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

COMMENTARY NUMBER 899
June Industrial Production, Retail Sales, CPI and PPI

July 17, 2017

Weaker-Than-Expected Headline Reporting Continued, as Negative Revisions Plagued Headline Production and Retail Sales Data

Downside Implications for Both First- and Second-Quarter 2017 GDP

Above-or-At-Consensus Headline June Production and Manufacturing Gains Reflected No More than Heavy Downside Revisions to Prior Months

No End in Sight: Record 114 Months of Continued Non-Expansion in Manufacturing, With June Production and Manufacturing Still Down Respectively by 0.2% (-0.2%) and 6.1% (-6.1%) from Pre-Recession Highs

Retail Sales Contractions Continued, Despite Upside Growth Distortions from Inconsistent Seasonal-Adjustment Revisions; Net of the Gimmicks, the Headline June Sales Drop of 0.2% (-0.2%) Would Have Been 0.5% (-0.5%)

Recession Signal Intensified Sharply; Market Economic Sentiment Appears to Be Shifting to the Downside, as Reflected in a Softening Dollar

Consumer Liquidity Stresses Continue to Restrain Broad Economic Growth

Headline June CPI-U Inflation Unchanged at Down 0.02% (-0.02%), Pulled Annual CPI-U Inflation Lower to 1.63% (Was 1.87%), with CPI-W at 1.50% (Was 1.78%) and ShadowStats at 9.3% (Was 9.6%)

Softening Consumer Inflation Likely Hit a Trough in June

June 2017 Annual Final-Demand PPI Declined to 1.99% (Was 2.36%)

PLEASE NOTE: The next regular Commentary*, scheduled for Wednesday, July 19th, will cover June New Residential Construction (Housing Starts) and preview the annual benchmark revisions to the Gross Domestic Product (GDP) due on July 28th.*

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

Today's ***Opening Comments and Executive Summary*** **(July 17th)** focuses on the unfolding pattern of renewed faltering in broad, headline economic reporting. The *Executive Summary* highlights the basic headline details of June 2017 Industrial Production, Retail Sales, CPI and PPI.

The ***Consumer Liquidity Watch*** (beginning page 10), introduced with today's *Regular Commentary*, covers the areas and series discussed in the irregularly updated *Consumer Liquidity Conditions* comments. Although repetitive in nature from prior *Commentaries*, the section always will reflect the most-recent underlying detail, along with a note as to headline changes from the prior *Regular Commentary*.

The ***Hyperinflation Watch*** (beginning page 20) updates the U.S. dollar and gold and silver prices in the context of likely developments in monetary and financial conditions.

The ***Reporting Detail*** (beginning page 25) provides extended analysis on June production, retail sales and the inflation data.

The ***Week, Month and Year Ahead*** (beginning page 57) provides links to recent *Commentaries* and previews Wednesday's release of the June Housing Starts.

OPENING COMMENTS AND EXECUTIVE SUMMARY

With Recent Headlines Not Quite As Indicated, Economic Activity Continued to Falter. Although not as overt or severe as in last month's headline details, this month's details of June 2017 Industrial Production and Retail Sales were weaker than expectations. Accordingly, market expectations appear to have continued to soften, with the U.S. dollar weakening and gold prices picking up on Friday, July 14th, in response to the indications of increasingly-faltering, broad domestic economic activity (see the *Hyperinflation Watch*).

Thanks to a confluence of the major June economic releases on Friday, today's (July 17th) *Commentary* is about as long as they come. Discussion of the continued "unexpected" weakening in headline activity, against the background of the pending July 28th benchmark revisions and coincident release of the "advance" or first estimate of second-quarter 2017 GDP, will be discussed in Wednesday's (July 19th) *Commentary No. 900*.

Faltering Economic Activity. Any relatively happy or not-so-happy news headlines from June 2017 Industrial Production and Retail Sales largely were inflated by downside revisions to prior months' activities, or reflected irregular-reporting distortions. The positive headlines for June 2017 Industrial Production showed a headline monthly production gain of 0.4%, versus expectations of a 0.3% gain, with June Manufacturing up by the expected 0.2%. Yet, those headline results actually were far shy of reality, against headline expectations that did not include major revisions to prior reporting.

Net of heavy, downside prior-period revisions, June production gained just 0.1% for the month, with the dominant June Manufacturing sector "unchanged" at 0.0% at the first decimal point, and down by a rounded 0.05% (-0.05%) at the second decimal point, which rounds to 0.0% at the first decimal point. Similar revision distortions boosted headline monthly gains in both the Mining and Utility sectors, as discussed in the *Reporting Detail*.

Against a consensus-expected June 2017 Retail Sales monthly gain of 0.1%, headline activity fell by a much weaker 0.2% (-0.2%), down by 0.1% (-0.1%) net of prior-period revisions, where the upside revision to prior May 2017 reporting largely offset the downside revision to April 2017 detail.

Yet, that market-disappointing sales result, in reality, still was much weaker than the headlines. Discussed in the *Reporting Detail*, a consistently-reported, nominal June 2017 Retail Sales number would have been down by 0.5% (-0.5%), considering inconsistently-spiked monthly seasonal-adjustment factors.

Further, despite the underlying distortions and minimally-negative headline CPI-U inflation, headline June real Retail Sales declined in the month by 0.1% (-0.1%), with year-to-year real sales growth slowing sharply from 2.1% in May 2017, to 1.2% in June 2017. That was a shift in real annual growth patterns that traditionally would be taken as a very strong signal of a coincident, or imminent, economic downturn. The deepening weakness here in headline Retail Sales reflected continued consumer liquidity stresses as discussed in the *Consumer Liquidity Watch*.

Where downside revisions to historical Industrial Production stretched back monthly from May 2017 to January 2017, and where the headline Retail Sales softened outright, the effect here was to slow markedly the second-quarter 2017 quarterly and annual growth trends for both the Industrial Production and Retail Sales (both nominal and real) series. Again, those factors will be reviewed in *Commentary No. 900*, in the context of recent annual benchmark revisions to the production and retail series and with implications for the pending annual benchmark revisions to the GDP on July 28th, and the coincident release of the first estimate of second-quarter 2017 GDP.

Softening in Headline Annual Inflation May Have Hit a Trough in June. Where popularly-followed economic series are stated most meaningfully in real or inflation-adjusted terms, understatement of the deflating price-adjustment measure tends to overstate the resulting pattern of real activity.

Discussed in both the *Executive Commentary* and the *Reporting Detail*, headline real growth measures appear to be overstated on a relative basis in the first half of year, in areas the ranging from real Retail Sales to Real Earnings, due to current problems the Bureau of Labor Statistics (BLS) has with seasonally-adjusting highly-volatile and irregular monthly swings in gasoline prices. The seasonally-adjusted data distortions should tend to reverse in July, as has been the BLS pattern.

Separately, an early estimate of unadjusted year-to-year headline CPI-U inflation suggests that the pattern of slowing, unadjusted annual inflation, from its near-term peak of 2.7% in February 2017 to 1.6% in June 2017, also will begin to increase anew with headline July 2017 reporting. As headline inflation numbers rise, such tends to be a negative for headline real economic activity, at least during periods of what have been short-term distortions.

Executive Summary: Industrial Production—June 2017—Happy Headline Gains Merely Reflected Heavy Downside Revisions to Prior Activity. Following what had been much weaker-than-expected May 2017 activity, headline June 2017 Industrial Production showed a monthly gain of 0.4%, versus expectations of a 0.3% gain for aggregate production, with June Manufacturing up by the expected 0.2%. Headline detail, however, was not as advertised and far shy of those market expectations, when viewed from the standpoint of consistent reporting. Specifically, the headline numbers were heavily bloated in the context of downside revisions to previous headline details. Net of those revisions, production showed a minimal monthly gain, and manufacturing a minimal monthly decline. The broad effect was a downside shift in related growth patterns for both first- and second-quarter 2017 activity.

Both production and manufacturing remained below pre-recession peak-activity levels, with the Manufacturing sector showing its longest stretch of economic non-expansion in the 99-year history of Industrial Production, now at 114-months and counting. In contrast, it took the post-war U.S. economy 96-months to rebuild manufacturing to its World War II peak. In the first down-leg of the Great Depression, it took 88-months to recover the pre-collapse high.

Headline Industrial Production. Headline June 2017 production gained 0.39%, following revised monthly gains of 0.06% in May, 0.84% in April, 0.11% gain in March, 0.24% in February and a revised monthly decline in January of 0.30% (-0.30%). Net of prior-period revisions, June 2017 production rose month-to-month by 0.13%. The unusual revision patterns are discussed in *Reporting Detail* as well as in the *Opening Comments*.

Headline Monthly Growth in Each Major Sector Was Boosted by Downside Revisions. Detailed by major industry group, the headline June 2017 monthly aggregate gain of 0.39% [up by 0.13% net of revisions] was composed of a monthly gain of 0.18% [a contraction of 0.05% (-0.05%) net of revisions] in manufacturing activity, a 0.04% gain [a contraction of 0.17% (-0.17%) net of revisions] in utilities activity and a gain of 1.62% [a gain of 1.15% net of revisions] in mining activity.

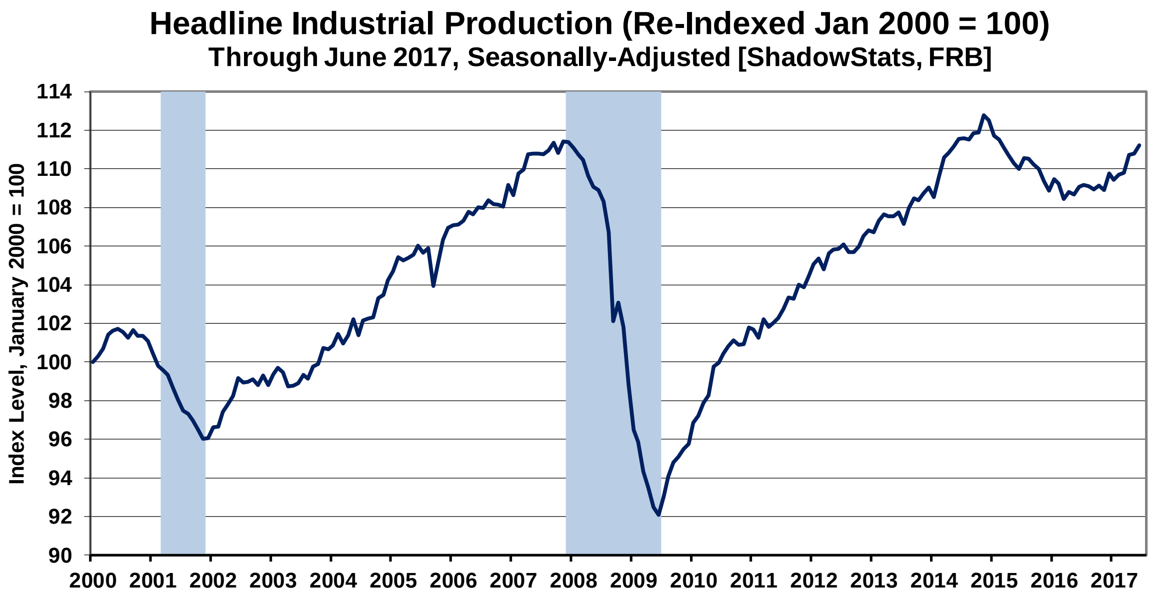
Year-to-Year Change. Year-to-year change in June 2017 industrial production was a gain of 1.97%, versus downwardly-revised gains of 1.95% in May 2017, 1.77% in April 2017, 1.26% in March 2017, 0.42% in February 2017 and an unrevised contraction in January 2017 of 0.02% (-0.02%).

Production Activity and Graphs—Corrected and Otherwise. In the context of the downside 2017 benchmark revisions to production of March 31st (see *Commentary No. 877*), and the subsequent regular monthly reporting of March, April and May activity, the July 14th headline production activity for June 2017 and annual growth detail are found and plotted in the *Reporting Detail* (*Graphs 22* to *25*), along with the drill-down graphs of major subcomponents of the production series (*Graphs 26* to *39*).

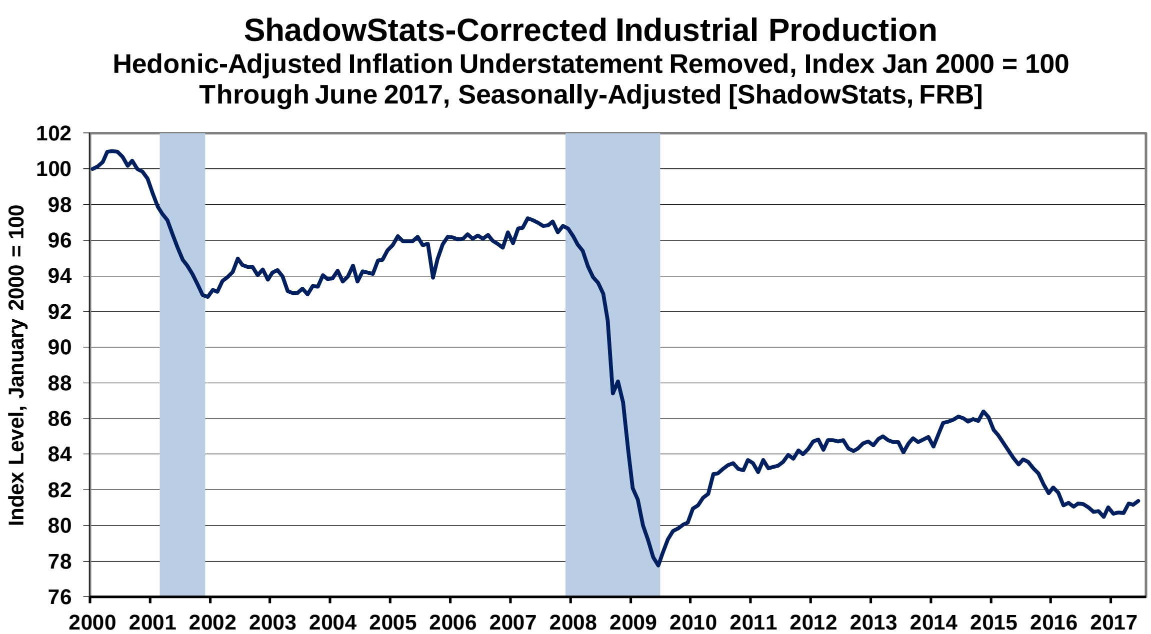
The level of headline production showed a topping-out process in third- and fourth-quarter 2014, followed by deepening quarterly downturns into first- and second-quarter 2015, with the second-quarter 2015 also beginning a string of quarterly year-to-year contractions. Third-quarter 2015 showed some bounce, but activity in fourth-quarter 2015 and in first- and second-quarter 2016 turned down anew, dropping sharply into negative quarter-to-quarter growth and continuing year-to-year decline. Third-quarter 2016 growth was positive on a quarter-to-quarter basis, but continued in annual contraction. That pattern repeated in fourth-quarter 2016. That seventh straight quarter of annual contraction was a circumstance never seen in industrial production surveying outside of periods that eventually were recognized formally as recessions.

With the reporting of first-quarter and second-quarter details 2017, production showed both annual and quarterly gains, although the headline activity has remained below pre-recession highs seen in 2007.

Graph 1: Indexed Headline Level of Industrial Production (Jan 2000 = 100)



Graph 2: Headline ShadowStats-Corrected Level of Industrial Production (Jan 2000 = 100)



Preceding *Graphs 1* and *2* address reporting quality issues tied just to the overstatement of headline growth in the total series that results directly from the Federal Reserve Board using too-low an estimate of inflation in deflating some components of its production estimates into real dollar terms, for inclusion in the Index of Industrial Production. Hedonic quality adjustments to the inflation estimates understate the inflation rates used in deflating those components; thus overstating the resulting inflation-adjusted growth in the headline industrial production series (see *Public Comment on Inflation* and *Chapter 9* of *2014 Hyperinflation Report—Great Economic Tumble*).

Graph 1 shows official, headline industrial production reporting, but indexed to January 2000 = 100, instead of the Fed's formal index that is set at 2012 = 100. The 2000 indexing simply provides for some consistency in the series of revamped "corrected" graphics including real retail sales (see the next section), new orders for durable goods and the GDP (see *Commentary No. 895* and *Commentary No. 896*) and as broadly covered in the *ECONOMY* section of *No. 859 Special Commentary*. It does not affect the appearance of the graph or reported growth rates (as can be seen with a comparison of *Graph 1* here to *Graph 24* in the *Reporting Detail* section).

Graph 2 is a recast version of *Graph 1,* corrected for the estimated understatement of the inflation used in deflating certain components of the production index. Estimated hedonic-inflation adjustments have been backed-out of the official industrial-production deflators used for headline reporting.

This "corrected" *Graph 2* shows some growth in the period subsequent to the official June 2009 trough in production activity, but that upturn has been far shy of the short-lived full recovery and the renewed expansion reported in official GDP estimation (see *Commentary No. 869* and the *ECONOMY* section of *No. 859 Special Commentary*). Unlike the headline industrial production data and the headline GDP numbers, corrected production levels never recovered pre-recession highs, although the headline aggregate production index quickly backed off its official two-month "recovery" in October and November 2014, and the headline manufacturing sector never has recovered fully since. Instead, the "corrected" series entered a period of protracted low-level, but up-trending, stagnation in 2010, with irregular quarterly contractions seen through 2013, an irregular uptrend into 2014, a topping-out in late-2014, generally turning lower through fourth-quarter 2016 and into early-2017, with a small uptick recent activity.

Where the corrected series has remained well shy of a formal recovery, both the official and corrected series suffered an outright contraction in both first- and second-quarter 2015; that is a pattern of severe economic weakness last seen during the economic collapse. Despite the brief third-quarter 2015 quarter-to-quarter uptick, headline fourth-quarter 2015 and first- and second-quarter 2016 industrial production continued in quarter-to-quarter contractions, but rallied thereafter. A string of seven quarters of year-to-year contraction began in second-quarter 2015 and continued through fourth-quarter 2016. First-quarter 2017 GDP grew both quarter-to-quarter and year-to-year, as did second-quarter 2017, as discussed in the *Reporting Detail*.

Retail Sales (Nominal and Real)—June 2017—Despite Gimmicked Seasonal-Adjustment Boosts and Negative Inflation Both Headline Nominal and Real Sales Contracted in June. Headline nominal sales showed another "unexpected" monthly decline. That was in the context of a sharp slowing in real annual growth, which generated a meaningful signal for imminent recession.

Monthly Nominal June Decline Was Despite Underlying 0.35% Growth Spike from Inconsistent Seasonal Adjustment Factors. Discussed in the *Reporting Detail*, for the second consecutive month, and for the second time this year, headline monthly retail sales numbers appeared to have been skewed significantly by the lack of consistent reporting of seasonally-adjusted retail sales data, with the effect of boosting relatively monthly headline growth by 0.35% on a seasonally-adjusted, but inconsistently-reported basis. That said, headline nominal retail sales declined month-to-month by 0.16% (-0.16%), instead of what otherwise likely would have been a relative drop in the data of 0.51% (-0.51%), again, when viewed based on consistent reporting.

Nominal Retail Sales. The "advance" estimate of June 2017 Retail Sales declined by a statistically insignificant 0.16% (-0.16%) [rounds to 0.2% (-0.2%)], following a revised decline of 0.06% (-0.06%) in May 2017 and a downwardly-revised monthly gain of 0.33%. The upside revision to May's monthly growth rate reflected the downside revision April activity.

The June 2017 nominal year-to-year change in Retail Sales showed a statistically-significant increase of 2.85%, versus annual gains of 4.06% in May 2017, and 4.47% in April 2017.

Real Retail Sales. Adjusted for headline June 2017 CPI-U inflation (see the *Reporting Detail*) real month-to-month retail sales declined by 0.13% (-0.13%) in June 2017, versus revised gains of 0.07% in May 2017 and 0.16% in April. Real annual Retail Sales growth slowed to 1.18% in June 2017, versus 2.14% in May 2017 and 2.23% in April 2017.

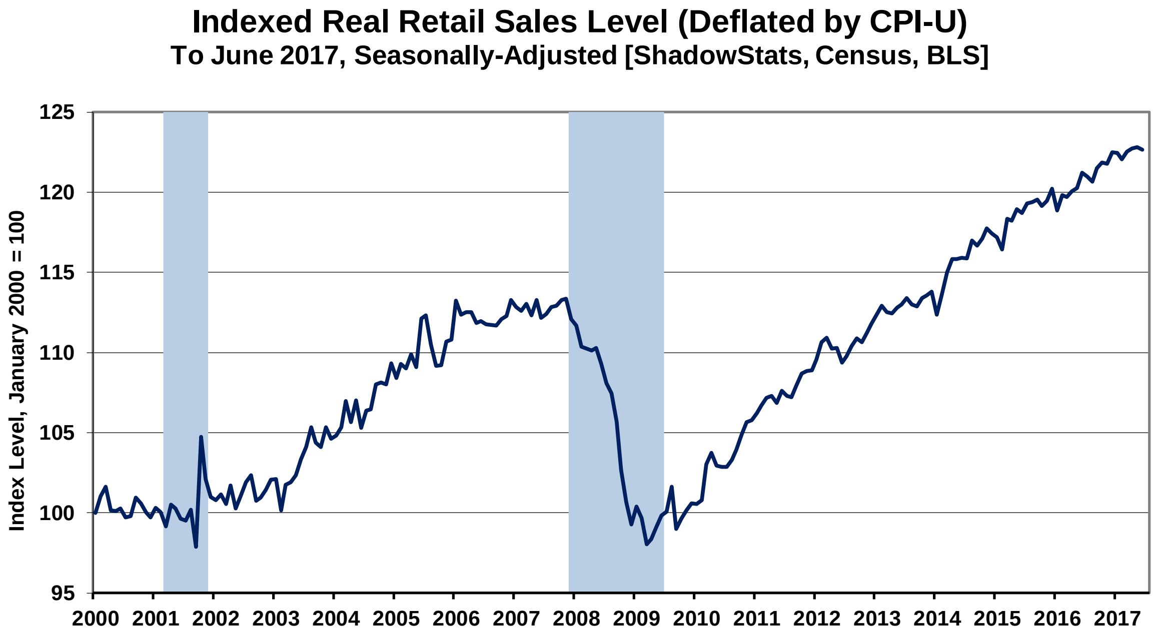
During normal economic times, annual real growth in Retail Sales at or below 2.0% signals an imminent recession. Where year-to-year real growth in June 2017 Retail Sales just sank to 1.18%, from 2.14% in May 2017, that is a major signal for imminent, if not coincident economic contraction.

Real Retail Sales Graphs, Corrected and Otherwise. In the *Reporting Detail*, *Graphs 40* and *42* show the level of real retail sales activity (deflated by the CPI-U), while *Graphs 41* and *43* show year-to-year percent change. The apparent "recovery" of headline real retail sales shown in the following *Graph 3* (see also *Graph 40* in the *Reporting Detail*) generally continued into late-2014. Although headline reporting turned down in December 2014, into first-quarter 2015, it turned higher into the third-quarter 2015, slowed to a near-standstill in fourth-quarter 2015 and contracted in first-quarter 2016, with an uptick in second-quarter 2016, renewed slippage into third-quarter 2016, a further uptick in fourth-quarter 2016 and into early-2017, turning down in May and June.

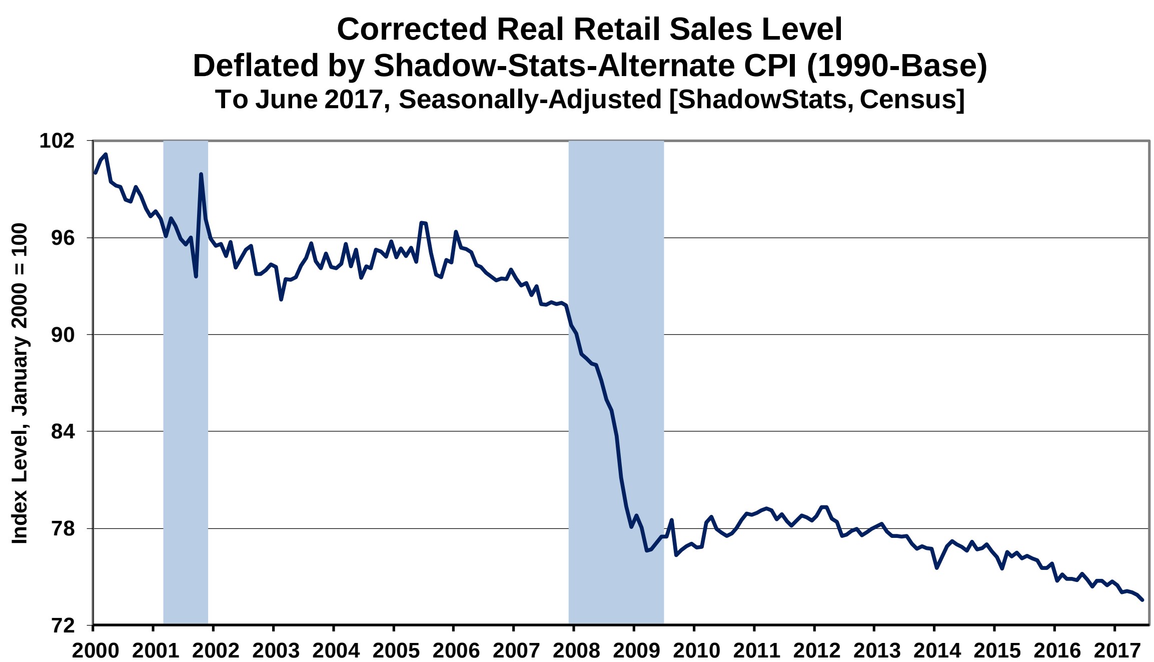
Nonetheless, headline real growth in retail sales continued to be overstated heavily, due to the understatement of CPI-U inflation used in deflating the retail sales series. Discussed more fully in *Chapter 9* of *2014 Hyperinflation Report—Great Economic Tumble – Second Installment* and *Public Commentary on Inflation Measurement*, deflation by too-low an inflation number (such as the CPI-U) results in the deflated series overstating inflation-adjusted economic growth.

Both of the accompanying graphs are indexed to January 2000 = 100.0 to maintain consistency in the series of graphs related to corrected inflation-adjustment, including the regular plots of the "corrected" industrial production index, the "corrected" new orders for durable goods and the "corrected" GDP (all covered respectively in *Commentary No. 887*, *Commentary No. 889* and *Commentary No. 889*, and also in *No. 859 Special Commentary*).

Graph 3: Headline Real Retail Sales Level, Indexed to January 2000 = 100



Graph 4: "Corrected" Real Retail Sales Level, Indexed to January 2000 = 100



The first graph here reflects the official real retail sales series, except that it is indexed, instead of being expressed in dollars. The plotted patterns of activity and rates of growth are exactly the same for the official series, whether the series is indexed or expressed in dollars, again, as is evident in a comparison of *Graph 3* with *Graph 40* in the *Retail Sales—Nominal and Real* in the *Reporting Detail* section.

Instead of being deflated by the CPI-U, the "corrected" real retail sales numbers—in *Graph 4*—use the ShadowStats-Alternate Inflation Measure (1990-Base) for deflation. With the higher inflation of the ShadowStats measure, the revamped numbers show a pattern of plunge and stagnation and renewed downturn. That pattern generally is consistent with consumer indicators such as real average weekly earnings (see *Graph 11* in the *Consumer Liquidity Watch*), faltering consumer liquidity conditions (again see the *Consumer Liquidity Watch* and the *ECONOMY* section of [*No. 859 Special Commentary*]). Extended coverage is found in the *Reporting Detail*.

Consumer Price Index (CPI)—June 2017—Inflation "Unchanged" at Down 0.02% (-0.02%) for the Month, Slowed to 1.63% Year-to-Year. Regular reporting in the first-half of the calendar year shows a pattern of downside seasonal-adjustments to monthly CPI growth, from January through June. The headline monthly contractions in June of 0.02% (-0.02%) and May 2017 of 0.13% (-0.13%) and gain of 0.17% in April all were depressed, reflecting continued negative seasonal adjustments to gasoline prices. Not adjusted for seasonal factors, as most people experience life, headline CPI-U inflation rose by 0.09% month-to-month in both June and May, versus a headline gain of 0.30% in April.

Unadjusted, year-to-year CPI-U inflation continued to back off its 60-month high of 2.74% in February 2017, to 2.38% in March 2017, 2.20% in April 2017, 1.87% in May 2017 and now 1.63% in June 2017, with some indication that the June level could be at a near-term trough in the annual inflation. The inflation surge into February had been driven by gasoline prices, not by an overheating economy. Still, the current 1.63% 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 June 2017 year-to-year inflation at 5.2%, based on 1990 methodologies, and at 9.3%, based on 1980 methodologies.

The Consumer Price Index for All Urban Consumers (CPI-U) is the broadest headline consumer-inflation number and is used to adjust numerous economic measures such as Retail Sales for inflation effects as reflected in *Retail Sales—Nominal and Real* of the *Reporting Detail*. 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. June 2017 seasonally-adjusted CPI-W declined month-to-month by 0.46% (-0.46%), having declined in May by 0.20% (-0.20%) and having gained 0.18% in April. Unadjusted, year-to-year change in the June 2017 CPI-W was 1.50%, down from 1.78% in May 2017 and from 2.14% in April 2017.

Real Average Weekly Earnings—June 2017—Month-to-Month Real Earnings Rose. Related details here are updated in today's *Consumer Liquidity Watch*, reflected there in *Graph 11* (page 17).

Producer Price Index (PPI)—June 2017—Final Demand PPI Annual Inflation Notched Higher, Despite Heavily-Negative Seasonal Adjustments Hitting Food and Energy. In the continued context of negatively-skewed seasonal adjustments to, and poor-quality theoretical constructs of underlying component series, headline aggregate "wholesale inflation" or the Final Demand Producer Price Index rose by 0.09% in June 2017. While that composite number reflected a headline PPI Goods inflation gain of 0.09% month-to-month, Construction Spending inflation up by 0.17% and the dominant “margins” in the Services sector rising by 0.18% (still boosted by declining gasoline prices—see *Services-Side Nonsense Detail*). Those combined factors do not add up, which often is the case here. Annual growth continued to slow from its recent multi-year peak of 2.73% in February 2017, to 1.63% in June 2017.

Beyond services-related definitional issues (see the *Reporting Detail*), the headline seasonally-adjusted monthly goods inflation in June of 0.09% reflected surging food prices, up by 0.60% offsetting the headline decline in energy prices of 0.52% (-0.52%). Before seasonal adjustments, however, goods inflation jumped by 0.36% in the month, with food inflation surging by 1.01% and energy prices jumping by 1.34%.

[The* Reporting Detail*, beginning on page 25, contains extended analysis and graphs.]

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CONSUMER LIQUIDITY WATCH

CONSUMER LIQUIDITY CONDITIONS: INCOME, CREDIT AND RELATIVE OPTIMISM.

[Please Note: the Consumer Liquidity Watch *–now a standard feature for all* Regular Commentaries—*will reflect the most recent detail. Where much of the text will be repetitive from the prior* Regular Commentary*, updates will be noted. Updates in this* Watch *are versus the prior* Consumer Liquidity Conditions *noted in the second paragraph following.]*

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 Real Retail Sales and New Residential Construction (see today’s Retail Sales discussion and the recent *Commentary No. 897*), along with related, negative impact on the broad economy.

This initial *Consumer Liquidity Watch* updates details from *Commentary No. 897*, *General Commentary No. 894*, *Commentary No. 893* and the *CONSUMER LIQUIDITY* section of *No. 859 Special Commentary*. A regular feature of this section, going forward, always will be the most-recent, related economic detail available. Against the prior missives noted above, today’s detail updates monthly headline indications of consumer optimism; updates consumer income, including real average weekly earnings and a note on the monthly real median household income measure; and updates consumer credit circumstances

***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*, the broad underlying consumer liquidity fundamentals simply have not supported, and still do not support a turnaround in general economic activity 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 73.0% of the headline real, first-quarter 2017 U.S. GDP.

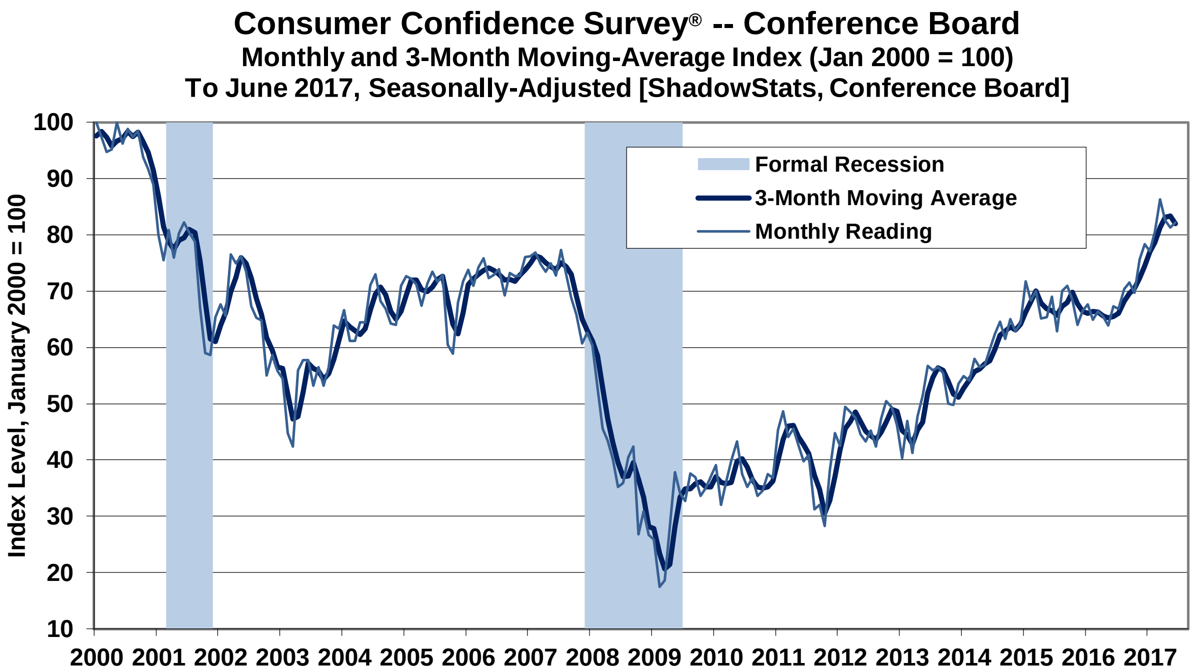
With the better-quality economic indicators and underlying economic reality never having recovered fully from the collapse into 2009, consumers increasingly should pull back on consumption in the months ahead. Underlying reality is evident in more-meaningful economic indicators—not the GDP—irrespective of the transient, gimmicked boosts to, and current headline slowing in, that most worthless of economic series, discussed most recently in *Commentary No. 896*.

Updated Consumer Optimism: June/Early-July Consumer Confidence and Sentiment Measures Continued to Falter. This detail incorporates June 2017 reporting (updated June 27th) for The Conference Board's Consumer-Confidence Index® (Confidence) and the early-July 2017 reporting (updated July 14th) for University of Michigan's Consumer-Sentiment Index (Sentiment). Reflected in *Graphs 5* and *6*, 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 now, however, appear to have topped and have pulled back. The latest readings remain off their respective post-election, euphoric peaks of March 2017 (Confidence) and January 2017 (Sentiment).

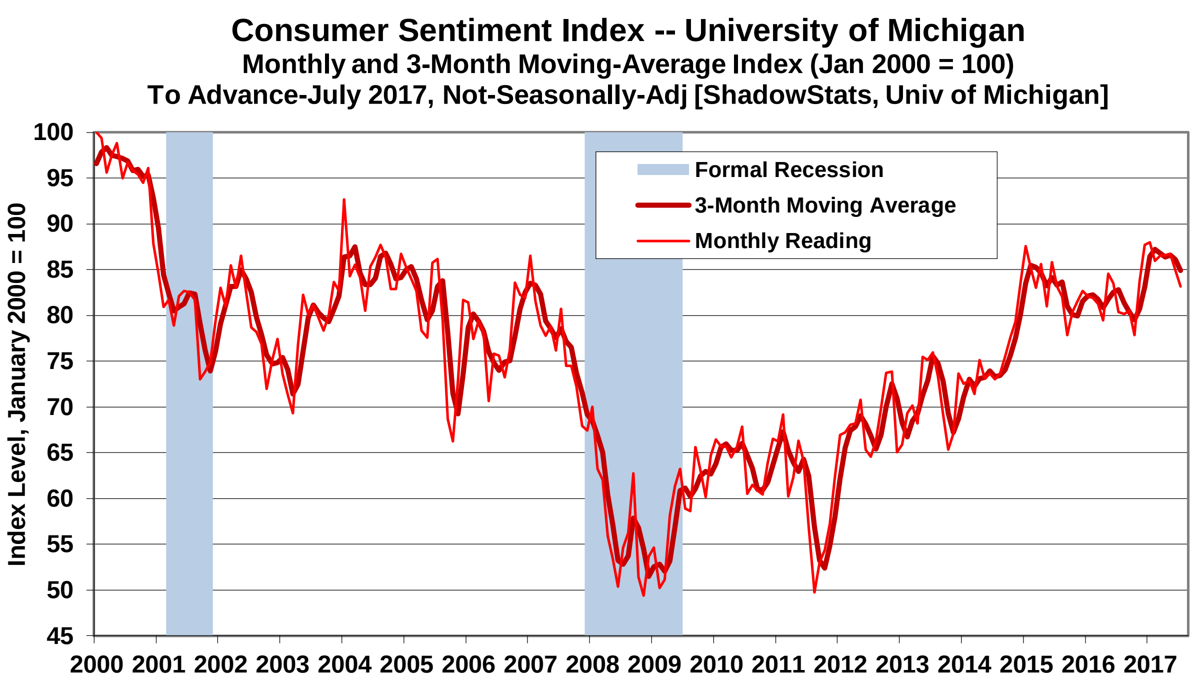
The Conference Board's seasonally-adjusted [unadjusted data are not available] Consumer-Confidence Index® (*Graph 5*), and the University of Michigan's not-seasonally-adjusted Consumer-Sentiment Index (*Graph 6*), again, both soared post-election, into early 2017, with Confidence booming into and topping in March and with sentiment booming into and topping in January 2017. The three-month moving averages in both series broke to pre-recession highs, with the Confidence hitting levels not seen since before the 2001 recession. The moving averages also have begun to falter, although still at high levels.

Showing the Consumer Confidence and Consumer Sentiment measures on something of a comparable basis, *Graphs 5* to *7* 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.

Graph 5: Consumer Confidence (2000 to 2017)



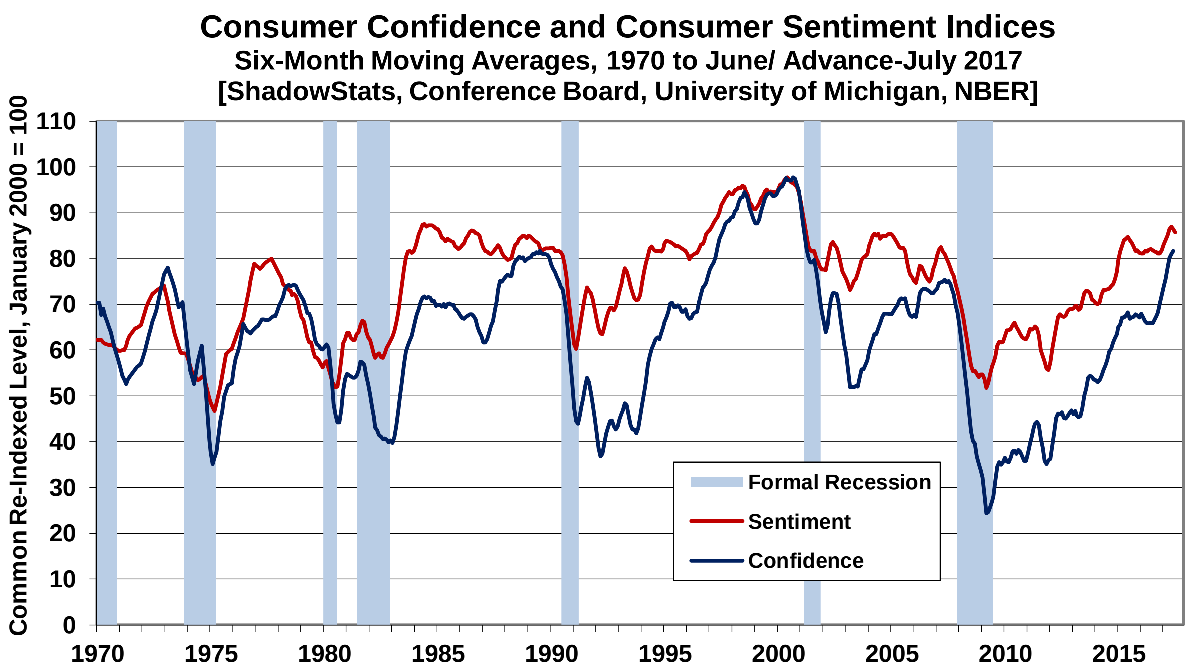
Graph 6: Consumer Sentiment (2000 to 2017)



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.

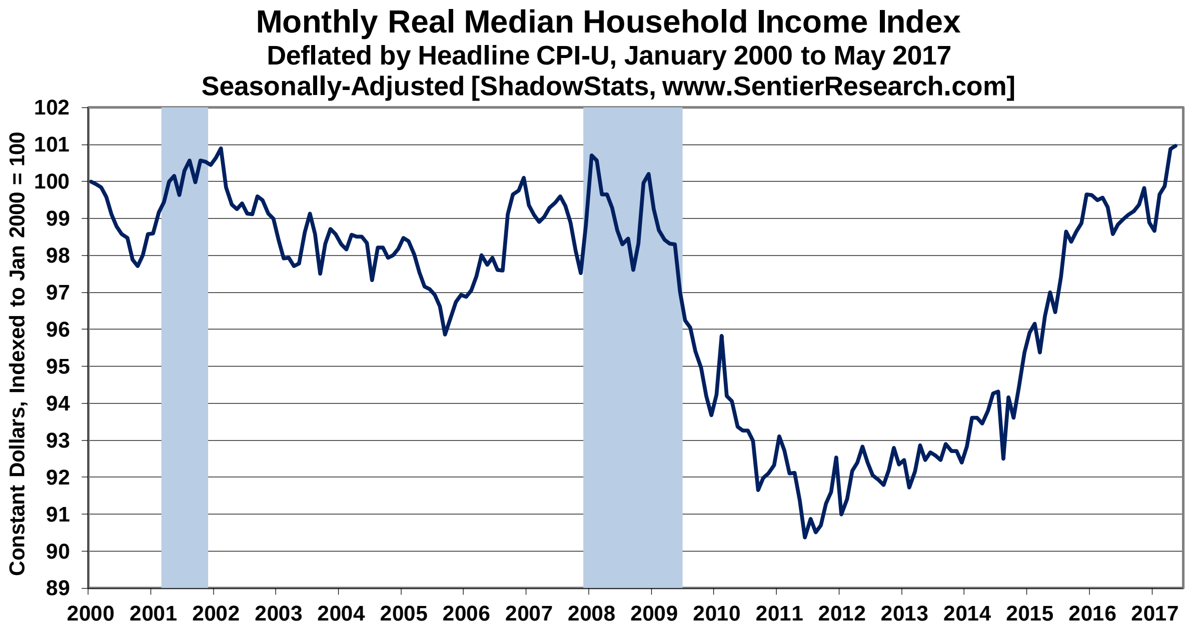
Smoothed for irregular, short-term volatility, the two series still generally had held at levels seen typically in recessions, until the post-2016 election circumstance. Suggested in *Graph 6*—plotted for the last 47 years—the latest readings of Confidence and Sentiment recently have recovered levels 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 7: Comparative Confidence and Sentiment (6-Month Moving Averages, 1970 to 2017)

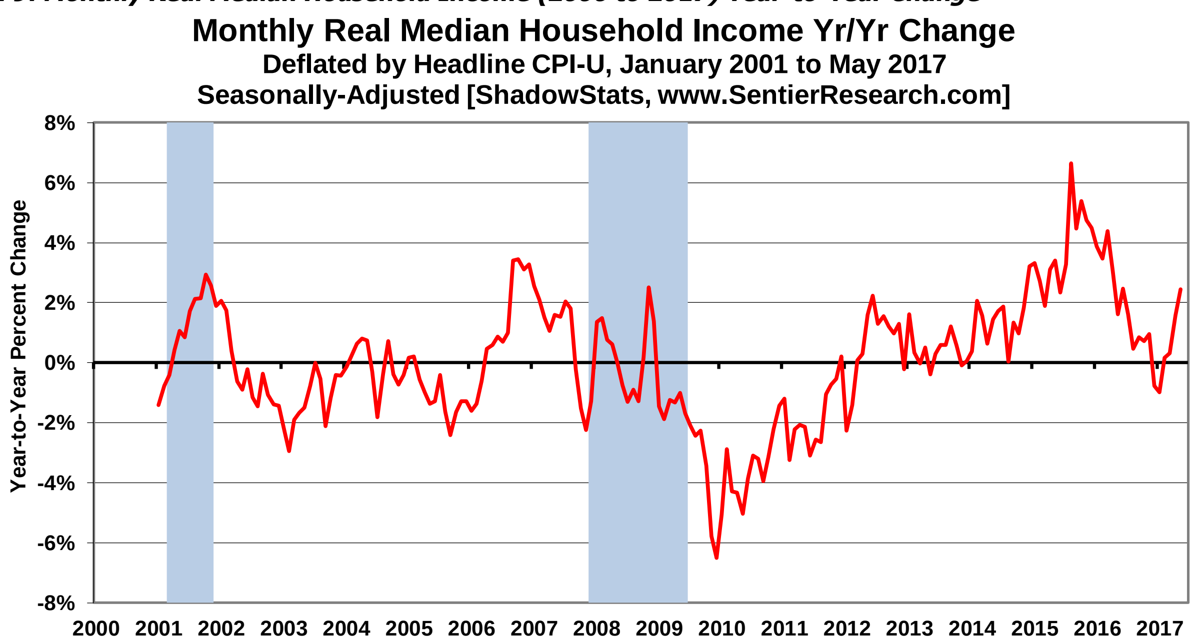


Updated Consumer Income: May 2017 Real Median Household Income Was Statistically Unchanged, Despite a Boost from Falling Gasoline Prices. Previously discussed in *General Commentary No. 894*, and in the contexts of continued, faltering gains in post-election consumer optimism, and inflation-adjusted 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%), as reported by www.SentierResearch.com. That followed a statistically-significant monthly gain of 1.00% in April 2017. As shown in *Graph 8*, such enabled May 2017 real monthly median household income to hold a level regained last month and otherwise last seen fifteen years ago, in February 2002. Year-to-year real median household income rose to 2.44% in May 2017, the highest level since last June, following an annual gain of 1.57% in April 2017 (see *Graph 9*).

Graph 8: Monthly Real Median Household Income (2000 to 2017) Index, January 2000 = 100



Graph 9: Monthly Real Median Household Income (2000 to 2017) Year-to-Year Change

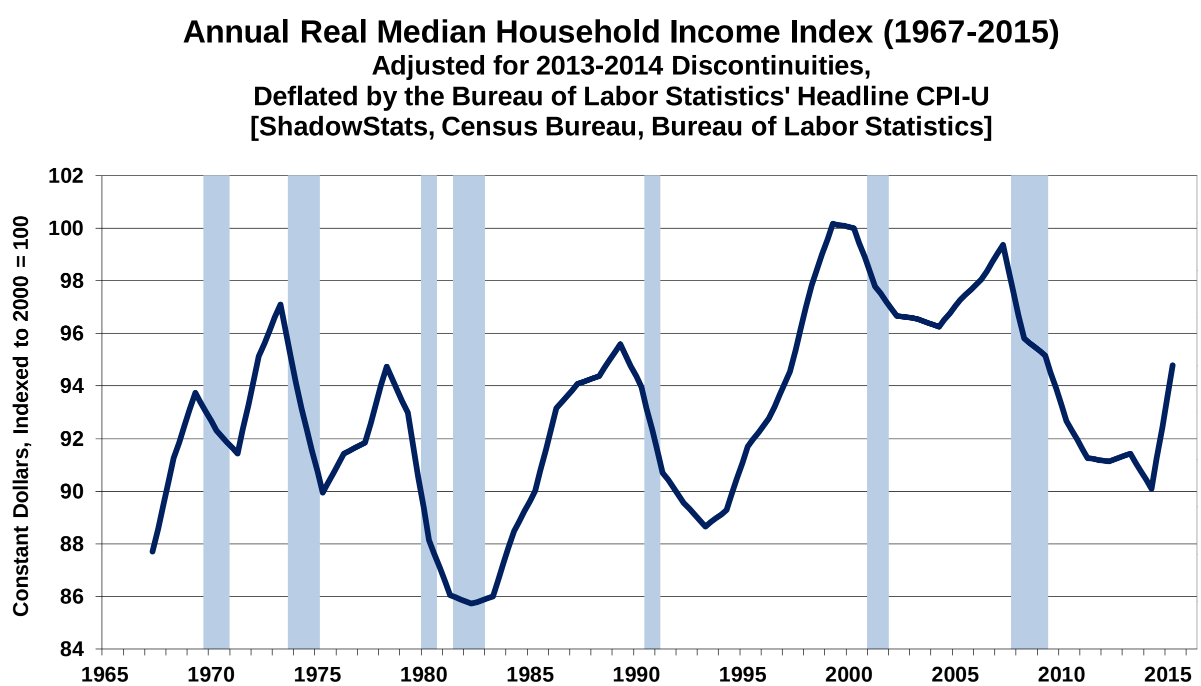


Where real median income plunged into the headline trough of the economic collapse in 2009, it did not then rebound in tandem with the headline GDP activity. When the GDP purportedly started its solid economic recovery in mid-2009, the monthly household income numbers nonetheless plunged to new lows, 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 should resume turning down anew, as headline pace of monthly consumer inflation picks up anew, perhaps as early as the July CPI.

Nonetheless, the recent "rebound" in the series still has 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 has been 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.

This measure of real monthly median household income generally can be considered as a monthly version of the annual detail shown in *Graph 10*, which was updated ten months ago for 2015 detail (see the full analysis of the 2015 annual household income reporting in *Commentary No. 833*, including an analysis of annual detail on income variance or "inequality"). The relative jump seen in the headline annual 2015 median income, despite formal adjustment for discontinuities in the recent annual reporting, was due largely to series redefinitions, not due to a sudden change in consumer liquidity, other than as tied to the collapse in gasoline prices and a related spike in the inflation-adjusted numbers. The level of real annual median household income for 2015, not only was below that seen at the purported trough of the economic collapse into 2009, but also it was below levels seen in the early-1970s and the late 1980s.

Graph 10: Annual Real Median U.S. Household Income (1967 to 2015)



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. At present, the Census Bureau publishes a broadly-similar series on an annual basis, but with an extraordinary time lag. The official Census annual version for 2016 is due for release and publication in September 2017. Again, see *Commentary No. 833* for the 2015 detail published in September 2016.

Differences in the Monthly versus Annual Median Household Income. The general pattern of relative historical weakness also has been seen in the headline reporting of the annual Census Bureau numbers, again, shown in preceding *Graph 10*, with 2014 real annual median household income having hit a ten-year low, and, again, with the historically-consistent 2015 annual number still holding below that seen when the collapsing economy hit its purported trough in 2009. The Sentier numbers had suggested a small increase in 2014 versus 2013 levels. Still, the monthly and annual series remain broadly consistent, although based on separate questions within the monthly Consumer Population Series (CPS), as conducted by the Census Bureau.

Where Sentier has 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.

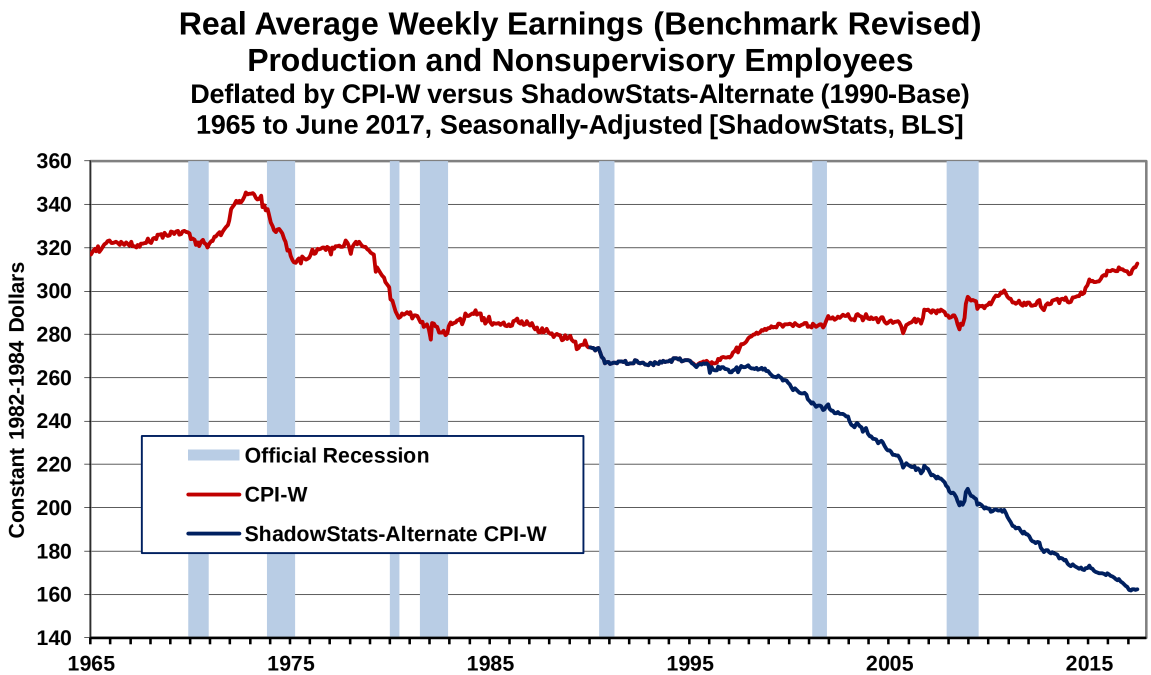
Real Average Weekly Earnings—June 2017—Month-to-Month Real Earnings Spiked by Declining Inflation. For the production and nonsupervisory employees category—the only series for which there is a meaningful history (see the full discussion in the *CPI* section of the *Reporting Detail*), spiked monthly by lower inflation in the context of headline, seasonally-adjusted declines in gasoline prices, the regularly-volatile real average weekly earnings were up by 0.53% in June 2017 (as reported by the Bureau of Labor Statistics on July 14th. That was against an unrevised gain of 0.04% in May 2017 and a revised monthly gain of 0.39% in April 2017. Year-to-year, the adjusted June 2017 year-to-year real change rose to 1.10%, versus revised annual gains of 0.59% in May 2017 and 0.49% in April 2017.

Initial reporting of second-quarter 2017 activity reflected an annualized real quarterly gain of 4.01%, following an unrevised first-quarter 2017 contraction of 1.13% (-1.13%), a fourth-quarter 2016 contraction of 1.36% (-1.36%), 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 0.73%, following an unrevised 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 major downside risk to headline real GDP reporting.

Graph 11 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, 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.

Graph 11: Real Average Weekly Earnings, Production and Nonsupervisory Employees, 1965-to-Date



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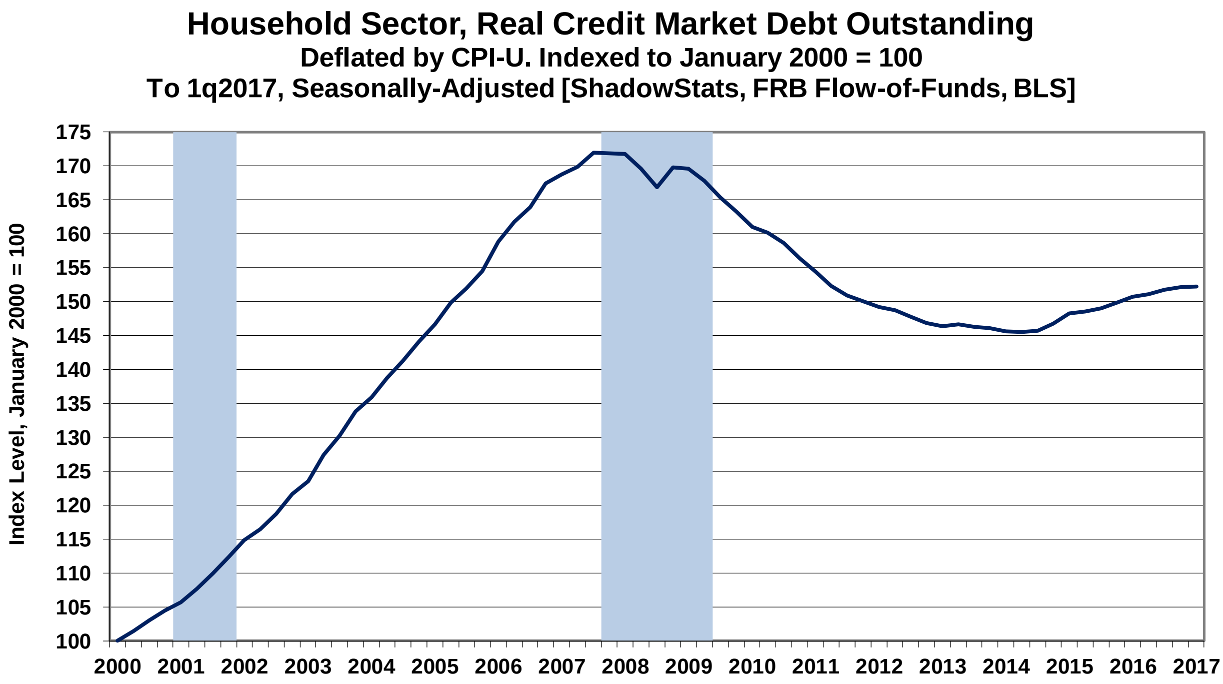
Updated Consumer Credit: Lack of Meaningful Real Consumer Credit Growth Remains an Economic Constraint. The final four graphs on consumer conditions address consumer borrowing. Where debt expansion can help make up for a shortfall in income growth, adequate expansion of consumer debt, which would help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

Consider *Graph 12* 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 13* to *15*.

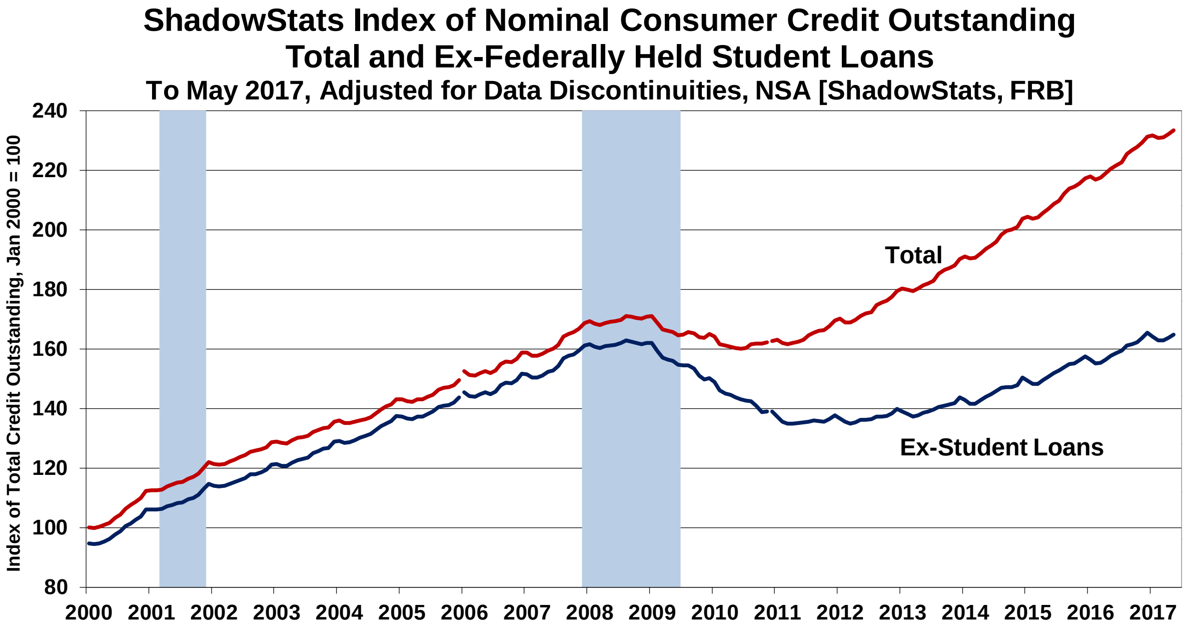
The ShadowStats analysis usually focuses on the particular current weakness in monthly levels of consumer credit, net of what has been rapidly expanding government-sponsored student loans. Where detail on that series is only available not-seasonally-adjusted, the following graphs are so plotted.

Graph 12: Household Sector, Real Credit Market Debt Outstanding (2000 through First-Quarter 2017)

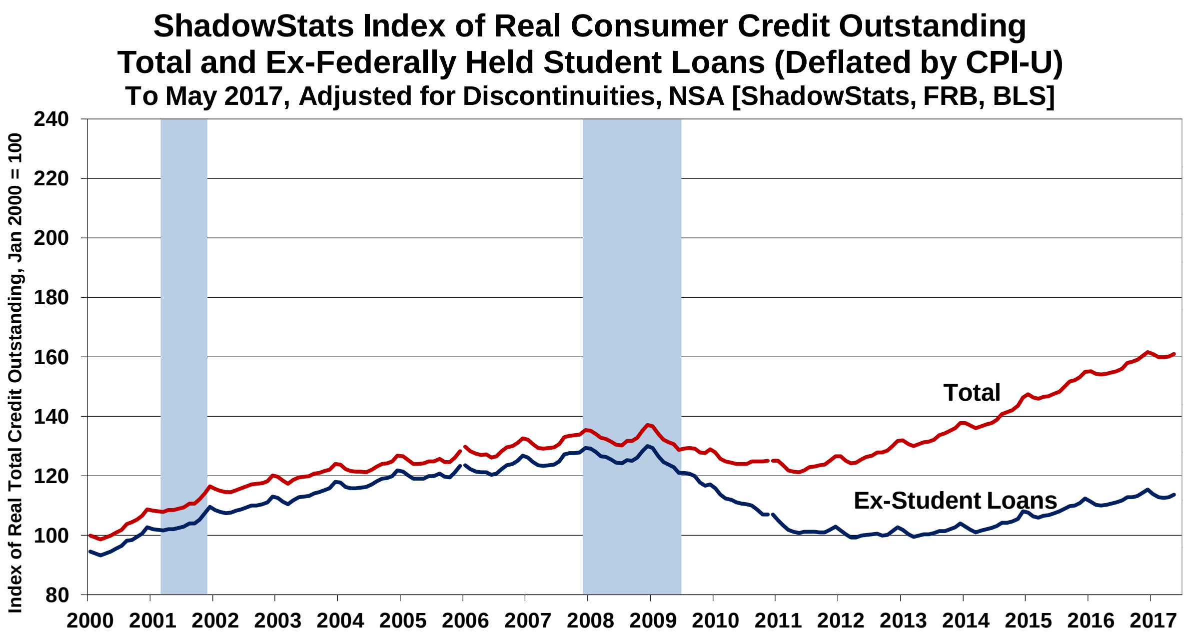


Shown through the latest reporting (May 2017), *Graph 13* of monthly Consumer Credit Outstanding is a subcomponent of *Graph 12* on real Household Sector debt. Where *Graph 13* reflects the nominal reporting, not adjusted for inflation, inflation-adjusted real activity for the monthly Consumer Credit Outstanding is shown both in terms of level (*Graph 14*) and in terms of year-to-year change (*Graph 15*).

Graph 13: Nominal Consumer Credit Outstanding (2000 to 2017)



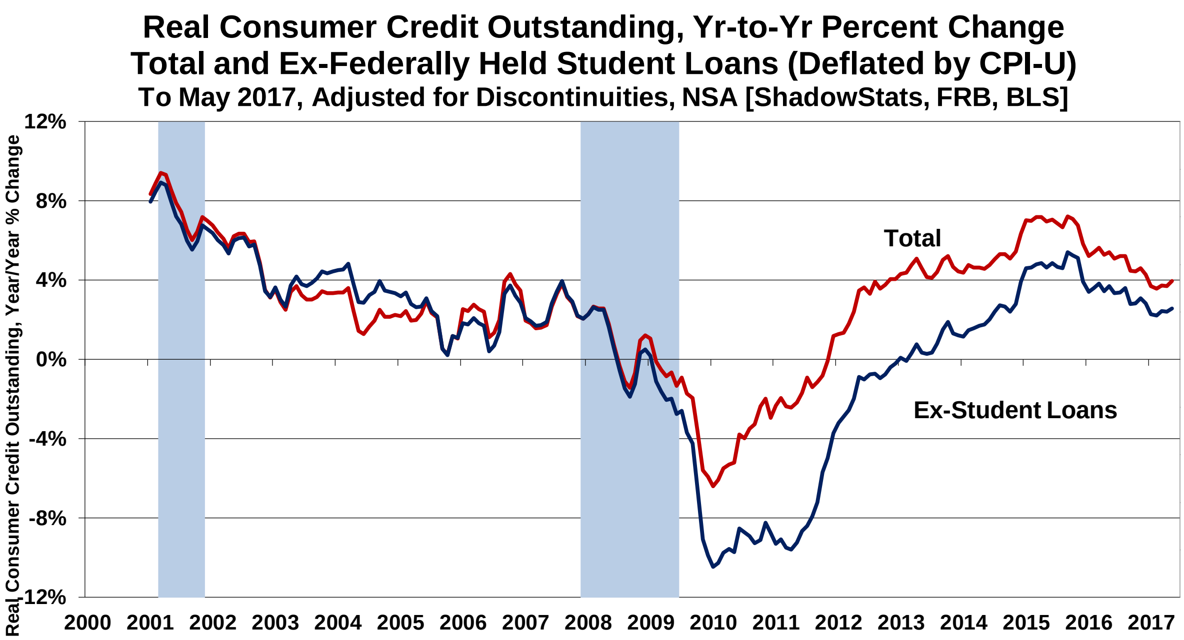
Graph 14: Real Consumer Credit Outstanding (2000 to 2017)



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 dips in the not-seasonally-adjusted consumer credit reflect a seasonal pattern, the pace of year-to-year growth continues to slow, suggesting some tightening of credit conditions. Adjusted for discontinuities and inflation, ex-student loans, consumer credit outstanding in May 2017 was down from its December 2007 pre-recession peak by 15.5% (-15.5%). Year-to-year growth in *Graph 15* tends to resolve most of the monthly distortions in the not-seasonally-adjusted data

Graph 15: Year-to-Year Percent Change, Real Consumer Credit Outstanding (2000 to 2017)



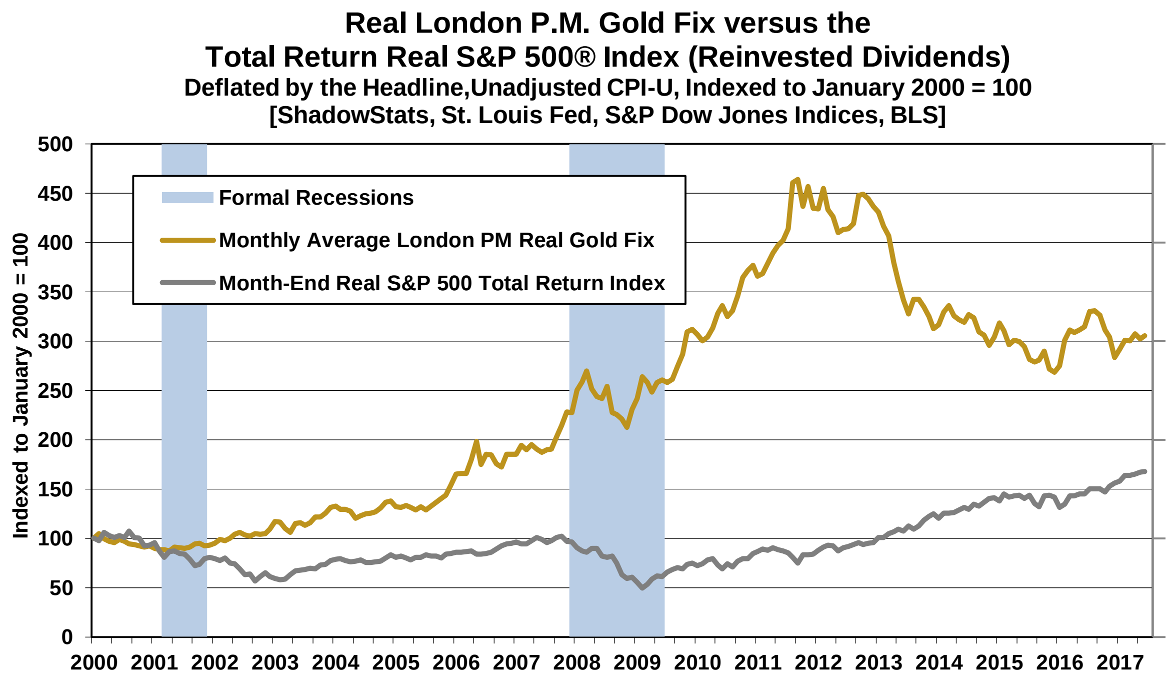
HYPERINFLATION WATCH

U.S. DOLLAR, GOLD AND FOMC

U.S. Dollar Begins to Soften Along with Economic Expectations. Beyond the headline June employment and unemployment detail (see prior *Commentary No. 898*), and as discussed in the *Opening Comments*, headline June economic reporting, as of mid-July, generally has continued on the downside of consensus expectations. Accordingly, consensus expectations have begun to soften in negative feedback, and should continue to soften, amidst further weakness in pending headline data. Particular risk looms with potential heavily-negative GDP benchmark revisions on July 28th (to be previewed in *Commentary No. 900* of July 19th). Unfolding reporting circumstances in the month or two ahead meaningfully increase the risk of market expectations shifting on policies of the Federal Reserve Board and its Federal Open Market Committee (FOMC). In response to the weaker-than-expected key reporting of June Retail Sales and Industrial Production on Friday (July 14th), the markets shifted somewhat against the U.S. dollar to favor gold and silver. That pattern should intensify sharply in the months ahead.

Gold and Silver Remain the Best Hedges in the Difficult Times Ahead. Reflected in *Graph 16*, holding of physical gold has outperformed holding the S&P 500 and reinvesting related dividends, since the turn of the millennium. Although the relative performances there are mixed over the years, difficult times ahead likely will favor the holding of physical gold over stocks. While physical gold has been much maligned and often negatively manipulated by central banks and some banking and Wall Street interests focused in other areas, it remains the best long-term, liquid hedge against inflation.

Graph 16: Inflation-Adjusted Gold versus the Inflation-Adjusted Total Return S&P 500 (2000 to June 2017)



The accompanying plot shows the values, adjusted for CPI-U inflation, indexed to January 2000 = 100. Putting aside issues of the CPI understating inflation, as commonly experienced by the general populace, the S&P 500 with reinvested dividends did not top its real value of January 2000 meaningfully until 2013, while gold has been consistently above its real value of January 2000 since 2003.

Discussed in *General Commentary No. 894* and in the *Opening Comments* and *Hyperinflation Watch* of *Commentary No. 892*, economic reporting during June showed a marked downturn versus consensus forecasts. That has continued in July, although not as severely as the June shocks. While such circumstances usually signal an unfolding, major downshift in underlying economic reality, the current circumstance also forewarns of a potential shift in FOMC activity, a circumstance still not established in consensus expectations, at this time.

Currently unfolding, weaker, headline business conditions likely will qualify as the "substantially adverse economic circumstances" that the FOMC has allowed as a trigger for renewed and expanded quantitative easing, with the June 14th rate hike likely the last one for some time. The recent series of rate hikes has provided the FOMC with a minimal policy cushion for the increasingly difficult times ahead.

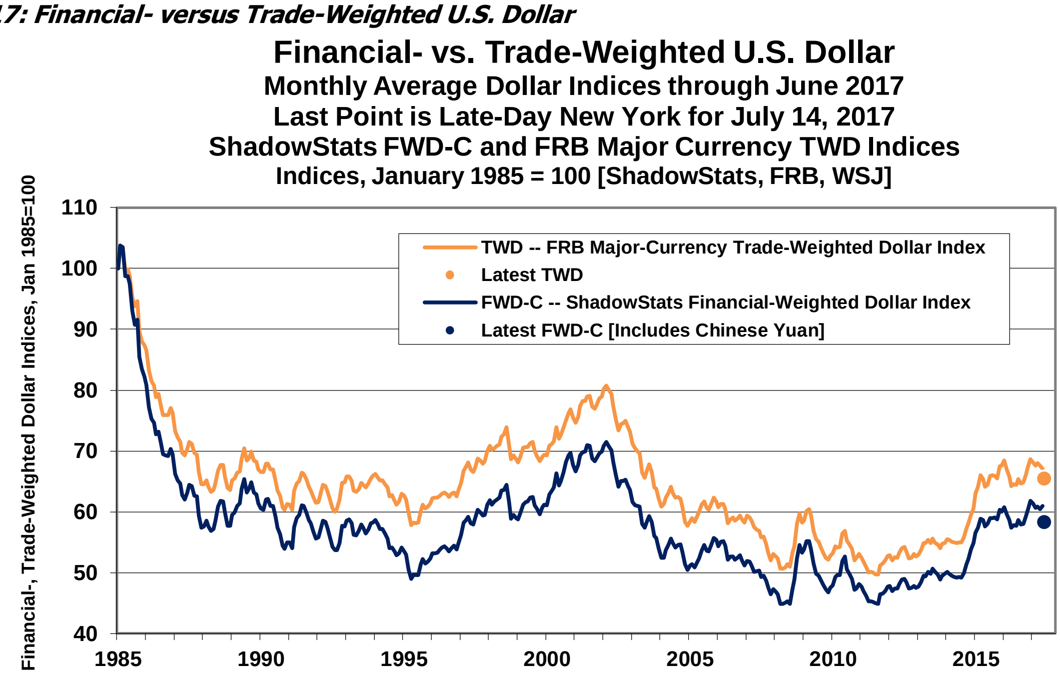
The U.S. central bank's primary concern remains the continuation and maintenance of a stable domestic banking system. While domestic economic stability and strength is an extremely important issue, it is secondary in the Fed's consideration to maintaining banking-system stability, strength and solvency. The big problem for the Fed remains that a weak economy stresses banking-system solvency issues. Expanded quantitative easing addresses banking-system liquidity and solvency, not economic growth.

The likely shift in terms of Fed policy would be a cessation of incremental rate hikes and indeed a shift back towards expanded quantitative easing. Such action likely would trigger a massive sell-off in the U.S. dollar, which otherwise has been propped by expectations of continued recent FOMC rate hikes. Heavy selling in the U.S. equity and credit markets likely would follow, as foreign investors increasingly shunned U.S. dollar-denominated assets.

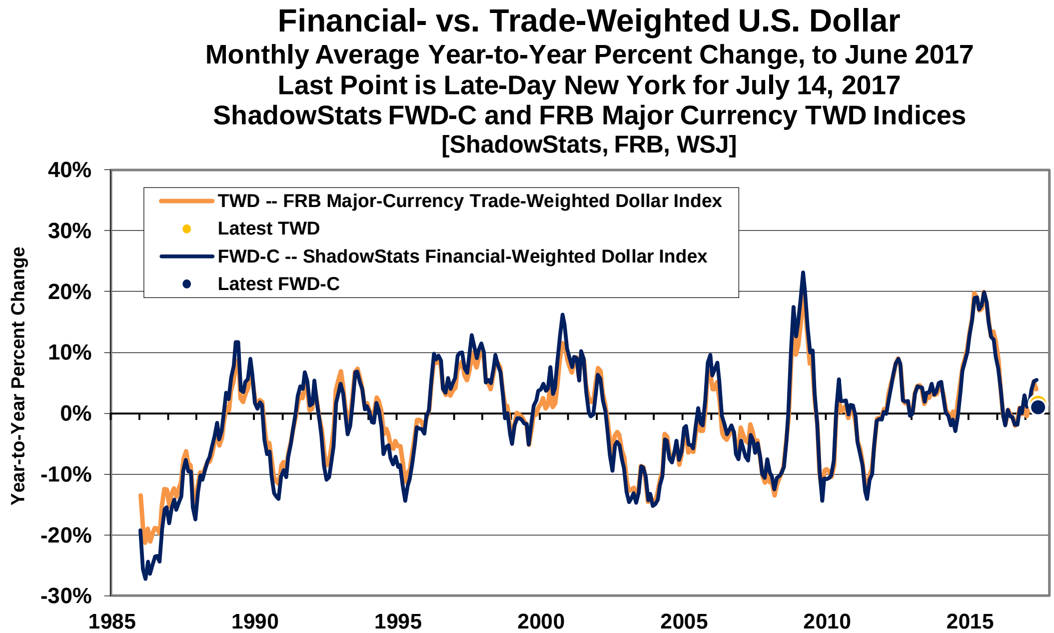
The circumstances here and the outlook still remain as broadly outlined in *No. 859 Special Commentary*; currently shifting headlines only reflect the continued movement and evolution forward in time of the Fed's difficulties discussed in that missive. Increasingly, the U.S. dollar appears to have topped and the near-term gold price appears to have bottomed.

Following are the updated U.S. dollar and gold graphs, showing monthly-average plots of prices covering the U.S. Dollar (*Graphs 17* and *18*), along with gold (*Graphs 19*, *20* and *21*), where the July points on the graphs reflect late-day New York prices for Friday, July 14th.

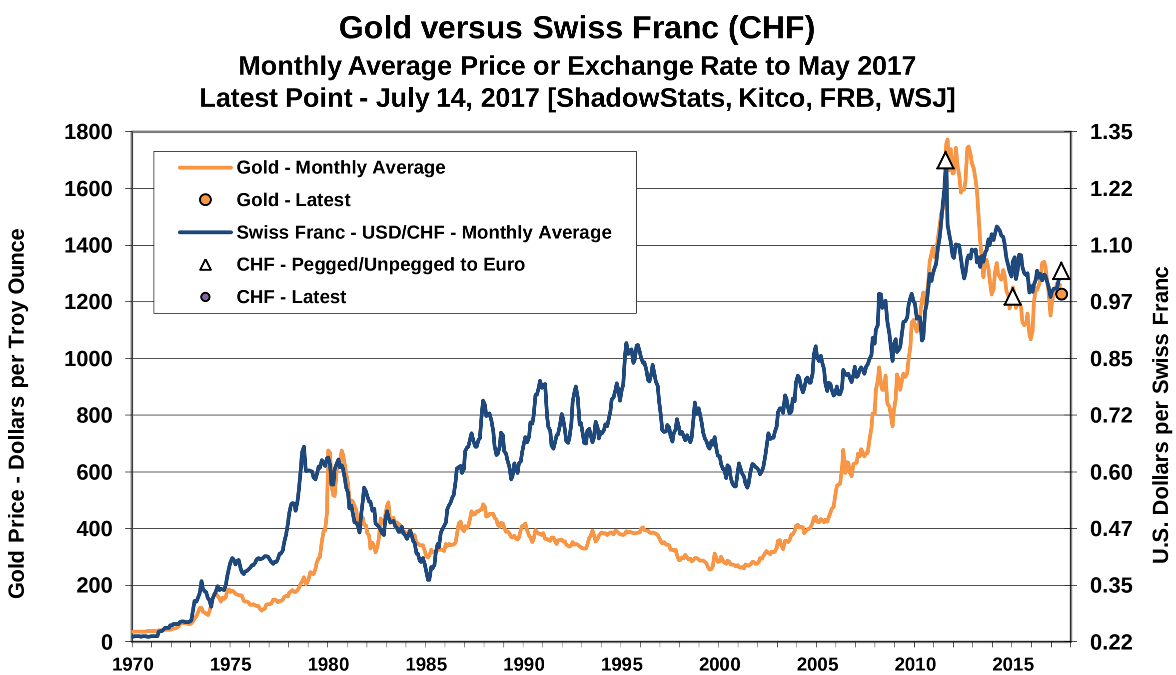
Graph 17: Financial- versus Trade-Weighted U.S. Dollar



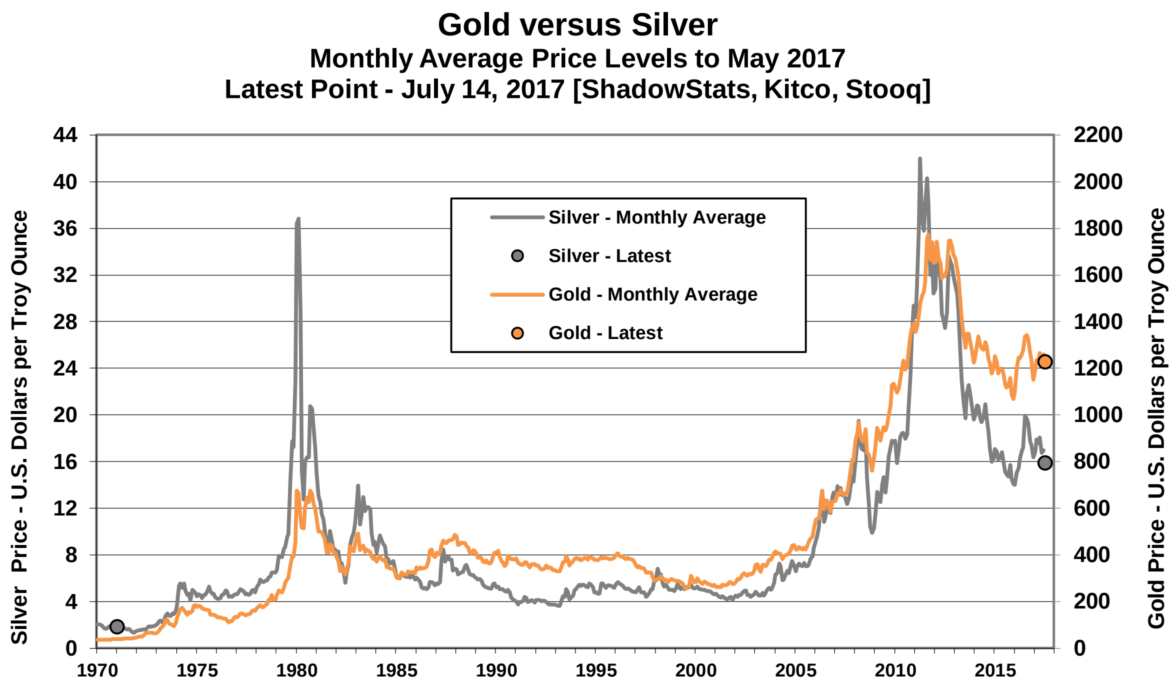
Graph 18: Year-to-Year Change, Financial- versus Trade-Weighted U.S. Dollar



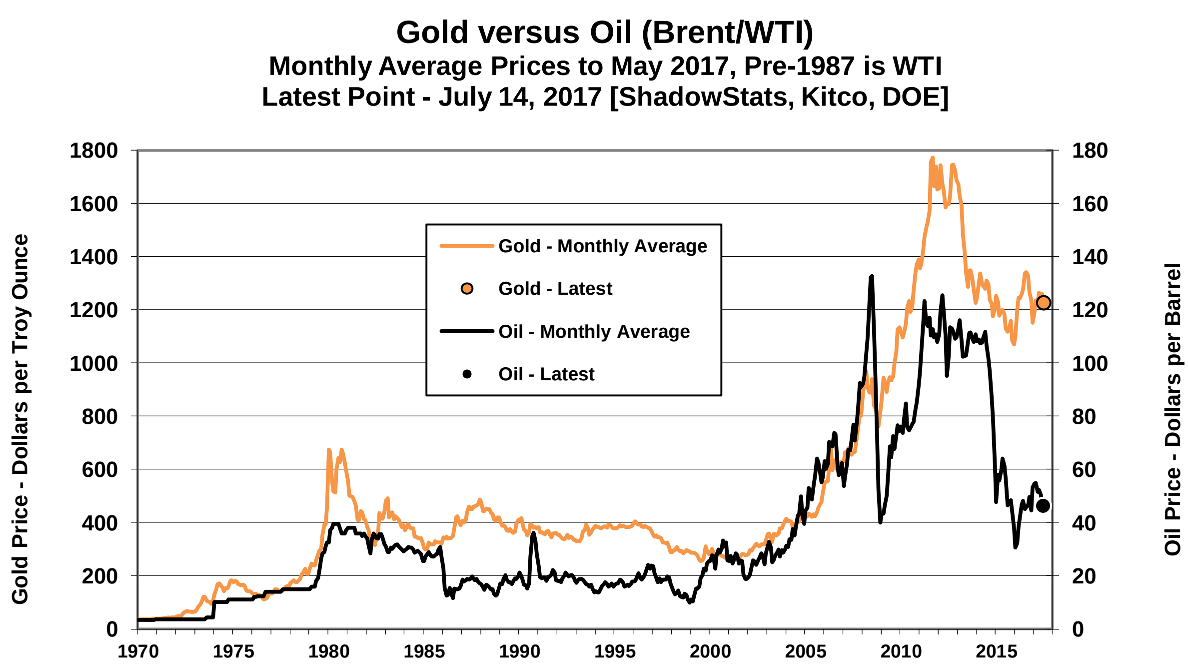
Graph 19: Gold versus the Swiss Franc



Graph 20: Gold versus Silver



Graph 21: Gold versus Oil



REPORTING DETAIL

INDUSTRIAL PRODUCTION (June 2017)

Happy Headline Production and Manufacturing Gains in June Reflected No More than Heavy Downside Revisions to Prior Activity, with Negative Implications for First- and Second-Quarter 2017 GDP. Following what had been much weaker-than-expected May 2017 activity, headline June 2017 Industrial Production showed a monthly gain of 0.4%, versus expectations of a 0.3% gain for aggregate production, with June Manufacturing up by the expected 0.2%. Headline detail, however, was not as advertised and far shy of those market expectations, when viewed from the standpoint of consistent reporting. Specifically, the headline numbers were heavily bloated in the context of downside revisions to previous headline details.

Net of the unexpected, heavy-downside, prior-period revisions, June production gained just 0.1% for the month, with dominant June manufacturing sector "unchanged" at 0.0% at the first decimal point, actually down by 0.05% (-0.05%) [at 0.047% (-0.47%)], which rounds to zero at the first decimal point]. Headline monthly June gains in the remaining mining and utilities sectors also were weaker or in contraction, net of revisions, as discussed later. Specifically, headline levels of monthly production and manufacturing revised lower for each month from January to May of 2017. As a result, second-quarter and first-quarter growth patterns both slowed versus previous reporting or trend, with implications for some downside revision to first-quarter 2017 GDP growth in the upcoming July 28th benchmarking, along with likely lowered consensus expectations for the initial second-quarter 2017 GDP report.

Separately, both production and manufacturing remained below pre-recession peak-activity levels. In terms of protracted, economic non-expansion, the Manufacturing sector has seen its longest stretch of non-recovery in the 99-year history of Industrial Production, now at 114-months and still counting. In contrast, it took the post-war U.S. economy 96-months to rebuild production to its World War II peak. In the first down-leg of the Great Depression, it took 88-months to recover the pre-collapse high.

June 2017 headline manufacturing remained 6.1% (-6.1%) below its December 2007 pre-recession peak. Unlike the Industrial Production series, which a had brief respite in 2014 before turning down anew, parallel and rivaling the pattern of the Great Depression economy, the Manufacturing sector never has regained its prior high, even for one month (see *Commentary No. 876*).

One of the Better-Quality Series, Industrial Production Still Overstates Headline Activity. Despite the March 31st benchmark revisions (see *Commentary No. 877*), which hit historical production detail hard, current headline production reporting still overstates economic activity. With the benchmarked 2016 industrial production representing 59% of the real value of Gross Domestic Product (GDP), the broad economy remains in the harsh reality of ongoing recession, one that has continued from somewhat before 2007. Although never recovering, other than briefly topping its pre-recession peak for two months at the end of 2014, a renewed downturn in production activity has been underway since December 2014, following a period of low-level, generally non-recovered economic stagnation.

That is irrespective of the continuing happy hype out of the Bureau of Economic Analysis (BEA), which has guesstimated first-quarter 2017 real GDP activity at 12.5% above its pre-recession peak (see *Commentary No. 896*. No other major economic series shows anything close to that purported level of recovery, while industrial production has shown a renewed and continuing downturn (see also the discussions in *Commentary No. 877* and *No. 859 Special Commentary*).

As of headline June 2017 reporting, the Industrial Production Index (2012 = 100) stood at 105.160, below its formal pre-recession high by 0.16% (-0.16%) and was down from its one-month "expansion" peak level of November 2014 by 1.36% (-1.36%).

The dominant Manufacturing sector (76.4% of Industrial Production, 45% of GDP, as weighted in 2016) never has recovered, with March 2017 manufacturing activity still down by 6.13% (-6.13%) from reclaiming its pre-recession peak level of activity.

Those issues also were expanded upon in *Commentary No. 869*, where the pre-benchmark, but still-relevant pattern of industrial production, in the historical context of that series and broad domestic economic activity, demonstrated that headline GDP activity no longer has any meaningful relationship to underlying economic reality.

Even so, allowing for the merits of the Industrial Production series, the understatement of inflation used in estimating some components of production still results in overstatement of headline production growth, as discussed in the *Executive Summary* and plotted there in *Graphs 1* and *2*.

An overriding issue continuing to hamper policies of the Federal Reserve, as well as the dominant contributing factor behind the major political shift seen with the 2016 presidential election (see *Commentary No. 846*), is that the U.S. economy never really has recovered from the "2007 Recession." The unfolding "new" downturn, intensifying in the most-recent headline data, remains no more than another down-leg in the economic collapse that began to surface in 2005 and 2006 (again, see *No. 859 Special Commentary*).

Headline Industrial Production (not the ShadowStats-corrected series), recovered its pre-recession high only for only two months, in October and November 2014 and had been in fairly-consistent monthly decline ever since, falling month-to-month in 19 out of the last 30 months, with year-to-year decline following in 20 of the last 26 months. That said, in the context of positive year-to-year change in headline production since February 2017, declining activity could be in the process of bottoming out.

Headline Industrial Production—June 2017. The Federal Reserve Board released its first estimate of seasonally-adjusted, June 2017 Industrial Production on July 14th. Headline June 2017 production gained 0.39%, following a revised 0.06% gain [previously unchanged at 0.00%] in May, following a revised monthly gain of 0.84% [previously 1.13%, initially 0.98%] in April, an unrevised 0.11% [earlier 0.41%, initially 0.55%] in March, a revised gain of 0.24% [previously 0.27%, 0.18% and 0.06%] in February and a revised monthly decline in January of 0.30% (-0.30%) [previously 0.29% (-0.29%), benchmarked at 0.27% (-0.27%)]. Net of prior-period revisions, June 2017 production rose month-to-month by 0.13%. Revisions again were discussed in the opening remarks of this *Reporting Detail* and in today's *Opening Comments*.

Headline Monthly June 2017 Growth by Each Major Sector Was Boosted by Downside Revisions to May 2017 Activity. Detailed by major industry group (see *Graphs 24*, *26*, *31* and *33*), the headline June 2017 monthly aggregate gain of 0.39% [up by 0.13% net of revisions] was composed of a monthly gain of 0.18% [a contraction of 0.05% (-0.05%) net of revisions] in manufacturing activity, a 0.04% gain [a contraction of 0.17% (-0.17%) net of revisions] in utilities activity and a gain of 1.62% [a gain of 1.15% net of revisions] in mining activity (including oil and gas production).

Year-to-Year Change. Year-to-year change in June 2017 industrial production was a gain of 1.97%, versus downwardly-revised gains of 1.95% [previously 2.21%] in May 2017, 1.77% [previously 2.10%, initially 2.19%] in April 2017, 1.26% [previously 1.30%, 1.54%, initially 1.53%] in March 2017, 0.42% [previously 0.46%, 0.40%, initially 0.25%] in February 2017 and an unrevised contraction in January 2017 of 0.02% (-0.02%).

Quarterly and Annual Production Changes. Year-to-year growth rates in quarterly production had continued to slow and then decline, ranging from a positive 1.72% in first-quarter 2015, to annual declines of 0.76% (-0.76%) in second-quarter 2015, 1.08% (-1.08%) in third-quarter 2015 and by 2.66% (-2.66%) in fourth-quarter 2015.

The annual declines continued, down by 2.17% (-2.17%) in first-quarter 2016, by 1.34% (-1.34%) in second-quarter 2016 and by 1.24% (-1.24%) in third-quarter 2016. Fourth-quarter 2016 production contracted year-to-year for the seventh-straight quarter by 0.14% (-0.14%).

Given the third revision to first-quarter 2017 detail, annual change by quarter rose by a revised 0.55% [previously 0.58%, 0.65%, initially 0.59%], the first annual gain since first-quarter 2015. With just three months of reporting in place, second-quarter 2017 production gained year-to-year by 1.90% [previously on track for an annual gain of 2.05%, based on prior detail].

Annualized Quarter-to-Quarter. Going back to first-quarter 2015 industrial production contracted at an annualized quarterly pace of 3.30% (-3.30%), having gained by 2.72% in fourth-quarter 2014. That was followed by a quarterly contraction of 3.97% (-3.97%) in second-quarter 2015, with a third-quarter 2015 production gain of 0.37%, followed by a fourth-quarter 2015 contraction of 3.66% (-3.66%).

The first-quarter 2016 declined by 1.34% (-1.34%), quarter-to-quarter, with a second-quarter 2016 quarterly decline of 0.68% (-0.68%). Third-quarter 2016 industrial production expanded at an annualized pace of 0.78%, with the fourth-quarter 2016 gain a revised 0.70% [previously 0.71%, initially 0.74%].

Annualized First-Quarter 2017. With the third revision to first-quarter 2017 detail, the annualized quarterly gain eased to 1.41% [previous 1.53%, 1.80%, initially 1.53%]. With just three months of reporting now in place, second-quarter 2017 production gain at an annualized pace of 4.74%, down from an early-track annualized gain of 5.28%.

Production Graphs. The regular two sets of long- and short-term plots of industrial production levels and annual growth rates (*Graphs 22* to *25*) set the background for the drill-down detail graphs of various components of the aggregate industrial series (*Graphs 26* to *39*).

Graphs 22 and *23*, and *Graphs 24* and *25* show headline industrial production activity to date. *Graph 23* shows the monthly year-to-year percent change in the aggregate series, in historical context since World

War II. Post-benchmarking, activity was somewhat stronger coming into 2014, but much weaker going into 2015, as detailed in *Commentary No. 877*.

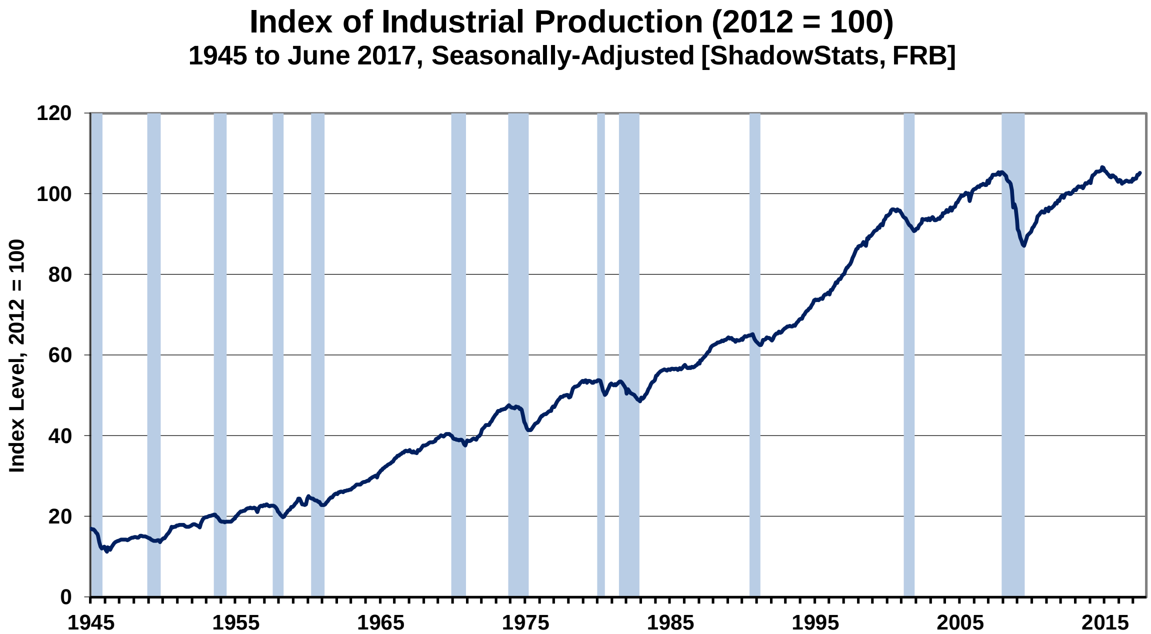
Graph 22 shows the monthly level of the production index post-World War II, with a topping-out and renewed downturn—deepening quarterly contractions in first- and second-quarter 2015, with a bounce in third-quarter 2015, followed by renewed and deeper contractions in fourth-quarter 2015 and first- and second-quarter 2016, a bounce back in third-quarter with gains into 2017. Such patterns of monthly, quarterly and annual declines since late-2014 (see *Graph 23*) still were seen last in the economic collapse into 2009, and historically never seen outside of what would be recognized as formal recessions. *Graphs 24* and *25* show the same series in near-term detail, beginning in January 2000.

Seen most clearly in *Graph 25*, year-to-year activity dipped anew in 2013, to levels usually seen at the onset of recent recessions, bounced higher into mid-2014, fluctuated thereafter, turning negative, again, into 2015 and through 2016 as seen only in formal recessions. In the context of the 2017 benchmark revisions, year-to-year growth remains well off the recent relative peak for the series, which was 8.55% in June 2010, going against the official June 2009 trough of the economic collapse. Indeed, as shown in *Graph 9*, the June 2009 (the end of second-quarter 2009) year-to-year contraction of 15.43% (-15.43%) was the steepest annual decline in production since the shutdown of wartime production following World War II.

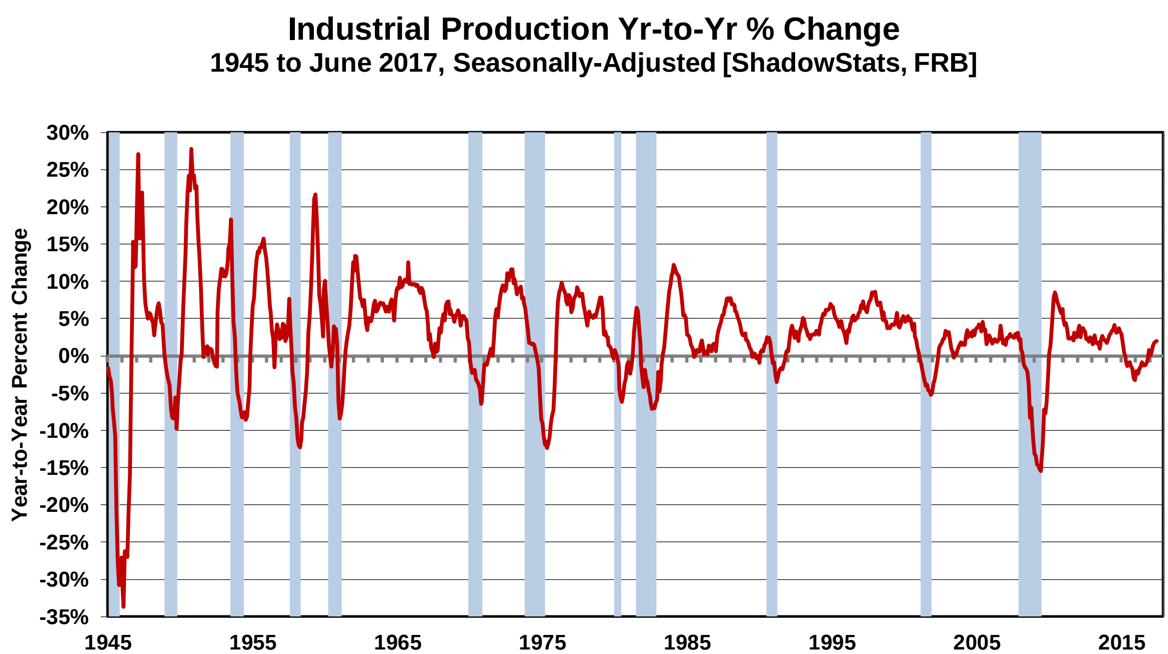
Although generally now-faltering, official production levels had moved higher since the June 2009 trough, corrected for the understatement of inflation used in deflating portions of the industrial production index (see the *Executive Summary* section, *Graph 2*). That series has shown more of a pattern of stagnation with a slow upside trend, since 2009, with irregular quarterly contractions interspersed. The slow uptrend continued into a topping out pattern in late-2014. Headline growth—purportedly already neutered of any inflation impact—contracted in both first- and second-quarter 2015, moved minimally higher into 2016 through mid-2017. The “corrected” series has contracted quarter-to-quarter throughout 2016 and into 2017, also with some recent, minimal uptick.

[Graphs 22 and 23 follow on the next page.]

Graph 22: Index of Industrial Production (Aggregate) since 1945

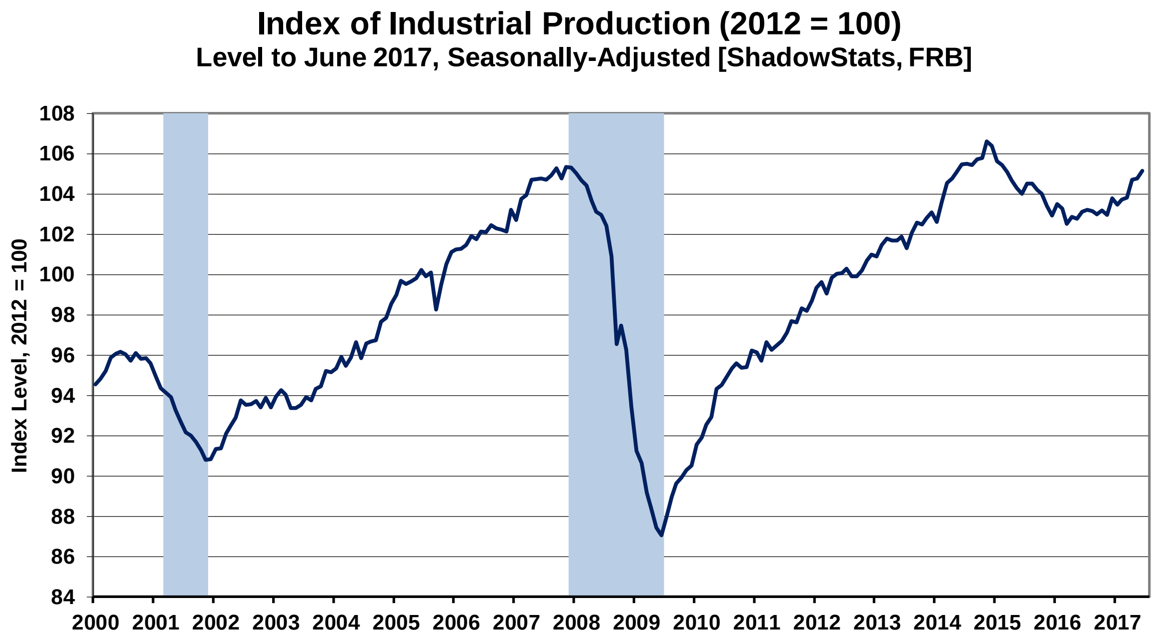


Graph 23: Industrial Production, Year-to-Year Percent Change since 1945

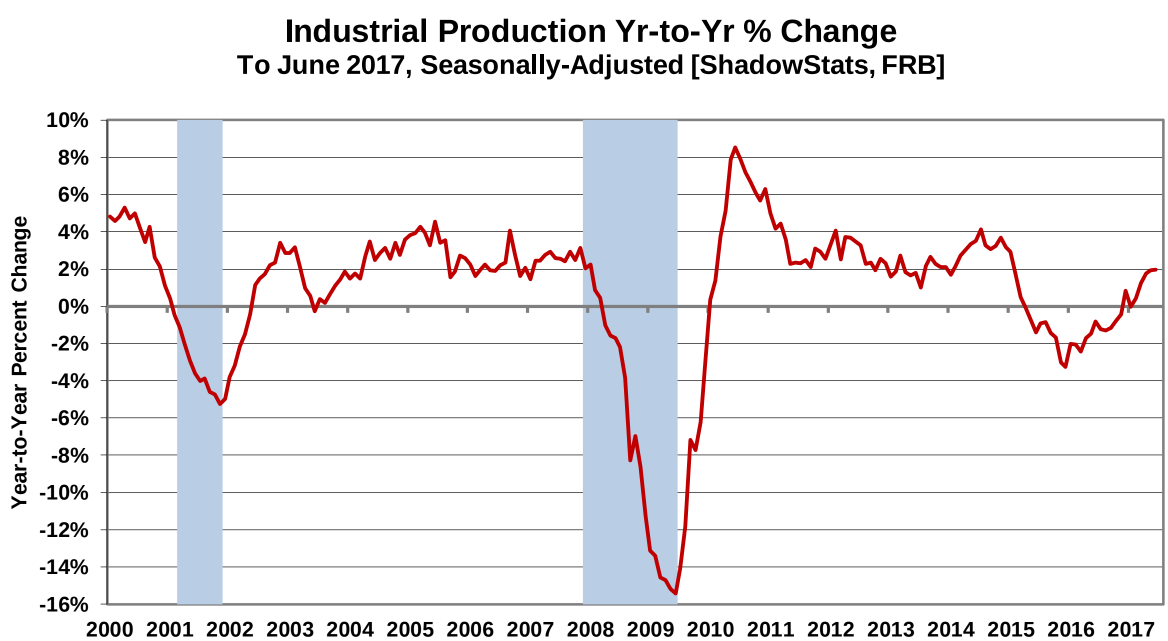


Drilling Down into the June 2017 U.S. Industrial Production Detail. *Graphs 24*, *26*, *31* and *33* show headline reporting of industrial production and its major components.

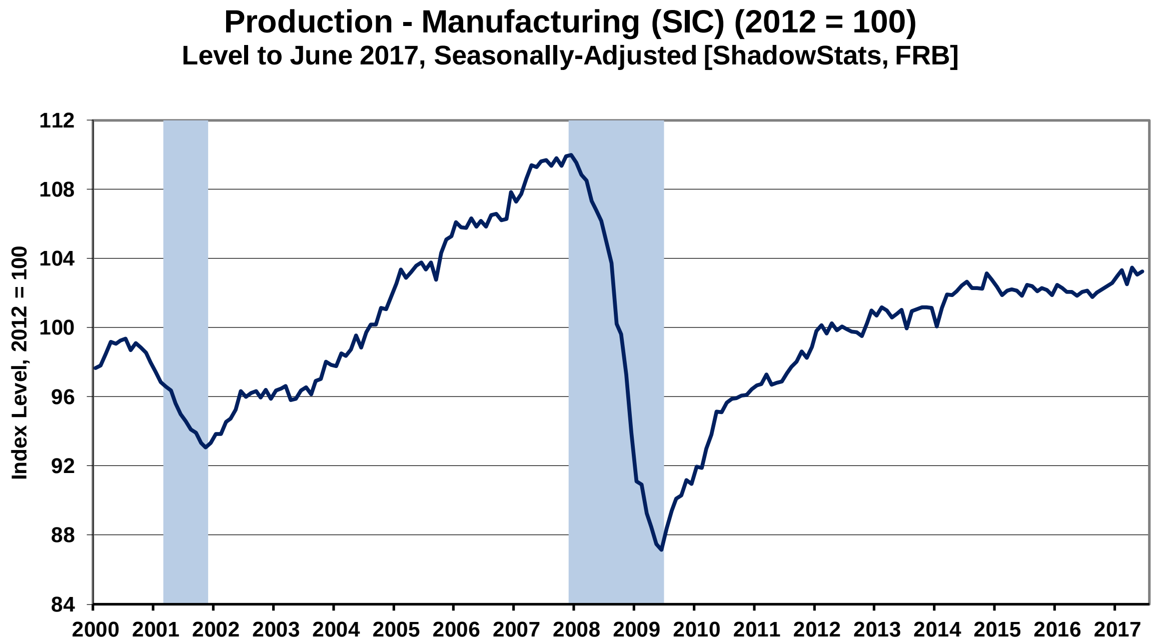
Graph 24: Index of Aggregate Industrial Production since 2000



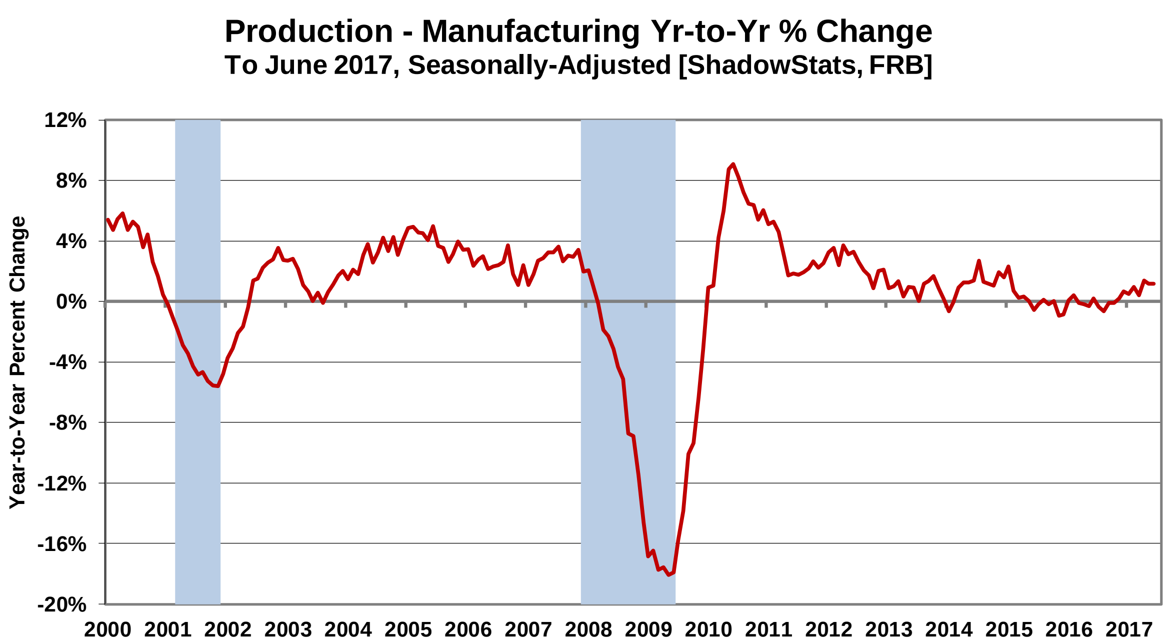
Graph 25: Aggregate Industrial Production, Year-to-Year Percent Change since 2000



Graph 26: Industrial Production - Manufacturing (76.4% of the IIP in 2016)



Graph 27: Industrial Production - Manufacturing, Year-to-Year Percent Change Since 2000



The aggregate index (*Graph 24*) contracted quarter-to-quarter in both first- and second-quarter 2015, with a third-quarter 2015 bounce, followed by ongoing, consecutive quarterly contractions from fourth-quarter 2015 through second-quarter 2016. Year-to-year declines by quarter were seen for seven consecutive quarters, from second-quarter 2015 through fourth-quarter 2016, with first-quarter 2017 activity positive on both a quarterly and annual basis, a trend continuing into second-quarter 2017. Nonetheless, production levels through June 2017 still held below the peak activity seen before the collapse into 2009.

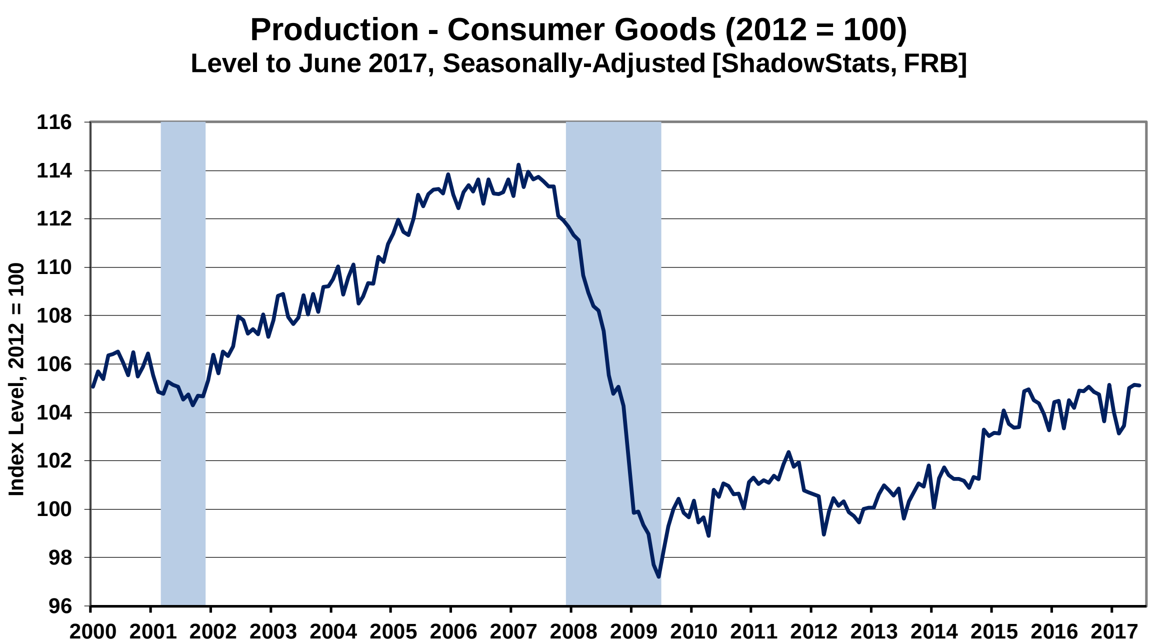
Shown in *Graphs 26*, *31* and *33*, of the three major industry sectors, Manufacturing, Utilities and Mining, Manufacturing gained month-to-month in June 2017 reporting, although those monthly gains all were inflated by downside revisions to activity in May 2017, discussed earlier.

Graph 26 of the dominant Manufacturing sector showed a month-to-month gain of 0.18% in June 2017, based largely on a gain in durable goods. Revised Manufacturing declined by 0.40% (-0.40%) in May, following a gain of 0.97% in April. *Graph 27* reflects annual growth patterns in June 2017 Manufacturing, which continued to back off a stronger showings in May 2017 and April 2017. It had fluttered at low levels since an initial bounce off the 2009 trough, down year-to-year in the six months through October 2016, turning to the plus-side in November 2016 to date.

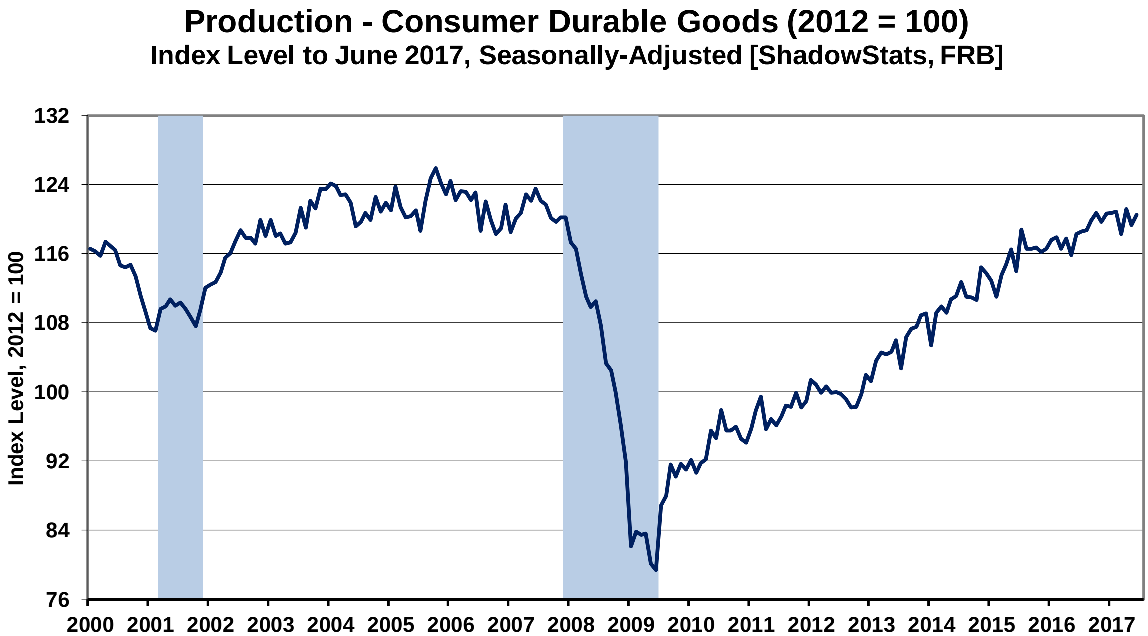
Consumer Goods production declined month-to-month by 0.03%, having gained a revised 0.13% [previously 0.16%] in May 2017, and a revised 1.50% [previously 1.72%, initially 1.51%] in April (see *Graphs 28* to *30*).

Headline June 2017 Consumer Goods detail reflected a monthly gain of 0.99%, boosted by a deepened monthly decline in revision of 1.56% (-1.56%) [previously a drop of 0.79% (-0.79%) in Durable Goods, tied to declining auto production, with Nondurable Goods declining by 0.32% (-0.32%) having gained a revised 0.62% [previously 0.44%] in May, reflected in *Graph 29* and *Graph 30*.

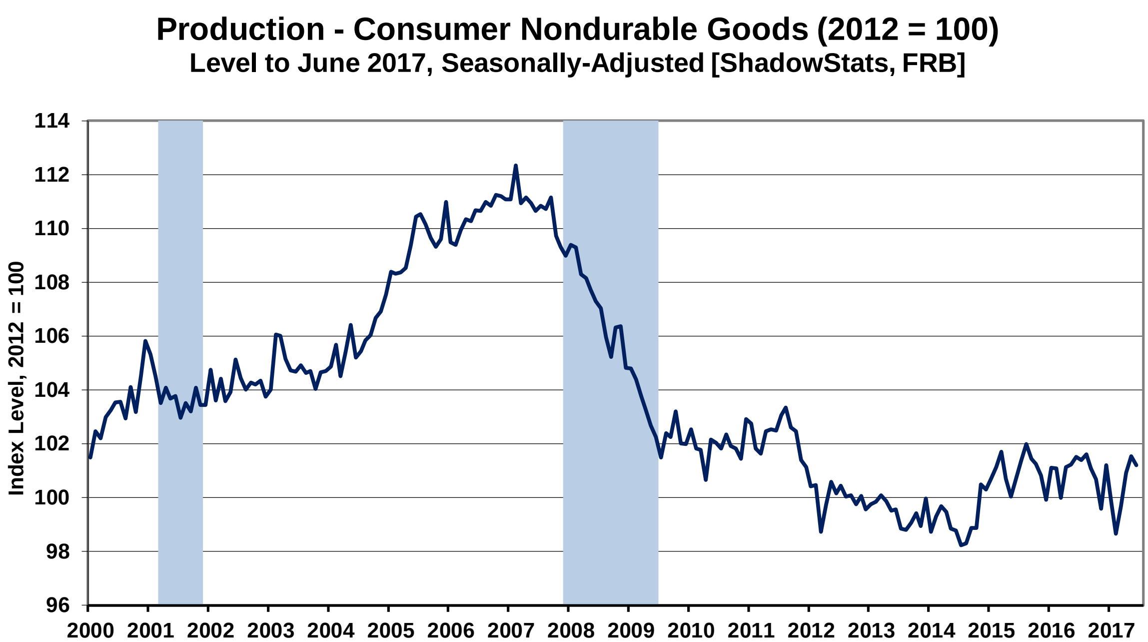
Graph 28: Consumer Goods (28.2% of the Aggregate in 2016)



Graph 29: Durable Consumer Goods (6.3% of the Aggregate in 2016)



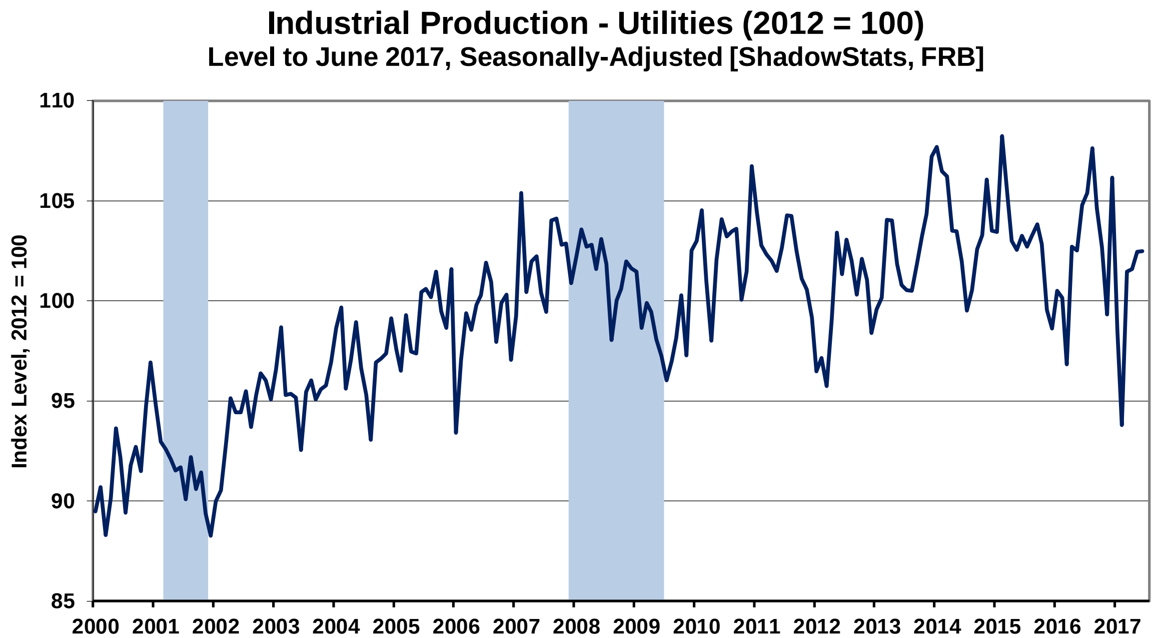
Graph 30: Nondurable Consumer Goods (21.9% of the Aggregate in 2016)



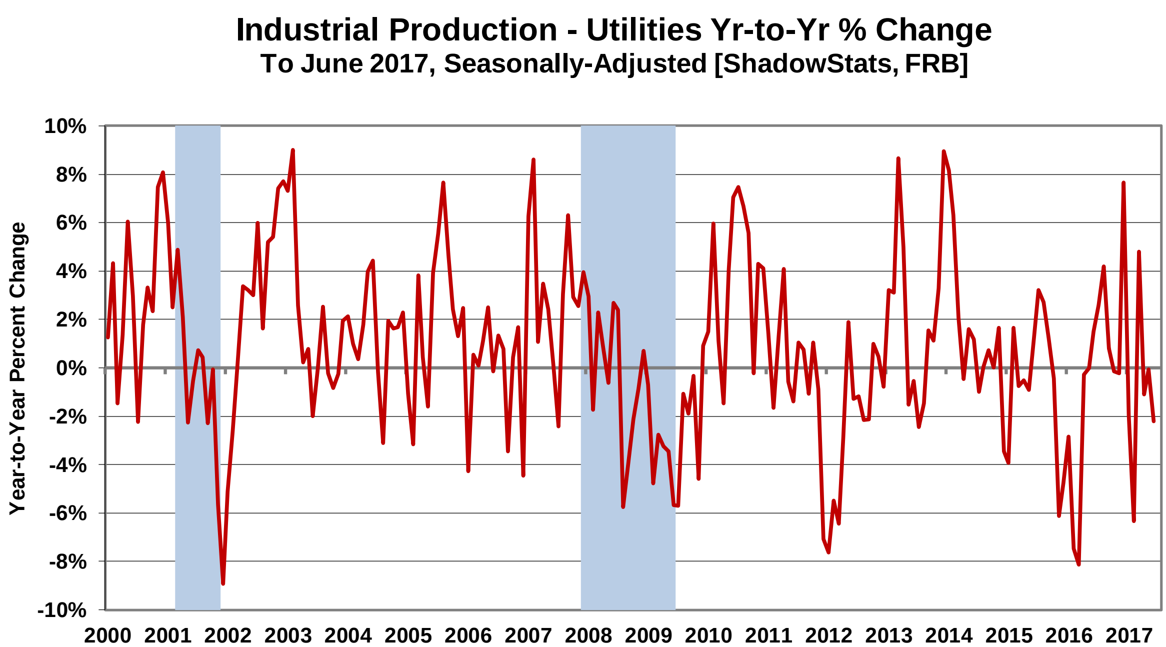
Monthly volatility in the utilities sector (*Graph 31*) usually reflects unseasonable shifts in weather conditions and reversals of same. The headline gain of 0.04% in June 2017, was against an upwardly revised 0.85% [previously 0.45%] in May 2017, on top of a revised monthly gain of 0.13% [previously

0.73%, initially 0.69%] in April, reflecting more-stable than usual activity, where the unrevised 8.15% monthly gain in March had been the largest monthly gain in the history of the series, sharply offsetting a revised plunge of 4.80% (-4.80%) in February and an unrevised plunge of 7.18% (-7.18%) in January 2017. Such distortions tend to balance out over the period of a year.

Graph 31: Industrial Production - Utilities (10.6% of the Aggregate in 2016)

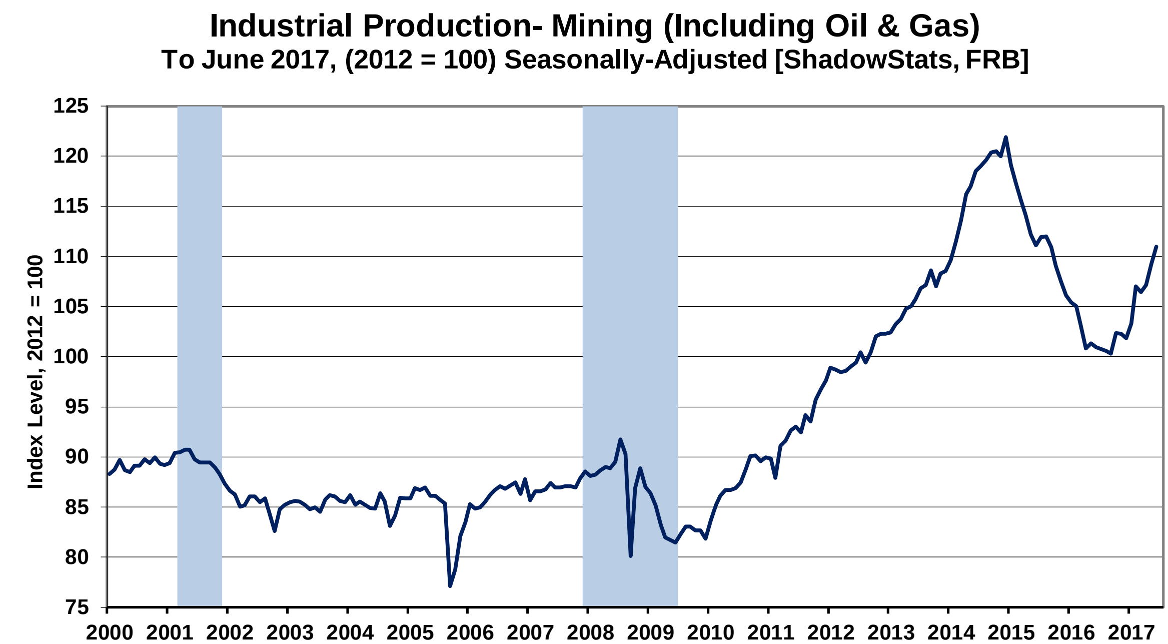


Graph 32: Industrial Production - Utilities, Year-to-Year Percent Change Since 2000

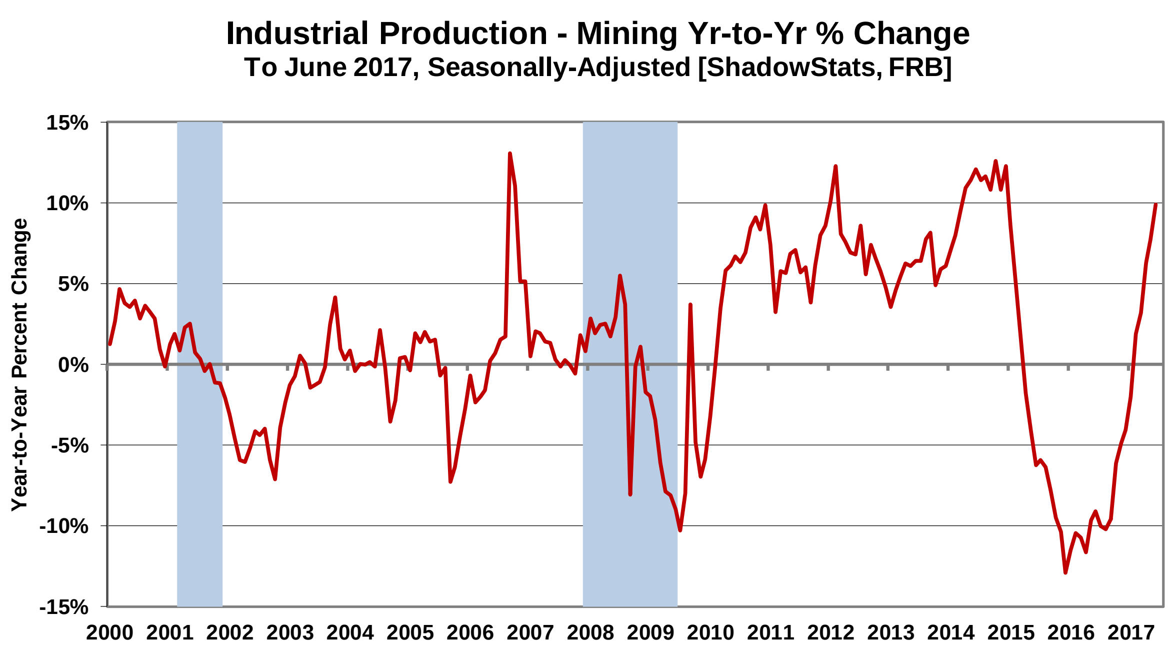


Activity in the mining sector (*Graph 33*), particularly in oil and gas exploration and production, and increasingly in gold and coal mining, remains the near-term focus of this analysis.

Graph 33: Industrial Production - Mining, Including Oil and Gas (12.9% of the Aggregate in 2016)



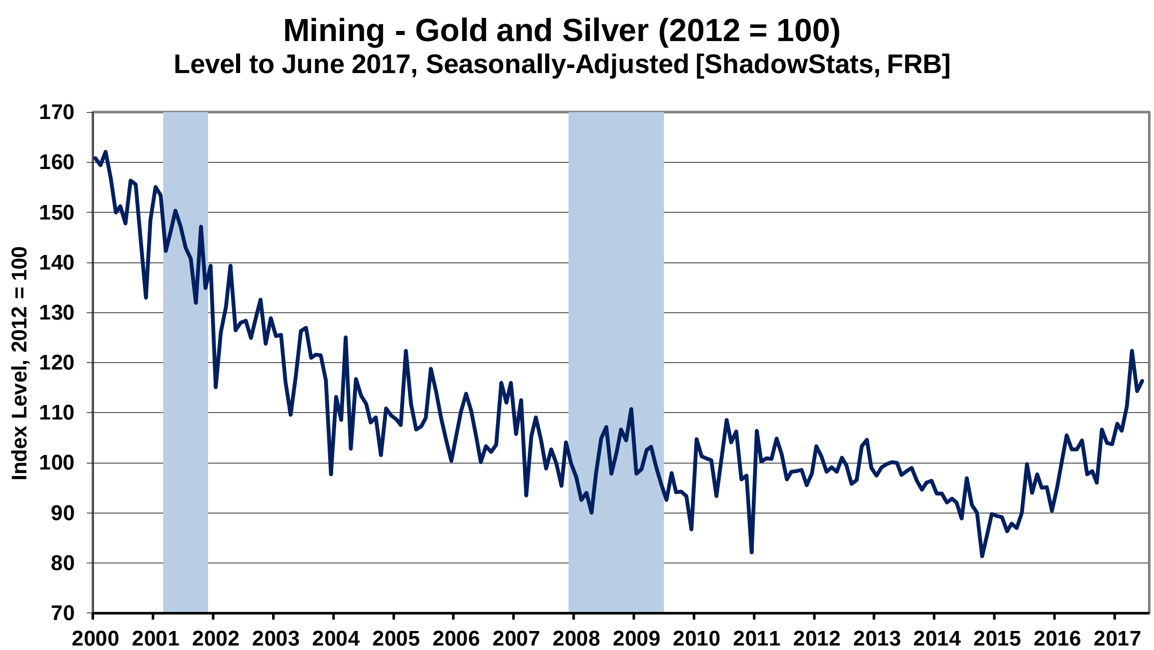
Graph 34: Industrial Production - Mining, Year-to-Year Percent Change



The mining sector, including oil and gas production, easily recovered its pre-recession high and accounted for the full "recovery," albeit extremely short-lived (just the months of October and November 2014), as seen in the aggregate Industrial Production detail since the economic collapse (see detail in *Commentary No. 877*). Since then, however, mining production turned down sharply, reflecting a number of factors, including the impact of largely orchestrated lower oil prices, which subsequently have fluctuated, tied to dollar and oil-supply issues, as well as U.S. government actions during the Obama Administration to limit coal consumption and production, now under some efforts at reversal. Year-to-year Mining Sector activity in (*Graph 34*) in February 2017 broke to the plus-side, to a downwardly revised 1.89%, for the first time since February 2015, up by an upwardly-revised 3.19% in March 2017, a downwardly-revised 6.29% in April 2017, a downwardly revised 7.76% in May 2017, versus annual growth of 9.90% in June 2017. Mining has moved off bottom, thanks to a general rebound in coal production and bottoming and broad monthly upturns in oil and gas extraction and exploration, and in gold and silver production (see *Graphs 35* through *39*). Monthly production in June 2017 coal, gold and silver mining, oil and gas extraction and drilling boosted monthly mining activity by 1.62%.

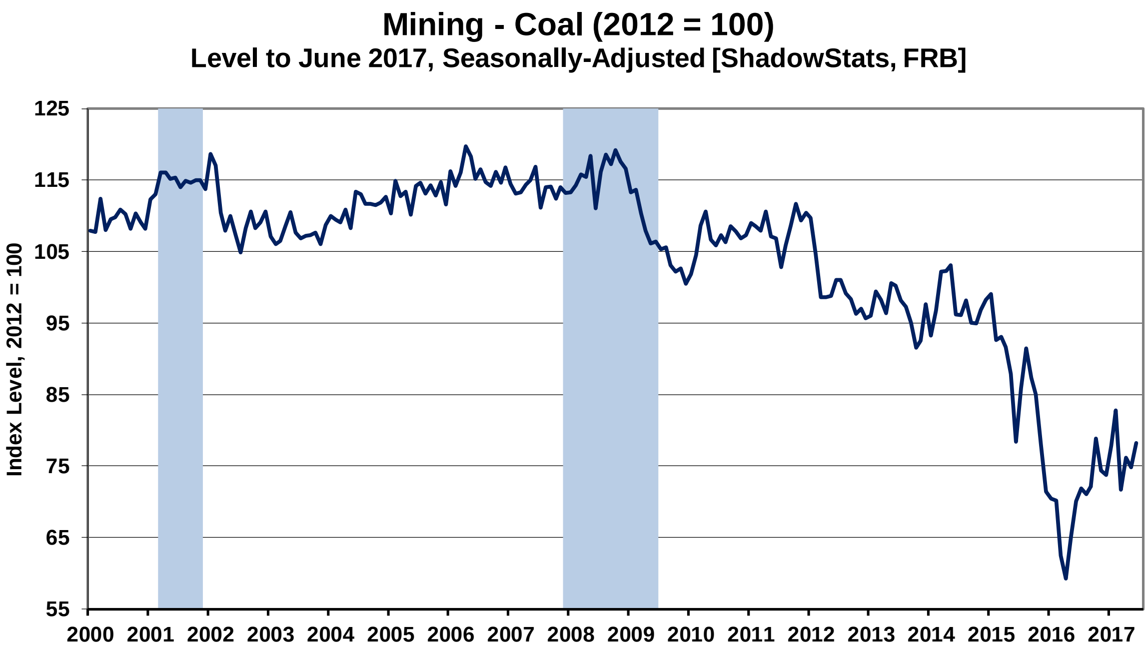
Graph 35 reflects generally increasing gold and silver mining activity (revised to an uptrend with the benchmark revision). Headline June 2017 detail was off its April peak, but otherwise the strongest level of gold and silver mining in more than a decade, irrespective of the pummeling given the prices of precious metals in recent years with central-bank orchestrated market manipulations as well as recent price volatility in the markets.

Graph 35: Mining – Gold and Silver Mining (Since 2000)

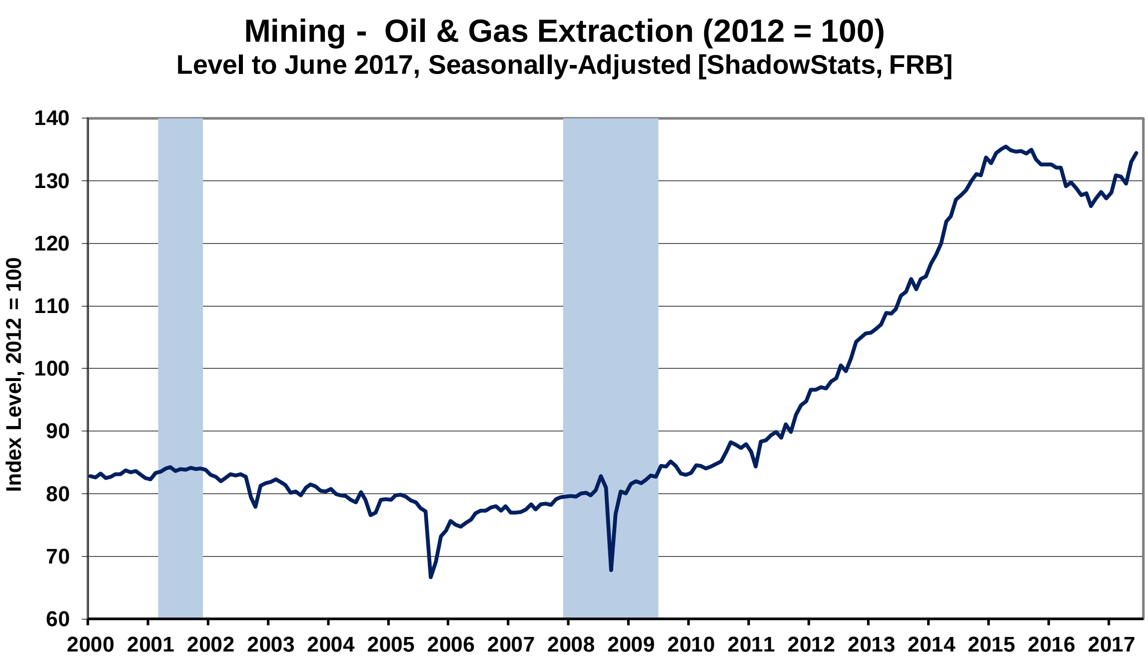


As with gold and silver mining, coal mining was benchmarked higher in recent years. *Graph 36* still shows a general rebound in the level of monthly coal production, with June 2017 activity up for the month by 4.59%, but still shy of its February 2017 near-term peak, down by 24.10% (-24.10%), from its near-term production peak in May 2014.

Graph 36: Mining - Coal Mining (Since 2000)



Graph 37: Mining – U.S. Oil & Gas Extraction (Since 2000)

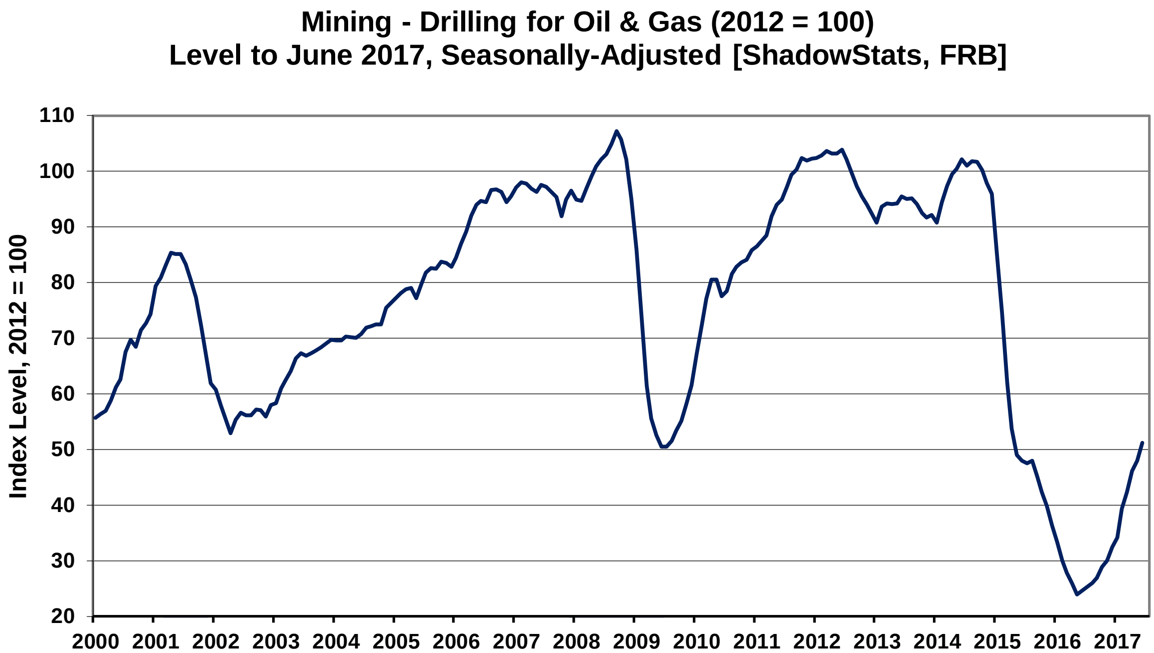


With oil prices still fluctuating above recent lows, but also below recent highs, June 2017 oil and gas extraction gained 1.07% in the month, having gained a revised 2.67% in May. June 2017 activity, however, remained 0.77% (-0.77%) off its all-time high of April 2015.

Exploration in terms of oil and gas drilling (*Graph 24*) has continued to rise in what increasingly looks like a bottoming process, up by 6.81% month-to-month in June 2017, having 3.84% May, 9.02% in April 2017, 7.71% in March and 15.09% in February. The series remains collapsed, although year-to-year growth broke to the plus-side by 2.42% in January 2017, soaring to 31.13% in February 2017, 52.46% in March 2017, 77.51% in April 2017, 100.53% in May 2017 and 108.18%.

Regularly discussed here, the collapse in drilling largely was an artefact of the massive U.S. dollar rally and oil-price plunge that began in July 2014. Those shifts appeared, at least initially, to be U.S.-orchestrated covert actions designed to stress Russia, financially, in response the circumstance in Ukraine. From the related June 2014 peak in oil drilling, June 2017 activity was down by 49.99% (-49.99%).

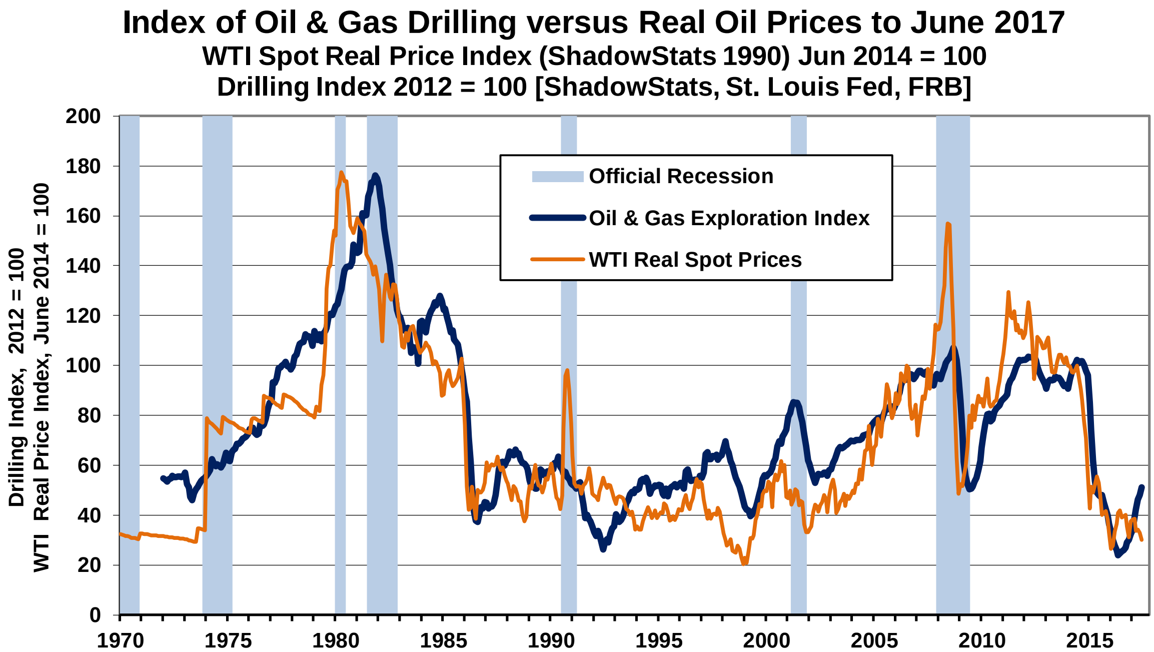
Graph 38: U.S. Drilling for Oil & Gas (Since 2000)



Shown in *Graph 39*, with some lag following sharp movements in oil prices, oil and gas exploration tends to move in tandem, and an upswing in exploration, indeed, continues to be in its early stages in response to the recent bottoming in oil price. The oil price index used here is for the West Texas Intermediate (WTI) monthly average spot price, deflated using the ShadowStats Alternate CPI measure (1990 Base). The graph lines have been highlighted to show more clearly the price-level movement, which visually had coincided graphically with the movement in the drilling levels in some recent months.

When the dollar weakens, dollar-denominated oil prices also begin to strengthen, even in a circumstance with excess supply conditions. At such time as the U.S. dollar declines meaningfully—ShadowStats looks for a massive sell-off in the dollar in the year ahead (see the *Hyperinflation Watch)*—U.S. dollar-denominated oil prices should rally sharply (see also *General Commentary No. 811*). That said, post-election, the U.S. dollar had rallied, but there had not been quite a commensurate decline in oil prices. Instead, with supply being tightened artificially (see the discussion in *No. 859 Special Commentary*), oil prices generally have increased and oil and gas extraction and exploration have picked up accordingly, with some lag. As the dollar weakens anew, artificial supply constraints likely will ease, although both the dollar and oil have backed off recent, relative peaks.

Graph 39: Mining – U.S. Drilling for Oil & Gas versus Real Oil Prices (WTI ShadowStats 1990 Base)



RETAIL SALES—Nominal and Real (June 2017)

Despite an Underlying 0.35% Monthly Spike in Headline Sales from Inconsistent Seasonal Adjustment Shifts, Nominal Retail Sales Still Declined by 0.16% (-0.16%). Headline nominal sales showed another "unexpected" monthly decline. That was in the context of a sharp slowing in real annual growth, which generated a meaningful signal for imminent recession.

Annual benchmark revisions to Retail Sales on April 26th (*Commentary No. 882*) and subsequent reporting of April and May Retail Sales on May 12th and June 14th (see *Commentary No. 886* and *Commentary No. 880*) are incorporated here by reference.

Annual Real Growth Generating a Sold Recession Signal. In the context of the recent revisions, the annual rate of inflation-adjusted real growth in the Retail Sales series had settled back to, now dropping below, two-percent, the traditional low-growth signal of imminent economic recession, where it had been pushing three percent before the March benchmarking. June 2017 real annual growth slowed to a nine-month low of 1.18%, versus a revised 2.14% [previously 1.91%] May 2017. Yet, the upside revision to annual May growth in the latest reporting, reflected only partially an upside revision to May 2017 detail, where it was dominated by a downward revision to the prior year's May 2016 activity, as part of inconsistently reported seasonal adjustment revisions to May and June. Those revisions had the effect boosting the headline nominal change in June 2017 retail sales to a decline of 0.16% (-0.16%), from what otherwise would have been a consistent headline monthly decline of 0.51% (-0.51%).

Monthly Nominal June Decline Was Despite Underlying 0.35% Growth Spike from Inconsistent Seasonal Adjustment Factors. For the second consecutive month, and for the second time this year, headline monthly retail sales numbers appeared to have been skewed significantly by the lack of consistent reporting of seasonally-adjusted retail sales data. As with many series, such as employment and unemployment (see *Headline Distortions from Shifting Concurrent-Seasonal Factors* on page 34 of *Commentary No. 890*) and new orders for durable goods, concurrent seasonal adjustment factors are used with the retail sales. There is nothing wrong with using concurrent seasonal adjustments—where monthly seasonal adjustments are recalculated each-and-every month based on the current headline detail—so long as all data are reported on a consistent, historical basis. Government agencies do not report such detail, however, on a consistent basis.

In the case of retail sales, only the three most recent months (April 2017, May 2017 and June 2017 at present) and two year-ago numbers (May 2016 and June 2016) are revised and reported on a consistent basis. Consistent and related shifts in other prior-activity, though, are not knowable by the public.

Where the levels of May 2016 and June 2016 were shifted respectively lower by 0.14% (-0.14%) and higher by 0.21% than previously reported, such was indicative the out-of-historical-context shift in seasonal factors related to May 2017 and June 2017, with the effect of boosting relatively monthly headline growth by 0.35% on a seasonally-adjusted, but inconsistently-reported basis.

That said, headline nominal retail sales declined month-to-month by 0.16% (-0.16%), instead of what otherwise likely would have been a relative drop in the data of 0.51% (-0.51%), again, when viewed based on consistent reporting.

Nominal Retail Sales—June 2017. The Census Bureau reported July 14th, its "advance" estimate of June 2017 Retail Sales. Headline nominal June 2017 activity declined by 0.16% (-0.16%) [rounds to 0.2% (-0.2%)], following a revised decline of 0.06% (-0.06%) [previously 0.25% (-0.25%)] in May 2017 and a revised monthly gain of 0.33% [previously 0.43%, initially 0.39%] in April. The upside revision to May's monthly growth rate reflected a downside revision April activity.

That seasonally-adjusted, headline June 2017 decline of 0.16% (-0.16%) +/- 0.59% was not statistically-significant (all confidence intervals are expressed at the 95% level. In like manner, the revised headline May 2017 monthly retail sales decline of 0.06% (0.06%) +/- 0.23% also was not statistically-significant.

Year-to-Year Annual Change. The June 2017 nominal year-to-year change in Retail Sales showed a statistically-significant increase of 2.85% +/- 0.82%, versus annual gains of 4.06% [previously 3.82%] in May 2017, and 4.47% [previously 4.57, initially 4.45%] in April 2017.

June Core Retail Sales, Net of Food and Gasoline. Reflecting a real-world environment that in theory should see flat-to-falling, seasonally-adjusted food prices [down by 0.05% (-0.05%)] in the month per the Bureau of Labor Statistics (BLS)] and weaker gasoline prices [down by 2.81% (-2.81%) for the month on a seasonally-adjusted basis, per the BLS], seasonally-adjusted grocery-store sales declined month-to-month by 0.47%, with gasoline-station sales down by 1.33% [-1.33%] in June 2017.

Under normal conditions, the bulk of non-seasonal variability in food and gasoline sales is in pricing, instead of demand. "Core" retail sales—consistent with the Federal Reserve's historical preference for ignoring food and energy prices when "core" inflation is lower than full inflation (when the Fed is looking to downplay inflation)—are estimated using two approaches:

Version I: Nominal June 2017 versus May 2017 seasonally-adjusted retail sales series—net of total grocery store and gasoline-station sales—was unchanged at 0.00%, versus the official headline aggregate sales decline of 0.16% (-0.16%).

Version II: Nominal June 2017 versus May 2017 seasonally-adjusted retail sales series—net of total grocery store and gasoline-station revenues—also was unchanged at 0.00%, versus the official headline aggregate sales decline of 0.16% (-0.16%).

Real Retail Sales—June 2017—In the Context of Downside Revisions and Despite Monthly Boosts from Negative Inflation and Non-Comparable Headline Shifts in Seasonal Factors, Real Sales Fell Month-to-Month, Annual Growth Collapsed and Quarterly Growth Slowed Markedly from Prior Trend. Headline detail from the release of the June 2017 CPI-U on July 14th, coincident with the Retail Sales release, showed a monthly decline in seasonally-adjusted consumer inflation of 0.02% (-0.02%), versus a monthly decline of 0.13% (-0.13%) in May and a monthly gain of 0.17% in April, with year-to-year seasonally-adjusted CPI-U inflation of 1.65% in June 2017, versus 1.87% in May 2017 and versus 2.20% in April 2017.

Accordingly, real month-to-month retail sales declined by 0.13% (-0.13%) in June 2017, versus revised gains of 0.07% in May 2017 and 0.16% in April. Real annual Retail Sales growth slowed to 1.18% in June 2017, versus 2.14% in May 2017 and 2.23% in April 2017.

Intense Signal of Recession in Annual Real Growth, Shaken Out of Temporary Abeyance by the Annual Benchmark Revisions, Collapsed into June. During normal economic times, annual real growth in Retail Sales at or below 2.0% signals an imminent recession. That signal broadly had been in play since February 2015 (the "new" recession likely still will be timed from December 2014, based on industrial production, retail sales and other indicators), suggesting a deepening, broad economic downturn.

Where that annual growth recently had moved higher, close to three-percent, ShadowStats had viewed that recession signal as in temporary abeyance. Post-2017 benchmarking, however, annual growth rates shifted lower, towards two-percent and now well below, again reviving that recession signal. Once more, year-to-year real growth in June 2017 Retail Sales just sank to 1.18%, from 2.14% in May 2017 and 2.23% in April 2017.

First-Quarter 2017 Annualized Real Growth Slowed Sharply versus Fourth-Quarter 2016. First-quarter 2017 annualized quarter-to-quarter real growth in Retail Sales slowed sharply to 1.05%, versus 3.34% in fourth-quarter 2016, with annual year-to-year real growth for first quarter-2017 at 2.42%, versus 2.03% in fourth-quarter 2016.

Based on initial full reporting for second-quarter 2017, annualized real quarterly growth was 1.26%, with year-to-year quarterly change down to 1.85%. Such slowed sharply from what had been indicated as the early-trend—based just on April and May reporting—of annualized real quarterly growth of 1.40%, with year-to-year quarterly change last on track for a gain of 1.91%.

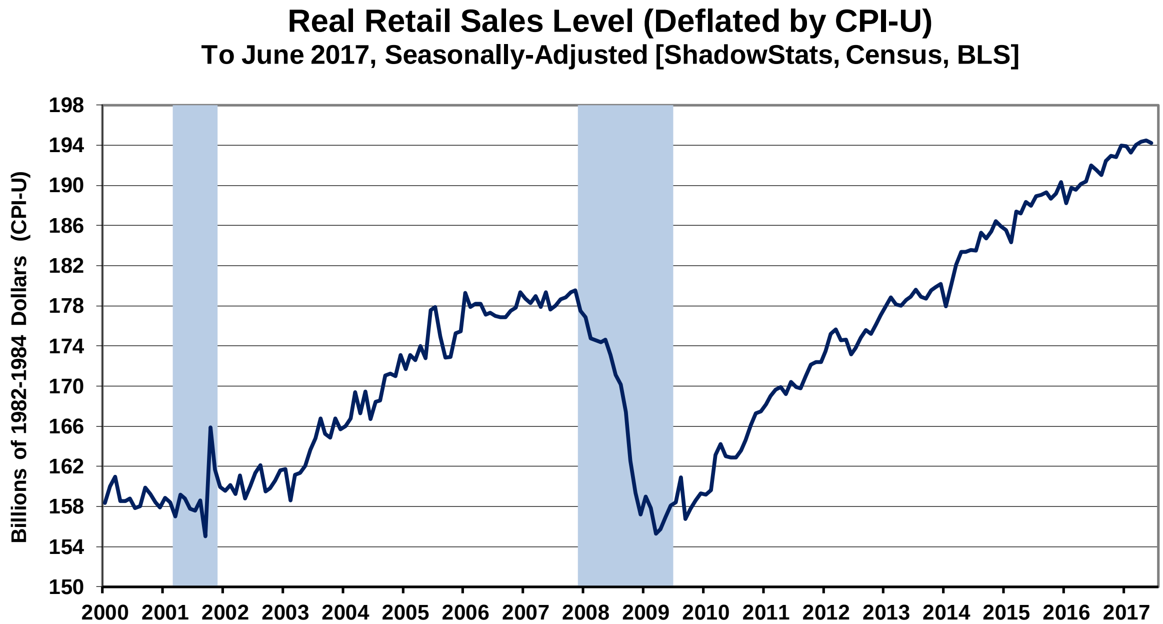
Structural Liquidity Issues Continue to Impair Retail Sales. An extreme consumer-liquidity bind increasingly constrains retail sales activity, as updated in the *Consumer Liquidity Watch* and fully detailed in the *Consumer Liquidity* section of *No. 859 Special Commentary*. Without sustainable growth in real income, and without the ability and/or willingness to take on meaningful new debt in order to make up for the income shortfall, the U.S. consumer remains unable to sustain positive growth in domestic personal consumption, including retail sales, real or nominal. That circumstance—in the last nine-plus years of economic collapse and stagnation—has continued to prevent a normal recovery in broad U.S. economic activity, 70% of which is dependent on personal spending.

As headline consumer inflation generally resumes its upside climb in the year ahead, and as overall Retail Sales continue to suffer from the ongoing consumer liquidity squeeze, the real Retail Sales data generally should continue to trend meaningfully lower, in what eventually should gain recognition as a formal "new" recession, likely timed from December 2014.

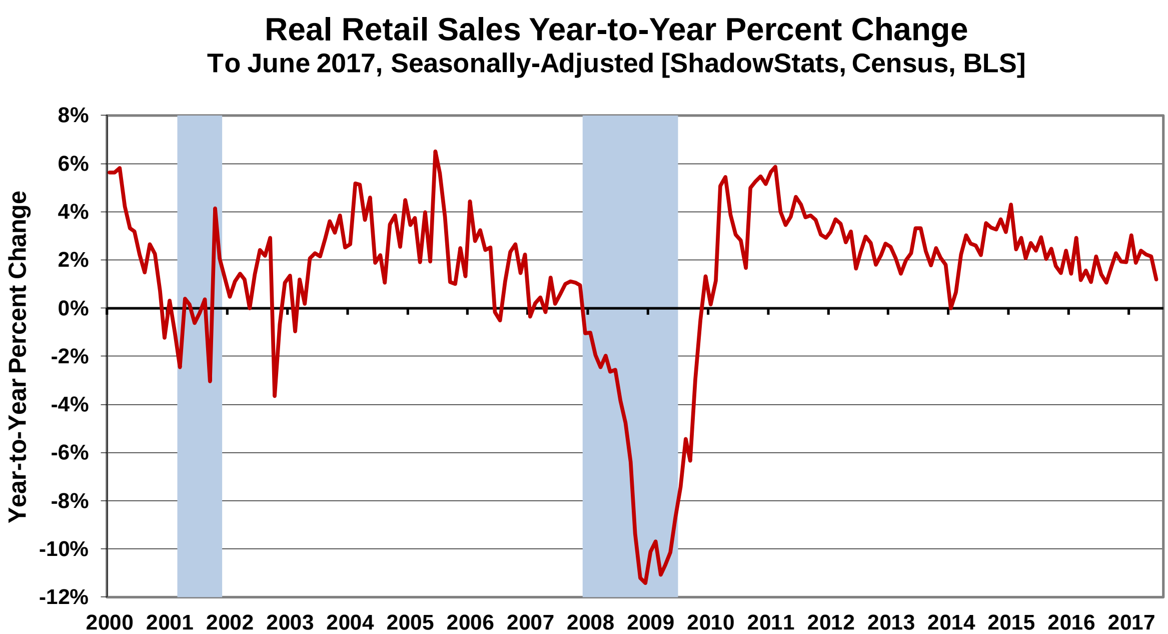
Real Retail Sales Graphs. The first of the four graphs following, *Graph 40* shows the level of real retail sales activity (deflated by the CPI-U) since 2000; *Graph 41* shows the year-to-year percent change for the same period. Annual real growth had slowed markedly into fourth-quarter 2015 and 2016, generating an intense recession signal, despite some near-term volatility and revisions with some recent upturn in annual real growth. *Graphs 42* and *43* show the level of, and annual growth in, real retail sales (and its predecessor series) in full post-World War II detail.

[Graphs 40 to 43 begin on the next page.]

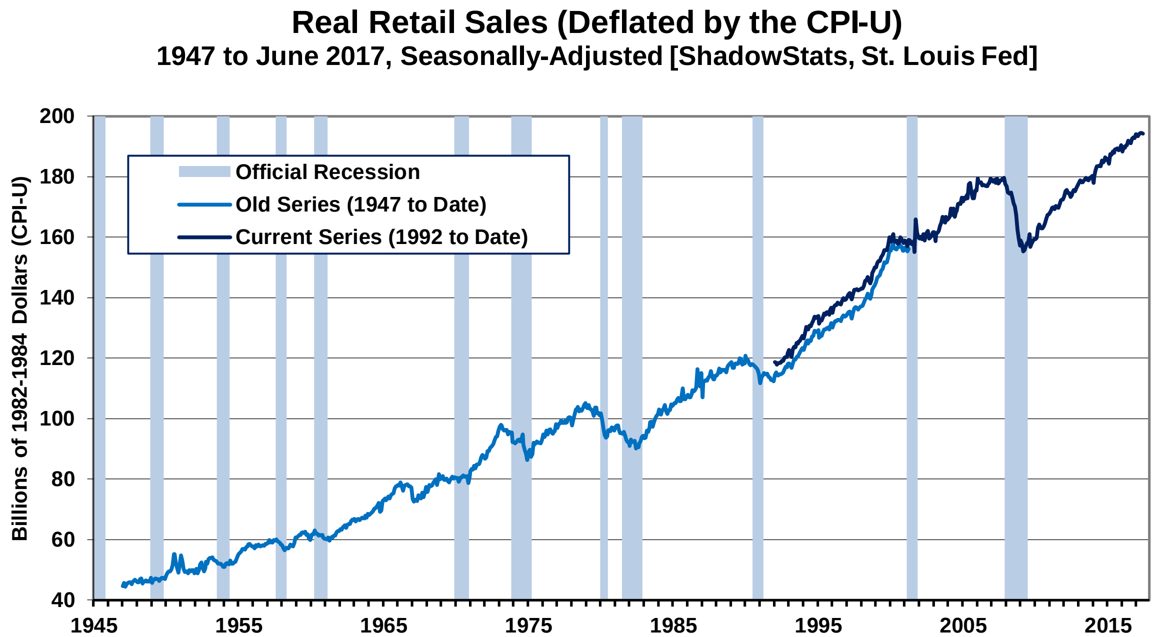
Graph 40: Level of Real Retail Sales (2000 to Date)



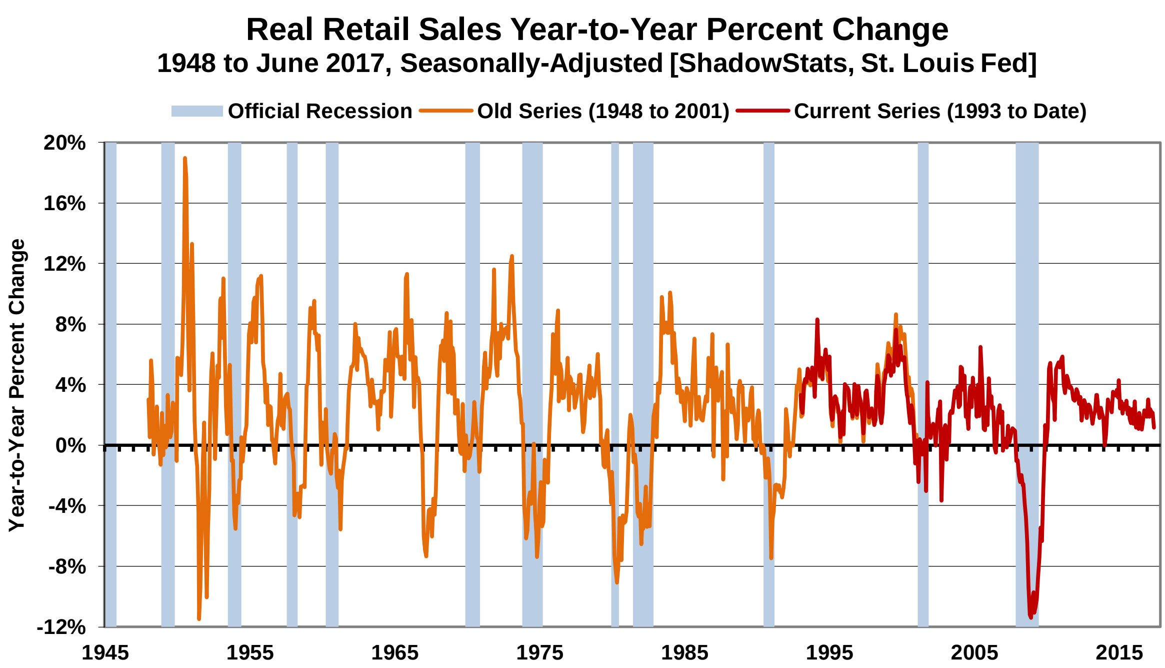
Graph 41: Real Retail Sales (2000 to Date), Year-to-Year Percent Change



Graph 42: Level of Real Retail Sales (1947 to Date)



Graph 43: Real Retail Sales (1948 to Date), Year-to-Year Percent Change



The relative strength seen in the real retail series since the economic trough in 2009 largely has reflected the understatement of the rate of inflation used in deflating the series. Discussed more fully in *Chapter 9* of *2014 Hyperinflation Report—Great Economic Tumble – Second Installment*, deflation by too low an inflation number (such as the CPI-U) results in the deflated series overstating inflation-adjusted, real economic growth. Shown in the latest "corrected" real retail sales—*Graph 4* in the *Executive Summary* section—with the deflation rates corrected for the understated inflation reporting of the CPI-U, the recent pattern of real sales activity has turned increasingly negative. The corrected graph shows that the post-2009 period of protracted stagnation ended, and a period of renewed and ongoing contraction began in second-quarter 2012 and continues to date. The corrected real retail sales numbers use the ShadowStats-Alternate Inflation Measure (1990-Base) for deflation instead of the CPI-U.

CONSUMER PRICE INDEX—CPI (June 2017)

Headline CPI-U "Unchanged" at Down 0.02% (-0.02%) for the Month, Slowed to 1.63% Year-to-Year. Once again, regular reporting in the first-half of the calendar year has taken its seasonally-adjusted toll on common experience as to headline June 2017 CPI-U inflation, with a regular pattern of downside seasonal-adjustments to month-to-month CPI growth, from January through June. The headline "unchanged" in May 2017 CPI-U monthly inflation of 0.0% [down by 0.02% (-0.02%) at the second decimal point] was weaker than consensus expectations of a 0.1% gain, primarily reflecting continued negative seasonal adjustments to gasoline prices. Not adjusted for seasonal factors, as most people experience life, headline CPI-U inflation rose by 0.09% month-to-month in June 2017.

In contrast to the May 2017 Producer Price Index (PPI), which minimally-backed off its 62-month high in April 2017, unadjusted, year-to-year CPI-U inflation continued to sharply fall off against its 60-month high of 2.74% of February 2017, having fallen back to 2.38% in March 2017, to 2.20% in April 2017 and to 1.87% in May 2017. As with the PPI, what had been the recent inflation surge into February was driven by gasoline prices, not by an overheating economy. Those pressures go both ways and, again, are affected heavily by seasonal adjustments. Consider that in May 2017, the Bureau of Labor Statistics (BLS) reported that gasoline declined by 1.40% month-to-month, unadjusted; that is what people paid at the pump. Seasonally-adjusted, however, headline gasoline prices plunged by 6.42% (-6.42%) month-to-month. 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 headline annual June 2017 CPI-U inflation dropping 1.6% [1.63%], the 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 June 2017 easing to 5.2% [previously 5.5% in May 2017], based on 1990 methodologies, and to 9.3% [previously 9.6%], based on 1980 methodologies.

Longer-Range Inflation Outlook. Despite U.S. dollar strength of recent years, and what had been accelerating, now 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 additional time with its emergency stopgap measures. Discussed in the accompanying *Hyperinflation Watch*, recent Fed tightening action was despite continued, unfolding "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.

Since the 2008 crisis, domestic- and global-banking systems have not been 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 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 will generate 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.*

CPI-U. The Bureau of Labor Statistics (BLS) reported July 14th, that headline, seasonally-adjusted June 2017 CPI-U inflation was "unchanged" a 0.0% [down by 0.02% (-0.02%) at the second decimal point] following a month-to-month decline of 0.1% (-0.1%) [0.13% (-0.13%)] in May. That followed an April month-to-month increase of 0.2% [up by 0.17%], a monthly decline in March 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. The level of the adjusted April 2017 CPI-U also was down from the headline January 2017 reading by 0.13% (-0.13%).

Adjusted June 2017 monthly inflation was weakened primarily by negative seasonal adjustments to energy (gasoline) inflation. Where energy-sector inflation rose by 0.75% unadjusted, seasonally-adjusted it declined by 1.55% (-1.55%), versus a decline in food-sector inflation of 0.15% (-0.15%) unadjusted, a decline of 0.05% (-0.05%), while the "core" (ex-food and energy) sector rose by 0.07% unadjusted, versus 0.12% adjusted. On an unadjusted basis, monthly June 2017 CPI-U gained 0.09%, versus 0.08% in May, 0.30% in April, 0.08% in March, 0.31% in February, 0.58% in January and 0.03% in December 2016.

June 2017 seasonal adjustments for monthly gasoline inflation were heavily negative, again, further "depressing" a CPI-U unadjusted monthly decline of 1.70% (-1.70%) in gasoline prices to an adjusted decline of 2.81% (-2.81%). The Department of Energy (DOE) had estimated an unadjusted monthly decline in June gasoline prices of 1.72% (-1.72%).

While early-July 2017 retail gasoline prices (DOE) are running lower month-to-month, versus June, positive seasonal adjustments to July 2017 gasoline suggest a neutral impact from gasoline, with a small, seasonally-adjusted aggregate monthly gain in the July CPI-U likely, possibly around 0.2%.

Major CPI-U Groups. Encompassed by the seasonally-adjusted monthly decline of 0.02% (-0.02%) in June 2017 CPI-U [up by an unadjusted 0.09%], June food inflation declined by a seasonally-adjusted 0.05% (-0.05%) [down by 0.11% unadjusted], energy inflation fell by a seasonally-adjusted 2.72% (-2.72%) in May [down by an unadjusted 0.15% (-0.15)], while the adjusted June "core" (ex-food and energy) inflation rate rose by 0.12% [up by 0.07% unadjusted].

Running contrary to FOMC hopes and expectations, core CPI-U inflation showed unadjusted year-to-year inflation of 1.70% on June 2017, down from 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.

Year-to-Year CPI-U. Not seasonally June 2017 year-to-year inflation for the CPI-U fell back to 1.6% [1.63% at the second decimal point, from 1.9% [1.87%] in May 2017, versus 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 July 2017 reporting, dependent on the seasonally-adjusted month-to-month change, versus the adjusted, headline gain of 0.02% in July 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 July 2017, the difference in July's headline monthly change (or forecast of same), versus the year-ago monthly change, should be added to or subtracted directly from the June 2017 annual inflation rate of 1.63. Given an early guess of a seasonally-adjusted 0.2% gain in the monthly July 2017 CPI-U, that would leave the annual CPI-U inflation rate for July bouncing back to about 1.8%, 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%), 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 June 2017 seasonally-adjusted, headline CPI-W, which is a narrower series and has greater weighting for gasoline than does the CPI-U, declined month-to-month by 0.05% (-0.05%), following a decline of 0.20% (-0.20%), 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 1.50% in June 2017, versus 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 last with minor downside adjustments to annual inflation in April 2017 reporting. Headline June 2017 C-CPI-U annual inflation came in at 1.63%, versus 1.73% in May 2017, 2.09% in April 2017, 2.28% in March 2017, 2.74% in February 2017, 2.43% in January 2017 and 1.92% in December 2016.

Quarterly C-CPI-U, Year-to-Year. On an unadjusted, year-to-year basis, annual inflation by quarter was up by 1.76% in second-quarter 2017, versus 2.48% in first-quarter 2017, 1.58% in fourth-quarter 2016, 0.78% 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 0.96% in 2016, versus and 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 5.2% in June 2017, versus 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 June 2017 ShadowStats-Alternate Consumer Inflation Measure (1980-Base), which reverses gimmicked changes to official CPI reporting methodologies back to 1980, was at about 9.3% (9.34% at the second decimal point, versus 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.

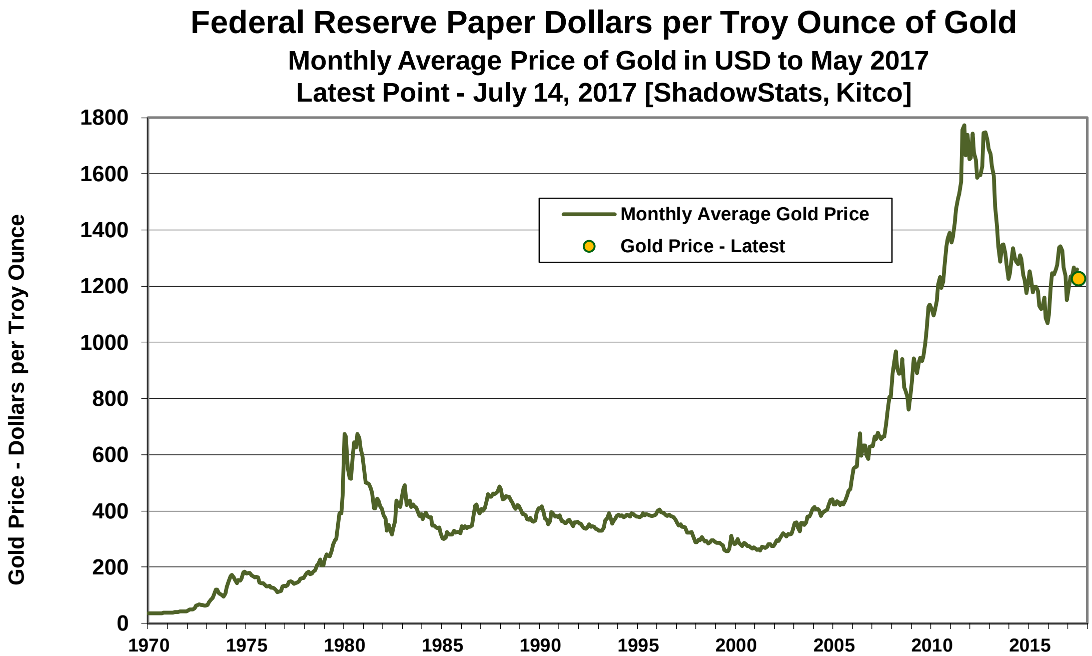
Note: The ShadowStats-Alternate Consumer Inflation Measures largely have been reverse-engineered from BLS estimates of the anticipated impact on annual CPI inflation from various changes made to CPI reporting methodology since the early 1980s, as also incorporated in the CPI-U-RS series. That series 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 44: Monthly Average Gold Price in Dollars (Federal Reserve Notes)



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

CPI-U: GOLD at $2,676 per Troy Ounce, SILVER at $156 per Troy Ounce
ShadowStats: GOLD at $14,351 per Troy Ounce, SILVER at $835 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 $2,676 per troy ounce, based on June 2017 CPI-U-adjusted dollars, and $14,351 per troy ounce, based on June 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 June 2017 CPI-U inflation, the 1980 silver-price peak would be $156 per troy ounce and would be $835 per troy ounce in terms of the June 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—June 2017—In the Context of Downside Revisions and Despite Monthly Boosts from Negative Inflation and Non-Comparable Shifts in Seasonal Factors, Real Sales Contracted Month-to Month, Annual Growth Collapsed and Quarterly Growth Slowed Markedly. Real Retail Sales are detailed in the prior *Retail Sales - Nominal and Real* section.

Real Average Weekly Earnings—June 2017—Real Earnings Boosted by Negative Inflation. The headline estimate for June 2017 real average weekly earnings was published coincident with July 14th release of the June 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 up by 0.53% in June 2017, versus an unrevised 0.04% in May 2017, versus a revised monthly gain of 0.39% [previously 0.44%, initially] in April 2017, at a slower paces than the unrevised monthly gains of 0.55% in March 2017, 0.07% in February, versus the 0.47% (-0.47%) contraction in January, which had been the sixth consecutive monthly decline for the series.

Year-to-year, the adjusted June 2017 year-to-year real change rose to 1.10%, versus a revised 0.59% [previously 0.63%] in May 2017, versus a revised 0.49% [previously 0.54%, initially 0.49%] gain in April 2017 and 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.

Initial reporting of second-quarter 2017 activity reflected an annualized real quarterly gain of 4.01%, following an unrevised first-quarter 2017 contraction of 1.13% (-1.13%), versus a fourth-quarter 2016 contraction of 1.36% (-1.36%), 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 0.73%, following an unrevised 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 major downside risk to headline real GDP reporting.

The 2015 rally in real annual income and the subsequent slowdown in latter 2016 were tied and continue to be tied directly to the impact of irregularly-collapsing gasoline prices, and intermittent, subsequent rebound 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 34 of *Commentary No. 890*).

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 true again, in the June 2017 detail, where lower, seasonally-adjusted gasoline prices generated a headline, seasonally-adjusted CPI-W decline of 0.05% (-0.0%), month-to-month, slightly deeper versus the parallel CPI-U decline of 0.02% (-0.02%).

Found in the *Consumer Liquidity Watch* on page 17, *Graph 11* 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.

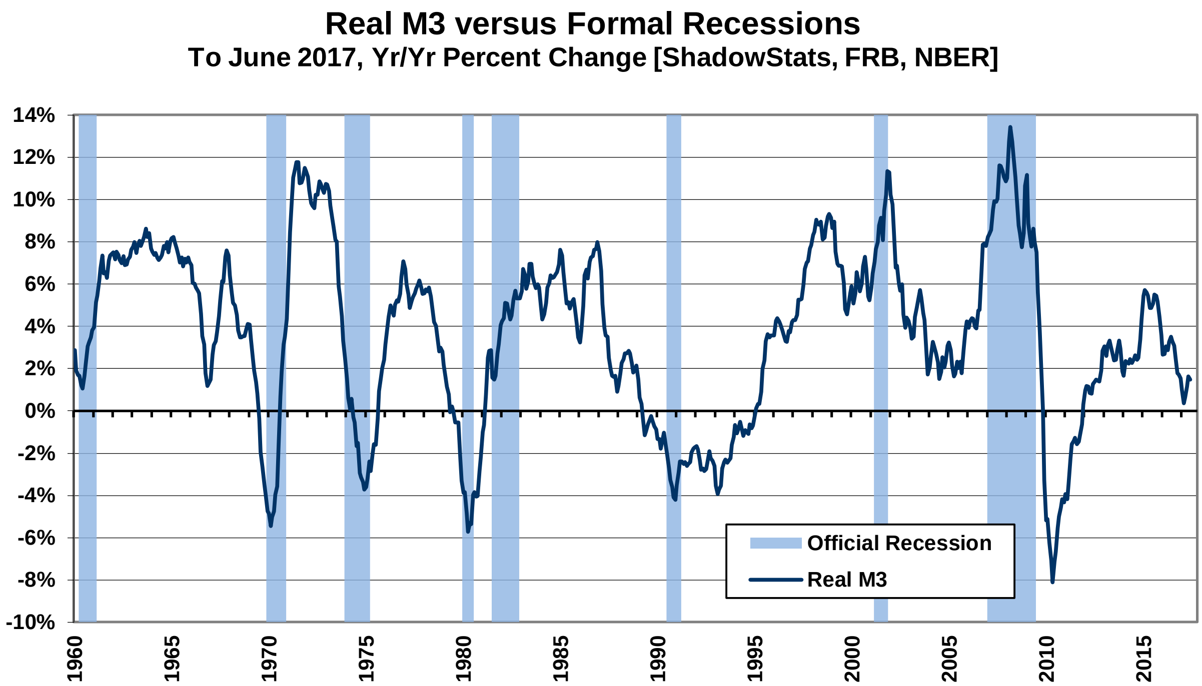
Real (Inflation-Adjusted) Money Supply M3—June 2017—Annual Growth Notched Lower, Reflecting Nominal M3 Growth Weakening Faster than Inflation. The signal for a double-dip, multiple-dip or simply protracted, ongoing recession, based on annual contraction in the real (inflation-adjusted) broad money supply (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.

Shown in *Graph 45*—based on June 2017 CPI-U reporting and the latest ShadowStats-Ongoing M3 Estimate—annual inflation-adjusted growth in June 2017 M3 slowed to 1.48%. The annual growth in June was in the context of a generally-downside benchmarking to money supply growth, and was lower than the downwardly-revised 1.64% [previously 1.69%] in May 201 and against similarly, downwardly-revised growth rates of 1.13% in April 2017, 0.64% in March 2017, 0.36% in February 2017 and 1.00% in January 2017. That growth was down from prior peak growth of a revised 5.71% [previously 5.69%] in February 2015. The June slowing in real annual growth reflected a downturn in nominal June 2017 M3 annual growth from 3.51% to 3.11% (see prior *Commentary No. 898*), with an offset from a slowing of unadjusted headline CPI-U annual inflation from 1.87% to 1.63% (see today's CPI-U headline detail); earlier-month rebounds primarily reflected declining annual CPI-U inflation.

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. 896*). 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 45: 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 (see *Graphs 2* and *4* in the *Executive Summary*, again *Commentary No. 896*, 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 (June 2017)

June 2017 Final Demand PPI Annual Inflation Notched Higher, Despite Heavily-Negative Seasonal Adjustments Hitting Food and Energy. In the continued context of negatively-skewed seasonal adjustments to, and poor-quality theoretical constructs of underlying component series, headline aggregate "wholesale inflation" or the Final Demand Producer Price Index rose by 0.09% in June 2017. While that composite number reflected a headline PPI Goods inflation gain of 0.09% month-to-month, Construction Spending inflation up by 0.17% and the dominant "margins" in the Services sector rising by 0.18% (still boosted by declining gasoline prices—see *Services-Side Nonsense Detail*). Those combined factors do not add up, which often is the case here. Annual growth continued to slow from its recent multi-year peak.

Recent Annual Inflation Spike Not Due to Overheating Economy. With headline annual inflation having hit a 62-month high of 2.45% in April 2017, now having backed off to 1.99% for June 2017, and as previously discussed here, the recent jump in annual headline PPI-FD inflation did 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, as well as food supply issues. That said, headline June 2017 energy prices declined sharply month-to-month, for the second month (seasonally-adjusted), with continued slowing annual growth, both before and after seasonal adjustment.

Beyond the services-related definitional issues, the headline seasonally-adjusted monthly goods inflation in June of 0.09% reflected surging food prices, up by 0.60% offsetting the headline decline in energy prices of 0.52% (-0.52%). Before seasonal adjustments, however, goods inflation jumped by 0.36% in the month, with food inflation surging by 1.01% and energy prices jumping by 1.34%

Services-Side Nonsense Detail. The headline monthly PPI Final Demand inflation generally still 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 February 2017 PPI revision, released with the June 2017 reporting, the headline index level revised lower by 0.19% (-0.19%), with the monthly change revising from an initial month-to-month gain of 0.18% to unchanged at 0.00%. With a net positive impact 0.27% from the goods side, the net-negative revision reflected downside a downside adjustment of 0.44% (-0.44%) in the dominant services area from a monthly gain of 0.18% to a monthly contraction of 0.27% (-0.27%), with downside revisions particularly in the unstable and, again, theoretically-challenged trade services sector (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.

June 2017 Headline PPI Detail. The Bureau of Labor Statistics (BLS) reported July 13th, that the seasonally-adjusted, month-to-month, headline Producer Price Index Final-Demand (PPI-FD) inflation for June 2017 rose by 0.09%, having been unchanged at 0.00% in May, versus a monthly gain of 0.54% in April, a revised gain of 0.09% [previously a contraction of 0.09% (-0.09%)] in March, due to the five-month revision to February 2017, which now stands at "unchanged" at 0.00% [previously a gain of 0.18%, initially up by 0.27%].

On a not-seasonally-adjusted basis—all annual growth rates are expressed unadjusted—year-to-year PPI-FD inflation in June 20127 was up by 1.99%, versus 2.36% in May 2017, 2.45% in April 2017, 2.28% in March 2017, and a revised 2.01% [previously 2.19%] in February 2017.

For the three major subcategories of June 2017 PPI-FD, headline monthly Goods inflation rose by 0.09%, Services "inflation" (profit margins) gained by 0.17% and Construction inflation rose by 0.09%, with respective unadjusted annual growth rates of 2.21%, 1.88% and 1.22%.

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 June 2017 rose by 0.09%, having declined by 0.54% (-0.54%) in May and having gained 0.45% in April. There was negative impact on the aggregate goods headline reading from underlying seasonal-factor adjustments. Not-seasonally-adjusted, June inflation rose month-to-month by 0.36%.

Unadjusted, year-to-year goods inflation in June 2017 showed an annual gain of 2.1%, following gains of 2.88% in May 2017 and 4.03% in April 2017.

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

- "Foods" inflation (weighted at 5.40% of the total index) rose month-to-month by 0.60% in June 2017, have declined by 0.17% (-0.17%) in May 2017 and having gained month-to-month by 0.95% in April. Seasonal adjustments were negative for the June headline change, which was up by 1.03% unadjusted. Unadjusted and year-to-year, annual June 2017 foods inflation rose by 1.11%, having gained 0.95% in May 2017 and 1.48% in April 2017.
- "Energy" inflation (weighted at revised 5.50% of the total index) declined month-to-month by 0.52% (-0.52%) in June 2017, having declined by 3.03% (-3.03%) in May and having gained by 0.81% in April. As is common in the first half of the year, seasonal adjustments were negative, with unadjusted monthly energy inflation up by 1.34% in the month. Unadjusted and year-to-year, June 2017 energy prices gained 4.13%, versus 7.65% in May 2017 and 14.34% in April 2017.
- "Less foods and energy" ("Core" goods) monthly inflation (weighted at 22.91% of the total index) rose by 0.09% in June 2017, having gained 0.09% in May and 0.27% in April. Seasonal adjustments were neutral for monthly core inflation, with unadjusted monthly inflation also up by 0.09%. Unadjusted and year-to-year, June 2017 showed an annual gain of 2.08%, versus 2.17% in May 2017 and 2.26% in April 2017.

Final Demand Services (weighted at 64.12% of the Aggregate Index). Headline monthly Final Demand Services inflation rose by 0.18% in June 2017, having gained 0.27% in May and 0.44% in April. The overall seasonal-adjustment impact on headline June services inflation was neutral, with an unadjusted monthly gain of 0.18% for a second month. Year-to-year, unadjusted June 2017 services rose by 1.99%, versus annual gains of 2.07% in May 2017 and 1.80% in April 2017.

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

- "Services less trade, transportation and warehousing" inflation, or the "Other" category (weighted at 38.87% of the total index), rose month-to-month by 0.27% in June 2017, having declined month-to-month by 0.09% (-0.09%) in May and having gained 0.81% in April. Seasonal-adjustment impact on the adjusted June detail was negative, where the unadjusted monthly reading also had been for a gain of 0.36%. Unadjusted and year-to-year, June 2017 "other" services inflation was up by 2.17%, having gained 2.18% in May 2017 and 2.09% in April 2017.
- "Transportation and warehousing" inflation (weighted at 4.99% of the total index) gained by 0.09% month-to-month in June 2017, having declined by 0.52% (-0.52%) in May and having gained 0.69% in April. Seasonal adjustments were negative for the headline June reading, versus an unadjusted monthly gain of 0.69%. Unadjusted and year-to-year, June 2017 transportation inflation was up by 2.20%, having risen by 2.22% in May 2017 and 2.20% in April 2017.
- "Trade" inflation (weighted at 20.26% of the total index) declined month-to-month in June 2017 by 0.17% (-0.17%), having gained by 1.14% in May, and having declined by 0.35% (-0.35%) in

April, reflecting parallel shifts in margins. Seasonal adjustments had a positive impact here, where the unadjusted monthly change was a steeper decline of 0.43% (-0.43%). Unadjusted and year-to-year, June 2017 trade inflation eased to an annual gain of 1.14%, having gained 2.03% in May 2017 and 1.06% in April 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 0.17% in June 2017, having gained 0.09% in May and 0.43% in April. The impact of seasonal factors on the June reading was neutral, as usual, where the unadjusted monthly gain also was 0.17%. 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* of September 2, 2016.

On an unadjusted basis, year-to-year construction inflation rose by 1.22% in June 2017, versus 1.05% in May 2017 and 0.96% in April 2017. Private surveys and other government estimates tend to show much higher construction-related inflation than is reported in the PPI, by an order of magnitude of a couple of hundred basis points, such as reflected in the privately-published Building Cost and Construction Cost Indices [Dodge Data and Analytics (McGraw Hill) *Engineering News-Record*] and in construction-related price deflators in the National Income Accounts, such as the Gross Domestic Product (GDP). 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.

PPI-Inflation Impact on Pending Reporting of June 2017 New Orders for Durable Goods. As to the upcoming reporting of June 2017 New Orders for Durable Goods, monthly inflation (reported only on a not-seasonally-adjusted basis) for new orders for manufactured durable goods in June 2017 was up by 0.00%, having been unchanged at 0.00% in May and having gained 0.24% in April. Year-to-year annual inflation backed off to 1.69% in June 2017, versus 1.75% in May 2017 and 1.87% in April 2017. June 2017 durable goods orders (both nominal and real) will be reported and calculable on July 27th, with coverage in the ShadowStats *Commentary No. 901* of that date.

WEEK, MONTH AND YEAR AHEAD

Continued Softening in Headline Economic Reporting Increasingly Should Compromise Fed Policies, Pummel the Dollar, Boost the Price of Gold and Foster Other Financial-Market Tumult. Discussed today's *Hyperinflation Watch* (page 20), previously in *General Commentary No. 894*, and further to the discussions in the *Opening Comments* and *Hyperinflation Watch* of *Commentary No. 892*, headline economic reporting during June showed a marked downturn versus consensus forecasts. Though not as severe as the June shocks, similar patterns have begun to unfold in related reporting in July. While such circumstances usually signal an unfolding, major downshift in underlying economic reality, in the current circumstance that also forewarns of a potential shift in FOMC activity, a circumstance well removed from consensus expectations, at this time. In terms of Fed policy, that would be a cessation of incremental rate hikes and a shift back towards expanded quantitative easing.

The immediate effect of such a policy change by the U.S. central bank likely would be 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. Consensus economic forecasts have begun to soften, as has the exchange rate for the U.S. dollar.

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*) 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. Such 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. Again, reporting patterns 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 economic expansion of 12.6% (see the *Executive Summary* of *Commentary No. 896* and *Commentary No. 869*).

Discussed in *No. 859 Special Commentary*, the Trump Administration continues to face extraordinarily difficult times, but 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. 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 cannot happen without the meaningful participation and cooperation of Congress. The financial crisis at hand likely will break 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 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: 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 the long-standing hyperinflation and economic outlooks published in 2014 Hyperinflation Report—The End Game Begins – *First Installment Revised* (April 2014) and 2014 Hyperinflation Report—Great Economic Tumble – *Second Installment* (April 2014). The two *Hyperinflation* installments remain the primary background material for the hyperinflation circumstance. Other references on underlying economic reality are the Public Commentary on Inflation Measurement and the Public Commentary on Unemployment Measurement.

Recent Commentaries (Covering Headline Details and/or Special Features). *[Pease Note: The complete ShadowStats archives, from 2004 forward, are found at www.ShadowStats.com (left-hand column of home page).]*

Commentary No. 898 (July 7, 2017) covered the headline employment and unemployment detail for June 2017, along with the initial estimate of annual growth in the ShadowStats Ongoing M3 for June.

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.

Commentary No. 895 (June 26, 2017) covered May 2017 New Orders for Durable Goods.

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. 893 (June 16, 2017) assessed May 2017 New Residential Construction (Housing Starts) and updated *Consumer Liquidity Conditions*.

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. 891 (June 14, 2017) covered the May 2017 CPI and PPI, along with real and nominal retail sales, along with a quick comment on the FOMC rate hike.

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.

Commentary No. 889 (May 26, 2017) reviewed the second-estimate, first-revision to first-quarter 2017 GDP, and the April 2017 estimates of New Orders for Durable Goods and New- and Existing Home Sales and Sentier Research's April Real Median Household income.

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.

Commentary No. 886 (May 16, 2017) reviewed the headline details of the April 2017 CPI and PPI detail, along with headline reporting of nominal and real Retail Sales, real Average Weekly Earnings and regular monthly review of U.S. dollar conditions and prospects.

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. 884 (May 4, 2017) reviewed the March 2017 details for the U.S. Trade Deficit and Construction Spending and the Conference Boards' reporting of April 2017 Help Wanted OnLine.

Commentary No. 883 (April 29, 2017) covered the headline detail for the "advance" or first-estimate of first-quarter GDP, along with an update to *Consumer Liquidity Conditions*.

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 for New- and Existing-Home Sales.

Commentary No. 881 (April 19, 2017) reviewed the prior March 2017 Industrial Production, Housing Starts and the Cass Freight Index™, along with an economic update in advance of the initial first-quarter 2017 GDP estimate.

Commentary No. 880 (April 15, 2017) detailed the prior March 2017 headline reporting the of both Real and Nominal Retail Sales, Real Earnings, the CPI, the PPI and updated Consumer Liquidity, where mounting stresses on consumer income and credit are signaling major economic issues ahead.

Commentary No. 879 (April 7, 2017) covered March 2007 Employment and Unemployment, Help-Wanted Advertising and an update on monetary policy and Money Supply M3 (the ShadowStats Ongoing Measure).

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™.

Commentary No. 873 (March 16, 2017) discussed prospects for future tightening and/or a return to quantitative easing by the FOMC, along with the prior review of the February 2017 Residential Construction reporting.

Commentary No. 872 (March 15, 2017) offered some initial comment on the FOMC rate hike, in conjunction with the review of last month’s February 2017 Retail Sales (real and nominal), Real Earnings and the CPI and PPI.

Commentary No. 871 (March 10, 2017) covered reporting of February Labor Conditions, updated Consumer Liquidity and the ShadowStats Ongoing M3 Measure for February 2017, and a revised FOMC outlook.

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. The GAAP-detail will be reviewed in a *Special Commentary*.

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 RELEASE: New Residential Construction—Housing Starts (June 2017). The Census Bureau will release the June 2017 estimate of New Residential Construction, including Housing Starts and Building Permits, Wednesday, July 19th, with detail covered in *Commentary No. 900* of that date.

In line with common-reporting experience of recent years, monthly results are likely to be unstable and not statistically meaningful, holding in a general pattern of down-trending stagnation. That said, in the wake of continuing, nonsensical extreme swings in recent months and relatively meaningless recent annual benchmark revisions, almost anything remains possible in this unstable series in a given month, despite what are strong, positive catch-up consensus expectations for the headline detail.

Irrespective of the usual meaninglessness of the headline detail, the broad pattern of housing starts still should remain consistent with the low-level, stagnant activity, as seen at present, where May 2017's continuing, "unexpected" downside activity was down by 52% (-52%) from recovering its pre-recession high of the series. Such low-level stagnation is particularly evident with the headline detail viewed in the context of a six-month moving average. Again, this series remains subject to regular and extremely-large, prior-period revisions.

Discussed in today's *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 demand for residential construction.

