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Analysis Behind and Beyond Government Economic Reporting

CONSUMER LIQUIDITY WATCH NUMBER 5 – SPECIAL EDITION

November 21, 2018

Stresses Mount on Consumer Income, Credit and Wealth

Cascading Consumer Liquidity Issues, Aggravated by Federal Reserve Tightenings, Wallop Headline Activity in Home Sales, Construction, Retail Sales and Manufacturing

Can the GDP Be Far Behind?

Consumer Liquidity Watch No. 5 – Special Edition (CLW-5) has been given the ***"Special Edition"*** designation, since it covers the opening transition from headline monthly economic "activity as usual," to headline "renewed economic downturn and economic contraction." *CLW-5*, encompasses the latest shifts and instabilities in relative Consumer Optimism and Outlook, the latest private-monthly as well as official-annual surveying of inflation-adjusted Real Median Household Income, monthly Real Average Weekly Earnings and expanded coverage of Real Consumer Credit and Household Debt Outstanding,. Where consumer financial health and liquidity ultimately drive U.S. economic activity, related broad signals of weakening activity and related developments in series ranging from *Retail Sales* and *Manufacturing* to *Residential Construction* and related *Home Sales* are assessed in the regular *ShadowStats Commentaries*.

CLW postings are advised by e-mail, with links available otherwise directly on the ShadowStats homepage or as provided in the *Week, Month and Year Ahead section* of regular *Commentaries*.

Please contact me if you have any questions, suggestions or otherwise would like to talk, at (707) 763-5786 or by e-mail at johnwilliams@shadowstats.com.

— Best wishes, John Williams

Today's (November 21st) *Consumer Liquidity Watch No. 5* is updated for the latest monthly, quarterly and annual measures of consumer liquidity, covering various aspects of earnings and income, measures of income stress, consumer credit and debt, and consumer optimism, all in the context of tightening systemic liquidity and faltering consumption/investment environments.

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Increasingly Stressed Consumer Income, Credit and Wealth

Consumer Liquidity Stress Is Pummeling Economic Activity, Ranging from Auto Sales to Residential Construction. The Federal Reserve's now regular and repetitive interest rate hikes and continued domestic tightening increasingly have had negative impact on U.S. consumer liquidity and related economic activity (see the *Opening Comments* of *Commentary No. 975*). This circumstance has helped to turn U.S. economic activity to the downside, triggering the onset of what should gain recognition in the next several quarters as a new, formal recession.

These liquidity issues and related economic disruptions also have contributed heavily to some early pummeling of the U.S. equity markets, as previewed in *Commentary No. 970* of September 26th, which discussed a potential, pending Tipping Point in the U.S. financial markets. Related concerns also were discussed in *Special Commentary No. 973 – ALERT* of October 14th and *Commentary No. 974*, and they will be reviewed anew in pending *Hyperinflation Watch No. 4* (*HW-4*) of the week ahead (see also the current *Hyperinflation Watch – No. 3*). The stock market sell-off has only just begun; watch out for market sentiment shifting against the U.S. dollar.

Troubled Consumer Income, Credit and Optimism. Consumer real income measures and credit conditions are heavily stressed. While consumer optimism has shown some unusual fluttering and renewed softening, particularly post-election, it still remains at or near the highest levels since 2001.

Reported this morning (November 21st), the University of Michigan's November 2018 Consumer Sentiment Survey declined in the month, accelerating to the downside, post midterm elections (see *Graphs 3* and *4,* and the accompanying discussion).

Levels of real consumer income have recovered pre-recession levels, as deflated by headline CPI inflation. Yet, official real earnings have been faltering anew in the last year (see *Graph 5*), never having recovered headline levels of the late-1970s and never having recovered pre-recession activity, when deflated by the ShadowStats Alternate CPI (1990-Base).

Deflated by the headline CPI, Real Annual Median Household Income in 2017 (Census Bureau), held below its 1999/2000 peak levels (*Graph 10*), but Real Monthly Median Household Income (Sentier Research) has risen month-to-month in six straight months through September 2018 (*Graph 6*).

Headline measures of income inequality have reached record levels, a circumstance that usually signals pending financial-market and economic turmoil (*Graphs 13* and *14*).

That said, real consumer credit (deflated by headline CPI inflation) remains below pre-recession peaks of activity, never having expanded. The New York Fed headlined in its just-released quarterly report of *Household Debt and Credit* that U.S. Household Debt in third-quarter 2018 had hit a new peak, topping the prior peak of third-quarter 2008. That was in nominal terms before inflation adjustment. Adjusted for headline CPI-U inflation, the third-quarter 2018 real household debt held shy by 9.9% (-9.9%) of recovering its pre-recession high. Ex-student loans, third-quarter 2018 real household debt was shy by 15.2% (-15.2%) of recovering its pre-recession high.

Reflecting mounting liquidity problems, the New York Fed also indicated that, "Aggregate delinquency rates worsened in the third quarter of 2018." Such was "... primarily due to a large increase in the flow into delinquency for student loan balances during the third quarter of 2018." ShadowStats has added *Graph 13* of *Household Sector, Real Credit Market Debt Outstanding*, which plots those New York Fed real debt levels in aggregate and net of student loans. That detail is plotted along with related measures of Consumer Credit in the series of *Graphs 15* to *20.*

Economic Activity Increasingly Reflects Deteriorating Consumer Liquidity Circumstances. Without positive real growth in income and credit, the consumer sector of the U.S. economy has stalled, headed into renewed downturn. Consumer activity accounts directly for roughly three-quarters (actually a dwindling 72.7% in third-quarter 2018) of U.S. economic activity, as measured by the Gross Domestic Product (GDP), and it accounts indirectly for the balance of domestic economic activity. As consumer liquidity stresses mount, and as consumer activity turns down, headline GDP activity should begin to slow and to decline, as well.

As will be expanded upon in *Pending Commentary No. 978*, current economic reporting has shown evolving and deepening downtrends in sales of residential real estate and in retail sales activity, including demand for new automobiles. For example, although this morning's (November 21st) release of October 2018 Existing-Home Sales, from the National Association of Realtors, saw its first month-to-month gain in seven months, up by 1.4%, the annual decline in the series deepened to 5.1% (-5.1%), the six-month smoothed downtrend continued to deepen and Fourth-Quarter 2018 activity was on early track for a fourth consecutive quarter-to-quarter contraction.

Separately, this morning's release of October 2018 New Order for Durable Goods (Census Bureau) showed nominal motor vehicles orders rising month-to-month by a tepid 0.18%, but that monthly change was a drop by 0.21% (-0.21%) net of downside revisions to September orders.

No. 978 also will review September and October 2018 Real Retail Sales and Industrial Production, where headline retail sales activity broadly reflected limited or negligible real strength, but such activity consistently has been in the context of major downside revisions to prior months' reporting. As auto sales falter, production of new autos has fallen. As home sales have declined, so too has U.S. residential construction, which accounts for about 55% of private construction spending. September/August activity in these areas was reviewed in *Commentary No. 977*, *Commentary No. 976* and *Commentary No. 975*. Again, October activity will be reviewed fully in *No. 978*.

Impaling consumer and systemic liquidity has been the near-continuous tightening policies of the Federal Reserve's Federal Open Market Committee (FOMC) over the last year. Tightening liquidity, with the effect of hiking interest rates, is a well-established approach for slowing or killing economic growth, and for constraining consumer activity, all as reflected in and discussed directly with accompanying *Graph 1*. While there are those on the FOMC who fret over an "overheating" economy, such has not been a realistic circumstance for decades (see *Commentary No. 975* and *Commentary No. 977*). The FOMC's primary problem remains that it never has been able to extricate itself from policies enacted to support and bailout the otherwise failing/collapsing banking and financial systems of 2007/2008.

Constrained Underlying Liquidity Limits 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, meaningful recovery or meaningful 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 remain at the root of the liquidity crisis and ongoing economic woes.

These underlying pocketbook 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 2001, let alone 2007. Yet, underlying liquidity conditions, economic reality and limited positive actions out of the government to turn the economy meaningfully, in terms of common experience, have continued to remain shy of consumer hopes, despite some booming headline numbers (see *Special Commentary No. 968-Extended*), yet even those headline numbers likely will stumble anew in the months ahead.

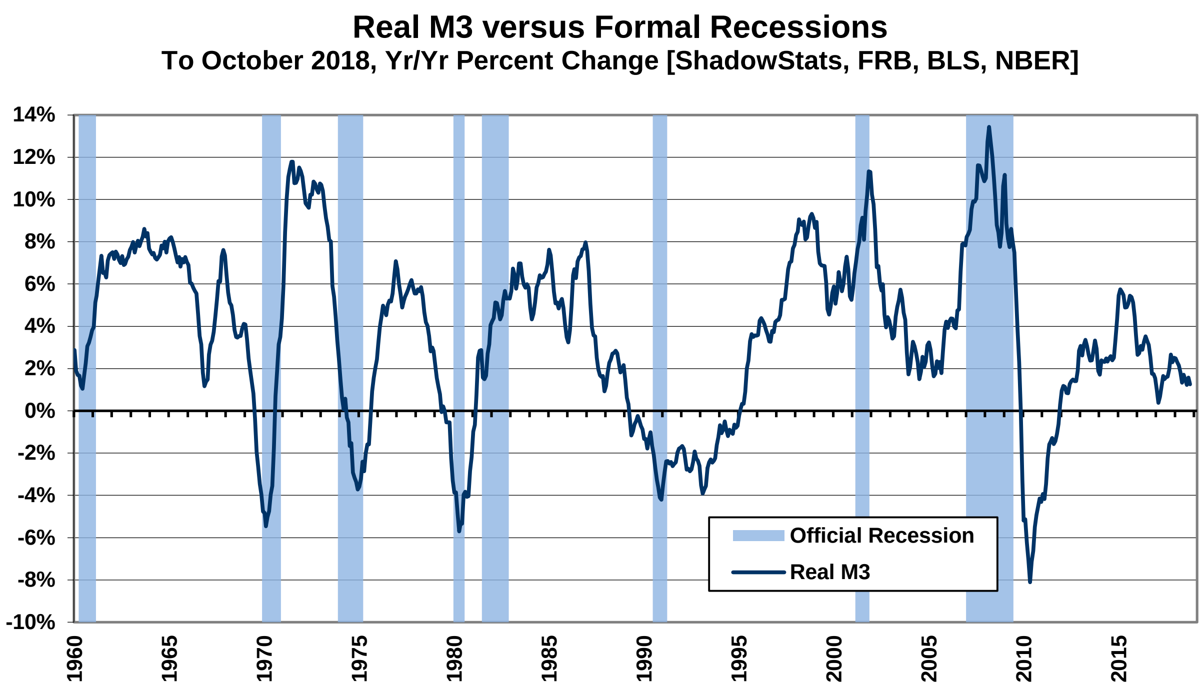
Including the various consumer-income stresses discussed in *Special Commentary No. 888*, broad, underlying consumer-liquidity fundamentals simply have not supported, and still do not support a broad turnaround in general economic activity—post "Great Recession" expansion—and broadly are more consistent with a "renewed" or continuing downturn in that non-recovered economic activity, activity that has not yet come close to breaking above its pre-recession high. Nonetheless, as discussed in *Commentary No. 976*, while the broad economy clearly remains well shy of formal recovery, it does appear recently to have moved off bottom and is growing minimally, albeit temporarily.

Existing policy of the Federal Reserve Board's Federal Open Market Committee (FOMC) was reviewed in *Commentary No. 975* of October 22nd, and in *Commentary No. 976* of October 30th, specifically as tied to deteriorating consumer- and systemic-liquidity conditions along with headline September 2018 Retail Sales, Industrial Production, New Residential Construction (Building Permits, Housing Starts), and Existing-Home Sales, and as confirmed further in headline reporting, so far, of October 2018 details (again, watch for updates in *Commentary No 978*).

The system remains close to generating a formal recession signal. *Commentary No. 977* of November 6th reviewed October 2018 Monetary Conditions. As will be discussed for the month of October 2018 in pending *No. 978*, annual real growth in Money Supply M3 was 1.26%; that is net of headline CPI-U inflation. On a quarterly basis, third-quarter 2018 annual real growth in Money Supply M3 stood at

1.43%, down from 1.61% in second-quarter 2018, the weakest since 0.68% in first-quarter 2017, which in turn was the weakest seen since a long series of outright monthly year-to-year contractions throughout 2010 and 2011. Net of year-ago hurricane disruptions to current annual CPI inflation, third-quarter 2018 annual real growth in Money Supply M3 would have been 1.22% (instead of 1.47%).

Graph 1: Real Annual M3 Growth versus Formal Recessions (1960 to October 2018)
(Preview of Graph 5 in pending Commentary No. 978)



The signal for a double-dip, multiple-dip or simply protracted, ongoing recession, based on an annual contraction in the real, broad money supply (M3), had been re-triggered/intensified in February 2017. Yet, that signal then softened or flattened out with a contrary bounce from May 2017 into December 2017, turning down anew after the FOMC began its more-aggressive tightening in December 2017. The previous recession signal of December 2009 had remained in place, despite real annual M3 growth having rallied into positive territory post-2011.

[Note: If realistic, not headline, inflation numbers were used here, there would be no question of ongoing, negative real annual growth in M3, or a renewed deepening of the economic collapse into 2009, as discussed in *Commentary No. 957* and *Public Commentary on Inflation Measurement*.]

FOMC Policy Is Setting Up a Formal, "New" Economic Downturn. A formal recession signal from low-level or negative annual real money supply growth has become increasingly likely in the near term. That reflects a continued, general weakening trend in nominal annual M3 growth, driven by FOMC policy, in combination with a continued (renewed) pick-up in annual CPI inflation, ex-temporary hurricane distortions. Headline inflation generally had surged recently, driven by unstable political/ supply conditions in the oil markets, not by an overheating U.S. economy that the FOMC likes to tout as the reason for its continued spiking of interest rates.

Reflected in *Graph 1* and noted in the prior section, third-quarter 2018 annual real growth in Money Supply M3 stood at 1.47%, its weakest showing in more than year, closing in rapidly on signaling a downturn, when annual inflation reporting returns to normal.

What recently had been higher, albeit tepid, real annual growth likely was a temporary reversal in the pattern of plunging annual growth, which had held at levels last seen in plunging growth into the 2009 economic collapse, a level never seen outside an economy falling into, or already in a recession.

The Signal. The signal for a downturn or an intensified downturn in economic activity 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*, *Commentary No. 902-B* and the latest GDP coverage in *Commentary No. 976*). The initial economic downturn never evolved into a meaningful or sustainable recovery. The current level and pattern of real annual M3 growth usually has been followed by annual contraction and an outright recession signal.

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, from which 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. Actual post-2009 economic activity has remained at relatively low levels—in protracted stagnation—with negligible recovery that already may sinking anew due to current FOMC policies (see *Commentary No. 970* and today's *Week, Month and Year-Ahead* section.)

CONSUMER OPTIMISM

Signals Mount of Troubled Economic Activity, Amidst a Faltering and Fluttering Consumer Outlook. Discussed in *Commentary No. 977*, while most recent economic news has generated positive headlines ranging from record-low unemployment to strong jobs growth and a booming GDP, there also have been developing negative headline trends generating a variety of cautionary signals. Consider underlying consumer activity, such as reflected in collapsing auto sales. Of particular note in the broad economy are deteriorating consumer liquidity conditions, which already have been hammering real retail sales (see *Commentary No. 975* and pending *No. 978*) and residential real-estate sales and construction activity (see *Commentary No. 976* and pending *No. 978*). Consider, too, the renewed deterioration in the U.S. Real Merchandise Trade Deficit (see the *Trade Deficit* section of *Commentary No. 977* and pending

Hyperinflation Watch No. 4), impairing both headline GDP growth and the outlook for the U.S. dollar and domestic financial markets.

Separately, some recent headline economic details were not quite as advertised, where for example, the headline 250,000 jobs gain in October 2018 payrolls likely was closer to 185,000, when balanced against a hurricane-reduced payroll gain of 118,000 in September (see *No. 977*). While the headline unemployment rate of 6.7% remained at a record low, the measures of labor-market stress remained consistent with the unemployment rate near a record high, despite a small uptick in the October employment-population ratio.

The Election, the Stock Market and the Economy All Have Their Impact. Key to the consumer's outlook in the near-term are:

- How am I doing?
- What is or will be happening to near-term business activity?
- Where the manic financial markets are headed.
- Unfolding circumstances in the Washington, D.C. political arena.

All four areas appear to be turning increasingly negative, rapidly, with likely heavy hits ahead for relative consumer optimism already beginning to surface. Softening areas of consumer sentiment and confidence reflect impaired personal liquidity, mounting indications of an economic downturn, increasingly negative stock-market volatility, and mounting political discord in that former malarial swamp on the Potomac.

Consumer Confidence Fumbled While Sentiment Shows a Deepening Drop. Reflected in *Graphs 2* and *3*, October 2018 details for the Conference Board's Consumer-Confidence Index® and the full-month November estimates of University of Michigan's Index of Consumer Sentiment (released today, November 21st) both show either unstable optimism or movement off recent peaks, although still at or minimally below recent multi-year highs.

For the Conference Board's seasonally-adjusted [unadjusted data are not available] Consumer-Confidence Index® (*Graph 2*), and the University of Michigan's not-seasonally-adjusted Consumer-Sentiment Index (*Graph 3*), the monthly and three-month moving averages generally remain at levels last seen in 2001, yet the still-high moving averages have begun to falter, topping out along with generally softening monthly details.

Before the 2016 election, September 2016 Confidence and Sentiment jumped and then plunged in October 2016, likely reflecting concerns as to the direction of the presidential race. Post-election, both measures rallied sharply, reflecting surges in consumer optimism into early-2017, with ongoing swings and volatility generally moving higher, to date.

Consumer Outlook Softened in October Despite Hype to the Contrary. Noted in *Commentary No. 977*, domestic consumer liquidity remains in an intensifying bind, and perhaps not so coincidentally, consumer optimism suddenly has taken a turn for the worse. These consumer indicators are generating increasingly negative economic signals. The U.S. consumer directly drives the domestic economic activity, as measured by the GDP. In turn, consumer liquidity tends to drive discretionary consumer economic activity and growth in same.

The popularly followed measures of the consumers' outlook and relative optimism have shown some unusual volatility, suddenly showing some indication of a renewed weakening outlook. For example, the Conference Board's Consumer Confidence Survey index took a headline jump of 1.9% in October 2018, to its highest level since September 2000, which was happy news on its surface. That reporting, however, was in the context of a sharp downside revision to September's initial reading, which initially had jumped by a headline 2.7% to its highest reading since September 2000. As revised with the October reporting, September now is 0.4% above an unrevised August, instead of 2.7%, and although the new headline October reading gained 1.9% in the month, it also was down by 0.4% (-0.4%) from the initial September reporting.

The University of Michigan's Consumer Sentiment Index for October declined by 1.5% (-1.5%) from September. The early-November Sentiment index, which was surveyed up through the midterm elections, declined by 0.3% (-0.3%) versus October. The final-November estimate, however, reported this morning (November 21st) declined by 1.1% (-1.1%) for the full month, where all the difference was in post-election details.

Noted by Consumer Sentiment Chief Economist David Curtin, "Although the data recorded a decline of 2.8 Index points following the election, the drop was related more to income than political party: among those with incomes in the bottom third, the Sentiment Index rose by 10.4 points and fell by 6.6 points among those in the top third of the income distribution. In contrast, the Sentiment Index remained unchanged among Democrats and Republicans prior to and following the election."

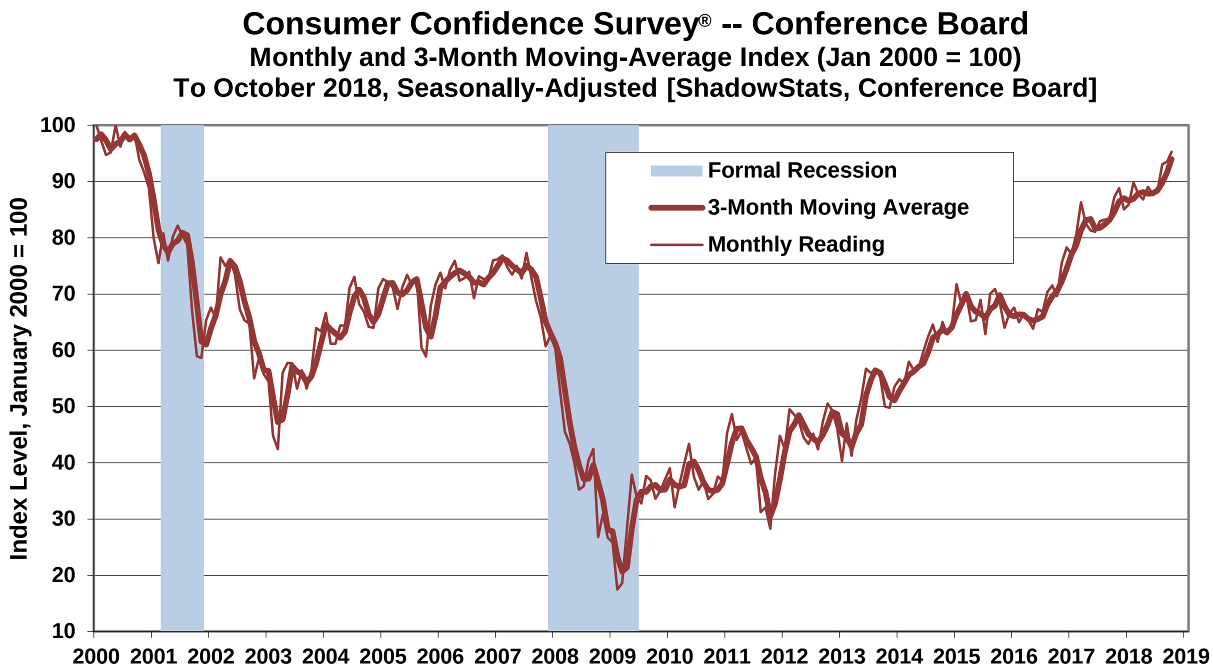
Graphs of Consumer Confidence and Sentiment. Showing the Consumer Confidence and Consumer Sentiment measures on something of a comparable scale, a scale comparable with almost all indexed ShadowStats graphs, *Graphs 2* to *4* reflect both measures of the relative consumer optimism re-indexed to January 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 the discussion in *Commentary No. 764*), and often are highly volatile month-to-month, as a result. Recent press has been highly positive on the headline economic and employment news, particularly with recent GDP, unemployment and retail sales. As headline financial and economic numbers turn increasingly-negative and unstable, so too should the recently-contained "optimism." The downturn in consumer outlook easily could accelerate, despite any euphoric headlines, reflecting deep-seated consumer liquidity stresses.

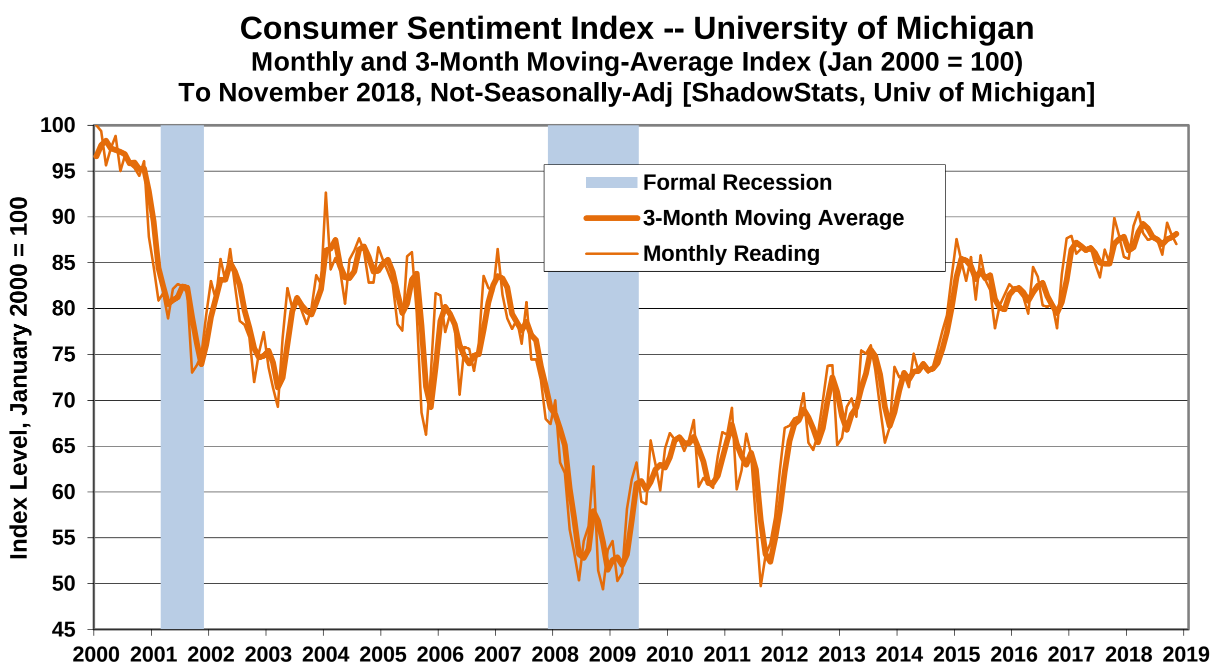
Broadly, though, the harder, consumer financial measures remain well below, or are inconsistent with, periods of historically-strong consumer growth suggested by GDP growth into the initial estimate of third-quarter 2018. Consumer measures such as goods consumption and residential investment actual took hits in first-quarter 2018 GDP, with quarterly hits seen in second- and third-quarter GDP real residential investment, as well (see *Commentary No. 976*). In an environment of high-level optimism, beyond having happy feelings about the future, consumers still need actual income, cash-in-hand or credit in order to increase their spending.

[Graphs 2 to 4 begin on the next page.]

Graph 2: Consumer Confidence (2000 to 2018)

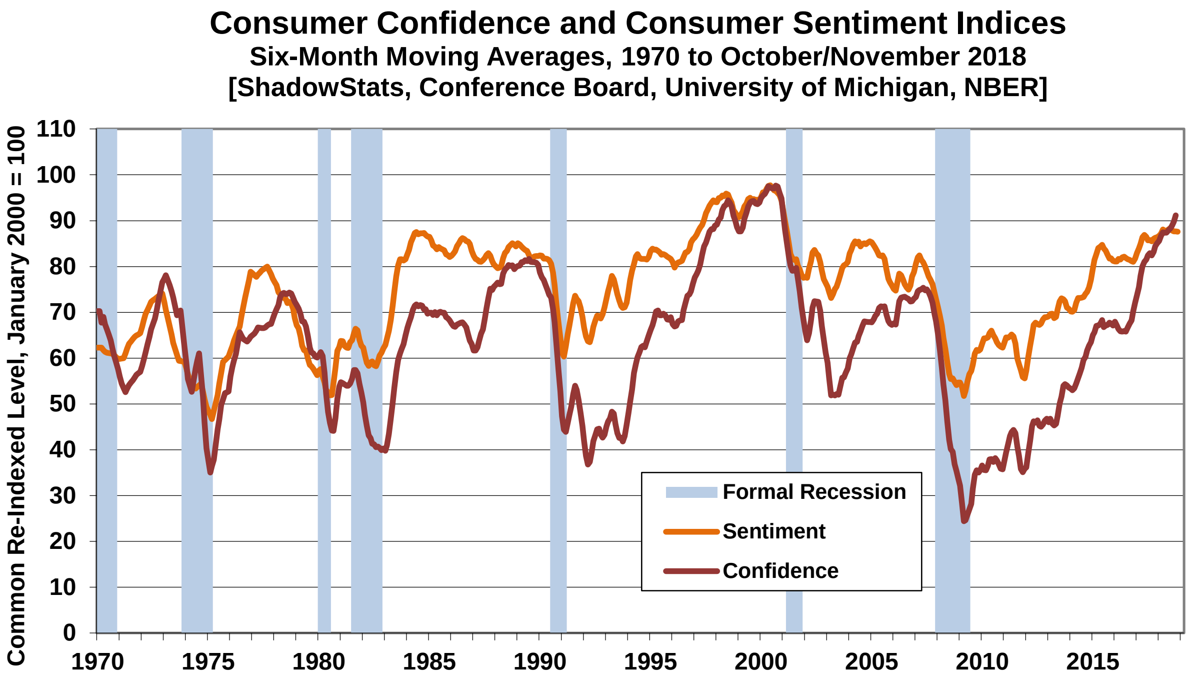


Graph 3: Consumer Sentiment (2000 to 2018)



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 4*—plotted for the last 48 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 increasingly, they appear to be topping out.

Graph 4: Comparative Confidence and Sentiment (6-Month Moving Averages, 1970 to 2018)



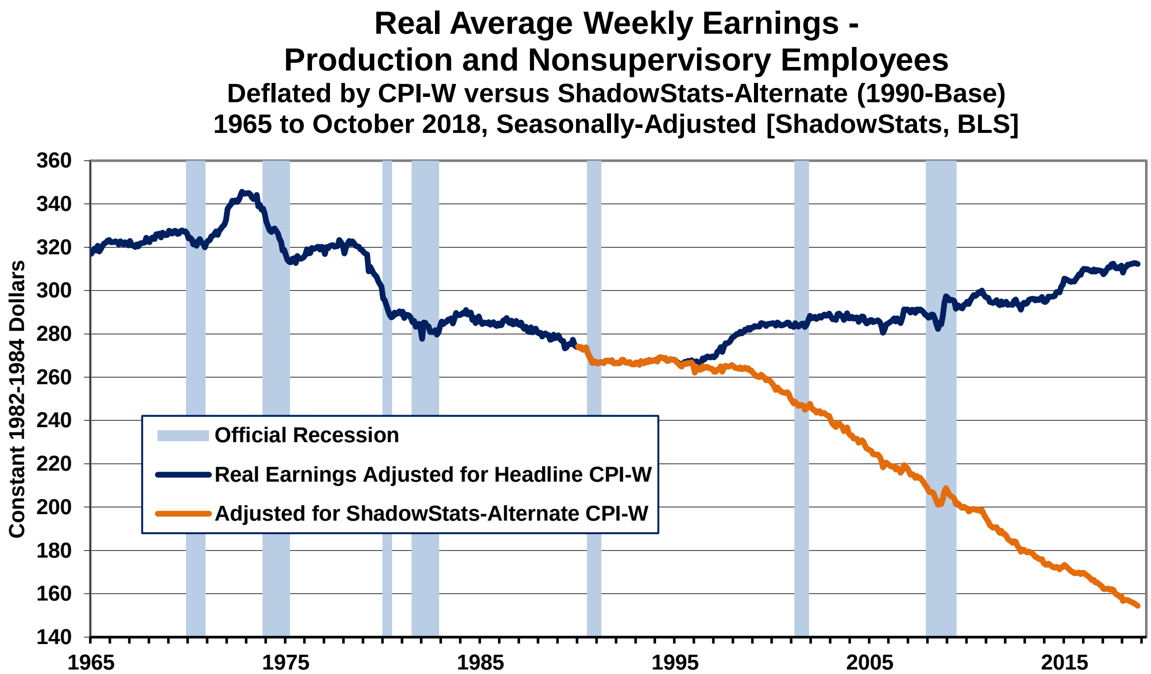
REAL AVERAGE WEEKLY EARNINGS

October 2018 Real Average Weekly Earnings Continued to Falter for Both the "Production and Nonsupervisory Employees" and "All Employees" Categories. Consumer liquidity stresses intensified in October, with continued faltering of Real Average Weekly Earnings, as reported November 14th by the Bureau of Labor Statistics (BLS).

Deflated by CPI-W inflation, real average weekly earnings for the "Production and Nonsupervisory Employees" category dropped by 0.09% (-0.09%) in October 2018, having declined by 0.06% (-0.06%) in September, with unadjusted annual real earnings falling year-to-year by 1.08% (-1.08%) in October 2018, having gained 2.22% in September 2018.

Against a first-quarter 2018 annualized quarterly contraction of 1.22% (-1.22%) in real earnings and unadjusted 0.06% year-to-year growth then, second-quarter 2018 showed an annualized quarterly gain of 2.87%, up by an annual 0.45%, with third-quarter 2018 annualized growth dropping to 0.63%, up by 0.82% year-to-year. The early trend for fourth-quarter 2018 real earnings was for an annualized quarterly contraction of 0.36% (-0.36%), with a year-to-year decline of 0.41% (-0.41%).

Graph 5: Real Average Weekly Earnings, Production and Nonsupervisory Employees, 1965-to-Date
(Preview of Graph 4 in pending Commentary No. 978)



That first-quarter 2018 quarterly contraction was the third-consecutive annualized contraction in real average weekly earnings, the fifth quarterly decline in the prior six quarters. Fourth-quarter 2017 earnings showed an annualized drop of 0.39% (-0.39%), versus a minimal decline of 0.03% (-0.03%) in third-quarter 2017, a gain of 3.48% in second-quarter 2017, and contractions of 0.84% (-0.84%) in first-quarter 2017 and 0.18% (-0.18%) in fourth-quarter 2016.

The production and nonsupervisory category is the only series for which there is a meaningful history, and *Graph 5* plots those seasonally-adjusted earnings as officially deflated by the BLS (blue line), and as adjusted for the ShadowStats-Alternate CPI Measure, 1990-Base (orange 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. Mathematically, when understated inflation is used to deflate income or economic growth, it ends up overstating the inflation-adjusted growth rate.

Nonetheless, 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 or temporarily weakened headline inflation). Deflated by the ShadowStats Alternate CPI-W (1990-Based), 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 deflation using the BLS's headline CPI-W. See the *Public Commentary on Inflation Measurement* for further detail, along with additional coverage following in *No. 978.*

When income growth is inadequate to support consumption growth, consumers often make up the difference in debt expansion. Yet, real Consumer Credit Outstanding has shown a pattern of declining annual real growth in recent quarters, irrespective of the specific series, as reflected in the plots of real monthly year-to-year change in *Graph 20*. The latest bounce off zero growth seen in that plot reflects the impact of year-ago hurricane disruptions to energy prices temporarily depressing headline annual CPI inflation for the last several months, that pattern should reverse fully by year end.

All Employees Detail. In the broader "All Employees" category (deflated by the CPI-U), which has a more-limited history than the "Production and Non-Supervisory Employees" category, real weekly earnings increased month-to-month by an adjusted 0.15% in October 2018, having declined by 0.06% (-0.06%) in September. Those same real earnings dropped year-to-year for all employees in October 2018 by 1.26% (-1.26%), having gained 2.72% in September 2018.

Having followed a broadly similar pattern in 2018 to the reporting of the "Production and Nonsupervisory Employees" in the first three quarters of 2018, the "All Employees" varied in its early trend for fourth-quarter 2018 real earnings, increasing at an annualized quarterly pace of 0.63%. The early trend in year-to-year growth, however, also was for a year-to-year decline, down by 0.35% (-0.35%).

REAL MEDIAN HOUSEHOLD INCOME

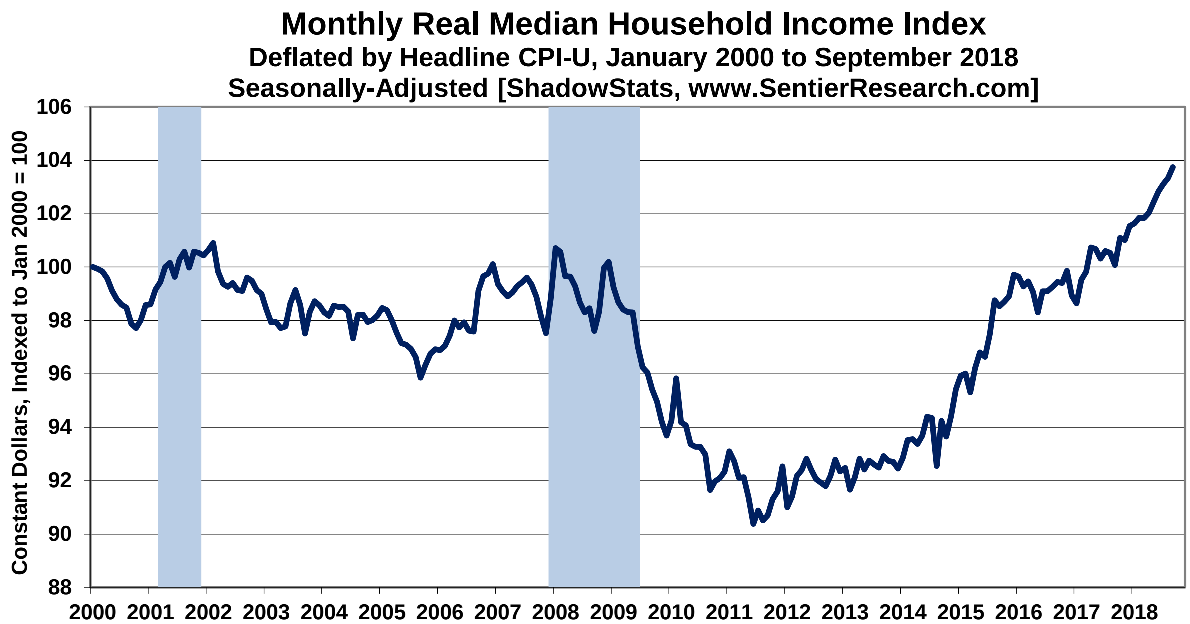
Sentier Research Monthly Real Median Household Income

Boosted by Lower Annual Inflation, Depressed by Relative Year-Ago Hurricane-Driven Spikes to Energy Inflation, Monthly Real Median Household Income Rose in September 2018 for the Sixth Consecutive Month. The September 2018 monthly Real Median Household Income rose for the sixth straight month, as reported by Sentier Research (www.SentierResearch.com) on October 24th. Sharply slowing annual growth in the series into 2017 has flattened out in a range of one-to-three percent, with the series showing a pattern of month-to-month stagnation in 2015 and 2016, adjusted for CPI-U inflation, also now uptrending since mid-2017. The current monthly series is plotted here both as to level (*Graph 6*) and as to year-to-year change (*Graph 7*).

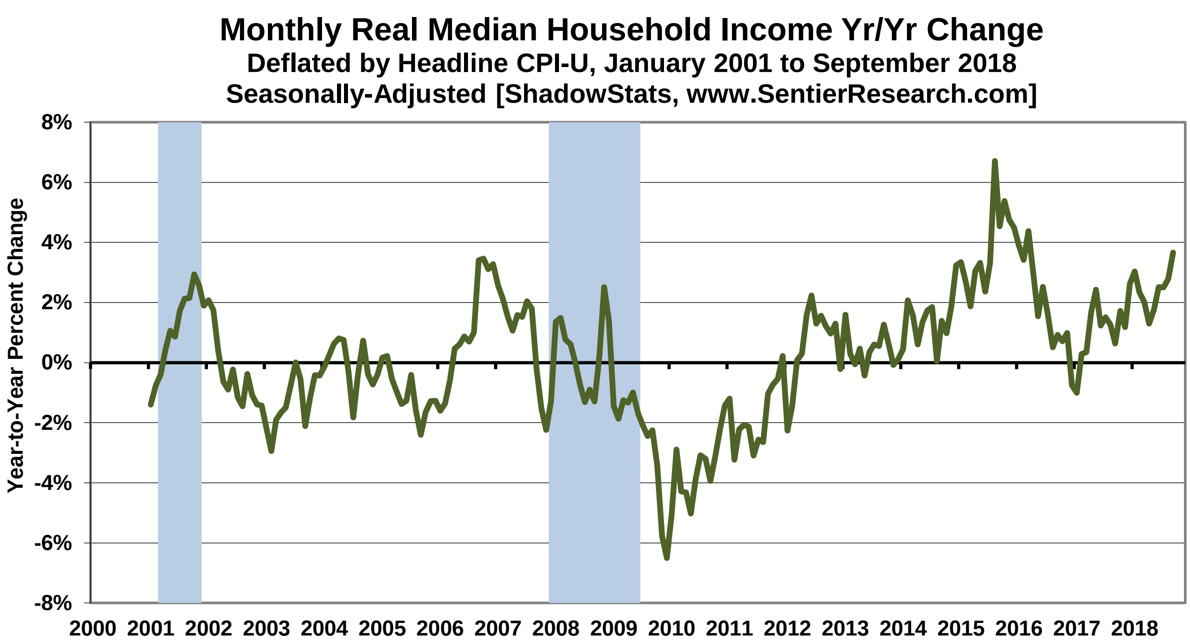
Discussed in *Opening Comments* of *Commentary No. 948*, Sentier Research (www.SentierResearch.com) reinstituted its monthly reporting of Real Median Household Income (the Household Income Index or HII), where publication had been suspended, temporarily, following the release of the May 2017 detail.

Sentier's series *Graph 6* generally can be considered a monthly version of the annual detail shown in *Graph 11*, in the next section, based on the most-recent (2017) release by the Census Bureau in September 2018, and, again as discussed in *Commentary No. 948* (see also *Commentary No. 909*).

Graph 6: Monthly Real Median Household Income (2000 to September 2018) Index, January 2000 = 100



Graph 7: Monthly Real Median Household Income (2000 to September 2018) Year-to-Year Change



Methodological understatement of the CPI-U by the Bureau of Labor Statistics (BLS) broadly has had the effect of overstating the growth in headline real or inflation-adjusted income series (see the *Public Commentary on Inflation Measurement*). In a related area, recent extreme volatility in monthly gasoline prices has had varying impact on the headline monthly detail data.

Details of the monthly series were reviewed the *Opening Comments* of *Commentary No. 948*, where annual average growth in the series since its January 2000 onset had been roughly 0.1% per year. Given the independence and quality of the Sentier research, and the known definitional biases and gimmicks used by Bureau of Economic Analysis (BEA) in its income and economic measures, the Sentier numbers suggest that actual domestic economic activity is not and has not been as robust as suggested by the BEA's headline reporting of GDP, for example.

Census Bureau Real Annual Median Household Income

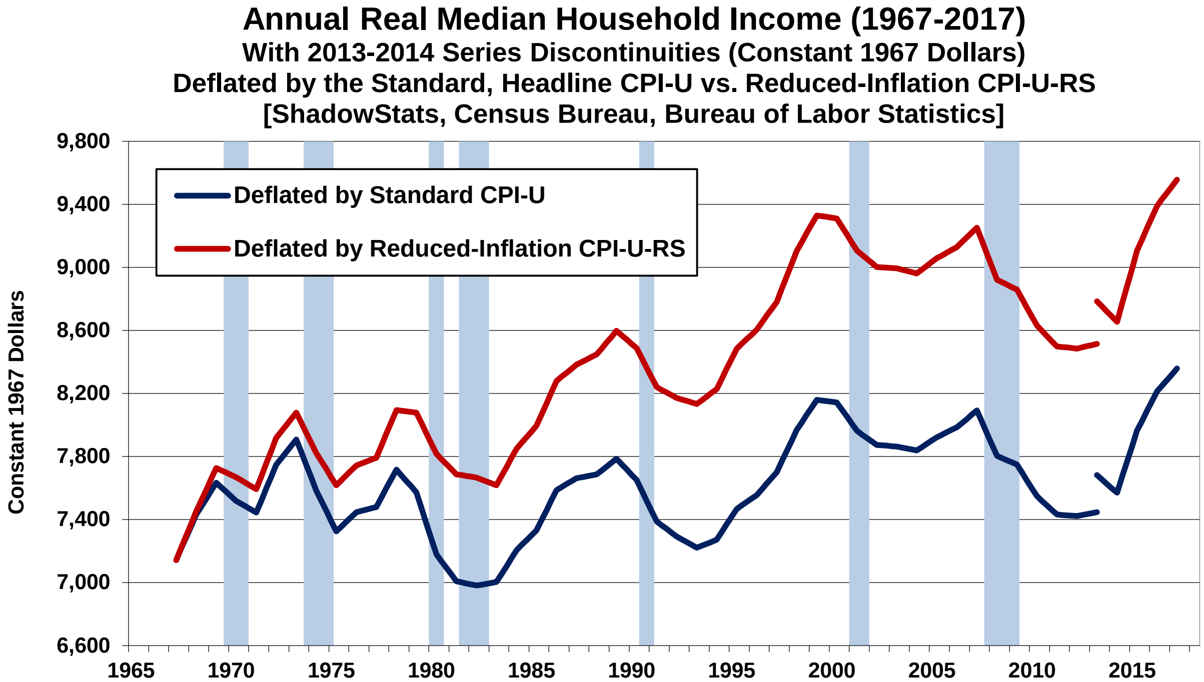
The Minimal Headline Gain in 2017 Real Annual Median Household Income Continued in the Context of the Upside Series Redefinitions of 2015; Consistent Income Levels Still Held Below 2000. *[Much of what follows in this section is from Commentary No. 969-Extended.]* The September 12th headlines in the ***Daily Update*** feature of the www.ShadowStats.com home page ran: "Consistently reported, 2017 Real Annual Median Household Income held below 1999 high. Record levels of income dispersion signal stock-market and economic turmoil." Those followed that morning's Census Bureau release of its *Income and Poverty in the United States: 2017*. Those headline issues tied to intensifying consumer liquidity stresses, dominated the meaningful substance of the report, not the headline poverty numbers

Poverty Survey. Changes in the reporting methodology for household income artificially boosted income levels in recent years, contributing to the understatement of the 2017 headline poverty rate at 12.31% of the population, its lowest level since 12.30% in 2006. That 2017 rate reflected 39.7 million people living in poverty. Separately, the regular use of gimmicked, understated inflation in deflating the income levels further boosted the resulting inflation-adjusted numbers. Beyond those issues, the Poverty Survey's design and somewhat arbitrary definitions are so heavily gimmicked and massaged, politically, as to be of negligible substance. Accordingly, ShadowStats does not regularly review it.

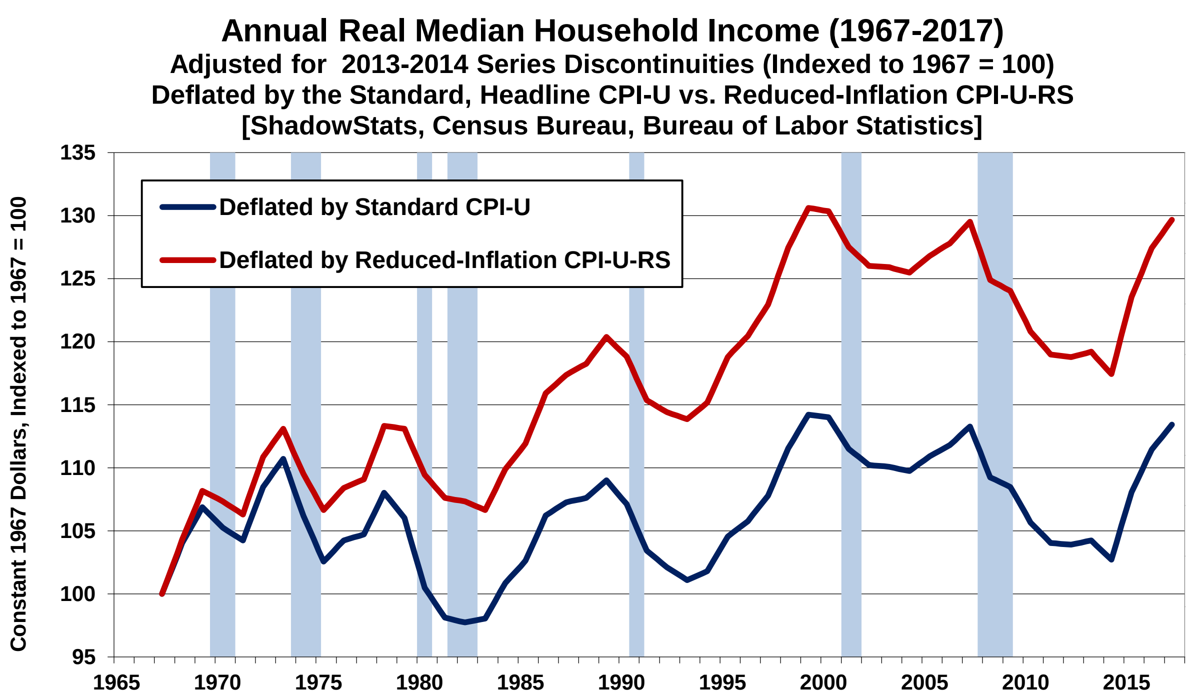
Real Annual Median Household Income. The reporting of Real Annual Median Household Income is of more substance, however, where the headline detail can be assessed both in the context of inflation-reporting distortions and of the recent series redefinitions. Again, despite the happy press headlines, underlying details continued to show a liquidity-distressed consumer, who has yet to recover meaningfully from deteriorating economic conditions in the last two decades.

Boosted by series redefinitions two years ago, with the Census Bureau now estimating, for example, what households "should be earning," headline inflation-adjusted "real" annual median household income technically was at an all-time high in 2017, as reflected in the discontinuities of the plot in *Graph 8*. Yet, the headline 2017-income level remained below levels seen in 1999 and 2000, with those reporting discontinuities removed, as reflected in *Graph 9*, which plots the current headline detail adjusted to an historically consistent reporting basis.

Graph 8: Annual Real Median Household, CPI-U versus CPI-U-RS, with the 2013-2014 Discontinuities



Graph 9: Annual Real Median Household Income through 2017, with the Discontinuities Removed Using Deflation with 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.



Statistical-definition conventions used with these data:

- "Nominal" or "Current" dollar numbers are reported as experienced, not adjusted for inflation.
- "Real" or "Constant" dollar numbers are adjusted to be net of the headline inflation rate over whatever time period is involved.
- "Median" income is the middle reading among all the households surveyed.
- "Average" or "Mean" income is total income of all households, divided by the number of households.

Expressed in both nominal and real dollars in 2017 (2017 was the headline base year for inflation in real terms, U.S. Median Household Income was $61,372, versus the Average or Mean Household Income of $86,220. In terms of measuring the financial health of the regular household, the median or middle number generally is used, where the average can be skewed heavily to the upside by some extremely large individual numbers.

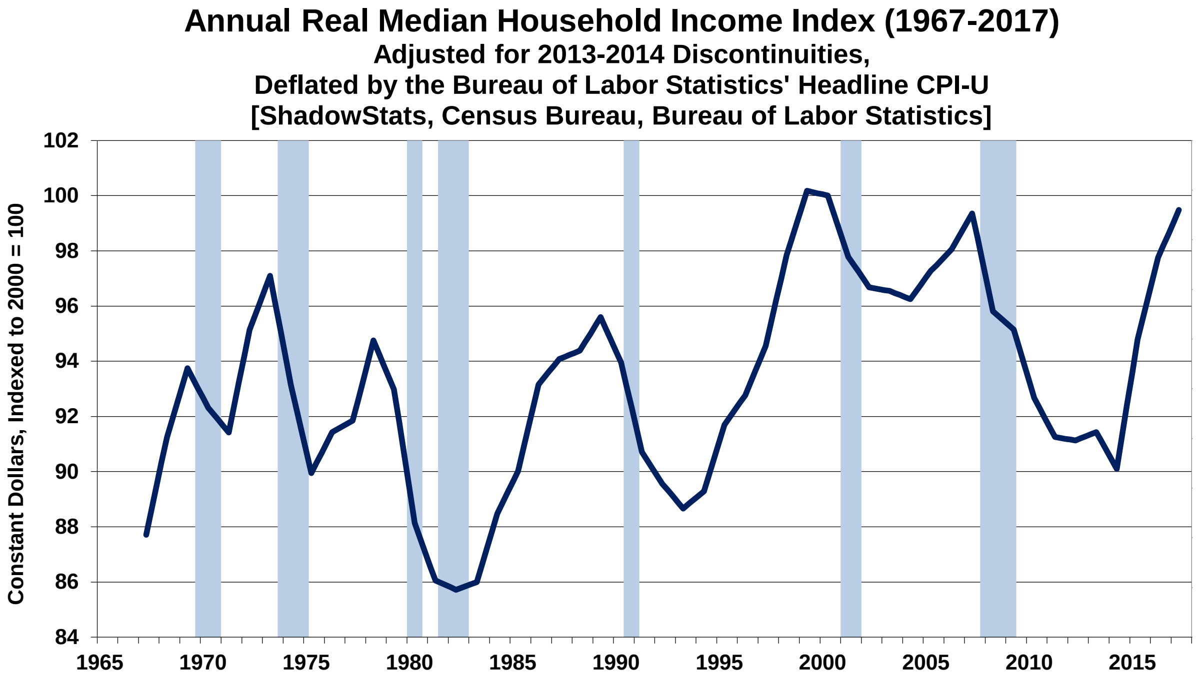
Deflation by the CPI-U-RS (Research Series) versus the CPI-U. Post-2000 comparative patterns of annual real growth in (not level of) median household income were about the same, irrespective of whether the income series was deflated by the "special" CPI-U-RS (Research Series) Consumer Price Index used here by the Census Bureau (red line in the accompanying graphs), or by the headline Consumer Price Index (CPI-U), used most broadly by the economics and financial communities (blue line in the graphs) in deflating consumer-related economic series.

Where the CPI-U-RS was constructed to show much weaker, long-term historical headline inflation than the headline CPI-U, use of the RS series in deflating numbers exaggerates the understatement of headline inflation. That has the effect of boosting the inflation-adjusted income numbers artificially, as used in both the Real Median Household Income reporting and, again, in the Poverty Report (reducing headline poverty levels), relative to simple CPI-U deflation. Separately, the current, headline CPI-U understates inflation against common experience. That is due to a variety of inflation-reducing redefinitions applied to the headline series over the decades. While discussed briefly here, those inflation issues are reviewed more fully in the *Public Commentary on Inflation Measurement*.

The CPI-U-RS series restates historical CPI-U inflation as though all the current reporting methods, again, as redefined in the last 30-plus years so as to reduce headline inflation, always have been in place. In turn, the ShadowStats Alternate Inflation estimates largely are based on reverse-engineering the CPI-U-RS series, to remove the effects of those inflation-depressing methodologies that have moved headline inflation reporting so far from common experience. The ShadowStats Alternate Series were designed to reflect current headline CPI-U inflation as though none of the inflation-dampening methodological changes had been made.

Since the bulk of the methodological changes that reduced headline inflation reporting going forward in time were in place by 2000, the impact on comparative year-to-year real change using the CPI-U-RS versus the CPI-U has been minimal in the headline numbers since 2000. That is why the red (CPI-U-RS deflated) and blue (CPI-U deflated) lines appear to move in tandem after 2000, albeit at different levels. The cumulative impact of the CPI-U-RS introduction can be seen between the plots of the series back into the latter 1960s. Without the cumulative dampening effect of the changes in methodology over time, headline annual CPI-U growth would be much higher and the headline annual growth in real median income much lower (actually in contraction). Accompanying *Graphs 8* to *14* show the CPI-U-RS-deflated series as red lines, with the headline CPI-U or CPI-W series as blue lines. *Graph 5* of real earnings, discussed in the earlier *Real Average Weekly Earnings* section, is the only income plot that reflects an orange line, deflated using the ShadowStats-Alternate Inflation (1990-Base).

Graph 10: Annual Real Median U.S. Household Income 1965 to 2017, 2013-2014 Discontinuities Removed



The Census Bureau 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 Bureau of Labor Statistics (BLS), however, usually deflates its income measures using the headline CPI-U or CPI-W, such as seen in *Graph 5*, which again is the headline *Real Average Weekly Earnings* through October 2018, plotted against the same data deflated by the ShadowStats Alternate CPI Measure (1990-Based). As an aside, consider that BLS headline real earnings numbers in *Graph 5* show that current real earnings are below where they were in the mid-1970s, not too different from the plot shown here in *Graph 10*.

Growth in Annual Real Median Household Income Slowed to 1.8% in 2017 from 3.1% in 2016. Headline annual real median household income grew at an annual pace of 1.76% in 2017, versus 3.13% [previously 3.15%] in 2016. The headline gain of 5.15% [previous 5.21%] in 2015 was not comparable or meaningful, given the significant series redefinitions of 2014/2015 (see detailed discussion in *Commentary No. 833*, see *Commentary No. 909* for the 2016 detail). The minor 2017 revisions in the headline growth for 2015 and 2016 reflected small revisions to the headline CPI-U-RS deflator.

Viewed on a consistent-reporting basis (discontinuities removed, as in *Graph 9*), the 2017 headline level of real median household income just broke above its 2007 pre-recession peak for the first time. Yet, the real income level in 2017 remained below the peak income levels of 1999 and 2000, going into the 2001 recession. Using headline CPI inflation as the Bureau of Labor Statistics (BLS) uses it to deflate its real income numbers, the 2017 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 5*, which 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*).

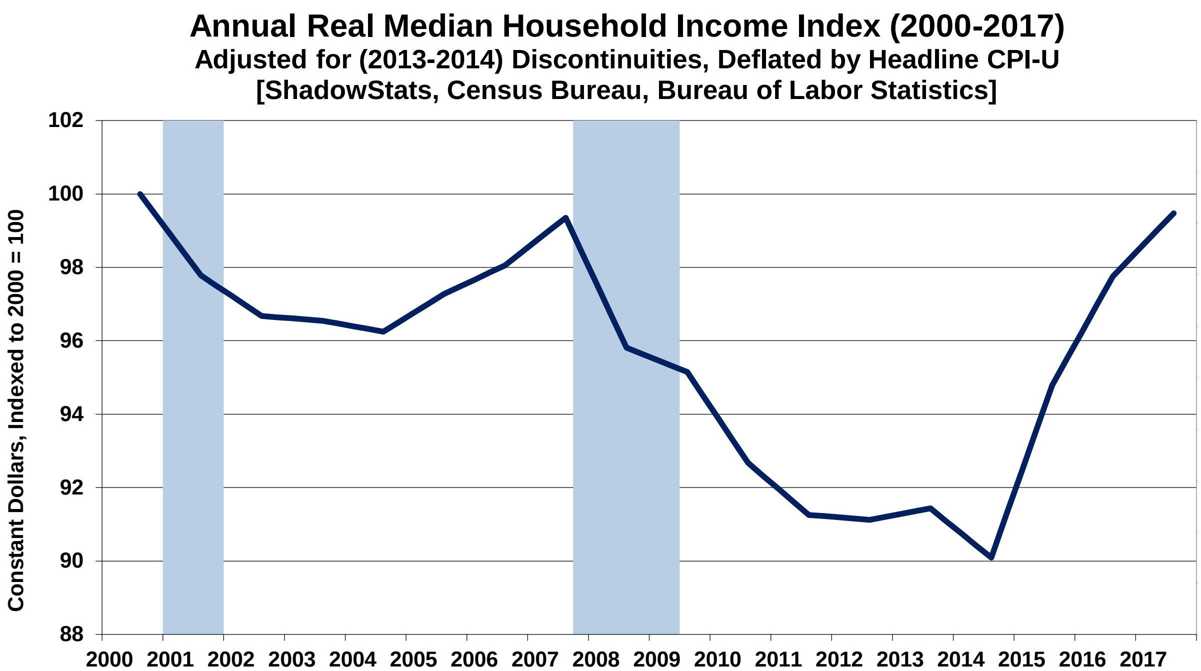
Based on March 2018 Census Bureau surveying of household income estimates for 2017, the underlying 2017 reporting detail reflected data older than what already had been published on a coincident basis by www.SentierResearch.com (Sentier), as regularly covered here (see the prior section). Shown here for comparison are *Graphs 11* and *12*. *Graph 11* shows the headline annual real median household income (Census) for 2000 to 2017, as surveyed in March of the following calendar year and as deflated by the CPI-U. *Graph 12* shows the Sentier 2016 and 2017 details (surveyed monthly by the Census Bureau, but not published in headline form), with the Sentier numbers also deflated also by the headline CPI-U. The Sentier numbers largely confirmed and predicted the direction of the recently-published annual Census numbers for 2017. *Graph 12* is plotted only through the end of 2017, for purposes of comparison with the annual census numbers, earlier *Graph 6* plots the Sentier number up to the most-recently published September 2018 details

Again, the numbers here were generated by separate surveying, Sentier in regular, coincident and consistent monthly surveying, and Census in a special annual survey conducted in March following the involved year, as recently re-defined so as to help boost reported income levels. Looking at the monthly median numbers out of Sentier, the annual median of those monthly numbers showed a real annual increase of 2.6% in 2016, slowing to 1.1% in 2017. The headline annual median numbers out of the Census Bureau, showed real annual median income growth of 3.1% in 2016 slowing to 1.8% in 2017. Both approaches suggested a slowing of 1.5% in annual growth-rate levels from 2016 to 2017. The higher level of the Census aggregate growth rate likely is due to the recent series redefinitions.

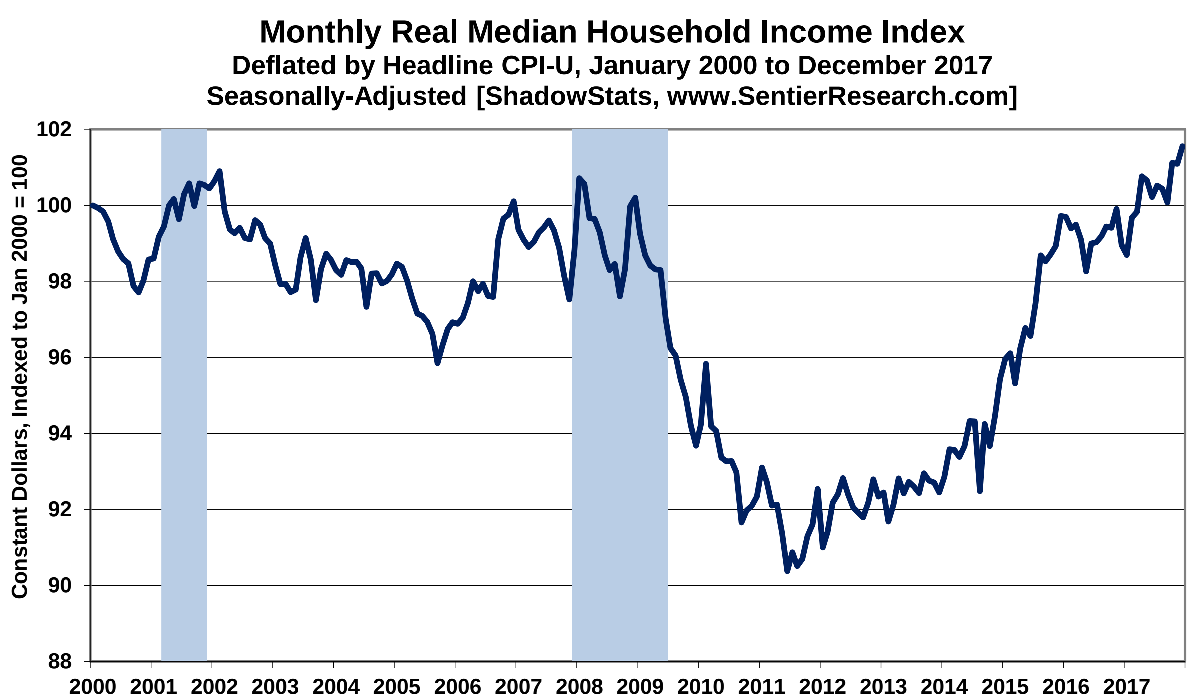
Sentier was founded by two former senior officials of the Bureau of the Census, who knew the inside workings of the various Census surveys. Sentier's monthly survey results are deflated by the headline CPI-U, not by the gimmicked CPI-U-RS otherwise used by the Census Bureau, as previously discussed. Again, the headline annual inflation differences between those two series primarily are before 2000.

[Graphs 11 and 12 follow on the next page.]

Graph 11 Annual Real Median U.S. Household Income 2000 to 2017, 2013-2014 Discontinuities Removed



Graph 12 Sentier Monthly Real Median Household Income (2000 to 2017) Index, January 2000 = 100



Gimmicked Economic Data Do Not Fool Main Street U.S.A. The headline 1.8% increase in 2017 real annual median household income (detailed, again, in *Income and Poverty in the United States: 2017*) and the minimally revised 3.1% (detailed in *Income and Poverty in the United States: 2016*), both were boosted by recent survey changes designed to inflate income artificially. The redefinition surge of 5.2% in 2015 income was detailed in *Income and Poverty in the United States: 2015*. The recent survey changes were designed specifically to inflate headline income growth 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, along with the 2015 redefined numbers, 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 has used that detail to plot the Real Annual Median Household Income series on something of an historically-consistent basis, through 2017—with the 2013-2014 discontinuity removed—as reflected in *Graphs 9* to *11*. That is in contrast to *Graph 8*, which reflects the discontinuities. Those discontinuities (unique to the headline Census series) continued in the official 2017 graphs. Separately, the definitional changes to the surveying also have had the negative effect of exacerbating income inequality, as discussed shortly (see *Graphs 13* and *14*).

Extreme Income Inequality Signals Financial Market and Economic Turmoil

Increasing Income Variance and Dispersion Tend to Foreshadow Market and Economic Upheavals That Move Income Disparity Back Towards the Middle. Part of the Census Bureau's regular review of Annual Real Median Household Income updates estimates of income dispersion, variance or inequality within the U.S. population. The 2017 estimates, which moved higher, to historically negative extremes, were reviewed in *Commentary No. 969-Extended* and discussed here, with the results plotted in accompanying *Graphs 13* and *14*.

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 broad, middle range of a population, while a high level of dispersion indicates heavier income concentrations at 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, countries, with income concentrated in the middle, tend to enjoy stronger and broader economic growth. In theory, a greater portion of the total population might be able to buy a new automobile (more automobiles sold in aggregate) with income distribution concentrated in the middle, as opposed to a circumstance with income concentrated at the extremes.

The Census survey changes and redefinitions published in 2015 shifted household incomes more into the "upper" categories, resulting in an upside shift or break in the data, along with a relative increased level of income inequality. *Graphs 13* and *14* reflect those discontinuities, where these series now have been broken, in terms of internal, historical comparison. Restating the current numbers to be consistent with prior reporting simply is not feasible.

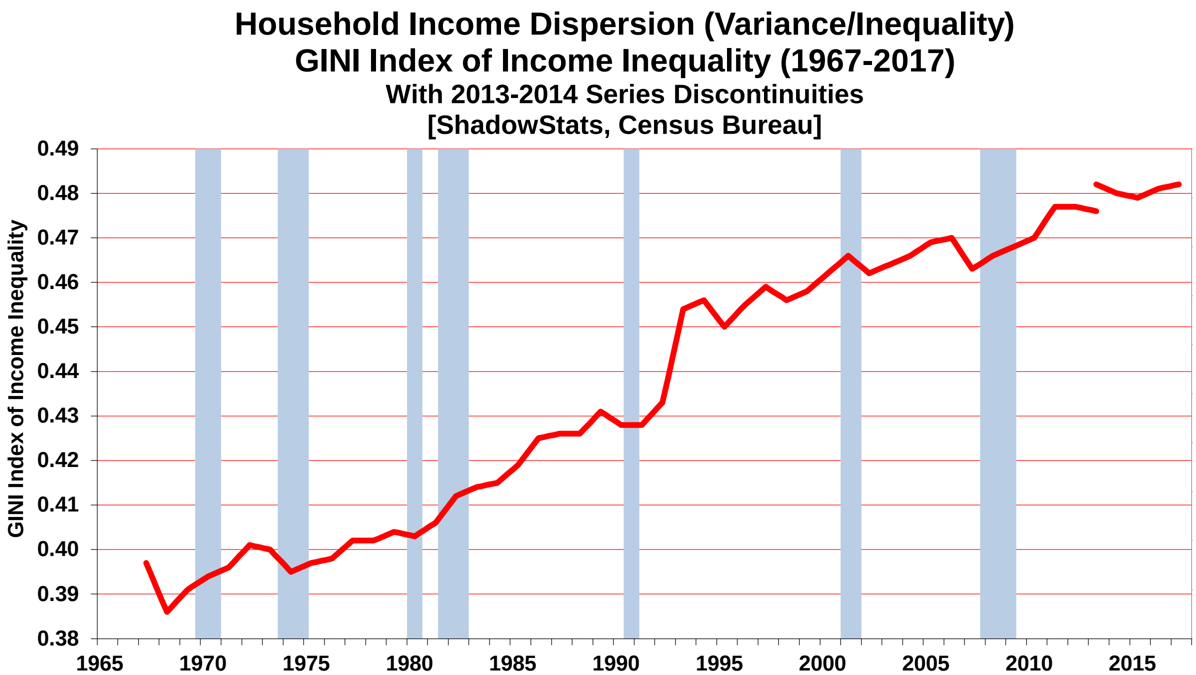
Rising and near-record income dispersion levels usually foreshadow economic and financial-market turmoil. Despite—or perhaps due to—the ongoing nature of the economic and systemic-solvency crises, and continuing impact effects of the 2008 financial panic (see *Hyperinflation Watch – No. 3*), income dispersion—the 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, 2016 and 2017.

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 new 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.

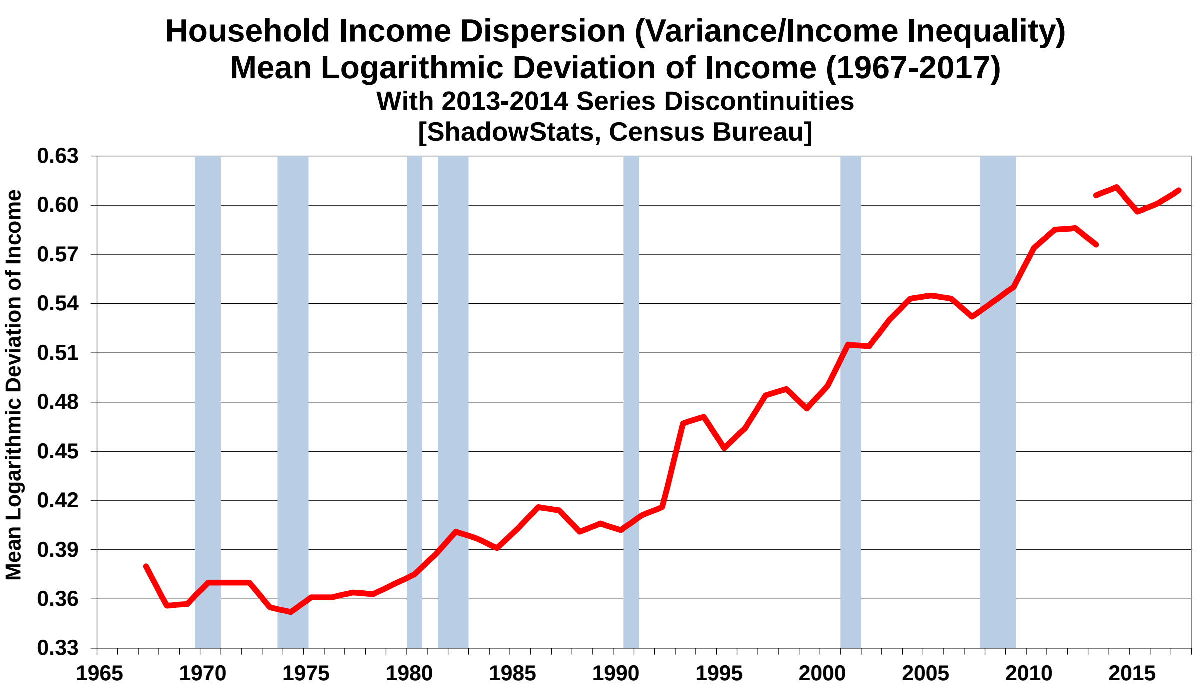
Again, shown in *Graphs 13* and *14*, the current circumstance is at a record extreme, well above levels estimated to have prevailed before the 1929 stock-market crash and the Great Depression. Increasingly difficult times remain likely for at least the next several years.

**[Graphs 13 and 14 of Income Inequality,
Variance and Dispersion follow on the next page.]**

Graph 13: Annual GINI Index of Income Inequality through 2017, with Discontinuities



Graph 14: Annual Mean Logarithmic Deviation of Income through 2017, with Discontinuities



HOUSEHOLD DEBT AND CONSUMER CREDIT OUTSTANDING

Real Household Debt and Consumer Credit Outstanding: Mounting Student Loan Delinquencies, Stagnation/Lack of Expansion and Slowing Annual Growth Constrain Economic Growth. The final six graphs on consumer conditions address consumer borrowing. In the absence of real income growth, debt expansion can help to fuel growth in personal consumption, but personal debt expansion in real or inflation-adjusted terms—the way economic activity usually is measured—has been almost nonexistent, following the 2008 banking crisis.

***Quarterly Series*.** Consider *Graph 15* of *Household Sector, Real Credit Market Debt Outstanding* (Federal Reserve Board) through Second-Quarter 2018, and *Graph 16* of *Real Household Debt and Credit Balance* (Federal Reserve Bank of New York) through Third-Quarter 2018. Both graphs reflect estimates of aggregate real Consumer Debt or Credit Outstanding, where ShadowStats has deflated those series using the headline Consumer Price Index (CPI-U).

The level of real household debt declined in the period following the Panic of 2008, reflecting loan defaults and reduced bank lending, and it has not come close to recovering fully, based on either the Federal Reserve's flow-of-funds accounting through second-quarter 2018, or the New York Fed's quarterly report of *Household Debt and Credit* discussed earlier in the *Opening Comments.*

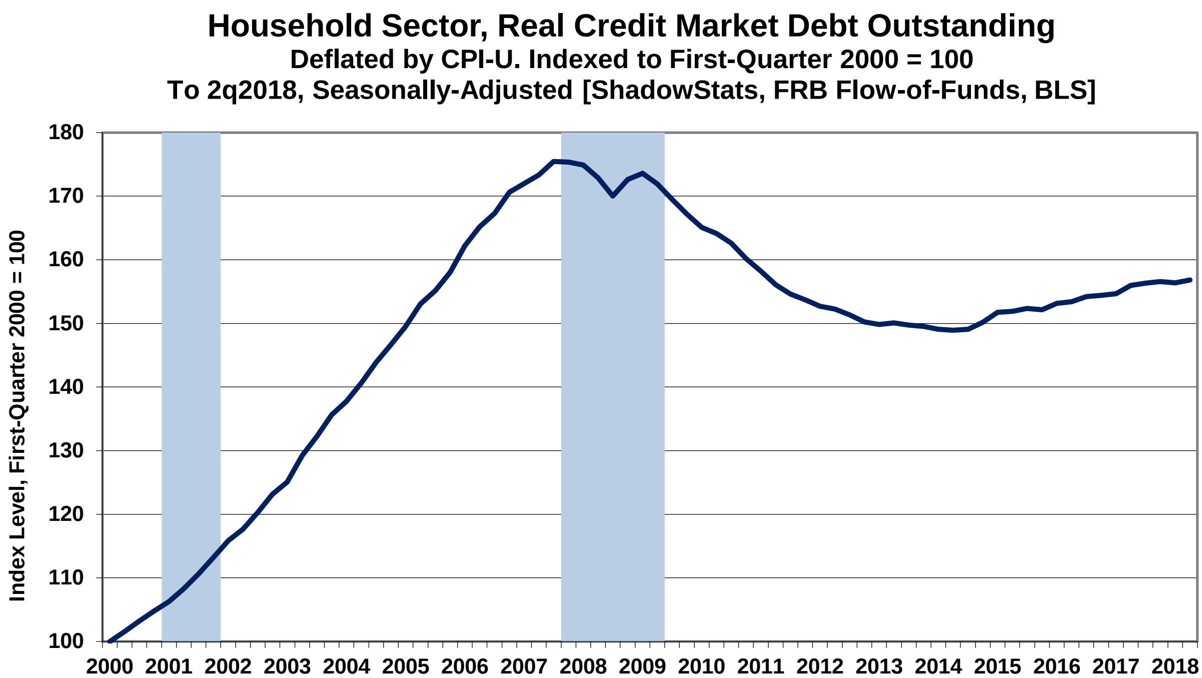
Reflected in *Graph 15*, the Household Sector, Real Credit Market Debt Outstanding in second-quarter 2018 still was down by 10.6% (-10.6%) from its pre-recession/crisis peak of third-quarter 2007. Such completed 43 straight quarters—a full decade-plus—of credit non-expansion.

This 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 (FOMC Quantitative-Easing Policy). 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 and intermittently into first-quarter 2018. Activity also reflects relative strength from student loans, as shown in the *Graphs 17* to *20*.

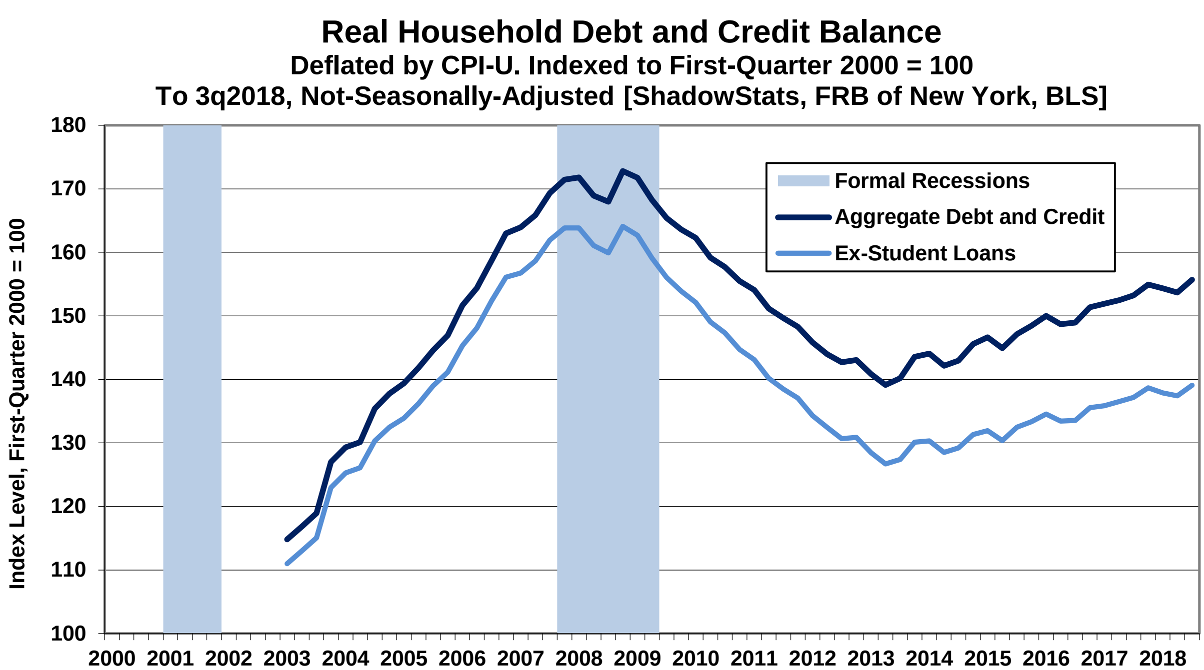
Graph 16 of the Real Household Debt and Credit Balance is down by 9.9% (-9.9%) from its pre-recession/crisis peak of fourth-quarter 2008, with the same series net of student loans down by 15.2% (-15.2%).

[Graphs 15 to 17 begin on the next page.]

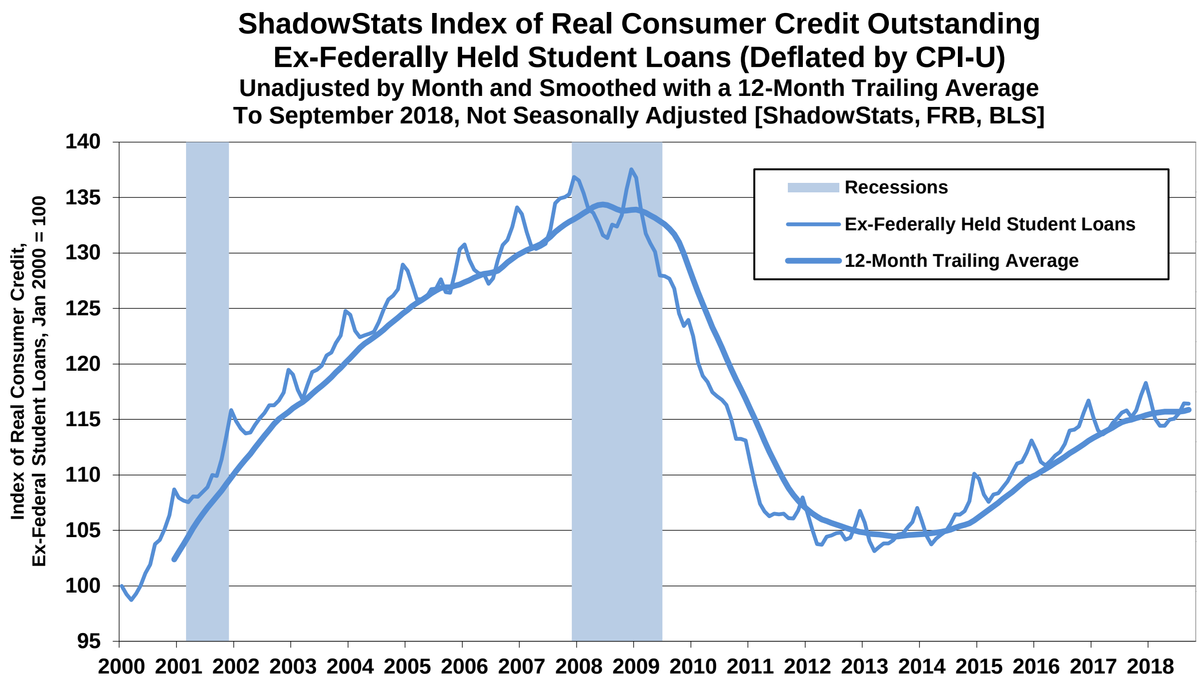
Graph 15: Household Sector, Real Credit Market Debt Outstanding (2000 through Second-Quarter 2018)



Graph 16: Real Household Debt and Credit Balance (2003 through Third-Quarter 2018)



Graph 17: Real Consumer Credit Outstanding, Ex-Federal Student Loans (2000 to Third-Quarter 2018)



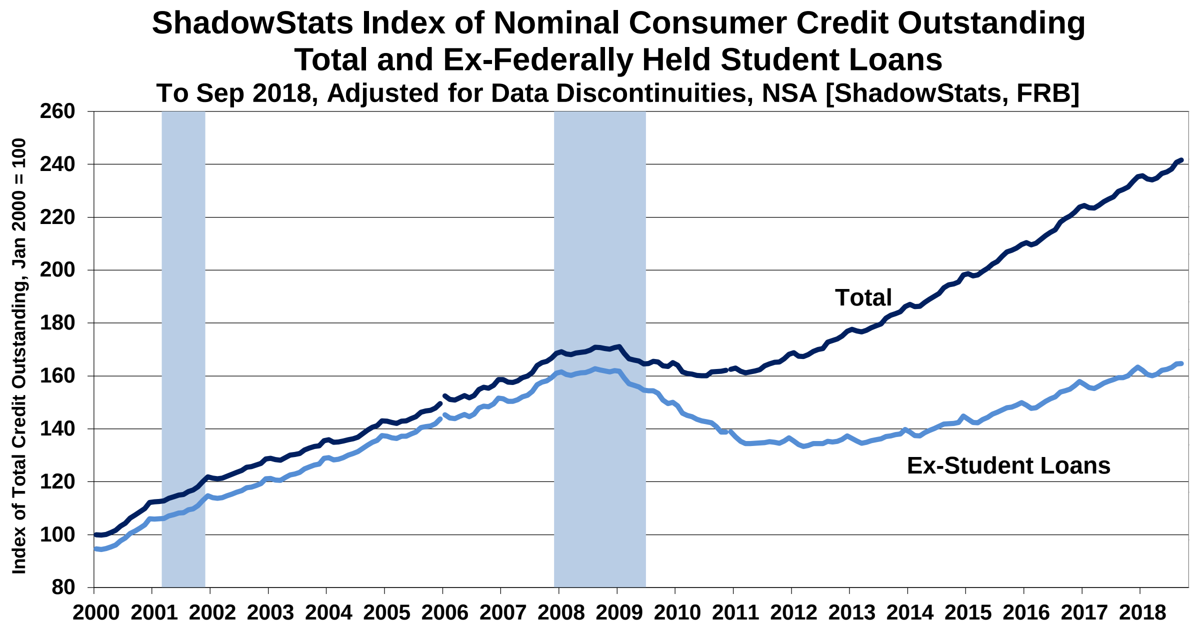
Shown for comparative purposes is *Graph 17* of real, not-seasonally-adjusted Consumer Credit Outstanding, Ex-Federally-Held Student Loans. That series has never recovered on a monthly, let alone the 12-month trailing-average basis, which is used as a surrogate here for seasonal adjustment. That is reflected on a parallel basis through with *Graphs 15 and 16*. Please note that the scale in *Graph 17* is indexed to Consumer Credit Outstanding Ex-Federal Student Loans equal to 100 in January 2000. In *Graphs 18* to *20*, that indexing is applied to the total Consumer Credit Outstanding number, which is greater than the dominant Ex-Federal Student Loans subcomponent.

As noted in the *Opening Comments*, the New York Fed indicated that, "Aggregate delinquency rates worsened in the third quarter of 2018." Such was "... primarily due to a large increase in the flow into delinquency for student loan balances during the third quarter of 2018" (*Household Debt and Credit*). Specifically, "11.5% of aggregate student debt was 90+ days delinquent or in default in 2018Q3, a substantial increase from the prior quarter." "Transition rates into delinquency worsened in the third quarter after a few quarters of relative improvement."

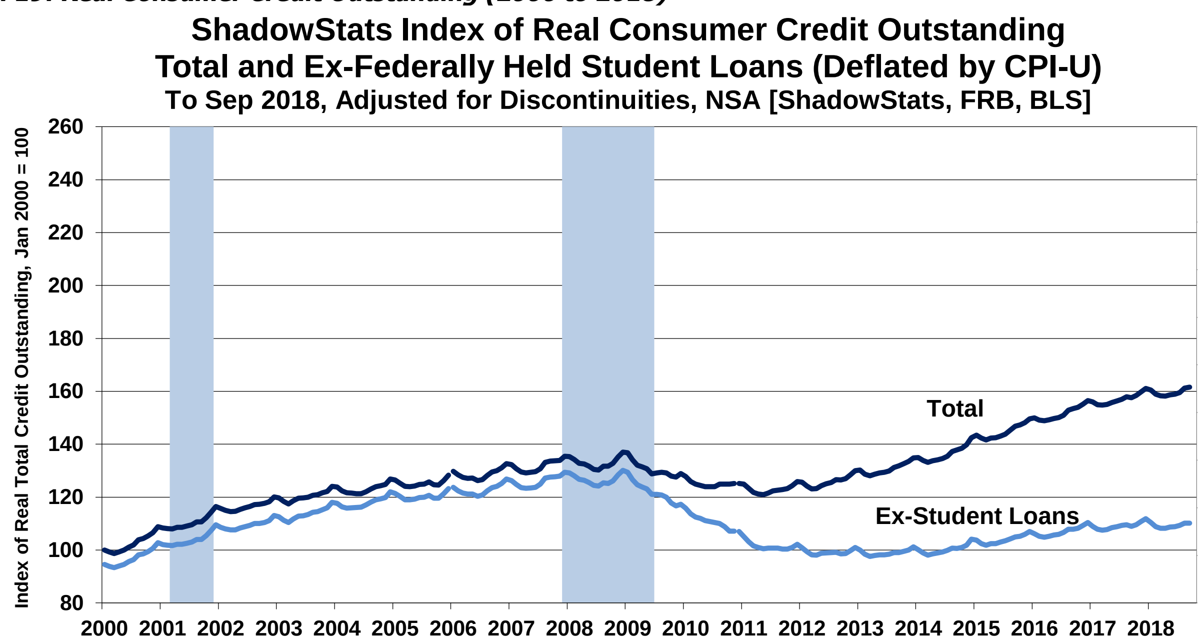
Monthly Consumer Credit Outstanding. The ShadowStats analysis usually focuses on the particular current and continuing weakness in monthly levels of consumer credit (excludes mortgages), net of what has been rapidly expanding government-sponsored student loans. Where detail on that series only is available not-seasonally-adjusted, the following related graphs and the preceding *Graph 17* are so plotted.

Shown through the September 2018 reading (released November 7th), the headline nominal monthly Consumer Credit Outstanding (*Graph 18*) is a subcomponent of the nominal Household Sector debt. Where *Graph 19* reflects the real or inflation-adjusted activity for monthly Consumer Credit Outstanding terms of both level (*Graph 19*) and year-to-year change (*Graph 20*). *Graphs 19* and *17* are comparable to the inflation-adjusted Household Sector plot in *Graph 15* as well as *Graph 16*.

Graph 18: Nominal Consumer Credit Outstanding (2000 to 2018)



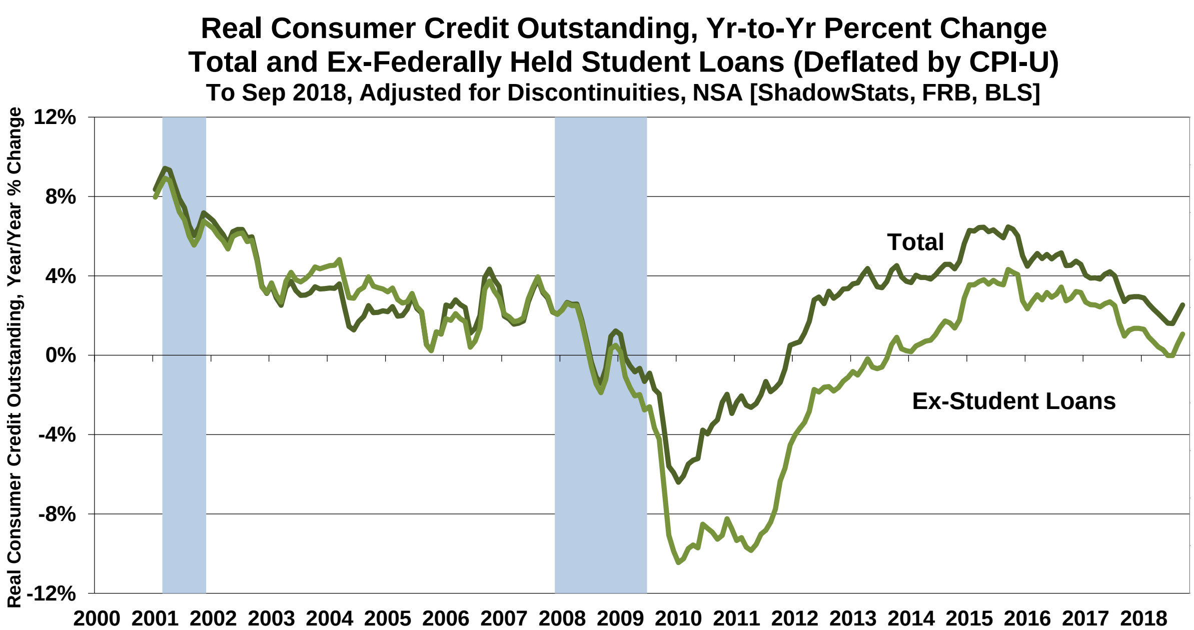
Graph 19: Real Consumer Credit Outstanding (2000 to 2018)



Post-2008 Panic, growth in outstanding consumer credit has continued to be dominated by growth in federally-held student loans (increasingly in default), not in bank loans to consumers that otherwise would have fueled 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 unadjusted CPI-U inflation, the lack of recovery in the ex-student loan area is more obvious. Where the slight monthly firming in the level of not-seasonally-adjusted real consumer credit reflected a seasonal pattern, the pattern of both real and nominal year-to-year growth has been in an intensifying downtrend, suggesting tightening of credit conditions (albeit with some skewed-inflation pick-up in recent months. Adjusted for discontinuities and inflation, ex-student loans, consumer credit outstanding in September 2018 was down from recovering its pre-recession December 2007 peak by 14.9% (-14.9%). That is 129 straight months, 43-straight quarters, 10-3/4 years of non-expansion of consumer credit. Year-to-year real growth shown in *Graph 20* tends to resolve most monthly seasonal distortions in the not-seasonally-adjusted data. Ex-federally-held student loans, annual real growth slowed over eight months to zero year-to-year change in June and July 2018, August 2018 real growth jumped to 0.6%, largely reflecting a drop of 0.3% (-0.3%) in the headline CPI-U deflator, due to relative year-ago spikes in the annual CPI from hurricane spiked energy price. The same effect boosted September 2018 real annual growth to 1.1%, which should ease back, with a return to more-stable annual CPI inflation in October through year-end 2018.

Graph 20: Year-to-Year Percent Change, Real Consumer Credit Outstanding (2000 to 2018)



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