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

COMMENTARY NUMBER 909

CPI and PPI, Real Median Household Income, Market and Economic Outlooks

September 14, 2017

Trouble in Hand and Looming

Consistently Surveyed, Reported and as Deflated by the Headline CPI-U,
2016 Median Household Income Held Shy of Its Pre-Recession 2007 Peak,
Below Levels of the Late-1990s and Minimally Higher than Levels of the Mid-1970s

2016 Income Variance and Dispersion Increased, Holding Near Record Highs,
Signaling Severe Financial-Market and Economic Stresses in Place

Real Average Weekly Earnings Declined in August

Hurricane Harvey May Have Had Minimal Impact on Inflation-Data Gathering, but
It Certainly Added Upside Pressure on Petroleum-Related Market Prices

August CPI-U Inflation Monthly Gain of 0.40%
Pulled Annual CPI-U Inflation Higher to 1.94% (Was 1.73%), with
CPI-W at 1.93% (Was 1.64%) and ShadowStats at 9.7% (Was 9.4%)

August 2017 Annual Final-Demand PPI Rose to 2.35% from 1.90% in July

Faltering Economic Activity and Intensifying Political Discord Continue to
Peril the Dollar and Intensify Risks in Markets Vulnerable to Turmoil

---

PLEASE NOTE: The next regular Commentary, *tomorrow, Friday, September 15th, will cover August Retail Sales and Industrial Production.*

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

Today's *Opening Comments and Executive Summary* (September 14th). The ***Opening Comments and Executive Summary*** reviews the just-released measures of 2016 Real Median Household Income and related measures of income variance or inequality, as well as highlights of today's CPI and PPI reporting, including in the context of Hurricane Harvey's related impact.

The ***Reporting Detail*** (page 9) provides a more-detailed analysis of the August inflation numbers.

The ***Hyperinflation Watch*** (page 23) reviews the current circumstances and outlook for the economy and the financial markets, including shifting conditions faced by the FOMC.

The ***Consumer Liquidity Watch*** (page 27) has been updated for 2016 Real Median Household Income, August Real Average Weekly Earnings, and for July 2017 Consumer Credit Outstanding.

The ***Week, Month and Year Ahead*** (page 37) provides links to recent *Commentaries* and updates the previews to tomorrow's, Industrial Production and Retail Sales.

OPENING COMMENTS AND EXECUTIVE SUMMARY

Not All Is As Headlined in the Media. With reporting in recent days ranging from "household income at an all-time high" to "a very small effect" from Hurricane Harvey on the August CPI survey, underlying reality has not been quite as advertised. While the headline 2016 inflation-adjusted real median household income indeed was the highest number ever published for the series, such was in the context of last year's series redefinition and reporting discontinuities. Discussed in these *Opening Comments*, that left the latest number below its pre-recession peak, when viewed on a consistent basis.

Where Hurricane Harvey may have provided only minimal disruption to the Bureau of Labor Statistics' August surveying of consumer prices, it certainly had some upside impact on the headline inflation detail, with already-higher gasoline prices spiking at month-end. Hurricanes Harvey and Irma promise mixed impacts on inflation and economic numbers in the months ahead, as discussed the *Executive Summary*.

Gains in 2016 Real Median Household Income Continued in the Context of 2015 "Redefinitions," Still Not Recovered from the Collapse into 2009. Boosted by headline "low inflation" in the Consumer Price Index (CPI), from depressed gasoline prices, and reflecting Census Bureau estimates of what households "should be earning," headline inflation-adjusted real annual median household income rose by 3.16% in 2016. That followed an annual gain of 5.21% in 2015 and an annual decline of 1.48% (-1.48%) in 2014. Given meaningful, series redefinitions in 2014/2015 (see detailed discussion *Commentary No. 833* of September 18, 2016), and viewed on a consistent basis, the latest headline detail remained below its 2007 pre-recession peak, as well as below income levels of the late-1990s, preceding the 2001 recession. Using headline CPI inflation as the Bureau of Labor Statistics (BLS) uses it to deflate its real income numbers, the 2016 detail effectively also was minimally above the real median income level going into the 1975 recession. Such is consistent with the latest plot of Real Earnings, *Graph CLW-7* in the *Consumer Liquidity Watch*, and it continues to indicate the long-term nature of the evolution of the major structural changes and stresses constraining consumer liquidity and impairing the current economy (see *No. 859 Special Commentary*).

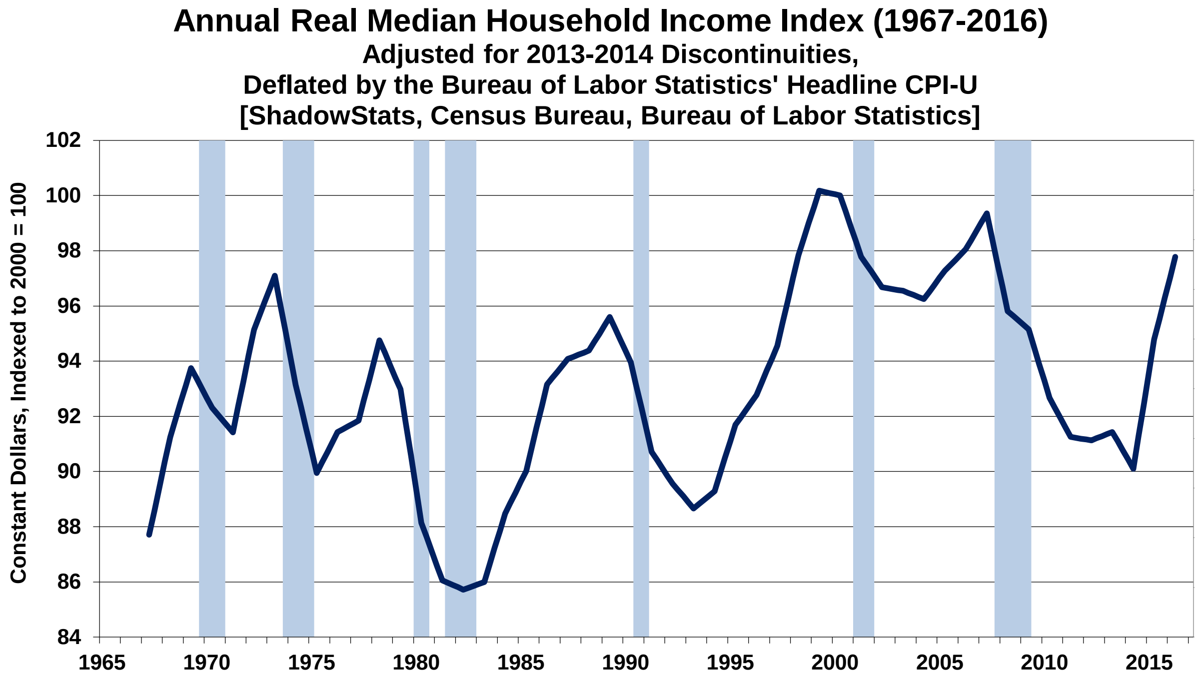
Based on March 2017 Census Bureau surveying of household income estimates for 2016, the underlying 2016 reporting detail reflected data older than what already had been published by Sentier Research (www.SentierResearch.com), as covered in the *Consumer Liquidity Watch* section (page 32). Even though Sentier suspended publication of its monthly index in May 2017, as shown in *Consumer Liquidity Watch Graph CLW-5* of *Monthly Real Median Household Income*, along with a comparative *Graph CLW-4* (a truncated, 2000-to-date version of accompanying *Opening Comments Graph OC-1* here), the Sentier 2016 details largely confirmed and predicted the direction of the just-published headline Census number. Sentier was founded by two former senior officials at the Bureau of the Census, who knew the inside workings of the various Census surveys. Sentier's monthly survey results were deflated by the headline CPI-U, not by the gimmicked CPI-U-RS otherwise used by the Census Bureau, as reviewed here shortly, although the headline annual inflation differences in those two series primarily are before 2000.

Gimmicked Economic Data Do Not Fool Main Street U.S.A. The headline 3.2% increase 2016 real annual median household income (detailed in *Income and Poverty in the United States: 2016*, published September 12th) and the 5.2% surge in 2015 income (detailed in *Income and Poverty in the United States: 2015*) both were boosted by recent survey changes designed to inflate income artificially. The changes reflected rising IRA withdrawals (income previously counted by Census) and imputed interest-income gains and other income simply guesstimated by the government as to what households "should be earning." Again, those income-boosting reporting redefinitions, gimmicks and the restructuring of this politically-sensitive series for release in the 2016 election year were discussed in *Commentary No. 833*.

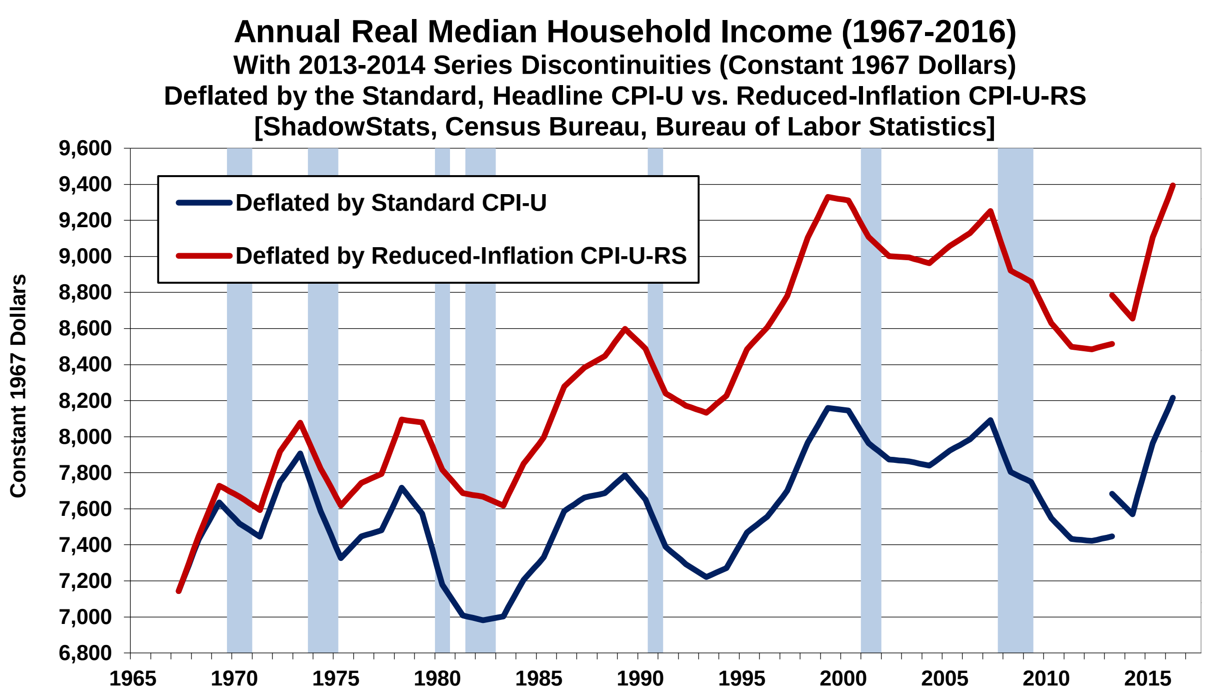
Census Did Provide Some Basis for Estimating a Consistent Historical Series. In fairness, last year the Census Bureau estimated and published the impact of its "improved" surveying methodology, which added about 3.0% to each year's level of real median household income, from what it would have been with historically-consistent surveying. ShadowStats used that detail to plot the Real Annual Median Household Income series on something of an historically-consistent basis, through 2016—with the 2013-2014 discontinuity removed—as reflected in *Graph OC-1*. Such is in contrast to *Graph OC-2*, which reflects the discontinuities. Those discontinuities continued in the official 2016 graphs. Separately, the definitional changes to the surveying also have had the negative effect of exacerbating income inequality, as shall be discussed shortly.

The difference between *Graph OC-1* and *Graph OC-2* is that the red line in *Graph OC-2* reflects the official median household income readings, including no adjustment for the 2013-2014 discontinuity, as deflated by the CPI-U-RS, used in the annual *Poverty Report*. That also is a restated version of the headline CPI-U (used in deflating *Graph OC-1* and the blue line in *Graph OC-2*). The CPI-U is covered separately, later in this *Commentary*, for headline August 2017 reporting. The CPI-U-RS (research series) is the CPI-U restated by the BLS and Census, as though all the inflation-reducing methodologies introduced by the BLS since 1980 were in place as of 1980. The differences have provided significant background and material for the estimation of the ShadowStats Alternate Inflation Measures, which look to recreate the CPI as if none of the politically-motivated, inflation-debilitating changes had been made to CPI reporting methodology. The ShadowStats approach to alternate inflation measures is directly contrary to the CPI-U-RS concept (see *Public Commentary on Inflation Measurement*). Again, though, the dark blue lines in these graphs reflect deflation by the headline CPI-U as published and used by the BLS. They do not reflect the ShadowStats alternate measures.

Graph OC-1: Annual Real Median U.S. Household Income through 2016, 2013-2014 Discontinuities Removed



Graph OC-2: Annual Real Median Household Income through 2016, with the Discontinuities and with Deflation Using Both the Standard CPI-U and the Reduced-Inflation CPI-U-RS Measure Preferred by the Census Bureau for Purposes of Exaggerating Real or Inflation-Adjusted Growth.



Census is the primary user of the CPI-U-RS, since that shows a stronger pattern of historical, inflation-adjusted income growth and lower poverty rates (weaker headline historical inflation means stronger historical inflation-adjusted growth), than does the traditional CPI-U. The BLS, however, usually deflates its income measures using the headline CPI-U or CPI-W, such as seen in *Graph CLW-7* in the *Consumer Liquidity Watch*, which again is the headline *Real Average Weekly Earnings* as published today by the BLS for August 2017, plotted against the same data deflated by the ShadowStats Alternate CPI Measure (1980-Based), all as discussed in the *Consumer Price Index* section of today's *Reporting Detail*. As an aside, consider that BLS headline real earnings numbers in *Graph CLW-7* show that current real earnings are below where they were in the mid-1970s, not too different from the plot shown here in *Graph OC-1*.

With the headline CPI-U being used to deflate the Annual Real Median Household Income (blue lines) in *Graphs OC-1* and *OC-2*. The difference between the annual percent changes in the blue versus the red lines (*Graph OC-2*) is nil in recent years, since most major changes to headline CPI-U inflation methodology were made prior to 2000.

Collapsing Gasoline and Oil Prices Have Spiked Inflation-Adjusted Income. Separately, a legitimate issue boosting real median household income in 2015 and 2016 was the collapse in gasoline prices in 2014. That pummeled headline consumer inflation, with the effect of boosting the inflation-adjusted data.

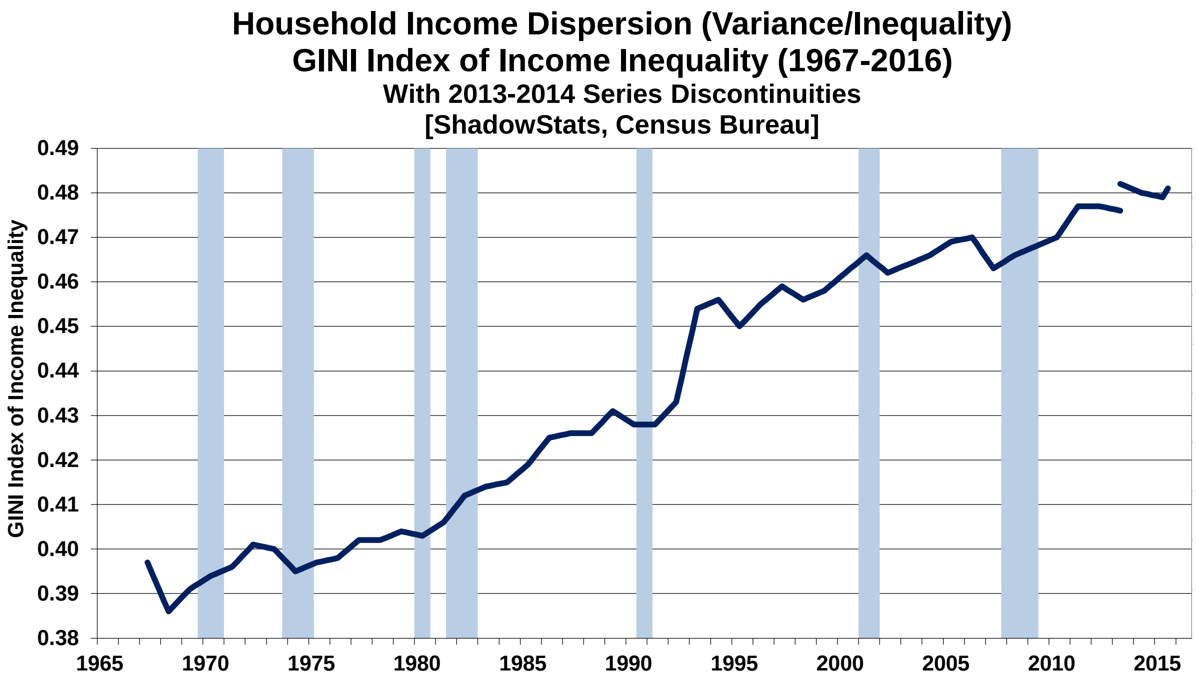
Reflecting the reduced headline inflation, much of the growth reflected in headline real median income of the last two years was due to the temporary drop in gasoline prices, not to growing nominal (not inflation adjusted) income, which more commonly had been the circumstance in Census surveys since 1967.

The impact of such gasoline-price driven, low headline CPI-U inflation also was seen regularly in the Monthly Real Median Household Income Measure published by www.SentierResearch.com, as discussed in the *Consumer Liquidity Watch* (again, see *Graphs CLW-4 and CLW-5* and the related discussion there). While the annual Census number has been updated on an inconsistent annual basis by the Census Bureau, through 2016, the Sentier numbers are shown monthly through May 2017, on a consistent basis in *Graph CLW-5*. The Sentier numbers rose sharply in 2015 and 2016, flattening in 2017.

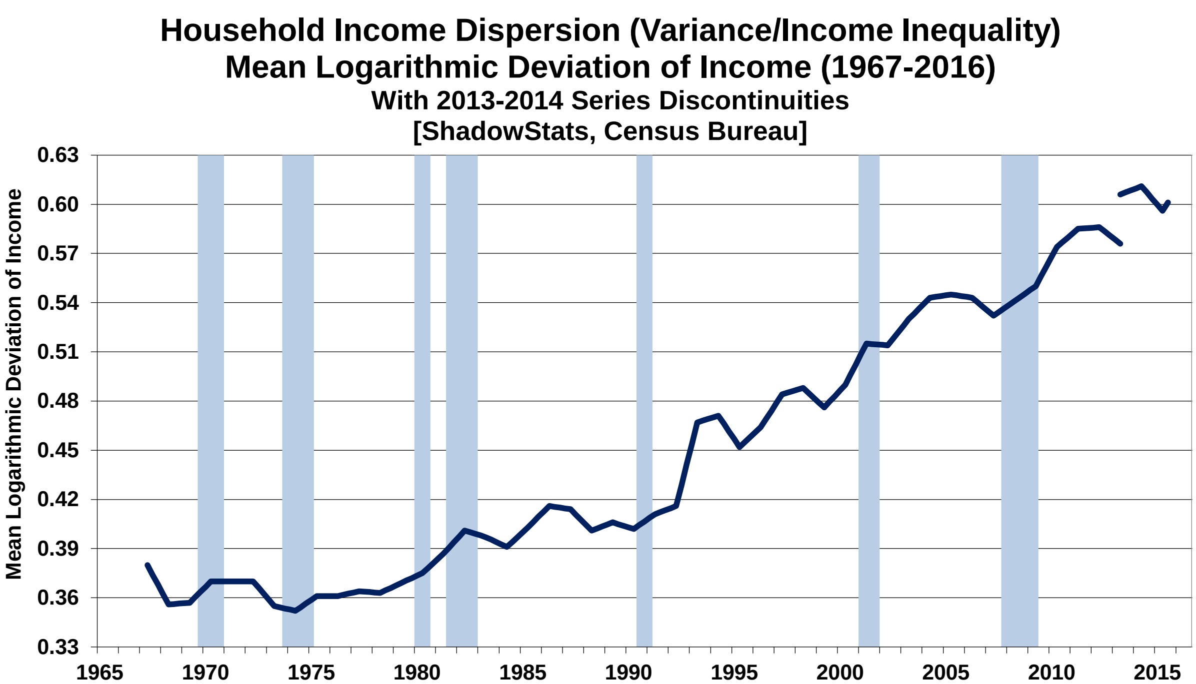
Increasing Income Variance. Updated estimates of income dispersion, or inequality, are shown through 2016 in *Graphs OC-3* and *OC-4*. Measures of income dispersion, or variance, indicate the distribution of income within a population. A low level of income dispersion indicates that income tends to be concentrated in the middle, while a high level of dispersion indicates heavier income concentrations in the extremes of low and high income, with less in the middle. The higher the variance of income, the greater is the income dispersion. Generally, economies with income concentrated in the middle tend to enjoy stronger and broader economic growth. The survey changes and redefinitions in 2015 shifted household incomes more into the "upper" categories, resulting in increased income inequality. *Graphs OC-3* and *OC-4* reflect the discontinuities, where these series now have been broken, in terms of internal, historical comparison, where restating the current numbers to be consistent with prior reporting simply is not feasible.

Rising and near-record income dispersion levels usually foreshadow economic and financial-market turmoil (see today's *Hyperinflation Watch*). Despite—or perhaps due to—the ongoing nature of the economic and systemic-solvency crises, and the effects of the 2008 financial panic, income dispersion—the movement of income away from the middle towards both high- and low-level extremes—held near record highs in 2013, instead of moderating, as often seen during periods of financial distress, and it is suggested to have moved to even greater extremes in 2014, 2015 and 2016.

Graph OC-3: Annual GINI Index of Income Inequality through 2016, with Discontinuities



Graph OC-4: Annual Mean Logarithmic Deviation of Income through 2016, with Discontinuities



Conditions surrounding extremes in income variance usually help to fuel financial-market bubbles, which frequently are followed by financial panics and economic depressions. The sequence of those factors tends to redistribute income in a manner that usually lowers income variance, helping broad economic recovery. Other than for a brief dip following the 1987 stock-market crash, U.S. income variance since 1987 has been higher than has been estimated for the economy going into the 1929 stock-market crash and the Great Depression, and its current reading remains nearly double that of any other "advanced" economy. Instead of being tempered by the 2008 financial panic and the ongoing economic and systemic-solvency crises, variance increased to further record levels subsequent to 2011. That suggests the greatest negative impact of the systemic turmoil, so far, has been on those in the middle-income area. It also is suggestive of even greater financial and economic crises still ahead.

Again, shown in *Graphs OC-3* and *OC-4*, the current circumstance is at a record extreme, well above levels estimated to have prevailed before the 1929 stock-market crash and the Great Depression. Increasingly difficult times are likely for at least the next several years.

EXECUTIVE SUMMARY: Hurricane Harvey Had Some Initial Impact on Inflation Data; More Inflation/Economic Impact Follows in the Months Ahead, Along with Hurricane Irma's Parallel Effects, Beginning with September Data. The horrendous damage wreaked on the Texas Gulf Coast by Hurricane Harvey and its catastrophic flooding, disrupted the production, refining and delivery of petroleum and its related products, with the immediate effect of increasing oil and gasoline prices, which helped to boost both the headline August CPI and PPI. Where a seasonally-adjusted 6.3% (unadjusted 3.9%) monthly jump in gasoline prices accounted for roughly half of the headline 0.4% monthly gain in the CPI-U, somewhat more than one-tenth of that monthly average-gasoline price impact was due to the late-month surge in gasoline prices. Those continuing high gasoline prices already suggest a 12% unadjusted jump in average gasoline prices for September, with resulting higher inflation likely for at least a couple of months. Some negative impact on headline August industrial production, with mixed retail sales impact could be seen in tomorrow's headline detail of those series.

The horrendous damage wreaked on Florida and the Southeast will surface first in headline September detail of various series, on top of Harvey's impact to the same series, ranging from employment, to retail sales, production and construction. Impact on the economy will reflect major disruption to near-term commerce and business activity in the affected areas. Physical destruction and property losses are not counted in the government's measures of the economy, but interruptions to normal commercial operations and rebuilding activity will have headline impact.

Consumer Price Index (CPI)—August 2017—CPI-U Gained 0.40% Month-to-Month, 1.94% Year-to-Year. Repeating patterns of recent years, more-positive seasonal adjustment factors, beginning in July 2017, started to boost the headline reporting of CPI-inflation in the second-half of the calendar year, reversing the negatively-biased reporting of the seasonally-adjusted monthly inflation in the first-half of 2017. Headline August 2017 CPI-U monthly inflation of 0.4% was stronger than consensus expectations for a 0.3% gain, reflecting some positive seasonal adjustments, particularly with gasoline prices. Not adjusted for seasonal factors, as most people experience life, headline CPI-U inflation rose by 0.3% month-to-month in August 2017. Consider that unadjusted—what people paid at the pump—underlying gasoline prices rose by 3.9% in the month. Seasonally adjusted, gasoline prices rose by 6.3%. That series might be viewed more meaningfully on an unadjusted basis, as annual growth usually is considered.

Unadjusted, year-to-year CPI-U inflation remained off its 60-month high of 2.74% of February 2017, having hit a near term trough of 1.63% in June 2017, with some rebound in July 2017 to 1.73% and a further jump to 1.94% in August 2017. What led the recent inflation surge into the February 2017 CPI annual gain was driven by rising gasoline prices not driven by economic demand. The inflation surge was not driven by an overheating economy, as claimed by some on the Fed's FOMC.

Separately, with unadjusted annual August 2017 CPI-U inflation rising by 1.94%, year-to-year inflation is not and has not been quite as low as indicated, when considered in the context of traditional CPI reporting and common experience. Moving on top of the unadjusted annual changes to the CPI-U, the ShadowStats-Alternate Inflation Measures showed year-to-year inflation in August 2017 rising to 5.5%, based on 1990 methodologies, and to 9.7%, based on 1980 methodologies.

The Consumer Price Index for All Urban Consumers (CPI-U) is the broadest headline consumer-inflation number, used to adjust numerous economic measures such as Retail Sales for inflation effects. The narrower Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) is used for deflating measures such as earnings for production and nonsupervisory employees on private nonfarm payrolls (see *Graph CLW-7* in the *Consumer Liquidity Watch*). August 2017 seasonally-adjusted CPI-W rose month-to-month by 0.46%, having gained 0.10% in July. Unadjusted, year-to-year change in the August 2017 CPI-W was 1.93%, up from 1.64% in July 2017.

Real Retail Sales—August 2017—Nominal Growth Will Be Reduced by 0.40% (-0.40%) Month-to-Month, by 1.93% (-1.93%) Year-to-Year. Nominal Retail Sales for August 2017 will be released tomorrow, Friday, September 14th, and covered in *Commentary No. 910* of that date. Headline August 2017 inflation-adjusted real retail sales will reflect the headline nominal growth rates reduced as headlined above (the annual inflation used for this series is seasonally-adjusted). See the related discussion the today's *Week, Month and Year Ahead* section.

Real Average Weekly Earnings—August 2017—Real Earnings Declined in the Month. Specifics are covered in the *Reporting Detail* and plotted in *Graph CLW-7* in the *Consumer Liquidity Watch*.

Producer Price Index (PPI)—August 2017—Surging Energy Inflation Dominated Final Demand PPI. Despite no formal references by the Bureau of Labor Statistics to Hurricane Harvey impact, either as to effect on the PPI surveying process or on month-end spikes in energy prices, higher energy costs in August were the major factor in upside goods-inflation movement, and correspondingly in the aggregate series. The Final-Demand PPI seasonally-adjusted monthly gain of 0.18% encompassed a gain of 0.45% in the PPI-traditional goods sector, a 0.09% gain in the most-heavily-weighted, but definitionally-impaired services sector, and a 0.26% gain in the minimally-weighted construction sector.

Where headline year-to-year aggregate PPI inflation hit a 62-month high of 2.45% in April 2017 and had backed off to 1.90% by July 2017, it jumped anew to 2.35% in August 2017. Recent relative strength in annual headline PPI-FD inflation did not reflect an overheating economy, but rather heavily orchestrated oil-price movements. Full details follow in the *Reporting Detail.*

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

REPORTING DETAIL

CONSUMER PRICE INDEX—CPI (August 2017)

Headline CPI-U Gained 0.40% for the Month, Rose to 1.94% Year-to-Year. Repeating patterns of recent years, more-positive seasonal adjustment factors, beginning in July 2017, have started to boost headline reporting of CPI-inflation for the second-half of the calendar year, reversing the negatively-biased reporting of seasonally-adjusted monthly inflation in the first-half. Headline August 2017 CPI-U monthly inflation of 0.4% was stronger than consensus expectations for a 0.3% gain, reflecting some positive seasonal adjustments, particularly with gasoline prices. Not adjusted for seasonal factors, as most people experience life, headline CPI-U inflation rose by 0.3% month-to-month in August 2017.

Unadjusted, year-to-year CPI-U inflation remained off its 60-month high of 2.74% of February 2017, having hit a near term trough of 1.63% in June 2017, but with some rebound in July 2017 to 1.73% and a further jump to 1.94% in August 2017. What led the recent inflation surge into the February 2017 CPI peak was driven by rising gasoline prices, not by an overheating economy, as claimed by some on the Federal Reserve's Federal Open Market Committee (FOMC).

Those pressures go both ways and, again, are affected heavily by seasonal adjustments. Consider that the Bureau of Labor Statistics (BLS) reported that gasoline declined by 2.29% (-2.29%) month-to-month, unadjusted in July; that is what people paid at the pump. Seasonally-adjusted, however, headline gasoline prices were little changed, up by 0.03% month-to-month. In August 2017, headline gasoline prices rose by an unadjusted 3.89% (with some month-end spike from Hurricane Harvey), that is what people paid at the pump. Seasonally-adjusted, though, headline gasoline prices jumped by 6.30% month-to-month. Frequently discussed here, meaningful seasonal adjustments are difficult to work, when most pricing volatility of the last two-to-three years has continued to be largely independent of regular monthly patterns of seasonality.

Separately, with not-seasonally-adjusted headline annual August 2017 CPI-U inflation rising by 1.94%, year-to-year inflation is not and has not been quite as low as indicated, when considered in the context of traditional CPI reporting and common experience. Moving on top of the unadjusted annual changes to the CPI-U, the ShadowStats-Alternate Inflation Measures showed year-to-year inflation in August 2017 rising to 5.5% [previously 5.3% in July 2017], based on 1990 methodologies, and to 9.7% [previously 9.4% in July 2017], based on 1980 methodologies.

Longer-Range Inflation Outlook. Despite U.S. dollar strength of recent years, and what had been accelerating, now increasingly faltering dollar strength, subsequent to the election and the last rate hike, a tremendous threat to the dollar and systemic liquidity and stability continues, tied to the U.S. Federal Reserve's ongoing inability to resolve fundamentally the 2008 financial collapse, other than having bought limited time with its emergency, stopgap measures. Recent Fed tightening action was despite continued, intensifying "adverse" economic circumstances. Forced to prop banking-system liquidity against the ongoing gale of renewed, economically-driven, banking-system solvency and liquidity issues, the FOMC likely will revert to renewed and expanded quantitative easing. That circumstance is compounded by increasing political discord in Washington and mounting global political instabilities.

Since the 2008 crisis, domestic- and global-banking systems have stabilized in a healthy or sustainable manner. Efforts to stimulate a non-recovering U.S. economy, amidst renewed faltering activity, had been nil, up through the advent of, and half a year into the Trump Administration. Given standard lead times, any positive impact from an increasingly-unlikely, economic-stimulus package this year would not have significant effect now until late-2018, at the earliest, a time lapse fraught with potential disaster created by a still-incapacitated Fed, fighting to the death a battle it already lost in the 2008 panic.

In the context of current economic reporting and signals, faltering economic activity has become increasingly obvious, along with related, increasing stresses on domestic systemic-liquidity and solvency issues, again, pushing the U.S. central bank back towards expanded quantitative easing in the next several months. Such has been reflected in mounting dollar weakness, with continuing high risks of extreme flight from the U.S. dollar—a massive dollar debasement—threatening an increasingly-rapid upturn in energy and dollar-based commodity inflation, driving headline U.S. inflation much higher.

Compounding the high-risk of a near-term run on the U.S. dollar remains mounting recognition in global markets that the U.S. Federal Reserve and other central banks still have no effective idea as to how to boost current economic activity, how to stabilize global banking-system solvency, or otherwise how to slog their way out of a self-generated quagmire. That circumstance only can be exacerbated by any intensification of systemic-political moves against President Trump by his opposition (see *Special Commentary No. 888*).

____

Notes on Different Measures of the Consumer Price Index

The Consumer Price Index (CPI) is the broadest inflation measure published by the U.S. Government, through the Bureau of Labor Statistics (BLS), Department of Labor:

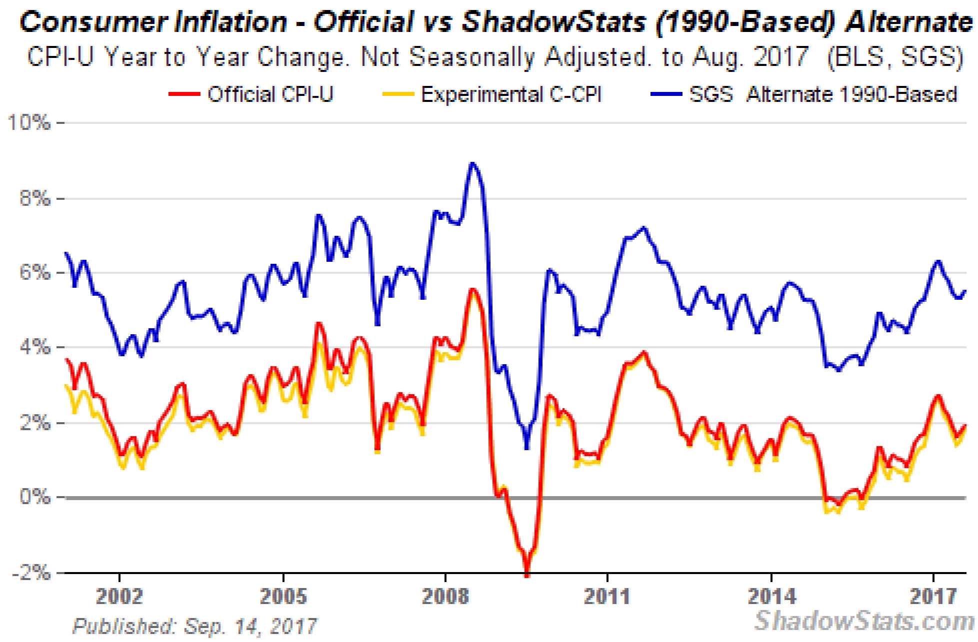
*The **CPI-U (Consumer Price Index for All Urban Consumers)** is the monthly headline inflation number (seasonally adjusted) and is the broadest in its coverage, representing the buying patterns of all urban consumers. Its standard measure is not seasonally-adjusted, and it never is revised on that basis except for outright errors.*

*The **CPI-W (CPI for Urban Wage Earners and Clerical Workers)** covers the more-narrow universe of urban wage earners and clerical workers and is used in determining cost of living adjustments in government programs such as Social Security. Otherwise, its background is the same as the CPI-U.*

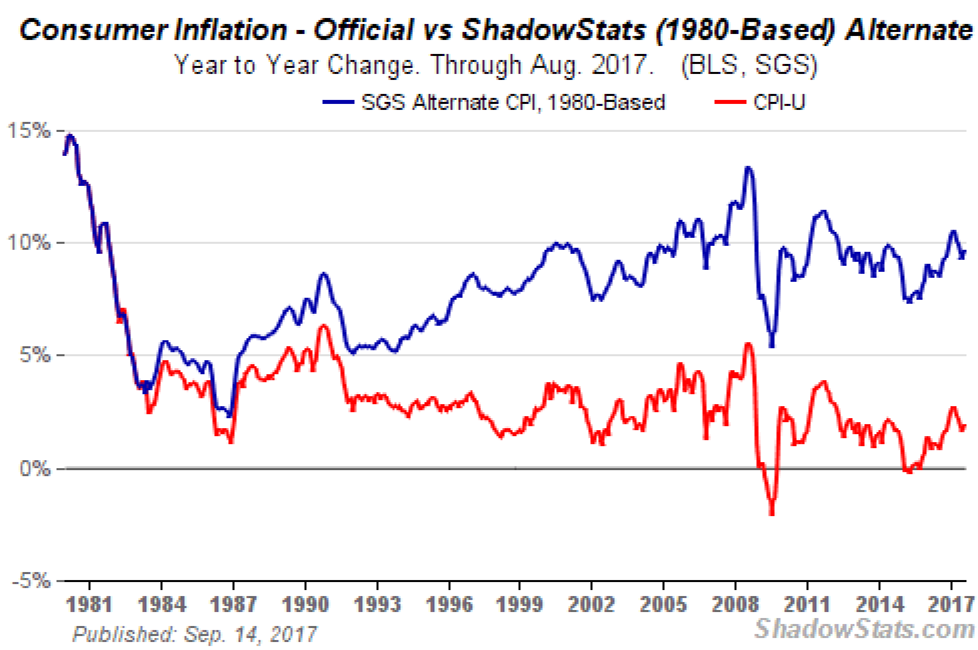
*The **C-CPI-U (Chain-Weighted CPI-U)** is an experimental measure, where the weighting of components is fully substitution based. It generally shows lower annual inflation rate than the CPI-U and CPI-W. The latter two measures once had fixed weightings—so as to measure the cost of living of maintaining a constant standard of living—but now are quasi-substitution-based. Since it is fully substitution based, the series tends to reflect lower inflation than the other CPI measures. Accordingly, the C-CPI-U is the "new inflation" measure being proffered by Congress and the White House as a tool for reducing Social Security cost-of-living adjustments by stealth. Moving to accommodate the Congress, the BLS introduced changes to the C-CPI-U estimation process with the February 26, 2015 reporting of January 2015 inflation, aimed at finalizing the C-CPI-U estimates on a more-timely basis, and enhancing its ability to produce lower headline inflation than the traditional CPI-U.*
*The **ShadowStats Alternative CPI-U Measures** are attempts at adjusting reported CPI-U inflation for the impact of methodological change of recent decades designed to move the concept of the CPI away from being a*

measure of the cost of living needed to maintain a constant standard of living. There are two measures, where the first is based on reporting methodologies in place as of 1980, and the second is based on reporting methodologies in place as of 1990.

Graph 1: Comparative Headline Year-to-Year Change, CPI-U vs. ShadowStats 1990-Based Alternate



Graph 2: Comparative Headline Year-to-Year Change, CPI-U vs. ShadowStats 1980-Based Alternate



CPI-U. The Bureau of Labor Statistics (BLS) reported this morning, September 14th, that headline, seasonally-adjusted August 2017 CPI-U inflation increased month-to-month by 0.4% [up by 0.40% at the second decimal point], following a gain of 0.1% [up by 0.11%] in July, "unchanged" at 0.0% [actual decline of 0.02% (-0.02%)] in June, a decline of 0.1% (-0.1%) [0.13% (-0.13%)] in May, an increase in April of 0.2% [up by 0.17%], a March drop of 0.3% (-0.3%) [down by 0.29% (-0.29%)], and monthly gains of 0.1% [up by 0.12%] in February, 0.6% [0.55%] in January, and 0.3% [0.26%] in December 2016.

Unadjusted August 2017 CPI-U gained by 0.30%, having declined by 0.07% (-0.07%) in July, having gained by 0.09% in June, 0.09% in May, 0.30% in April, 0.08% in March, 0.31% in February, 0.58% in January and 0.03% in December 2016.

Major CPI-U Groups. The adjusted August 2017 monthly inflation increase reflected gains in food, in the energy and in the "core" inflation (everything but food and energy) sectors. On an unadjusted basis, all major sectors also reflected monthly gains.

Encompassed by the August 2017 CPI-U seasonally-adjusted monthly gain of 0.40% [up by 0.30% unadjusted], August 2017 food inflation rose by 0.05% [up by 0.11% unadjusted], energy inflation jumped by 2.84% in August [up by an unadjusted 1.65%], while the adjusted August "core" (ex-food and energy) inflation rate rose by 0.25% [up by 0.21% unadjusted].

Running contrary to FOMC hopes and expectations, core CPI-U inflation has yet to regain 2.0% in the current cycle, showing unadjusted year-to-year inflation of 1.68% in August 2017, versus 1.69% in July 2017, 1.70% in June 2017, 1.73% in May 2017, 1.88% in April 2017, 2.00% in March 2017, 2.22% in February 2017, 2.27% in January 2017 and versus 2.20% in December 2016.

August 2017 seasonal adjustments for monthly gasoline inflation—usually reflective of the dominant pressure in energy prices—turned positive in July and August, having been heavily negative since February, turning a CPI-U unadjusted monthly gain of 3.89% in gasoline prices to an adjusted monthly gain of 6.30%. The Department of Energy (DOE) had estimated an unadjusted monthly gain in August gasoline prices of 3.31%.

While early-September 2017 retail gasoline prices (DOE) are running higher month-to-month versus August, by an order of magnitude of 12%, spiked by production and delivery disruptions from Hurricane Harvey, positive seasonal adjustments to September 2017 gasoline suggest an increasingly positive impact on gasoline, with a relatively-strong, seasonally-adjusted aggregate monthly gain in the August CPI-U likely, possibly 0.6% or more.

Year-to-Year CPI-U. Not seasonally adjusted, August 2017 year-to-year inflation for the CPI-U rose to 1.9% [1.94% at the second decimal point] versus 1.7% [1.73%] in July 2017, 1.6% [1.63%] in June 2017, 1.9% [1.87%] in May 2017, 2.2% [2.20%] in April 2016, 2.4% [2.38%] in March 2017, a 60-month high of 2.7% [2.74%] in February 2017, 2.5% [2.50%] in January 2017 and 2.1% [2.07%] in December 2016.

Year-to-year, CPI-U inflation would increase or decrease in next month's September 2017 reporting, dependent on the seasonally-adjusted month-to-month change, versus the adjusted, headline gain of 0.26% in September 2016 CPI-U. The adjusted change is used here, since that is how consensus expectations are expressed. To approximate the annual unadjusted inflation rate for September 2017, the difference in September's headline monthly change (or forecast of same), versus the year-ago monthly change, should be added to or subtracted directly from the August 2017 annual inflation rate of 1.94%.

Given an early guess of a seasonally-adjusted 0.6% gain in the monthly September 2017 CPI-U, that would leave the annual CPI-U inflation rate for September increasing to about 2.3%, plus-or-minus, depending on rounding.

Quarterly CPI-U. On an annualized quarter-to-quarter basis, seasonally-adjusted CPI-U declined by 0.16% (-0.16%) in second-quarter 2017, as reported last month, having gained by 3.15% in first-quarter 2017, 3.44% in fourth-quarter 2016, 1.63% in third-quarter 2016, 2.53% in second-quarter 2016 and having declined by 0.31% (-0.31%) in first-quarter 2016.

On an unadjusted, year-to-year basis, annual inflation by quarter was up by 1.35% in second-quarter 2017, versus 2.54% in first-quarter 2017, 1.80% in fourth-quarter 2016, 1.12% in third-quarter 2016, 1.05% in second-quarter 2016 and 1.08% in first-quarter 2016.

Annual Average CPI-U. The annual average CPI-U inflation rate was 1.26% in 2016, versus 0.12% in 2015.

CPI-W. The August 2017 seasonally-adjusted, headline CPI-W, which is a narrower series and has greater weighting for gasoline than does the CPI-U, rose month-to-month by 0.46% in August 2017, following a monthly gain of 0.10% in July, declines of 0.05% (-0.05%) in June and 0.20% (-0.20%) in May, a monthly gain of 0.18% in April, a decline of 0.37% (-0.37%) in March, and gains of 0.06% in February, 0.61% in January and 0.29% in December 2016.

On an unadjusted basis, year-to-year CPI-W rose to 1.93% in August 2017, versus 1.64% in July 2017, 1.50% in June 2017, 1.78% in May 2017, 2.14% in April 2017, 2.35% in March 2017, 2.82% in February 2017, 2.51% in January 2017 and 1.99% in December 2016.

Quarterly CPI-W. On an annualized quarter-to-quarter basis, seasonally-adjusted CPI-W declined by 0.39% (-0.39%) in second-quarter 2017, having gained by 3.22% in first-quarter 2017, by 3.80% in fourth-quarter 2016, 1.40% in third-quarter 2016 and 2.56% in second-quarter 2016, having declined in first-quarter 2016 by 1.08% (-1.08%). On an unadjusted year-to-year basis, annual inflation by quarter was up by 1.56% in second-quarter 2017, versus 2.56% in first-quarter 2017, 1.65% in fourth-quarter 2016, 0.76% in third-quarter 2016, 0.71% in second-quarter 2016 and 0.79% in first-quarter 2016.

Annual CPI-W. The annual average CPI-W inflation rate was 0.98% in 2016, versus an annual average contraction of 0.41% (-0.41%) in 2015.

Chained-CPI-U. The headline C-CPI-U is not seasonally adjusted, but it is revised quarterly for the prior year, as was seen in the previous headline July 2017 reporting. Year-to-year change for the headline August 2017 C-CPI-U annual inflation came in at 1.82%, versus 1.51% in July 2017, 1.39% in June 2017, 1.66% in May 2017 and 2.02% in April 2017.

Quarterly C-CPI-U, Year-to-Year. On an unadjusted, year-to-year basis, annual inflation by quarter was up by 1.69% in second-quarter 2017, versus 2.41% in first-quarter 2017, 1.51% in fourth-quarter 2016, 0.74% in third-quarter 2016, 0.73% in second-quarter 2016 and 0.76% in first-quarter 2016.

Annual Average C-CPI-U. The annual average C-CPI-U inflation rate was 0.93% in 2016, versus an annual average price index contraction of 0.12% (-0.12%) in 2015.

See discussions in the earlier CPI *Commentary No. 721* and in the opening notes in the *CPI Section* of *Commentary No. 699* as to recent changes in the series. More-frequent revisions and earlier finalization of monthly detail broadly have been designed to groom the C-CPI-U series as the new Cost of Living Adjustment (COLA) index of choice for the budget-deficit-strapped federal government, as discussed in the *Public Commentary on Inflation Measurement*.

Caution: Artificially-low inflation numbers estimated by the U.S. Government and used in fields ranging from Social Security COLAs (see the 2017 CPI-W estimate discussion in *Commentary No. 841*) to determining income-tax brackets, have been redesigned in recent decades specifically to help reduce the federal deficit. They are harmfully misleading to anyone using a government CPI estimate as a meaningful cost-of-living measure for guidance on income or investment purposes.

Alternate Consumer Inflation Measures. The ShadowStats-Alternate Consumer Inflation Measures are constructed on top of the unadjusted CPI-U series. Adjusted to 1990 methodologies—the ShadowStats-Alternate Consumer Inflation Measure (1990-Base)—year-to-year annual inflation was roughly 5.5% in August 2017, versus 5.3% in July 2017, 5.2% in June 2017, 5.5% in May 2017, 5.8% in April 2017, 6.0% in March 2017, 6.3% in February 2017, 6.1% in January 2017 and 5.7% in December 2016.

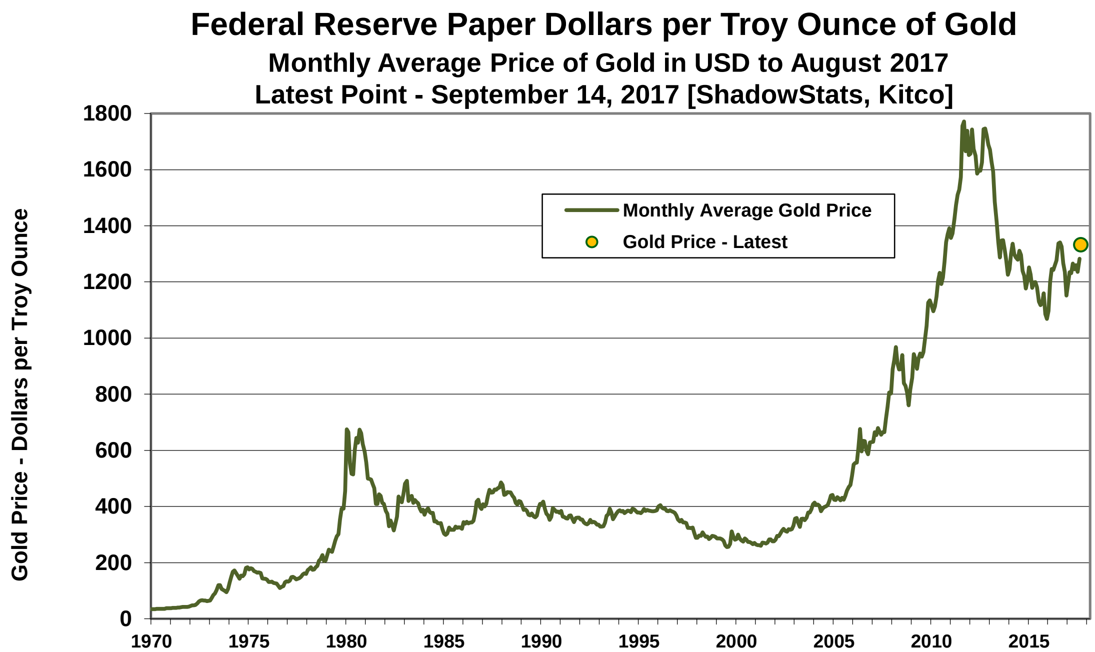
The August 2017 ShadowStats-Alternate Consumer Inflation Measure (1980-Base), which reverses gimmicked changes to official CPI reporting methodologies back to 1980, was at about 9.7% (9.67% at the second decimal point) in August 2017, versus 9.4% (9.44%)in July 2017, 9.3% (9.34%) in June 2017, 9.6% (9.60%) in May 2017, 10.0% (9.95%) in April 2017, 10.1% (10.14%) in March 2017, 10.5% (10.53%) in February 2017, 10.3% (10.27%) in January 2017 and 9.8% (9.81%) in December 2016. Detail, along with an inflation calculator will be found in the CPI section of the Alternate Data tab of the www.ShadowStats.com home page.

Note: The ShadowStats-Alternate Consumer Inflation Measures largely have been reverse-engineered from BLS estimates of the anticipated impact on annual CPI inflation from various changes made to CPI reporting methodology since the early 1980s, as also incorporated in the CPI-U-RS series. That series provides an official estimate of historical inflation, assuming that all current methodologies were in place going back in time. The changes reflected there are parallel with and of the same magnitude of change as estimated by the BLS, when a given methodology was changed.

The ShadowStats estimates are adjusted on an additive basis for the cumulative impact on the annual inflation rate from the various BLS changes in methodology (reversing the net aggregate inflation reductions by the BLS). The series are adjusted by ShadowStats for those aggregate changes, but the series otherwise are not recalculated.

Over the decades, the BLS has altered the meaning of the CPI from being a measure of the cost of living needed to maintain a constant standard of living, to something that neither reflects the constant-standard-of-living concept nor measures adequately what most consumers view as out-of-pocket expenditures. Roughly five percentage points of the additive ShadowStats adjustment since 1980 reflect the BLS's formal estimate of the annual impact of methodological changes; roughly, two percentage points reflect changes by the BLS, where ShadowStats has estimated the impact not otherwise published by the BLS. For example, the BLS does not consider more-frequent weightings of the CPI series or shifting the nature of retail outlets to be changes in methodology. Yet those changes have had the effect of reducing headline *inflation from what it would have been otherwise (See* Public Commentary on Inflation Measurement *for further details.)*

Graph 3: Monthly Average Gold Price in Dollars (Federal Reserve Notes)



Gold and Silver Historic High Prices Adjusted for August 2017 CPI-U/ShadowStats Inflation—

CPI-U: GOLD at $2,682 per Troy Ounce, SILVER at $156 per Troy Ounce
ShadowStats: GOLD at $14,501 per Troy Ounce, SILVER at $844 per Troy Ounce

Despite the September 5, 2011 historic-high gold price of $1,895.00 per troy ounce (London afternoon fix), and despite the multi-decade-high silver price of $48.70 per troy ounce (London fix of April 28, 2011), gold and silver prices have yet to re-hit their 1980 historic levels, adjusted for inflation. The earlier all-time high of $850.00 (London afternoon fix, per Kitco.com) for gold on January 21, 1980 would be $2,682 per troy ounce, based on August 2017 CPI-U-adjusted dollars, and $14,501 per troy ounce, based on August 2017 ShadowStats-Alternate-CPI (1980-Base) adjusted dollars (all series here are not seasonally adjusted).

In like manner, the all-time high nominal price for silver in January 1980 of $49.45 per troy ounce (London afternoon fix, per silverinstitute.org)—although approached in 2011—still has not been hit since 1980, including in terms of inflation-adjusted dollars. Based on August 2017 CPI-U inflation, the 1980 silver-price peak would be $156 per troy ounce and would be $844 per troy ounce in terms of the August 2017 ShadowStats-Alternate-CPI (1980-Base) adjusted dollars (again, all series not seasonally adjusted).

Shown in *Table 1*, on page 47 of *No. 859 Special Commentary*, over the decades, the increases in gold and silver prices have compensated for more than the loss of the purchasing power of the U.S. dollar as reflected by CPI inflation. They also effectively have come close to fully compensating for the loss of purchasing power of the dollar based on the ShadowStats-Alternate Consumer Price Measure (1980-Methodologies Base).

Real Retail Sales—August 2017—Real Monthly Growth Will Reflect Headline Nominal Growth Reduced by 0.40% (-0.40%) Month-to-Month, by 1.94% (-1.94%) Year-to-Year. Nominal Retail Sales for August 2017 will be released tomorrow, Friday, September 15th, and covered in *Commentary No. 910* of that date. Based on today's headline CPI-U reporting for August 2017, headline inflation-adjusted real retail sales will show growth rates reduced versus headline nominal growth by 0.40% (-0.40%) month-to-month and by 1.94% (-1.94%) year-to-year (see *Pending Economic Releases* in the *Week*, *Month and Year-Ahead* section).

Real Average Weekly Earnings—August 2017—Month-to-Month Real Earnings Declined. *[Note: Details are plotted in today's* Consumer Liquidity Watch Graph CLW-7.*]* The headline estimate for August 2017 real average weekly earnings was published coincident with today's release of the headline August 2017 CPI-W. In the production and nonsupervisory employees category—the only series for which there is a meaningful history, the regularly-volatile real average weekly earnings were down month-to-month by 0.28% (-0.28%) in August 2017, versus downwardly-revised gains of 0.13% [previously 0.18%] in July and 0.23% [previously 0.27%, initially 0.53%] in June, and against unrevised monthly gains of 0.34% in May, 0.39% in April, 0.55% in March, 0.07% in February and versus a monthly contraction in January of 0.47% (-0.47%), which had been the sixth consecutive monthly decline for the series.

Year-to-year, the adjusted August 2017 real change rose to 0.68%, versus downwardly revised gains of 0.62% [previously 0.71%] in July 2017, 1.10% [previously 1.14%, initially 1.10%] in June 2017, and against unrevised gains of 0.89% in May 2017, 0.49% in April 2017 and versus annual declines of 0.01% (-0.01%) in March 2017, 0.39% (-0.39%) in February 2017 and 0.46% (-0.46%) in January 2017.

Second-quarter 2017 activity reflected a revised, annualized real quarterly gain of 4.43% [previously 4.49%, initially 4.01%], following contractions in first-quarter 2017 of 1.13% (-1.13%), in fourth-quarter 2016 of 1.36% (-1.36%), and third-quarter 2016 growth of 1.48%, a second-quarter 2016 contraction of 0.11% (-0.11%) and first-quarter 2016 annualized growth of 1.81%.

Year-to-year change in second-quarter 2017 real earnings rose by a revised 0.83% [previously 0.84%, initially 0.73%], following an annual contraction of 0.29% (-0.29%) in first-quarter 2017, the first annual or year-to-year quarterly contraction since fourth-quarter 2012, when the real GDP effectively was unchanged quarter-to-quarter. The signal there highlighted financial stresses on the consumer and continuing major downside risk to headline real GDP reporting.

Based solely on volatile initial reporting for July and August 2017, the early-trend for real third-quarter 2017 activity was for an annualized quarterly gain of 1.01%, with real annual quarterly growth of 0.71%.

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

While these usually heavily-revised and seasonally-adjusted monthly changes are without much, if any, meaning in the near-term—effectively reporting garbage—over the longer term and quarterly, and particularly the benchmarked trends tend to be of some substance. As with the BLS reporting tied to the nonfarm payrolls, the headline seasonally-adjusted monthly data here are not comparable due to reporting issues with concurrent seasonal factor adjustments (see *Headline Distortions from Shifting Concurrent-Seasonal Factors* on page 21 of prior *Commentary No. 908-B*).

Separately, the CPI-W deflated reporting here also is biased versus the CPI-U-deflated series, where the CPI-W—more heavily weighted with gasoline prices—tends to have much deeper, negative headline inflation, with resulting stronger headline, real growth than would be seen with the CPI-U, when gasoline prices are falling, and vice versa. Such was seen in August 2017 detail, where strong, seasonally adjusted gasoline prices helped to generate a headline, seasonally-adjusted CPI-W gain of 0.46% month-to-month, versus the parallel CPI-U gain of 0.40%.

Again, *Consumer Liquidity Watch Graph CLW-7* plots this series, showing the seasonally-adjusted earnings as officially deflated by the BLS (red-line), and as adjusted for the ShadowStats-Alternate CPI Measure, 1990-Base (blue-line). When inflation-depressing methodologies of the 1990s began to kick-in, the artificially-weakened headline CPI-W (also used in calculating Social Security cost-of-living adjustments) helped to prop up the reported real earnings. Official real earnings today still have not recovered their inflation-adjusted levels of the early-1970s, and, at best, have been in a minimal uptrend for the last two decades (albeit spiked recently by negative headline inflation). Deflated by the ShadowStats (1990-Based) measure, real earnings have been in fairly-regular decline for the last four decades, which is much closer to common experience than the pattern suggested by the CPI-W. See the *Public Commentary on Inflation Measurement* for further detail.

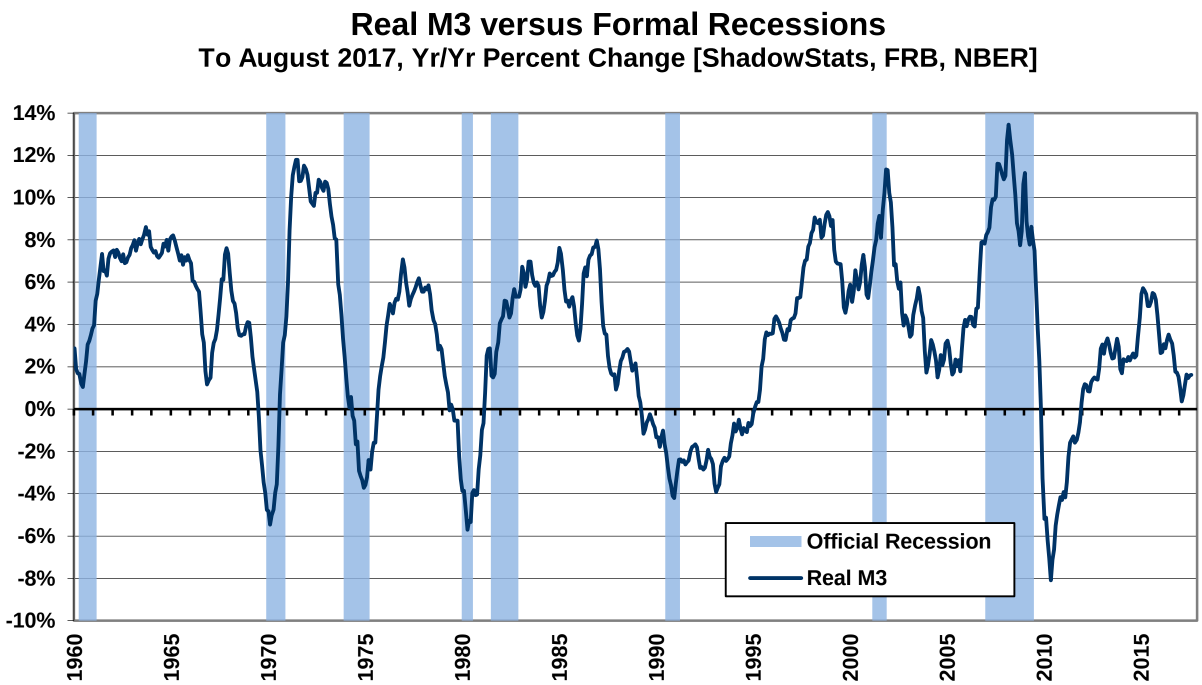
Real (Inflation-Adjusted) Money Supply M3—August 2017—Annual Growth Held on the Plus-Side of "Unchanged," Reflecting an Uptick in Nominal M3 Growth Minimally-Larger than the CPI-U Uptick. The signal for a double-dip, multiple-dip or simply protracted, ongoing recession, based on annual contraction in the real (inflation-adjusted) broad money supply (M3), recently had been re-triggered/ intensified, but that signal then softened with a continuing, contrary bounce in May 2017. The previous signal had been, and has remained in place, despite real annual M3 growth having rallied into positive territory post-2010, and the real growth pattern turned down anew, with annual nominal M3 growth slowing faster than CPI-U annual inflation in June 2017, with a minimal reversal of trend in July 2017 and August 2017.

Shown in *Graph 4*—based on August 2017 CPI-U reporting and the latest ShadowStats-Ongoing M3 Estimate—annual inflation-adjusted growth in August 2017 M3 moved minimally higher to 1.62%, versus a revised 1.59% [previously 1.51%] in July 2017, an unrevised 1.46% in June 2017, and a revised 1.63% [previously 1.64%] in May 2017. That growth remained down from peak growth of a 5.71% in February 2015. The minimal firming in the August versus July number, reflected an increase in nominal August 2017 M3 annual growth to 3.56%, from a revised 3.32% [previously 3.24%] in July 2017 (see prior *Commentary No. 908-B*), with an offset from a gain in unadjusted headline CPI-U annual inflation from 1.73% in July 2017 to 1.94% in August 2017 (see today's earlier CPI-U headline detail).

The recent monthly upticks in annual growth still are likely to have reflected a temporary reversal in the pattern of plunging annual growth, which has held at levels last seen in plunging growth into the 2009 economic collapse, a level always seen going into, or already in a recession.

The signal for a downturn or an intensified downturn is generated when annual growth in real M3 first slows sharply, approaches zero and turns negative in a given cycle; the signal is not dependent on the depth of the downturn or its duration. Breaking into positive territory does not generate a meaningful signal one way or the other for the broad economy. The previous "new" downturn signal was generated in December 2009, even though there had been no upturn since the economy purportedly hit bottom in mid-2009. The ongoing issue here confounding the regular signal is that the U.S. economy never has recovered fully from its collapse into 2009 (see *Commentary No. 877* and *Commentary No. 902-B*). The initial economic downturn never evolved into a meaningful or sustainable recovery. The current level and pattern of real annual M3 growth generally has been followed by annual contraction and recession signal.

Graph 4: Real M3 Annual Growth versus Formal Recessions



Again, when real M3 growth breaks above zero, there is no signal; the signal is generated only when annual growth moves to zero and into negative territory, where it has backed off at present. The broad economy tends to follow in downturn or renewed deterioration roughly six-to-nine months after the signal. Weaknesses in a number of economic series have continued to the present, with significant new softness in recent reporting. Actual post-2009 economic activity has remained at relatively low levels—in protracted stagnation—with no actual recovery (again, see *Commentary No. 907*, and the *ECONOMY* section of *No. 859 Special Commentary*).

Despite the purported, ongoing recovery shown in headline GDP activity, a renewed downturn in official data is underway that likely still will gain official recognition as a "new" recession, in the months ahead. Underlying reality remains that the collapse into 2009 was followed by a plateau of low-level economic activity—no meaningful upturn, no full recovery from or end to the official 2007 recession, no new economic expansion—where the unfolding "new" downturn remains nothing more than a continuation and re-intensification of a downturn that began unofficially in 2006.

PRODUCER PRICE INDEX—PPI (August 2017)

August 2017 Final Demand PPI: Surging Energy Inflation Ostensibly Was Not Affected by Hurricane Harvey. The Bureau of Labor Statistics (BLS) made no reference to Hurricane Harvey either as to impact on the PPI surveying process or from month-end spikes in energy prices related to the storm. Nonetheless, higher energy costs in the month were a factor in the monthly upside movement in goods inflation, with the headline, aggregate Final Demand PPI jumping sharply in terms of annual inflation.

Recent Annual Inflation Spike Was Not Due to Overheating Economy. With headline year-to-year inflation having hit a 62-month high of 2.45% in April 2017, having backed off to 1.90% July 2017, but jumping back to 2.35% in August 2017, as previously discussed here, recent relative strength in annual headline PPI-FD inflation has not reflected an overheating economy, as claimed by some at the Fed. The headline issue remains energy-price distortions in the last several years that have been rigged heavily through the Federal Reserve's interest-rate jawboning and dollar-propping gimmicks, combined with recent OPEC-supply jawboning. That said, headline August 2017 energy rebounded sharply month-to-month, having declined sharply for the three prior months (seasonally-adjusted).

Separate from the definitional issues of the dominant services sector, headline seasonally-adjusted monthly goods inflation in August of 0.45%, reflected food prices down by 1.28% (-1.28%), with energy prices up by 3.26% and "core" inflation (ex-food and energy) up by 0.18%. Before seasonal adjustments, goods inflation gained by 0.27% in the month, with food inflation down by 1.44% (-1.44%) and with energy prices up by 2.54% and "core" inflation up by 0.09%.

Massive PPI Overhaul Due for Publication in February 2018. Announced initially the prior August 10th *Press Release*, all PPI weightings will undergo significant revisions (updating current weightings, based on 2007, to weightings based on 2012 detail.). Final Demand Producer Price Index and its key component indices such as Final Demand Goods and Final Demand Services only go back to November 2009. Current starting-month index levels of 100.0 will be maintained at 100.0.

Services-Side Nonsense Detail. The headline monthly PPI Final Demand inflation generally reflects neither real-world activity, nor common experience, except by possible coincidence. As structured, the monthly wholesale inflation rate remains dominated by the services sector, which remains of negligible common-experience or theoretical value, as discussed in the following *Bulk of Headline PPI Reporting Is of Little Practical Use* section. It also has proven to be highly unstable in its surveying and related reporting. Consider that the monthly PPI detail is subject to revision five months after its initial reporting.

For the April 2017 PPI revision, released with the August 2017 reporting, the seasonally-adjusted headline index level revised lower by 0.09% (-0.09%), with the monthly change revising from an initial month-to-month gain of 0.63% to a gain of 0.54%. Net negative revisions of 0.09% (-0.09%) were seen in each of the goods, services and construction areas. As usual, though, the internal numbers did not add up to provide a consistent picture, particularly in the context of seasonal adjustments. Where the data-consistency issues largely were across-the-board in August, most frequently the issues are generated on the dominant services-side of the reporting (see *Inflation That Is More Theoretical than Real World*).

Bulk of Headline PPI Reporting Is of Little Practical Use. *[The background text here and in the next subsection is as published previously.]* Beyond the broad issues with general inflation measurement (see *Public Commentary on Inflation Measurement*), indeed the bulk of the PPI is covered by the "services" sector, where inflation is determined largely by shifting profit margins. Discussed in the next subsection, profit-margin inflation estimates generally are handled in a manner counter-intuitive to the more-traditional measurement of inflation in goods and services, otherwise calculated as a measurement of change in prices. Accordingly, the headline detail here increasingly has a limited relationship to real-world activity.

The conceptual differences between goods inflation and services profit margins do not blend well and are not merged easily or meaningfully in the current version of the PPI. While the dual measures are more meaningfully viewed independently than as the hybrid measure of the headline Producer Price Index Final Demand—ShadowStats separates the analyses of those sectors by sub-category—the aggregate headline series here also is reviewed and covered within the headline reporting conventions of the Bureau of Labor Statistics (BLS).

Inflation That Is More Theoretical than Real World. Effective with January 2014 reporting, a new Producer Price Index (PPI) replaced what had been the traditional headline monthly measure of wholesale inflation in Finished Goods (see *Commentary No. 591*). In the new headline monthly measure of wholesale Final Demand, Final Demand Goods basically is the old Finished Goods series, albeit expanded.

The new otherwise dominant Final Demand Services sector largely reflects problematic and questionable surveying of intermediate or quasi-wholesale profit margins in the services area. To the extent that profit margins shrink in the services sector, one could argue that the resulting lowered estimation of inflation actually is a precursor to higher inflation, as firms subsequently would move to raise prices, in an effort to regain more-normal margins. In like manner, in the circumstance of “increased” margins—due to the lower cost of petroleum-related products not being passed along immediately to customers—competitive pressures to lower margins would tend to be reflected eventually in reduced retail prices (CPI). The oil-price versus margin gimmick works both way. In times of rapidly rising oil prices, it mutes the increase in Final Demand inflation, in times of rapidly declining oil prices; it tends to mute the decline in Final Demand inflation.

The current PPI series remains an interesting concept, but it appears limited as to its aggregate predictive ability versus general consumer inflation. Further, there is not enough history available on the new series (just seven years of post-2008-panic data) to establish any meaningful relationship to general inflation or other economic or financial series.

August 2017 Headline PPI Detail. The Bureau of Labor Statistics (BLS) reported September 13th, that the seasonally-adjusted, month-to-month, headline Producer Price Index Final-Demand (PPI-FD) inflation for August 2017 rose by 0.18%, versus a headline deflation of 0.09% (-0.09%) July, versus a gain of 0.09% in June, a revised gain of 0.09% [previously unchanged at 0.00%] in May, due to the five-month revision to April, which now stands at a gain of 0.54% [previously 0.63%, initially 0.54%].

On a not-seasonally-adjusted basis—all annual growth rates are expressed unadjusted—year-to-year PPI-FD inflation in August 2017 jumped to 2.35%, versus 1.90% in July 2017, 1.99% in June 2017, 2.36% in May 2017, and an unrevised 2.45% in April 2017.

For the three major subcategories of August 2017 PPI-FD, headline monthly Goods inflation rose by 0.45%, Services "inflation" (profit margins) rose by 0.09% and Construction inflation jumped increased by 0.26%, with respective unadjusted annual growth rates of 3.06%, 2.06% and 3.34%.

Final Demand Goods (weighted at 33.81% of the Aggregate Index). Running somewhat in parallel with the old Finished Goods PPI series, headline month-to-month Final Demand Goods inflation in August 2017 rose by 0.45%, following a decline of 0.09% (-0.09%) in July and a gain of 0.09% in June. There was positive impact on the aggregate goods headline reading from underlying seasonal-factor adjustments. Not-seasonally-adjusted, August inflation gained 0.27% month-to-month.

Unadjusted, year-to-year goods inflation in August 2017 showed an annual gain of 3.06%, following gains of 2.30% in July 2017 and of 2.21% in June 2017.

Headline seasonally-adjusted monthly changes by major components of the August 2017 Final Demand Goods:

- "Foods" inflation (weighted at 5.40% of the total index) declined month-to-month in August 2017 by 1.28% (-1.28%), having been unchanged at 0.00% in July 2017 and having gained 0.60% in June. Seasonal adjustments were positive for the August headline change, which declined by 1.44% (-1.44%) unadjusted. Unadjusted and year-to-year, annual August 2017 foods inflation rose by 1.75%, having gained by 1.90% in July 2017 and by 1.11% in June 2017.
- "Energy" inflation (weighted at 5.50% of the total index) gained month-to-month by 3.26% in August 2017, having declined by 0.31% (-0.31%) in July and by 0.52% (-0.52%) in June. Seasonal adjustments were positive in August, with unadjusted monthly energy inflation up by 2.54%. Unadjusted and year-to-year, August 2017 energy prices gained 8.61%, versus annual gains of 4.13% in both July 2017 and June 2017.
- "Less foods and energy" ("Core" goods) monthly inflation (weighted at 22.91% of the total index) gained by 0.18% in August 2017, having declined by 0.09% (-0.09%) in July and gaining 0.09% monthly in June. Seasonal adjustments were positive for monthly core inflation, with unadjusted monthly August inflation up by 0.09%. Unadjusted and year-to-year, August 2017 rose to 1.99%, versus 1.90% in July 2017 and 2.08% in June 2017.

Final Demand Services (weighted at 64.12% of the Aggregate Index). Headline monthly Final Demand Services inflation increased by 0.09% having declined by 0.18% (-0.18%) in July and having gained 0.18% in June. The overall seasonal-adjustment impact on headline August services inflation was neutral, with an unadjusted monthly gain also at 0.09%. Year-to-year, unadjusted August 2017 services inflation slowed to rose to 2.06%, versus 1.79% in July 2017 and 1.88% in June 2017.

The headline monthly changes by major component for August 2017 Final Demand Services inflation:

- "Services less trade, transportation and warehousing" inflation, or the "Other" category (weighted at 38.87% of the total index) monthly inflation here rose by 0.09% in August 2017, having gained 0.18% in July and 0.27% in June. Seasonal-adjustment impact on the adjusted August detail was positive, where the unadjusted monthly reading was unchanged at 0.00%. Unadjusted and year-to-year, August 2017 "other" services inflation was up by 1.89%, having gained 2.07% in July 2017 and 2.17% in June 2017.

- "Transportation and warehousing" inflation (weighted at 4.99% of the total index) rose by 0.35% in August 2017, having declined month-to-month by 0.78% (-0.78%) in July and having gained 0.09% in June. Seasonal adjustments were positive for the headline August reading, versus an unadjusted monthly gain of 0.09%. Unadjusted and year-to-year, August 2017 transportation inflation rose by 1.58%, versus 1.05% in July 2017 and 2.20% in June 2017.
- "Trade" inflation (weighted at 20.26% of the total index) was unchanged at 0.00% month-to-month in August 2017, having declined by 0.52% (-0.52%) in July and by 0.17% (-0.17%) in June. Seasonal adjustments had a neutral impact, where the unadjusted monthly change was unchanged at 0.00%. Unadjusted and year-to-year, August 2017 trade inflation rose to an annual gain of 2.14%, versus 1.42% in July 2017 and 1.14% in June 2017.

Final Demand Construction (weighted at 2.07% of the Aggregate Index). Although a fully self-contained subsection of the Final Demand PPI, Final Demand Construction inflation receives no formal headline coverage. Month-to-month construction inflation rose by 0.26% in August 2017, versus 1.21% in July and 0.17% in June. The impact of seasonal factors on the August reading was neutral, as usual, where the unadjusted monthly gain also was 0.26%. The issues here are a combination of monthly headline cost changes along with a quarterly estimate of contractor profit-margin changes that have little connection to real-world activity. The latter circumstance was addressed in *Commentary No. 829*.

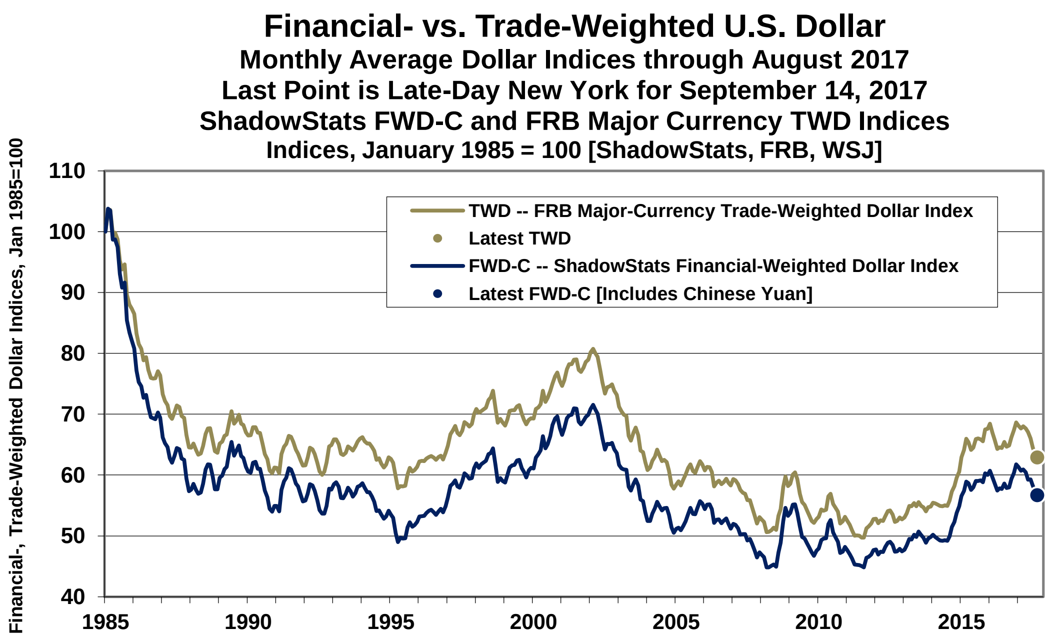
On an unadjusted basis, year-to-year construction inflation rose by 3.34% in August 2017, versus 3.17% in July 2017 and 1.22% in June 2017. For the first time recent memory, the PPI annual change has moved closer to the estimates of private surveying and other government estimates (GDP deflators), which usually show much higher construction-related inflation than the PPI, by an order of magnitude of a couple of hundred basis points. Annual inflation in those measures, however also appears to be on the rise. Discussed in *Commentary No. 829*, ShadowStats has constructed a Composite Construction Deflator (CCD) now used by ShadowStats in deflating the Census Bureau's monthly estimates of Construction Spending Put in Place in the United States (see also prior *Commentary No. 908-B*).

PPI-Inflation Impact on Pending Reporting of August 2017 New Orders for Durable Goods. As to the upcoming reporting of August 2017 New Orders for Durable Goods, monthly inflation (reported only on a not-seasonally-adjusted basis) for new orders for manufactured durable goods in August 2017 gained 0.06% month-to-month, having been unchanged at 0.00% in July and having gained 0.06% in June. Year-to-year annual inflation held at 1.56% in August 2017, versus 1.56% in July 2017 and 1.69% in June 2017. August 2017 durable goods orders (both nominal and real) will be reported and calculable on September 27th, with coverage in the ShadowStats *Commentary No. 912* of that date.

HYPERINFLATION WATCH

Continuing and Mounting Flight from the U.S. Dollar Should Foreshadow Further Spikes in Gold and Silver Prices, and Oil Prices, with Implications for Higher Domestic Inflation. The "Alert" issued a month ago in *Special Commentary No. 904* (see also the related *Opening Comments* there) of August 14th, which speaks for itself, warned of likely severe troubles in the next several months for the U.S. dollar, with related negative impact on the U.S. equity and credit markets. That "Alert" continues in play. Subsequent to that missive, and as reflected in *Hyperinflation Watch Graphs HW-1* to *HW-5*, the U.S. dollar broadly has weakened, with some related, offsetting rallies in the prices for oil and the precious metals.

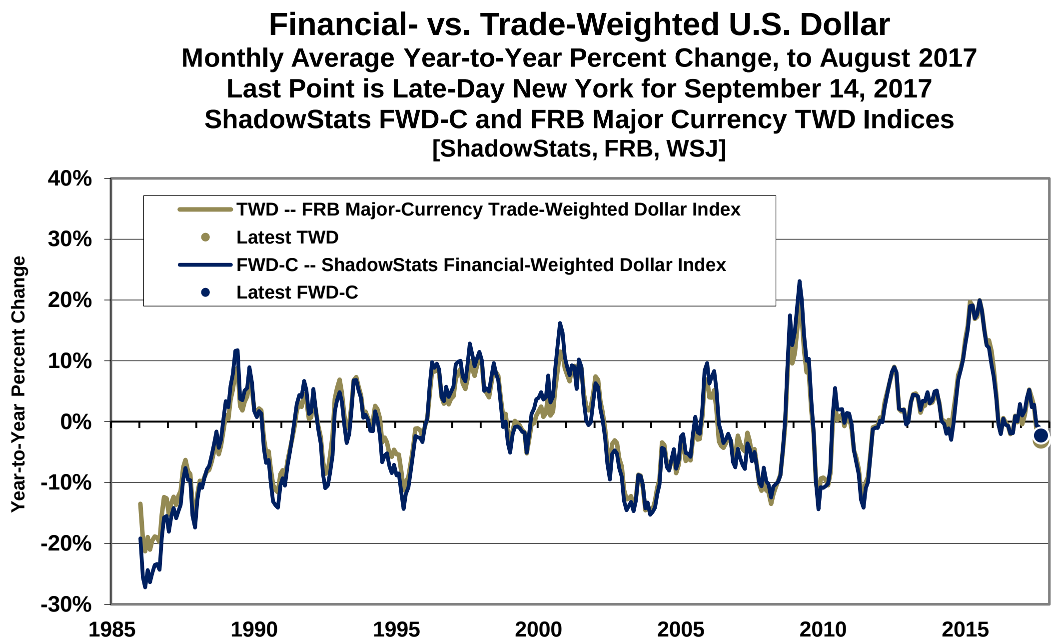
Graph HW-1: Financial- versus Trade-Weighted U.S. Dollar



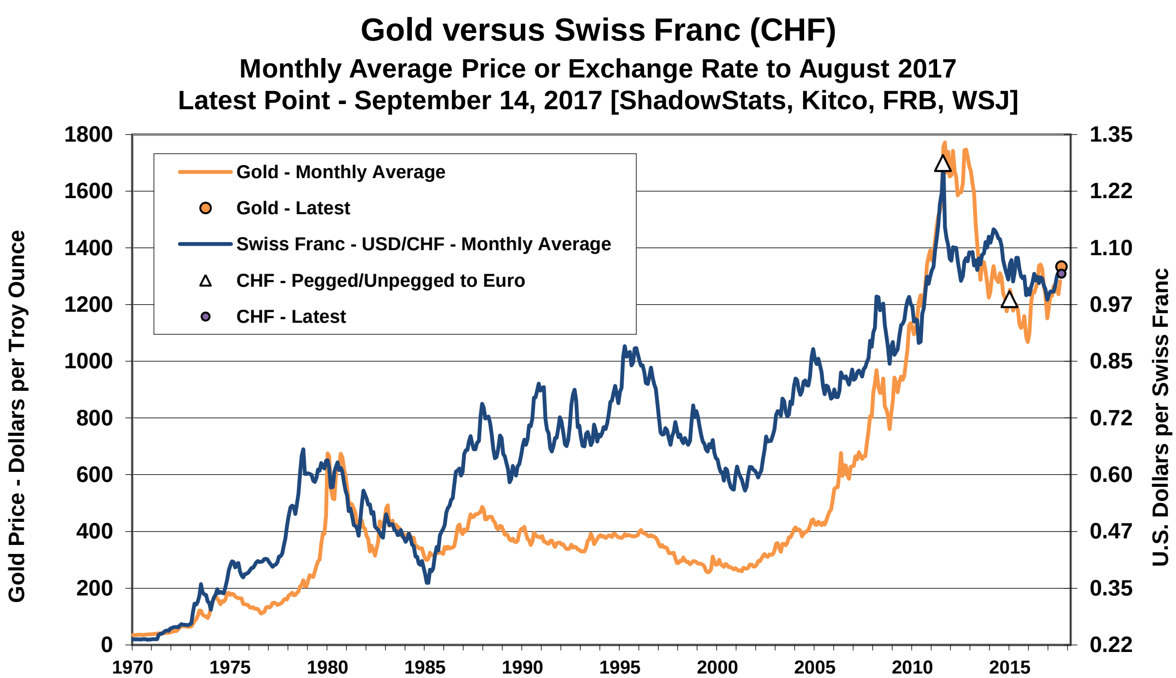
As the headline U.S. economy continues to weaken, with pressures added from the damage of recent disastrous hurricanes, odds are increasing for the Federal Reserve Board's Federal Open Market Committee (FOMC) backing away from its proclaimed rate-hiking, balance-sheet-liquidating and tightening policies. As economic activity continues to sink anew, a process that was underway well before the impact of any natural disasters, mounting liquidity stresses on the banking system eventually should push the Fed back into expanded quantitative.

Unfolding perceptions of that circumstance increasingly should savage the U.S. dollar, and again the domestic stock and equity markets. Discussed into today's *Opening Comments*, the extreme variance or dispersion currently seen in the U.S. household income is a condition that commonly accompanies and fosters extreme financial-market turmoil and economic displacement, although timing is far from specific. As with the squirrelly season discussed in the *Opening Comments* of [Special Commentary No. 904](), however, a confluence of unusual factors can lead to an extraordinary crisis.

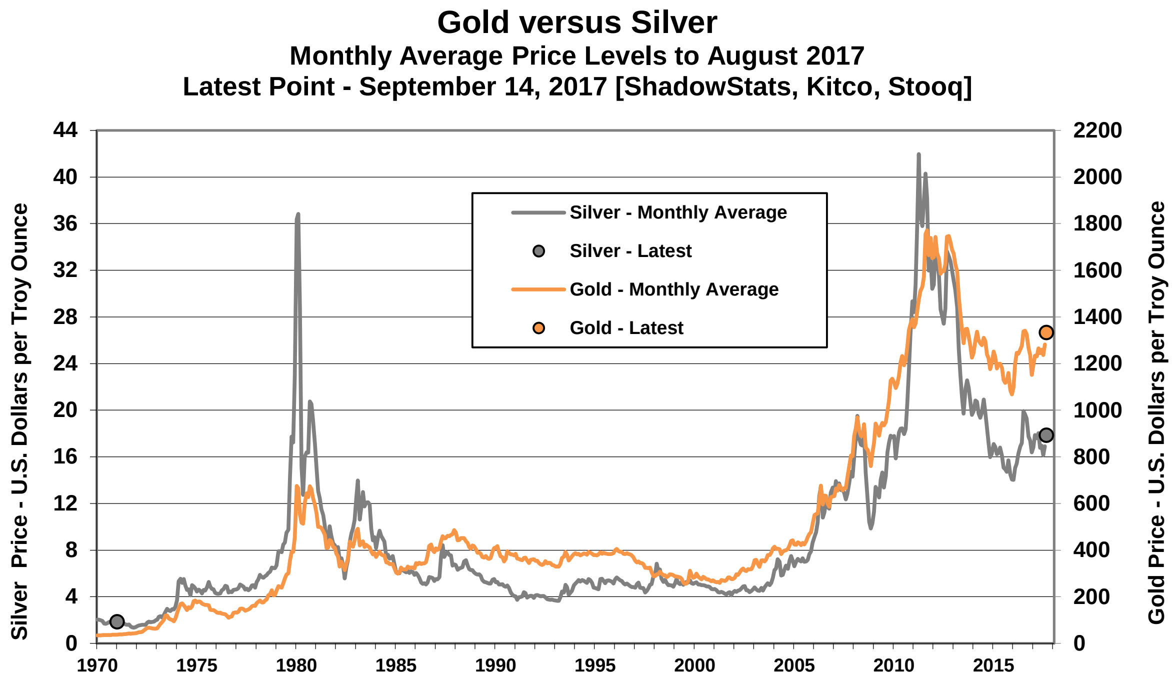
Graph HW-2: Year-to-Year Change, Financial- versus Trade-Weighted U.S. Dollar



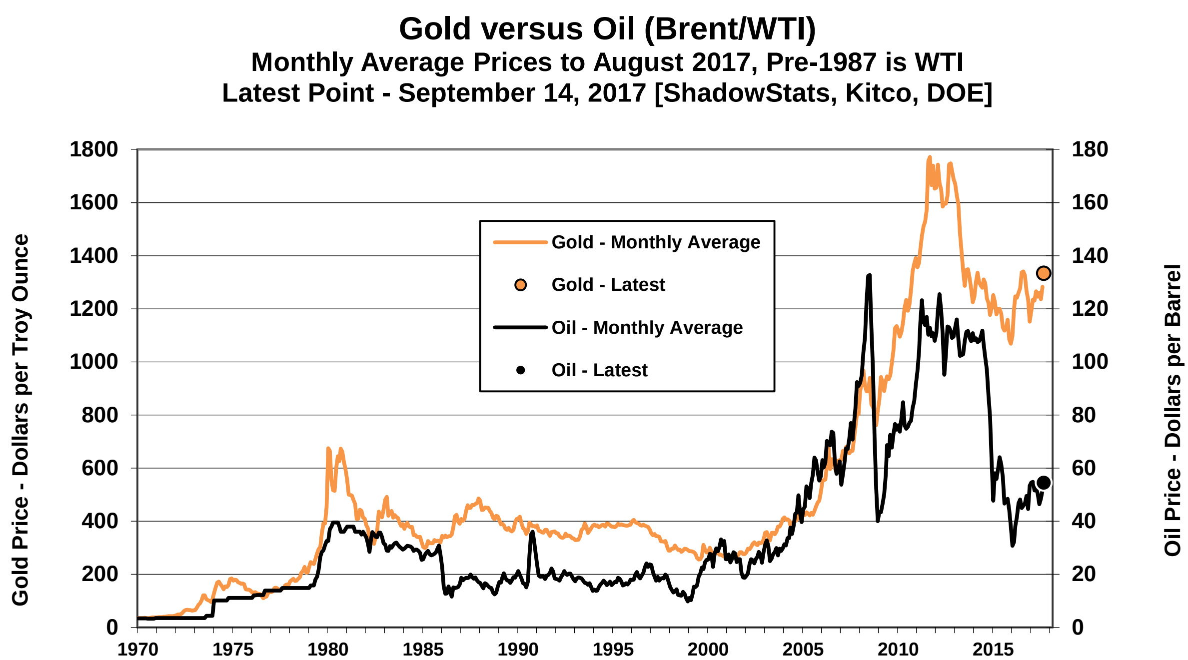
Graph HW-3: Gold versus the Swiss Franc



Graph HW-4: Gold versus Silver



Graph HW-5: Gold versus Oil



The trigger events for the great turmoil ahead likely will be tied to an intensifying economic downturn that was unfolding well before the recent natural disasters, which can have mixed economic impact as discussed earlier. Watch out for surprisingly weak data in the next couple of months, irrespective of any hurricane damages.

The outlook for heavy dollar selling remains in place. Holding physical gold and silver remains the primary hedge for preserving the purchasing power one's wealth and assets, in manner that is liquid and portable. Please call me any time at (707) 763-5786 if you would like discuss unfolding market conditions or economic circumstances.

Special "Alerts" will be posted as needed. – *John Williams*

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

CONSUMER LIQUIDITY WATCH

CONSUMER LIQUIDITY CONDITIONS: INCOME, CREDIT AND RELATIVE OPTIMISM.
[The CLW *has been updated for 2016 Annual Real Median Household Income, August 2017 Real Average Weekly Earnings, and July 2017 Consumer Credit Outstanding.]*

Liquidity Stresses Mounted Amidst Faltering Optimism. The U.S. consumer faces continuing financial stress, increasingly reflected in the renewed softening of headline economic activity, including Employment conditions, Real Retail Sales, Home Sales and impacted construction series and as reflected ultimately in affected broader-based economic series such as Industrial Production.

Liquidity Issues Limit Economic Activity. Severe and persistent constraints on consumer liquidity of the last decade or so drove economic activity into collapse through 2009, and those conditions have prevented meaningful or sustainable economic rebound, recovery or ongoing growth since. The limited level of, and growth in, sustainable real income, and the inability and/or unwillingness of the consumer to take on new debt have remained at the root of the liquidity crisis and ongoing economic woes.

These same pocket-book issues contributed to the anti-incumbent electoral pressures in the 2016 presidential race. The post-election environment showed a near-term surge in both the consumer confidence and sentiment measures to levels generally not seen since before the formal onset of the recession in 2002, let alone 2007. Yet, underlying liquidity conditions, economic reality and lack of positive actions out of the government to turn the economy meaningfully, all have continued to remain shy of consumer hopes. Not surprisingly, consumer optimism has begun to falter anew.

Including the various consumer income stresses discussed in *Special Commentary No. 888*, broad, underlying consumer-liquidity fundamentals simply have not supported, and still do not support a turnaround in general economic activity—a post "Great Recession" expansion—and broadly are consistent with a "renewed" downturn in that non-recovered economic activity. Indeed, never truly recovering post-Panic of 2008, limited growth in household income and credit have eviscerated and continue to impair broad, domestic U.S. business activity, which is driven by the relative financial health and liquidity of consumers. These underlying liquidity conditions and reality—particularly income and credit—remain well shy of consumer hopes and needs.

The combined issues here have driven the housing-market collapse and ongoing, long-term stagnation in consumer-related real estate sales and construction activity, and have constrained both nominal and real retail sales. Related, personal-consumption-expenditure and residential-construction categories accounted for 73.1% of the headline real (73.0% of nominal), second-quarter 2017 U.S. GDP.

With the better-quality economic indicators and underlying economic reality never having recovered fully from the collapse into 2009, consumers increasingly should pull back on consumption in the months ahead. Underlying reality is evident in more-meaningful economic indicators—not the GDP—irrespective of the transient, gimmicked boosts to, and current headline slowing in, that most worthless of economic series, discussed most recently in *Commentary No. 907*.

Consumer Optimism: August Consumer Confidence and Sentiment Measures Both Jumped in the Month, Sentiment Pulled Back from Its "Advance" Estimate. This detail includes the August 2017 reading of The Conference Board's Consumer-Confidence Index® (Confidence) of August 29th, as well as the full-August 2017 reading for the University of Michigan's Consumer Sentiment Index (Sentiment) of September 1st. Reflected in *Graphs CLW-1* and *CLW-2*, both Confidence and Sentiment rose in September 2016 and plunged in October, likely reflecting concerns as to the direction of the presidential race. Post-election, both measures rallied sharply, reflecting a surge in consumer optimism into early 2017. Both series appeared to have topped and pulled back in June, but the July Confidence number rebounded anew, with August continuing to rebound, yet with each rebound being on top of a lesser downside revision to the prior month. Where the full-July Sentiment number pulled back, the August Sentiment reading jumped anew, although the just released full-month estimate revised lower from its "advance" estimate for the month. Nonetheless, both the latest Confidence and Sentiment levels remained off their respective post-election, euphoric peaks of March 2017 (Confidence) and January 2017 (Sentiment).

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

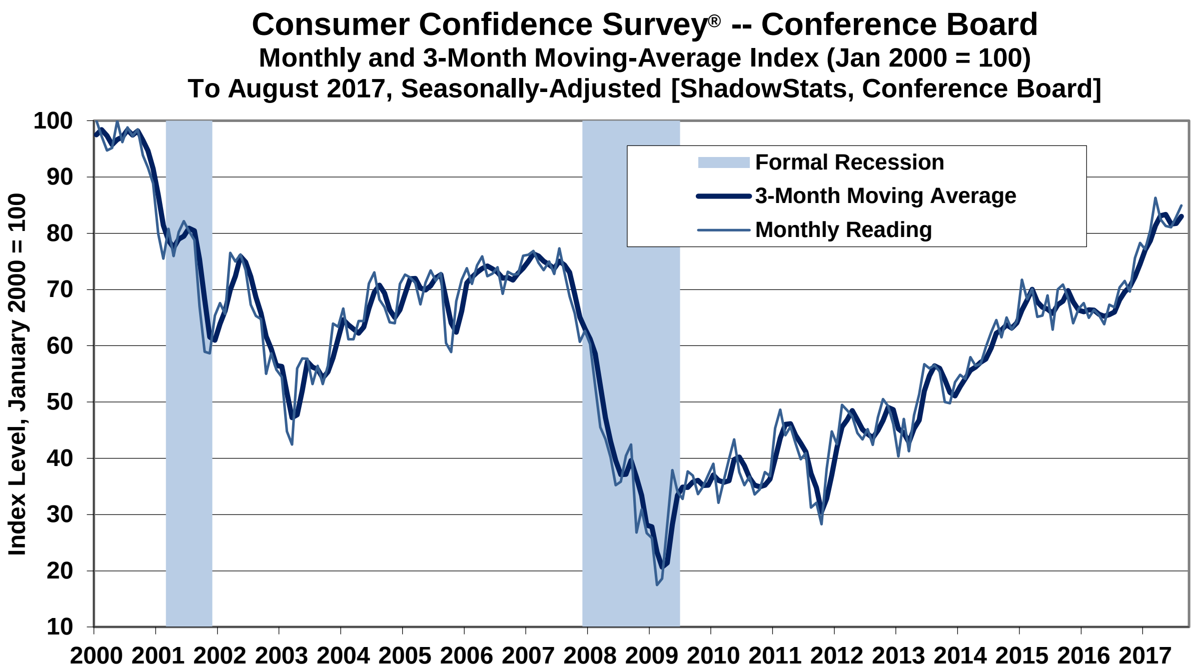
Showing the Consumer Confidence and Consumer Sentiment measures on something of a comparable basis, *Graphs CLW-1* to *CLW-3* reflect both measures re-indexed to January 2000 = 100 for the monthly reading. Standardly reported, the Conference Board's Consumer Confidence Index® is set with 1985 = 100, while the University of Michigan's Consumer Sentiment Index is set with January 1966 = 100.

The Confidence and Sentiment series tend to mimic the tone of headline economic reporting in the press (see discussion in *Commentary No. 764*), and often are highly volatile month-to-month, as a result. With what should become increasingly-negative, unstable and uncertain headline financial and economic reporting in the months ahead—beyond the early change-in-government euphoria—continued, successive negative hits to both the confidence and sentiment readings remain increasingly likely in the near future.

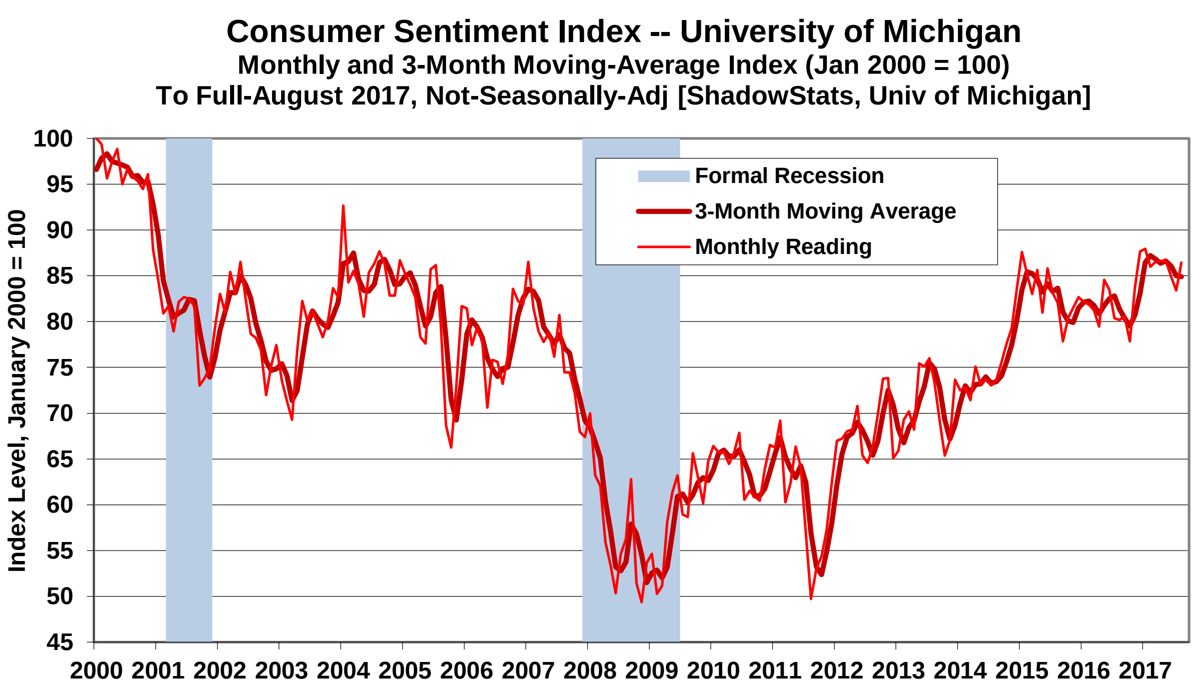
Smoothed for irregular, short-term volatility, the two series still generally had held at levels seen typically in recessions, until the post-2016 election circumstance. Suggested in *Graph CLW-3*—plotted for the last 47 years—the latest readings of Confidence and Sentiment recently have recovered levels seen in periods of normal, positive economic activity of the last four decades, with their six-month moving averages at levels last seen going into the 2001 recession, although they appear to be topping out.

Broadly, though, the harder, financial consumer measures remain well below, or are inconsistent with, periods of historically-strong economic growth as suggested by headline GDP growth in 2014, for second-and third-quarter 2015 and for third-quarter 2016. Beyond having happy feelings about the future, consumers still need actual income, cash-in-hand or credit in order to increase their spending.

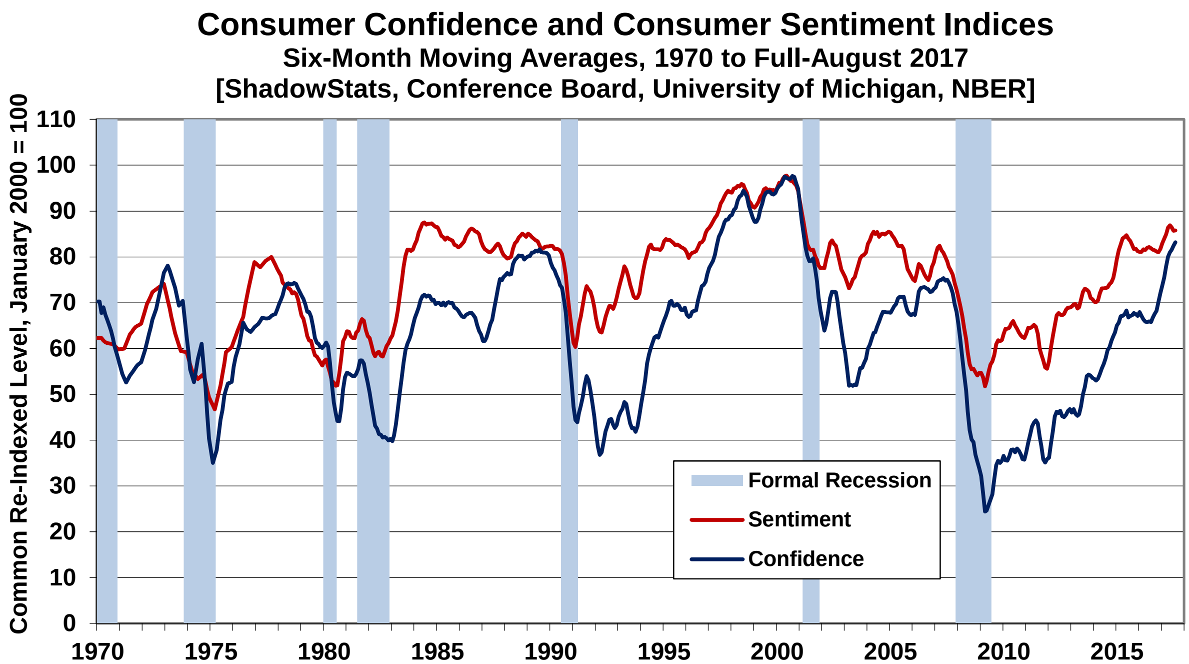
Graph CLW-1: Consumer Confidence (2000 to 2017)



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



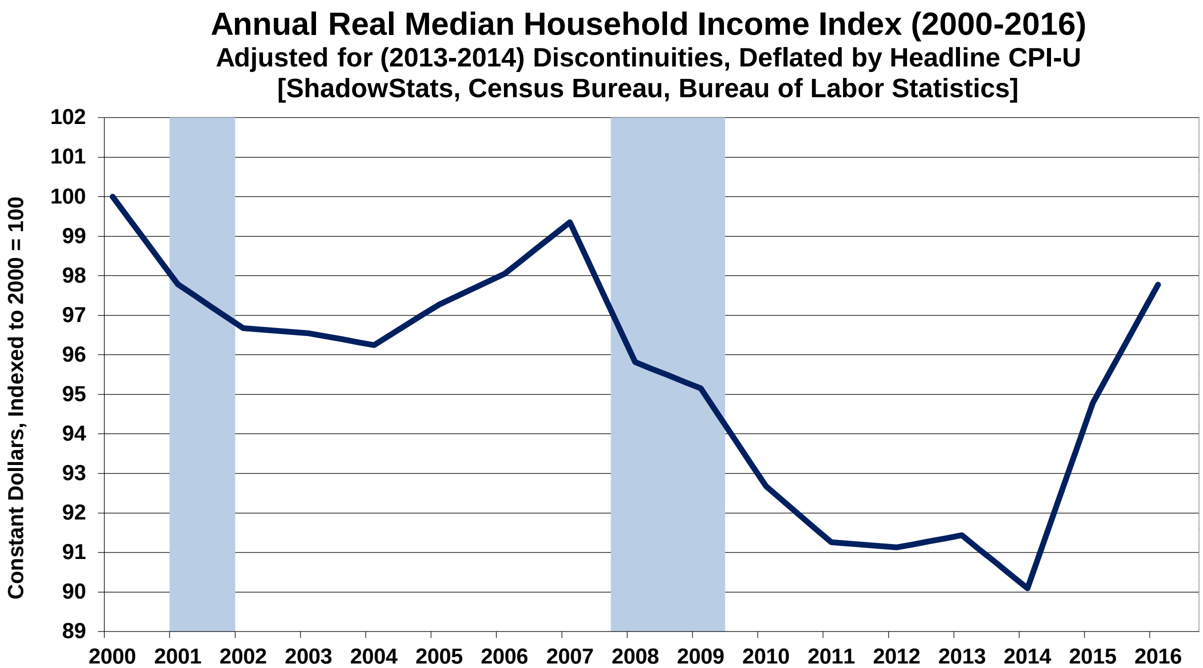
Graph CLW-3: Comparative Confidence and Sentiment (6-Month Moving Averages, 1970 to 2017)



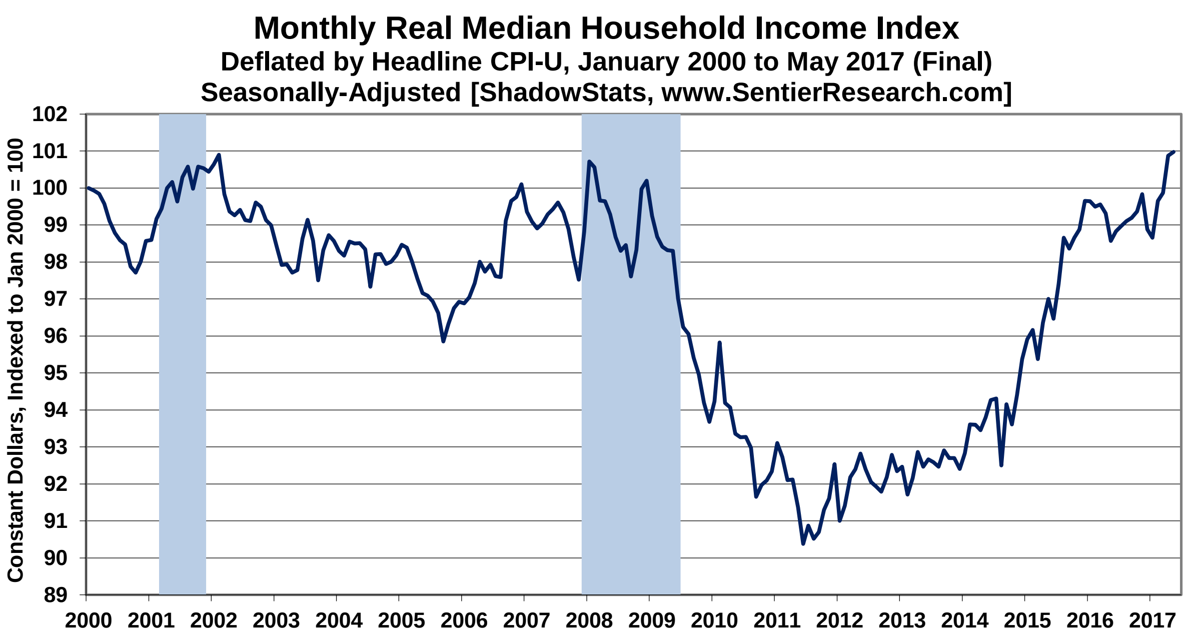
2016 Annual Real Median Household Income Still Was Below Its 2007 Pre-Recession High, Below Activity in the Late-1990s, About Even with the Mid-1970s. The measure of real monthly median household income, which has been provided by www.SentierResearch.com, generally can be considered as a monthly version of the annual detail shown in *Graph CLW-4,* based on the annual detail just released by the Census Bureau and as discussed in today's *Opening Comments*. The 3.16% headline gain in 2016 real annual median household income for 2016 left the level of income not only below that seen at the purported pre-recession peak of 2007, but also below levels seen in the late-1990s, and minimally above activity see in the mid-1970s (see the *Opening Comments Graph OC-1*). The Sentier details, as far as they go, from January 2000 to May 2017, suggested that the annual real median income was on track for a further increase in 2017, at that time, having indicated also the annual increases for 2015 and 2016.

Last Monthly Estimate Showed Stagnating Monthly Real Growth. As last reported by Sentier Research, May 2017 Real Median Household Income was statistically unchanged, despite a boost from falling gasoline prices. Discussed in *General Commentary No. 894*, and in the contexts of then-faltering gains in post-election consumer optimism, and inflation-adjusted activity boosted by declining headline Consumer Price Index (CPI-U) inflation (weakened by seasonally-adjusted gasoline price declines), May 2017 Real Median Monthly Household Income was "statistically unchanged" (a statistically-insignificant monthly gain of 0.10%). That followed a statistically-significant monthly gain of 1.00% in April 2017. Shown in *Graph CLW-4*, such enabled May 2017 real monthly median household income to hold a level regained in April and otherwise last seen in February 2002. Year-to-year real median household income rose to 2.44% in May 2017, the highest level since June 2016, following an annual gain of 1.57% in April 2017 (see *Graph CLW-5*). The May detail, however, may have been the final reporting of the monthly series (see the following *Special Note*).

Graph CLW-4: Annual Real Median U.S. Household Income (1967 to 2016)

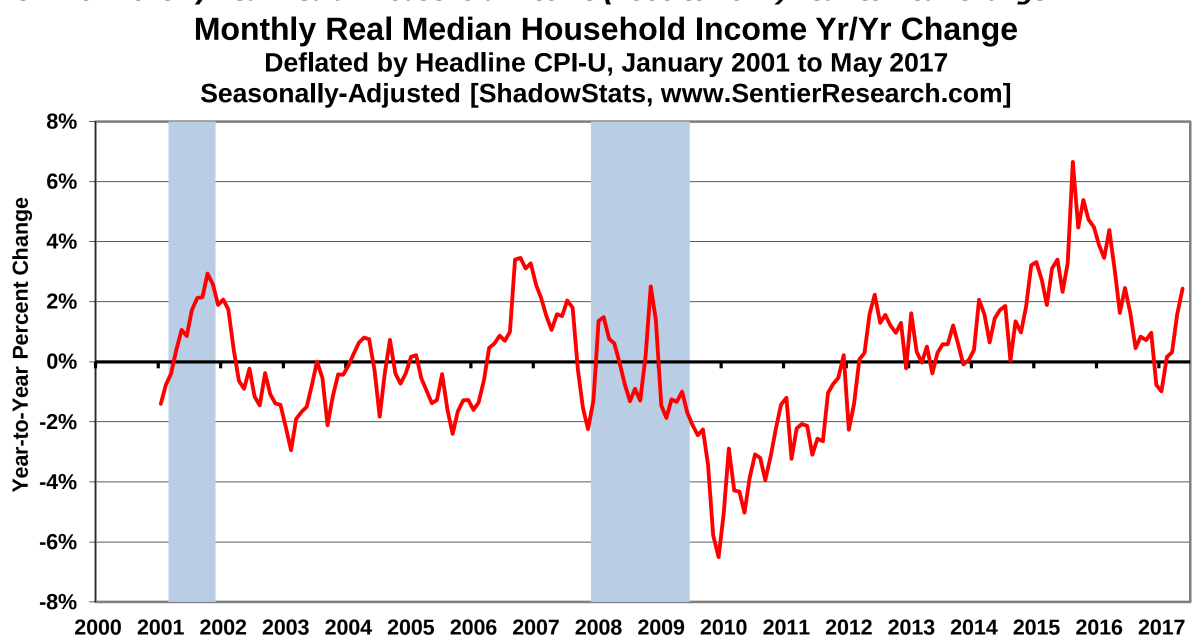


Graph CLW-5: Monthly Real Median Household Income (2000 to 2017) Index, January 2000 = 100



Where real monthly median income plunged into the headline trough of the economic collapse in 2009, it did not then rebound in tandem with the headline GDP activity. When the GDP purportedly started its solid economic recovery in mid-2009, the monthly household income numbers nonetheless plunged to new lows, hitting bottom in 2011. The income series then held in low-level stagnation, until collapsing gasoline prices and the resulting negative CPI-U inflation drove a post-2014 uptrend in the inflation-adjusted monthly income index. The index approached pre-recession levels in the December 2015 reporting, but it remained minimally below the pre-recession highs for both the formal 2007 and 2001 recessions until recent months. Real median household income had the potential to resume turning down anew, as the headline pace of monthly consumer inflation picked up anew, with the August 2017 CPI.

Graph CLW-6: Monthly Real Median Household Income (2000 to 2017) Year-to-Year Change



Nonetheless, the most-recent recent "rebound" reported in the series still left consumers financially strapped. Where lower gasoline prices had provided some minimal liquidity relief to the consumer, indications are that any effective extra cash largely was used to help pay down unsustainable debt or other obligations, not to fuel new consumption. Except for mixed gyrations in first-half 2017, the effects of changing gasoline prices in the headline CPI-U generally had reversed, pushing headline consumer inflation higher and beginning to push real income lower.

Differences in the Monthly versus Annual Median Household Income. The general pattern of relative monthly historical weakness has been seen in the headline reporting of the annual Census Bureau numbers, again, shown in *Graph CLW-4*, with 2014 real annual median household income having hit a ten-year low, and, again, with the historically-consistent 2015 and 2016 annual number still holding below the 2007 pre-recession high. The Sentier numbers had suggested a small increase in 2014 versus 2013 levels, low-inflation induced real increases in 2015 and 2016. Allowing for the direction difference in 2014, and continual redefinitions and gimmicks in the annual series (again, see the *Opening Comments*) the monthly and annual series have remained broadly consistent, although based on separate questions within the monthly Consumer Population Series (CPS), as conducted by the Census Bureau.

Where Sentier used monthly questions surveying current annual household income, the headline annual Census Bureau detail is generated by a once-per-year question in the March CPS survey, as to the prior year's annual household income. The Median Household Income surveying results are broadly consistent with Real Average Weekly Earnings.

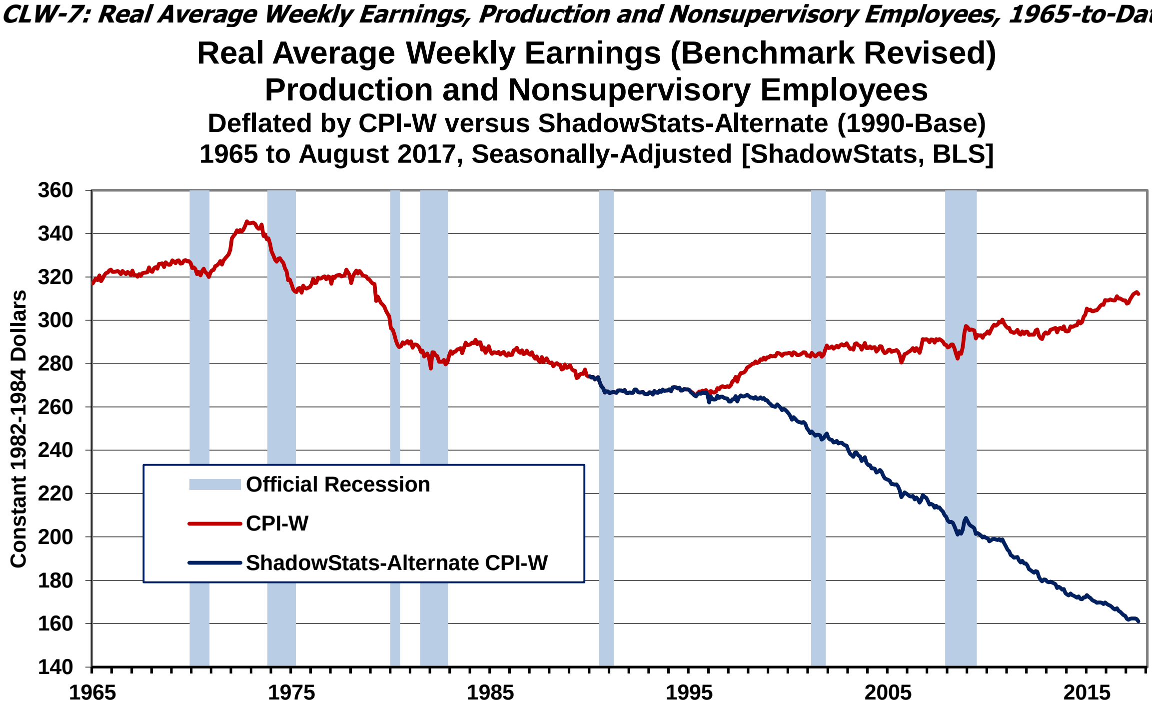
***Special Note*:** Accompanying the release of the May 2017 data by Sentier Research was this Notice of Final Report:

> Dear Friends, This will be our final report in the monthly series of median household income. We can no longer afford to provide these estimates given our current level of resources. We believe, as we hope you do, that these estimates provided an important new dimension regarding the economic situation of American households as we slowly climbed out of the Great Recession. The story continues but we must move on. Our hope is that someone will be able to continue this work. Should you or someone you know be interested please contact us. Thanks to all of you for your kind support.. John and Gordon

ShadowStats hopes a circumstance will unfold that enables continued reporting of this extraordinarily valuable and timely indicator of consumer liquidity. Gordon Green and John Coder, the authors of the monthly report, both are former senior officials at the U.S. Census Bureau and have a unique understanding of the underlying monthly data. The Census Bureau publishes a broadly-similar series on an annual basis, but with an extraordinary time lag. The 2016 Census annual detail is due for release and publication in September 2017. Again, see *Commentary No. 833* for the 2015 detail published in 2016.

Real Average Weekly Earnings—August 2017—Month-to-Month Real Earnings Declined. For the production and nonsupervisory employees category—the only series for which there is a meaningful history (see the full discussion on page 16 of today's *Reporting Detail*), the regularly-volatile real average weekly earnings fell month-to-month by 0.28% (-0.28%) in August 2017, versus downwardly-revised gains of 0.13% in July and 0.23% in June. Year-to-year, the adjusted August 2017 real change rose to 0.68%, versus a downwardly revised gains of 0.62% in July 2017 and 1.10% in June 2017.

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



Based solely on volatile initial reporting for July and August 2017, the early-trend for real third-quarter 2017 activity is for an annualized quarterly gain of 1.01%. Second-quarter 2017 activity reflected a revised, annualized real quarter-to-quarter gain of 4.43%, following contractions in first-quarter 2017 of

1.13% (-1.13%), in fourth-quarter 2016 of 1.36% (-1.36%), and third-quarter 2016 growth of 1.48%, a second-quarter 2016 contraction of 0.11% (-0.11%) and first-quarter 2016 annualized growth of 1.81%.

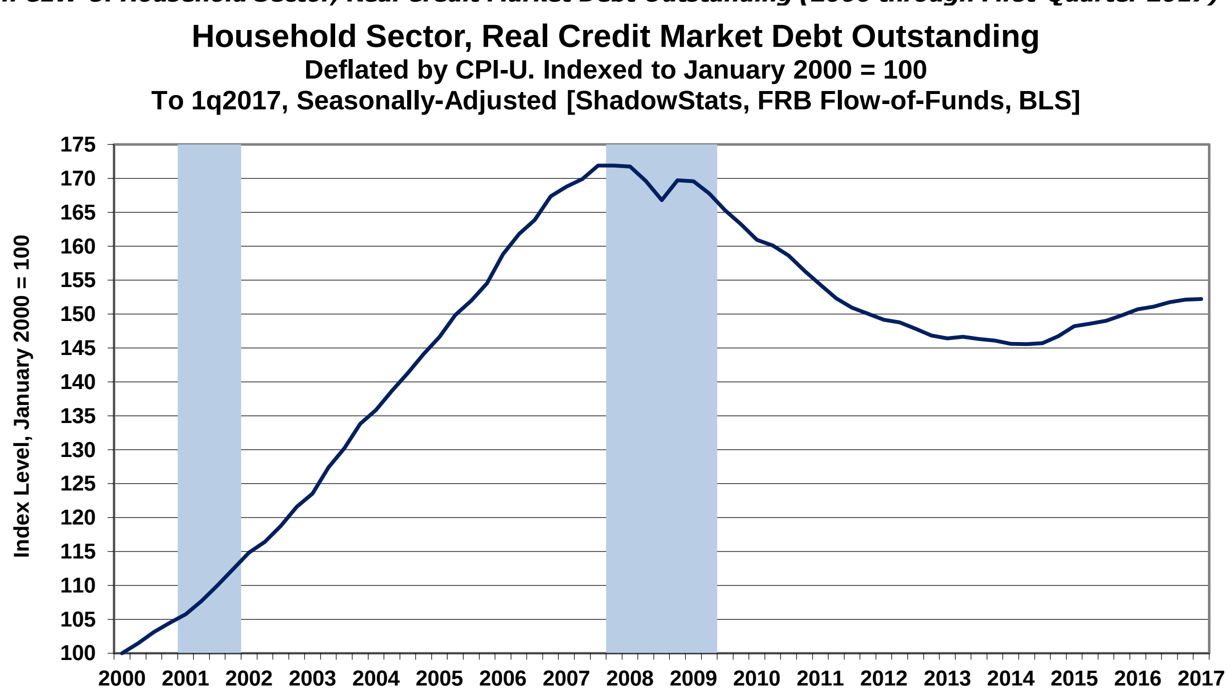
Year-to-year change in third-quarter 2017 was on early track for 0.71%, where second-quarter 2017 real earnings rose by a revised 0.83%, following an annual contraction of 0.29% (-0.29%) in first-quarter 2017, the first annual or year-to-year quarterly contraction since fourth-quarter 2012.

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

Graph CLW-7 plots the seasonally-adjusted earnings as officially deflated by the BLS (red-line), and as adjusted for the ShadowStats-Alternate CPI Measure, 1990-Base (blue-line). When inflation-depressing methodologies of the 1990s began to kick-in, the artificially-weakened CPI-W (also used in calculating Social Security cost-of-living adjustments) helped to prop up the reported real earnings. Official real earnings today still have not recovered their inflation-adjusted levels of the early-1970s (see today's *Opening Comments*), and, at best, have been in a minimal uptrend for the last two decades (albeit spiked recently by negative headline inflation). Deflated by the ShadowStats (1990-Based) measure, real earnings have been in fairly-regular decline for the last four decades, which is much closer to common experience than the pattern suggested by the CPI-W. See the *Public Commentary on Inflation Measurement* for further detail.

Consumer Credit: Lack of Meaningful Real Consumer Credit Growth Remains an Economic Constraint. The final four graphs on consumer conditions address consumer borrowing. Where debt expansion can help make up for a shortfall in income growth, adequate expansion of consumer debt, which would help fuel growth in personal consumption, has been lacking.

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



Consider *Graph CLW-8* of *Household Sector, Real Credit Market Debt Outstanding*. The level of real household debt declined in the period following the Panic of 2008, reflecting loan defaults and reduced banking lending, and it has not recovered fully, based on the Federal Reserve's flow-of-funds accounting through first-quarter 2017. Household Sector, Real Credit Market Debt Outstanding in first-quarter of 2017 still was down by 11.5% (-11.5%) from its pre-recession peak of third-quarter 2007, the same as in fourth-quarter 2016.

The series includes mortgages, automobile and student loans, credit cards, secured and unsecured loans, etc., all deflated by the headline quarterly CPI-U. The level of real debt outstanding has remained stagnant for several years, reflecting, among other issues, lack of normal lending by the banking system into the regular flow of commerce. The slight upturn seen in the series through 2015 and into 2016 was due primarily to gasoline-price-driven, negative CPI inflation, which continued to impact the system through second-quarter 2016. Current activity also has reflected continued relative strength from student loans, as shown in the *Graphs CLW-9* to *CLW-11*.

The ShadowStats analysis usually focuses on the particular current weakness in monthly levels of consumer credit, net of what has been rapidly expanding government-sponsored student loans. Where detail on that series is only available not-seasonally-adjusted, the following graphs are so plotted.

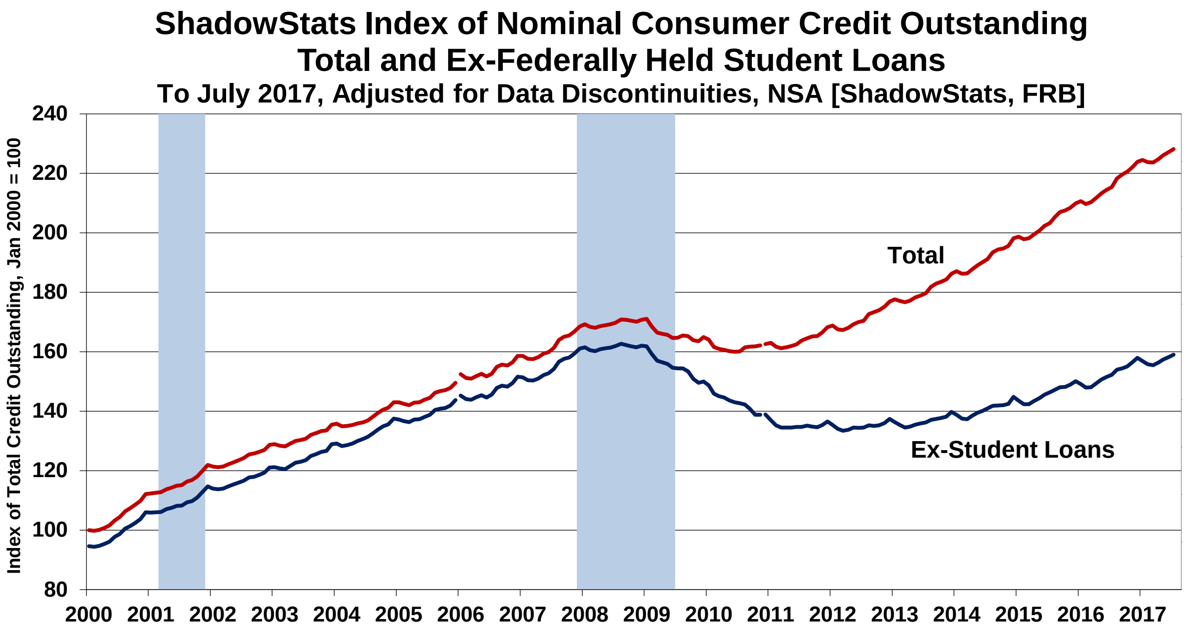
Shown through the July 2017 reporting, *Graph CLW-9* of monthly Consumer Credit Outstanding is a subcomponent of *Graph CLW-8* on real Household Sector debt. Where *Graph CLW-9* reflects the nominal reporting, not adjusted for inflation, inflation-adjusted real activity for monthly Consumer Credit Outstanding is shown in terms of both level (Graph CLW-10) and year-to-year change (*Graph CLW-11*). The August detail includes a downside revision to the last five years of total credit outstanding.

Post-2008 Panic, growth in outstanding consumer credit has continued to be dominated by growth in federally-held student loans, not in bank loans to consumers that otherwise would fuel broad consumption or housing growth. Although in slow uptrend, the nominal level of Consumer Credit Outstanding (ex-student loans) has not recovered since the onset of the recession. These disaggregated data are available and plotted only on a not-seasonally-adjusted basis, with the pattern of monthly levels during one year reflecting some regular, unadjusted seasonal dips or jumps.

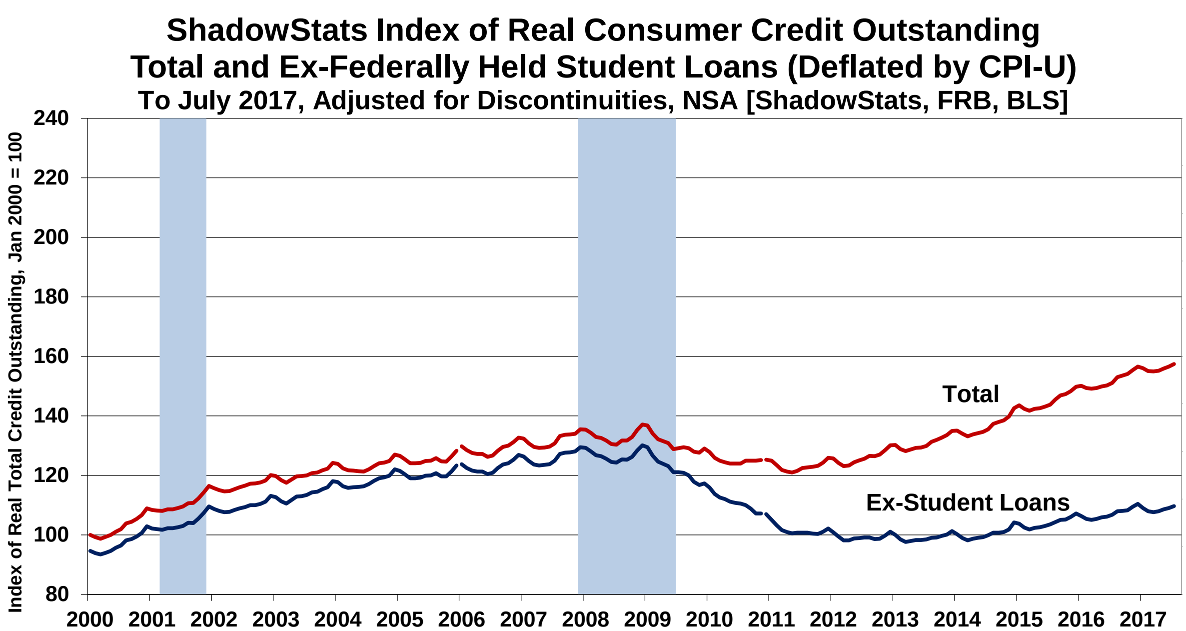
Adjusted for inflation, the lack of recovery in the ex-student loan area is more obvious. Although the recent monthly upside move in the not-seasonally-adjusted consumer credit reflected a seasonal pattern, the pace of year-to-year growth continued to slow, suggesting some tightening of credit conditions. Adjusted for discontinuities and inflation, ex-student loans, consumer credit outstanding in July 2017 (released September 8th) was down from its December 2007 pre-recession peak by 15.3% (-15.3%) [that previously had been down by 12.3% (-12.3%) in June 2017, before the recent downside revisions to the last five years of activity]. Year-to-year real growth shown in *Graph CLW-11* tends to resolve most of the monthly distortions in the not-seasonally-adjusted data.

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

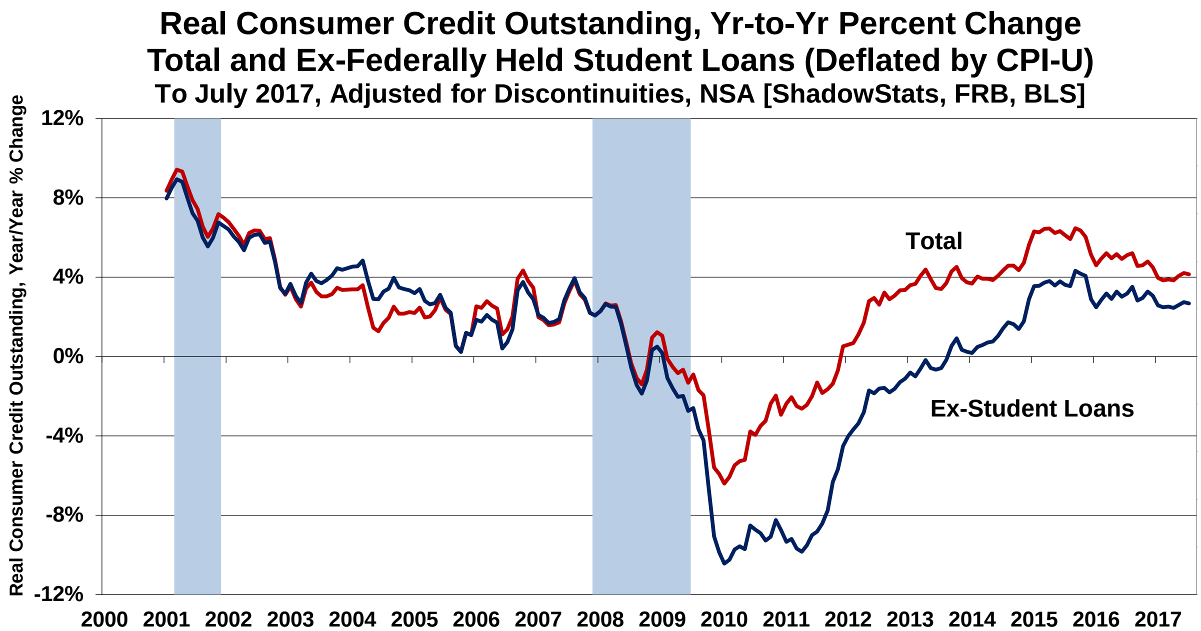
Graph CLW-9: Nominal Consumer Credit Outstanding (2000 to 2017)



Graph CLW-10: Real Consumer Credit Outstanding (2000 to 2017)



Graph CLW-11: Year-to-Year Percent Change, Real Consumer Credit Outstanding (2000 to 2017)



WEEK, MONTH AND YEAR AHEAD

Deteriorating Domestic and Global Political Circumstances and Continued Softening of the Economy Should Continue Increasingly to Pummel the Dollar, Boost the Price of Gold and Foster Financial-Market Turmoil. Today's *Hyperinflation Watch* speaks for itself and will be merged into this section with updated text in *Commentary No. 911* of September 19th. Otherwise, this section is little changed from its prior version, except for the updated *Pending Releases* section.

In the context of the *Opening Comments* and *Hyperinflation Watch* of the August 14th *Special Commentary No. 904* and the *Opening Comments* of *Commentary No. 905*, underlying reality remains a weakening and vulnerable, seriously-impaired U.S. economy, as seen, for example with the latest employment and construction detail, and in likely weak data in the week ahead, all amidst continuing domestic and global political instabilities and unfolding natural disasters. .

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

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

Immediate effects of such a policy change likely would include a massive sell-off in the U.S. dollar, which otherwise has been propped by recent FOMC rate hikes and continual jawboning for same. In parallel, heavy selling in the U.S. equity and credit markets would follow. As consensus economic forecasts have begun to soften, so too has the U.S. dollar exchange rate, while gold prices generally have firmed.

The circumstances here and the outlook still remain as broadly outlined in *No. 859 Special Commentary*; currently shifting headlines only reflect the continued movement and evolution forward in time of the Fed's difficulties discussed in that missive.

The problem for the Federal Reserve remains that faltering domestic economic activity stresses banking-system solvency. Aside from formal obligations of the Fed to maintain healthy domestic economic and inflation conditions, the central bank's primary function (in practice) always has been to keep the banking system afloat. The near-absolute failure of that function in 2008 remains the primary ongoing and unresolved problem for the Fed, and it continues as one of the ongoing primary issues preventing the return of U.S. economic activity to normal functioning. Contrary to the recent purported headline comments of "not in our lifetime" by Federal Reserve Chair Janet Yellen, the continued unfolding of "unexpected" economic deterioration suggests that the next major systemic financial crisis is likely to break in the next several months.

Separately, recent benchmark revisions to Construction Spending (see *Commentary No 897*), the Trade Deficit (*Commentary No. 890*), Industrial Production (*Commentary No. 877*), Manufacturers' Shipments (*Special Commentary No. 888*), Housing Starts (*Commentary No. 887*) and Retail Sales (*Commentary No. 882*), and reporting subsequent to the benchmarks, broadly have confirmed that historical activity in recent years has been overstated and/or that it is turning down anew, particularly in 2015, with the availability of better-quality historical detail. Again, that is despite recent near-term improvement in some headline details, such as the headline unemployment rate, which increasingly suffers from dysfunctional definitional and sampling issues, and the latest headline GDP detail.

The reporting patterns of the better-quality, less-gimmicked series likely will continue to weaken with increasing intensity in the weeks and months ahead. Adding a negative uncertainty to unfolding financial-market risks remains potential political surprise, discussed in *Special Commentary No. 888*. Otherwise, the broad outlook has not changed. Reflected in common experience, actual U.S. economic activity generally continues in stagnation or downturn, never having recovered its level of pre-economic-collapse (its pre-2007-recession peak), while the latest GDP reporting shows an otherwise unconfirmed economic expansion of 13.7%.

Discussed in *No. 859 Special Commentary*, the Trump Administration continues to face extraordinarily difficult times, but still has a chance to turn the tide on factors savaging the U.S. economy and on highly negative prospects for long-range U.S. Treasury solvency and stability. Any forthcoming economic stimulus faces a nine-month to one-year lead-time, once in play, before it meaningfully affects the broad economy. Increasing delays from political discord continue to push targeted programs back in time. Needed at the same time are a credible plan for bringing the U.S. long-term budget deficit (sovereign solvency issues) under control and action to bring the Federal Reserve under control and/or to reorganize the banking system. These actions broadly are necessary to restore domestic-economic and financial-system tranquility (see *No. 859*), but they cannot happen without the meaningful participation and cooperation of Congress. The financial crisis at hand likely will intensify well before the 2018 Congressional Election will have a chance to stabilize the outlook for economic policy objectives.

No. 859 Special Commentary updated the post-election, near-term economic and inflation conditions, including general economic, inflation and systemic distortions, which had evolved out of the Panic of 2008, have continued in play and, again, need to be addressed by the Trump Administration and Congress (see also the *Hyperinflation Watch* of *Commentary No. 862* and *Commentary No. 869*).

Contrary to the official reporting of an economy that collapsed from 2007 into 2009 and then recovered strongly into ongoing expansion, underlying domestic reality remained and remains that the U.S. economy started to turn down somewhat before 2007, collapsed into 2009 but never recovered fully. While the economy bounced off its 2009 trough, it entered a period of low-level stagnation and then began to turn down anew in December 2014, a month that eventually should mark the beginning of a "new" formal recession (see *General Commentary No. 867*). Formal economic expansion does not begin until economic recovery breaks above its pre-recession high.

Coincident with and tied to the economic crash and the Panic of 2008, the U.S. banking system moved to the brink of collapse, a circumstance from which U.S. and global central-bank policies never have recovered. Unwilling to admit its loss of systemic control, the Federal Reserve has made loud noises in the last year or so of needing to raise interest rates, in order to contain an "overheating" economy, but that "overheating" activity—never recognized by Main Street, U.S.A.—has been fading quickly. As this ongoing crisis evolves towards its unhappy end, the U.S. dollar ultimately should face unprecedented debasement with a resulting runaway domestic inflation.

Broad economic and systemic conditions are reviewed regularly, with the following *Commentaries* of particular note: *Commentary No. 902-B*, *General Commentary No. 894*, *Special Commentary No. 885*, *Commentary No. 869*, *No. 859 Special Commentary*, *No. 777 Year-End Special Commentary* (December 2015*)*, *No. 742 Special Commentary: A World Increasingly Out of Balance* (August 2015) and *No. 692 Special Commentary: 2015 - A World Out of Balance* (February 2015). Those publications updated hyperinflation and economic outlooks published in *2014 Hyperinflation Report—The End Game Begins – First Installment Revised* (April 2014) and *2014 Hyperinflation Report—Great Economic Tumble – Second Installment* (April 2014). The two *Hyperinflation* installments remain the primary background material for the hyperinflation circumstance. Other references on underlying economic reality are the *Public Commentary on Inflation Measurement* and the *Public Commentary on Unemployment Measurement*.

Recent Commentaries. *[Listed here are* Commentaries *of the last month, plus recent* Special Commentaries *and others covering a variety of non-monthly issues, including annual benchmark revisions, dating back through the beginning of 2017. Please Note: Complete ShadowStats archives back to 2004 are found at www.ShadowStats.com (left-hand column of home page).]*

Commentary No. 908-B (September 6th) provided extended detail of the August 2017 Labor and Monetary conditions and July 2017 Construction Spending, along with coverage of the July 2017 Trade Deficit and the initial estimate of the 2017 Payroll Employment benchmarking.

Advance Commentary No. 908-A (September 1st) provided summary coverage of the headline reporting on August 2017 Labor and Monetary conditions and July 2017 Construction Spending.

Commentary No. 907 (August 30th) reviewed the second estimate of, first revision to Second-Quarter 2017 GDP and initial quarterly reporting of the related GDI and GNP series.

Commentary No. 906 (August 25th) covered July 2017 New Orders for Durable Goods and New- and Existing-Home Sales, with further discussion of the unfolding "new" downturn in economic activity.

Commentary No. 905 (August 17th) reviewed the headline detail of for July 2017 Industrial Production, Retail Sales (Nominal and Real), New Residential Construction and the Cass Freight Index™.

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

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

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

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

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

Commentary No. 899 (July 17, 2017) covered headline June 2017 Retail Sales, Industrial Production, the Consumer Price Index (CPI) and the Producer Price Index (PPI), along with a review of current circumstances affecting the markets, U.S. dollar, gold and silver and the FOMC.

Commentary No. 897 (July 6, 2017) reviewed the headline May 2017 Construction Spending and the annual revisions to same, along the May Trade Deficit, and June The Conference Board Help Wanted OnLine® Advertising and the May Cass Freight Index™.

Commentary No. 896 (June 29, 2017) reviewed the third estimate of first-quarter 2017 GDP.

General Commentary No. 894 (June 23, 2017) reviewed unfolding economic, financial and political circumstances in the context of market expectations shifting towards an "unexpected" headline downturn in broad economic activity, along with headline details on May 2017 Real Median Household Income (Sentier Research) and New- and Existing-Home Sales.

Commentary No. 892 (June 15, 2017) reviewed May 2017 Industrial Production and assessed current circumstances and likely pending shifts in FOMC policy, in the context of rapidly-deteriorating, headline economic data.

Commentary No. 890 (June 5, 2017) covered the negative-downside annual benchmark revisions to the trade deficit, the May 2017 estimates of labor conditions, ShadowStats Ongoing Money Supply M3, The Conference Board Help Wanted OnLine® Advertising and April 2017 estimates of the Cass Freight Index™, and the monthly trade deficit and construction spending.

Special Commentary No. 888 (May 22, 2017) discussed evolving political circumstances that could impact the markets and the economy, reviewed the annual benchmark revisions to Manufacturers' Shipments and New Orders for Durable Goods and updated Consumer Liquidity Conditions.

Commentary No. 887 (May 18, 2017) reported on the April 2017 detail for Industrial Production and Residential Construction (Housing Starts), with some particular attention to historic, protracted periods of economic non-expansion, of which the current non-recovery is the most severe.

Special Commentary No. 885, entitled *Numbers Games that Statistical Bureaus, Central Banks and Politicians Play*, (May 8, 2017) reviewed the unusual nature of the headline reporting of the April 2017 employment and unemployment details.

Commentary No. 882 (April 27, 2017) summarized the annual benchmark revisions to Retail Sales and reviewed the March 2017 releases of New Orders for Durable Goods and New- and Existing-Home Sales.

Commentary No. 877 (April 2, 2017) outlined the nature of the downside annual benchmark revisions to industrial production, along with implications for pending annual revisions to Retail Sales, Durable Goods Orders and the GDP.

Commentary No. 876 (March 30, 2017) current headline economic activity in the context of formal definitions of the business cycle (no other major series come close to the booming GDP, which is covered in its third revision to fourth-quarter activity. Also the February 2017 SentierResearch reading on real median household income was highlighted.

Commentary No. 875 (March 24, 2017) assessed and clarified formal definitions of the U.S. business cycle, which were expanded upon significantly, subsequently, in *No. 876*. It also provided the standard review of the headline February 2017 New Orders for Durable Goods, New- and Existing-Home Sales and the Cass Freight Index™.

General Commentary No. 867 (February 24, 2017) assessed mixed signals for a second bottoming of the economic collapse into 2009, which otherwise never recovered its level of pre-recession activity. Such was in the context of contracting and faltering industrial production that now rivals the economic collapse in the Great Depression as to duration. Also covered were the prior January 2017 New- and Existing Home Sales.

Commentary No. 864 (February 8, 2017) analyzed January 2017 Employment and Unemployment detail, including benchmark and population revisions, and estimates of December Construction Spending, Household Income, along with the prior update to Consumer Liquidity.

Commentary No. 861 (January 13, 2017) covered the December 2016 nominal Retail Sales, the PPI, with a brief look at some summary GAAP reporting on the U.S. government's fiscal 2016 operations.

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

Note on Reporting-Quality Issues and Systemic-Reporting Biases. In the context of historical background provided in *Special Commentary No. 885*: *Numbers Games that Statistical Bureaus, Central Banks and Politicians Play*, significant reporting-quality problems remain with most major economic series. Beyond the pre-announced gimmicked changes to reporting methodologies of the last several decades, which have tended both to understate inflation and to overstate economic activity meaningfully—as generally viewed in the common experience of Main Street, U.S.A.—ongoing, near-term headline reporting issues often reflect systemic distortions of monthly seasonal adjustments.

Data instabilities—induced partially by the still-evolving economic turmoil of the last eleven years—have been without precedent in the post-World War II era of modern-economic reporting. The severity and ongoing nature of the downturn provide particularly unstable headline economic results, with the use of concurrent seasonal adjustments (as seen with retail sales, durable goods orders, employment and unemployment data). While historical seasonal-factor adjustments are revised every month, based on the latest, headline monthly data, the consistent, revamped historical data are not released or reported at the same time. That issue is discussed and explored in the labor-numbers related *Supplemental Commentary No. 784-A* and *Commentary No. 695*.

Further, discussed in *Commentary No. 778*, a heretofore unheard of spate of "processing errors" surfaced in 2016 surveys of earnings (Bureau of Labor Statistics) and construction spending (Census Bureau). This is suggestive of deteriorating internal oversight and control of the U.S. government's headline economic reporting. That construction-spending issue now appears to have been structured as a gimmick to help boost the July 2016 GDP benchmark revisions, aimed at smoothing the headline reporting of the GDP business cycle, instead of detailing the business cycle and reflecting broad economic trends accurately, as discussed in *Commentary No. 823*.

Combined with ongoing allegations in the last several years of Census Bureau falsification of data in its monthly Current Population Survey (the source for the BLS Household Survey), these issues have thrown into question the statistical-significance of the headline month-to-month reporting for many popular -economic series (see *Commentary No. 669*). Investigative-financial/business reporter John Crudele of the *New York Post* has written extensively on such reporting irregularities: *Crudele Investigation*, *Crudele on Census Bureau Fraud* and *John Crudele on Retail Sales*.

PENDING ECONOMIC RELEASES: A Note on Hurricane Harvey. The horrendous damage wreaked on the Texas Gulf Coast by Hurricane Harvey and its catastrophic flooding, disrupted the production, refining and delivery of petroleum and its related products, with the immediate effect of boosting oil and gasoline prices, in addition to major disruption to near-term commerce and business activity in the affected area. Correspondingly, as discussed in the *Executive Summary*, that circumstance will spike headline domestic inflation reporting of the next several months, or so, as was seen initially with the headline August CPI and PPI data. Impact also should begin to show up in August retail sales and production, where—unlike the labor-market details—included surveying should have extended into the storm's timeframe. Impact of Hurricane Irma should be evident starting with September 2017 headline details. Physical destruction and property losses are not counted in the government's measures of economic activity, interruption to normal commercial operations and rebuilding activity certainly will have headline impact.

***Updated* - Retail Sales—Nominal and Real (August 2017).** The Census Bureau will release its "advance" estimate of August 2017 nominal (not-adjusted-for-inflation) Retail Sales tomorrow, Friday, September 15th. Given that today's release of the August CPI-U showed seasonally-adjusted headline month-to-month inflation of 0.40%, and unadjusted year-to-year inflation of 1.94%, those are the subtractions to the headline nominal growth rates in retail sales that will restate that activity to inflation-adjusted real terms.

Where consensus expectations are for a relatively flat monthly nominal gain of 0.1%, underlying weakness continues to mount in anecdotal evidence tied particularly to automobile sales, suggestive of an outright nominal month-to-month contraction. Again, with headline consumer inflation at 0.40%, headline real retail sales should be negative in either case. Nonetheless, headline nominal sales for August should be weaker than expected, with a fair bet for renewed downside revisions to recent headline activity, irrespective of any impact on the industry from Hurricane Harvey.

Per the *Consumer Liquidity Watch*, without sustainable growth in real income, and without the ability and/or willingness to take on meaningful new debt in order to make up for an income shortfall, the liquidity-strapped U.S. consumer remains unable to sustain growth in broad economic activity, including personal-consumption expenditures and retail sales, real or otherwise.

***Updated* - Index of Industrial Production (August 2017).** The Federal Reserve Board will publish its estimate of August 2017 Industrial Production activity also tomorrow, Friday, September 15th, again with coverage in *Commentary No. 910* of that date. In the context of continued, previously-weakening reporting, with mounting indications of faltering demand for new automobiles, production is a good bet to show further month-to-month weakness in August 2017, as well as some continued downside revision to activity in recent months. Consensus expectations are for a minimal monthly gain of about 0.1%. Weakness should be seen here, nonetheless, separate from any late-month hit to production from Harvey.

____