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

COMMENTARY NUMBER 975

September Retail Sales, Production, Freight, Housing Starts, Hurricanes and FOMC

October 22, 2018

FOMC Discussions of Raising Rates to Restrictive Levels Are After the Fact; Higher Rates Already Are Pummeling Near-Term Economic Prospects and Threatening Financial-System Stability in this Still-Experimental and Unresolved Post-2007/2008-Crisis Environment

Oil-Price Driven Inflation Does Not Reflect an Overheating Economy; It Hurts Consumer Liquidity Just as Much as Federal Reserve Rate Hikes

Faltering Consumer Liquidity Clobbered September 2018 Retail Sales and New Residential Construction

Real Annual Retail Sales Growth Slowed in a Manner Most Commonly Seen at the Onset of a New Recession

Building Permits, Housing Starts and Home Sales Just Entered What Could Be Considered a New Recession

Third-Quarter Permits and Starts Fell in Consecutive Quarterly Contractions; Existing-Home Sales Declined in a Third Consecutive Quarterly Contraction; All Key Residential Series Are in Deepening Six-Month Downtrends

Minimal Monthly Growth in September Consumer Goods Production Came Entirely from Downside Revisions to August Activity

With No End in Sight, September 2018 Manufacturing Remained Shy by 4.8% (-4.8%) of Recovering Its December 2007 Pre-Recession Peak

The 129 Straight Months (43 Straight Quarters) of Economic Non-Expansion in U.S. Manufacturing Is the Longest Such Period in the 100-Year History of the Series

Mixed Data Distortions/Disruptions from the Hurricanes of 2018 and 2017

PLEASE NOTE: The next regular *Commentary No. 976*, planned for Friday, October 26th will review September New-Home Sales, New Orders for Durable Goods and the "advance" or first estimate of Third-Quarter 2018 Gross Domestic Product (GDP).

Hyperinflation and Consumer Liquidity Watches. Both of the most-recent *Watches, Hyperinflation Watch – No. 3* of August 12th and *Consumer Liquidity Watch – No. 4* of August 10th will be updated in *Special Editions* this week.

DAILY UPDATE Coverage. Detail on new headline economic data is posted in the **Daily Update** section in the top (right-hand) section of the <u>www.ShadowStats.com</u> home page. When major economic releases are published, brief, summary headline details are posted there usually within an hour or two of the release. Those details remain posted until they are covered separately in a subsequent *Commentary*.

The planned ShadowStats Publication Schedule, Schedule Revisions and Notes to Subscribers also are provided regularly at the end of that column.

Your comments and suggestions always are invited.

Best wishes to all, John Williams (707) 763-5786, johnwilliams@shadowstats.com

Today's (October 22nd) *Opening Comments* reviews evolving economic circumstances and systemic liquidity developments in the context of Federal Reserve tightening policies, supplemental to the discussions in <u>Special</u> <u>Commentary No. 973 – ALERT</u> and <u>Commentary No. 974</u>. Separate issues considered in these *Opening Comments* include (1) impact on the current and pending headline economic numbers from the 2017 and 2018 hurricane seasons, (2) pending GDP and the Congressional elections, and (3) the September 2018 CASS Freight IndexTM.

The *Reporting Detail* reviews the September 2018 Real and Nominal Retail Sales, Industrial Production, New Residential Construction (Building Permits and Housing Starts) and Existing-Home Sales.

The *Week, Month and Year Ahead* previews pending economic releases and provides background on recent *Commentaries*.

Commentary No. 975 contents, including graphs and tables, are indexed and linked on following page.

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OPENING COMMENTS

Misguided FOMC Is Driving Headline Economic Activity Into a New Recession

Tightening Consumer- and Systemic-Liquidity Conditions Begin Hitting the Economy Hard, as Seen in Real Retail Sales, Consumer Goods Production, Home Sales and Residential Construction. The Federal Reserve Board's Federal Open Market Committee (FOMC) has been spiking its targeted federal funds rate by 0.25% per quarter since December 2016 (third-quarter 2017 excepted), presently at 2.00% to 2.25%. Keep in mind that the current circumstance is without precedent for the FOMC. With headline consumer activity clearly now beginning to tumble anew, the pace of the Fed's tightening appears to be, and to have been, too aggressive to maintain what presumably is desired systemic stability.

In response to the unfolding banking and financial-system collapse of 2007/2008, the FOMC slashed its Fed Funds target to 0.00% to 0.25% in December 2008, holding it there until notching it a quarter-point higher in December 2015, with subsequent rate hikes as detailed, above. Further quarterly rate hikes are planned into 2019.

Initially, the current rate hikes were designed to unwind the Fed's unprecedented machinations to prevent systemic collapse in 2008. Now, the "concern" is to slow down a purportedly overheating economy. Frequently discussed here, however, the U.S. economy is far from overheating (see *Commentary No.* 971), and the Fed's apparent too-rapid pace of rate hikes has intensified consumer and systemic-liquidity problems (see *Consumer Liquidity Watch – No. 4* or its pending sequel). Such has dampened headline domestic economic activity, which had been slowing and now is turning down at an accelerating pace, with the potential of exacerbating banking-system liquidity issues anew. That suggests the Fed remains mired in the still-unresolved, effective banking-system collapse of 2008, with the potential of being pushed back into a renewed expansion of Quantitative Easing (see *Hyperinflation Watch – No. 3* or its pending sequel).

Slowing activity in September 2018 Real Retail Sales, Residential Construction and Home Sales and Consumer Goods in Industrial Production is reviewed in today's *Reporting Detail*. Keep in mind that the increasingly liquidity-strapped consumer remains the primary driving force behind domestic Gross Domestic Product (GDP), accounting for roughly 73% of second-quarter 2018 GDP activity.

A Healthy and Prosperous Consumer and Taxpayer Eventually Will Pull the System into Full Recovery, Not the Fed and Not Wall Street, Yet the FOMC Is Discussing "Restrictive" Policy. No one, including those in on the FOMC, has been through this type of post-banking-system failure/bailout

before. Given intensifying headline problems resulting from the current, extended round of tightening, the FOMC might consider giving the consumer a little greater liquidity break, with less aggressive rate hikes. Consider that these central bankers still have not figured out how to resolve fully the banking-system turmoil and its distortions, including handling \$1.7 trillion of Mortgage Backed Securities (MBS) that the Fed bought from troubled banks, much of which the Fed likely will have to take to its grave.

That said, not only is the FOMC currently jawboning unrealistic economic conditions, it actively is debating whether to impose "restrictive" policy, excessive rate hikes. ShadowStats contends that restrictive rates hikes already are in place, as reflected in the slowing of consumer economic activity, discussed in today's *Reporting Detail*. Consider the <u>Minutes</u> of the last FOMC Meeting:

"[FOMC] Participants offered their views about how much additional policy firming would likely be required for the Committee to sustainably achieve its objectives of maximum employment and 2 percent inflation. A few participants expected that policy would need to become modestly restrictive for a time and a number judged that it would be necessary to temporarily raise the federal funds rate above their assessments of its longer-run level in order to reduce the risk of a sustained overshooting of the Committee's 2 percent inflation objective or the risk posed by significant financial imbalances. A couple of participants indicated that they would not favor adopting a restrictive policy stance in the absence of clear signs of an overheating economy and rising inflation."

Headline CPI Inflation Net of Energy Inflation, but Including Food Inflation, Is Near the FOMC's Targeted "Core" Inflation Rate of 2.0%. Headline Consumer Price Index (CPI) inflation, net just of energy prices, but including food prices, is running about two percent, a level the Federal Reserve's Federal Open Market Committee (FOMC) considers "healthy," and which it purportedly targets for its "Core Inflation Rate," which excludes both food and energy. At present, food inflation is relatively stable and low, and excluding it along with the highly volatile energy prices from the headline CPI-U to generate the Fed's "Core" CPI calculations currently is bloating the headline "Core" rate by 0.2%, to a headline 2.2%. The headline CPI-U with headline food inflation included, but excluding the volatile energy prices, which largely reflecting global political distortions, currently shows headline annual inflation at the Fed's 2.0% target.

Discussed frequently in the *ShadowStats Commentaries* (see *Commentary No. 974*, for example), recent headline inflation has been driven by oil prices, not an overheating economy. The FOMC's targeted "Core" inflation rate, net of food and energy is a canard. A concept pushed by the Fed at the same time it was pushing and encouraging the Congress to redefine the CPI in the late 1980s, 1990s and into the present so as to lower the reported level of headline inflation, in order to reduce COLA payments to Social Security recipients and to boost the reported real (inflation-adjusted) growth in headline economic numbers. In theory, strong "Core" inflation wages should be rising along with the presumably accompanying strong economic activity, but none of that is happening.

The FOMC knows or should know better about the actual strength of the economy and employment conditions, as commonly experienced by Main Street U.S.A., where the Fed has been complicit over decades in biasing headline inflation reporting to the downside, along with the direct effect of biasing headline economic data to the upside.

In the current circumstance, it is the total actual inflation that has to be considered here, because that is what consumers have to pay out of pocket for actual living costs. When global political distortions are driving oil prices higher, which is dominating headline inflation at present, instead of strong economic activity boosting wages, domestic wages are not rising to cover the inflation. At present, both rising oil prices and related spiking interest rates are constraining consumer and systemic liquidity, a circumstance on the brink of driving headline economic activity sharply lower, of intensifying banking-system liquidity risks, and of throwing the FOMC back into a conundrum it has not yet been able to escape.

Disruptions to Headline Economic Reporting from the Hurricanes of 2018 and 2017

Hurricane Disruptions to Current Economic Reporting Continue, Driven More-Heavily by the 2017- Rather Than the 2018-Hurricane Season. As terrible as the hurricanes in 2017 and 2018 have been, the impact of the 2017 disruptions were severe at the time, and have had lingering impact in 2018, with distorted year-to-year comparisons of various numbers. Headline disruptions from the 2018 hurricanes are just beginning to surface, and increasingly should be obvious in the next couple of months, as replacement spending surfaces for damaged and destroyed property, ranging from homes and other structures to automobiles. Little has surfaced there, so far, in headline September details.

Where some of the 2017 hurricanes damaged oil-and-gas production and distribution facilities along the Gulf Coast, such disrupted related "Mining" production and oil prices, which had broad impact on a number of economic series. That circumstance did not repeat in 2018. Accordingly, as noted in the *Reporting Detail*, the Federal Reserve indicated less than a 0.1% negative impact on September 2018 production from hurricane disruptions, while last year, damages were enough to throw third-quarter aggregate Industrial Production into a quarterly contraction.

Noted in and expanding upon <u>Commentary No. 970</u>, Hurricanes Harvey and Irene dealt a devastating double blow to the U.S. mainland in terms of physical destruction and monetary losses/costs in August and September 2017. Such included distortions and disruptions to economic activity ranging from oil and gas production (and related spikes to gasoline prices and headline inflation), to massive property destruction, as well as to reporting disruptions of employment, unemployment and other labor-market details. In particular, labor-surveying distortions reflected inconsistent Bureau of Labor Statistics (BLS) methodologies, when Irene hit Florida during the BLS's September 2017 survey week for its monthly Household and Establishment (Payroll Employment) Surveys.

Where data distortions from the 2017-hurricane season and related recovery spending, had ongoing relative month-to-month and quarterly impact through headline first-quarter 2018 economic activity, and now distortions in relative year-to-year growth patterns in August and September 2018, similar patterns already are in the works, into the same periods in 2019, thanks to the timing of Hurricanes Florence and Michael and their terrible devastations on the Carolinas, Florida and adjacent regions.

As with Irene in 2017, Florence hit hard in the week that included the 12th of September, where the 12th defines the week used for both the Household and Payroll Surveys in a given month. Noted in

<u>Commentary No. 972</u>, hurricane impact appeared to depress both the headline September 2018 payroll jobs growth and the headline unemployment. What happened there will be clearer in the context of the headline October labor data, due for release on November 2nd.

Noted in <u>Commentary No. 974</u>, disruptions to oil production, oil prices and headline inflation in 2017 affected related production and relative, comparative inflation data a year later, with some offsetting disruptions to today's comparative annual year-to-year inflation rates, and related real annual growth or annual growth rates in the Mining Sector of Industrial Production (see the *Reporting Detail*).

Annual inflation rates in the headline August and September 2018 Consumer Price Index (CPI) and Producer Price Index (PPI) effectively were understated, distorted relative to the July 2018 annual numbers, due to the one-time and temporary headline spiking of gasoline prices and related CPI and PPI aggregates from the storm effects in August and September 2017, not otherwise reflected in the August and September 2018 activity.

As related distortions are anticipated or surface, they will be described in either the related *Pending Economic Releases* of the *Week, Month and Year Ahead* section or the related *Reporting Detail* section.

Pending Headline Third-Quarter GDP Growth and the Congressional Elections

Current Economic Reporting Has Been Structured with Enough Growth-Boosting Gimmicks to Forestall Separate, Extraordinary External Manipulations. The last national election, where I know for sure that direct political manipulation of the GDP was used in an effort to sway voters in into favoring the incumbent party was in the 1992 presidential election. There also were some unusual games played with payroll employment in 1996, but barring extraordinarily negative economic circumstances, enough upside biases have been built into key data of recent decades, such as the GDP (see <u>Special Commentary No. 968-Extended</u>) to keep headline data positive enough to have good headlines going into Election Day.

Early gimmicks with key numbers are storied, see <u>Special Commentary No. 885</u>, entitled *Numbers Games that Statistical Bureaus, Central Banks and Politicians Play*.

Yet, It Is Underlying Economic Reality, Not Hyped Numbers in the Press, That Drives Elections. With the Congressional elections looming on November 6th, just a tad more than two weeks off, political biases would tend to favor reporting of this week's "advance" estimate of Third-Quarter 2018 GDP coming in at the upper end of expectations (see Pending Economic Releases in the Week, Month and Year Ahead section. Often discussed in ShadowStats (see Commentary No. 846 of November 11, 2016), however, Main Street U.S.A. has a pretty good sense as to how the economy actually is faring, specifically how its pocket book is doing, and Main Street U.S.A. will vote its pocketbook against candidates deemed to be hurting its finances, and for candidates deemed to be helping with or will help with its finances.

Manufacturing and the Cass Freight IndexTM (September 2018)

September 2018 Freight Index Held Shy of Recovering Its Adjusted Pre-Recession Peak by a Narrowing 3.3% (-3.3%), in the Context of a Continuing Uptrend and Positive Annual Growth. An independent, reliable private indicator of real-world economic activity and shifting business patterns, the September 2018 Cass Freight IndexTM was published October 17th. Again, we thank Cass Information Systems for their permission to use the data.

Patterns Reflected in Other Key Economic Measures. Although uptrending based on its 12-month moving average, the unadjusted freight series continued sharply lower from its post-recession high, amidst some rebound in the year-to-year change of the raw, unadjusted headline monthly reading (see accompanying Graphs OC-1 and OC-3). The improving smoothed series remained shy of full economic recovery, still shy of recovering its pre-recession peak activity by 3.3% (-3.3%). The headline detail here remains as published, not seasonally adjusted and not subject to annual benchmark revisions, unlike some of the purportedly better-quality government numbers, such as Industrial Production, as discussed shortly, which still are heavily modeled and gimmicked (see Commentary No. 942-B and Commentary No. 950).

Similar patterns are seen in a variety of major economic measures, including the heavily upside-biased headline GDP (see in particular the previously published *Opening Comments* of <u>Commentary No. 971</u>, and the discussion involving *Graphs OC-3* to *OC-23* there.) Other series include the Manufacturing Sector of Industrial Production (updated here in *Graphs OC-2* and *OC-4*) and series such U.S. Petroleum Consumption, Real Construction Spending and the Employment-Population Ratio (again see <u>Commentary No. 971</u>).

The September 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, uptrending headline activity. The pace of year-to-year growth had rebounded some to 8.2% in September 2018, having backed off to 6.0% in August 2018, from 10.6% in July 2018, versus 7.2% in June 2018, 11.9% in May 2018, all versus a near-term peak in January 2018 of 12.5% (*Graph OC-3*). The unadjusted monthly level of September 2018 (thin line in *Graph OC-1*) held near August's level, well off the May 2018 post-recession high and still holding below its pre-recession peak activity.

The 12-month trailing average of activity, however, did hit a new post-recession high, yet it remained meaningfully shy of recovering its pre-recession peak. Activity reflected in the 12-month trailing average—used to eliminate seasonality in the unadjusted series (see the *General Background to the Freight Index*)—remained in low-level, uptrending stagnation, down by 3.28% (-3.28%) from recovering its formal pre-recession high, down by 6.34% (-6.34%) from its precursor peak (see *Graph OC-1*).

For the twenty-second consecutive month, the twenty-third month in the last twenty-four, year-over-year change in the unadjusted monthly index was positive. Again, it rebounded to 8.20%, having dropped to 5.96% in August 2018 from 10.57% in July 2018, but it stills holding off its near-term peak activity of 12.54% in January 2018 (see *Graph OC-8*).

A consecutive string of nineteen months of annual contraction in the Freight Index began in March 2015. That was consistent with the "new" recession signal following the near-term Industrial Production peak in November 2014 recovered anew in initial March 2018 reporting, lost again with the annual benchmark revisions, only to be regained once more with the headline April 2018 (see the discussion in the *Industrial Production* section of the *Reporting Detail*).

Comparative growth patterns of the Freight Index versus the never-recovered, dominant Manufacturing Sector of Industrial Production are shown in *Graphs OC-1* and *OC-2* as to level and in *Graphs OC-3* and *OC-4* as to year-to-year change. More-extensive comparisons with other meaningful indicators of U.S. economic activity, including the GDP, again, are found *Commentary No. 971*.

The continuing uptrend in the smoothed series, and the ongoing positive, albeit fluctuating annual growth in the Cass Index, indicate that the recession in freight activity has bottomed out, but still has not recovered its pre-recession peak activity. Even with a positive annual gain in 2017 and in the first nine 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 is not yet fully recovered.

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

Noted earlier, the ShadowStats smoothed (12-month trailing average) headline reading on the CASS Freight Index, through September 2018 (*Graph OC-1*) remained down by 6.34% (-6.34%) from "Recovering" its preliminary pre-recession peak of September 2006, down by 3.28% (-3.28%) 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.

General Background to the Freight Index. [This section largely is repeated from Commentary No. 966.] 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 September 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 reindexed the series to January 2000 = 100, consistent with other graphs used here, where the headline Cass

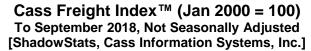
Index plot is based on January 1990 = 100. The plot of the trailing twelve-month average of the freight index shows it hit a near-term peak in February 2015, consistent with the onset of what appears to have been a "new recession" in December 2014. It slowed through September 2016, then flattened out and turned back to the upside through the current September 2018 reading, its highest level of the post-recession period, although still shy of its pre-recession peak (again, see *Graph OC-1*).

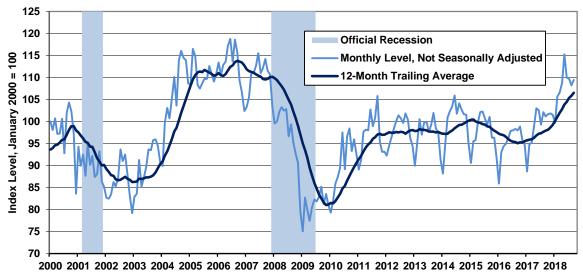
The pattern here is broadly consistent with the Industrial Production series, although no signs of an aggregate 2015 economic contraction came out of the recent comprehensive annual benchmark revisions to the GDP (see <u>Special Commentary No. 968-Extended</u>), despite indications of double-dip recession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

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 down to 5.96% in August 2018 and rebounding to 8.20% in September 2018. In combination, *Graphs OC-1* to *OC-4* 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 stagnation.

[Graphs OC-1 to OC-4 begin on the following page.]

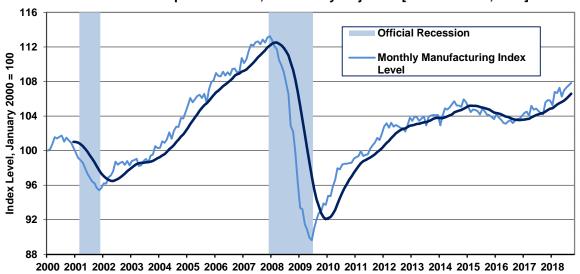
Graph OC-1: CASS Freight Index™ Moving-Average Level (2000 to September 2018)





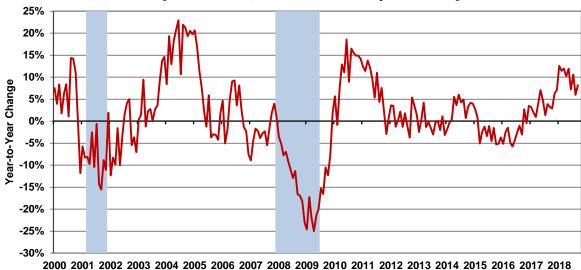
Graph OC-2: Industrial Production-Manufacturing, 12-Month Moving-Average Level (2000 to September 2018)

Production - Manufacturing (SIC) Index Reset to January 2000 = 100, Monthly and 12-Month Moving Average To September 2018, Seasonally Adjusted [ShadowStats, FRB]



Graph OC-3: CASS Freight Index, Monthly Year-to-Year Percent Change (2000 to September 2018)

Cass Freight Index™ (Year-to-Year Percent Change) Monthly to September 2018, Not Seasonally Adjusted [ShadowStats, Cass Information Systems, Inc.]



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

Production - Manufacturing (Year-to-Year Percent Change) To September 2018, Seasonally-Adjusted [ShadowStats, FRB]



REPORTING DETAIL

Retail Sales (September 2018)

Headline Real Retail Sales Were Unchanged in the Month, Against Downwardly Revised August Activity. Monthly September Retail Sales effectively collapsed against robust consensus expectations, on top of small downside revisions to prior activity. Likely reflecting the effects of intensified Federal Reserve tightening on deteriorating consumer liquidity conditions, real Retail Sales (net of headline CPI-U inflation) was unchanged at 0.0%, month-to-month, following a revised deeper monthly drop of 0.2% (-0.02%) [previously down by 0.1% (-0.1)] in August. Annual real growth slowed to 2.4% in September 2018, from 3.7% in August 2018, a pattern often seen at the onset of recessions. Hurricane-related activity should have boosted sales activity in terms of grocery stores, and suppliers of material for boarding up, etc., but nothing was obvious in the headline detail.

Quarterly Nominal Motor Vehicle Sales Were Unchanged, Third-versus Second-Quarter 2018. As reported by the Census Bureau, third-quarter 2018 nominal (not-adjusted for inflation) sales of new and used motor vehicles in third-quarter 2018 was "unchanged" at 0.0% versus second-quarter 2018.

Nominal September Monthly Retail Sales Rose 0.10% (Unchanged at 0.00% Net of Revisions); Real Sales Were a Headline First-Decimal Point 0.0% "Unchanged," Up 0.04% at Second Decimal Point, but Down by 0.05% (-0.05%) Net of Revisions. Despite a 0.8% monthly gain in motor vehicle sales, on top of small upside revisions to August and July, the balance of other retail sales categories declined by 0.6% (-0.6%) in September 2018, on top of downside revisions to August and July activity. Nonetheless, the slowdown in nominal and real auto sales continued, again, with nominal quarterly levels of motor vehicle sales unchanged between second- and third-quarter activity.

Headline Nominal Retail Sales—September. The Census Bureau reported its "advance" estimate of September 2018 *Retail Sales* on Monday, October 15th. The headline, seasonally-adjusted monthly nominal gain of 0.10% +/- 0.59% was statistically-insignificant (all confidence intervals are expressed at the 95% level), as was the downwardly revised August monthly gain of 0.6% [previously 0.09%] +/- 0.23%.

That August gain was on top of a revised July monthly gain of 0.61% [previously 0.68%], versus an unrevised 0.24% in June, 1.24% in May, 0.34% in April, 0.72% in March, 0.10% in February and a decline of 0.12% (-0.12%) in January. Again, net of the prior-month's revision, the September's 2018 nominal monthly sales gain was unchanged at 0.00% instead of the headline 0.10%.

Year-to-Year Annual Nominal Change. The September 2018 nominal year-to-year change in Retail Sales showed a statistically-significant increase of 4.72% +/- 0.82%, versus revised annual gains of 6.51% [previously 6.64%] in August 2018, 6.62% [previously 6.69%, initially 6.41%] in July 2018 and versus unrevised annual gains of 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.

September 2018 "Core" Retail Sales, Net of Food and Gasoline. In theory, the nominal September 2018 retail sales environment should have been relatively flat for grocery stores, with seasonally-adjusted food prices rising by 0.03% (up by 0.20% unadjusted) in September, and negative for gasoline stations, with seasonally-adjusted gasoline prices down by 0.21% (-0.21%), up by 0.34% unadjusted, in September, per the Bureau of Labor Statistics (BLS). That said, adjusted retail sales grocery-store sales declined by 0.6% (-0.6%), per the Census Bureau, with seasonally-adjusted gasoline-station sales down by 0.81% (-0.81%).

Given the 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. 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.

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:

<u>Version I:</u> Nominal September versus August 2018 seasonally-adjusted retail sales series—net of total grocery store and gasoline-station sales—gained 0.22%, versus the official headline aggregate sales gain of 0.10%.

<u>Version II:</u> Nominal September versus August 2018 seasonally-adjusted retail sales series—net of the monthly *change* in grocery store and gasoline-station revenues—gained by 0.18%, versus the official headline aggregate sales gain of 0.10%.

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 the <u>Consumer Liquidity Watch – No. 4</u> (soon to be updated as *CLW-5* and <u>Commentary No. 974</u>). Without sustainable growth in, and 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 benchmarked revamped second-quarter GDP shrank 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 continues its upside climb in the year ahead, and as overall headline Retail Sales should continue to suffer from the continuing consumer liquidity squeeze, real Retail Sales growth should continue to trend meaningfully lower as suggested in the September 2018 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, 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 September 2018 were up year-to-year by 3.5% from the year-before, there would be some value in knowing that 2.3% of that gain was in inflation, with physical sales (real sales) volume up by 2.2%.

If the inflation estimate used were understated, the resulting "real" or "inflation-adjusted" growth would be overstated. Using the prior example, if sales were up by 3.5%, but inflation was really 4.0%, instead of 2.3%, physical sales volume would have declined by 0.5% (-0.5%) instead of having gained 2.2%.

Discussed in the <u>Public Commentary on Inflation Measurement</u>, 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 <u>2014 Hyperinflation Report—Great Economic Tumble</u> – Second Installment. These inflation-adjustment issues are separate from the adjustment issues mentioned in the opening paragraph of this section.

Graphs Reflecting Alternate Inflation-Adjustment. Both of the accompanying *Graphs 1* and 2 of Real Retail Sales are indexed to January 2000 = 100.0, so as to maintain consistency with the series of graphs related to corrected inflation-adjustment. Parallel, regular plots of the ShadowStats "corrected" Industrial Production Index are found in that section (see *Graphs 8* and 9 on page 26). In *Commentary No. 971*, see *Graphs 22* to 25 for the "corrected" New Orders for Durable Goods, and the *Opening Comments (Graphs OC-4* and *OC-5* and following) for the GDP series.

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

Indexed Real Retail Sales Level (Deflated by CPI-U) To September 2018, Seasonally-Adjusted [ShadowStats, Census, BLS]



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

Corrected Real Retail Sales Level Deflated by Shadow-Stats-Alternate CPI (1990-Base) To September 2018, Seasonally-Adjusted [ShadowStats, Census]



The first graph reflects the official Real Retail Sales series, except that it is indexed, instead of being expressed in dollars. The plotted patterns of activity and rates of growth are exactly the same for the official series, whether the series is indexed or expressed in dollars, as is evident in a comparison of *Graph 1* with *Graph 3* plotted in headline CPI-U deflated dollars.

Instead of being deflated by the CPI-U, the "corrected" Real Retail Sales numbers—in *Graph 2*—use the ShadowStats-Alternate Inflation Measure (1990-Base) for deflation.

With the higher inflation of the ShadowStats measure, the revamped numbers show a pattern of plunge and stagnation and renewed downturn. That pattern generally is more consistent with consumer indicators such as Real Average Weekly Earnings and other faltering consumer liquidity conditions, seen in *Consumer Liquidity Watch – No. 4* than is seen with headline Real Retail Sales detail.

Headline Real Retail Sales—September 2018—Real Sales Gained 0.04% (-0.4%) in the Month, Declined by 0.05% (-0.05%) Net of Revisions, With Annual Growth Slowing to 2.39% from 3.85%. 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 October 11th, and covered in Commentary No. 974. The headline levels of, and year-to-year changes in, monthly Real Retail Sales are plotted in Graphs 3 to 6.

The September 2018 Consumer Price Index showed the seasonally-adjusted CPI-U up month-to-month by 0.06%, versus 0.22% August, 0.17% in July, 0.13% June, 0.21% in May and 0.22% in April.

Year-to-year seasonally-adjusted CPI-U gained by 2.26% in September 2018, by 2.68% in August 2018, 2.89% in July 2018, 2.80% in June 2018, 2.72% in May 2017 and 2.43% in April 2018 (see *Commentary No. 974* for detail).

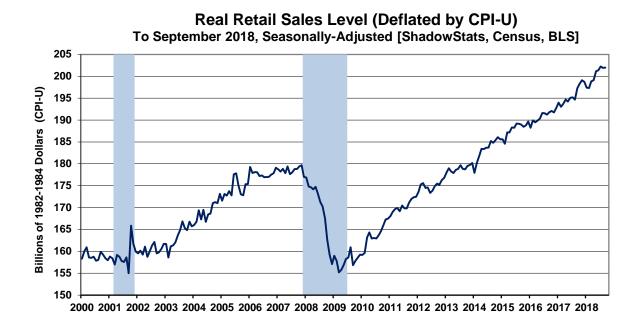
Deflated by the CPI-U, September 2018 Real Retail Sales rose month-to-month by 0.04% [down by 0.05% (-0.05%)] net of prior-period revisions], having declined in August by a revised 0.17% (-0.17%) [previously 0.14% (-0.14%), having gained a revised 0.43% [previously 0.50%, initially 0.34%] month-to-month in July, 0.11% in June, 1.03% in May and 0.12% in April.

Deflated by the adjusted annual CPI-U, September 2018 annual Real Retail Sales rose by an adjusted 2.39%, down from a revised 3.72% [previously 3.85%] in August 2018, a revised 3.63% [previously 3.70%] in July 2018, with unrevised annual gains of 3.22% in June 2018, 3.56% in May and 2.28 in April.

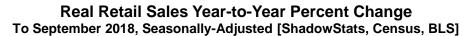
Inconsistent Seasonal Adjustment Revisions Minimally Negative to Headline September 2018 Activity. In the context of inconsistent headline reporting of year-ago revisions just for August 2017 (downside) and September 2017 (downside), year-to-year real growth was depressed artificially by a 0.03% (-0.03%) in September 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 Inflation Understate and Otherwise section).

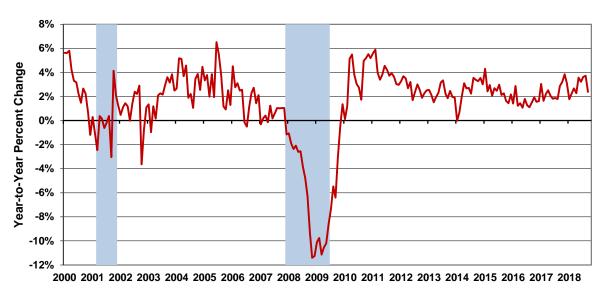
Real Retail Sales Graphs. The first of four graphs following, *Graph 3* shows the level of Real Retail sales activity (deflated by the CPI-U) since 2000; *Graph 4* shows the year-to-year percent change for the same period. Annual real growth had slowed markedly into fourth-quarter 2015 and 2016, generating an intense recession signal. Again, with recent 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 solid recession signal had been restored, only to disappear anew with year-to-year Real Retail Sales growth in second-quarter 2018 at 3.0% and at 3.2% in third-quarter 2018.

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



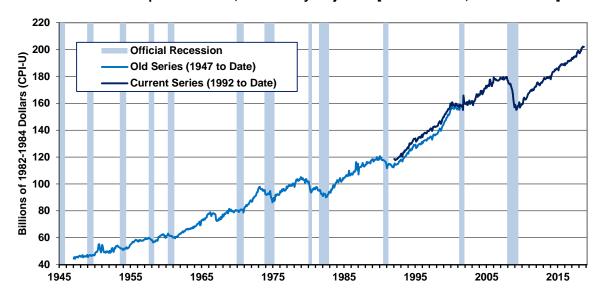
Graph 4: Real Retail Sales (2000 to Date), Year-to-Year Percent Change





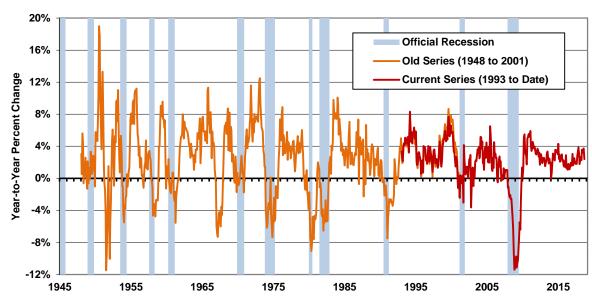
Graph 5: Level of Real Retail Sales (1947 to Date)

Real Retail Sales (Deflated by the CPI-U) 1947 to September 2018, Seasonally-Adjusted [ShadowStats, St. Louis Fed]



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

Real Retail Sales Year-to-Year Percent Change 1948 to September 2018, Seasonally-Adjusted [ShadowStats, St. Louis Fed]



Nonetheless, real annual growth slowed to a recession-signal level of 2.39% in September 2018, perhaps a harbinger of fourth-quarter activity. *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.

Inflation-Adjusted Series Showed a 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 an annualized quarterly pace of 1.67% (-1.67%), 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 5.53%, initial third-quarter 2018 activity backed off to 3.05%.

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

Industrial Production (September 2018)

Hurricane Florence Restrained September Industrial Production by Less Than 0.1% (-0.1%), While 2017 Hurricane Damages Triggered Boosted Relative Annual Third-Quarter 2018 Activity. September Industrial Production came in about as expected, up by a headline 0.3% (0.25% at the second decimal point) in the month, up 0.2% (0.23%) net of revisions. Despite its 0.2% (0.24%) gain, Manufacturing continued its record run of non-recovery. Mining gained 0.5% (0.46%) in the month, up by 0.6% (0.64%) net of revisions, while Utilities were "unchanged" at 0.0%, down by 0.01% (-0.01%) [down by 0.18% (-0.18%) net of revisions].

In combination, the Federal Reserve estimates of hurricane disrupted data show minimal distortions from 2018-hurricane activity on the current numbers, but where September aggregate headline monthly change turned lower, annual monthly growth spiked, due to the hurricane-depressed activity seen during the 2017-hurricane season.

Downside revisions to aggregate September 2018 Industrial Production and to its dominant Manufacturing sector continued to bloat headline gains for a second month. Last month, headline August 2018 Industrial Production gained 0.4%, which would have been a gain of 0.2%, net of a downside revision to July activity. In September, production gained 0.3%, but that was 0.2% net of a downside revision to August activity.

In like manner, last month, the headline August gain of 0.2% in Manufacturing, was "unchanged" at 0.0% net of downside revisions to July activity. While a similar swing at the second decimal point did not change the rounded monthly change in September, consider that the September 0.2% monthly gain in its major subsidiary series Consumer Goods, reflected nothing more than downside revisions to August activity. Net of revisions, Consumer Goods effectively were "unchanged" at 0.0%, perhaps reflecting some of the mounting consumer liquidity pressures that hit both September Real Retail Sales and the Residential Construction and Existing-Home Sales series (see the *Opening Comments* and those respective sections).

Manufacturing Sector Showed a Record 129th Straight Month (43rd Straight Quarter) of Economic Non-Expansion. September 2018 Manufacturing gained 0.2% in the month, yet headline Manufacturing activity still held shy by 4.8% (-4.8%) of recovering its pre-recession peak on both a monthly basis against December 2007, and on a quarterly basis for third-quarter 2018 versus fourth-quarter 2007.

Accordingly, the Manufacturing series now has logged a record string of 129 straight months or of 43 straight quarters of economic non-expansion, a circumstance never before seen in the 100-year history of Industrial Production reporting, as reflected in *Graph 17*.

Table 1: Industrial Production and Its Major Sectors

Table 1: Index of Industrial Production (IIP) to September 2018, by Month (IIP and Major Sectors Indexed to 2012 = 100.000)										
Measure	Weight	Sep '18	Aug	Jul	Jun	May	Apr	Mar		
IIP Index	100.0%	108.482	108.209	107.823	107.457	106.781	107.662	106.449		
- Prior			108.232	107.788	107.400	106.749	107.646	106.449		
Mo/Mo		0.25%	0.36%	0.34%	0.63%	-0.82%	1.14%	0.50%		
- Prior			0.41%	0.36%	0.61%	-0.83%	1.13%	0.50%		
Yr/Yr		5.14%	4.86%	4.06%	3.55%	2.96%	3.81%	3.63%		
- Prior			4.88%	4.02%	3.50%	2.93%	3.79%	3.63%		
Manufacturing	75.5%	104.820	104.564	104.300	103.999	103.277	104.267	103.689		
- Prior			104.608	104.348	104.002	103.309	104.258	103.689		
Mo/Mo		0.24%	0.25%	0.29%	0.70%	-0.95%	0.56%	-0.11%		
- Prior			0.25%	0.33%	0.67%	-0.91%	0.55%	-0.11%		
Yr/Yr		3.50%	3.09%	2.60%	2.02%	1.44%	1.98%	2.53%		
- Prior			3.13%	2.64%	2.02%	1.47%	1.97%	2.53%		
Mining	14.1%	124.844	124.276	123.810	122.825	120.702	119.455	118.408		
- Prior			124.052	123.221	122.395	120.284	119.366	118.408		
Mo/Mo		0.46%	0.38%	0.80%	1.76%	1.04%	0.88%	1.13%		
- Prior			0.67%	0.67%	1.76%	0.77%	0.81%	1.13%		
Yr/Yr		13.42%	14.35%	13.27%	12.15%	11.25%	10.75%	10.98%		
- Prior			14.15%	12.73%	11.75%	10.87%	10.67%	10.98%		
Utilities	10.4%	105.183	105.195	104.065	104.076	105.687	108.490	102.573		
- Prior			105.376	104.152	104.076	105.693	108.516	102.573		
Mo/Mo		-0.01%	1.09%	-0.01%	-1.52%	-2.58%	5.77%	4.21%		
- Prior			1.18%	0.07%	-1.53%	-2.60%	5.79%	4.21%		
Yr/Yr		5.42%	4.60%	1.93%	2.86%	2.84%	8.08%	1.99%		
- Prior			4.78%	2.02%	2.86%	2.85%	8.11%	1.99%		
Sources: Federal Reserve Board, ShadowStats										

Mining Sector Gained, Utilities Sector Was Flat-to-Lower in September 2018. On top the soft headline monthly gain in the Manufacturing Sector, the Mining Sector picked some strength, on top of upside revisions, while the Utilities Sector flattened out on top of a downside revisions. The Mining Sector gained 0.46% in September (0.64% net of prior-period revisions, dominated as usual by Oil and Gas Extraction, which more than offset the monthly contraction in Oil and Gas Exploration, but supplemented by monthly gains in Coal and Gold Mining.

Separately, ever-volatile, weather-dominated Utility usage declined by 0.01% (-0.01%) in the month, which was down by 0.18% (-0.18%) net of prior-period revisions.

Headline Monthly and Annual Details. The October 16th publication of September 2018 Industrial Production activity by the *Federal Reserve Board* came in about as expected at 0.3% (0.2% net of priorperiod estimates), but the jump in annual production growth from 3.5% in June 2018 to 5.1% in

September 2018 largely was function oil and gas production at relatively normal levels today versus yearago hurricane disrupted oil and gas production as a result of the 2017 hurricane season.

The September 2018 aggregate Industrial Production headline monthly gain of 0.25% [0.23% net of revisions], followed a downwardly revised 0.36% [previously 0.44%] in August, and a revised monthly gain of 0.34% [previously 0.36%, initially 0.11%] in July.

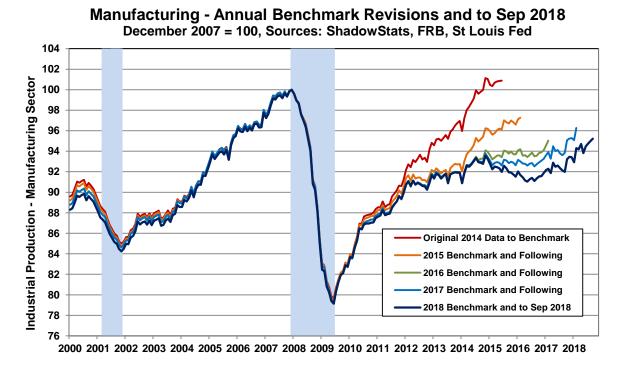
The easiest way to review these numbers is look at the revised detail in *Table 1*, particularly the index levels, as opposed extensive descriptors used in the text, which likely would not give as clear a picture as simply looking at the numbers. Accordingly, what follows is limited to near-term headline detail.

Year-to-year, September 2018 Industrial Production gained 5.14%, versus a revised 4.86% [previously 4.88%] and versus an unrevised 4.02% in July 2018.

Growth by Major Sector. Detailed by major industry group (see *Graphs 13*, *15*, *22* and *24*), the September 2018 the aggregate Industrial Production monthly gain of 0.25%, broke out by component sector as a gains of 0.24% in Manufacturing and 0.46% in Mining, with Oil and Gas production more than offsetting declines in Exploration, and a virtually "unchanged" decline of 0.01% (-0.01%) in Utilities.

In the wake of the July 27th Comprehensive Benchmark Revision to GDP, the ShadowStats estimate of the GDP Series Corrected for Understatement of Headline Inflation increasingly resembled patterns of activity seen the in Manufacturing Sector, as plotted and compared in today's *Opening Comments* section with the CASS Freight Index TM (see also *Commentary No. 971* and *Sections I* and *II* of *Special Commentary No. 968-Extended* of September 6th for the comparative details with the benchmarked GDP and Real New Orders for Durable Goods, Ex-Commercial Aircraft and other series).

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



Separately, the recent comprehensive GDP Benchmarking showed no obvious impact to the aggregate historical GDP activity from recent downside benchmark revisions to Industrial Production, Manufacturers' Shipments and New Orders for Durable Goods, etc., such as reflected here in *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 September 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, the series had regained the fourth-quarter 2014 recovery peak for second time, albeit only by 0.12%, having lost that status in the March 2018 benchmarking. As of the September 2018 reporting, that level had been topped by 1.71%, last regaining that peak in revised April 2018 reporting.

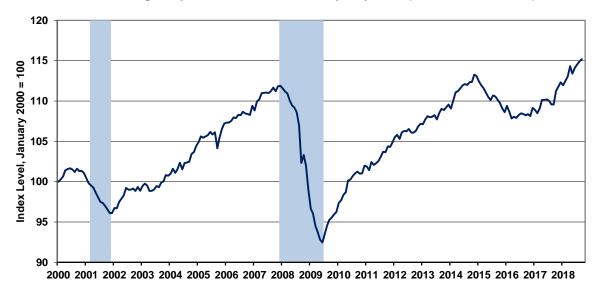
Graphs 8 and 9 address reporting-quality issues tied just to the overstatement of headline growth in the total Industrial Production series that results directly from the Federal Reserve Board using too-low an estimate of inflation in deflating some components of its production estimates into real-dollar 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 <u>Public Comment on Inflation</u> 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* on page 17), 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 seen with a comparison of *Graph 8* here to later *Graph 14*, which has the standard, headline indexing).

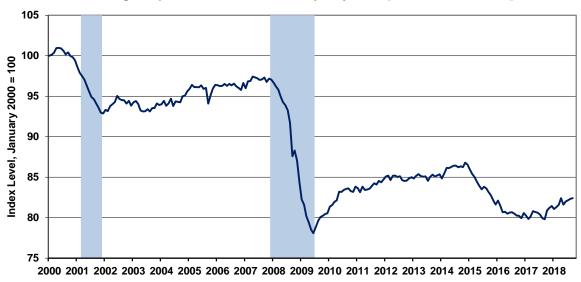
Graph 8: Indexed Headline Level of Industrial Production (Jan 2000 = 100)

Industrial Production, Re-Indexed to Jan 2000 = 100 Through September 2018, Seasonally-Adjusted [ShadowStats, FRB]



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

ShadowStats-Corrected Industrial Production Hedonic-Adjusted Inflation Understatement Removed, Index Jan 2000 = 100 Through September 2018, Seasonally-Adjusted [ShadowStats, FRB]



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.

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 last month's benchmarking, only to recovery the 2014 highs again with in April 2018 detail. That said, the dominant manufacturing sector of industrial production never has recovered its December 2007 pre-recession peak, a record period of 10-plus years of economic non-expansion in the 100-year history of the Industrial Production series.

Noted earlier, the now 129-straight months of Manufacturing non-expansion, indeed remains unprecedented in its duration within the 100-year history of the Industrial Production series. While the recently-benchmarked GDP and its second-quarter 2018 real GDP reporting showed that series to have expanded by 17.4% above its pre-recession peak, the dominant Manufacturing Sector of Industrial Production still holds shy of recovering its pre-recession high by 4.8% (-4.8%) as of third-quarter 2018.

Quarterly and Annual Production Changes. In the context of March 23, 2018 benchmark revisions sharply to the downside for annual growth and annualized quarterly growth, and the initial 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%.

Reflecting detail published with the headline September 2018 numbers, fourth-quarter 2017 growth was a hurricane-boosted 2.99%, with first-quarter 2018 reporting showing annual growth of 3.38% and second-quarter 2018 showing a fourth estimate of 3.44% [previously 3.41%, 3.62%, initially 3.58%]. Based initial full third-quarter 2018 reporting, annual growth was 4.68%.

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

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

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

Reflecting detail published with the headline September 2018 numbers, the fourth-quarter activity was up by an unrevised, disaster-recovery-boosted 7.75%, with the first-quarter 2018 at an unrevised 2.52%, second-quarter 2018 at a revised 5.25% [previously 5.12%, initially 5.96%] and with an initial estimate of third-quarter 2018 at 3.29%.

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 September 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 13 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 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.

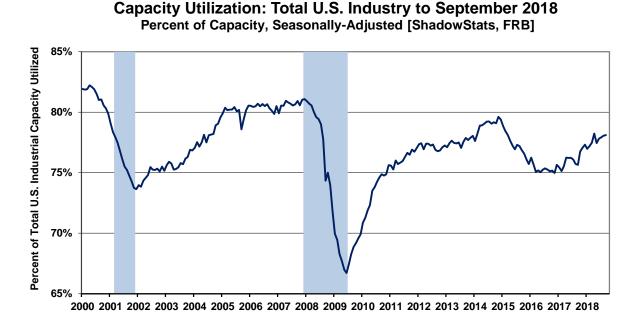
Still Fighting the Great Recession. Headline September 2018 Industrial Production currently is relatively stagnant at a minimally-recovered level, versus its pre-Great Recession peak. Third-quarter 2018 production activity was up by 2.90% versus its fourth 2007 pre-recession peak, while second quarter 2018 GDP stood at 17.44% 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 into September 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.

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



Having Hit a Near-Term Peak in April 2018, Total U.S. Industrial Capacity Utilization Took a Relative Hit in May and Rose in June and Eased in July and Held Below the April Peak in September 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 September 2018 Capacity Utilization Rate of 78.11% versus a revised 78.06% [previously 78.08%] in August, 77.92% [previously 77.90%] in July, 77.81% [previously 77.76%] in June, versus 77.46% [previously 77.43%] in May, with all later reporting below the revised April 2018 near-term peak of 78.23 [previously 78.22, 78.29%, 78.18%, 78.06%, initially 77.99%].

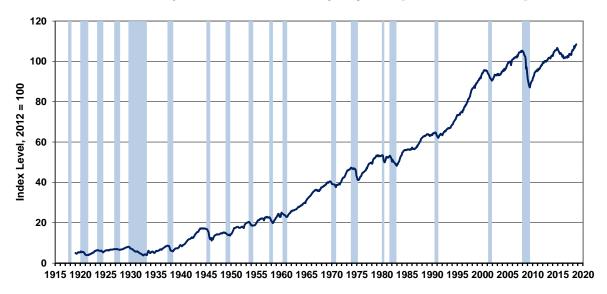
Against its December 2007 pre-recession peak level of 81.10%, September 2018 Capacity Utilization reading held shy of recovering that peak *level* by 3.68% (-3.68%), or by 299 (-299) basis points in terms of the peak *percentage number*. That is despite September 2018 Industrial Production holding at 3.02% above its December 2007 pre-recession peak, and with the September 2018 Manufacturing Sector holding shy of recovering its December 2007 pre-recession peak by 4.78% (-4.78%).

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 nothing confirming that showed up in the 2018 comprehensive GDP benchmarking. Contrary to consensus hype of fully recovered and expanding economic activity, as seen in the Manufacturing Sector, much of the headline U.S. economy never has recovered fully from the 2007 downturn.

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

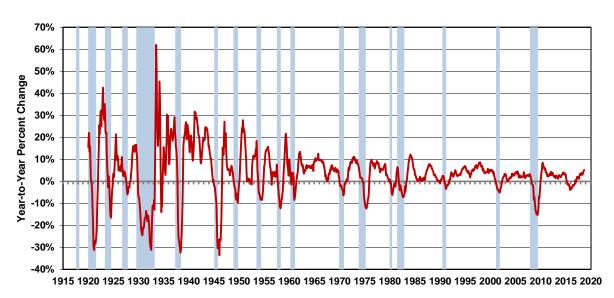
Graph 11: Index of Industrial Production, Full Historical Series 1919 to Date

Index of Industrial Production (2012 = 100) 1919 to September 2018, Seasonally-Adjusted [ShadowStats, FRB]



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

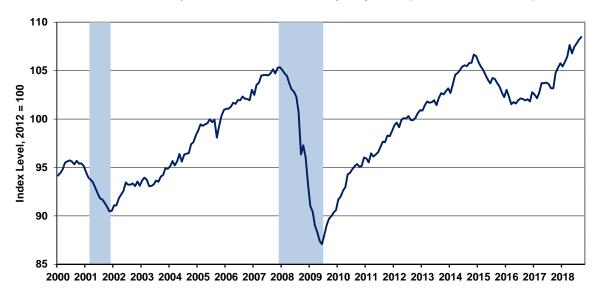
Industrial Production (Year-to-Year Percent Change) 1920 to September 2018, Seasonally-Adjusted [ShadowStats, FRB]



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

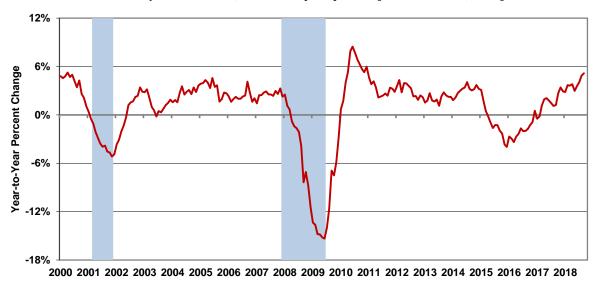
Graph 13: Index of Aggregate Industrial Production, Since 2000

Index of Industrial Production (2012 = 100) Level to September 2018, Seasonally-Adjusted [ShadowStats, FRB]



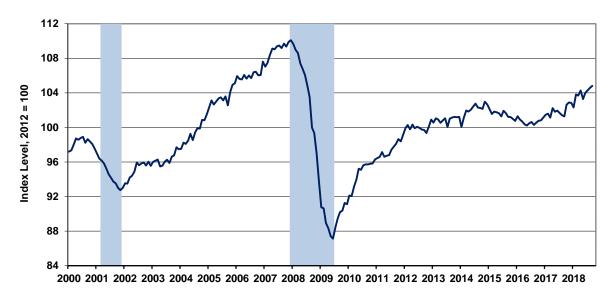
Graph 14: Aggregate Industrial Production, Year-to-Year Percent Change, Since 2000

Industrial Production (Year-to-Year Percent Change) To September 2018, Seasonally-Adjusted [ShadowStats, FRB]



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

Production - Manufacturing (SIC) (2012 = 100) Level to September 2018, Seasonally-Adjusted [ShadowStats, FRB]



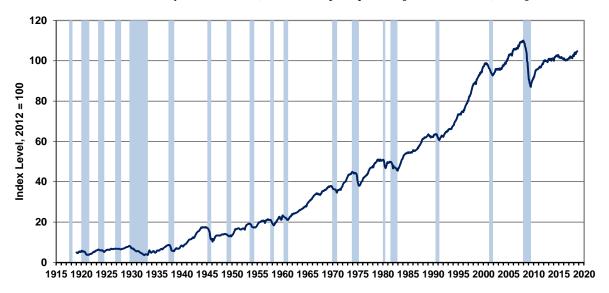
Graph 16: Industrial Production - Manufacturing, Year-to-Year Percent Change, Since 2000 (Same as Graph OC-4 in the Opening Comments)

Production - Manufacturing (Year-to-Year Percent Change) To September 2018, Seasonally-Adjusted [ShadowStats, FRB]



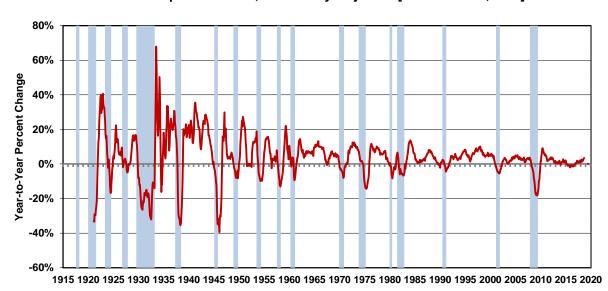
Graph 17: Industrial Production, Manufacturing, Full Historical Series 1919 to Date

Industrial Production - Manufacturing Sector (2012 = 100) 1919 to September 2018, Seasonally-Adjusted [ShadowStats, FRB]



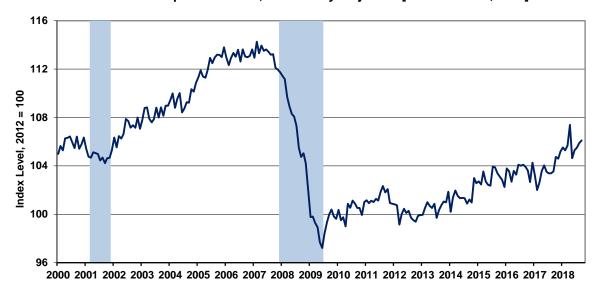
Graph 18: Manufacturing Year-to-Year Percent Change, Full Historical Series Since 1920

Manufacturing Sector (Year-to-Year Percent Change) 1920 to September 2018, Seasonally-Adjusted [ShadowStats, FRB]



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

Production - Consumer Goods (2012 = 100) Level to September 2018, Seasonally-Adjusted [ShadowStats, FRB]



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

Production - Consumer Durable Goods (2012 = 100) Index Level to September 2018, Seasonally-Adjusted [ShadowStats, FRB]



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





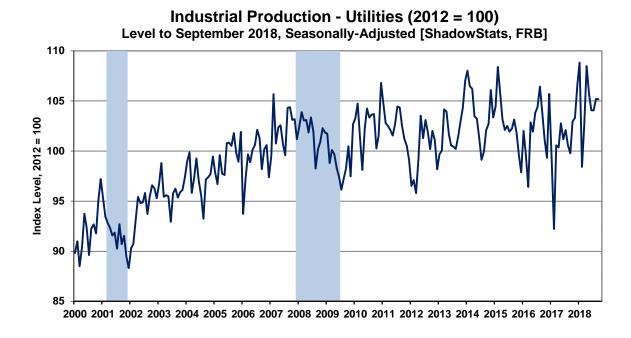
The aggregate production index (*Graph 13*) contracted quarter-to-quarter for six consecutive quarters, from first-quarter 2015 through second-quarter 2016. Year-to-year declines by quarter were seen for seven consecutive quarters, from second-quarter 2015 through fourth-quarter 2016, with first-quarter 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 has continued to pick up going into September 2018.

Shown in *Graphs 15*, 22 and 24 are the levels of activity in the three major industry sectors, Manufacturing, Utilities and Mining, where all but Utilities gained month-to-month in September, often affected by revisions to prior index levels as reflected in earlier *Table 1*.

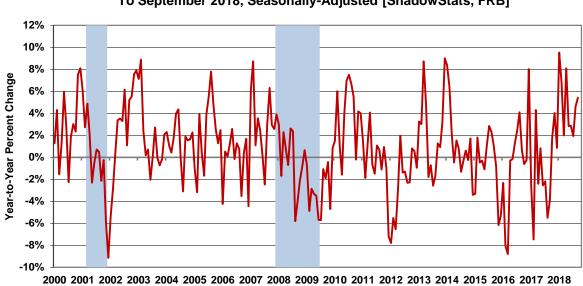
The Manufacturing graphs precede this, while the graphs of Utilities and Mining follow, all updated for the latest detail. *Graphs 16*, 23 and 25, show the respective plots of year-to-year change for those series. The preceding Manufacturing *Graphs 15* to 21 include various levels of consumer goods 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



Production - Utilities (Year-to-Year Percent Change) To September 2018, Seasonally-Adjusted [ShadowStats, FRB]

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*) increased month-to-month by 0.81%, having declined by a revised 3.91% (-3.91%) [previously 0.12% (-0.12%)] in August, but was down year-to-year by 8.78% (-8.78%) in September 2018, having declined by a revised 1.37% (-1.37%) [previously having

gained 1.45% year-to-year in August 2018, still picking up from a trough in annual growth of down by 22.18% (-22.18%) in April 2018. Coal Mining activity (*Graph 27*) gained in September 2018 by 0.93%, having declined by 1.28% (-1.28%) in August. Respective rates of annual change were up by 3.16% in September 2018, versus a decline of 0.49% (-0.49%) in August 2018.

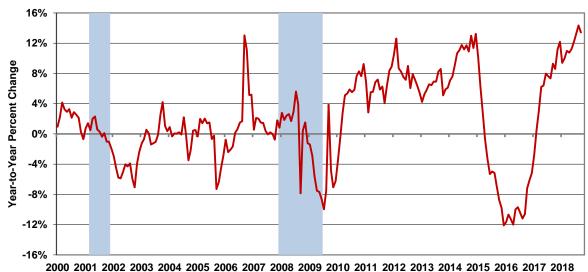
Graph 24: Industrial Production - Mining, Including Oil and Gas (14.1% of the Aggregate in 2017), Since 2000

Industrial Production - Mining (Including Oil & Gas) To September 2018, (2012 = 100) Seasonally-Adjusted [ShadowStats, FRB]



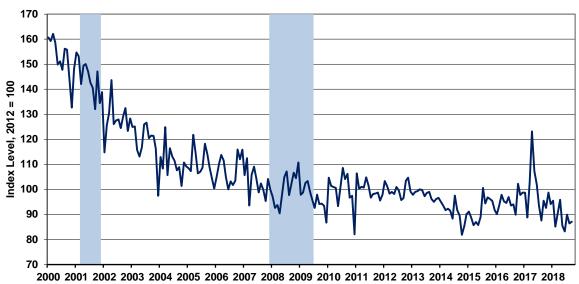
Graph 25: Industrial Production - Mining, Year-to-Year Percent Change, Since 2000

Production - Mining (Year-to-Year Percent Change) To September 2018, Seasonally-Adjusted [ShadowStats, FRB]

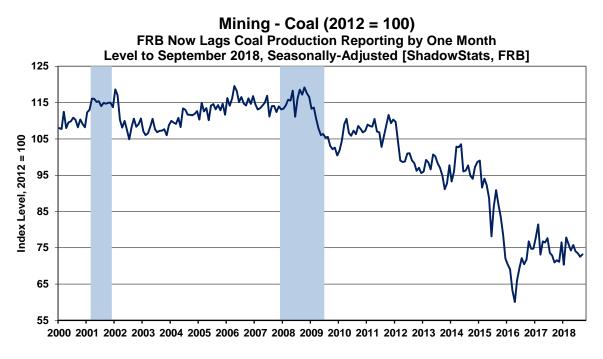


Graph 26: Mining – Gold and Silver Mining (0.2% of the Aggregate in 2017), Since 2000

Mining - Gold and Silver (2012 = 100) Level to September 2018, Seasonally-Adjusted [ShadowStats, FRB]

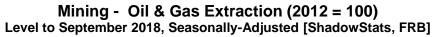


Graph 27: Mining - Coal Mining (0.8% of the Aggregate in 2017), Since 2000



Dominated by positive monthly and annual growth from Oil and Gas Extraction and Exploration, the aggregate September 2018 Mining Sector gained by 0.46%, versus 0.38% [previously 0.67%] in August (see *Table 1*), with Mining activity up year-to-year by 13.42% in September 2018, versus a revised 14.35% [previously 14.15%] in August 2018, complemented by gains 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

Mining - Drilling for Oil & Gas (2012 = 100) Level to September 2018, Seasonally-Adjusted [ShadowStats, FRB]

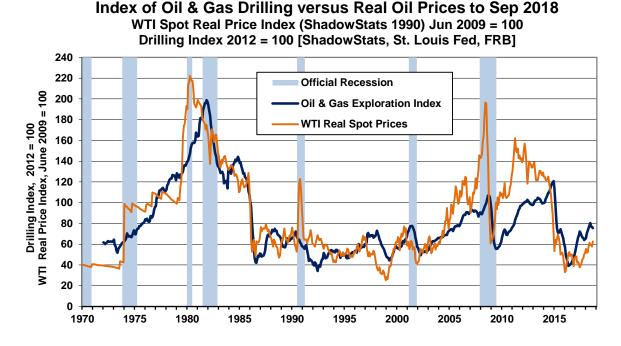


Likely boosted by rising oil prices, the dominant oil and gas mining sector rose month-to-month for extraction, but still declined for drilling and exploration for a third month (see *Graphs 28* to *30*), with Oil and Gas Extraction up by 0.79% for the month and 15.86% year-to-year, while Oil and Gas Drilling

declined by 1.38% (-1.38%) for the month, but up by 13.53% year-to-year. Year ago activity has begun to reflect impact from last year's Gulf Coast hurricane activity in September.

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 have risen strongly in recent months. Nonetheless, hurricanes and their after effects disrupted exploration in August through November 2017. That turned with an uptick in exploration in December 2017, with surging monthly growth into June 2018. The oil price index used here is for the West Texas Intermediate (WTI) monthly average spot price, deflated using the ShadowStats Alternate CPI measure (1990 Base).

Graph 30: Mining – U.S. Drilling for Oil & Gas versus Real Oil Prices (WTI ShadowStats 1990 Base), Since 1970



Indeed, rising oil prices tend to increase oil and gas exploration. When the dollar weakens, dollar-denominated oil prices also begin to strengthen, as had been seen recently, even in circumstances with excess supply conditions. With the U.S. dollar in a faltering upswing, albeit still off its recent bottom, oil prices have been firming, more heavily impacted recently by intensified global political tensions, particularly in the Middle East. At such time as the U.S. dollar meaningfully resumes its decline—ShadowStats looks for a massive sell-off in the dollar in the year ahead—U.S. dollar-denominated oil prices should rally sharply in response (see the *Hyperinflation Watch – No. 3* and soon-to-be-updated *HW-4*). Yet, again, beyond the dollar, recent movement in oil prices appears most-heavily impacted by, and reflective of political developments at home and abroad. Nonetheless, oil prices recently have risen sharply, on top of having rallied enough and for a long-enough period to induce continuing increases in domestic exploration and extraction activity, in the near future, as also has been seen at present.

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New Residential Construction (September 2018)

Where Back-to-Back Quarterly Contractions in Real GDP Usually Define the Onset of a Recession, New Recessions Now Are Underway for New Residential Construction and Home Sales. Despite extreme month-to-month volatility in initial headline reporting and subsequent first revisions to monthly Housing Starts (Census), quarterly data tend to be more stable. Building Permits (Census) are less volatile month-to-month than Starts and more stable on a quarterly basis. Existing-Home Sales (National Association of Realtors) are the most-stable monthly and quarterly numbers published in the realm of Home Sales or New Residential Construction.

All of the major residential-construction and home-sales series are in deepening six-month downtrends, with at least two consecutive quarter-to-quarter contractions in place as of third-quarter 2018, for those series reported so far in the third quarter.

Just published back-to-back annualized quarterly contractions for Building Permits (units) were 15.6% (-15.6%) in third-quarter 2018, versus 10.3% (-10.3%) in second-quarter 2018, with a year-to-year contraction of 0.5% (-0.5%) in third-quarter 2018, versus an annual gain of 4.9% in second-quarter 2018.

Just published back-to-back annualized quarterly contractions for Housing Starts (units) were 13.0% (-13.0%) in third-quarter 2018, versus 16.0% (-16.0%) in second-quarter 2018, with a year-to-year gain of 3.9% in third-quarter 2018 down from an annual gain of 7.7% in second-quarter 2018.

The just published, annualized back-to-back quarterly contractions for Existing-Home Sales (units) are in place now for three consecutive quarters (again, see expanded detail in the next section). Existing-Home Sales contracted at an annualized quarterly pace of 10.0% (-10.0%) in third-quarter 2018, versus 6.6% (-6.6%) in second-quarter 2018, and 6.1% (-6.1%) in first-quarter 2018, with an annual contraction of 2.4% (-2.4%) in third-quarter 2018, versus year-to-year declines of 2.4% (-2.4%) in second-quarter 2018 and 1.7% (-1.7%) in first-quarter 2018.

September New-Home Sales (Census), to be published on October 24th (see <u>Commentary No. 971</u> for the prior reporting), usually are extremely volatile in initial headline monthly reporting and revisions, but nonetheless are on track for a second, consecutive quarterly contraction (units), trending at an annualized quarterly pace of decline of 9.8% (-9.8%) for third-quarter 2018, having dropped at an annualized quarterly pace of 12.4% (-12.4%) in second-quarter 2018, with a year-to-year gain trending at 6.0% in third-quarter 2018, versus an annual gain of 5.0% in second-quarter 2018.

Real Construction Spending (Census) in the United States is trending for an initial third-quarter 2018 contraction (inflation-adjusted, constant dollars) in both aggregate and in private residential construction spending, but the numbers are extremely volatile in headline reporting and in revisions each month (see *Commentary No. 972* for prior detail. The release of September data is scheduled for November 1, 2018).

Consider, too, that headline investment in Residential Real Estate showed unusual, back-to-back outright quarterly contractions in both first- and second-quarter 2018 GDP (see *Commentary No. 971*).

Reflecting the broad economic non-expansion in all these series as of their latest headline details, Building Permits and Housing Starts both (September) remained well shy of recovering there pre-recession highs, down from those prior peaks respectively by 47.2% (-47.2%) and by 52.2% (-52.2%), Existing- and New-Home Sales (September and August) were down respectively by 29.2% (-29.2%) and 54.7% (-54.7%), and aggregate Real Construction Spending (August) was down by 20.7% (-20.7%).

Consumer Liquidity Pressures Continued to Flow Through from Weakening Home Sales to Deepening Downtrends in the Highly Volatile New Residential Construction Series. Unstable monthly reporting and heavy revisions continued as usual in the current headline reporting for September 2018 New Residential Construction, specifically Building Permits and Housing Starts, yet all the major series showed a continued deepening of their six-month smoothed trends, driven by intensifying consumer liquidity stresses that continue to impair home sales activity, as discussed in the next section. The effects of mounting, systemic liquidity stresses were reflected in mixed revisions and headlines, but still broadly faltering activity. While there well may have been some negative impact on September Housing Starts or Building Permits from Hurricane Florence disruptions, there was nothing obvious in the headline details of the series or volatility outside the norm of these usually volatile and unstable series.

Consider, for example, on top of upside revisions, September 2018 Building Permits activity, which usually leads Housing Starts activity, dropped by a statistically insignificant 0.6% (-0.6%) in the month, but it gained 1.0%, net of revisions. On top of downside revisions to August, September Building Permits dropped by 5.3% (-5.3%) in the month. Net of revisions, that September drop was 6.3% (-6.3%). None of the monthly or annual rate of change was statistically significant.

As usual, for the aggregate Housing Starts and each of its Single-Unit and Multiple-Units component series, the issuing Census Bureau noted for those respective, headline month-to-month percent changes, that where, "The 90 percent confidence interval includes zero, there is insufficient evidence to conclude that the actual change is different from zero." [Note: ShadowStats standardly uses 95% confidence intervals in its analysis, as discussed later.]

Again, of significance, though, all related series here continued in six-month smoothed downtrends, with headline activity down by 20% (-20%) to 50% (-50%) from recovering pre-recession highs. In addition, as noted in the opening remarks, all related series contracted quarter-to-quarter in both third-quarter 2018 and second-quarter 2018, as had been suggested in prior coverage (see *Commentary No. 971*).

Consumer Liquidity Problems Continued to Impair Residential Construction Activity. The liquidity bind besetting consumers, exacerbated by continued rate hikes out of the Federal Reserve (see today's *Opening Comments* as well as the discussion in <u>Consumer Liquidity Watch – No. 4</u> (and soon to be published CLW-5). Without sustainable growth in real income, and the ability and/or willingness to take

on meaningful new debt in order to make up for an income shortfall, the U.S. consumer remains unable to maintain positive growth in domestic personal consumption, including real retail sales, residential real estate and related demand for residential construction. That circumstance—in the last twelve-plus years of economic collapse and stagnation—has continued to prevent a normal recovery in broad U.S. economic activity.

September 2018 Housing Starts, Headline Detail. The Census Bureau and Department of Housing and Urban Development (HUD) reported October 17th, a statistically-insignificant, seasonally-adjusted, headline monthly decline in September 2018 Housing Starts of 5.3% (-5.3%) +/-13.2% (all confidence intervals are expressed at the 95% level, unless otherwise indicated). That followed a revised monthly gain of 7.1% [previously 9.2%] in August, a revised gain of 0.6% [previously down by of 0.3% (-0.3%), initially a gain of 0.9%] in July and an unrevised drop of 11.4% (-11.4%) in June. 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 September 2018 aggregate Housing Starts measure was a statistically-insignificant gain of 3.7% +/- 14.2%, versus a revised gain of 8.2% [previously 9.4%] in August 2018, a revised decline of 0.1% (-0.1%) [previously down 0.9% (-0.9%), initially 1.4% (-1.4%)] in July 2018 and an unrevised drop of 3.9% (-3.9%) in June 2018.

Sampling Statistics Showed No Monthly Changes in September 2018 Housing Starts That Were Significantly Different from Zero. As seen most commonly with this series, the headline monthly changes in September 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 September 2018 Housing Starts was a decline of 5.3% (-5.3%) +/-13.2%, the actual monthly change was within a range from a contraction of 18.5% (-18.5%) to a gain of 7.9%, with 95% confidence, with the headline decline of 5.3% (-5.3%) the most likely change. The recently revised and benchmarked reporting system for the Housing Starts series has not done much, yet, to narrow those confidence intervals,

Housing Starts by Unit Category. The September 2018 headline monthly decline of 5.3% (-5.3%) in total Housing Starts encompassed a monthly decline of 0.9% (-0.9%) in Single-Unit starts and a monthly

drop of 12.9% (-12.9%) 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 64.7% (-64.7%) in September. 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 declined by 15.2% (-15.2%), instead of the headline 12.9% (-12.9%), discussed later in the broadest, Aggregate Multiple Units category. 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 September 2018 declined month-to-month by a statistically-insignificant 0.9% (-0.9%) +/- 10.4%, following revised gains of 2.1% [previously 1.9%] in August, 0.6% [previously 1.8%, initially 0.9%] in July and an unrevised decline of 9.3% (-9.3%) in June. September 2018 Single-Unit starts showed a statistically-insignificant annual gain of 4.8% +/- 12.2%, versus a revised "unchanged" at 0.0% [previously a 0.2% (-0.2%) decline] in August 2018, a revised annual gain of 2.6% [previously 2.5%, initially 2.7%] in July 2018 and an unrevised annual decline of 1.0% (-1.0%) in June 2018 (see *Graphs 31*, 32, 35 and 36).

Housing Starts for Multiple-Units (5-units-or-more) such as apartment buildings, condominiums, etc. declined month-to-month in September 2018 by a statistically-insignificant 12.9% (-12.9%) +/- 32.8%, versus a revised monthly gain of 17.4% [previously 27.3%] in August, a revised gain of 0.3% [previously a decline of 2.5% (-2.5%), initially a gain of 3.1%] in July and an unrevised decline of 16.6% (-16.6%) in June. A statistically-insignificant annual gain of 4.5% +/- 32.3%, followed a revised annual gain of 30.1% [previously 37.1%] in August 2018, a revised decline of 5.4% (-5.4%) [previously down by 8.1% (-8.1%), initially 9.6% (-9.6%)] in July 2018 and an unrevised decline of 12.0% (-12.0%) in June 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*, *37* and *38*).

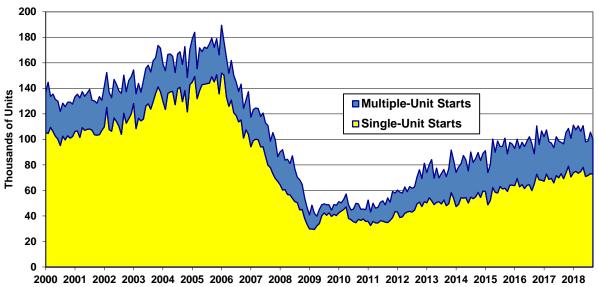
Accordingly, the statistically-insignificant September 2018 monthly decline of 5.3% (-5.3%) in aggregate starts was composed of statistically-insignificant declines of 0.9% (-0.9%) in one-unit structures and 15.2% (-15.2%) in the multiple-unit structures category (two-units-or-more, including the five-units-or-more 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)

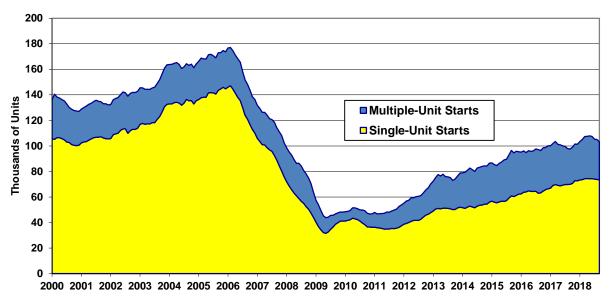
Graph 31: Single- and Multiple-Unit Housing Starts (Monthly Rate of Activity, January 2000 to September 2018)

Single- and Multiple-Unit Housing Starts (Monthly Rate) To September 2018, Seasonally-Adjusted [ShadowStats, Census and HUD]

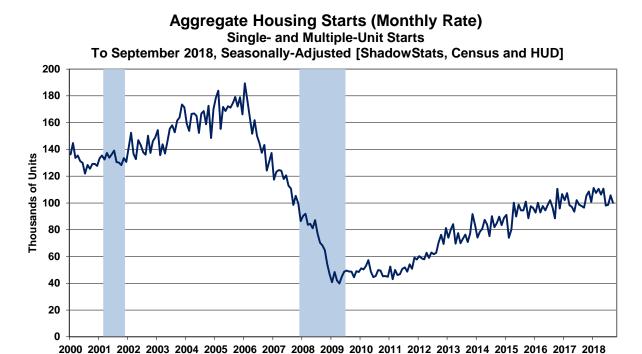


Graph 32: Single- and Multiple-Unit Starts (Six-Month Moving Average, Monthly Rate of Activity)

Single- and Multiple-Unit Starts (6-Month Moving Average) To September 2018, Seasonally-Adjusted [ShadowStats, Census and HUD]



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



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



Aggregate Housing Starts (Six-Month Moving Average)
To September 2018, Seasonally-Adjusted [ShadowStats, Census and HUD]

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018

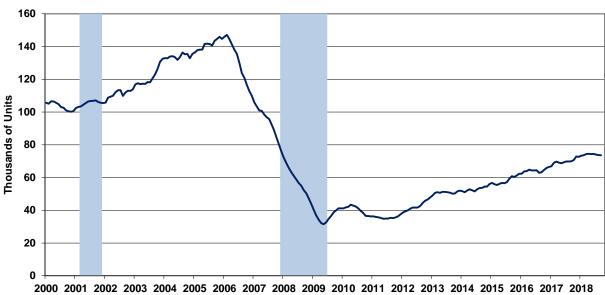
Graph 35: Single-Unit Housing Starts (Monthly Rate of Activity, 2000 to September 2018)

Single-Unit Housing Starts (Monthly Rate) To September 2018, Seasonally-Adjusted [ShadowStats, Census and HUD]



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

Single-Unit Housing Starts (Six-Month Moving Average) To September 2018, Seasonally-Adjusted [ShadowStats, Census and HUD]



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

Multiple-Unit Housing Starts (Monthly Rate) Two-or-More Units

To September 2018, Seasonally-Adjusted [ShadowStats, Census and HUD]

45

40

35

25

10

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018

Graph 38: Multiple-Unit Housing Starts (Six-Month Moving Average, Monthly Rate of Activity)

Multiple-Unit Housing Starts (Six-Month Moving Avg) Total Two-or-More Units

To September 2018, Seasonally-Adjusted [ShadowStats, Census and HUD]

45

40

35

25

10

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018

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 1,201,000 in September 2018, down from a revised 1,268,000 [previously 1,282,000] in August 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 100,083 units in September 2018, instead of the annualized headline level of 1,201,000 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 September 2018 headline monthly number was up by 141%, but it still was down by 47% (-47%) 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 September 2018 six-month smoothed trends now are in 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 15.6% (-15.6%), Aggregate Housing Starts down at an annualized 13.0% (-13.0%), Single-Unit Housing Starts down at an annualized 10.8% (-10.8%) and Multiple Unit Starts (2-or-More) down at an annualized 18.0% (-18.0%).

Separately, those downtrending and contracting New Construction series, showed September 2018 Building Permits activity down by 45.2% (-45.2%) from recovering its pre-recession peak (see *Graphs 39*

and 41). Similarly, aggregate Housing Starts (see *Graphs 33* and 34) was down by 47.2% (-47.2%), with Single-Unit Starts (*Graphs 35* and 36) down by 52.2% (-52.2%).

Multiple-Unit Starts (*Graphs 37* and *38*) had fallen back sharply, after first having recovered its 2005 prerecession 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 September 2018 total Multiple-Unit Starts now down 26.7% (-26.7%) 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 September 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 deepening downtrend. 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 31* to *38*, covering the Housing Starts component series.

Building Permits. Specifically, the generally more-stable but sometimes inconsistent Building Permits activity also has seen a broad pattern of non-recovery. The statistically insignificant headline, monthly decline of 0.6% (-0.6%) +/- 1.4%, and the statistically significant headline annual decline of 1.0% (-1.0%) +/- 1.4% in September 2018, both followed upside revisions to monthly and annual gains in August 2018. September 2018 activity was down by 9.9% (-9.9%) from the March 2018 recent post-recession peak, and again still was shy by 45.2% (-45.2%) 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 <u>Commentary No. 950</u>. That is why ShadowStats concentrates on the more-consistent Housing Starts series, despite its extreme month-to-month volatility and frequent, massive monthly revisions. The recent headline monthly declines in Permits has intensified the 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 Permits series.

Initial Annualized Third-Quarter 2018 Contraction in Housing Starts Hit 13.0% (-13.0%), versus 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 initial reporting of an annualized contraction of 13.0% (-13.0%) in third-quarter 2018, up year-to-year by 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 <u>Commentary No. 950</u>), 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 initial estimate of an annualized contraction of 15.6% (-15.6%) with an annual decline of 0.5% (-0.5%).

[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

Building Permits for Housing Units (Annual Rate by Month) To September 2018, Seasonally-Adjusted [ShadowStats, Census and HUD]



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

Housing Starts (Annual Rate by Month) To September 2018, Seasonally-Adjusted [ShadowStats, Census and HUD]



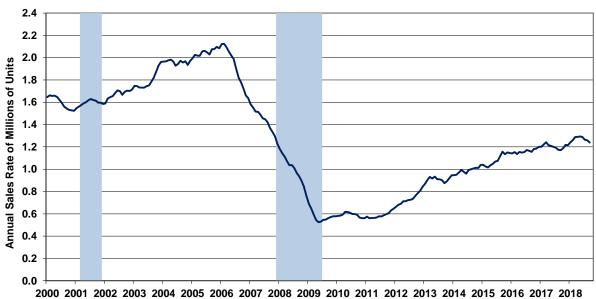
Graph 41: Building Permits (Six-Month Moving Average), 2000 to Date





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

Aggregate Housing Starts (Six-Month Moving Average) To September 2018, Seasonally-Adjusted [ShadowStats, Census and HUD]



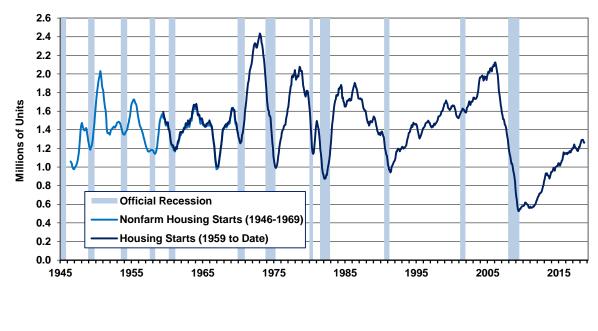
Graph 43: Housing Starts (Annualized Monthly Rate of Activity), 1946 to Date

Housing Starts (Annual Rate by Month) 1946 to Sep 2018, Seasonally-Adjusted [ShadowStats, Census and HUD]



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

Housing Starts (Annual Rate by Month, 6-Month Moving Avg) 1946 to Sep 2018, Seasonally-Adjusted [ShadowStats, Census and HUD]



Existing-Home Sales (September 2018)

September Existing-Home Sales Plunged for the Month and the Year; Third-Quarter 2018 Sales Contracted at an Annualized 10.0% (-10.0%) Pace, in Third Consecutive Quarterly Decline.

Against relatively flat expectations, September 2018 Existing-Home Sales (National Association of Realtors) plunged month-to-month by 3.4% (-3.4%), versus a downwardly revised August decline of 0.2% (-0.2%) [previously unchanged at 0.0%]. Year-to-year, sales dropped by 4.1% (-4.1%) in September 2018, following a revised annual decline of 1.7% (-1.7%) [previously 1.5% (-1.5%)] in August 2018. Discussed in the prior *New Residential Construction* section, Existing-Home Sales reflected a third, consecutive, quarter-to-quarter contraction, down at an annualized quarterly pace in third-quarter 2018 of 10.0% (-10.0%), versus 6.6% (-6.6%) in second-quarter 2018 and 6.1% (-6.1%) in first-quarter 2018, with respective quarterly year-to-year declines of 2.4% (-2.4%), 2.4% (-2.4%) and 1.7% (-1.7%).

In a sharply deepening downside trend (see *Graphs 45* and *46*), the minimally revised monthly detail contracted for the sixth straight month, to its lowest level since November 2015, with year-to-year change down for the seventh month. Headline conditions in Residential Construction (see the prior section) and in both Existing- and New- Home Sales broadly have continued to falter in recent months, with six-month smoothed levels of activity in all series continuing in deepening downtrends. While there may have been some negative impact from Hurricane Florence, it was not obvious. Rapidly deteriorating consumer- and systemic-liquidity conditions are taking an increasingly heavy toll on the economy, as the Federal Reserve continues raising interest rates, in its ongoing efforts to dampen "overheating" domestic business activity. This circumstance is reviewed in *Consumer Liquidity Watch – No. 4* and *Hyperinflation Watch – No. 3* (also to be updated in pending *CLW-5 and HW-4*), as well as in today's *Opening Comments*.

Existing-Home Sales Continued in Smoothed, Downtrending Stagnation. Released October 19th by the National Association of Realtors (NAR), September 2018 Existing-Home Sales (closings of home sales, as opposed to the count of contract signings for New-Home Sales, reported by the Census Bureau) plunged month-to-month by 3.38% (-3.38%) in September 2018 That followed a revised decline of 0.19% (-0.19%) [previously unchanged at 0.00%] in August and monthly declines of 0.74% (-0.74%) in July, 0.56% (-0.56%) in June, 0.73% (-0.73%) in May and 2.68% (-2.68%) in April, having gained 1.08% in March and 2.97% in February, having declined month-to-month by 3.24% (-3.24%) in January and 2.80% (-2.80%) in December 2017. Those followed monthly gains of 4.00% in November and 2.42% in October and a decline of 0.92% (-0.92%) in September 2017.

Shown in *Graph 45*, 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

September 2018 reporting, the series held shy by 29.2% (-29.2%) 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 six months, since April 2018, as reflected in *Graph 46*.

Annual Change. September 2018 year-to-year change was a contraction of 4.10% (-4.10%), following a revised decline of 1.66 (-1.66%) [previously 1.48% (-1.48%)] in August 2018 and annual declines of 1.48% (-1.48%) in July 2018, 2.18% (-2.18%) in June 2018, 3.39% (-3.39%) in May 2018, 1.62% (-1.62%) in April 2018 and 1.23% (-1.23%) in March 2018. Those followed annual gains of 1.09% in February 2018, an annual plunge in January 2018 of 4.78% (-4.78%), which was the steepest annual decline since August 2014. Such followed annual gains of 0.91% in December 2017, 2.14% in November 2017, annual declines of 0.54% (-0.54%) in October 2017 and 1.83% (-1.83%) in September 2017.

In terms of the trailing 12-months of sales, for the year-ended September 2018, Existing-Home Sales were down by 1.40% (-1.40%) from the year-ended September 2017. That was the sixth consecutive trailing 12-month period in deepening contraction, against its parallel year-ago pattern.

Quarterly Change. The initial full estimate of 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 contractions 9.94% (-9.94%) in third-quarter 2017, with a pre-hurricanes drop of 3.97% (-3.97%) in second-quarter 2017.

Distressed Sales Held at 3.0% of Total Sales, With September All-Cash Sales Rose to 21%. In the context of mounting consumer liquidity constraints, the NAR estimated the portion of September 2018 sales in "distress" held at 3% (2% in foreclosure, 1% short sales), the same as in August 2018 and down from 4% (3% in foreclosure, 1% short sales) in September 2017. While such continued the lowest level of distress reported since the NAR began surveying such detail in October 2008, consider that October 2008 conditions already were more than three years into the housing-market collapse.

Reflecting ongoing lending problems and continuing stresses within the financial system, including related banking-industry and consumer-solvency issues (see today's *Opening Comments*), as well as possibly some ongoing influx of speculative investment money into the existing-housing market, the NAR estimated all-cash sales increased to 21% of transactions in September 2018, up from 20% in August 2018, versus 20% in September 2017.

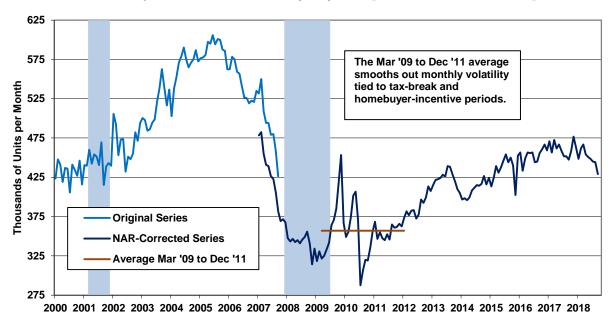
Intensifying Consumer Liquidity Constraints Impair Residential Real Estate Activity. The intensifying liquidity bind besetting U.S. consumers continues to constrain residential real estate activity, as discussed in the New Residential Construction Section, the Opening Comments and reviewed in Consumer Liquidity Watch—No. 4 (pending update in CLW-5). Without sustainable growth in real income, and without the ability or willingness to take on meaningful new debt (including mortgages) in order to make up for an income shortfall, consumers remain unable to sustain positive growth in domestic personal consumption, including residential real estate activity. That circumstance—in the last twelve-plus years of economic collapse and stagnation—has prevented a normal recovery in broad U.S. economic activity.

Graphs 45 and *46* 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.

Graph 45: Existing-Home Sales (Monthly Rate of Activity)

Existing-Home Sales (Monthly Rate)

Single- and Multiple-Unit Sales, Non-Annualized Monthly Level To September 2018, Seasonally-Adjusted [ShadowStats, NAR, HUD]



Graph 46: Existing-Home Sales (Six-Month Moving Average)

Existing-Home Sales (Six-Month Moving Average) Single- and Multiple-Unit Sales, Non-Annualized Monthly Rate

To September 2018, Seasonally-Adjusted [ShadowStats, NAR, HUD]



WEEK, MONTH AND YEAR AHEAD

MOUNTING RISK OF INTENSE FINANCIAL MARKET TURMOIL

[The following text is as published in <u>Special Commentary No. 973 – ALERT</u> of October 14th, and as discussed throughout <u>Commentary No. 974</u> and in today's <u>Opening Comments</u>. The <u>ALERT</u> remains in place, updated here only for references and links. Going forward, this section will be updated and included regularly in the latest <u>Hyperinflation Watch</u>.]

Risks of Intense Dollar and Financial-Market Turmoil Are Magnified by Deteriorating Economic, Fiscal and Political Conditions and Are Exacerbated by Mounting Systemic- and Consumer-Liquidity Stresses. In the context of recent intensified, negative Stock Market volatility, the happy hype on the ongoing stock market boom has begun to pull back a bit. Discussed here are risks of extraordinary financial-market disruptions and turmoil—selloffs—mounting rapidly in the near-term, in the next six months or even in the next couple of weeks. Further background and detail were discussed in the Opening Comments on Consumer Liquidity, the CPI section of the Reporting Detail and the Week, Month and Year Ahead section of Commentary No. 974, to be expanded upon in pending Special Editions of the Consumer-Liquidity and Hyperinflation Watches.

With the backdrop of the *Squirrelly Season* and likely tipping point for the markets discussed in <u>Commentary No. 970</u>, likely rapid deterioration in near-term headline economic activity and rapidly mounting risks of near-term political turmoil and/or perceptions of same are combining to widen the risk of major downside movements in the U.S. dollar and U.S. equity markets, all coming together at the same point in time.

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.

Consider as basic background $\underline{Hyperinflation\ Watch-No.\ 3}$ and $\underline{Consumer\ Liquidity\ Watch-No.\ 4}$. Both Watches will be updated shortly in $Special\ Editions$, but the basic concepts discussed there already are in play, or as otherwise discussed here.

What continues to unfold is the still-unresolved 2007/2008 banking-system collapse, where the Federal Reserve has done its best to bailout, obfuscate, forestall or mask a systemic problem that has had neither an easy nor a rapid solution. Despite trillions of dollars used to prop the banks in the last decade, neither the U.S. banking system nor the U.S. economy has been able to return to anything close to normal functioning, post-2007. As the FOMC moves to reverse course by raising interest rates and tightening

domestic liquidity, it also is killing whatever nascent economic recovery was beginning to surface (see today's *Opening Comments*).

Accordingly, the U.S. dollar and financial markets remain at extreme risk of intense, panicked declines that could happen at any time. The financial system and the markets eventually should become self-healing, but not without likely significant cost to or alteration of existing circumstances.

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. Such circumstances increasingly are likely in the next six months, but, again, they could begin to break at any time.

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

Best wishes – John Williams

PENDING ECONOMIC RELEASES

Note: Summary observations of these numbers are posted as soon as possible to the *Daily Update* section at the top right-hand side of the <u>www.ShadowStats.com</u> homepage, usually within an hour or so of headline release.

New-Home Sales (September 2018). Reporting of September 2018 New-Home Sales from the Census Bureau is scheduled for release on Wednesday October 24th, to be covered in *Commentary No. 975* of October 26th. Given the recently-published "unexpected" monthly plunge in September 2018 Existing-Home Sales, with sales declining in a deepening downtrend. Similar weakening patterns and consecutive quarterly contractions loom for New-Home Sales, both in the context of usual, extreme-month-to-month volatility in series and despite—net of—any downside pressures from recent hurricane activity.

Where anything is possible with the extreme reporting volatility regularly seen in headline New-Home Sales, reporting trends should turn increasingly negative, including a deepening downtrend and second quarterly contraction. Such is in the context of deteriorating consumer-liquidity issues and the intensifying downtrend in the housing-market measures (see today's *Reporting Detail* covering Residential Construction and Existing-Home Sales).

Indeed, with the deteriorating liquidity bind besetting consumers and continuing to constrain residential real estate activity, odds generally favor weaker-than-expected numbers here, where the consensus outlook appears to be for a monthly contraction in the usually volatile and heavily revised series.

Where the private housing sector never recovered from the business collapse of 2006 into 2009, there remains no chance of a near-term, sustainable turnaround in home-sales activity, without a fundamental upturn in consumer and banking-liquidity conditions. That does not appear to be in the offing. Smoothed for month-to-month variability, patterns of low-level downtrending stagnation should continue in play for both the Home Sales series, with reporting risks on the downside of consensus for both series.

New Orders for Durable Goods (September 2018). The Census Bureau will report September 2018 New Orders for Durable Goods on Thursday, October 25th, to be covered initially in *Commentary No.* 975 planned for October 26. Headline details will be posted shortly after the press release, in the **Daily Update** section in top-right section of the www.ShadowStats.com homepage. Where expectations usually are reasonably positive for this series, net of the volatile commercial aircraft orders, chances for a downside "surprise" remain strong, despite any near-term spike in replacement motor vehicle orders generated by recent hurricane/flooding destruction. Look for:

Net of the irregular activity in commercial aircraft orders, aggregate orders likely continued in a pattern of intensifying, downtrending real stagnation, weaker than expected. Last month, expanded government spending on defense orders kept aggregate orders positive. That possibility remains in play for September, along with a near-term spike in replacement automobile orders generated by hurricane activity.

Where commercial aircraft orders are booked for the long-term—years in advance—they have only limited impact on near-term production volatility. Further, by their nature, these types of orders do not lend themselves to seasonal adjustment. As a result, the durable goods measure that best usually serves as a leading indicator to broad production—a near-term leading indicator of broad economic activity and the GDP—is the activity in new orders, ex-commercial aircraft, adjusted for inflation. With expectations on the downside-side for new orders, ex-aircraft, the headline change in month-to-month activity remains a fair bet to be in contraction, particularly in real terms, net of rapidly-spiking headline inflation.

In inflation-adjusted or real terms, reflecting PPI-related inflation for "manufactured durable goods," relative month-to-month and year-to-year New Orders activity will be dampened on both a monthly and annual basis. Month-to-month related inflation for September 2018 was 0.17%, versus 0.11% in August and 0.17% in July. Year-to-year, annual inflation rose to 3.31% in September 2018, versus 3.25% in August 2018 and 3.20% in July 2018 (see the *Producer Price Index* section in *Commentary No. 974*).

Gross Domestic Product (Third-Quarter 2018, "Advance" or First Estimate). The Bureau of Economic Analysis (BEA) will release its "advance" or first estimate of Third-Quarter 2018 Gross Domestic Product (GDP) on Friday, October 26th, to be covered at least initially in *Commentary No. 975* of that date. Headline details will be covered shortly after the data are released in the *Daily Update* section in the top, right-hand section of the www.ShadowStats.com home page.

Consensus forecasts for Third-Quarter 2018 GDP are running in a range of 3.0% to 3.4%, plus-orminus. Separately, the Federal Reserve Bank of New York's <u>Nowcasting Report</u> model was projecting 2.1% as of October 19th, while the Federal Reserve Bank of Atlanta's <u>GDPNow</u> model was projecting 3.9% as of October 17th. Broadly, the Atlanta Fed has had the best track record in terms of the initial reporting.

Trade Deficit Mitigation of the Consensus Outlook. Election-year politics aside, one key release affecting the initial headline third-quarter GDP still is to be released the day before the GDP, and that is the "advance" estimate of the September 2018 trade deficit in goods, on October 25th. Where consensus expectations appear to be for a monthly narrowing in the trade deficit, odds are good for a widening or deterioration in the number, which would have negative impact on the quarterly trade deficit and the GDP. Weaknesses and revisions seen in the construction and retail numbers would suggest some downside "surprise" as well. Where the BEA tends to target its first GDP estimate at the consensus outlook, net of the direction otherwise suggested by trends in the incomplete first-estimate data, look for:

Adjusted for any "advance" September trade deficit surprise, look for an initial estimate of annualized third-quarter GDP growth at the lower end of expectations, around 3.0%. If it comes in below that, expect downside revisions next month, or much above that, expect upside revisions next month.

Potential political considerations for the initial headline reporting of Third-Quarter GDP on October 26th, eleven days before the November 6th Congressional elections, are discussed in today's *Opening Comments*.

LINKS TO PRIOR COMMENTARIES, SPECIAL REPORTS AND OTHER WRITINGS

Most Recent Hyperinflation and Consumer-Liquidity Watches:

The *Consumer Liquidity Watch* of August 10th: *Consumer Liquidity Watch – No. 4*.

The *Hyperinflation Watch* of August 12th: *Hyperinflation Watch – No. 3*.

The latest Watches always are available on www.ShadowStats.com and by link from the current Commentary. Updates pending in the coming week will be advised by e-mail as they are posted.

Special Pieces Underlying the Regular and Special Commentaries: Underlying the recent Special Commentary No. 935 (Part One) and the pending Special Commentaries (Part Two) on Inflation, and (Part III) on the Federal Reserve and U.S. banking system, are Commentary No. 899 and General Commentary No. 894, along with general background from regular Commentaries throughout 2017.

These missives also are built upon writings of prior years, including <u>No. 777 Year-End Special</u> <u>Commentary</u> (December 2015), <u>No. 742 Special Commentary: A World Increasingly Out of Balance</u> (August 2015) and <u>No. 692 Special Commentary: 2015 - A World Out of Balance</u> (February 2015). In turn, they updated the long-standing hyperinflation and economic outlooks published in <u>2014</u> <u>Hyperinflation Report—The End Game Begins</u> – First Installment Revised (April 2014) and <u>2014</u> <u>Hyperinflation Report—Great Economic Tumble</u> – 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 <u>Public Commentary on Inflation</u> <u>Measurement</u> and the <u>Public Commentary on Unemployment Measurement</u>.

Recent Regular Commentaries: [Listed here are Commentaries of the last several months or so, plus recent 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, consumerliquidity and financial-market circumstances as they develop.

<u>Commentary No. 974</u> (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.

<u>Special Commentary No. 973 – ALERT</u> (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*.

<u>Commentary No. 972</u> (October 7th) covered September 2018 Employment and Unemployment, Monetary Conditions and the August Trade Deficit and Construction Spending.

<u>Commentary No. 971</u> (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.

<u>Commentary No. 970</u> (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 IndexTM.

<u>Commentary No. 969-Extended</u> (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.

<u>Flash Commentary No. 969-Advance</u> (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.

<u>Special Commentary No. 968-Extended</u> (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 <u>Flash Commentary No. 968-Advance</u>).

<u>Flash Commentary No. 968-Advance</u> (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 early indications from the latest Consumer Liquidity measures.

<u>Commentary No. 967</u> (August 24th) discussed 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.

<u>Commentary No. 966</u> (August 17th) reviewed July 2018 Retail Sales, Industrial Production, New Residential Construction and the CASS Freight IndexTM.

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

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

<u>Commentary No. 963</u> (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.

<u>Commentary No. 962</u> (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 in today's (September 4th) *Special Commentary*.

<u>Commentary No. 961</u> (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 TM, all of which were expanded upon in *Commentary No. 963*.

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

<u>Commentary No. 959-B</u> (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.

<u>Commentary No. 959-A</u> (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.

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

<u>Commentary No. 957</u> (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).

<u>Commentary No. 956</u> (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 IndexTM and some potential twists to the pending July 27th Comprehensive Benchmark Revision to the GDP.

<u>Commentary No. 955</u> (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 IndexTM.

<u>Commentary No. 954</u> (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.

<u>Commentary No. 953-B</u> (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*.

<u>Commentary No. 953-A</u> (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.

<u>Commentary No. 952</u> (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.

<u>Commentary No. 951</u> (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.

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

<u>Commentary No. 949</u> (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.

<u>Commentary No. 948</u> (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.

<u>Commentary No. 947</u> (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.

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

<u>Commentary No. 945</u> (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.

<u>Commentary No. 944</u> (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.

<u>Commentary No. 943</u> (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.

<u>Commentary No. 942-B</u> (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 IndexTM.

<u>Commentary No. 942-A</u> (March 23rd) provided a very brief summary of the much more extensive Industrial Production benchmarking details covered in *Commentary 942-B*.

<u>Commentary No. 941</u> (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.

<u>Commentary No. 940</u> (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.

<u>Commentary No. 939</u> (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.

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

<u>Commentary No. 937</u> (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 IndexTM.

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

<u>Special Commentary No. 935</u> (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.

<u>Commentary No. 934-B</u> (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.

<u>Commentary No. 934-A</u> (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.

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

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

<u>Commentary No. 931</u> (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.

<u>Commentary No. 930-B</u> (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.

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

<u>Commentary No. 926</u> (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."

<u>Commentary No. 909</u> (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.

<u>Special Commentary No. 904</u> (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).

<u>Special Commentary No. 888</u> (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.

<u>Commentary No. 887</u> (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.

<u>Special Commentary No. 885</u>, 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.

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

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

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