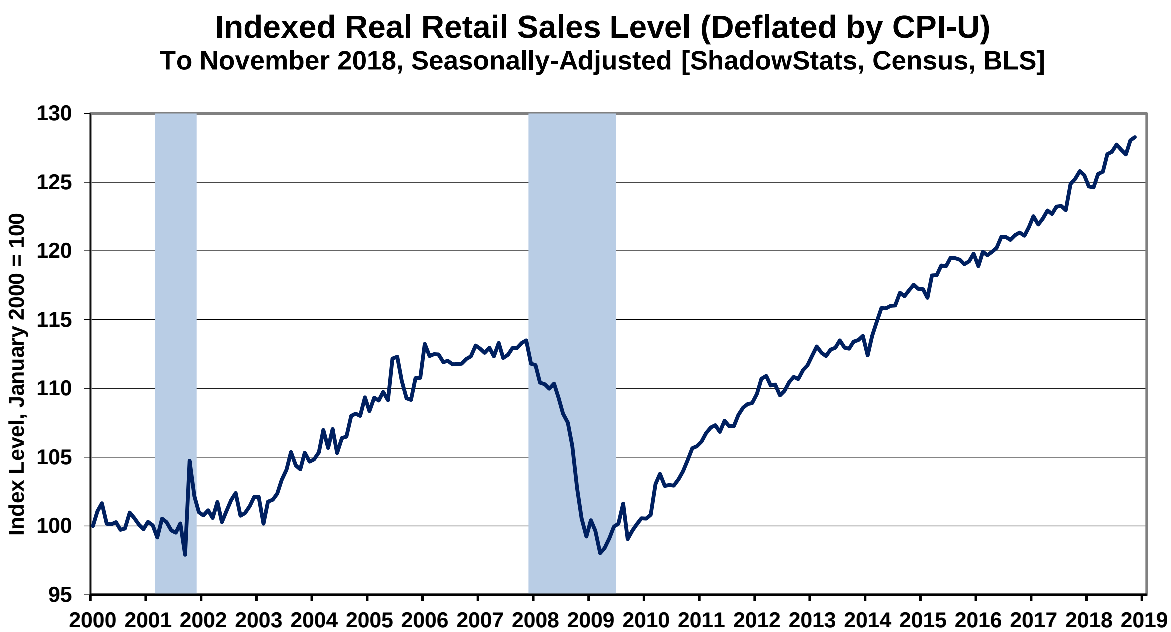
That "recovery" and "expansion" shown in the headline graphs, however, largely reflected the U.S. government's deliberate understatement of headline CPI-U inflation. Most economic numbers are viewed net of inflation, so as to get a sense of underlying physical activity and volume in the economy.

For example, if a retail storeowner noted that sales in November 2018 were up year-to-year by 4.2% from the year-before, there would be some value in knowing that 2.2% of that gain was in inflation, with physical sales (real sales) volume up by 2.0%.

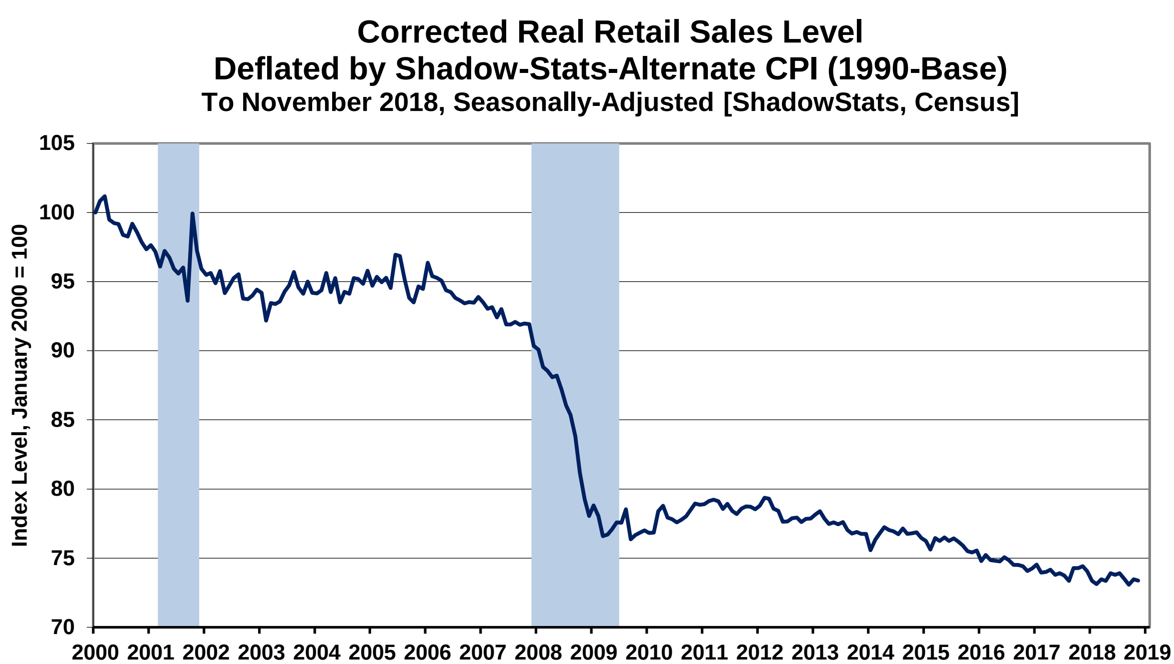
If the inflation estimate used were understated, the resulting "real" or "inflation-adjusted" growth would be overstated. Using the prior example, if sales were up by 4.2%, but inflation was really 4.2%, instead of 2.2%, physical sales volume would have been flat, instead of having gained 2.0%.

Graphs Reflecting Alternate Inflation-Adjustment. 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-adjustment issues are separate from seasonal-adjustment issues discussed elsewhere in this section.

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



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



Both 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" series are found in the respective series sections of this *Reporting Detail*. For, the "corrected" Industrial Production Index, see *Graphs 8* and *9*, with "corrected" New Orders for Durable Goods reflected in *Graphs 54* to *59* and the "corrected" GDP in *Graphs 71* and *72*.

Headline Real Retail Sales—November 2018—Real Sales Rose Monthly by 0.21%, by 0.38% Net of Revisions, With Annual Growth Holding at a Recession-Signal Level of 1.96%. 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 December 12th (see *Commentary No. 979*). The headline levels of, and year-to-year changes in, monthly Real Retail Sales are plotted here in *Graphs 3* to *6*.

The November 2018 Consumer Price Index showed the seasonally-adjusted CPI-U up month-to-month by a gasoline-price-depressed 0.02%, versus 0.33% in October, 0.06% in September, 0.22% August and 0.17% in July.

Year-to-year seasonally-adjusted CPI-U gained by 2.21% in November 2018, versus 2.53% in October 2018, versus 2.27% in September 2018, 2.68% in August 2018 and 2.89% in July 2018.

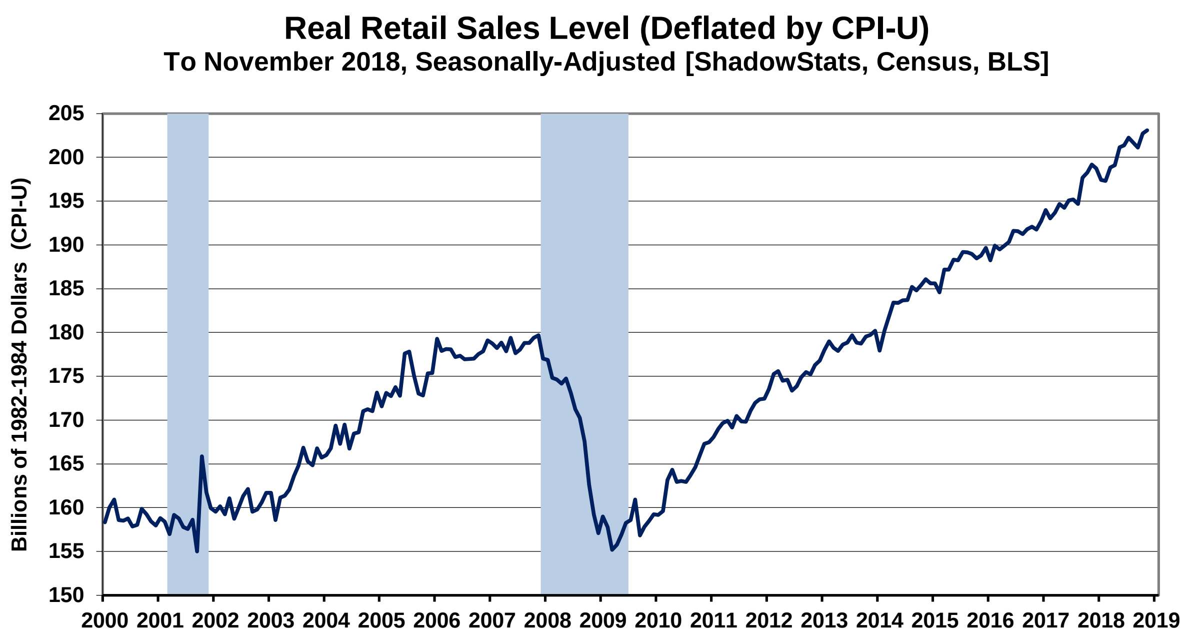
Deflated by the CPI-U, November 2018 Real Retail Sales rose month-to-month by 0.21% [up by 0.38% net of prior-period revisions], having gained a revised 0.77% [previously 0.43%] in October, having declined by a revised 0.28% (-0.28%) [previously down by 0.11% (-0.11%), initially a gain of 0.04%] in September, having declined in August by an unrevised 0.29% (-0.29%) and having gained 0.43% in July.

Deflated by the adjusted annual CPI-U, November 2018 annual Real Retail Sales rose by an adjusted 1.96%, versus a revised 2.21% [previously 1.98%] in October 2018, a revised 1.72% [previously 1.89%, initially 2.39%] in September 2018, an unrevised 3.59% in August 2018 and 3.63% in July 2018. Standardly, annual real growth falling below 2.00% is a solid signal of pending recession.

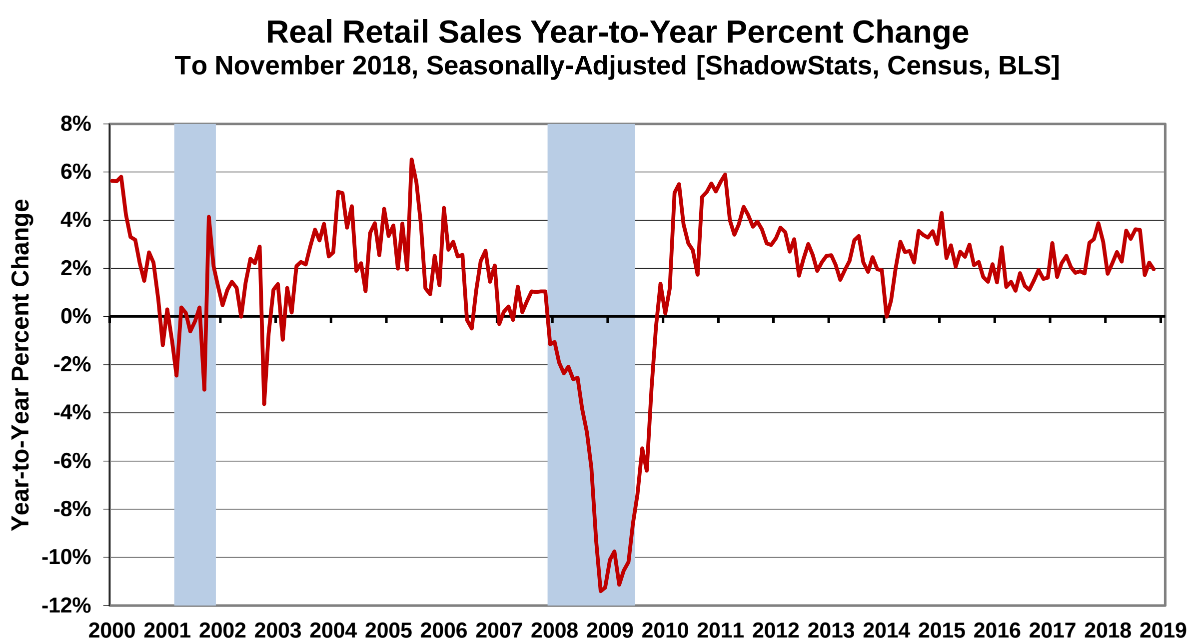
Inconsistent Seasonal-Adjustment Revisions Added 0.08% to Headline November 2018 Activity. In the context of inconsistent headline reporting of year-ago revisions, just for October 2017 (downside) and November 2017 (upside), year-to-year real growth was boosted artificially by 0.08% (-0.08%) in November 2018. The underlying ShadowStats outlook of minimally-recovering, non-expanding broad economic activity, based partially on key headline reporting being systematically overstated, has not changed (see the earlier *Real Retail Sales Corrected for Understated Inflation and Otherwise* section).

Real Retail Sales Graphs. The first of 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 volatility, including natural-disaster-recovery activity and the related 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 at 2.2%, a near-recession signal had been restored, only to disappear anew with year-to-year Real Retail Sales growth in second- and third-quarter both at 3.0%. Yet, with late-third-quarter annual growth slowing to 1.72% in September 2018, and with real annual growth at 2.21% in October 2018 and 1.96% in November 2018, the three month average through November showed annual real growth at 2.0%, with fourth-quarter 2018 real annual growth on early track for a 2.1%, which would be a renewed recession signal.

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

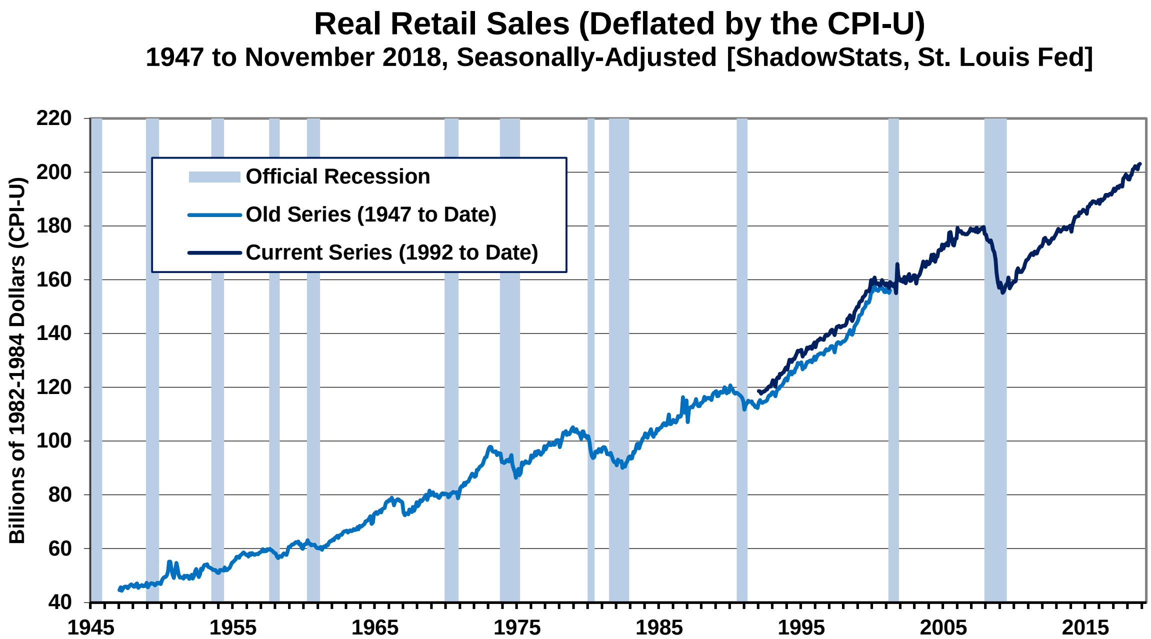


Graph 4: Real Retail Sales (2000 to Date), Year-to-Year Percent Change

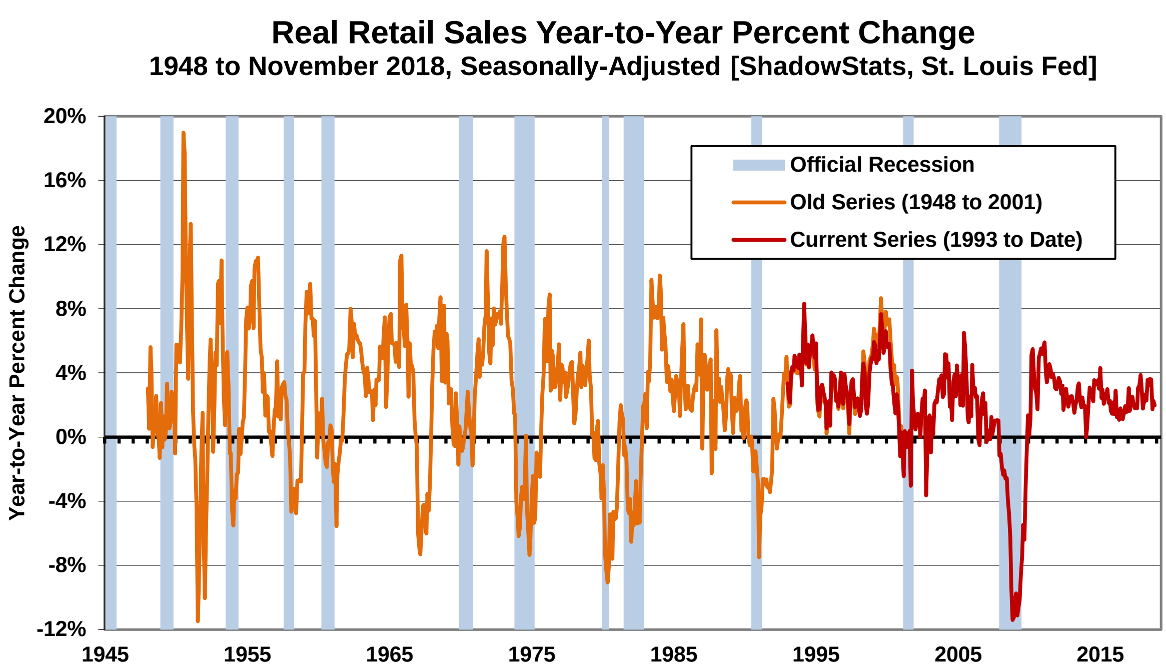


Graphs 5 and *6* show the level of, and annual growth in, real retail sales (and predecessor series) in full post-World War II detail.

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 Showed a Further Catch Up Quarterly Slowing in Third-Quarter 2018, Still Well Off a Sharp, First-Quarter Quarterly Contraction. 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 1.71% (-1.71%) [previously 1.75% (-1.75%), initially], still the weakest quarter since second-quarter 2012. Such at least partially reflected a sharp easing from fourth-quarter 2017 natural-disaster-recovery boosts. With second-quarter 2018 reporting showing a rebound to still an unrevised 5.53%, the third estimate of third-quarter 2018 activity backed off once more, to a revised 2.39% [previously 2.50%, initially 3.05%]. Again, as noted earlier in this Retail Sales section, that foreshadowed a downside revision in the third-estimate of third-quarter 2018 GDP.

Based on the initial November 2018 estimate and a sharp upside first revision to October 2018 activity, the early fourth-quarter 2018 trend is for an annualized real quarterly gain of 2.39%.

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

Industrial Production (November 2018)

Downside Revisions to, and Slowing Activity in, the Manufacturing Sector Largely Reflect Softening Demand from Increasingly, Liquidity Strapped Consumers. Released Friday, December 14th by the Federal Reserve Board (FRB), November Industrial Production rose 0.61% in the month, but that was a monthly gain of 0.30%, net of downside revisions to October activity. September activity also revised lower, with the effect of slowing previously estimated third-quarter growth. November 2018 annual growth in aggregate production was 3.89%, versus a downwardly revised 3.79% [previously 4.11%] in October 2018 and 5.55% [previously 5.60%] in September 2018. As with real retail sales, the quarterly slowing in production was indicative of the likely downside final revision to third-quarter Gross Domestic Product (GDP) that followed, although GDP reporting rarely is so consistent.

As also seen with real retail sales, the broad trend in production was for slowing year-to-year growth, dominated by slowing growth in the production of consumer goods. Again, such reflected tightening consumer liquidity conditions and softening personal consumption, including weakening demand for and production of motor vehicles (also, see the *New Orders for Durable Goods* section). Indeed, the dominant **Manufacturing Sector** declined month-to-month in November by 0.01% (-0.01%), which was a monthly decline of 0.45% (-0.45%) net of revisions, versus a revised monthly decline of 0.10% (-0.10%) [previously a gain of 0.28%] in October. Annual growth of 1.96% in November 2018 Manufacturing slowed from a downwardly revised 2.22% [previously 2.68%] in October 2018 (see *Table II*). Discussed shortly, Manufacturing continued its 100-year record run of non-expansion, never having recovered its 2007 pre-recession peak.

Dominated by oil and gas production, the **Mining Sector** remained the bright spot in November aggregate production, having gained 1.69% in the month (up by 2.07% net of revisions), having declined by a revised 0.66% (-0.66%) [previously down by 0.31% (-0.31%)] in October. Annual growth was 13.23% in November 2018, down from a revised 13.57% [previously 13.14%] in October 2018. Despite unusual volatility, even the strong annual growth rates in this sector have begun to slow, as seen in *Table I*.

Driven largely by unusual weather patterns and disruptions, the **Utilities Sector** continued randomly volatile, having gained 3.27% [up by 2.89% net of revisions] in November 2018, versus a revised gain of 0.23% [previously down by 0.48% (-0.48%)] in October, with annual growth jumping to 4.31% in November 2018, versus a revised 1.35% [previously 1.73%] gain in October 2018 (see *Table I*).

Indeed, the easiest way to review these numbers by major sector is to review the headline and revised detail in the following *Table I*, particularly the index levels, as opposed extensive descriptors used in the text, which rarely can give as clear a picture as simply looking at the numbers.

Table I: Industrial Production and Its Major Sectors

Table I: Index of Industrial Production (IIP) and Major Sectors to November 2018
by Month, 2012 = 100.000 for All Indices

Measure	Weight	Nov '18	Oct	Sep	Aug	Jul	Jun	May
IIP Index	**100.0%**	**109.393**	**108.734**	**108.906**	**108.793**	**107.897**	**107.444**	**106.778**
- Prior		--	109.065	108.953	108.785	107.908	107.464	106.778
Mo/Mo		**0.61%**	**-0.16%**	**0.10%**	**0.83%**	**0.42%**	**0.62%**	**-0.82%**
- Prior		--	0.10%	0.15%	0.81%	0.41%	0.64%	-0.82%
Yr/Yr		**3.89%**	**3.79%**	**5.55%**	**5.42%**	**4.13%**	**3.54%**	**2.96%**
- Prior		--	4.11%	5.60%	5.42%	4.14%	3.56%	2.96%
Manufacturing	**75.5%**	**104.902**	**104.909**	**105.013**	**104.821**	**104.349**	**103.991**	**103.274**
- Prior		--	105.378	105.086	104.814	104.372	104.014	103.274
Mo/Mo		**-0.01%**	**-0.10%**	**0.18%**	**0.45%**	**0.34%**	**0.69%**	**-0.95%**
- Prior		--	0.28%	0.26%	0.42%	0.34%	0.72%	-0.95%
Yr/Yr		**1.96%**	**2.22%**	**3.69%**	**3.34%**	**2.64%**	**2.01%**	**1.43%**
- Prior		--	2.68%	3.76%	3.34%	2.67%	2.03%	1.43%
Mining	**14.1%**	**128.928**	**126.791**	**127.634**	**126.908**	**123.941**	**122.785**	**120.660**
- Prior		--	126.315	126.711	126.892	123.897	122.790	120.660
Mo/Mo		**1.69%**	**-0.66%**	**0.57%**	**2.39%**	**0.94%**	**1.76%**	**1.01%**
- Prior		--	-0.31%	-0.14%	2.42%	0.90%	1.77%	1.01%
Yr/Yr		**13.23%**	**13.57%**	**15.95%**	**16.78%**	**13.39%**	**12.11%**	**11.22%**
- Prior		--	13.14%	15.12%	16.76%	13.35%	12.11%	11.22%
Utilities	**10.4%**	**107.765**	**104.351**	**104.109**	**105.381**	**104.232**	**104.068**	**105.729**
- Prior		--	104.738	105.244	105.377	104.233	104.078	105.729
Mo/Mo		**3.27%**	**0.23%**	**-1.21%**	**1.10%**	**0.16%**	**-1.57%**	**-2.55%**
- Prior		--	-0.48%	-0.13%	1.10%	0.15%	-1.56%	-2.55%
Yr/Yr		**4.31%**	**1.35%**	**4.35%**	**4.78%**	**2.09%**	**2.85%**	**2.88%**
- Prior		--	1.73%	5.48%	4.78%	2.09%	2.86%	2.88%

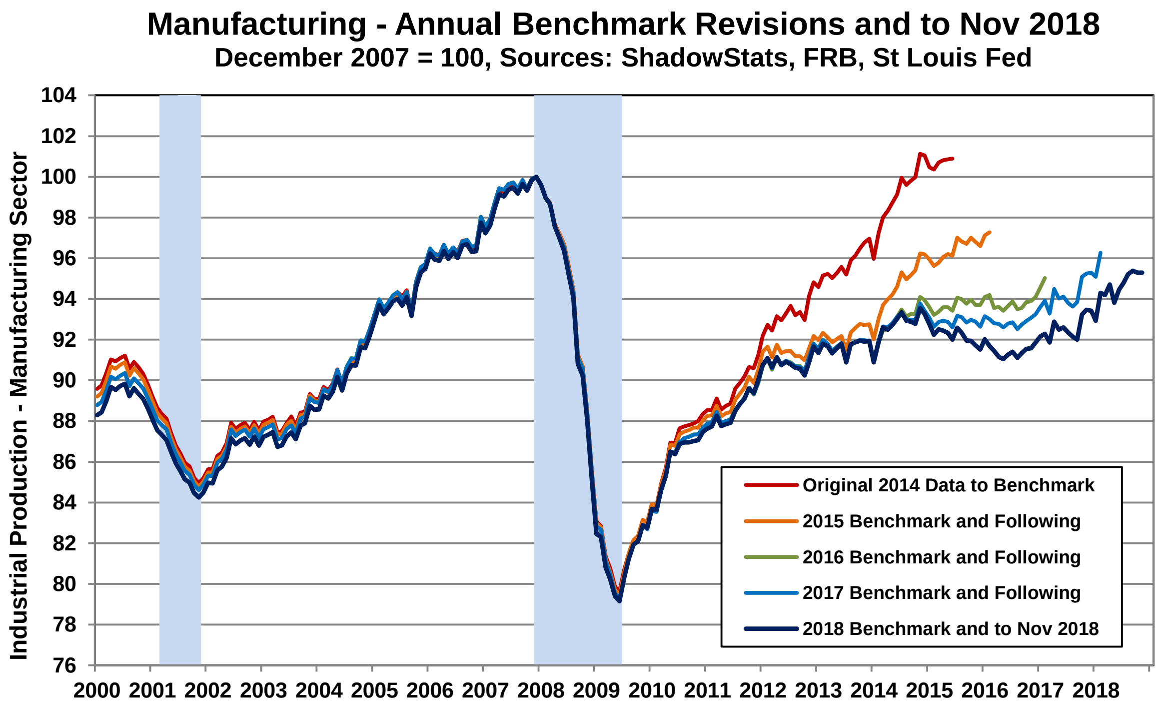
Sources: Federal Reserve Board, ShadowStats

Growth by Major Sector. Detailed by major industry group (see *Graphs 13*, *15*, *22* and *24*), the November 2018 aggregate Industrial Production monthly gain of 0.61%, broke out by component sector as a monthly decline of 0.01% (-0.01%) in Manufacturing, and gains of 1.69% in Mining and 3.37% in Utilities.

Manufacturing Sector Showed a Record 131st Straight Month of Economic Non-Expansion. November 2018 Manufacturing was virtually flat in the month, again down by 0.01% (-0.01%), following a monthly drop of 0.45% (-0.45%), net of downside revisions to October activity. That left the Manufacturing Sector in a deepening shortfall of 4.7% (-4.7) [previously 4.3% (-4.3%)] shy of recovering its pre-recession monthly peak of December 2007. As of third-quarter 2018, the series held shy by an unrevised 4.6% (-4.6%) on a quarterly basis, of recovering its fourth-quarter 2007 pre-recession peak. Such is in contrast with the headline third-quarter 2018 GDP, which now stands at a third-estimate 18.4% [previously 18.5% second estimate] above its fourth-quarter 2007 pre-recession peak (see the later GDP section in this *Reporting Detail*).

Accordingly, the dominant Manufacturing Sector of the Industrial Production series now has logged a record string of 131 straight months of economic non-expansion, a circumstance never before seen in the 100-year history of Industrial Production reporting, as reflected later in *Graph 17*, and as reflected through successive annual benchmark revisions reflected in *Graph 7*.

Graph 7: Annual Benchmark Revisions to the Dominant Manufacturing Sector of Industrial Production



In the wake of the July 27, 2018 Comprehensive Benchmark Revision to GDP, the ShadowStats estimate of the GDP Series Corrected for Understatement of Headline Inflation (see *Graphs 71* and *72* in the later GDP detail) increasingly resembled patterns of activity seen the in Manufacturing Sector and Real New Orders for Durable Goods Ex-Commercial Aircraft, as plotted and compared in today's *Opening Comments* section with the CASS Freight Index™ (*Graphs OC-1* to *OC-8*).

Separately, the recent comprehensive GDP Benchmarking showed no obvious impact to the aggregate historical GDP activity from the recent downside benchmarking of Industrial Production, Manufacturers' Shipments and New Orders for Durable Goods, etc., such as reflected here in prior *Graph 7*.

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 November 2018 detail, index-level and annual-growth production details are found in and plotted in *Graphs 11* to *14*, along with the drill-down graphs of major subcomponents of the production series in *Graphs 15* to *30*.

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 8*, and the longer-term *Graphs 11* and *12*, it looks like there was a missing recession call beginning at the end of 2014, but, again, nothing like that was suggested in the GDP benchmark revisions.

With the reporting of quarterly details in 2017 and the first-three quarters of 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 fell, although second- and third-quarter 2018 now have recovered.

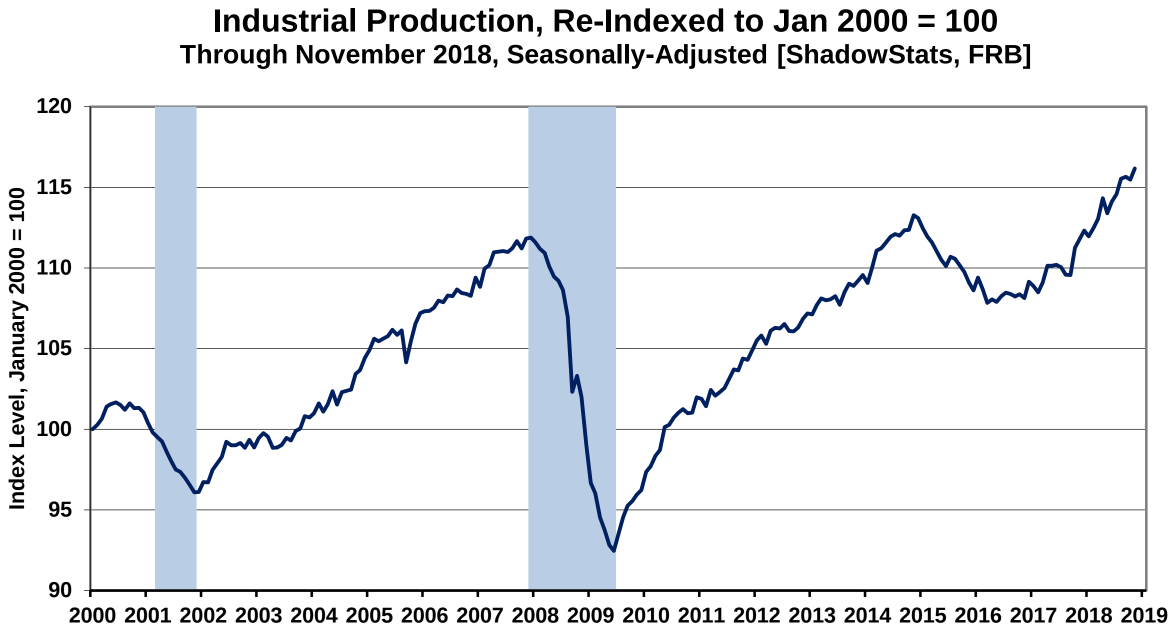
On a monthly basis, the pre-recession high of November 2007 was recovered briefly in June of 2014, with October and November 2014 a short-lived peak. October 2017 reporting recovered the monthly pre-recession high, for a second time, with a reset to December 2017, in the context of the recent benchmark revisions. Given that benchmarking and subsequent reporting, the initial first-quarter 2018 Industrial Production reporting 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. As of the November 2018 reporting, that level had been topped by 2.56%, last regaining that peak in revised April 2018 reporting.

Graphs 8 and *9* 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*).

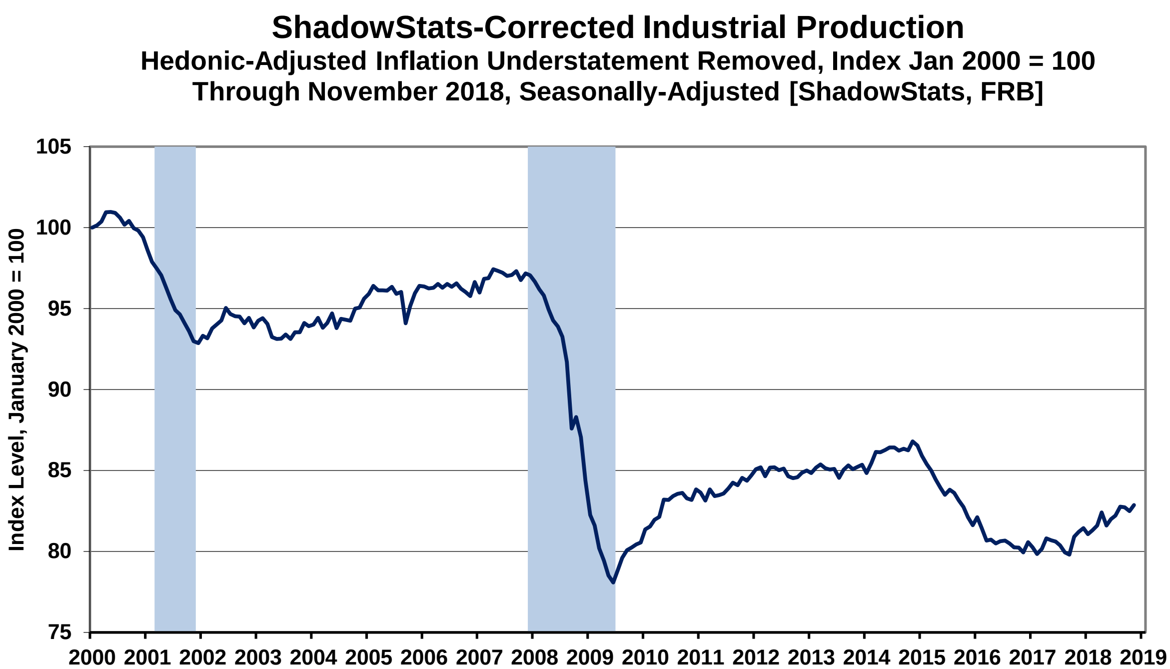
Graph 8 shows official, headline industrial production reporting, but indexed to January 2000 = 100, instead of the Fed's formal index that is set at 2012 = 100. The 2000 indexing simply provides for some consistency in the series of revamped "corrected" graphics including, Real Retail sales (see *Graphs 1* and *2* in the prior *Retail Sales* coverage on page 18), and as discussed there in the *Graphs Reflecting Alternate Inflation-Adjustment* section**.** The indexing does not affect the appearance of the graph or reported growth rates (as can be in comparing *Graph 8* here to later *Graph 14*, which has the standard, headline indexing).

Graph 9 is a recast version of *Graph 8,* 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.

Graph 8: Indexed Headline Level of Industrial Production (Jan 2000 = 100)



Graph 9: Headline ShadowStats-Corrected Level of Industrial Production (Jan 2000 = 100)



This "corrected" *Graph 9* 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 the March 2018 benchmarking, only to recovery the 2014 highs again with in April 2018 detail. That said, again, as previously reviewed, the dominant Manufacturing Sector of Industrial Production never has recovered its December 2007 pre-recession peak, a 131-straight months of non-expansion, unprecedented in its duration within the 100-year history of the Industrial Production series. While the recently-benchmarked GDP, and its initial "final" third-quarter 2018 real GDP reporting, show the series to have expanded by 18.4% above its pre-recession peak, the dominant Manufacturing Sector of Industrial Production still holds shy of recovering its pre-recession high by 4.6% (-4.6%) as of third-quarter 2018, and by 4.7% (-4.7%) on a monthly basis, as of November 2018, versus December 2007.

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 third estimate of third-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 annual gain of 1.20%. Fourth-quarter 2017 growth was a hurricane-boosted 2.99%, with first-quarter 2018 reporting showing annual growth of 3.38%.

In the context of November 2018 headline detail, second-quarter 2018 showing a fifth estimate of 3.43% [previously 3.44%]. Based on the third full third-quarter 2018 reporting, annual growth was a revised 5.03% [previously 5.05%]. With only two months in place, early fourth-quarter reporting is on track for an annual gain of 3.60% [same as suggested by the initial October 2018 detail].

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%), 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 an annualized quarterly contraction of 1.54% (-1.54%). Fourth-quarter 2017 activity was up by a disaster-recovery-boosted 7.75%, with the first-quarter 2018 at 2.52%.

Based on November 2018 headline detail, second-quarter 2018 annualized growth revised to 5.24% [previously 5.26%, 5.25%, 5.12%, initially 5.96%], with the third estimate of third-quarter 2018 at 4.69%

[previously 4.73%, initially 3.29%], with a revised early fourth-quarter 2018 indication of 1.97% [previously 1.92%].

Production Graphs. The regular two sets of long- and short-term plots of industrial production levels and annual growth rates (*Graphs 11* to *14* set the background for the drill-down detail graphs of various components of the aggregate industrial series (*Graphs 15* to *30*).

Graphs 11 and *12*, and *Graphs 13* and *14* show headline industrial production activity to date. *Graph 12* shows the monthly year-to-year percent change in the aggregate series, in historical context since World War I. 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 11 here shows the monthly level of the production index since its inception, post-World War I, 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 third-quarter 2017 hurricane disruptions and accompanying near-term volatility, with mixed reporting into November 2018. Such patterns of monthly and quarterly year-to-year declines post late-2014 to the onset of 2017 (see *Graph 12*) were seen last in the economic collapse into 2009, and historically never seen outside of what would be recognized as formal recessions. *Graphs 10* and *14* show the same series in near-term detail, beginning in January 2000. Such remains in the context of a hurricane-impaired third-quarter 2017 reading and a hurricane-boosted fourth-quarter 2017 into slowing first-quarter and, again, mixed second-and third-quarter 2018 activity.

Seen most clearly in *Graph 15*, 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, but that did not surface in the current GDP benchmarking. In the context of the 2018 production benchmark revisions, year-to-year growth remained 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 12*, 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 November 2018 Industrial Production currently is relatively stagnant at a minimally-recovered level, versus its pre-Great Recession peak. Third-quarter 2018 production activity was up by 3.24% versus its fourth-quarter 2007 pre-recession peak, while the third estimate of third-quarter 2018 GDP stood 18.42% above its fourth-quarter 2007 pre-recession peak.

Following its 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 3.98% (-3.98%) from its pre-recession high.

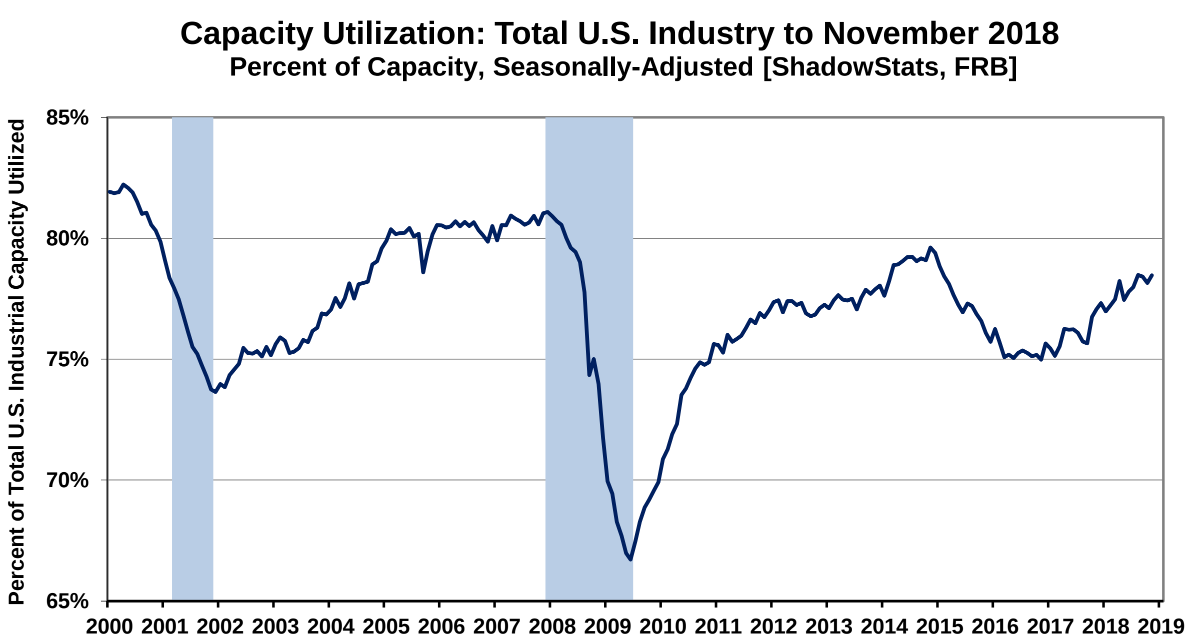
Production and Underestimated Headline Inflation. Versus the pre-Great Recession peak, official headline production levels have moved higher since their June 2009 trough, showing a pattern of stagnation in slow upside trend, since 2009, with irregular quarterly contractions interspersed. The slow uptrend 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 and June 2018, picking up steam in September 2018, but with annual growth slowing in October and November 2018.

Yet, corrected for the understatement of inflation used in deflating portions of the industrial production index, as shown earlier in *Graphs 8* and *9*, 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.

Total U.S. Industrial Capacity Eased in October, Rose in November, Versus, Revised Near-Term Peak of August 2018. The Federal Reserve's 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 10* of the series has been updated for the November 2018 Capacity Utilization Rate of 78.48%, versus a revised 78.15% [previously 78.39%] in October and 78.42% [previously 78.45%, initially 78.11%] in September, effectively even with the near-term high of 78.48% in August 2018.

Against its December 2007 pre-recession peak level of 81.10%, November 2018 Capacity Utilization reading held shy of recovering that peak *level* by 3.23% (-3.23%), or by 262 (-262) basis points in terms of the peak *percentage number*. That is despite November 2018 Industrial Production holding at 3.88% above its December 2007 pre-recession peak, and with the November 2018 Manufacturing Sector holding shy of recovering its December 2007 pre-recession peak by 4.71% (-4.71%).

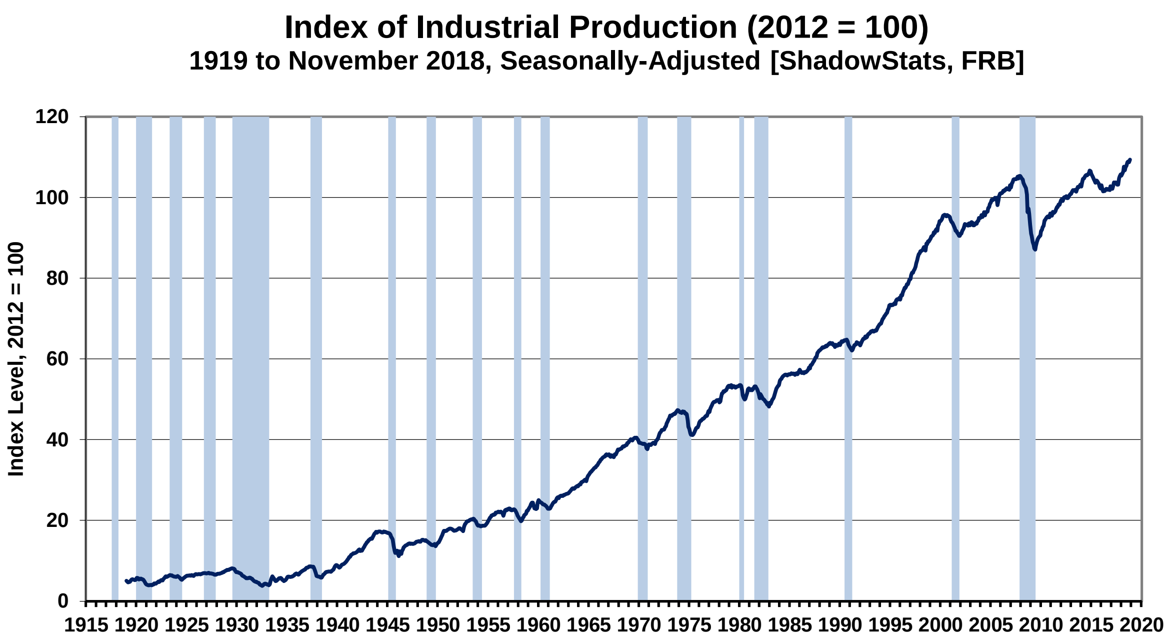
Graph 10: Utilization of Total U.S. Industrial Production and Manufacturing Capacity (2000 to Date)



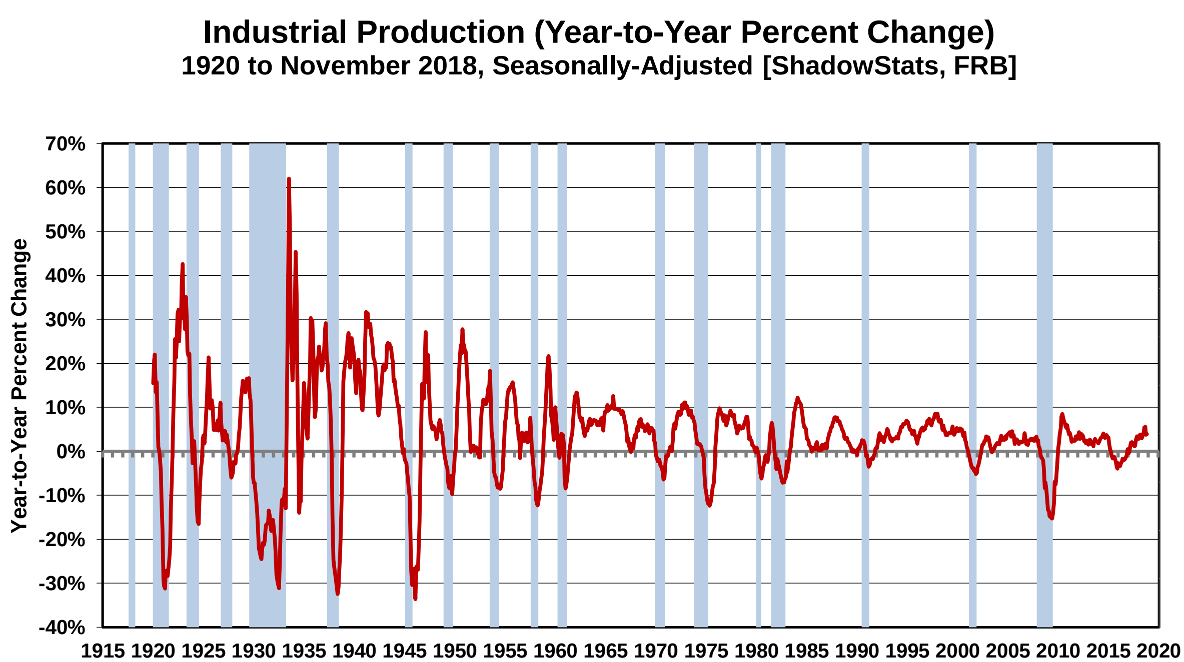
Sharp Downturns in Capacity Utilization Usually Signal the Onset of a Recession. Where sharp downturns in Utilization historically usually mark onsets of formal recessions, such would support the concept of a renewed "headline" recession, a double-dip downturn that began at the end of 2014, as indicated by the Industrial Production series. That remains 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, although—again— nothing confirming that showed up in the 2018 comprehensive GDP benchmarking. Contrary to consensus hype of fully recovered and expanding U.S. economic activity, as seen in the Manufacturing Sector, much of the headline U.S. economy never has recovered fully from the 2007 downturn.

[Graphs 11 to 14 begin on the next page.]

Graph 11: Index of Industrial Production, Full Historical Series 1919 to Date

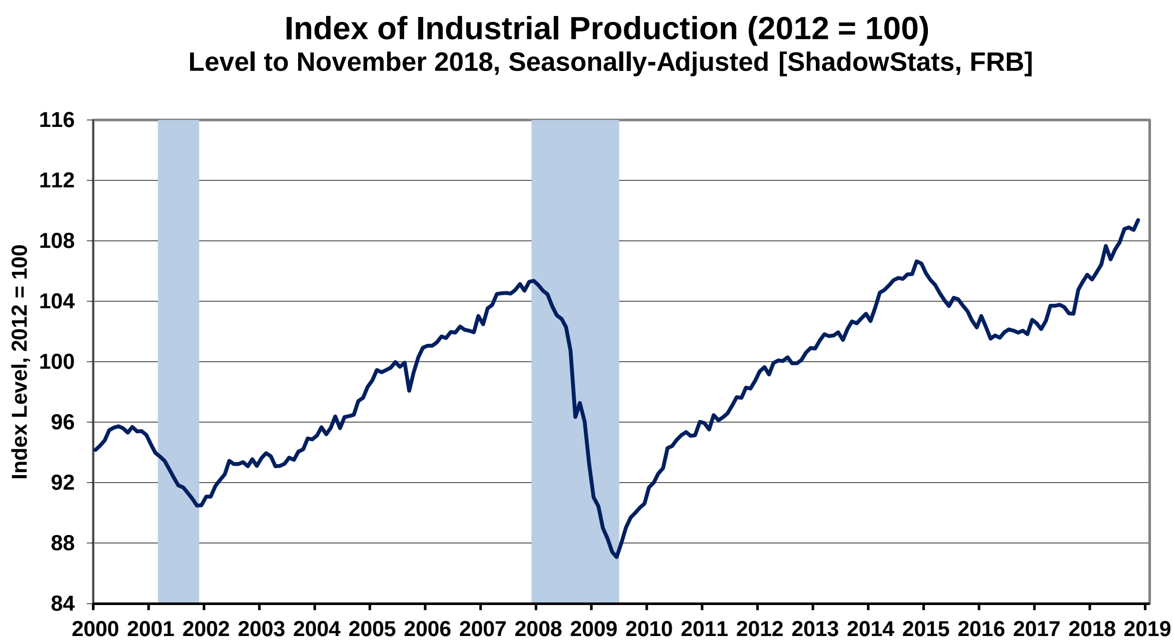


Graph 12: Industrial Production, Year-to-Year Percent Change, Full Historical Series Since 1920

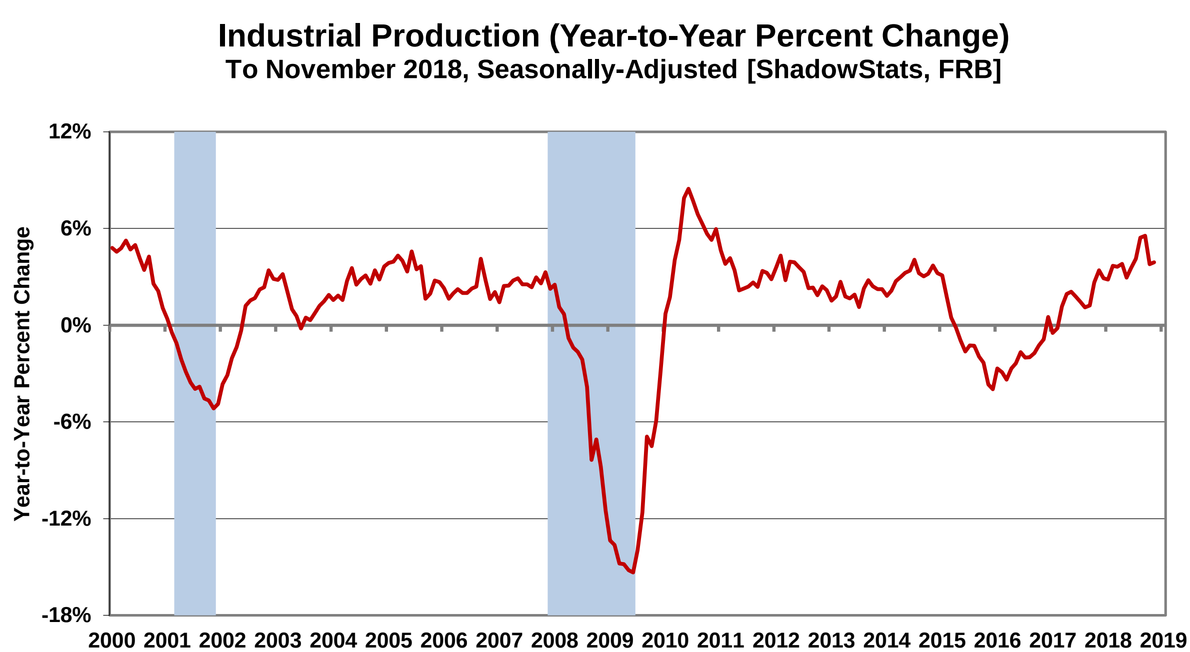


Drilling Down into the November 2018 U.S. Industrial Production Detail. *Graphs 13, 15, 21* and *25* show headline industrial production and its major components January 2000 through November 2018.

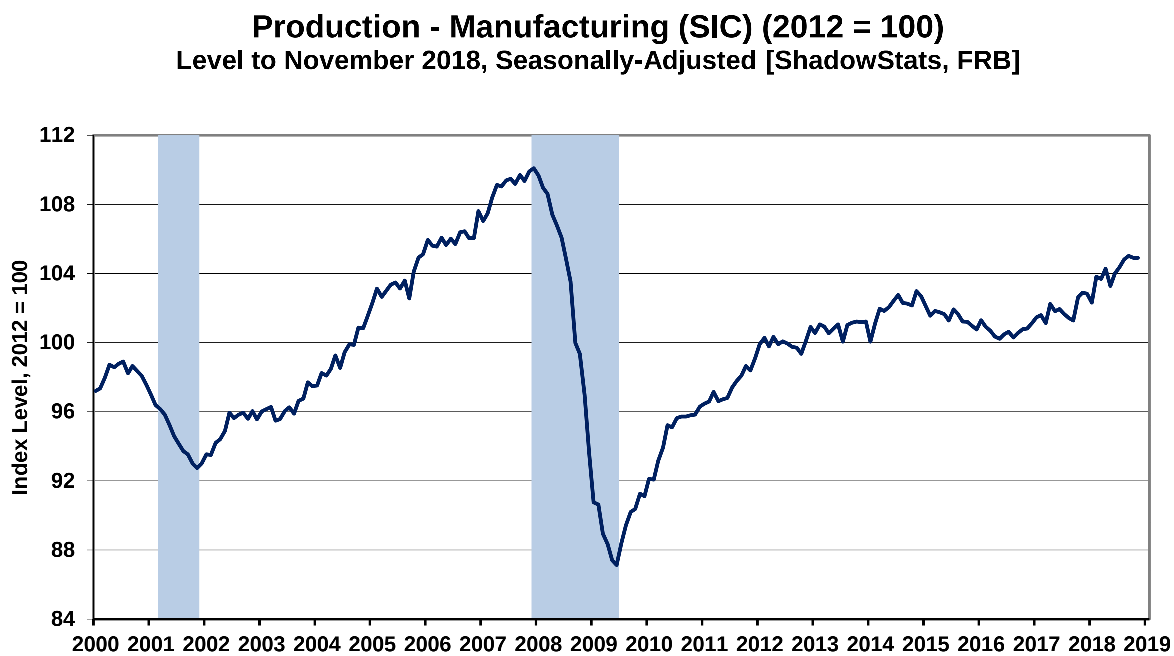
Graph 13: Index of Aggregate Industrial Production, Since 2000



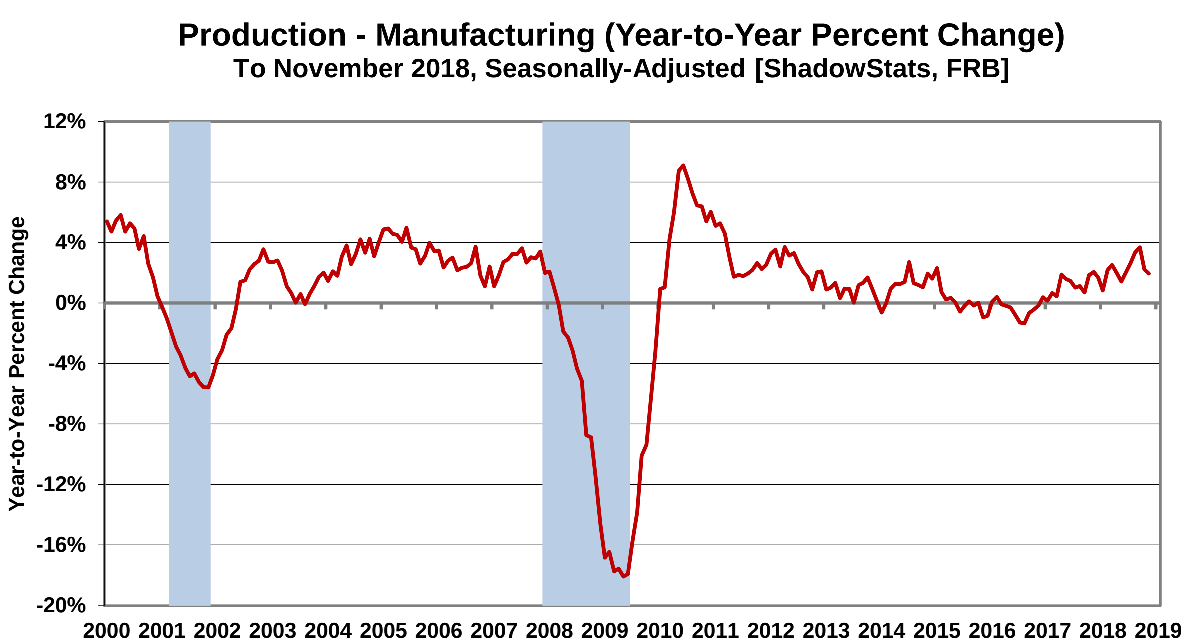
Graph 14: Aggregate Industrial Production, Year-to-Year Percent Change, Since 2000



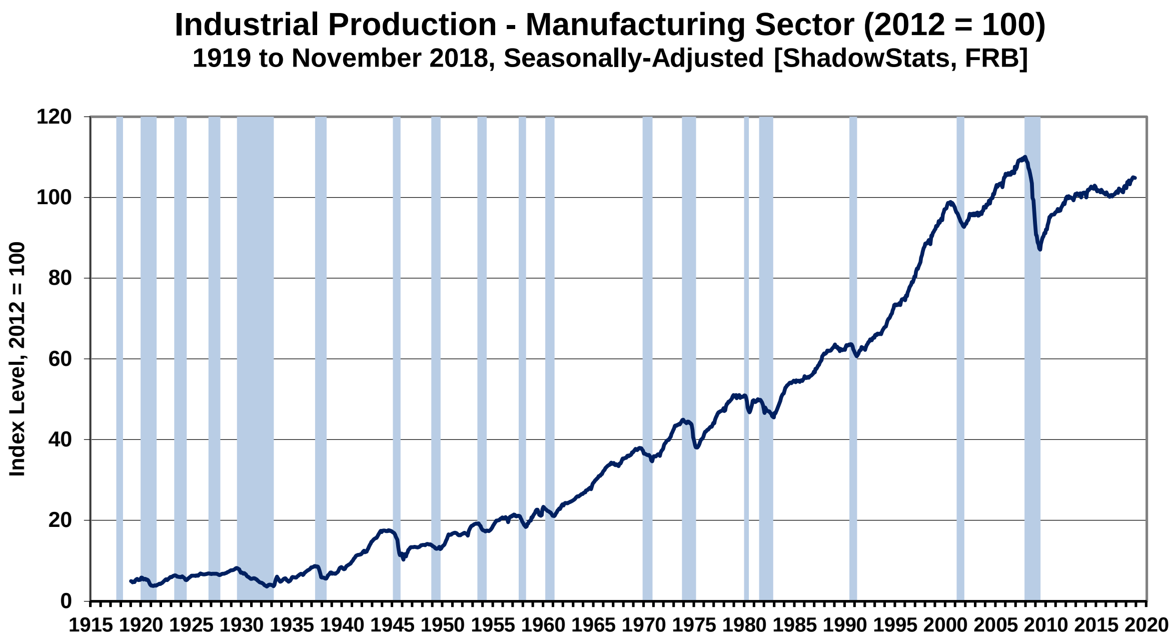
Graph 15: Industrial Production - Manufacturing (75.5% of the IIP in 2017), Since 2000



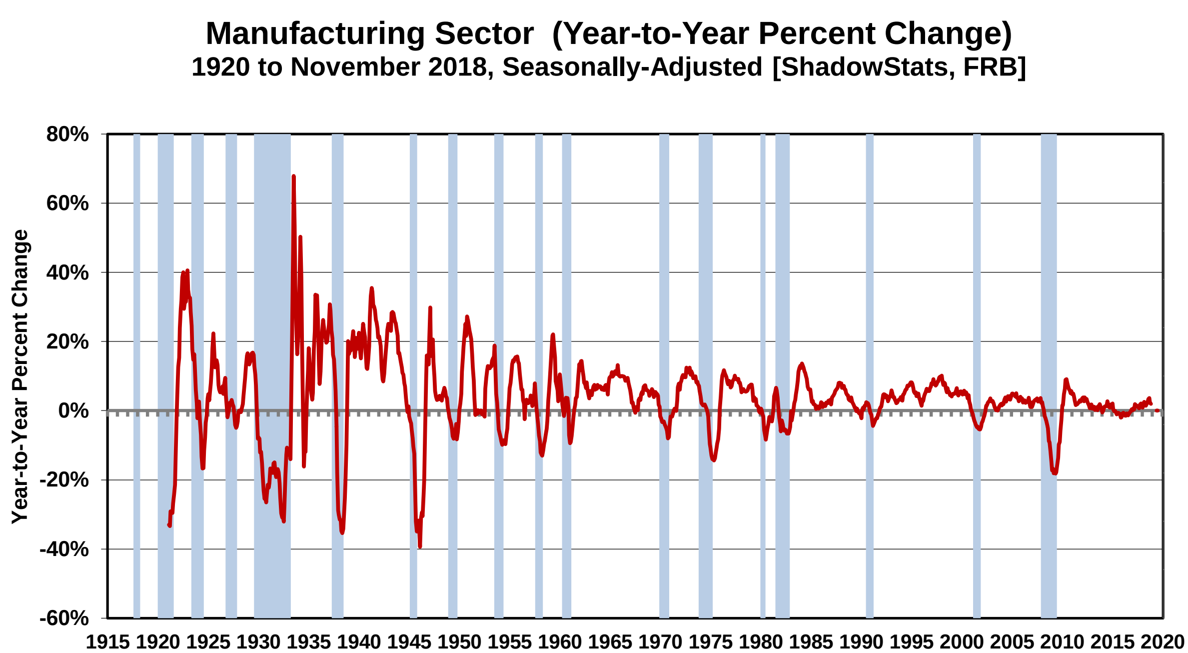
Graph 16: Industrial Production - Manufacturing, Year-to-Year Percent Change, Since 2000
(Same as Graph OC-4 in the Opening Comments)



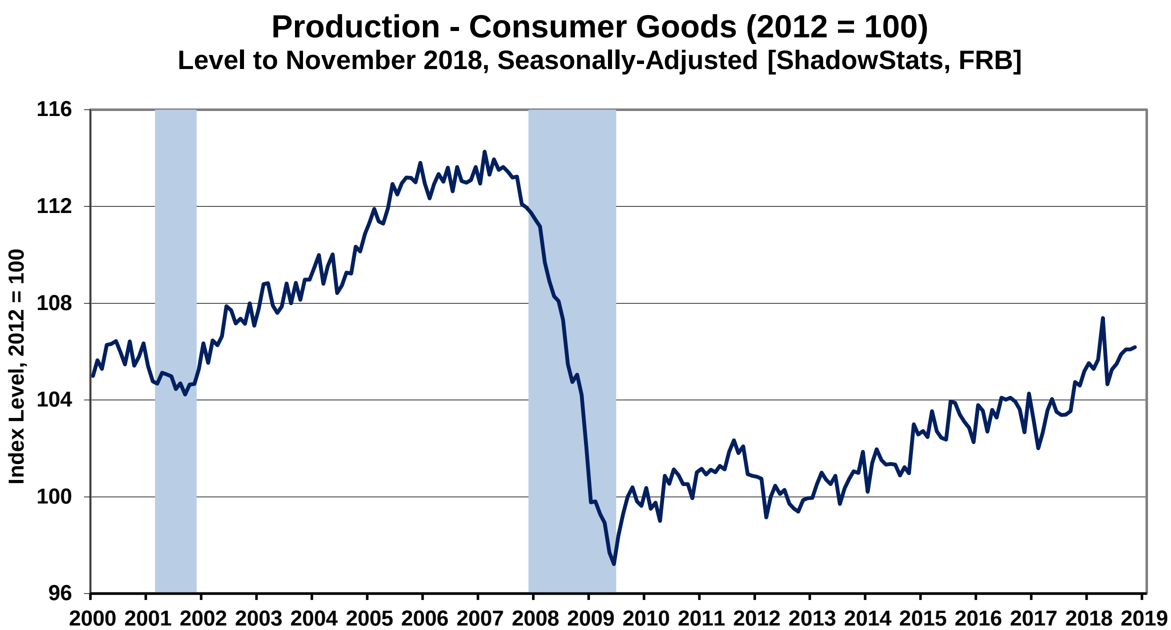
Graph 17: Industrial Production, Manufacturing, Full Historical Series 1919 to Date



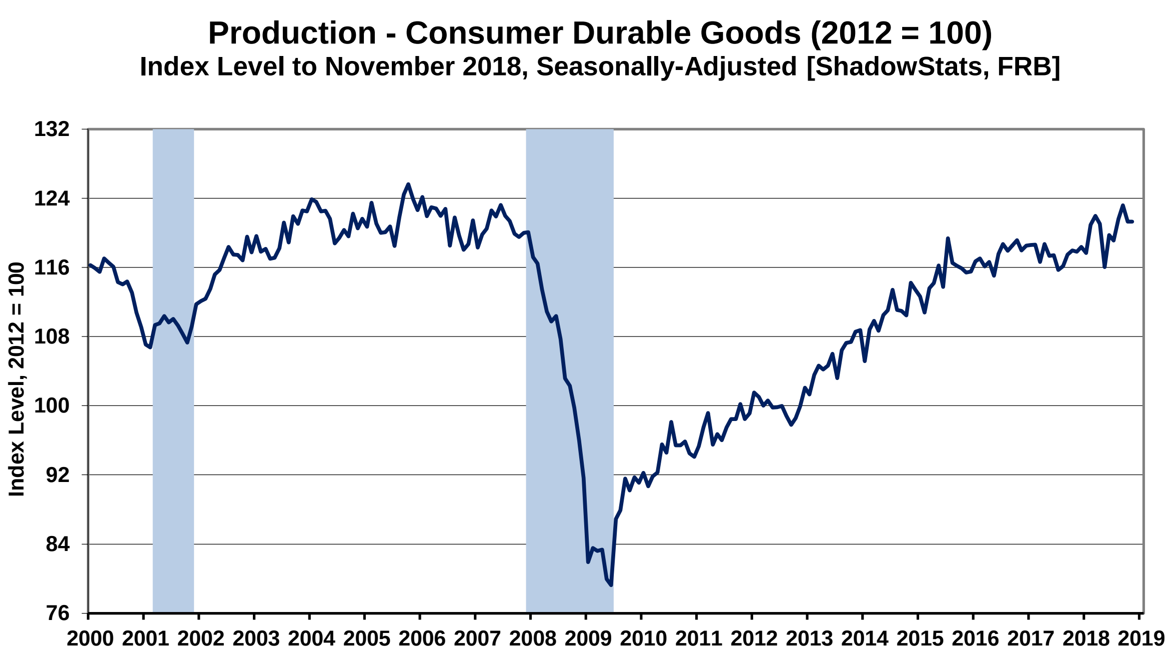
Graph 18: Manufacturing Year-to-Year Percent Change, Full Historical Series Since 1920



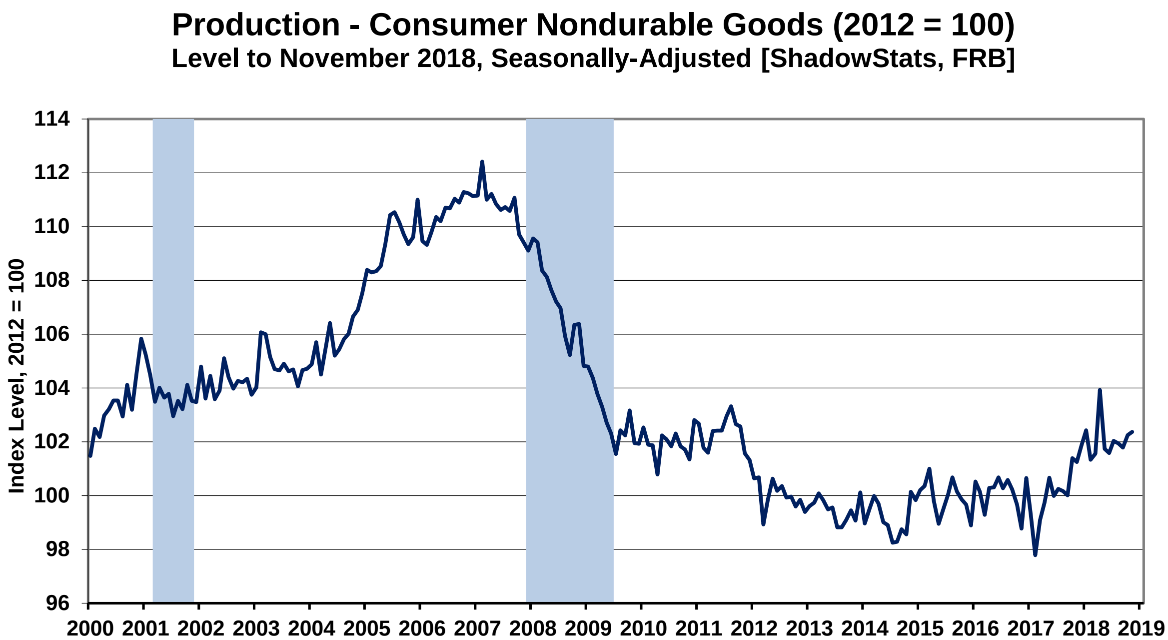
Graph 19: Consumer Goods (28.0% of the Aggregate in 2017), Since 2000



Graph 20: Durable Consumer Goods (6.3% of the Aggregate in 2017), Since 2000



Graph 21: Nondurable Consumer Goods (21.7% of the Aggregate in 2017), Since 2000



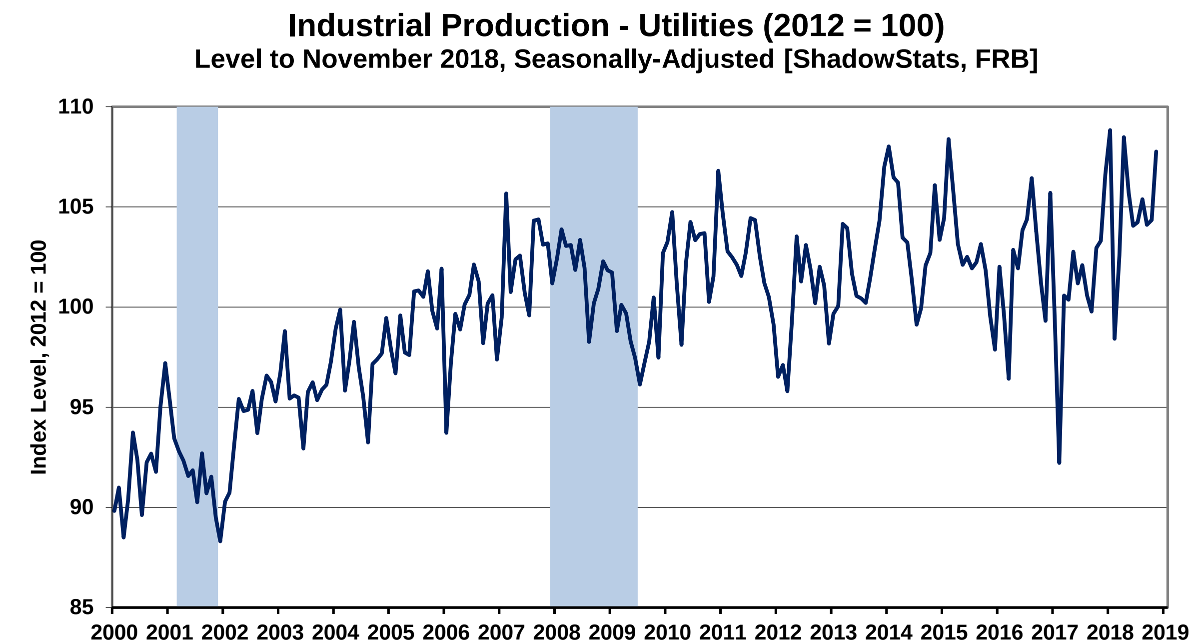
The aggregate production index (*Graph 13*) contracted quarter-to-quarter for six consecutive quarters, from first-quarter 2015 through second-quarter 2016. Year-to-year declines by quarter were seen for seven consecutive quarters, from second-quarter 2015 through fourth-quarter 2016, with first-quarter 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 then waning recovery from same in first-half 2018. Nonetheless, activity generally had continued to pick up, it has been slowing/fluctuating coming into November 2018.

Graphs 15, *22* and *24* show headline activity for the three major industry sectors, Manufacturing, Utilities and Mining, where all but Manufacturing, which was flat, gained month-to-month in November. Nonetheless, all but Mining were boosted by downside revisions to October activity (see *Table I*).

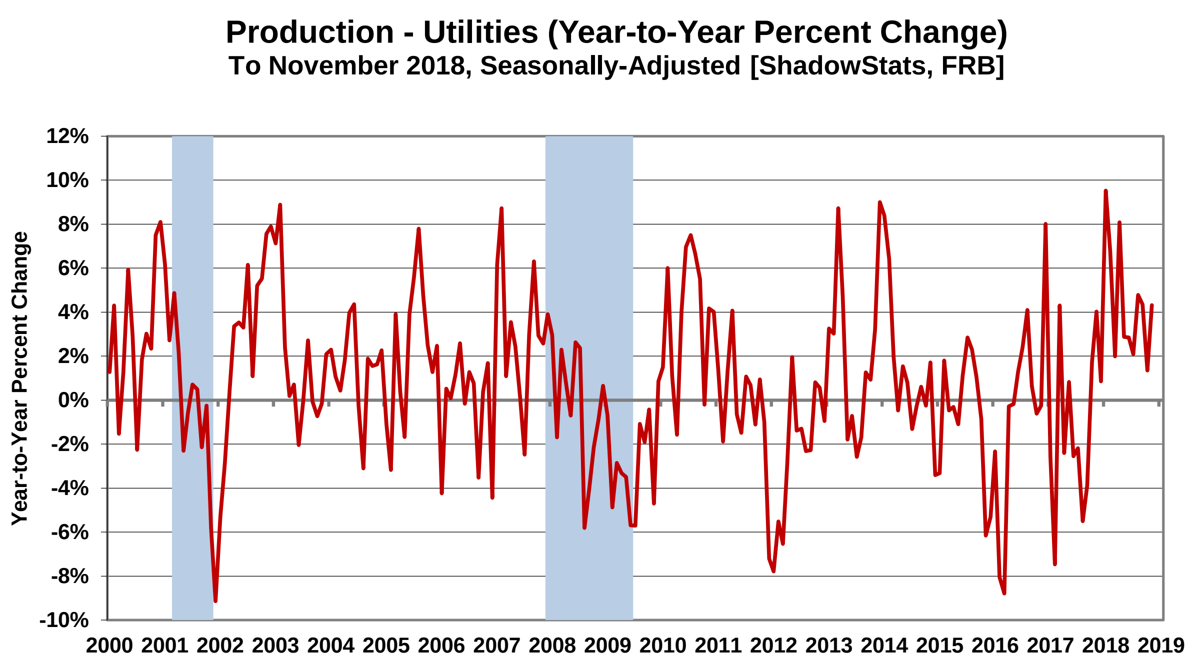
The Manufacturing graphs precede this, while the graphs of Utilities and Mining follow, all updated for the latest detail. *Graphs 16*, *23* and *25*, show the respective plots of year-to-year change for those series. The preceding Manufacturing *Graphs 15* to *21* include various levels of consumer goods production (*Graphs 19* to *30*). The next two *Graphs 22* and *23* reflect Utilities activity, massively volatile as a result of regularly unstable weather patterns.

[Graphs 22 to 25 begin on the next page.]

Graph 22: Industrial Production - Utilities (10.4% of the Aggregate in 2017), Since 2000



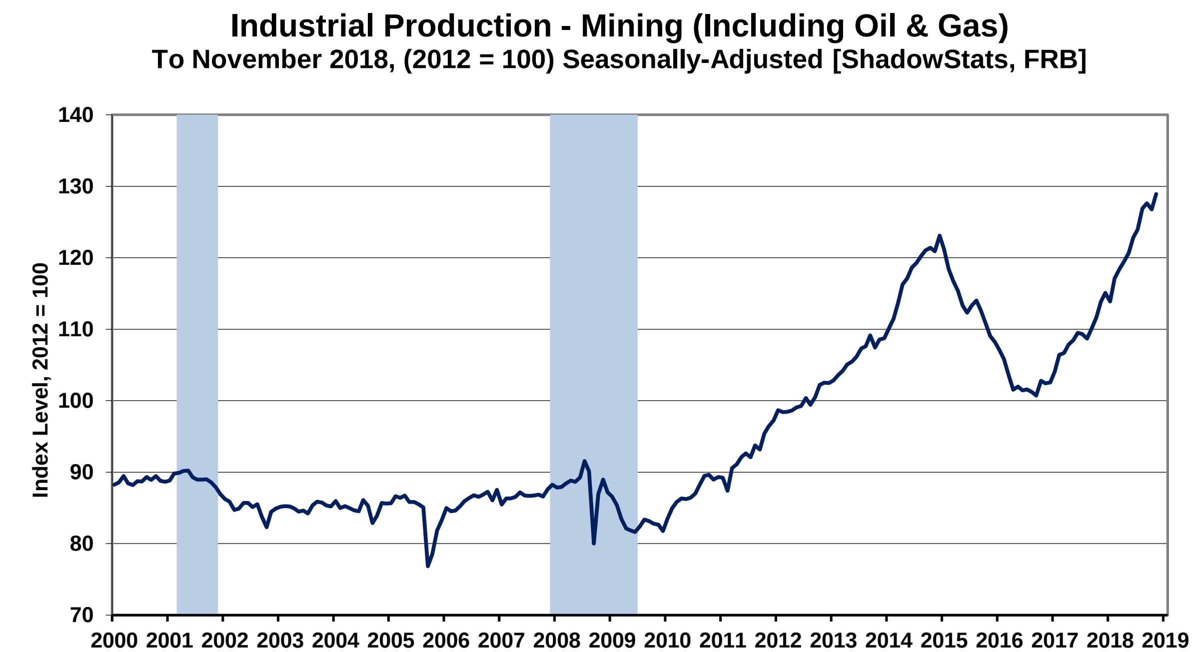
Graph 23: Industrial Production - Utilities, Year-to-Year Percent Change, Since 2000



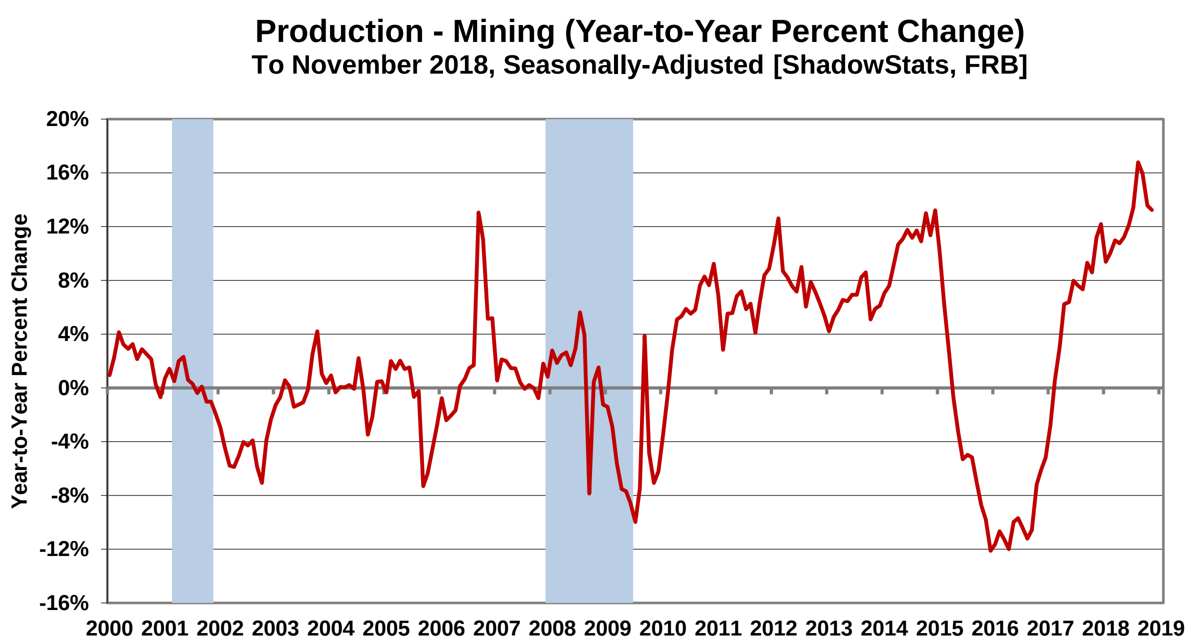
The final set of Mining *Graphs 24* to *30*, encompasses plots of related mining/oil production or exploration activity. Gold and Silver mining (*Graph 26*) declined month-to-month by 3.00% (-3.00%), having gained by a revised 3.90% [previously 1.91%] in October, having declined year-to-year by 13.07% (-13.07%) in November 2018, a revised 4.44% (-4.44%) [previously 11.74% (-11.74%)] in October 2018.

Coal Mining activity (*Graph 27*) gained by 0.22% in the month, having declined 5.05% (-5.05%) in October. Respective rates of annual change were a decline of 2.06% (-2.06%) in November 2018, versus a drop of 2.85% (-2.85%) in October 2018.

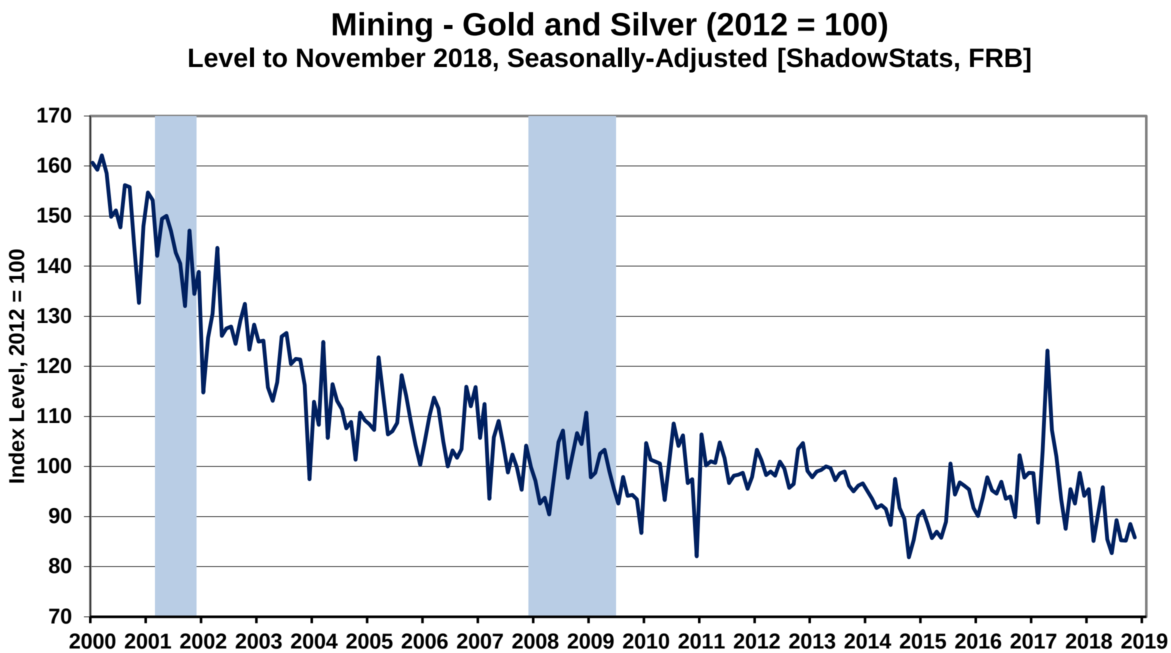
Graph 24: Industrial Production - Mining, Including Oil and Gas (14.1% of the Aggregate in 2017), Since 2000



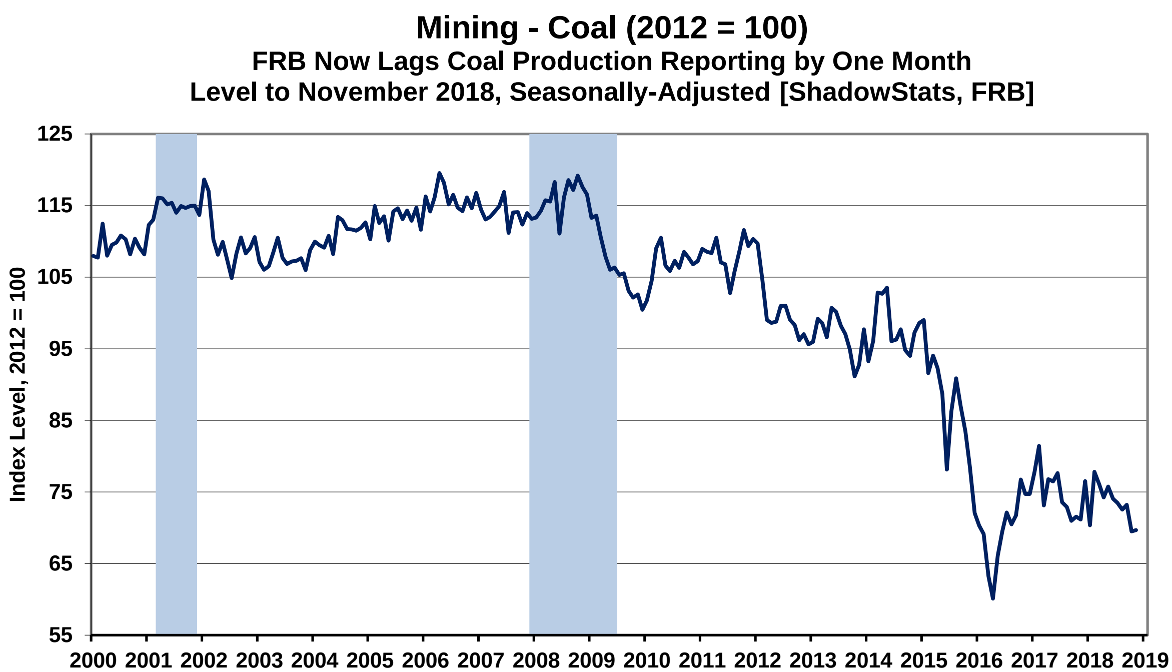
Graph 25: Industrial Production - Mining, Year-to-Year Percent Change, Since 2000



Graph 26: Mining – Gold and Silver Mining (0.2% of the Aggregate in 2017), Since 2000



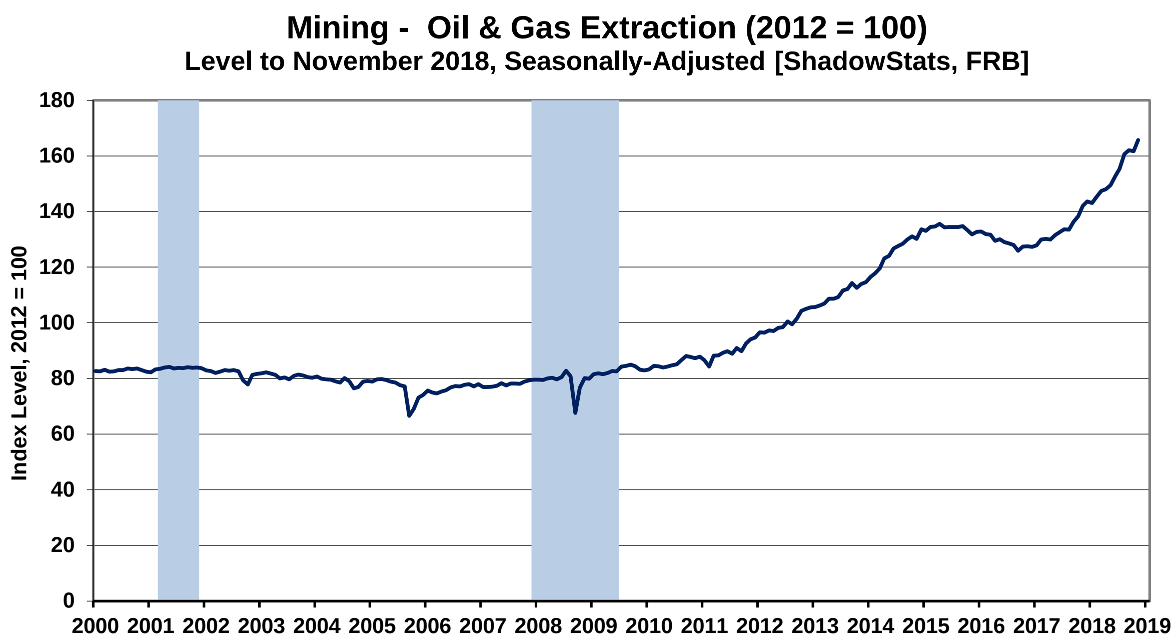
Graph 27: Mining - Coal Mining (0.8% of the Aggregate in 2017), Since 2000



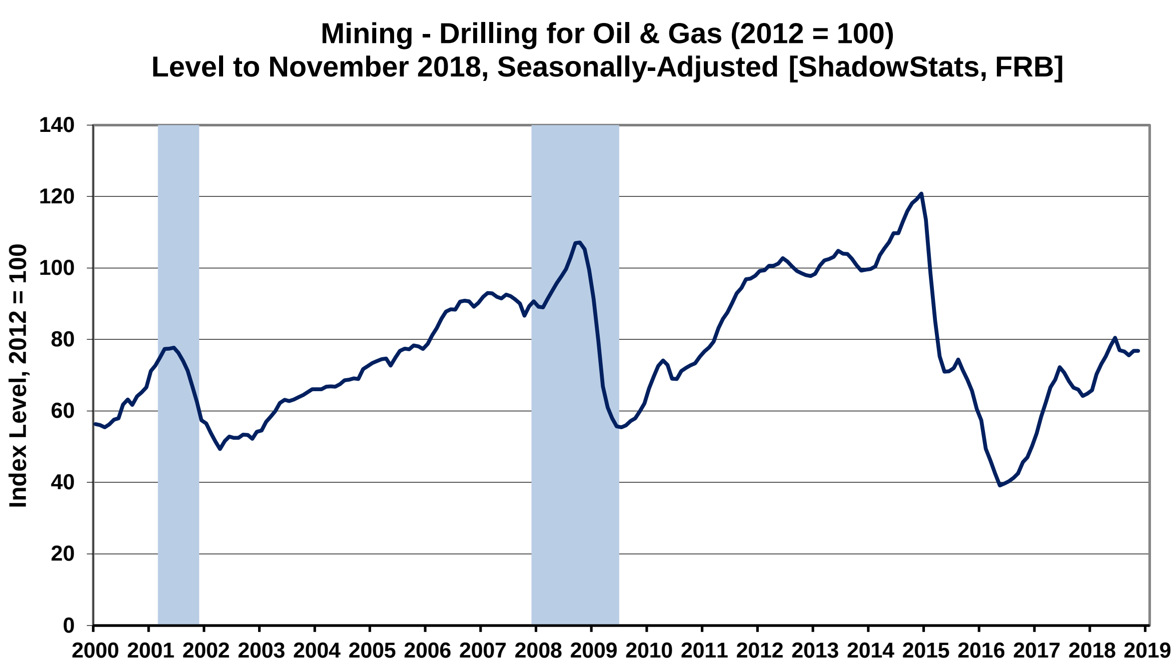
Usually dominated by monthly and annual growth from Oil and Gas Extraction and Exploration (all positive in November 2018), the broad Mining Sector gained 1.69% in the month, having declined by 0.66% (-0.66%) [previously by 0.31% (-0.31%)] in October, with Mining activity up year-to-year by

13.23% in November 2018, versus 13.57% [previously 13.14%] in October 2018 (see *Table I*), with Oil and Gas complemented by the activity in Gold and Coal mining.

Graph 28: Mining – U.S. Oil & Gas Extraction (10.3% of the Aggregate in 2017), Since 2000



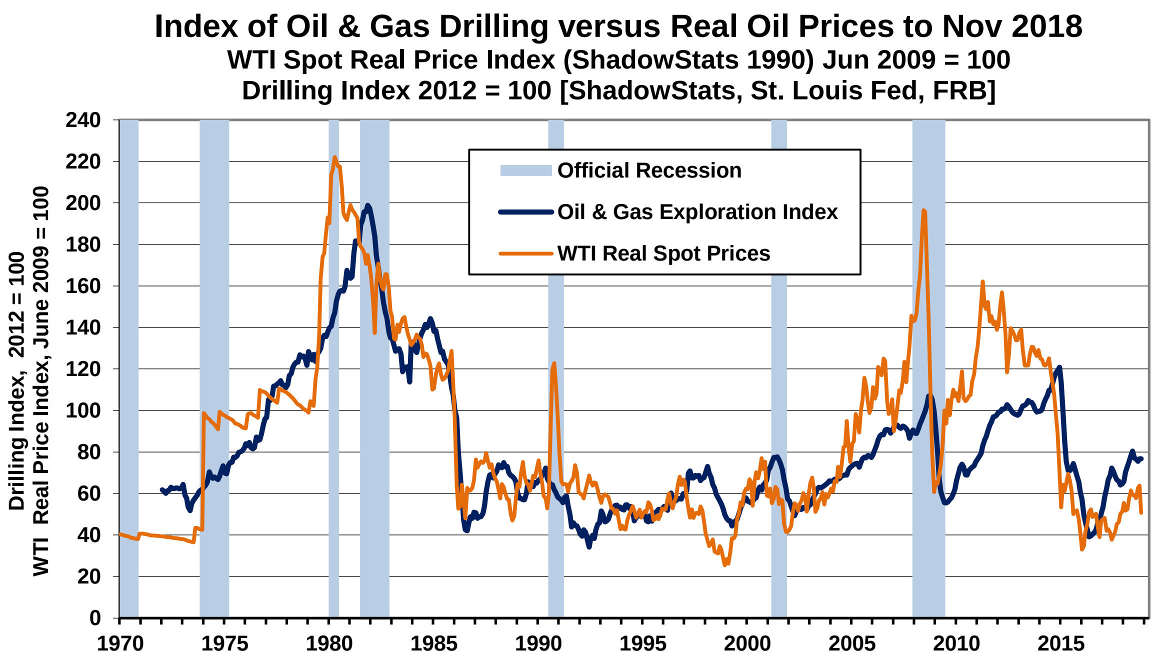
Graph 29: U.S. Drilling for Oil & Gas - Exploration (0.5% of the Aggregate in 2017), Since 2000



Often boosted by rising oil prices, currently in decline, the dominant oil and gas mining sector rose month-to-month for extraction, and gained for drilling and exploration (see *Graphs 28* to *30*), with Oil and Gas Extraction up by 2.50% for the month and 16.69% year-to-year, with Oil and Gas Drilling up by 0.07% for the month and by 19.69% year-to-year. Year ago activity still reflects impact from the 2017 Gulf Coast hurricane activity.

With some lag following sharp movements in oil prices (*Graph 30*), 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 rose strongly in the hurricane disruptions of 2017. Still, the 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 June 2018 and soaring prices, which have fallen in recent months. 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 30: Mining – U.S. Drilling for Oil & Gas versus Real Oil Prices (WTI ShadowStats 1990 Base), Since 1970



Indeed, rising oil prices tend to lead to increased 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 in a faltering upswing, albeit still off its recent bottom, oil prices had been firming recently, more heavily impacted by intensified global political tensions, particularly in the Middle East, although, again, those prices have pulled sharply lower in recent months. 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 No. 4*).

New Residential Construction (November 2018)

November 2018 Housing Starts and Building Permits Both Showed Continued, Deepening Smoothed Six-month Downtrends. New Residential Construction (November 2018). Despite month-to-month gains in these highly unstable and volatile series, Housing Starts and Building Permits both showed deepening, six-month smoothed downtrends for the last seven months, with third-quarter 2018 contractions holding in place, on top of second-quarter contractions, across-the-board. Such continued to reflect intensifying consumer liquidity stresses (Home Sales have remained in deepening downtrend and quarterly contractions).

As usual, the monthly Housing Starts were highly unstable, with no statistically meaningful changes, either month-to-month (positive total and multiple-unit, negative single-unit) or year-to-year (negative total and single-unit, positive multiple-unit), with negative revisions to October activity, again, across-the-board. The aggregate series rose month-to-month by 3.2% in November, versus a revised decline of 1.6% (-1.6%) [previously a gain of 1.5%] in October, which was down by a revised 3.4% (-3.4%) [previously down by 5.5% (-5.5%)] from September. Annual change was down by 3.8% (-3.8%) in November versus 2018, versus 3.7% (-3.7%) in October. Again, none of those changes was statistically meaningful. The Housing Starts series still is shy of ever recovering is pre-recession peak, by 44.7% (-44.7%).

Against a small upside revision to October activity, November 2018 Building Permits showed a statistically meaningful monthly gain of 5.0%, versus a revised monthly contraction of 0.4% (-0.4%) [previously down by 0.6% (-0.6%)] in October. The November year-to-year gain of 0.4%, however, was not statistically meaningful, versus a revised annual October contraction of 5.8% (-5.8%) [previously down by 6.0% (-6.0%)]. The Building Permits series still is shy of recovering its pre-recession peak, by 41.3% (-41.3%).

November 2018 Housing Starts, Headline Detail. The Census Bureau and Department of Housing and Urban Development (HUD) reported December 18th, a statistically-insignificant, seasonally-adjusted, headline monthly gain in November 2018 Housing Starts of 3.2% +/-11.5% (all confidence intervals are expressed at the 95% level, unless otherwise indicated). That followed a revised monthly declines of 1.6% (-1.6%) [previously a gain of 1.5%] in October, 3.4% (-3.4%) [previously 5.5% (-5.5%), initially down by 5.3% (-5.3%)] in September, and an unrevised gain in August. Level-of-activity aggregate detail is plotted in *Graphs 31* to *34*, and in *Graphs 40*, *42*, *43* and *44*.

Year-to-year change in the seasonally-adjusted November 2018 aggregate Housing Starts measure was a statistically-insignificant decline of 3.6% (-3.6%) +/- 11.0%, versus a revised decline of 3.8% (-3.8%) [previously 2.9% (-2.9%)] in October 2018, a revised gain of 6.8% [previously 4.5%, initially 3.7%] in September 2018 and an unrevised gain of 9.2% in August 2018.

Sampling Statistics Showed No Monthly Changes in November 2018 Housing Starts That Were Significantly Different from Zero. As seen most commonly with this series, the headline monthly changes in November Housing Starts were not statistically-significant, as ShadowStats uses the term. When the 95% confidence interval around the headline change includes zero, the headline change is not statistically-significant at the 95% confidence level (or 90% use by the Census Bureau) in terms of being different from zero.

The indicated confidence intervals account only for sampling error. Again, 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), again, 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 for monthly and annual changes in Housing Starts.

That means, for example, where the headline monthly change for headline November 2018 Housing Starts was a gain of 3.2% +/-11.5%, the actual monthly change was within a range from a contraction of 8.3% (-8.3%) to a gain of 14.7%, with 95% confidence, with the headline gain of 3.2% the most likely change. The recently revised and benchmarked reporting system for the Housing Starts series still has not done much to narrow those confidence intervals,

Housing Starts by Unit Category. The November 2018 headline monthly gain of 3.2% in total Housing Starts encompassed a monthly decline of 4.6% (-4.6%) in Single-Unit starts and a monthly gain of 24.9% 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 21.1% (-21.1%) in November. 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 22.4%, instead of the headline 24.9%, discussed later in the broadest, Aggregate Multiple Units category. Other than for the annual decline in November 2018 Single Unit Starts of 13.1% (-13.1%), none of the headline monthly or annual changes in the various Housing Starts series was statistically significant. These numbers all are reflected in *Graphs 31* to *38.*

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 Single-Unit Housing Starts—generally for individual consumption, resulting in New-Home Sales—versus Multiple-Units Housing Starts that generally reflect the building of condominiums, rental and apartment units.

Housing Starts for Single-Unit structures in November 2018 declined month-to-month by a statistically-insignificant 4.6% (-4.6%) +/- 9.8%, following a revised decline of 1.7% (-1.7%) [previously down by 1.8% (-1.8%)] in October, a revised decline of 1.2% (-1.2%) [previously down by 1.0% (-1.0%), initially by 0.9% (-0.9%)] in September and against an unrevised revised gain of 3.4% in August. November 2018 Single-Unit starts showed a statistically-significant annual decline of 13.1% (-13.1%) +/- 8.5%, versus a revised annual decline of 2.7% (-2.7%) [previously 2.6% (-2.6%)] in October 2018, a revised gain of 5.8% [previously 6.0%, initially 4.8%] in September 2018, and an unrevised gain of 1.4% in August 2018 (see *Graphs 31*, *32*, *35* and *36*).

Housing Starts for Multiple-Units (5-units-or-more) such as apartment buildings, condominiums, etc. gained month-to-month in November 2018 by a statistically-insignificant 24.9% +/-29.4%, having declined in October by a revised 4.3% (-4.3%) [previously having gained by 6.2%], having declined by a revised 6.4% (-6.4%) [previously by 13.4% (-13.4%), initially by 12.9% (-12.9%)] in September, versus an unrevised monthly gain of 17.6% in August. A statistically-insignificant annual gain of 20.2% +/- 33.7% in November 2018 followed a revised decline of 7.0% (-7.0%) [previously 4.5% (-4.5%)] in October 2018, versus a revised 12.6% [previously 4.2%, initially 4.5%] gain in September 2018, and an unrevised annual gain of 30.4% in August 2018.

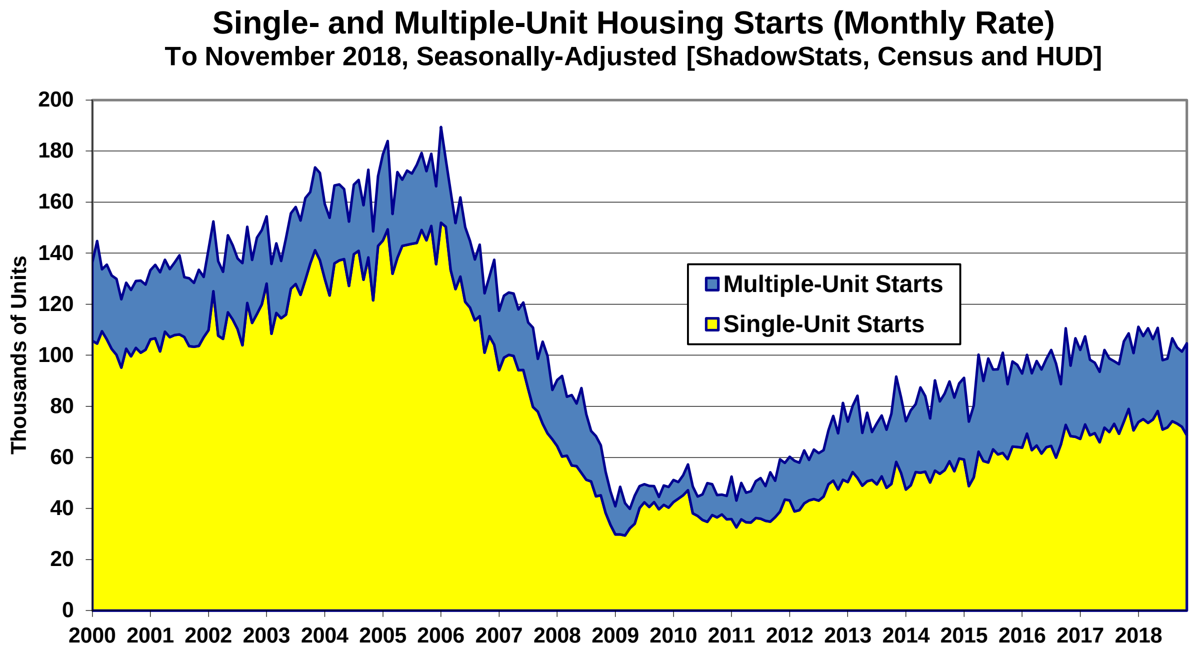
Expanding the Multiple-Units housing starts category to include 2-to-4-units plus 5-units-or-more usually reflects the bulk of rental- and apartment-unit activity. The Census Bureau does not publish monthly estimates of the 2-to-4-units category, due to statistical significance problems (a general issue for the aggregate series). Nonetheless, the total Multiple-Units category can be estimated by subtracting the single-unit category from the total category (see *Graphs 31*, *32*, *39* and *40*).

Accordingly, the statistically-insignificant November 2018 monthly gain of 3.2% in aggregate starts was composed of a statistically-insignificant decline of 4.6% (-4.6%) in one-unit structures and a statistically-insignificant gain of 22.4% in the multiple-unit structures category (two-units-or-more, including the five-units-or-more category).

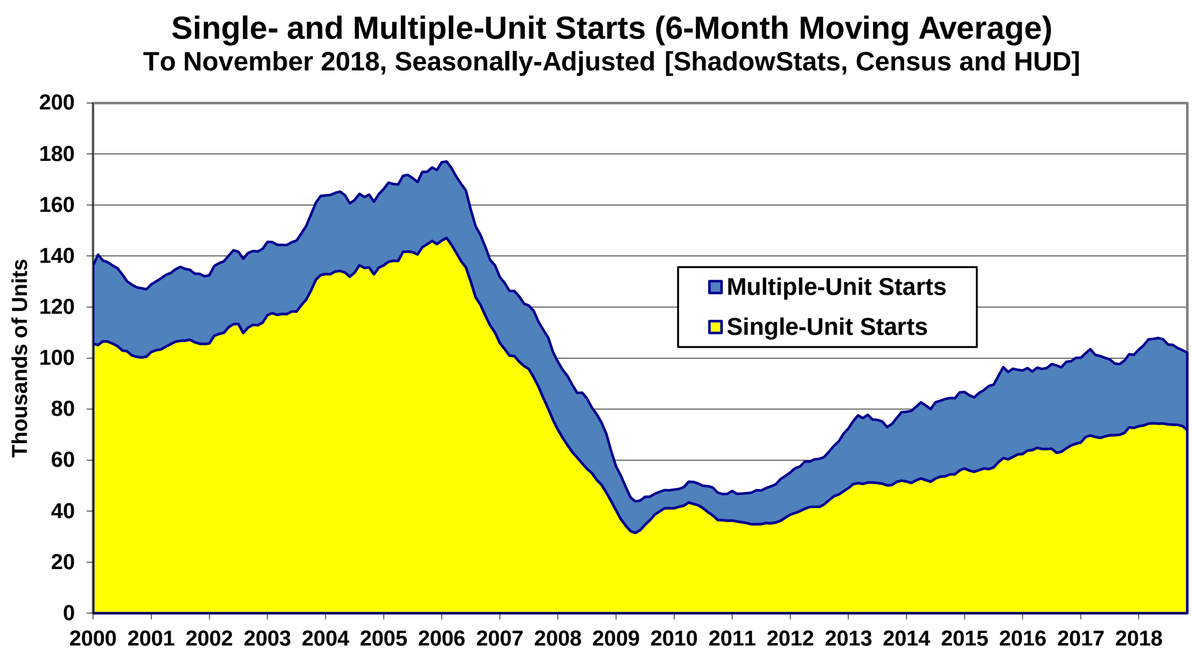
[Graphs 31 to 38 begin on the next page.]

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

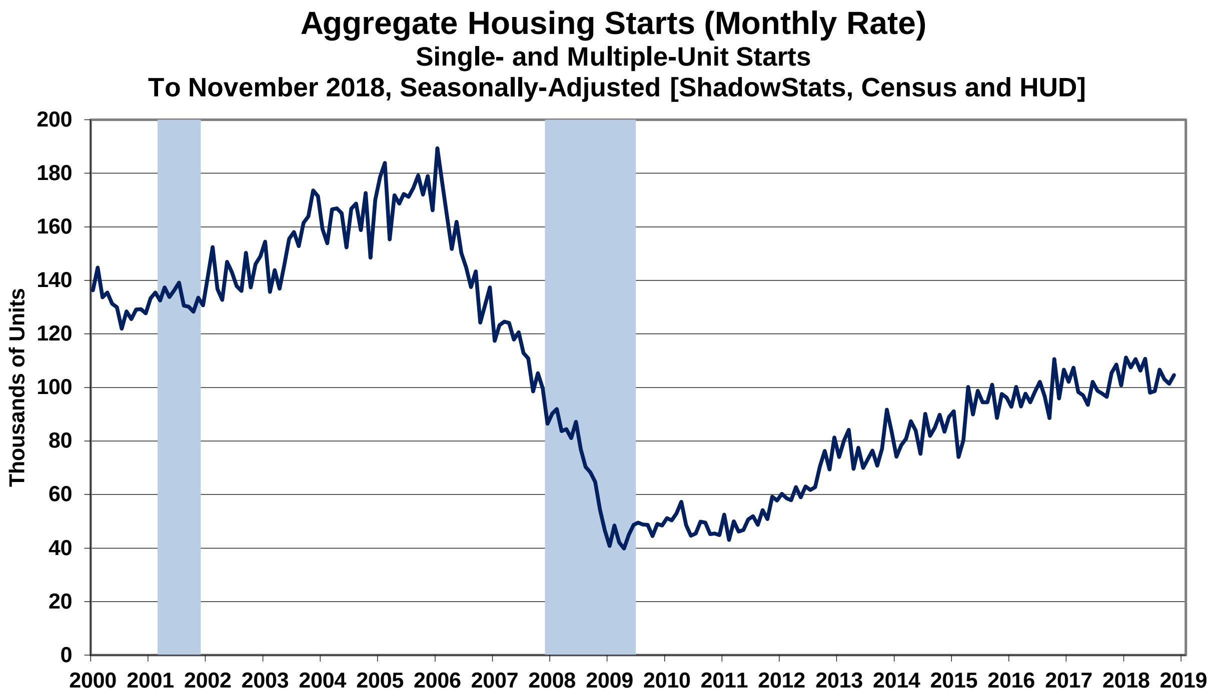
Graph 31: Single- and Multiple-Unit Housing Starts (Monthly Rate of Activity, January 2000 to November 2018)



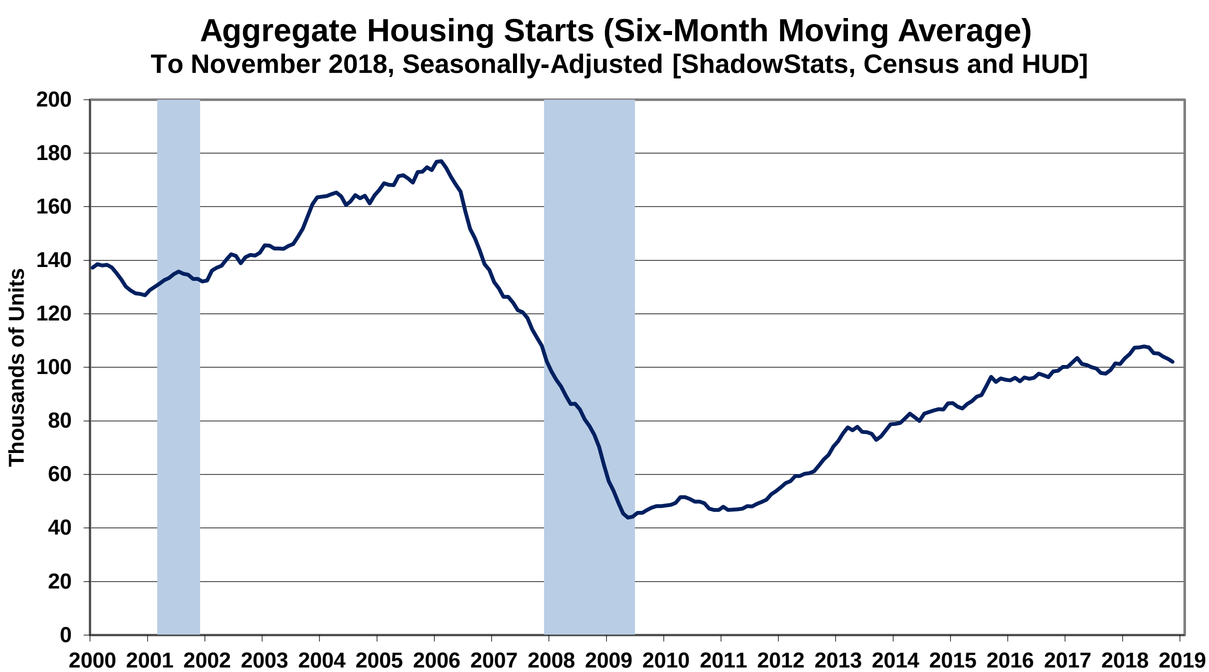
Graph 32: Single- and Multiple-Unit Starts (Six-Month Moving Average, Monthly Rate of Activity)



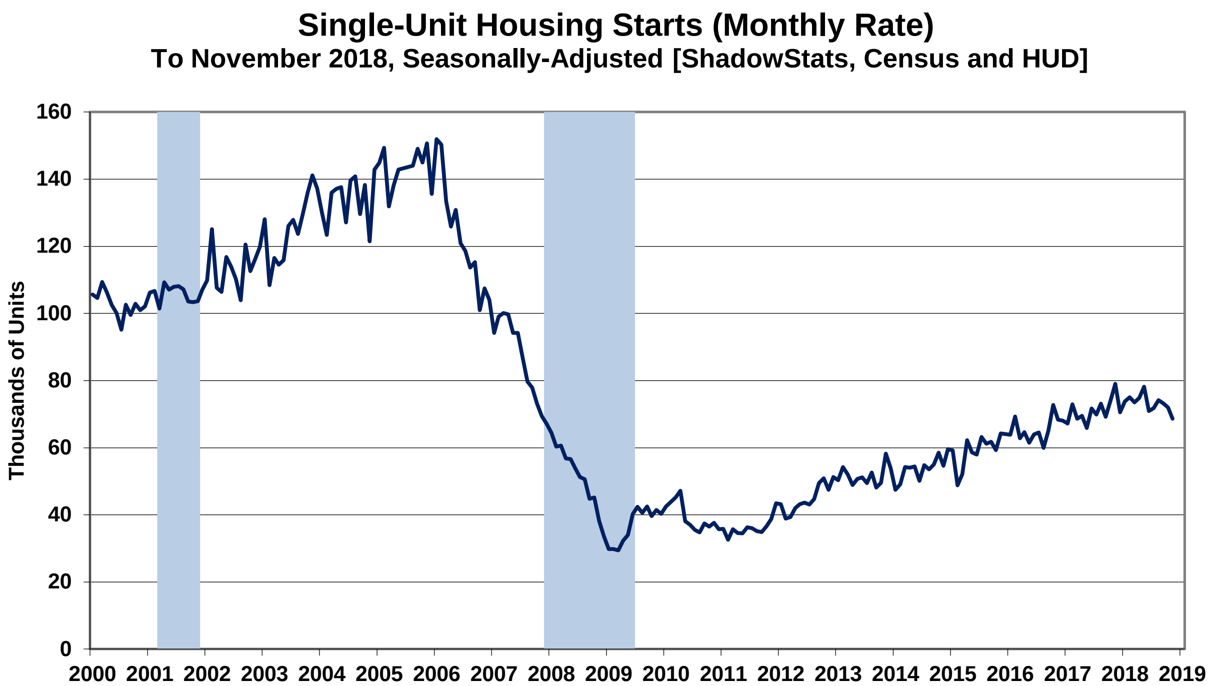
Graph 33: Aggregate Housing Starts (Monthly Rate of Activity, January 2000 to November 2018)



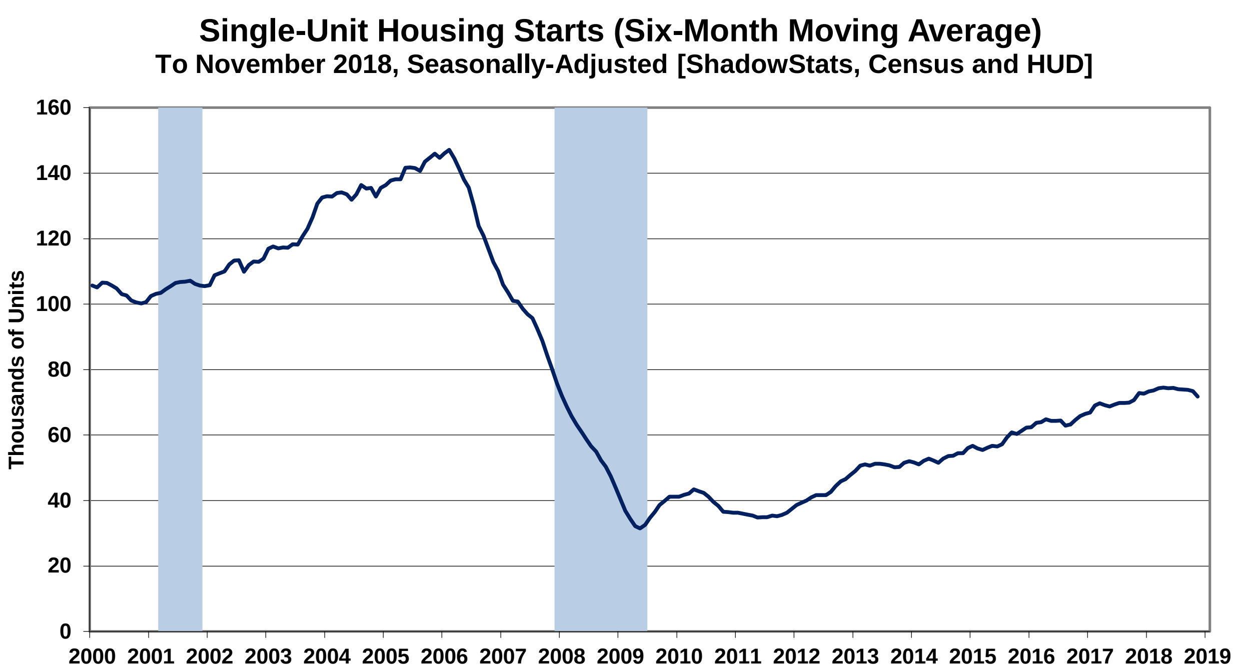
Graph 34: Aggregate Housing Starts (Six-Month Moving Average, Monthly Rate of Activity)



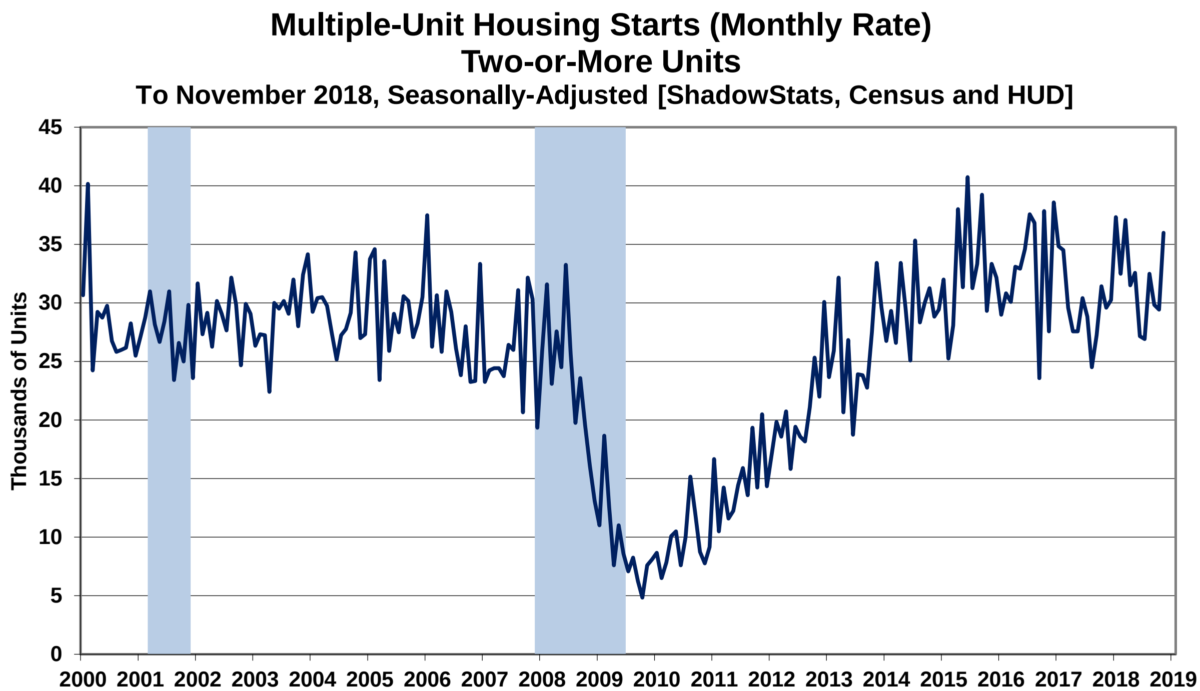
Graph 35: Single-Unit Housing Starts (Monthly Rate of Activity, 2000 to November 2018)



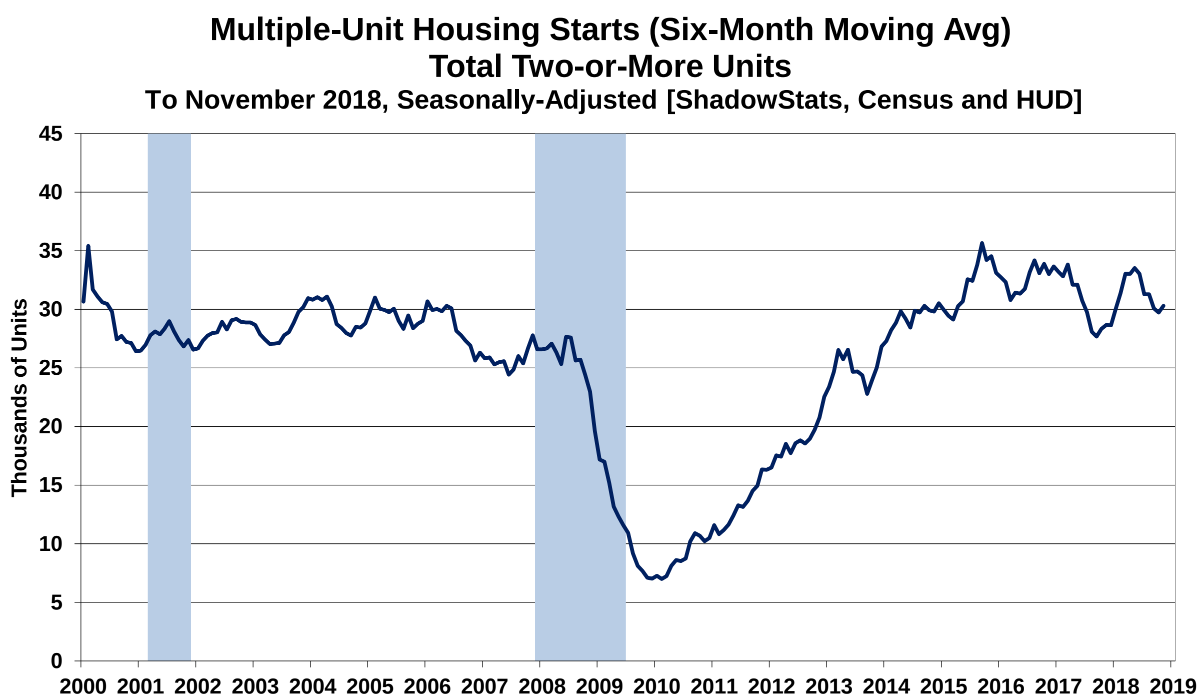
Graph 36: Single-Unit Housing Starts (Six-Month Moving Average, Monthly Rate of Activity)



Graph 37: Multiple-Unit Housing Starts, Two-or-More Units (Monthly Rate of Activity, 2000 to November 2018)



Graph 38: 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 1,256,000 in November 2018, up from a revised 1,217,000 [previously 1,228,000] in October 2018. The scaling used in the aggregate historical Housing Starts and Building Permits *Graphs 39* to *44* (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 104,667 units in November 2018, instead of the annualized headline level of 1,256,000 units, is used in the scaling (monthly units in thousands) of the preceding *Graphs 31* to *38,* 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 33* and *Graph 40*.

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 November 2018 headline monthly number was up by 163%, but it still was down by 45% (-45%) from recovering the January 2006 pre-recession high.

Shown in the historical perspective of the post-World War II era, current aggregate-starts activity is in downtrending 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 43* and *44* at the end of this *New Residential Construction* section. In fact, as can be seen there in *Graph 44*, 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, down-trending stagnation, non-recovery and non-expansion.

All the headline November 2018 six-month smoothed trends are in continuing, deepening downtrends, across-the-board for Housing Starts (both Single- and Multiple-Unit Starts) and Building Permits. In like manner, each of those series contracted quarter-to-quarter for third-quarter 2018, with Building Permits activity down at an annualized pace of 13.0% (-13.0%), Aggregate Housing Starts down at an annualized 8.3% (-8.3%), Single-Unit Housing Starts down at an annualized 8.2% (-8.2%) and Multiple Unit Starts (2-or-More) down at an annualized 8.5% (-8.5%).

Separately, those downtrending and contracting New Construction series, showed November 2018 Building Permits activity down by 41.3% (-41.3%) from recovering its pre-recession peak (see *Graphs 39* and *41*). Similarly, aggregate Housing Starts (see *Graphs 33* and *34*) was down by 44.7% (-44.7%), with Single-Unit Starts (*Graphs 35* and *36*) down by 54.8% (-54.8%).

Multiple-Unit Starts (*Graphs 37* and *38*) 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 has fallen off sharply, again, with November 2018 total Multiple-Unit Starts now down 21.6% (-21.6%) from its pre-recession peak on a monthly basis. Seen in *Graph 38*, however, on a smoothed six-month moving average basis, while Multiple-Unit Starts is holding at a level around its pre-recession peak, it also is downtrending.

In the context of continuing broad weakness in the aggregate November 2018 housing-starts detail (in both single-unit and multiple-unit starts), the six-month smoothed, moving averages of these series, as seen in *Graphs 32*, *34, 36* and *38* now are in continually deepening downtrends. Again, current levels of headline monthly activity still hold well below pre-recession peaks for the various series, with the exception of the smoothed multiple-units category.

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. Again, that largely had remained flat in the last several years, in ongoing, low-level stagnation; intensifying downtrends have unfolded (see accompanying *Graphs 39* to *44* of the Building Permits and Housing Starts series). Again, also see *Graphs 33* to *38*, covering the Housing Starts component series.

Building Permits. The generally more-stable but sometimes inconsistent Building Permits activity also has seen a broad pattern of non-recovery. The statistically significant headline, monthly gain of 5.0% +/- 1.9%, and the statistically insignificant headline annual gain of 0.4% +/- 2.0% in November 2018, both followed minimal upside revisions to October 2018, down by a revised 0.4% (-0.4%) [previously 0.6% (-0.6%)] month-to-month, and down by 5.8% (-5.8%) [previously by 6.0% (-6.0%)] year-to-year.

November 2018 activity was down by 3.6% (-3.6%) from the March 2018 recent post-recession peak, and still shy by 41.3% (-41.3%) of recovering its pre-recession high. All confidence intervals expressed here are at the 95% level, unless indicated otherwise. 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, usually with annual breaks around benchmarkings. That said, Permits do tend to lead the Starts, smoothed over time.***

The size and nature of the permits sampling base is revised frequently, without offsetting adjustments to the historical data, as discussed in *Commentary No. 950*. That is why ShadowStats concentrates on the more-consistent Housing Starts series, despite its extreme month-to-month volatility and frequent, massive monthly revisions. Recent headline monthly declines in Permits have generated a downtrend in the otherwise the broadly stagnant six-month moving average of that series (see *Graph 41*), with some parallel movement seen in *Graph 42* of the six-month smoothed Housing Starts series.

Annualized Third-Quarter 2018 Contraction in Housing Starts Narrowed to 8.3% (-8.3%) in Revision, versus an Unrevised 16.0% (-16.0%) in Second-Quarter 2018. In this highly volatile and unstable series of recent years, the 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 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%, but with a year-to-year gain of just 0.5%.

First quarter 2018, annualized quarterly growth slowed to 19.6%, with annual growth up to 7.2%. Second quarter activity showed an annualized quarterly contraction of 16.0% (-16.0%), with an annual gain of 7.7%, followed by an revised reporting of an annualized contraction of 8.3% (-8.3%) [previously 10.9% (-10.9%), initially 13.0% (-13.0%)] in third-quarter 2018, up year-to-year by 5.3% [previously 4.5%, initially 3.9%].

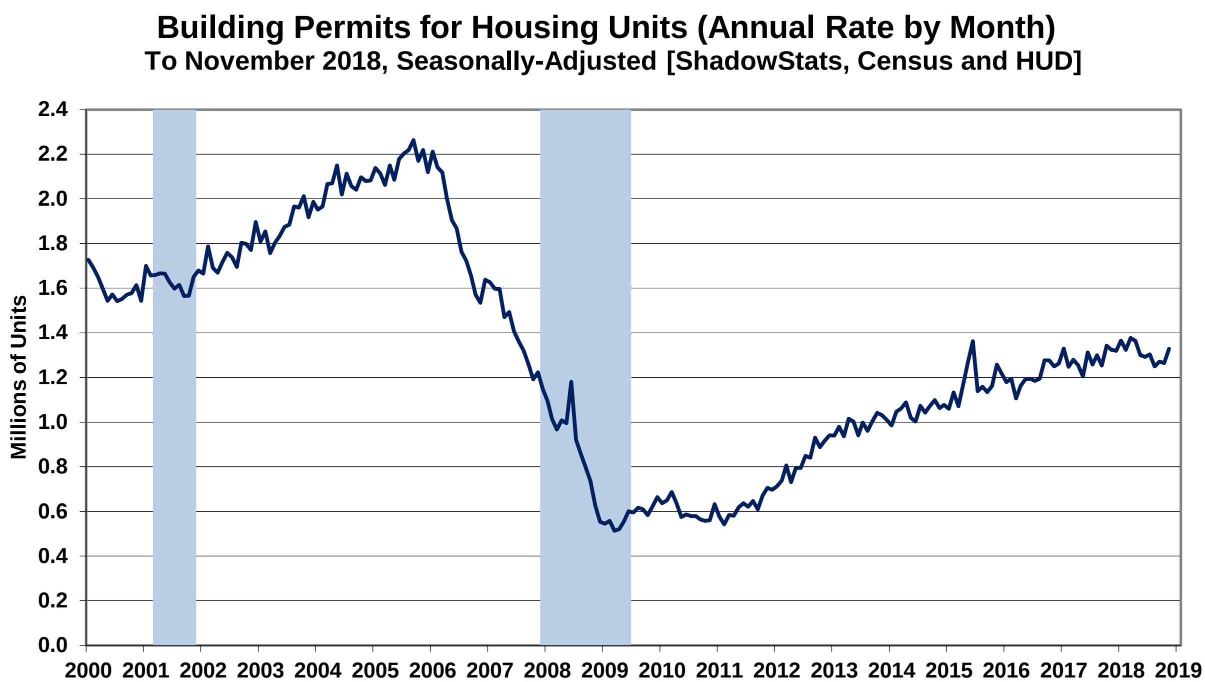
Building Permits. In comparison/contrast, Building Permits (the theoretically-leading series to Housing Starts) showed an annualized quarterly gain of 7.4% in first-quarter 2017 (earlier numbers are not consistent, as discussed in *Commentary No. 950*), with year-to-year change of 10.8%. Second-quarter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

First-Quarter 2018, annualized quarterly growth was 8.3%, up by 5.4% year-to-year. Second-quarter 2018 showed an annualized quarterly contraction of 10.3% (-10.3%), up year-to-year by 4.9%. Third-quarter activity showed an unrevised estimate of an annualized contraction of 13.0% (-13.0%) with an annual gain of 0.3%.

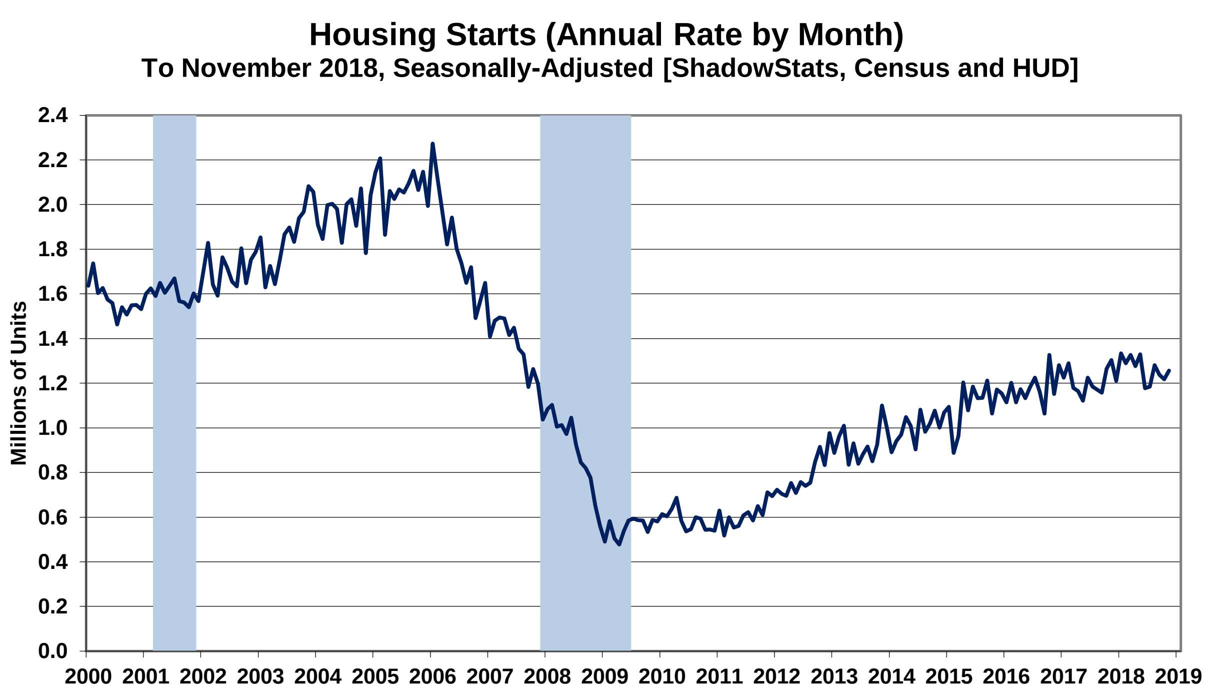
[Graphs 39 to 44 begin on the next page.]

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

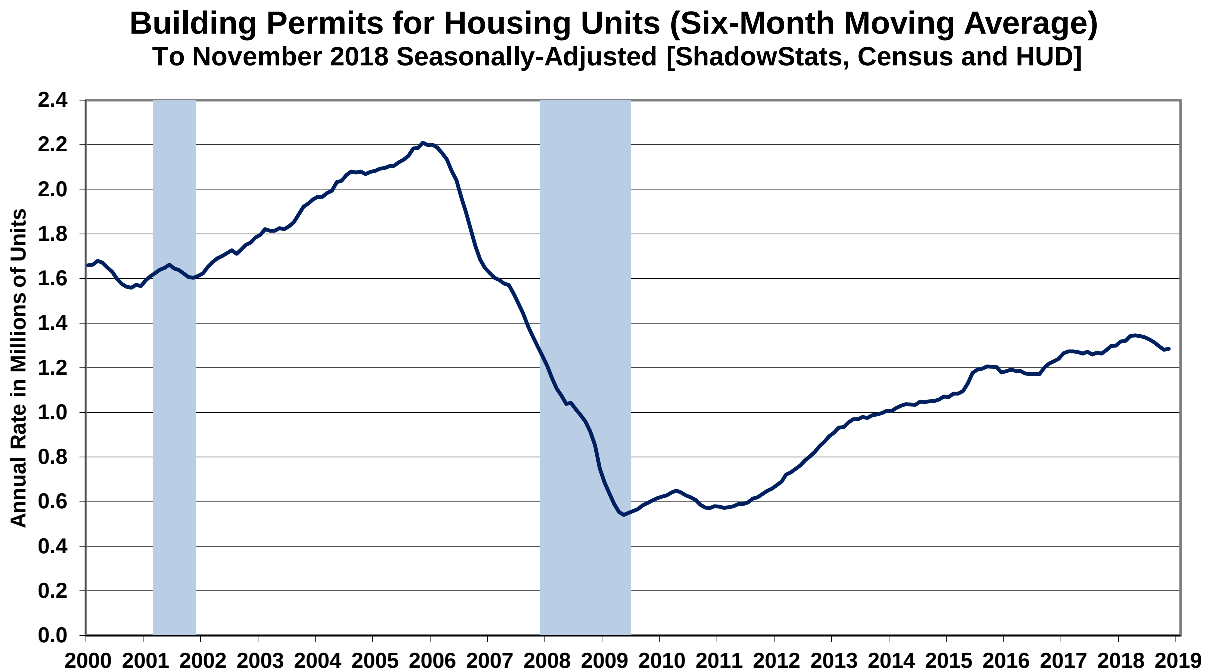
Graph 39: Building Permits (Annualized Monthly Rate of Activity), 2000 to Date



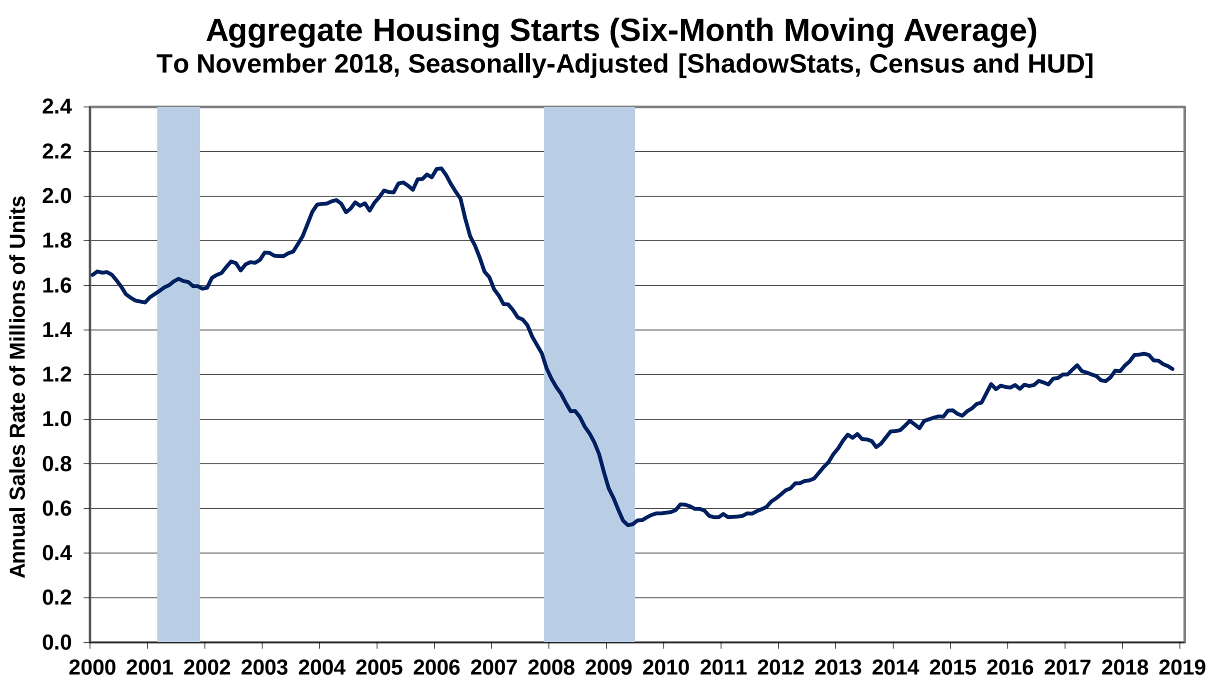
Graph 40: Housing Starts (Annualized Monthly Rate of Activity), 2000 to Date



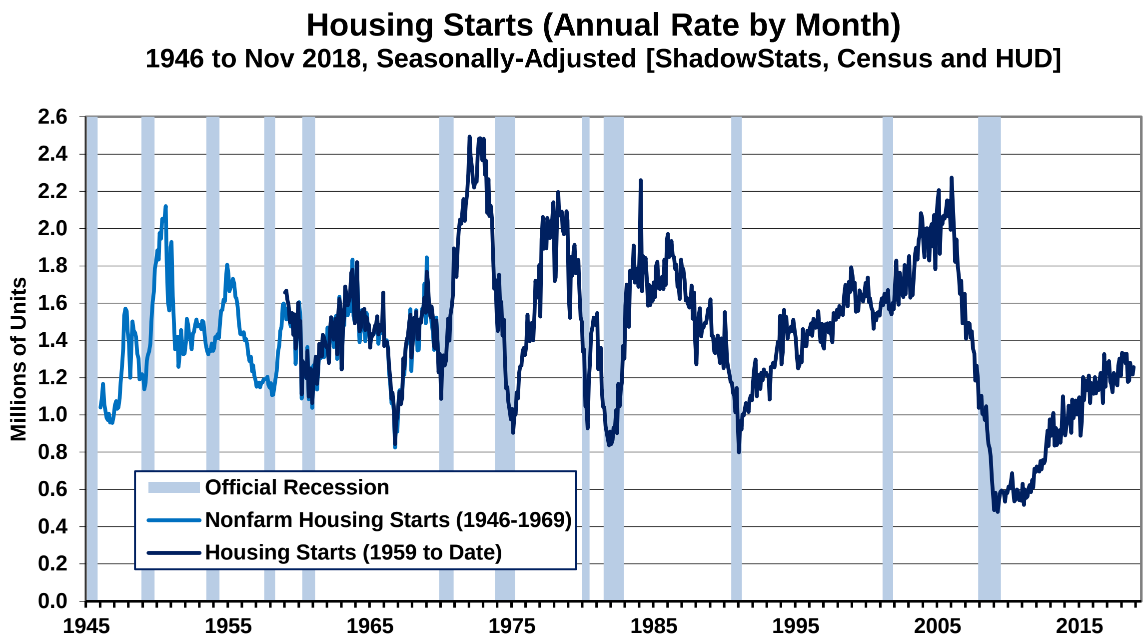
Graph 41: Building Permits (Six-Month Moving Average), 2000 to Date



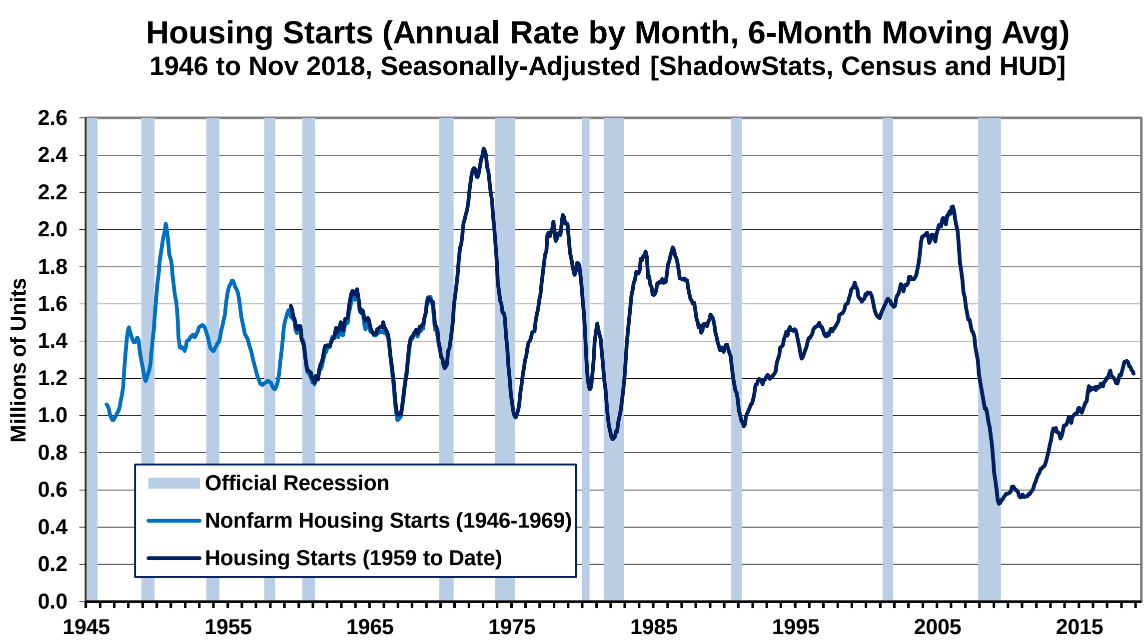
Graph 42: Housing Starts (Six-Month Moving Average), 2000 to Date



Graph 43: Housing Starts (Annualized Monthly Rate of Activity), 1946 to Date



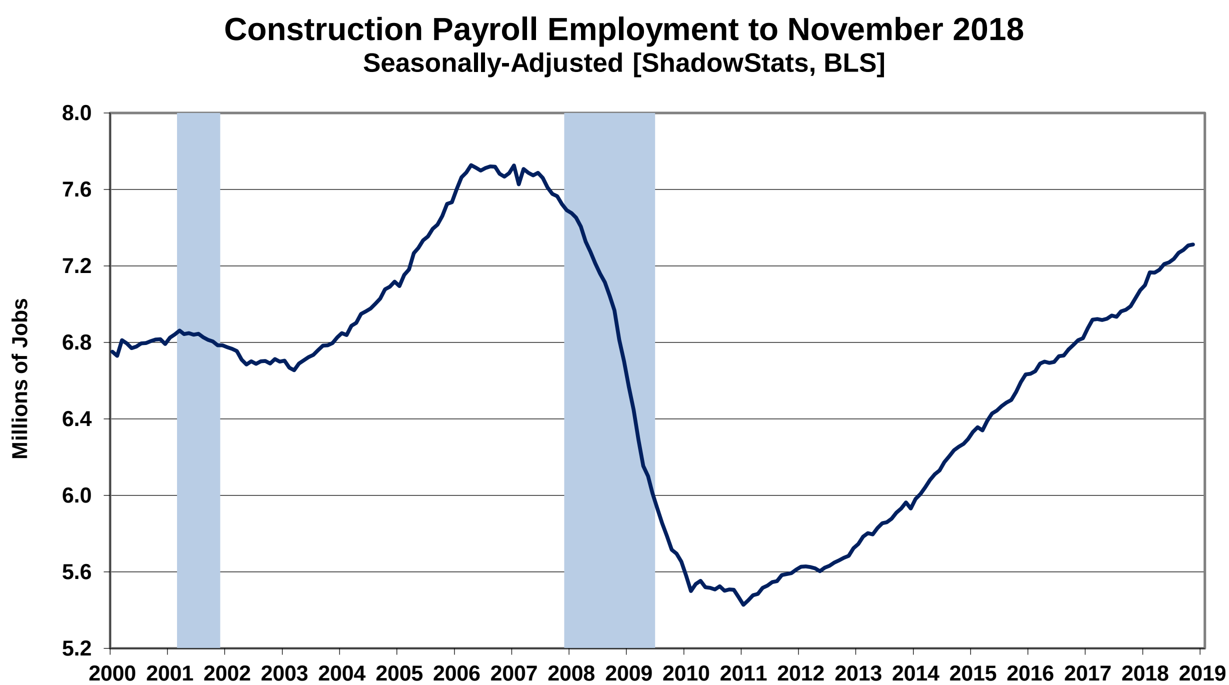
Graph 44: Housing Starts (Annualized Monthly Rate of Activity, 6-Mo Moving Avg), 1946 to Date



November Construction Employment Revised Lower, Shy by 5.4% (-5.4%) of Its Pre-Recession Peak. Supplemental to the November 2018 New Residential Construction reporting, consider the latest Construction Industry jobs survey was released along with the headline November 2018 payroll employment reporting (see *Commentary No. 979*). Construction payrolls rose by a headline 0.07% in the month to 7,312,000, but that was a decline of 0.08% (-0.08%) net of a downside revision to October activity, which was on top of a downside revision to September payrolls. Such has become a repetitive pattern with recent construction employment reporting.

Headline November construction jobs rose by 5,000, following downwardly revised gains of 24,000 [previously 30,000] in October, and 15,000 [previously 20,000, initially 23,000] in August. Headline, unadjusted annual growth slowed to 3.89% (its weakest showing since January 2018), versus an unrevised 4.43% in October 2018 and a revised 4.17% [previously 4.14%, initially 4.18%] in September 2018. Construction Jobs in November 2018 still were shy by 408,000 (-408,000), or by 5.42% (-5.42%) of full recovery to pre-recession levels.

Graph 45: Construction Payroll Employment (2000 to Date)



Existing- and New-Home Sales (November/October 2018)

November Existing-Home Sales Gained for the Second Straight Month, but Continued in a Deepening Plunge Year-to-Year and in a Still-Deepening Smoothed Six-Month Downtrend. In a positive turn, November 2018 Existing-Home Sales (National Association of Realtors) saw a second consecutive month-to-month gain for the first time since March 2018, up by 1.9% November, versus 1.4% in October. That said, the series continued in a deepening six-month smoothed trend. November

2018 year-to-year sales declined for the ninth straight month, down by 7.0% (-7.0%), the steepest annual drop since 2011, versus year-to-year declines of 5.1% (-5.1%) in October 2018 and 4.1% (-4.1%) in September 2018. Aggregate sales for the trailing twelve months through November 2018 were down year-to-year by 2.6% (-2.6%), versus a 1.8% (-1.8%) annual decline for the trailing twelve months of sales through October 2018.

The Existing-Homes Sales smoothed six-month moving downtrend continued to deepen (see *Graphs*), despite the monthly upticks in October and November activity, with the moving average at its lowest level since May 2016.

Shown in *Graph 46*, November 2017 Existing-Home Sales was close to the highest level of the post-2006 revamped series (blue line), but shy of its pre-recession peak in the original series (red line). In November 2018 reporting, the series held shy by 26.8% (-26.8%) of recovering its pre-recession high. That said, smoothed for six-month moving averages, the Existing-Home Sales series had been in uptrending stagnation into 2017. That shifted to a fluttering, relatively-flat trend that now clearly has been a non-recovering downtrend for the last eight months, since April 2018, as reflected in *Graph 48*.

In terms of the trailing 12-months of sales, for the year-ended November 2018, Existing-Home Sales were down by a deepening 2.56% (-2.56%) from the year-ended November 2017. That was the eighth consecutive trailing 12-month period in deepening contraction, against its parallel year-ago pattern.

Quarterly Change. Third-quarter 2018, Existing-Homes Sales contracted at an annualized quarterly pace of 9.95% (-9.95%), versus contractions of 6.61% (-6.61%) in second-quarter 2018 and 6.06% (-6.06%) in first-quarter 2018. Those followed natural-disaster disrupted periods of an annualized quarterly gain of 14.82% in fourth-quarter 2017 and a quarterly contraction of 9.94% (-9.94%) in third-quarter 2017, with a pre-hurricanes drop of 3.97% (-3.97%) in second-quarter 2017.

Distressed Sales Dropped to 2.0% of Total Sales, With November All-Cash Sales Easing to 21%. In the context of mounting consumer liquidity constraints, the NAR estimated the portion of November 2018 sales in "distress" at 2%, down from 3% (2% in foreclosure, 1% short sales) in October 2018, and down from 4% (3% in foreclosure, 1% short sales) in November 2017. While such set the new "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 (see *Consumer Liquidity Watch No. 5*), as well as possibly some ongoing influx of speculative investment money into the existing-housing market, the NAR estimated all-cash sales declined to 21% of transactions in November 2018, down from 23% of transactions in October 2018, up from 22% in November 2017.

October New-Home Sales Plunged to a 31-Month Low, in a Deepening Downtrend, Holding in Contraction for a Second Consecutive Quarter, on Track for a Third Consecutive Contraction. *[Please note: the Census Bureau planned of release November 2018 New-Home Sales on Thursday, December 27th was delayed by the partial shutdown of the Federal Government and has not been rescheduled. Accordingly, detail from the October 2018 release (Commentary No. 978 – Part II) is* *repeated here for comparison purposes, with updated graph numbers. Updated November detail will follow in the first ShadowStats missive subsequent to the eventual data release.*

October 2018 New-Home Sales contracted sharply, as measured month-to-month and year-to-year, in a deepening six-month downtrend holding in a second consecutive quarter-to-quarter contraction, on early track for a third consecutive quarterly contraction . Such confirmed similar broad patterns of activity seen across-the-board for Existing-Home Sales and New Residential Construction—Building Permits and Housing Starts, and as confirmed as a third-consecutive quarterly contraction in the first revision to third-quarter 2018 Private Residential Investment component of third-quarter Gross Domestic Product [reflected here in *Graph 50,* there have been two successive downside revisions to this GDP measure, as discussed in the later GDP section in this *Reporting Detail* and as shown there in *Table III*].

As usual, headline monthly numbers were highly volatile, with no statistically meaningful changes in aggregate monthly or annual data. Against consensus expectations for a month-to-month gain, and on top of upside revisions to prior reporting, the headline monthly decline of 8.9% (-8.9%) in October 2018 was a drop of 1.6% (-1.6%) net of revisions. Year-to-year sales fell by 12.0% (-12.0%), having declined year-to-year by a revised 6.8% (-6.8%) [previously 13.2% (-13.2%)] in September 2018.

Of substance, was the continued deepening six-month downtrend, and consecutive quarter-to-quarter contractions in sales activity, discussed shortly. The major unfolding issue remains constraint on demand, reflecting intensified consumer liquidity stresses. Liquidity issues have been exacerbated by the Federal Reserve continuing to raise interest rates in an economy that never fully recovered from the Great Recession. For example, consider that October 2018 New-Home Sales held shy of recovering its pre-recession peak by 60.8% (-60.8%) again see *Consumer Liquidity Watch No. 5* and the opening paragraphs of this broad residential sales and construction section.

October New-Home Sales Continued in an Increasingly Significant, Deepening Six-Month Downtrend. Released November 28th 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) declined month-to-month in October 2018 by a statistically-insignificant 8.9% (-8.9%) +/- 16.0% (all confidence intervals are expressed at the 95% level, as detailed in the *New Residential Construction* section of *Commentary No. 975*. That followed a revised monthly gain of 1.0% [previously a decline of 5.5% (-5.5%)] in September, a revised decline of 2.5% (-2.5%) [previously 3.0% (-3.0%), initially a gain of 3.5%] in August, and an unrevised revised decline of 1.0% (-1.0%) in July, as reflected in *Graph 47* and as contrasted with September Existing-Home Sales, plotted in *Graph 46*.

Where headline October 2018 activity for the New-Home Sales remained shy of its pre-recession peak by 60.8% (-60.8%), this series also has continued in a deepening downtrend, smoothed with a six-month moving average, as reflected in *Graph 49*, accompanied by *Graph 50* of the GDP's Real Residential Investment, plotted quarterly through third-quarter 2018

Annual Change. The year-to-year change in October 2018 New-Home Sales was a statistically-insignificant decline of 12.0% (-12.0%) +/- 15.3%, versus a revised decline of 6.3% (-6.3%) [previously down by 13.2% (-13.2%)] in September 2018 and a revised annual gains of 5.9% [previously 4.5%, initially 12.7%] in August 2018, 9.0% [previously 8.5%, 9.4%, initially 12.8%] in July 2018 and an unrevised decline of 0.6% (-0.6%) in June 2018.

<u>Quarterly Change.</u> Reflecting increasingly negative and unstable monthly and quarterly swings, Fourth-Quarter 2017 activity surged at an unrevised annualized pace of 58.9%, with First-Quarter 2018 showing a gain of 0.4% and Second-Quarter 2018 showing an revised annualized contraction of 13.5% (-13.5%). Based just on still-unstable detail for July, August and September 2018, the second reporting of third-quarter 2018 was for an annualized quarterly contraction of 20.2% (-20.2%) [initially 29.2% (-29.2%)].

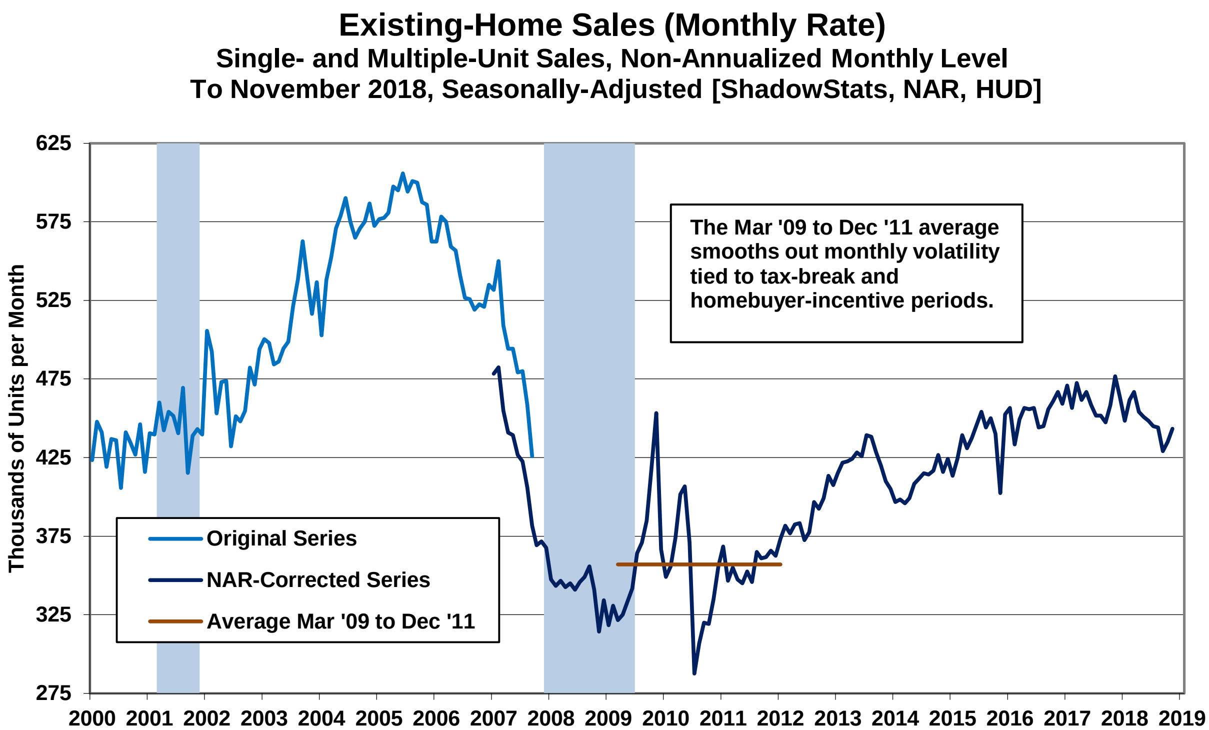
Graphs of Existing- and New-Home Sales versus Real GDP Residential Investment. *Graphs 47* and *49* plot New-Home Sales, versus comparative *Graphs 35* and *36* of the Single Unit Housing Starts series in the *New Residential Construction* section. Both series cover single -unit activity, while *Graphs 46* and *48* plot Existing-Home Sales, versus comparative *Graphs 33* and *34* of the Housing Starts series in the *New Residential Construction* section. Both series cover single and multiple-unit activity.

As introduced in *Commentary No. 976*, *Graph 50* of GDP Residential Investment (through the third and final estimate of third-quarter 2018) is comparable with the regular plot of six-month smoothed moving averages of Existing- and New-Home Sales in *Graphs 48* and *49*.

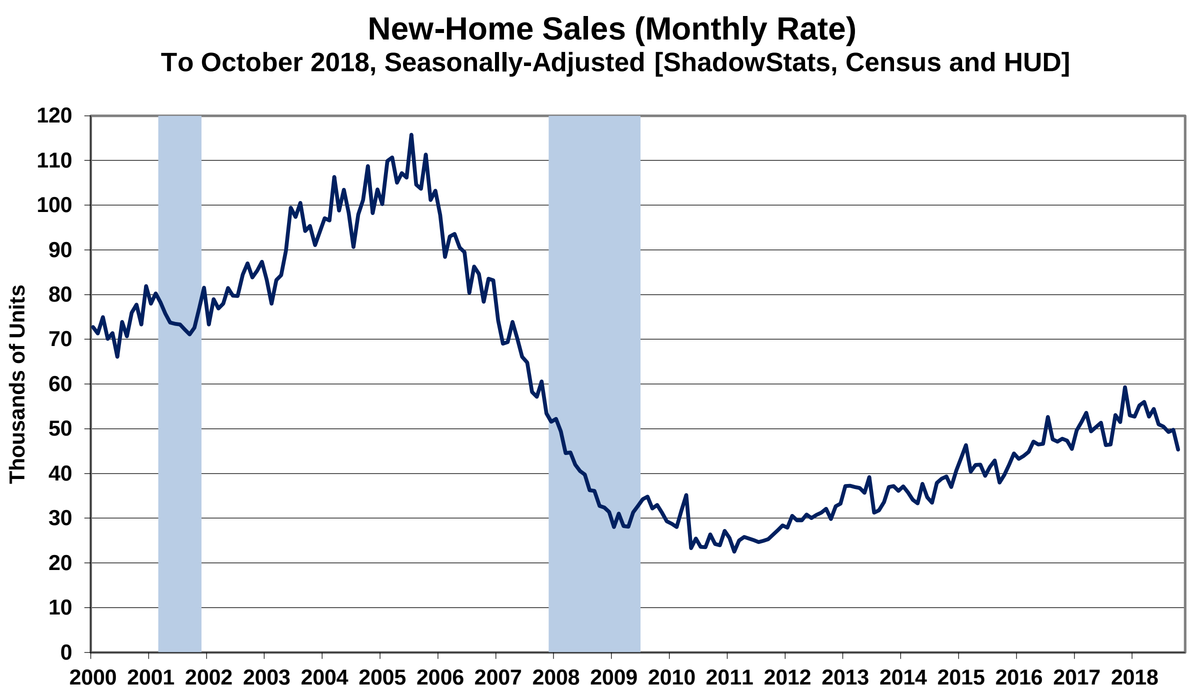
Where the second estimate of third-quarter GDP showed a real annualized quarterly contraction in Residential Investment of 2.56% (-2.56%) versus a second quarter contraction of 1.34% (-1.34%), the third and "final" estimate revised the third-quarter's annualized contraction to a deeper 3.56% (-3.56%). This circumstance broadly reflects continued weakening and downside revisions to residential construction and sales, along with parallel weakening the driving force of consumer liquidity.

[Graphs 46 to 50 begin on the next page.]

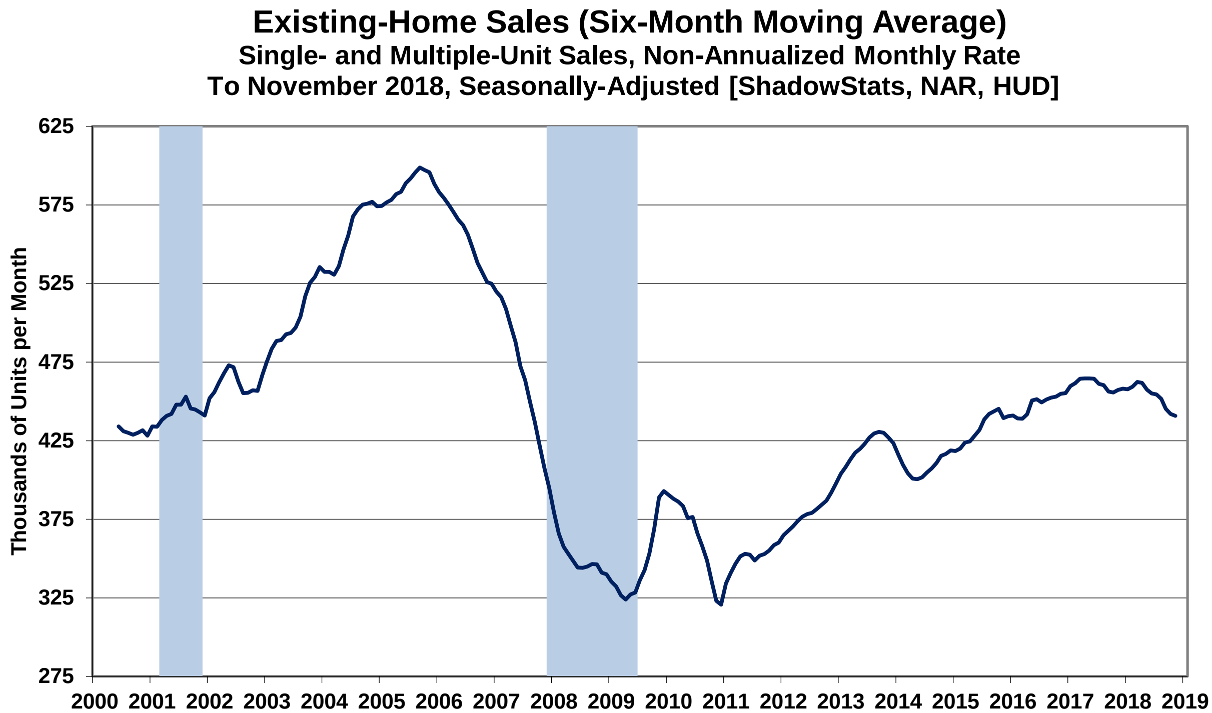
Graph 46: Existing-Home Sales (Monthly Rate of Activity)



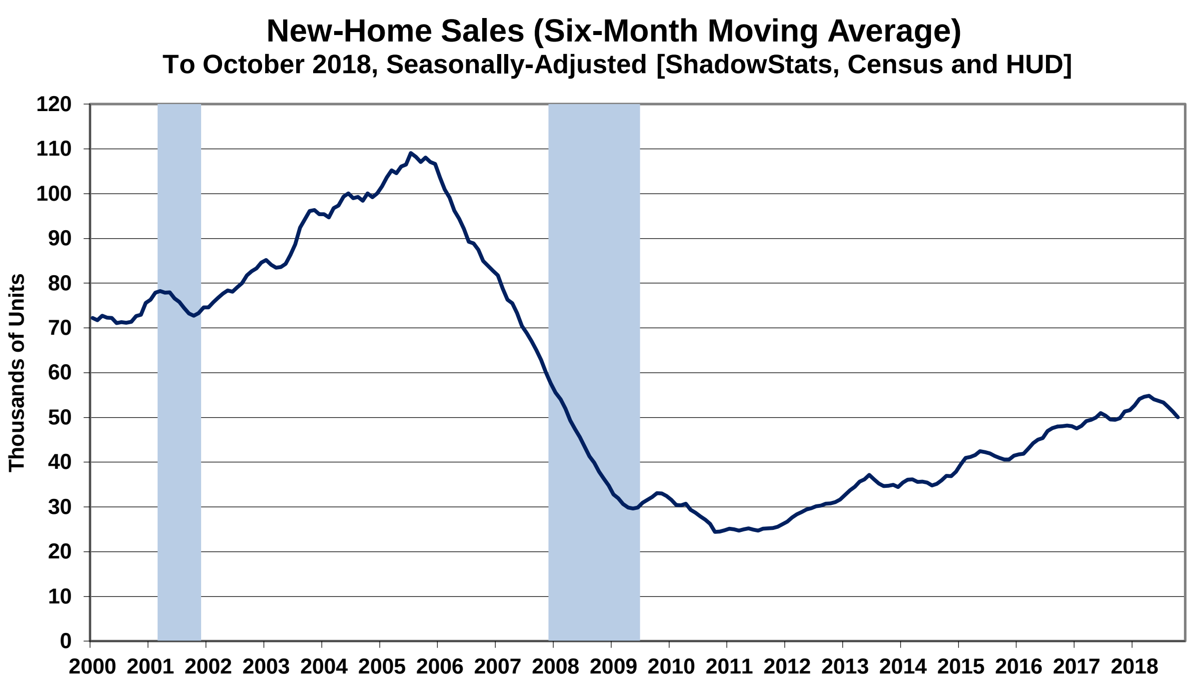
Graph 47: New-Home Sales (Monthly Rate of Activity)



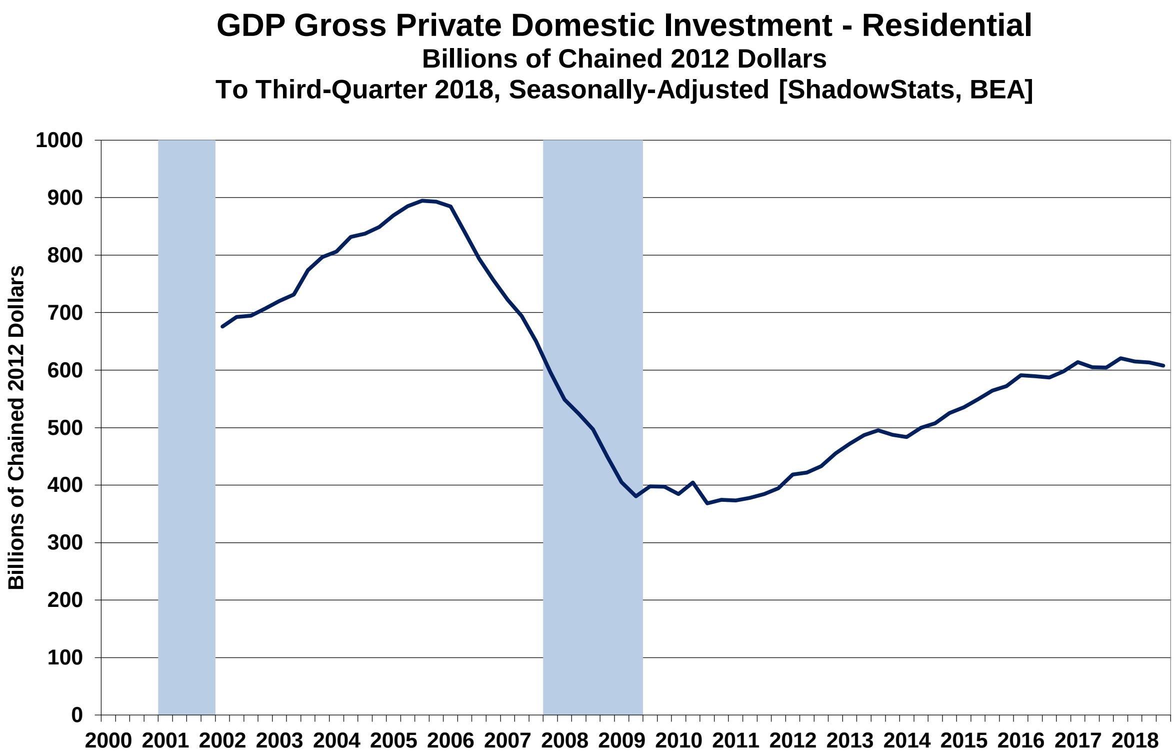
Graph 48: Existing-Home Sales (Six-Month Moving Average)



Graph 49: New-Home Sales (Six-Month Moving Average)



Graph 50: Gross Domestic Product – Real Residential Investment (1q2002 to Final 3q2018)



New Orders for Durable Goods (November 2018)

Real New Orders for Durable Goods, Ex-Commercial Aircraft Rose by 0.41% in November 2018. Released Friday December 21st by the Census Bureau (Census), aggregate November New Orders for Durable Goods, in nominal terms, before inflation adjustment, and before consideration for the extreme, irregular volatility in Commercial Aircraft orders, rose in the month by a weaker-than-expected 0.76%, versus a revised , monthly plunge of 4.32% (-4.32%) [previously down by 4.42% (-4.42%)] in October 2018. The last couple months have seen extreme monthly volatility in aggregate new orders, tied to defense and defense aircraft orders. With activity in defense orders stabilized, the analysis here has shifted back to aggregate new orders for durable gods, both with and ex-commercial aircraft, as ShadowStats usually does, as well as net of inflation

With headline New Orders for Durable Goods up by 0.76%, net of related monthly Durable Goods PPI inflation, that was a real gain of monthly 0.64%. Net of irregular Commercial Aircraft orders, that was a nominal monthly gain of 0.52%, and a real gain of 0.41%, a detailed in *Table II* and as plotted in in *Graphs 51* to *53.*

Separately, Separately, suggestive of intensifying consumer-liquidity pressures, seasonally-adjusted November 2018 nominal new orders for and shipments of motor vehicles declined month-to-month respectively by 0.2% (-0.2%) and by 0.3% (-0.3%).

Real Durable Goods Orders—November 2018. ShadowStats uses the Producer Price Index (PPI) component inflation measure "Durable Manufactured Goods" for deflating the new orders for durable goods series. Published only on a not-seasonally-adjusted basis, the related November 2018 PPI series (2009 = 100) showed headline month-to-month inflation of 0.11% in November 2018, versus 0.29%, in October, 0.17% in September, 0.11% August, 0.23% in July, 0.29% in June, 0.46% in May, 0.35% in April, 0.41% in March, 0.35% in February and a 0.41% gain in January. Related year-to-year annual inflation was 3.30% in November 2018, versus 3.24% in October, 3.31% in September 2018, 3.25% in August 2018, 3.20% in July 2018, 2.90% in June 2018, 2.66% in May 2018, 2.19% in April 2018, 2.08% in March 2018, 1.84% in February 2018 and 1.79% in January 2018 (see the *Producer Price Index* section earlier in this *Reporting Detail*).

Table II summarizes the current monthly new orders numbers in aggregate, and net of the regularly volatile aircraft orders, both before and after inflation, as the aggregate numbers begin to return to a sense of month-to-month stability, as presented here, by category and inflation–adjusted or not-inflation-adjusted status. ShadowStats is considering a couple of approaches to separating out the accounting for the one-shot defense orders extreme volatility.

Table II: Summary Detail of November 2018 New Orders for Durable Goods

Table II: New Orders for Durable Goods (November 2018 Reporting)					
Month	Nominal Millions of Current Dollars			Real Millions of Constant 2009 Dollars	
	Total New Orders	Commercial Aircraft	Ex-Commercial Aircraft	Total New Orders	Ex-Commercial Aircraft
Sep 18	**260.178**	**13.391**	**246.787**	**231.749**	**219.821**
Oct 18	**248.939**	**9.545**	**239.394**	**221.106**	**212.628**
Nov 18	**250.827**	**10.189**	**240.638**	**222.529**	**213.489**
	Percent Change			Percent Change	
	Mo/Mo	**Mo/Mo**	**Mo/Mo**	**Mo/Mo**	**Mo/Mo**
Sep 18	**-0.02%**	**-19.07%**	**1.28%**	**-0.19%**	**1.10%**
Oct 18	**-4.32%**	**-28.72%**	**-3.00%**	**-4.59%**	**-3.27%**
Nov 18	**0.76%**	**6.75%**	**0.52%**	**0.64%**	**0.41%**
Prior M/M					
Sep 18	-0.08%	-19.27%	1.22%	-0.25%	1.05%
Oct 18	-4.42%	-21.40%	-3.50%	-4.69%	-3.78%
	Yr/Yr		**Yr/Yr**	**Yr/Yr**	**Yr/Yr**
Sep 18	**7.07%**		**7.85%**	**3.64%**	**4.39%**
Oct 18	**6.83%**		**7.88%**	**3.48%**	**4.50%**
Nov 18	**5.29%**		**7.41%**	**1.93%**	**3.98%**
Prior Y/Y					
Sep 18	7.00%		7.79%	3.57%	4.34%
Oct 18	6.65%		7.26%	3.31%	3.90%
Sources: Commerce Department, BLS, ShadowStats.com					

New Orders, Production and North American Freight Activity and Broad Domestic Economic Activity. ShadowStats concentrates on the inflation-adjusted real New Orders for Durable Goods series, ex-commercial aircraft, as a leading indicator to the dominant Manufacturing sector of Industrial Production, as well as its relationship with the CASS Freight Index™, a key private-sector indicator of broad activity. Those relationships are highlighted in today's *Opening Comments* (see *Graphs OC-1* to *OC-8*).

Graphs of Inflation-Adjusted and Smoothed Durable Goods Orders and Recent Benchmark Revisions. The headline November 2018 New Orders for Durable Goods of December 21st and accompanying revisions all were in the broad context of prior, meaningful, downside annual benchmark revisions (through March 2018) of May 17, 2018, discussed primarily in *Commentary No. 951* and *Commentary No. 950*. Intervening headline monthly details for April to September 2018 were discussed in *Commentary No. 957*, *Commentary No. 961*, *Commentary No. 967*, *Commentary No. 971* and *Commentary No. 976*, with the November details updated in *Graphs 51* and *52*.

In the context of those benchmark revisions, *Graphs 58* and *59* show the current headline monthly detail, as well as the six-month moving-average activity for both the aggregate new orders series and the same series net of the irregularly-volatile commercial-aircraft orders. The broad pattern of smoothed, real activity generally has remained at a low-level of non-recovered, but uptrending stagnation.

The moving-average levels in *Graphs 51* and *52* turned lower into year-end 2014, and after an uptick in mid-2015—some smoothed bounce-back—the trend turned down anew into late fourth-quarter 2015, with continued minor fluttering into third-quarter 2016, and initially a small uptick in fourth-quarter 2016. Activity continued on the upside into 2017 and 2018, although softened by the downside benchmark revisions (again, see *Graphs 58* and *59*). Starting with August and September of 2017, however, broad orders activity was spiked temporarily by natural-disaster recovery, a pattern that largely had passed in early 2018, but that could be returning a bit, in the wake of September 2018 hurricane damage, despite weakening orders driven by intensifying liquidity issues.

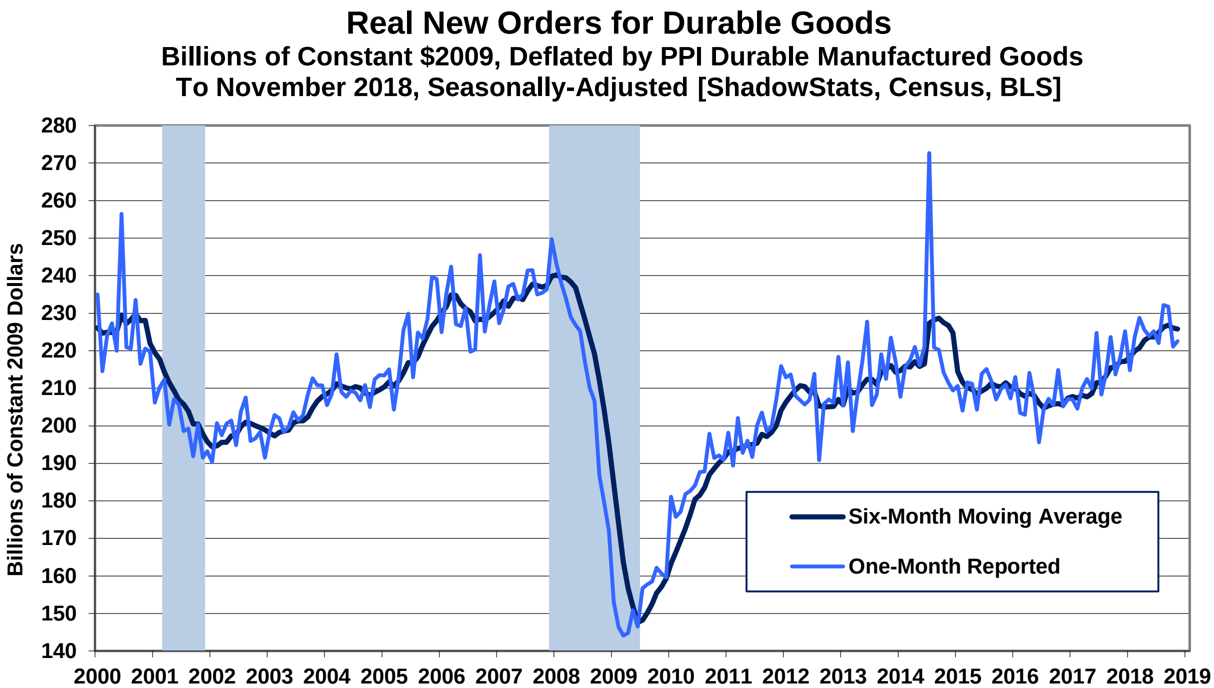
Three sets of inflation-adjusted graphs (*Graphs 51* to *53*, *Graphs 54* and *55*, and *Graphs 56* and *57*) follow. The first set shows the headline monthly detail, as well as the six-month moving-average activity for both the aggregate new orders series and the series net of irregular commercial-aircraft orders. It also shows annual growth for the real series (net of commercial aircraft). The moving-average levels in both the durable goods series (*Graphs 51* and *52*) had turned lower into year-end 2014 and the first two quarters of 2015, with some smoothed bounce-back into third-quarter 2015, followed by renewed downturn into 2016 with a late-year uptick continuing into March 2017, which largely was revised away with the May 2017 benchmarking. Along with a period of uptrending stagnation, boosted by disaster recovery, the same pattern of growth and downside benchmark revision largely was repeated through May 2018, as can be seen in *Graphs 58* and *59.*

The second set of graphs (*Graphs 54* and *55*) shows the patterns of six-month moving averages of historical, headline real new orders for durable goods (net of official inflation), as well as that pattern "corrected" for understatement of that inflation (and for the corresponding overstatement of official, inflation-adjusted growth). The third set of graphs (*Graphs 56* and *57*) shows largely the same patterns, although they are for the aggregate durable goods orders series, net of commercial aircraft orders.

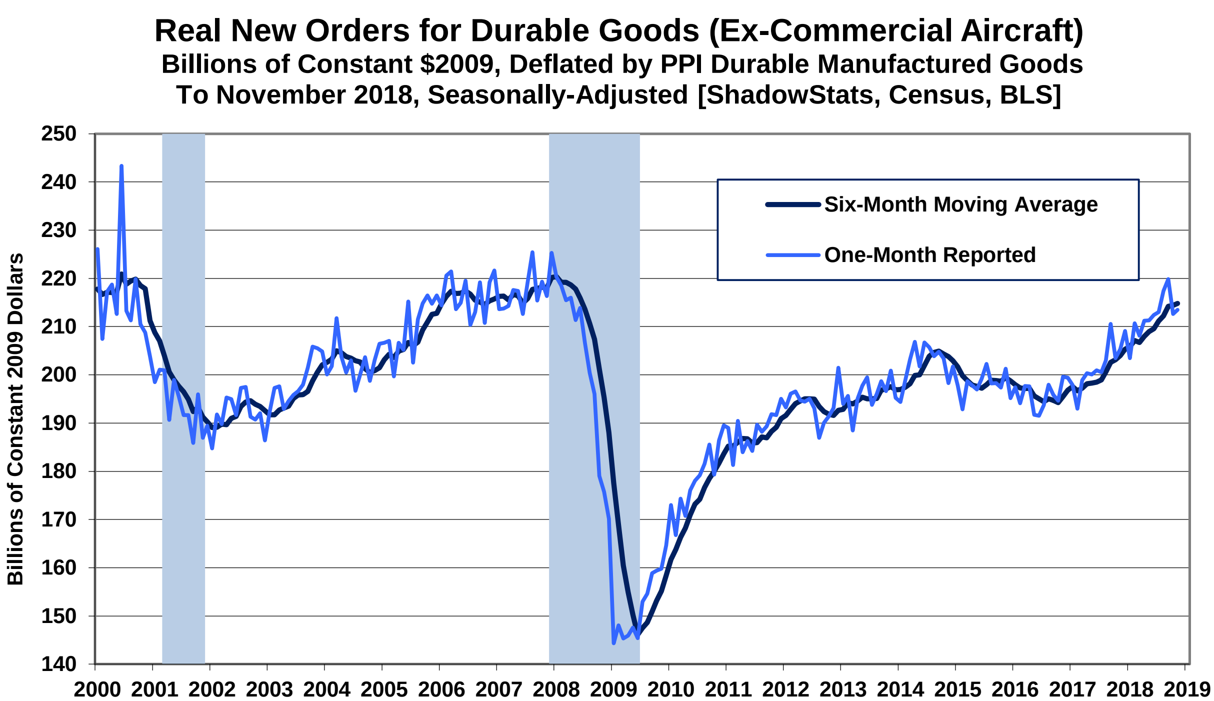
Broad Patterns of New Orders Activity. There has been a general pattern of stagnation or bottom-bouncing evident in the orders of recent years—clearly not the booming recovery seen in official GDP reporting. The real monthly and six-month moving-average levels of new orders in September 2018 remained below both the pre-2007 recession high, as well as the pre-2000 recession high for the series. The pattern of low-level stagnation and fluctuating trend in the annual inflation-adjusted series since mid-2014—net of the irregular aircraft-order effects—again is one that most commonly precedes and/or coincides with a recession or non-economic expansion, as is the current circumstance. These series remain in non-recovered, non-expanding, low-level, albeit uptrending stagnation (see the *Opening Comments* of *Commentary No. 966*).

Headline New Orders Detail, Aggregate and Ex-Commercial Aircraft

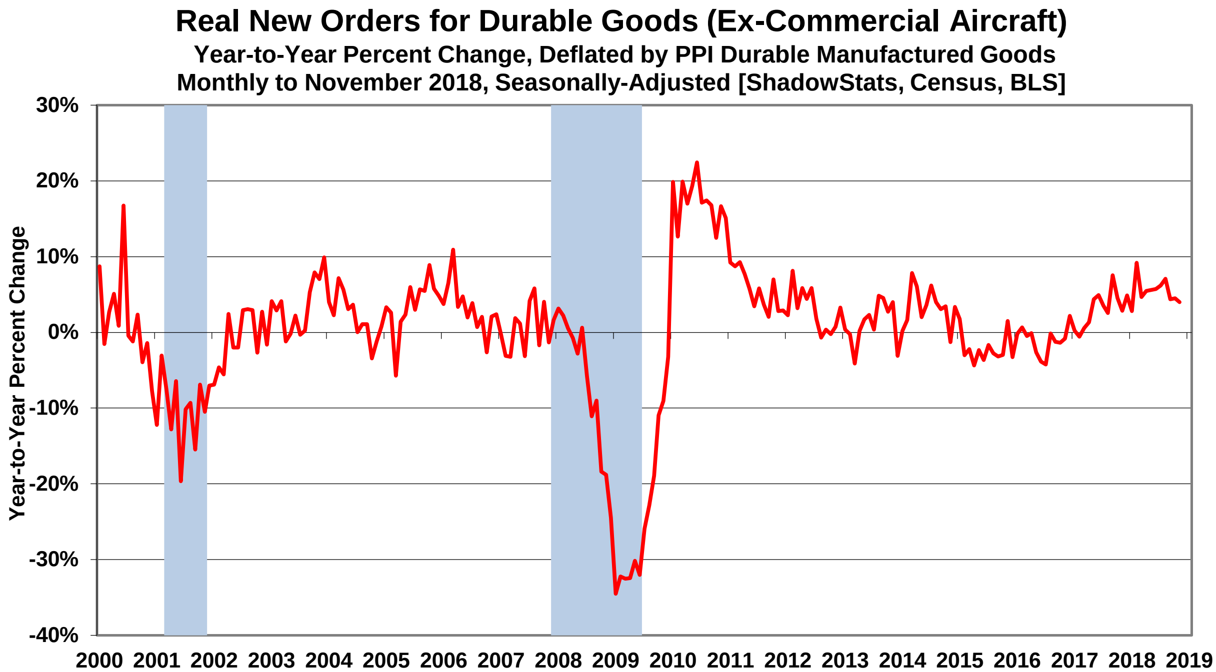
Graph 51: Real Total New Orders for Durable Goods to Date



Graph 52: Real New Orders for Durable Goods – Ex-Commercial-Aircraft Orders to Date



Graph 53: Yr-to-Yr % Change, Real New Orders for Durable Goods – Ex-Commercial Aircraft (2000 to Date)
(Same as Graph OC-6 in the Opening Comments)



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

As done for other series such as Retail Sales and Industrial Production and the GDP (see the related comments (accompanying *Graph 2*) in the Retail Sales section earlier in this *Reporting Detail*, ShadowStats publishes an experimental, corrected-inflation version of the graph of real New Orders for Durable Goods. Real activity, in this case, is corrected for the understatement of the inflation used in deflating the new orders series with the headline PPI inflation for manufactured durable goods. For consistency all the "corrected-inflation" series and their accompanying headline counterparts are indexed to January 2000 = 100. The indexing does not affect the appearance of the graph or reported growth rates.

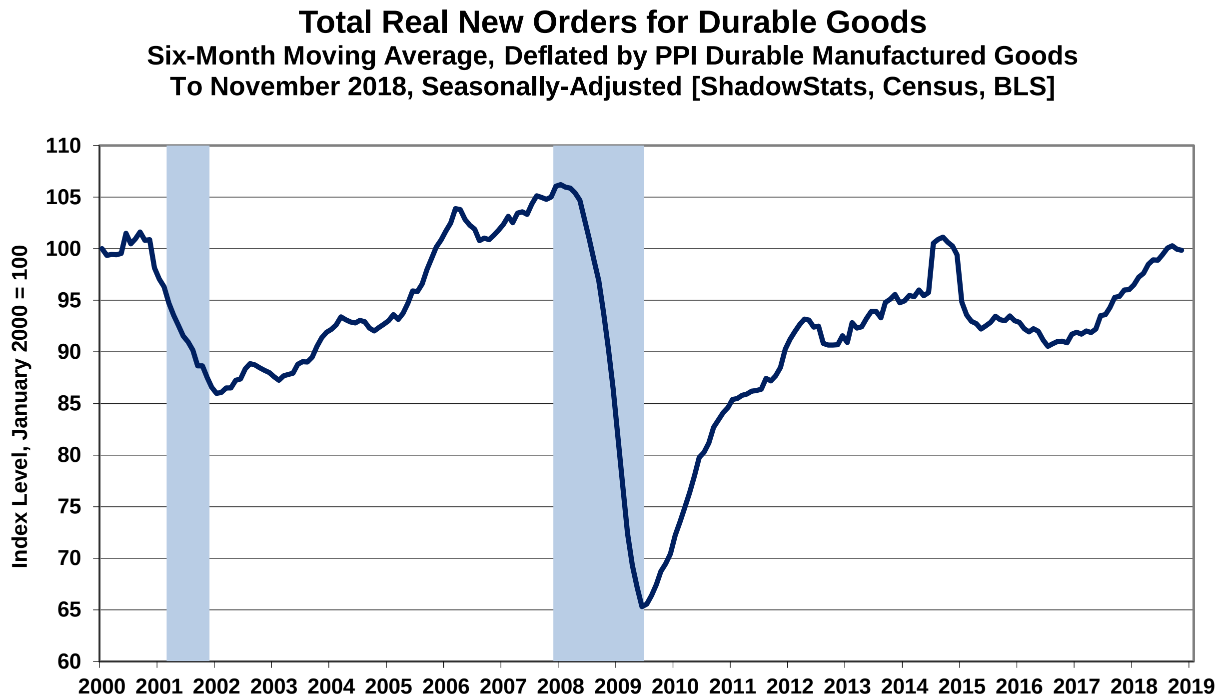
Two sets of graphs follow. The first set (*Graph 54* and *Graph 55*) shows the aggregate series or total durable goods orders; the second set (*Graph 56* and *Graph 57*) shows the ex-commercial aircraft series. The aggregate orders series in *Graphs 54* and *55* includes the monthly commercial aircraft orders. Placed years in advance, aircraft orders are a better indicator of long-range production activity, than they are as a near-term leading indicator of production activity. Again, *Graphs 56* and *57* are shown net of those volatile commercial aircraft orders.

The first graph in each of the two sets shows the official six-month moving average, the same heavy dark-blue line shown in *Graph 51* and *Graph 52*, along with the light-blue thin line of monthly detail. The second graph in each set is the same six-month, moving-average series shown in the first graph, but it has been re-deflated to correct for the ShadowStats estimate of the understatement of the PPI manufactured durable goods inflation measure used in the headline-deflation process. Again, the "corrected" graphs all are indexed to January 2000 = 100.

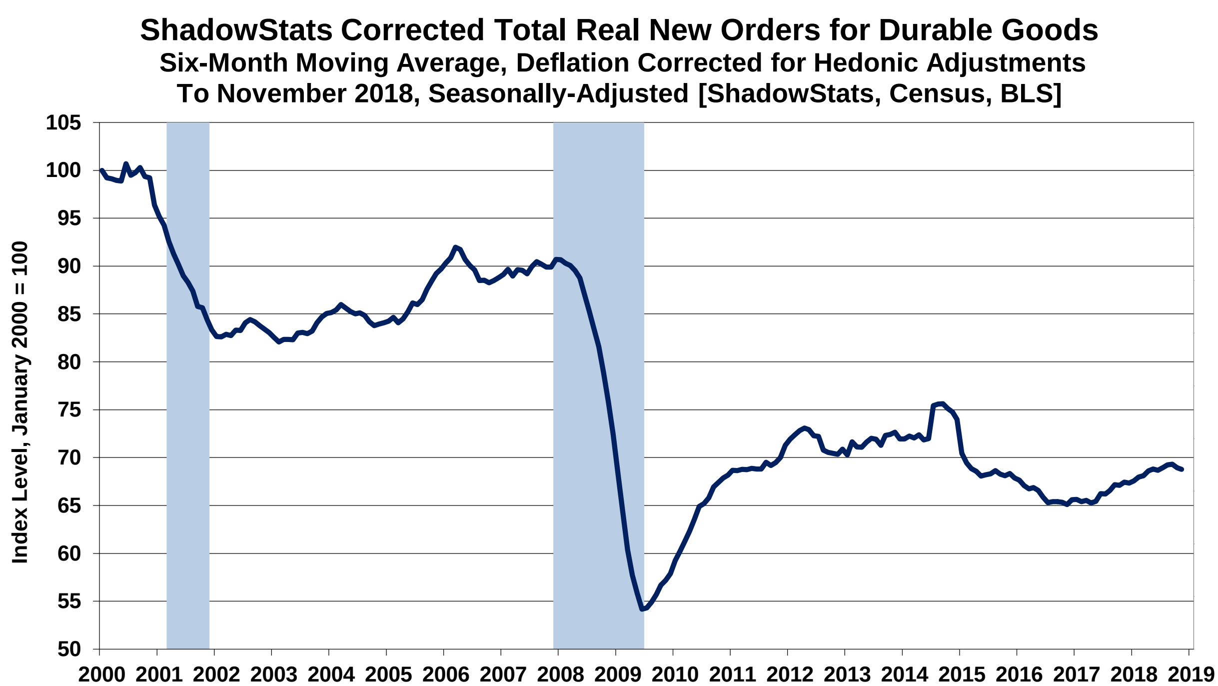
[Graphs 54 to 57 begin on the next page.]

Smoothed Real Series and Real Series Corrected for Inflation-Understatement

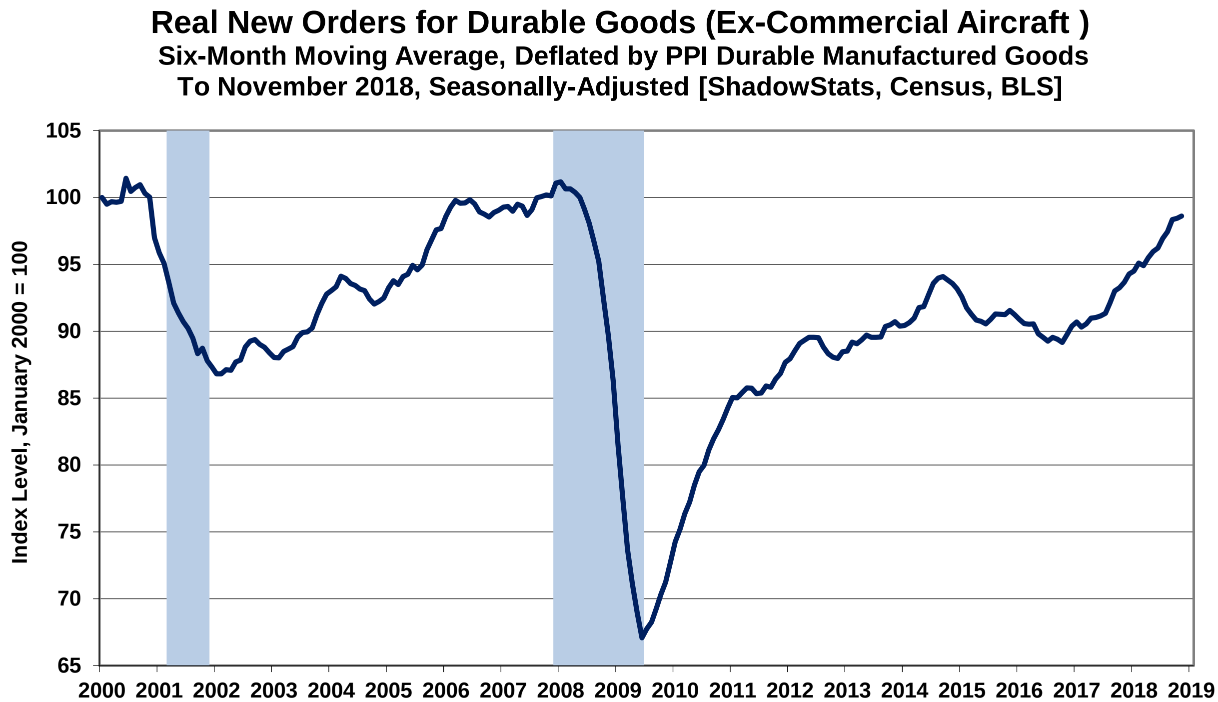
Graph 54: Index of Real Total New Orders for Durable Goods, 6-Month Moving Average



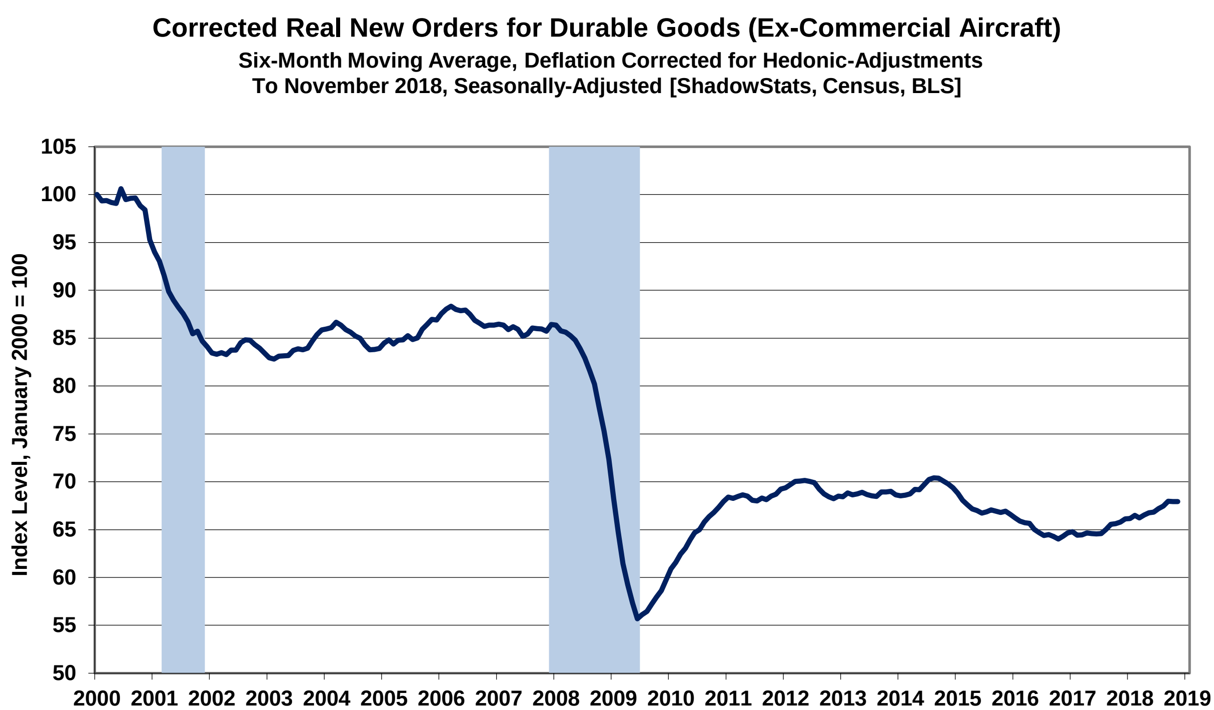
Graph 55: Corrected Index of Real Total New Orders for Durable Goods, 6-Month Moving Average



Graph 56: Index of Durable Goods Orders – Ex-Commercial Aircraft, 6-Month Moving Average



Graph 57: Corrected Index of Durable Goods Orders – Ex-Commercial Aircraft, 6-Month Moving Average



Caution: Beyond Regular Upside Biases Built Into Headline Reporting, Seasonally-Adjusted Month-to-Month Data Simply Are Not Comparable. The Census Bureau published its 2018 annual benchmark revisions to Manufacturers' Shipments, and the subsidiary series New Orders for Durable Goods on May 17th, which broadly were to the downside. They also largely were consistent with major downside revisions to the Industrial Production series in its March 23rd benchmarking and in its unusual monthly revisions of May 16th (see *Commentary No. 951*, *Commentary No. 950* and *Commentary No. 942-B*), and suggestive of some likely parallel hits in the GDP revisions. Yet, there was no clear, parallel impact on the recently-published GDP "comprehensive" benchmark revisions discussed in *GDP Special No. 968*.

This circumstance has been the common experience in economic reporting of recent years and decades. Discussed in *Special Commentary No. 885*, there is a broad upside bias often built into the underlying assumptions that drive the headline reporting of many, widely-followed and politically-sensitive economic series.

As an example of the regular, annual downside restatement of recent activity in the New Orders for Durable Goods series, consider accompanying *Graphs 58* and *59* of both aggregate (*Graph 58*) and ex-commercial aircraft (*Graphs 59*) real new orders for durable goods. The plots reflect the net revisions to the six-month moving averages of those two series for the 2018 benchmarking, as well as for the three prior benchmarkings, along with subsequent reporting through the November 2018 headline detail.

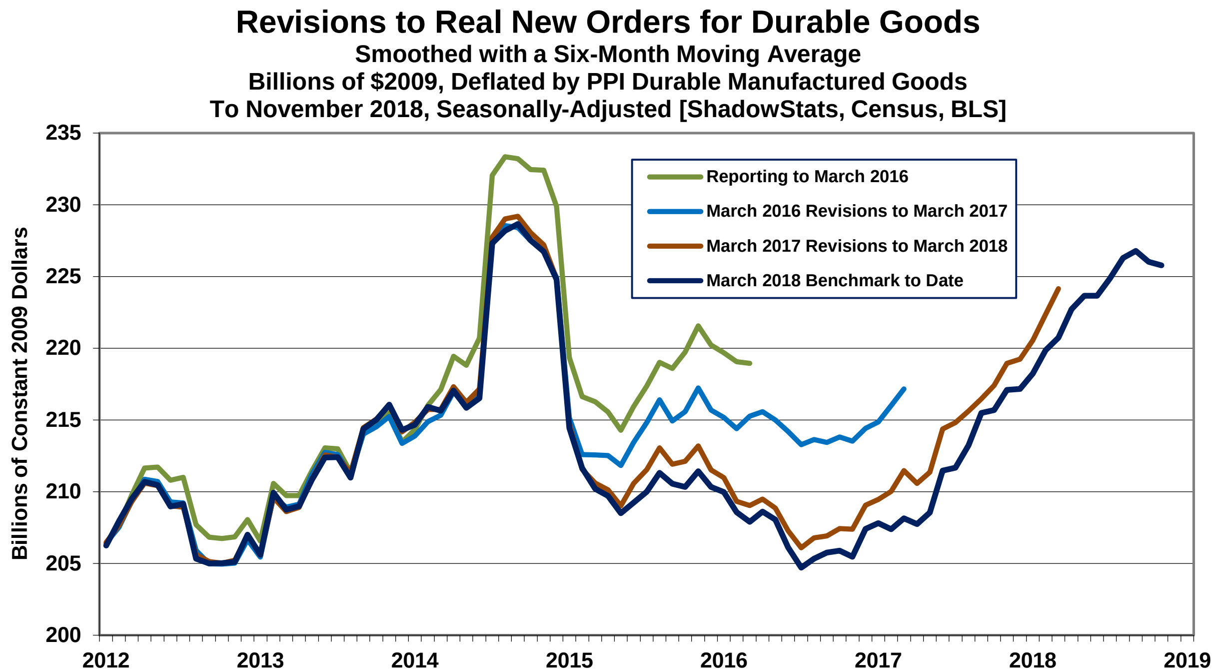
For a substantive review of the last two years of benchmark revisions to New Orders for Durable Goods, and the parent Manufacturers' Shipments series, see *Commentary No. 951*, *Commentary No. 950* and *Special Commentary No. 885*.

Current headline durable-goods reporting remains subject not only to the upwardly-biased sampling assumptions seen in the pre-benchmarking reporting, but also to the concurrent-seasonal-adjustment problems commonly seen with series such as retail sales, and payroll and unemployment reporting. Unusual seasonal-factor volatility raises issues as to the significance of comparing reported seasonally-adjusted changes, be they monthly or quarterly, or on a year-to-year basis. While those issues were brought into balance, for a period of eight days, with the annual benchmark revision to durable goods orders through March 2018 on May 17, 2018 (again see *No. 950*), that consistency ceased with the May 25th release of the headline April 2018 detail.

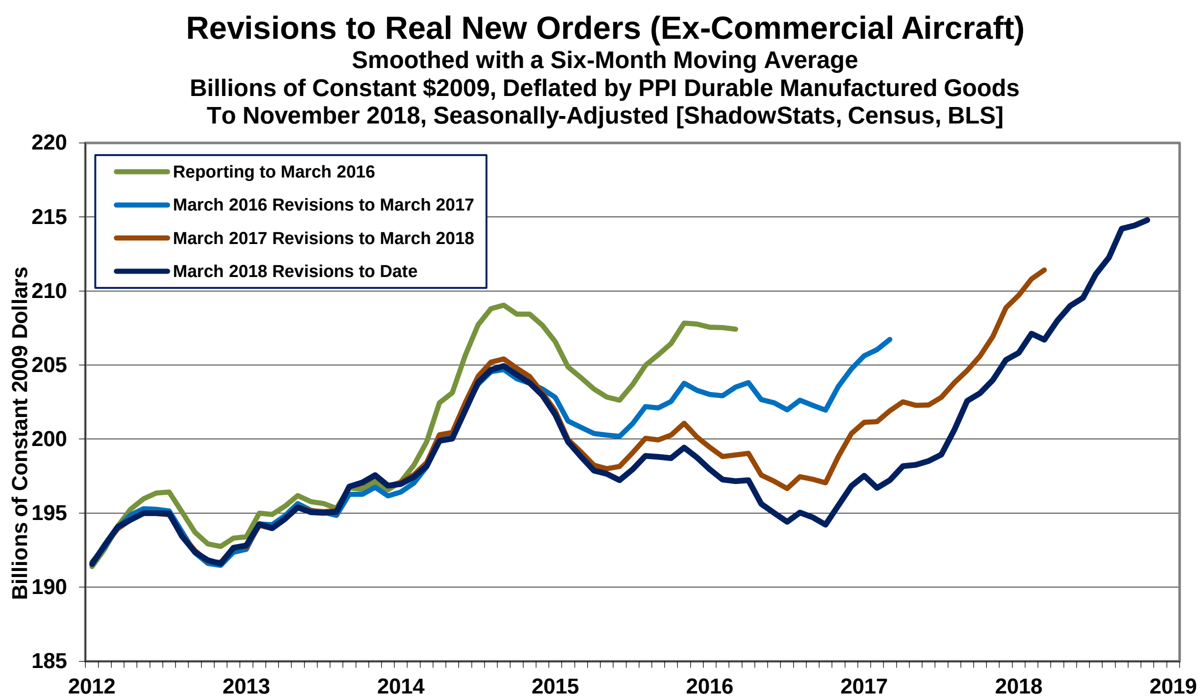
For all monthly reporting from the April 2018 detail until the next annual benchmarking in May 2019, unpublished, monthly historical seasonal-adjustment revisions, calculated along with each new current headline month's detail, and with each month to follow, make the latest detail (November 2018) inconsistent with all the headline historical numbers. (See the related discussion in *Supplemental Labor-Detail Background* in *Commentary No. 979*).

[Graphs 58 and 59 follow on the next page.]

Graph 58: Benchmark Revisions to Real Total New Orders for Durable Goods, Smoothed for 6-Month Moving Avg



Graph 59: Benchmark Revisions to Real Total New Orders for Durable Goods, Ex-Commercial Aircraft



Gross Domestic Product (Third-Quarter 2018, Third Estimate, Second Revision)

Third-Quarter GDP Growth Revised Lower in Its Third Estimate, Reflecting Downside Revisions to Motor Vehicle Sales, Residential Investment and a Widening Revision in the Trade Deficit. Released Friday December 21st by the Bureau of Economic Analysis (BEA), third-quarter 2018 annualized real GDP growth revised lower to 3.36% +/- 2.5% (95% confidence interval), from 3.50% in both its first and second estimates, versus 4.16% in second-quarter 2018. Year-to-year real growth in third-quarter 2018 GDP also revised lower, easing to 3.00% (previously 3.04% in both the first and second estimates), versus 2.87% in second-quarter 2018 and 2.58% in first-quarter 2018 (see *Table III* and *Graphs 65* to *68*). Both the headline annual and quarterly real growth rates for third-quarter 2018 GDP were above their respective 40-year averages of 2.69% and 2.67%.

Summary GNP and GDI Headlines. Third-quarter growth in Gross National Product (GNP), the broadest national income measure, which is GDP net of trade in Factor Income (interest and dividend payments), revised lower to 3.05% from 3.49%, versus 4.04% in second-quarter 2018. That was in the context of a revised, increased deterioration in Net Exports, very specifically a deteriorating balance in Factor Income.

Third-quarter growth in the less-stable Gross Domestic Income (GDI), the theoretical income-side equivalent of the consumption-side GDP, revised higher to 4.26%, from 4.03%, versus 0.87% in second-quarter 2018.

Deteriorating GDP Trends Signaled by Underlying Sales and Production. Despite a consensus outlook for no net revision in the headline GDP, that downside revision had been indicated by downside revisions to earlier September data accompanying the November Retail Sales and Industrial Production releases (see those earlier sections in the *Reporting Detail*). The effects of increasingly severe consumer liquidity problems were reflected in further downside revisions to the residential investment and motor vehicle sales components of the GDP. Given continuing downside revisions to sales and upside revisions to inventories, third-quarter Final Sales (GDP minus Inventory Change) growth revised lower to an annualized 1.03% (previously 1.23%, initially 1.43%), versus 5.33% in second-quarter 2018.

Headline GDP Economic Recovery Not Seen Commonly in Underlying or Related Economic Series. A continuing issue for the headline GDP series remains that the level of real third-quarter 2018 GDP activity revised lower to an 18.4% (previously 18.5%) aggregate gain, or "expansion," against its pre-recession high of fourth-quarter 2007. That magnitude of gain has not been confirmed by any other major economic series, including the various measures of employment activity.

Separately, major components of the broad economy, including the Manufacturing Sector (discussed earlier in the *Industrial Production* section (see page 24 and *Graph 17*) and the Residential Construction sector (discussed on page 50, see *Graph 43*) never have recovered their pre-recession peak levels of economic activity. Consider, again, the Manufacturing Sector has seen 131 straight months of economic non-expansion, so far, the longest period of non-recovery in the 100-year history of the series. That circumstance also is considered along with *Graphs 71* and *72* (also see the *Opening Comments* and the same *Graphs OC-7* and *OC-8*).

The GDP (or the broader GNP detail headlined in earlier decades) remains the most worthless of the popular government economic series, in terms of determining what really is happening to U.S. business activity. The series is the most-heavily-modeled, politically-massaged and gimmicked government indicator of the economy. It has been so since at least the 1960s (see the discussion in *GDP Special No. 968* and *Special Commentary No. 885*)

GDP-Component Revisions Increasingly Were Unstable. Headline third-quarter GDP growth was unrevised in its first revision, second estimate, but eased a bit in its second revision, third estimate, while component activity increasingly shifted meaningfully in both revisions, reflecting ever-weakening consumer conditions, as reflected in *Table III*. With a still even greater build-up in inventories in the third GDP estimate, for example, now accounting for 82.5%, previously 77.1%, initially 70.7%, of the headline quarterly increase in the GDP level. Specifically, third-quarter real growth in Final Sales (GDP net of inventory change) slowed to 1.03%, from 1.23% in the second estimate and versus 1.43% in the initial (Personal Consumption of Motor Vehicles repeatedly was revised lower), and from 5.33% in second-quarter Final Sales.

Also, increasingly negative revisions to and reporting of economic activity related to Residential Investment also is shown in *Table III.*

Separately, the revised quarterly trade deficit deepened sharply, to a new record trade shortfall, while a widening trade deficit in October provided a negative signal for Fourth-Quarter 2018 GDP.

Shortfalls in Real Net Exports and the Real Merchandise Trade Deficit Hit Record Levels. Reflected in *Graphs 60* to *63*) and in *Table III* following them, which details GDP-related quarterly growth contribution (Net Exports only), the real Merchandise Trade Deficit hit its historical nadir in third-quarter 2018, as did the real deficit in the GDP's Net Exports account, both in terms of total Net Exports of Goods and Services, and of total Net Exports of Goods. Services usually generates a small surplus.

The third-quarter 2018 real shortfall in Net Exports widened from a record \$939.0 (-939.0) billion in constant 2012 dollars in its initial estimate, to a new record \$945.8 (-945.8) billion in its second revision, to a still greater record shortfall of \$949.7 (-949.7) billion in its third revision. That was enough to alter its initial contribution to headline real third-quarter 2018 GDP growth from a negative 1.78% (-1.78%) to a negative 1.91% (-1.91%) in its second estimate, to a negative 1.99% (-1.99%) in its third revision.

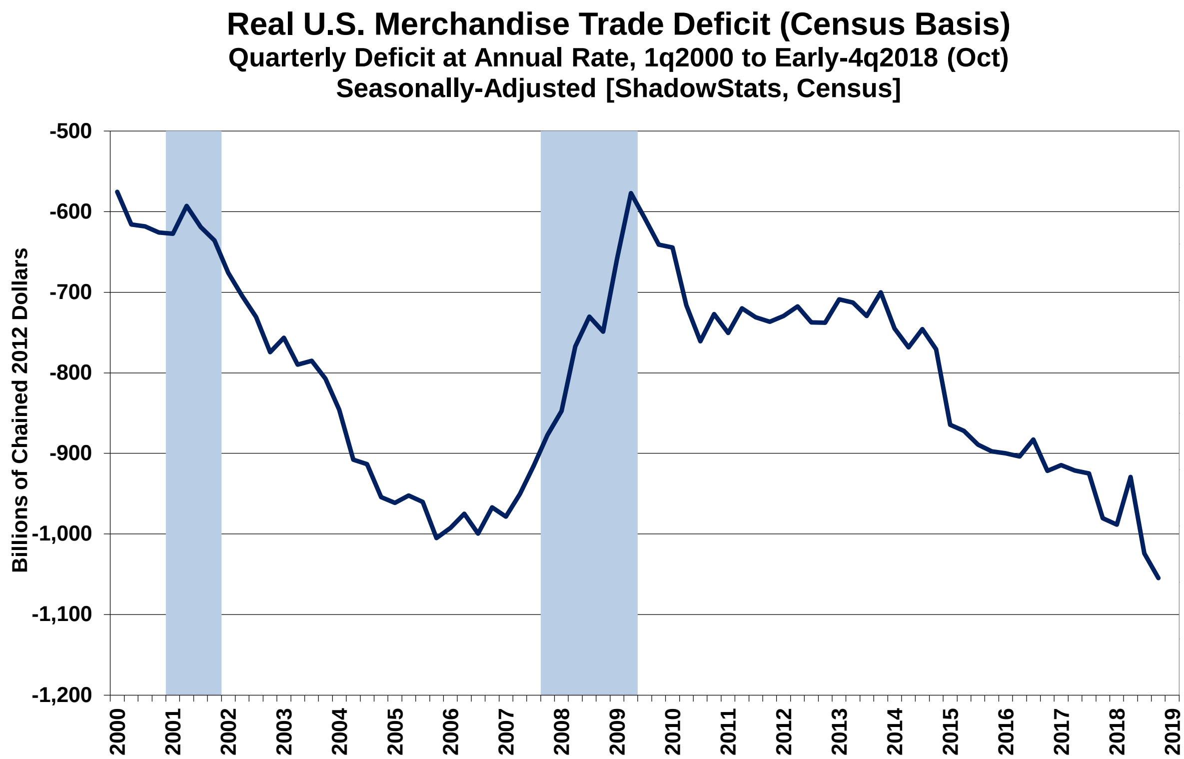
The October 2018 merchandise trade deficit in goods widened versus third-quarter activity. That put the real fourth-quarter 2018 Net Exports account on track for continued widening and a negative contribution to fourth-quarter 2018 GDP growth (See *Commentary No. 979*). *Graphs 60* and *62* plot the headline real merchandise trade deficit through third-quarter 2018, with the plotted fourth-quarter 2018 point based on the deteriorating trend indicated in the headline estimate for the October 2018 goods deficit. *Graph 61* plots the headline real Net Export deficit for Goods, through the final estimate of third-quarter GDP, while *Graph 63* plots the headline real deficit in Net Exports of Goods and Services (since 1994), where services usual show small surplus, and the breakout between goods and services is not available before 2002.

Third or "Final" Estimate of Third-Quarter 2018 GDP by Sector. Following *Graphs 61* to *63*, *Table III* shows summary GDP and component details, which include key sub-categories of Personal Consumption of Motor Vehicles and Residential Investment. Along with annualized real growth rates of the Gross Domestic Income (GDI) and Gross National Product (GNP), the same summary statistics cover the Implicit Price Deflator (IPD or GDP inflation) and the ShadowStats Corrected-Inflation GDP estimates, along with year-to-year rates of change for the aggregate measures.

The third GDP estimate for a given quarter commonly is considered "final," although it is final only until the next annual benchmark revision, which will be second-quarter 2019 in the current circumstance. That said, the third estimate of, second revision to third-quarter 2018 GDP came in at a downwardly revised, annualized real quarterly growth rate of 3.36% [previously 3.50% in initial and second estimates], versus 4.16% in second-quarter 2018, 2.22% in first-quarter 2018, 2.29% in fourth-quarter 2017 and 2.82% in third-quarter 2017. The table shows the breakout of GDP growth by quarter, by economic sector and by general product sector back to third-quarter 2017. Annual real GDP growth revised to 3.00% [previously 3.04%] in third-quarter 2018, versus 2.87% in second-quarter 2018, 2.58% in first-quarter 2018, 2.47% in fourth-quarter 2017 and 2.34% in third-quarter 2017. *Notes on GDP-Related Nomenclature and Definitions* follow *Table III*, with regular GDP, GDI and GNP analysis continuing on page 80.

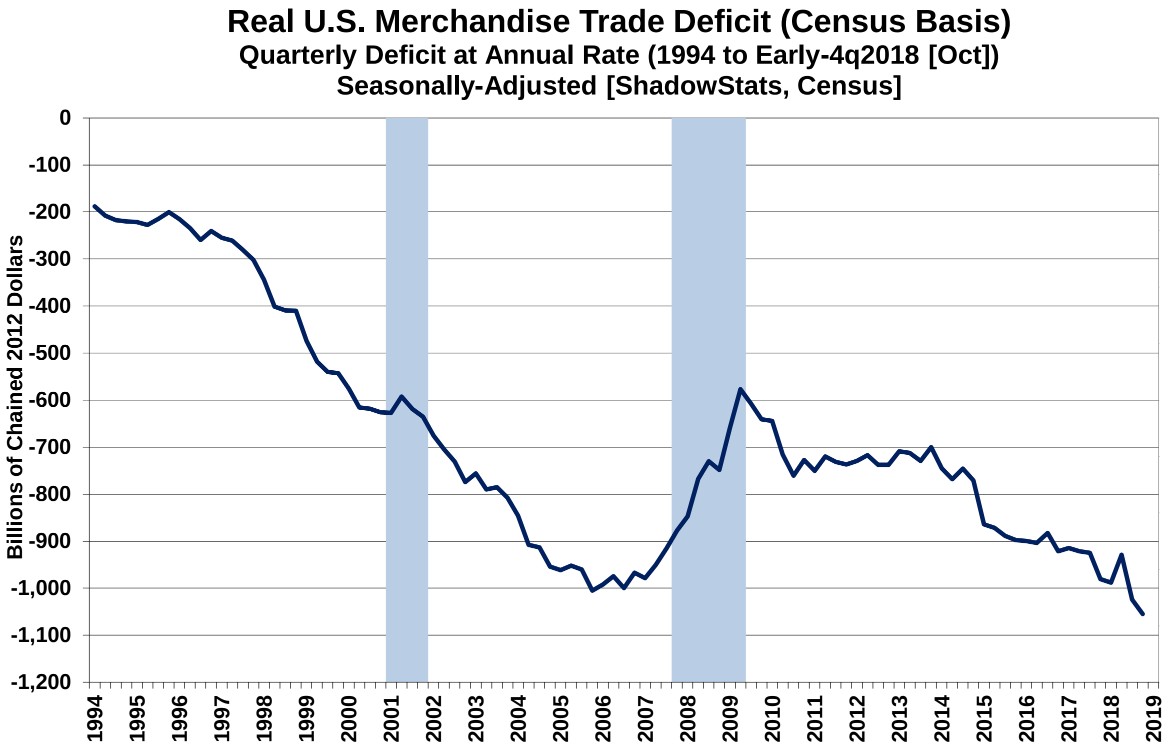
[Graphs 60 to 63 begin on the next page.]

Graph 60: Real Merchandise Trade Deficit (First-Quarter 2000 to Early-Fourth Quarter 2018)



Graph 61: U.S. Net Exports of Goods (2002 to Third-Quarter 2018 GDP, Third Estimate)

Graph 62: Real Merchandise Trade Deficit (First-Quarter 1994 to Early-Fourth Quarter 2018)



Graph 63: U.S. Net Exports of Goods and Services (1q1994 to 3q2018 GDP, Third Estimate)

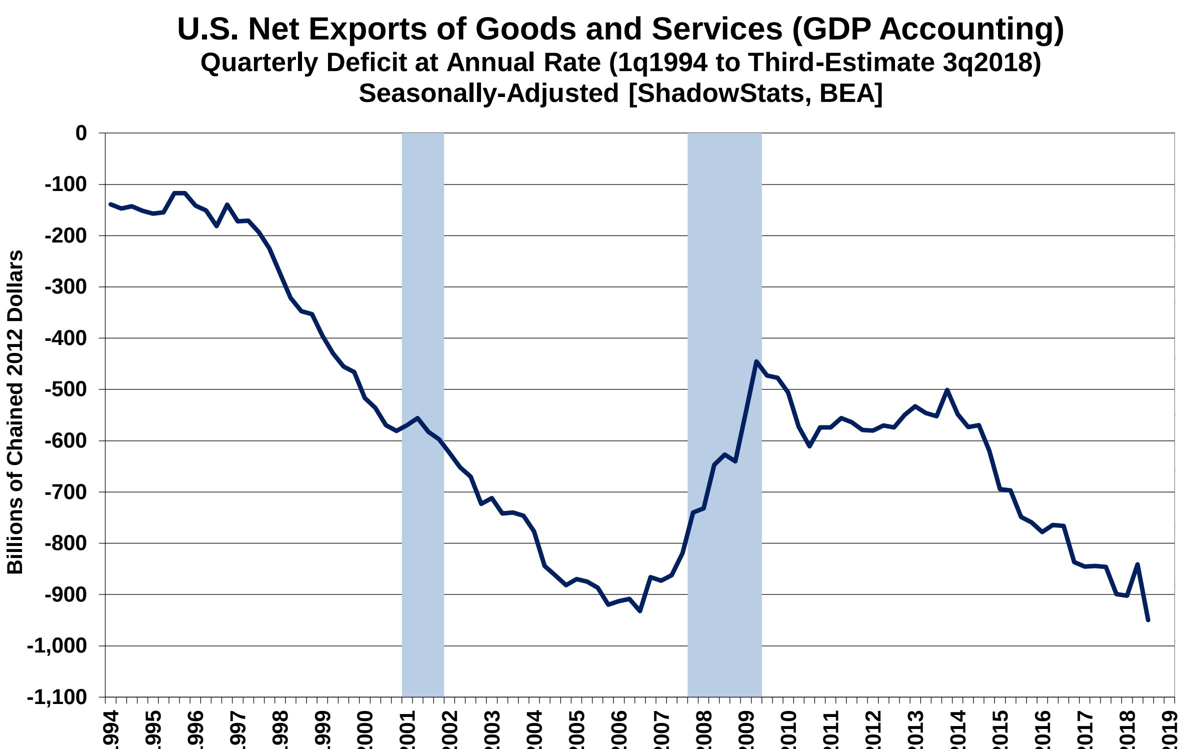


Table III: Third Estimate of Third-Quarter 2018 GDP, Growth Distribution versus the Prior Four Quarters

Annualized Quarterly Real Growth in Headline Gross Domestic Product
Third (Final) Estimate of Third-Quarter 2018 GDP
Growth Contribution by Consumption and Product Sector

GDP COMPONENTS	3rd-Q 2018 Third Estimate	3rd-Q 2018 Second Estimate	3rd-Q 2018 First Estimate	2nd-Q 2018 Final	1st-Q 2018 Final	4th-Q 2017 Final	3rd-Q 2017 Final
CONTRIBUTING ECONOMIC SECTOR							
Personal Consumption Expenditures							
- Goods	0.90%	1.00%	1.20%	1.16%	-0.13%	1.42%	0.86%
-- Motor Vehicles	*-0.05%*	*-0.04%*	*0.09%*	*0.16%*	*-0.35%*	*0.40%*	*0.21%*
- Services	1.47%	1.45%	1.49%	1.42%	0.49%	1.22%	0.65%
Gross Private Domestic Investment							
- Fixed Investment	0.21%	0.25%	-0.04%	1.10%	1.34%	1.04%	0.44%
-- Residential	*-0.14%*	*-0.10%*	*-0.16%*	*-0.05%*	*-0.14%*	*0.41%*	*-0.02%*
- Change in Private Inventories	2.33%	2.27%	2.07%	-1.17%	0.27%	-0.91%	1.04%
Net Exports of Goods and Services	-1.99%	-1.91%	-1.78%	1.22%	-0.02%	-0.89%	0.01%
Government Consumption/Investment	0.44%	0.44%	0.56%	0.43%	0.27%	0.41%	-0.18%
GDP ANNUALIZED REAL GROWTH	3.36%	3.50%	3.50%	4.16%	2.22%	2.29%	2.82%
Final Sales, GDP Less Inventories	1.03%	1.23%	1.43%	5.33%	1.95%	3.20%	1.78%
CONTRIBUTING PRODUCT SECTOR							
Goods	1.76%	1.81%	1.89%	1.91%	1.20%	0.34%	2.40%
Services	1.77%	1.77%	1.82%	1.78%	0.73%	1.32%	0.74%
Structures	-0.17%	-0.07%	-0.21%	0.47%	0.28%	0.64%	-0.32%
GDP Annualized Real Growth	3.36%	3.50%	3.50%	4.16%	2.22%	2.29%	2.82%
SUPPLEMENTAL							
Annualized Quarter to Quarter Real Change							
Gross Domestic Product (GDP)	3.36%	3.50%	3.50%	4.16%	2.22%	2.29%	2.82%
Gross Domestic Income (GDI)	4.26%	4.03%	--	r 0.87%	3.90%	1.49%	1.28%
Gross National Product (GNP)	3.05%	3.49%	--	4.04%	2.20%	2.57%	3.57%
Implicit Price Deflator (IPD)	1.51%	1.40%	1.38%	3.31%	2.02%	2.72%	1.94%
ShadowStats Corrected Inflation	1.27%	1.41%	1.41%	2.05%	0.15%	0.22%	0.74%
Year-to-Year Real Change							
Gross Domestic Product (GDP)	3.00%	3.04%	3.04%	2.87%	2.58%	2.47%	2.34%
Gross Domestic Income (GDI)	2.62%	2.56%	--	r 1.88%	2.36%	2.25%	2.47%
Gross National Product (GNP)	2.96%	3.07%	--	3.09%	2.73%	2.56%	2.60%
Implicit Price Deflator (IPD)	2.39%	2.36%	2.36%	2.50%	1.95%	1.97%	1.81%
ShadowStats Corrected-Inflation GDP*	0.92%	0.95%	0.95%	0.79%	0.51%	0.40%	0.27%

Sources: Bureau of Economic Analysis (BEA), www.ShadowStats.com (ShadowStats).
*Real GDP corrected for understated headline inflation (see *Special Commentary No. 968-Extended*).
r Net of downside 2nd-Q GDI in first revision, Q/Q 3rd-Q was 3.26% vs 2nd-Q 1.81%; Y/Y 2nd-Q was 2.12%.

Notes on GDP-Related Nomenclature and Definitions

For purposes of clarity and the use of simplified language in the text of the GDP analysis, here are definitions of several key terms used related to GDP reporting (denotes an exclusive ShadowStats series):*

Gross Domestic Product (GDP) *is the headline number and the most widely followed broad measure of U.S. economic activity. It is published quarterly by the [Bureau of Economic Analysis](#) (BEA), with two successive monthly revisions, along with annual Benchmark Revisions usually in the following July, coincident with the "advance" GDP estimate for the second quarter of that year. Every five years or so, those annual revisions are "Comprehensive," restating the series back to its earliest 1929 estimate. The GDP popularly is reported and followed in real terms, net of inflation, reflecting annualized quarter-to-quarter or year-to-year change.*

****GDP Corrected for Headline Understatement of Inflation*** *is a ShadowStats version of real GDP that adjusts headline real GDP activity only for the understated inflation used in deflating the series. Where the inflation used to deflate the various GDP components series tends to be understated in aggregate by roughly two-percentage points per year, the resulting headline real GDP growth is overstated by roughly that amount (see the discussion in [Public Commentary on Inflation Measurement](#)* and the *Opening Comments of [GDP Special No. 968](#) Graphs OC-4 and OC-5).*

****ShadowStats Alternate GDP Estimate*** *is a ShadowStats version of real GDP, which adjusts the headline real GDP activity for nominal biases built into the headline GDP reporting from methodological redefinitions that usually are introduced with annual benchmark revisions. Discussed in the Opening Comments, these biases almost always are positive—the ShadowStats "Pollyanna Creep"—and have added 18.1% to the headline level of nominal GDP since 1980 (see Table OC-1 of [GDP Special No. 968](#)). Since those numbers are nominal, before inflation-adjustment, the annual bias estimates are separate from the inflation-adjusted distortions of the previous "Corrected" series. Graph OC-7 in No. 968, however, is an inflation-adjusted, year-to-year version of this series, posted regularly on the Alternate Data Tab of [www.ShadowStats.com](#). It will be fully updated and overhauled in the near future.*

Gross Domestic Income (GDI) *is the theoretical equivalent to the GDP, but the popular press generally does not follow it. Where GDP reflects the consumption side of the economy and GDI reflects the offsetting income side. When the series estimates do not equal each other—invariably the case—where the series are surveyed separately, the difference is added to or subtracted from the GDI as a "statistical discrepancy." Although the BEA touts the GDP as the more accurate measure, the GDI is relatively free of the of the GDP's monthly political targeting.*

Gross National Product (GNP) *is the broadest measure of the U.S. economy published by the BEA. Once the headline number, now it rarely is followed by the popular media. GDP is the GNP net of trade in factor income (interest and dividend payments). GNP growth usually is weaker than GDP growth for net-debtor nations. Games played with headline money flows between the United States and the rest of the world tend to mute that impact on the reporting of U.S. GDP growth.*

Real *(or **Constant Dollars**) means the data have been adjusted, or deflated, to reflect the effects of inflation.*

Nominal *(or **Current Dollars**) means the growth or level of activity has not been adjusted for inflation. This is the way a business normally records revenues or an individual views day-to-day income and expenses.*

GDP Implicit Price Deflator (IPD) *is the inflation measure used to convert GDP data from nominal to real. The adjusted numbers are based on "Chained 2012 Dollars," a concept introduced with the 2013 and comprehensive revisions, when 2009 was used as the base year for inflation (updated to 2012 dollar in 2018). "Chained" refers to a substitution methodology, where the GDP components with the strongest nominal growth, automatically get a weaker, deflating inflation rate, which artificially boosts the headline real GDP growth.*

Quarterly *growth, unless otherwise stated, is in terms of seasonally-adjusted, annualized quarter-to-quarter growth, i.e., the growth rate of one quarter over the prior quarter, raised to the fourth power, a compounded annual rate of growth. While some might annualize a quarterly growth rate by multiplying it by four, the BEA uses the compounding method, raising the quarterly growth rate to the fourth power. So a one percent quarter-to-quarter growth rate annualizes to 1.01 x 1.01 x 1.01 x 1.01 = 1.0406 or 4.1%, instead of 4 x 1.0% = 4.0%.*

Annual *growth is year-to-year change of the referenced period versus the same period the year before.*

Gross Domestic Income (GDI) is the theoretical income-side equivalent to the consumption-side GDP estimate, yet the two measures rarely come close to showing similar quarterly growth patterns, with some relatively wild quarterly swings in the current numbers. Accordingly, on just a bookkeeping basis, the GDP and GDI are made to equal each other, every quarter, with the addition of an ever-fluctuating "statistical discrepancy" to the GDI-side of the equation. Yet, the headline GDI growth patterns reflect only the headline GDI estimate, not any "discrepancy" accounting.

The second estimate of more-unstable GDI series, showed revised real third-quarter annualized real growth of 4.26% [previously 4.03%], versus an unrevised gains of 0.87% in second-quarter 2018, 3.90% in first-quarter 2018, 1.49% in fourth-quarter 2017 and 1.28% in third-quarter 2017.

Annual GDI growth rose by a revised 2.62% [previously 2.56%] in third-quarter 2018, versus 1.88% in second-quarter 2018, 2.36% in first-quarter 2018, 2.25% in fourth-quarter 2017 and 2.47% in third-quarter 2017 (see *Table III*).

Gross National Product (GNP) is the broadest National Income measure, reflecting GDP plus the net international trade-flows of factor income, specifically interest and dividend payments. As a reporting gimmick aimed at boosting the headline reporting of economic growth for net-debtor nations such as the United States, international reporting standards were shifted some decades ago to reporting headline GDP instead of what had become a relatively weaker GNP. With no unusually large swings in headline factor income in the last several quarters, however, third-quarter 2018 GNP reporting moved largely in tandem with the GDP.

Nonetheless, with deteriorating balances both in net exports and factor income, real annualized third-quarter 2018 GNP growth slowed sharply in revision to 3.05% [previously 3.49%], versus 4.04% in second-quarter 2018, 2.20% in first-quarter 2018, 2.57% in fourth-quarter 2017 and 3.57% in third-quarter 2017.

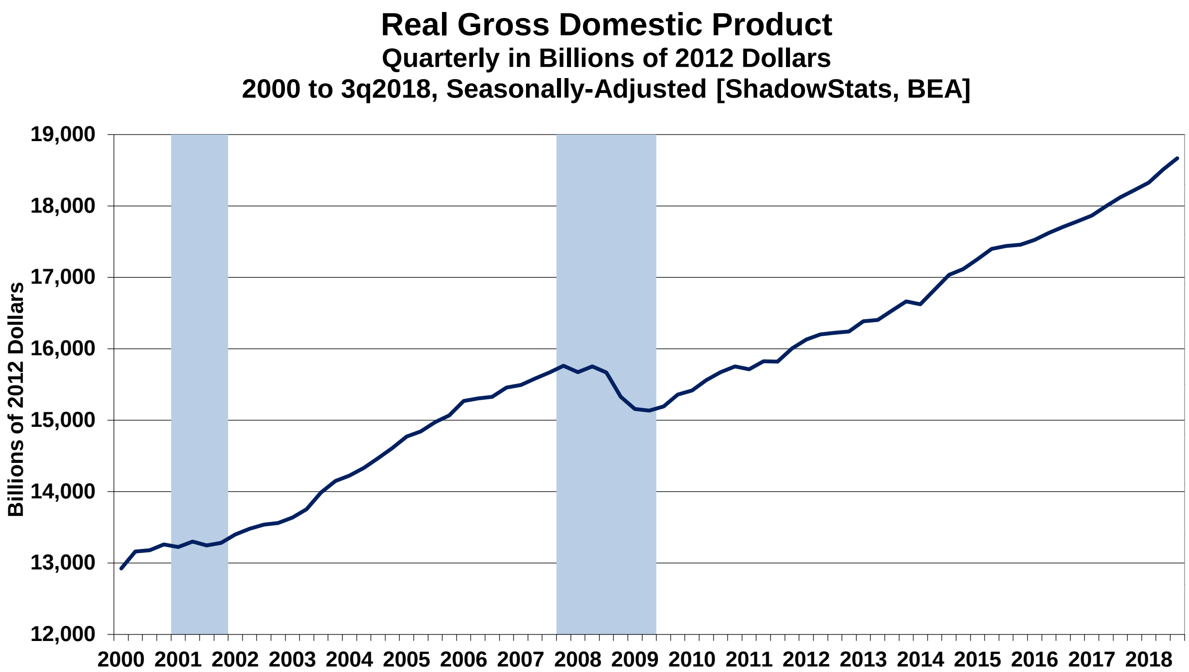
Real year-to-year GNP growth revised lower to 2.96% [previously 3.07%] in third-quarter 2018, versus 3.09% in second-quarter 2018, 2.73% in first-quarter 2018, 2.56% in fourth-quarter 2017 and 2.60% in third-quarter 2017 (see *Table III*).

Real GDP Graphs of Activity Levels and Annual Growth Rates. *Graphs 64* and *66* plot headline levels of real quarterly GDP activity, respectively showing short-term (since 2000) and long-term (since the historical onset of the quarterly GDP series in 1947) perspectives. *Graphs 65* and *67* show the year-to-year quarterly detail for the same series. The current-cycle trough in quarterly annual change was second-quarter 2009, reflecting a year-to-year decline of 3.92% (-3.92%).

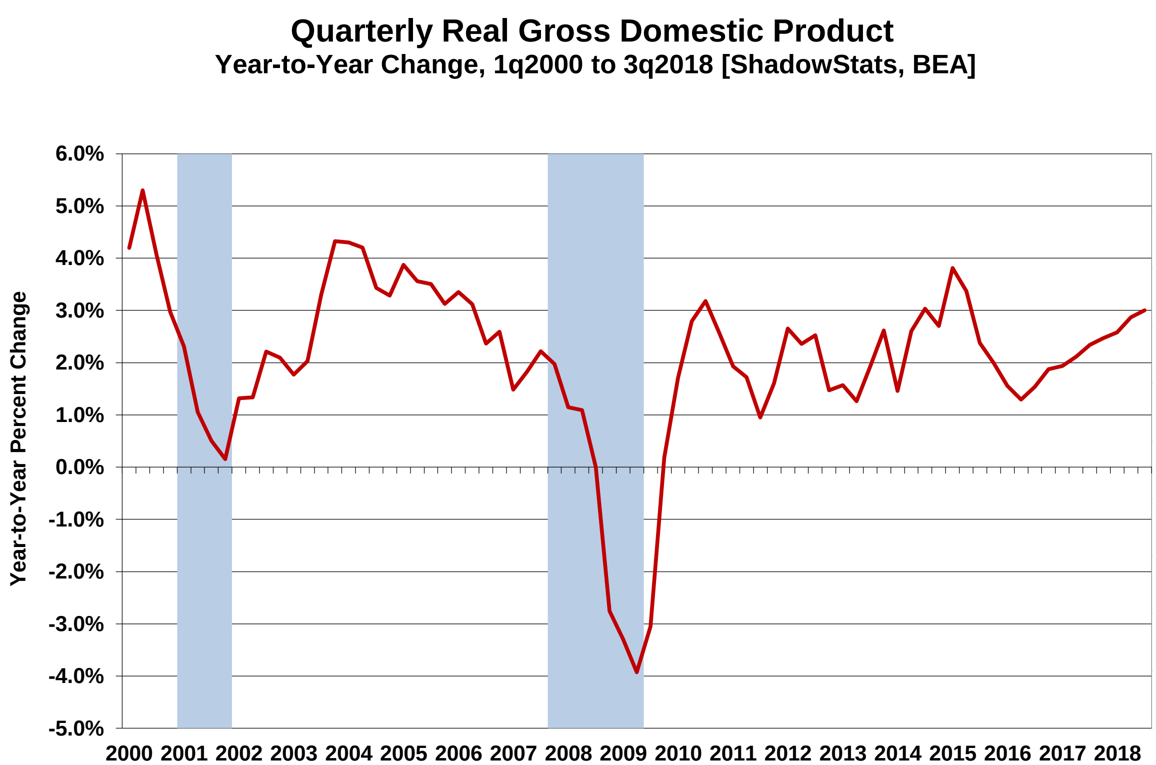
That was the deepest year-to-year contraction for any quarterly GDP in the history of the quarterly series, which began with first-quarter 1947 (1948 in terms of available year-to-year detail). Shown in *Graph 79*, the annual decline of 2.54% (-2.54%) in 2009 was the steepest regular annual drop in economic activity since the Great Depression. The 1946 production shutdown and economic reorganization following World War II, however, resulted in an annual GDP decline of 11.61% (-11.61%), minimally narrower than the 1932 annual economic crash of 12.88% (-12.88%).

[Graphs 64 through 70 begin on the next page.]

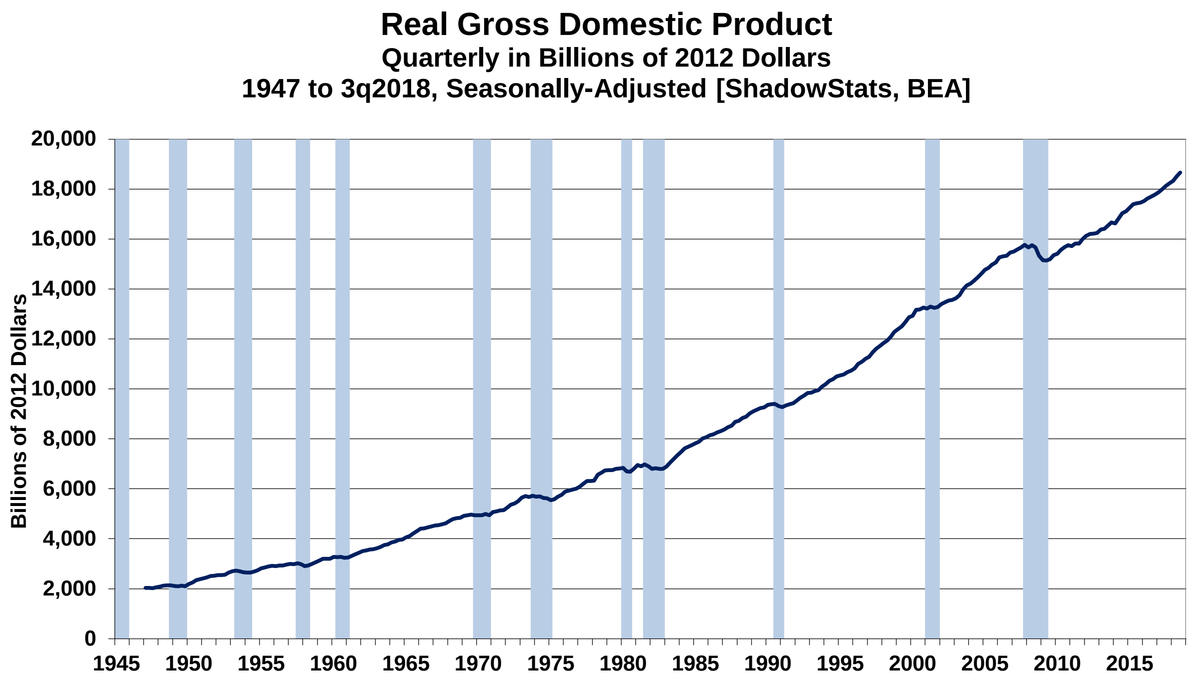
Graph 64: Quarterly GDP in Billions of 2012 Dollars (2000 to 2018), Third-Estimate of Third-Quarter 2018



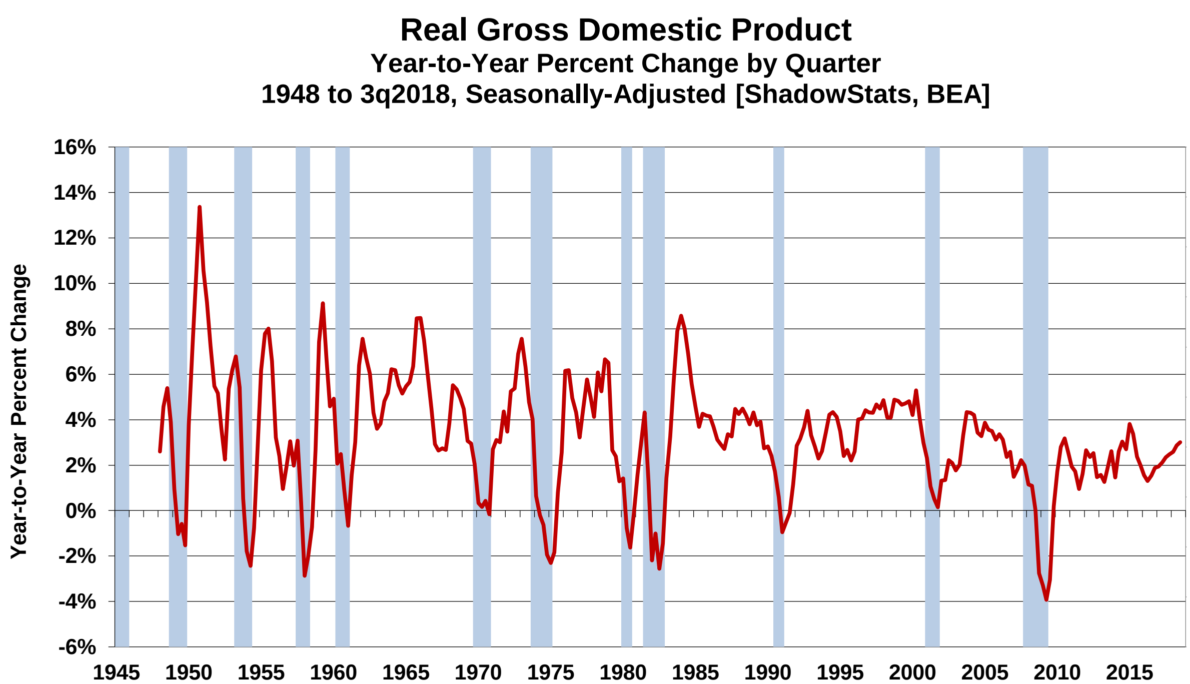
Graph 65: Quarterly GDP Real Year-to-Year Change (2000 to 2018), Third-Estimate of Third-Quarter 2018



Graph 66: Quarterly GDP in Billions of 2012 Dollars (1947-2018), Third-Estimate of Third-Quarter 2018



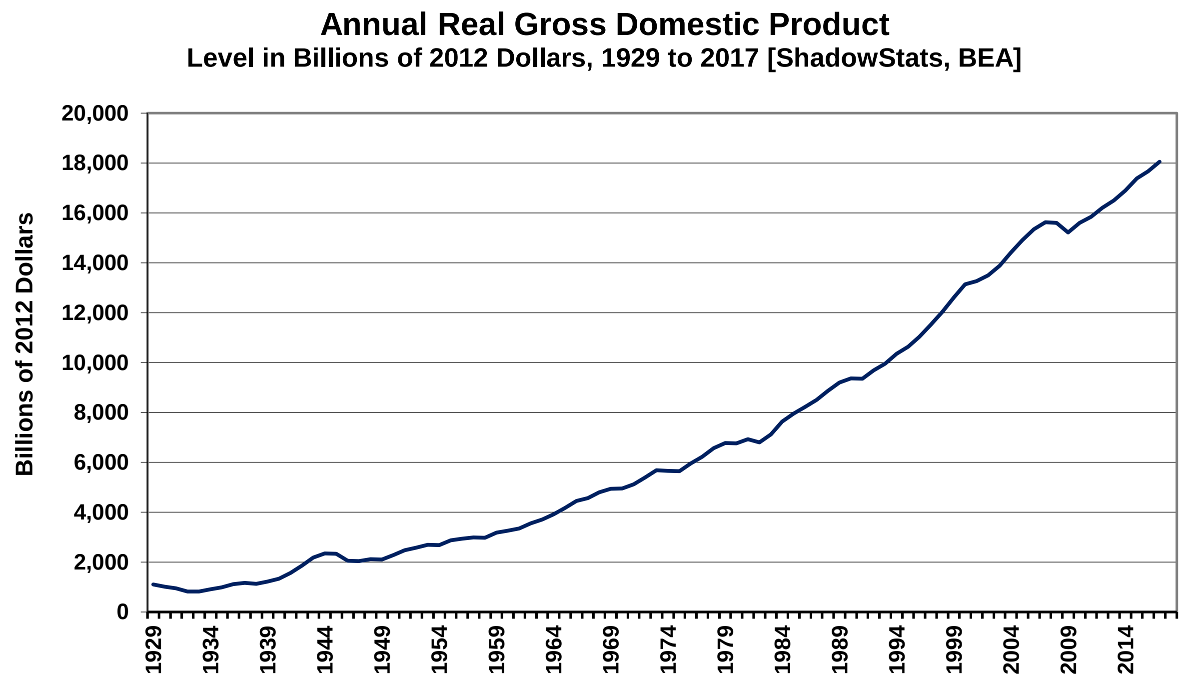
Graph 67: Year-to-Year GDP Real Change (1948-2018), Third-Estimate of Third-Quarter 2018



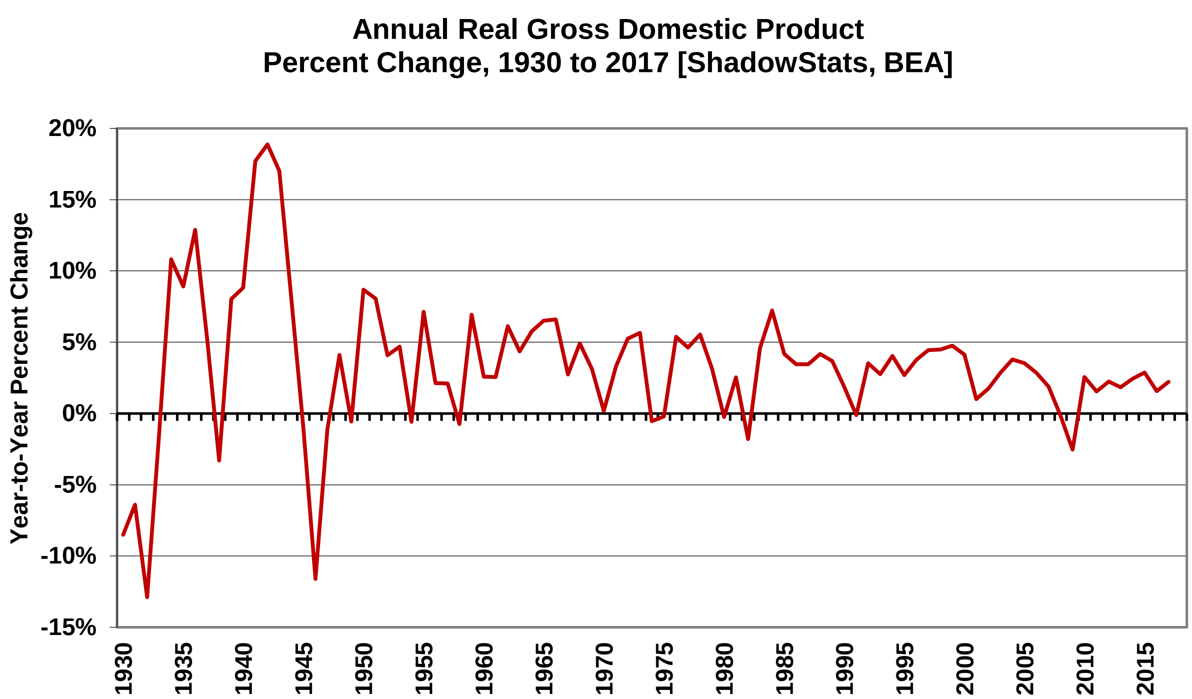
Graphs 68 and *69* show the levels of annual real GDP activity, as well as annual percent change, as estimated beginning in 1929. Reflected in *Graph 68*, the annual-average real GDP growth in 2017 was 2.22%, versus 1.57% in 2016, 2.88% in 2015 and 2.45% in 2014. The annual growth rate of 1.55% in

2011 was the slowest pace of annual growth in the post-2009 "recovery," although effectively the same level of growth as seen in 2016.

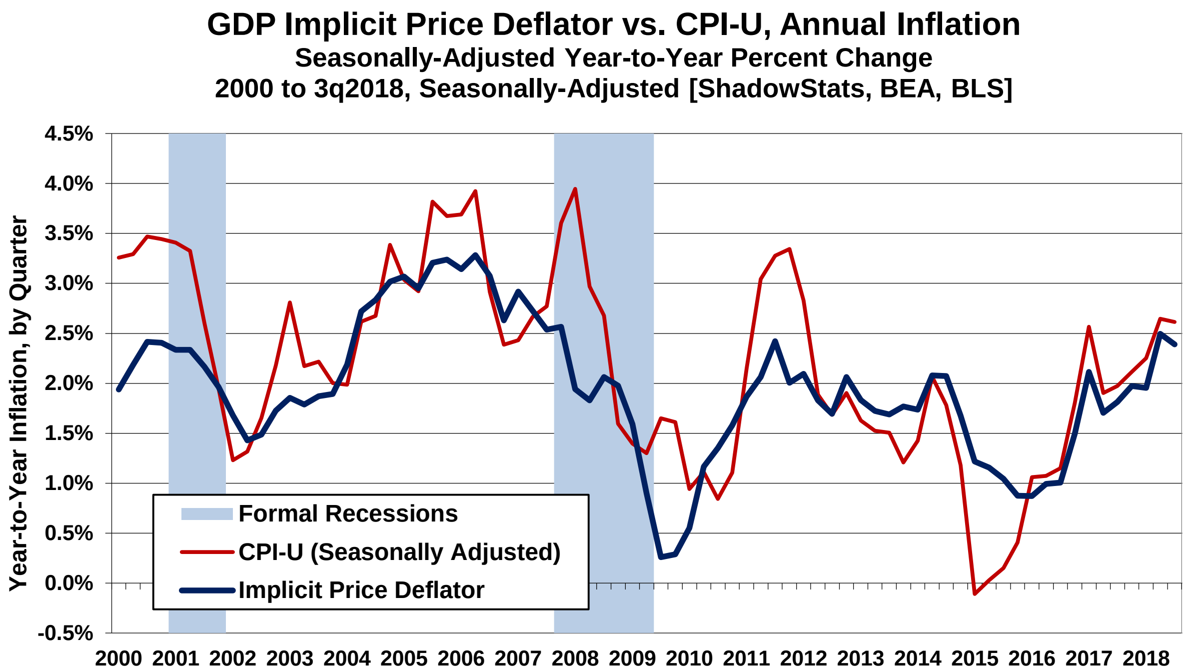
Graph 68: Annual GDP in Billions of 2012 Dollars (1929-2017)



Graph 69: Real Annual Percent Change (1930-2017)



Graph 70: Year-to-Year Inflation, Implicit Price Deflator vs. CPI-U, to Third-Quarter 2018, Third Estimate IPD



Implicit Price Deflator (IPD). The IPD is the effective GDP inflation rate used in deflating the before-inflation-adjustment or nominal GDP, to an after-inflation-adjustment, or real GDP basis. Reflecting unusual patterns in and revisions to third-quarter versus second-quarter GDP activity, annualized quarterly GDP inflation (the Implicit Price Deflator or IPD) for third-quarter 2018 revised higher to an annualized 1.51% [previously 1.40%, initially 1.38%] quarter-to-quarter, versus 3.31% in second-quarter 2018 and 2.02% in first-quarter 2018 (see *Graph 70*). Year-to-year inflation revised to 2.39% [previously 2.36% in both the initial and second estimates] in third-quarter 2018, versus 2.50% in second-quarter 2018 and 1.95% in first-quarter 2018.

As general guidance, the weaker the inflation rate used in deflating an economic series, the stronger will be the resulting inflation-adjusted growth, and vice versa, particularly where the headline CPI-U moves in the direction opposite from the IPD (although muted a bit by the latest IPD revision), as the strengthening CPI-U did here, increasing to 2.00% in third-quarter 2018, from 1.66% in second-quarter 2018 (again see *Graph 70*). The decline in the IPD inflation to an annualized third-quarter 1.51%, versus an annualized second-quarter 3.31% added a relative, annualized quarterly boost to the real GDP growth of 1.80%.

Reflected in *Table III*, the seasonally-adjusted Implicit Price Deflator showed annualized quarterly inflation for the third estimate of third-quarter 2018 GDP at 1.51% [previously 1.40%, initially 1.38% in the "advance" estimate], versus 3.31% in second-quarter 2018, 2.02% in first-quarter 2018, having gained 2.72% in fourth-quarter 2017, 1.94% in third-quarter 2017, 1.14% in second-quarter 2017, and 2.10% in first-quarter 2017.

Year-to-year, the second estimate of third-quarter 2018 IPD, again was a revised 2.39% [previously 2.36%], versus 2.50% in second-quarter 2018, 1.95% in first-quarter 2018, 1.97% in fourth-quarter 2017, 1.81% in third-quarter 2017, 1.70% in second-quarter 2017, 2.11% in first-quarter 2017 (see *Graph 70*).

For comparison, seasonally-adjusted, annualized quarterly CPI-U inflation, consistent with the way the seasonally-adjusted, headline real GDP is worked, showed annualized quarterly gains of 2.00% in third-quarter 2018, versus 1.66% in second-quarter 2018, 3.50% in first-quarter 2018, 3.31% in fourth-quarter 2017, 2.13% in third-quarter 2017, 0.10% in second-quarter 2017 and 2.95% in first-quarter 2017.

Seasonally-adjusted, year-to-year quarterly CPI-U inflation, consistent with the way the seasonally-adjusted, headline real GDP is worked, showed annual gains of 2.61% in third-quarter 2018, versus 2.65% in second-quarter 2018, 2.25% in first-quarter 2018, versus 2.12% in fourth-quarter 2017, 1.97% in third-quarter 2017, 1.90% in second-quarter 2017 and 2.57% in first-quarter 2017 (see *Graph 70*).

ShadowStats Corrected-Inflation Real GDP—Underlying Economic Reality—Nascent Recovery Continued, But No Economic Expansion, Amidst Signs of an Intensifying Liquidity-Driven Slowdown. Updating *Commentary No. 978 – Part II* and *Commentary No. 976*, *Graphs 71* and *72* here, and *Graphs OC-7* and *OC-8* in today's *Opening Comments*, still largely are indistinguishable from *Graphs OC-8* and *OC-9* in *No. 976*, reflecting the "advance" or first reporting of the third-quarter GDP. Accordingly, what would be the virtually unrevised analysis in the *Opening Comments* of *Commentary No. 976* are incorporated here by reference. *Commentary No. 976* expanded upon the *Underlying Economic Reality* section of *Special Commentary No. 968-Extended*, *Section II* and *Commentary No. 971*, reflecting the latest data in comparative graphs.

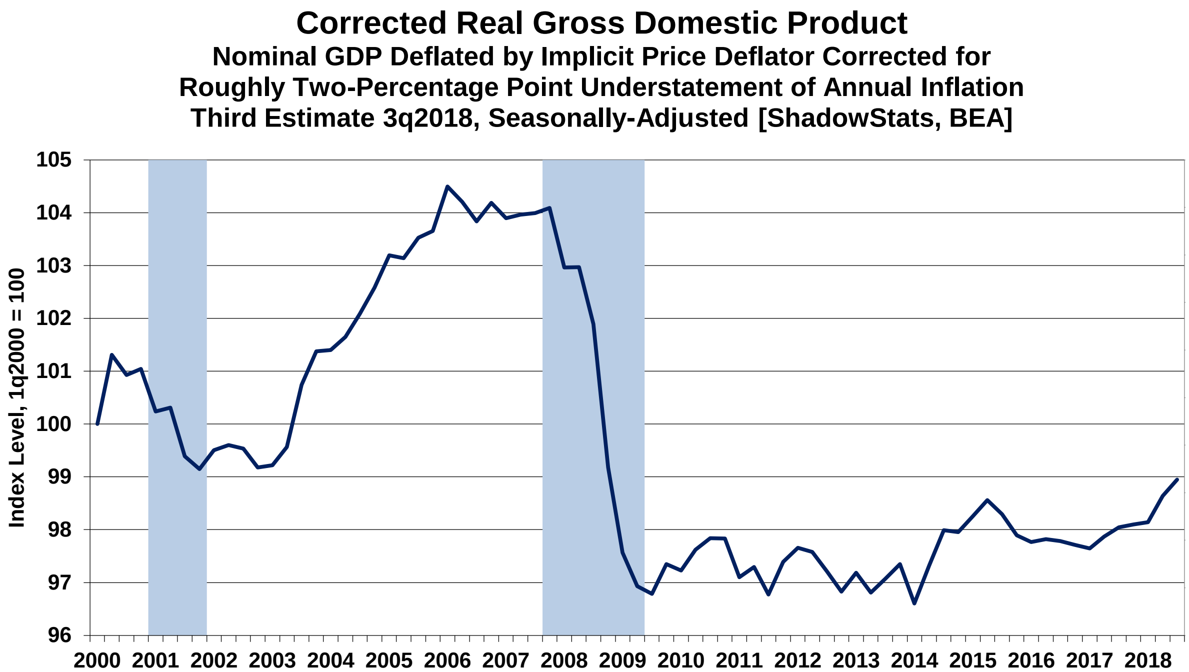
Noted regularly in these GDP *Commentaries*, the headline Gross Domestic Product (GDP) detail, as published by the Bureau of Economic Analysis (BEA) simply remains the most worthless of the popular government economic series, in terms of indicating realistic U.S. business activity. "Headline Real GDP" is plotted in accompanying *Graphs 64* and *65*. That same series "Corrected" for roughly two-percentage points of understated inflation used in deflating the headline nominal GDP, is plotted in *Graphs 71* and *72*. That ShadowStats "Corrected" Real GDP in *Graph 71* was compared and contrasted with a some better-quality, private- and public-economic measures of broad activity in today's *Opening Comments*, and against an expanded field of comparative numbers, again in the *Opening Comments* of *Commentary No. 976*.

In sharp contrast to the headline GDP, which currently stands 18.4% [previously 18.5%] above its pre-recession high of fourth-quarter 2007, and 23.3% [previously 23.4%] above its recession trough, the ShadowStats Corrected-Inflation GDP has not recovered (as in matching or recovering its pre-recession peak, where movement above the prior peak is the measure of economic expansion), but it is 2.2% above its recession trough [previously 2.3% in the first and second estimates], indicated in *Commentary No. 976*). Otherwise, it still is shy of recovering its pre-recession peak by an unrevised 4.9% (-4.9%).

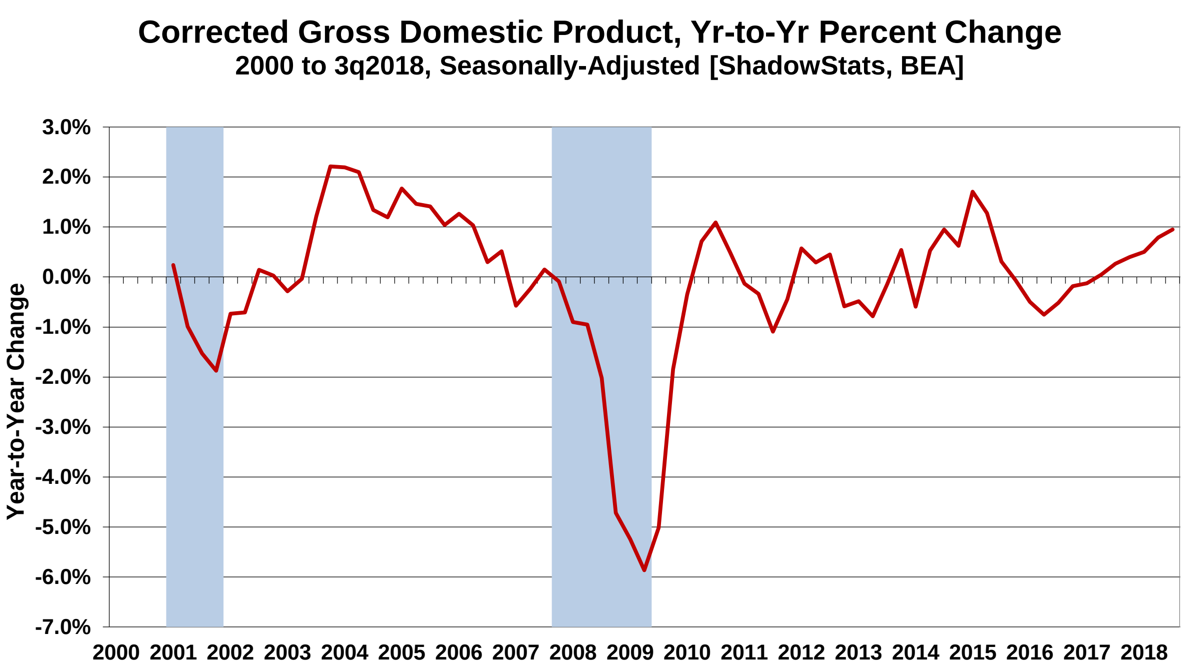
Noted in the prior paragraph and detailed in *Table III*, the *ShadowStats Corrected-Inflation Real GDP* continued off bottom, growing at a downwardly revised real annualized quarterly growth rate of 1.3% [previously 1.4%] in third-quarter 2018, versus 2.1% in second-quarter 2018 and 0.2% in first-quarter 2018. In terms of year-to-year real change, growth revised lower to 0.9% [previously 1.0%] in third-quarter 2018, versus 0.8% in second-quarter 2018 and 0.5% in first-quarter 2018.

[Graphs 71 and 72 follow on the next page.]

Graph 71: "Corrected" Real GDP Index (First-Quarter 2000 to Third-Estimate of Third-Quarter 2018)
(Same as Graph OC-7 in the Opening Comments)



Graph 72: "Corrected" Real GDP, Year-to-Year Percent Change (First-Quarter 2000 to Third-Quarter 2018)
(Same as Graph OC-8 in the Opening Comments)



ShadowStats Alternate GDP (Including Inflation Distortions and "Pollyanna Creep." The ShadowStats-Alternate GDP, which incorporates not only the GDP "Corrected" for understatement of inflation, but also the "Pollyanna Creep" of recent decades (reviewed broadly in the *Opening Comments* of *GDP Special No. 968*), reflected an unrevised year-to-year decline of 1.2% (-1.2%) in third-quarter 2018, versus a headline annual GDP headline gain of 3.0%. That was against a ShadowStats annual decline of 1.3% (-1.3%) and a headline annual GDP gain of 2.9% in second-quarter 2018. Details are highlighted on the Alternate Data tab for the GDP on the www.ShadowStats.com home page.

While the annualized, real quarterly growth rate is not estimated formally on an alternate basis, the heavily bloated, overstated, third-estimate of an annualized, headline quarter-to-quarter gain of 3.4% in third-quarter 2018 likely was much weaker in reality, net of all the happy assumptions and regular reporting gimmicks.

Irrespective of the 2018 headline benchmark revisions, real-world quarterly contractions still appear to have been a realistic possibility for bloated, headline inflation-adjusted GDP in a number of quarters since the official, second-quarter 2009 end to the 2007 recession (again, see the *Opening Comments* of *Commentary No. 976*).

The alternate GDP estimates are reviewed in the *Opening Comments* and *Section I* of *GDP Special No. 968*. Discussed there is the "Corrected" GDP and the ShadowStats-Alternate GDP, which reflect reversing additional methodological distortions (again "Pollyanna Creep") of recent decades, highlighted in the Alternate Data tab on the GDP on the www.ShadowStats.com home page.

Comprehensive GDP Benchmark Revisions of 2018 and Subsequent Updates. Current headline GDP reporting is in the context of the July 27, 2018 comprehensive benchmark revisions to the series back to 1929. Incorporated here by reference, *Special Commentary No. 968-Extended* (with a shortened link: *GDP Special No. 968*) of September 6th, was structured into four sections:

- The *Opening Comments* in *GDP Special No. 968* reviewed inflation-related and definitional distortions built into headline GDP reporting over the decades. Issues and details there supplement today's *GDP-Related Nomenclature and Definitions* section, specifically tied to the *ShadowStats GDP Corrected for Headline Understatement of Inflation* and the *ShadowStats Alternate GDP Estimate.*
- Part I reviewed the first-revision to second-quarter 2018 GDP (first post-benchmarking revision), with the second revision covered in *Commentary No. 971*.
- Part II discussed underlying U.S. economic reality, a section that was updated and expanded upon in *Commentary No. 976*, previously as updated in *Commentary No. 971*.
- Part III provided expanded coverage of the Comprehensive GDP Benchmark Revision back to 1929, which is available for review, again, at *GDP Special No. 968*.

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

WEEK, MONTH AND YEAR AHEAD

Watch for Continued Selling of Stocks, the U.S. Dollar and a Flight to Gold!

Note: *Some Thoughts on the Stock Market (No. 980-A)* of December 26th addressed unfolding stock-market turmoil, supplemental to *Hyperinflation Watch No. 4* – *Special Edition* of December 11th, which incorporated and expanded upon *Special Commentary No. 973 – ALERT* of October 14, 2018. In advance of *Hyperinflation Watch No. 5*, related new material will be advised in the *Daily Update* section of *www.ShadowStats.com*, and/ or posted in the *Opening Comments* of a *Regular Commentary* (see today's *Opening Comments*, beginning on page 6). The same holds for updates to *Consumer Liquidity Watch No. 5* – *Special Edition* of November 21st.

Financial-Market Turmoil Reflects Deteriorating Economic, Fiscal and Political Conditions, Exacerbated by the FOMC and Related, Mounting Systemic- and Consumer-Liquidity Stresses. Previously noted here, and expanded upon in today's *Opening Comments*, the backdrop of the *Squirrelly Season* and likely tipping point for the markets reviewed in *Commentary No. 970* is coming into play. Rapid deterioration in near-term, headline economic activity, and rapidly mounting risks of near-term political turmoil/instability, have combined to widen the risk of massive selloffs in the U.S. dollar and U.S. equity markets coming together at the same point in time. Such market movements began to break in the days leading into Christmas, with increasingly unstable activity since. Again, see today's *Opening Comments* section for updated circumstances. ***The remainder of this text is background, unchanged from* No. 979 *of December 19th:***

Discussed in *Hyperinflation Watch No. 4* and the *Daily Update*, extraordinary financial-market and systemic risks are in play, with a great deal more involved in recent stock-market selling than overvalued equities. At hand are circumstances that could trigger one of the worst financial panics/systemic disruptions of the last century. Consider still-unresolved systemic instabilities from the 2008 bailout of the global banking system; heavily inflated equity prices; current Fed tightening and a related, unfolding U.S. recession; rapidly deteriorating, uncontained and unsustainable U.S. fiscal deficits; and exploding risks of political instability in the United States and among major U.S. trading partners and allies.

In particular, watch out for weakness and instability in the U.S. Dollar, and for spiking gold prices. The dollar and precious metals serve as the Canary in the Coal Mine for the domestic stock and bond markets. A sudden sell-off in the U.S. dollar, likely would be coincident with, if not the proximal trigger for the intensifying flight from liquid dollar-denominated assets such as stocks and bonds.

Holdings of 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 U.S. inflation and currency debasement and/or political- and financial- system upheaval. These crisis circumstances increasingly are likely in the next six months, but they could break at any time.

Please call (707) 763-5786, or contact me by e-mail at johnwilliams@shadowstats.com, if you would like to discuss current circumstances, or otherwise.

Best wishes – John Williams

Pending Economic Releases

Note: Summary observations of major economic releases are posted in real time, as soon as possible (usually within two hours of the headline release) to the *Daily Update* section at the top right-hand side of the *www.ShadowStats.com* homepage.

Employment and Unemployment (December 2018). Irrespective of the partial government shutdown, details of both the headline December U.3 Unemployment Rate (in the context of annual benchmark revisions) and the monthly changes in December Payroll Employment remain scheduled for release on Friday, January 4th, by the Bureau of Labor Statistics (BLS) at 8:30 a.m. Eastern Time. ShadowStats coverage of headline detail will follow in the ***Daily Update*** section of the *ShadowStats* home page, within roughly two hours of the headline release.

The headline December 2018 release will include the ***Annual Benchmark Revision*** to the seasonally adjusted numbers in the ***Household Survey***. Accordingly, the usual update to the *ShadowStats Alternate Unemployment Rate* on the *Alternate Data* tab likely will take several extra hours. Where last year's benchmarking was nil for U.3, there were some twists otherwise (see *Commentary No. 930-B*), and that could shift this time around, given a second straight year of similarly timed hurricanes.

Full coverage will follow in a *Commentary* next week, depending on the status of the government's publication of other data (please check the ***Daily Update*** on the *www.ShadowStats.com* home page for the latest scheduling).

The consensus outlook appears to be for a December 2018 Payroll gain of about 180,000 plus-or-minus, versus what was a weaker-than-expected 155,000 jobs gain in November (a gain of 143,000 net of revisions to October).

Expectations also are for the 49-year low unemployment rate to hold at 3.6% to 3.7% in December, for the third straight month. The November 2018 U.3 rate of 3.67% was the lowest level ever seen in the current series, which was redefined in 1994. Nonetheless, the series broadly is viewed historically back to 1948. A wildcard here is that the December 2018 headline details encompass annual benchmark revisions to seasonal adjustments for the last five years.

In this pre-government-shutdown employment surveying, odds currently favor weaker-than-expected labor data, given mounting deterioration in current economic numbers, discussed in today's *Reporting Detail*. Consider that while the headline November 2018 U.3 unemployment held at 3.7% versus October, the broader U.6 rate widened to 7.6% in November, versus 7.4% in October, along with heavily-stressed measures of labor market health in the Household Survey (Employment-Population Ratio and Participation Rate) and in the Payroll Survey (Annual Growth). Those stress levels remain more consistent with the unemployment rate at a record high, rather than a record low.

Despite weaker-than-expected jobs growth in November, negative reporting shocks remain well overdue here for December. The wildcard in December reporting could be in the Household Survey, which will go through its annual benchmarking of seasonally adjusted numbers, revising previously published headline unemployment rates back to 2014.

Releases Delayed or Likely Delayed by the Partial Shutdown of the U.S. Government:
(Revised detail will be posted to the *DAILY UPDATE* column, *www.ShadowStats.com*.)

New Home Sales (November 2018). ***Delayed*** **–** Was due for release on Thursday, December 27th by Census Bureau (Census).

Construction Spending (November 2018). ***Likely Delayed*** **–** Initially scheduled for release on Thursday, January 3rd, by the Census Bureau.

Trade Deficit (November 2018). ***Likely Delayed*** **–** Initially scheduled for release on Tuesday, January 8th, by the Census Bureau and the Bureau of Economic Analysis.

Prior Commentaries and Current Hyperinflation and Consumer-Liquidity Watches

Most Recent *Hyperinflation* and *Consumer-Liquidity Watches*: The latest Watches always are available on www.ShadowStats.com and by link from the current *Commentary*. Updates are advised by e-mail when they are posted.

The ***Hyperinflation Watch*** of December 11th: *Hyperinflation Watch No. 4* – Special Edition.

The ***Consumer Liquidity Watch*** of November 21st: *Consumer Liquidity Watch No. 5* – Special Edition.

Special Pieces Underlying the *Regular* and *Special Commentaries*: Underlying the *Special Commentary No. 935*, 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*.

Regular Commentaries: *[Listed here are* Commentaries *of the last year or so, including* Special Commentaries *and a sampling of others covering a variety of non-monthly issues, including annual benchmark revisions. Please Note: Complete ShadowStats archives back to 2004 are available at www.ShadowStats.com (left-hand column of home page).]*

These regular *Commentaries* should be published about weekly, with *Consumer Liquidity* and *Hyperinflation Watches* updated every several weeks or so, updating general economic, consumer-liquidity and financial-market circumstances as they develop.

Some Thoughts on the Stock Market (No. 980-A) (December 26th), with any subsequent 980-B reserved for an interim market update, offered brief comments on unfolding, extreme stock-market volatility.

Commentary No. 979 (December 19th) disccused the FOMC meeting of December 19th and reviewed the November 2018 employment and unemployment reporting, the October Trade Deficit and the November 2018 Consumer and Producer Prices Indices and related consumer-liquidity indicators.

Commentary No. 978 – Part II (December 5th) completed *Part I*, reviewing the October 2018 New Residential Construction, New-and Existing-Home Sales and Construction Spending, the second estimate of Third-Quarter GDP and the initial estimates of Third-Quarter GDI and GNP. It also updated the *No. 973 ALERT*.

Commentary No. 978 - Part I (December 1st) covered deteriorating economic and consumer-liquidity conditions and evolving FOMC policy, the October 2018 Consumer and Producer Prices Indices, Retail Sales, Industrial Production, New Orders for Durable Goods and the CASS Freight Index™.

Commentary No. 977 (November 6th) detailed the October 2018 employment and unemployment reporting, the September Trade Deficit and Construction Spending and October monetary conditions.

Commentary No. 976 (October 30th) reviewed the first or “advance” estimate of Third-Quarter 2018 GDP, September 2018 New Orders for Durable Goods, September New-Home Sales, the “advance” September and third-quarter 2018 Trade Deficit and an updated review of underlying economic reality.

Commentary No. 975 (October 22nd) covered FOMC policy and deteriorating consumer- and systemic-liquidity conditions along with headline September 2018 Retail Sales, Industrial Production, New Residential Construction (Building Permits, Housing Starts), Existing-Home Sales, the Cass Freight Index™, Hurricane Impact and pending Elections.

Commentary No. 974 (October 15th) expanded upon elements of the *No. 973 ALERT*, previewed elements of updated consumer and systemic liquidity measures and covered the September 2018 Consumer and Producer Price Indices.

Special Commentary No. 973 – ALERT (October 14th) was a single-page discussion and warning of rapidly mounting risks of instabilities in the domestic financial markets in six months ahead. See the latest *Hyperinflation* and *Consumer-Liquidity Watches* and *Commentary No. 970.*

Commentary No. 972 (October 7th) covered September 2018 Employment and Unemployment, Conference Board Help Wanted OnLine® Advertising, Monetary Conditions and the August Trade Deficit and Construction Spending.

Commentary No. 971 (October 3rd) reviewed August 2018 New Residential Construction, Existing- and New-Home Sales, New Orders for Durable Goods and the third estimate of Second-Quarter 2018 GDP, along with an updated review of underlying economic reality.

Commentary No. 970 (September 26th) discussed a potential, pending Tipping Point in the U.S. financial markets along with a review of August 2018 CPI, PPI, Retail Sales, Industrial Production and the CASS Freight Index™.

Commentary No. 969-Extended (September 16th) Reviewed the reporting of 2017 Real Median Annual Household Income and related measures of Income Dispersion, along with extended coverage of the August 2010 Employment and Unemployment numbers, including an updated Supplemental Labor-Detail Background Supplement.

Flash Commentary No. 969-Advance (September 7th) covered initial headline employment and unemployment detail for August 2018 (expanded upon in *No 969-B*), July Construction Spending, the July Trade Deficit and a review of August Monetary Conditions.

Special Commentary No. 968-Extended (September 6th) reviewed underlying economic reality, in the context of statistical deception used in boosting headline GDP activity, and against the background of extended analysis of the 2010 Comprehensive GDP Benchmarking. Separately covered was extended coverage of the second estimate of second-quarter 2018 (see *Flash Commentary No. 968-Advance*).

Flash Commentary No. 968-Advance (August 29th) provided a summary review of the headline first revision, second estimate of Second-Quarter 2018 GDP and initial estimates of GDI and GNP. Also updated were early indications from the latest Consumer Liquidity measures.

Commentary No. 967 (August 24th) discuused the annual squirrely season and reviewed July 2018 New Orders for Durable Goods and New- and Existing-Home Sales and the preliminary benchmark revision to 2018 payroll employment.

Commentary No. 966 (August 17th) reviewed July 2018 Retail Sales, Industrial Production, New Residential Construction and the CASS Freight Index™.

Commentary No. 965 (August 12th) covered the July 2018 Consumer and Producer Price Indices (CPI and PPI), and Real Average Weekly Earnings and deteriorating consumer liquidity conditions.

Commentary No. 964-A (August 3rd) preliminary coverage of July 2018 Employment/Unemployment, Conference Board Help Wanted OnLine® Advertising, M3 and the June Trade Deficit and Construction Spending.

Commentary No. 963 (July 31st) reviewed June Retail Sales, Industrial Production, New Orders for Durable Goods and the Cass Freight Index, all in the context of the GDP revisions and unfolding, underlying economic reality.

Commentary No. 962 (July 27th) provided initial coverage of the first or "advance" estimate of Second-Quarter 2018 Gross Domestic Product (GDP) and the Comprehensive Benchmark Revisions to the series back to 1929. A full update and extended coverage are the September 6th *Special Commentary No. 968-Extended.*

Commentary No. 961 (July 26th) provided full coverage on New Residential Investment (Housing Starts, Building Permits and New- and Existing-Home Sales. Preliminary coverage was provided on June Retail Sales, Industrial Production, New Orders for Durable Goods and the Cass Freight Index™, all of which were expanded upon in *Commentary No. 963.*

Commentary No. 960 (July 15th) reviewed the June Consumer and Producer Price Indices (CPI and PPI), Real Earnings and related implications for consumer and systemic liquidity

Commentary No. 959-B (July 11th) provided extended detail on June 2018 Employment and Unemployment, the May 2018 Trade Deficit and updated economic outlook, along with expanded discussion on issues affecting the credibility of the headline employment and unemployment data.

Commentary No. 959-A (July 6th) provided flash headlines and summary details of the June 2018 Employment and Unemployment and the May 2018 Trade Deficit, expanded upon in *Commentary No. 959-B* and headline coverage of June 2018 Conference Board Help Wanted OnLine® Advertising.

Commentary No. 958 (July 3rd) covered May 2018 Construction Spending and the accompanying annual benchmarking to that series.

Commentary No. 957 (July 1st) covered May 2018 New Orders for Durable Goods and the third estimate of First-Quarter 2018 Gross Domestic Product (GDP) and the coincident second estimates of Gross National Product (GNP) and Gross Domestic Income (GDI).

Commentary No. 956 (June 27th) reviewed May 2018 Retail Sales, Industrial Production, New Residential Construction (Housing Starts and Building Permits), New- and Existing-Home Sales, along with detail on the May 2018 Cass Freight Index™ and some potential twists to the pending July 27th Comprehensive Benchmark Revision to the GDP.

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 First-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 Industrial Production benchmarking 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).

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. 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 pre-recession level of activity. Such was in the context of contracting and faltering industrial production rivaling the economic collapse in the Great Depression as to duration. Also covered were prior January 2017 New- and Existing Home Sales.

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

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