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

COMMENTARY NUMBER 792
Retail Sales and Producer Price Index

March 15, 2016

Previously up by 0.2%, January Retail Sales Fell by a Revised 0.4% (-0.4%);
February Sales Fell by 0.1% (-0.1%), with a Quarterly Sales Drop Unfolding

Seasonal-Adjustment Inconsistencies Bloated Headline February Sales by 0.5%;
Consistent Reporting Would Have Seen a Headline Decline of 0.6% (-0.6%)

February 2016 PPI Goods Inflation Fell by 0.56% (-0.56%),
PPI Services Profit Margins Were Unchanged at 0.00%, with
Final-Demand PPI Inflation Down by 0.18% (-0.18%)

PLEASE NOTE: The next regular Commentary *planned for tomorrow, Wednesday, March 16th, will cover the Consumer Price Index (CPI), real Retail Sales and earnings, Industrial Production, Housing Starts and a general economic update. Given the amount of new detail being released, the* Commentary *most likely will be late in the day, quite possibly going overnight.*

Best wishes to all — John Williams

OPENING COMMENTS AND EXECUTIVE SUMMARY

Economic Detail Continues in Broad Contraction. Today's (March 15th) headline reporting of nominal Retail Sales for February 2016 included a statistically-significant, downside revision to last month's headline detail, suggestive of Real Retail sales tumbling into a new quarterly contraction for first-quarter 2016. Such will be assessed in the next *Commentary No. 793*, planned for tomorrow, in conjunction with the latest headline releases on Industrial Production, Housing Starts and consumer inflation and related real Retail Sales and earnings. The outlook for near-term GDP reporting, including the March 25th second revision to fourth-quarter 2015 GDP, also will be reviewed.

Noted above, given the large amount of new data being released, *No. 793* most assuredly will be late in the day and could roll over into publication on Thursday, March 17th. The status of the pending publication, as usual, will be updated in the *Publishing Schedule* box at the top of the left-hand column of the ShadowStats home page at www.ShadowStats.com.

Today's *Commentary* (March 15th). The balance of these *Opening Comments* provides summary coverage of the February 2016 nominal Retail Sales and Producer Price Index (PPI) reporting, and a brief update on *Consumer Conditions* related to the latest monthly real median household income measure. The *Week Ahead* updates the outlook for tomorrow's releases on February Industrial Production, Housing Starts and the CPI and related series. The most recent *Hyperinflation Outlook Summary* is found in *Commentary No. 783*.

Nominal Retail Sales—February 2016—As the First-Quarter Outlook Gets Pushed into Contraction, the Headline February Decline of 0.1% (-0.1%) Would Have Been 0.6% (-0.6%) but for Covert Seasonal Adjustment Shifts. In the context of a downside revision in headline January 2016 nominal retail sales from a statistically-insignificant gain of 0.18%, to a statistically-significant decline of 0.40% (-0.40%), the monthly decline in February 2016 nominal Retail Sales of 0.15% (-0.15%) [rounds to the headline decline of 0.1% (-0.1%)] resulted from underlying and historically-inconsistent seasonal-factor shifts, which boosted headline February activity by 0.45%.

Discussed in the *Seasonal-Factor Distortions* section of the *Reporting Detail*, the issues here were within the usual inconsistent and non-comparable shifts in the published seasonally-adjusted data, based on monthly "concurrent seasonal adjustment" calculations and lack of relevant publication of consistent, historical data. Accordingly, using old-fashioned consistent reporting, headline nominal February 2016 retail sales likely were down by about 0.6% (-0.6%) month-to-month. Constraining retail sales activity, the consumer remains in an extreme liquidity bind, as updated briefly in the *Consumer Conditions* section, which follows.

As to the headline revisions, ShadowStats affiliate www.ExpliStats.com has charted the revisions to nominal retail sales, viewable here: *Nominal Retail Sales Revisions*.

Separately, before inflation consideration, seasonally-adjusted, annual nominal growth remained sharply higher (despite a downward revision to January) against extraordinarily-weak activity in January 2015 and February 2015, which purportedly had been hammered by bad weather. In nominal terms, year-to-year change in sales widened to 3.1% in February, from a downwardly-revised 3.0% in January 2016, versus an upwardly-revised 2.6% in December 2015.

Nominal (Not-Adjusted-for-Inflation) Retail Sales—February 2016. In the context of a sharp downside revision to headline January 2016 retail sales, and boosted sharply by the inconsistent seasonal-factor shifts, February 2016 nominal sales declined month-to-month by a statistically-insignificant, seasonally-adjusted 0.15% (-0.15%) [such rounds to a decline of 0.1% (-0.1%)]. Net of prior-period revisions, nominal February retail sales fell by 0.58% (-0.58%).

Such followed a statistically-significant, revised monthly decline of 0.40% (-0.40%) in January 2016, and an upwardly revised gain of 0.31% in December 2015.

Year-to-Year Annual Change. Year-to-year nominal change in February 2016 retail sales was a statistically-significant increase of 3.09%, versus a downwardly-revised 2.99% in January 2016, and an upwardly revised 2.59% in December 2015.

Annualized Quarterly Changes. Reflecting the inconsistent seasonal-adjustment shifts both in the current and year-ago data, the pace of annualized nominal retail sales decline in first-quarter 2015 narrowed to a contraction of 3.67% (-3.67%), still the worst quarter-to-quarter showing since the economic collapse. Once again, these revisions to first-quarter 2015 had nothing to do with better-quality historical detail, only with the use of concurrent seasonal-adjustment revisions to help shift headline sales activity into current headline reporting, again, as discussed in the *Seasonal-Factor Distortions* section of the *Reporting Detail*.

In like manner, with the seasonal-factor inconsistencies now in both January 2015 and February 2015, relative second-quarter 2015 retail sales growth softened to a revised annualized growth rate of 5.91%, while the annualized third-quarter 2015 growth held at an unrevised 4.51% gain. Revised reporting for fourth-quarter 2015 nominal retail sales had the annualized growth rate at a slightly stronger 1.19%.

Based solely on January and February 2016, first-quarter 2016 growth was on track for an annualized nominal contraction of 0.64% (-0.64%). Based solely on last month's initial January 2016 reporting, the outlook for first-quarter 2016 had been for an annualized quarterly gain of 1.59%.

Real (Inflation-Adjusted) Retail Sales—February 2016. The monthly decline of 0.15% (-0.15%) in nominal February 2016 retail sales was before accounting for inflation. The monthly change in real retail sales for February awaits the headline estimate of the CPI-U consumer inflation for February 2016, in tomorrow's *Commentary No. 793*. Discussed in the *Week Ahead* section, the headline CPI-U outlook is for roughly a 0.3% (-0.3%) decline in headline monthly inflation, which would boost the headline change in real Retail Sales by a parallel amount, likely into positive territory. Annual inflation, however, should remain positive, muting the headline nominal annual gain in real, inflation-adjusted terms, while the developing quarter-to-quarter change in first-quarter 2016 real Retail Sales easily could be shown in prospective contraction.

Consumer Conditions Updated—January 2016 Real Median Household Income. Constraining retail sales activity, the consumer remains in an extreme liquidity bind, as updated briefly, again, in today's *Opening Comments*, in prior *Commentary No. 791* and as discussed broadly in *Commentary No. 790* and *No. 777 Year-End Special Commentary*. Without sustained 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 has been unable to sustain positive growth in domestic personal consumption, including retail sales, real or otherwise. That circumstance—in the last eight-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.

Household Income Measures Still Signal Broad-Based Economic Difficulties. Discussed and graphed in *Commentary No. 752* are the Census Bureau's most-recent (2014) annual measures of household income, with the latest annual detail on real median household income plotted in *Graph 2*. The latest monthly detail on real median household income, published by www.SentierResearch.com through January 2016 (released today, March 15th), has been updated in *Graph 1*. The new detail, however, does not appear yet to have incorporated annual revisions to seasonally-adjusted CPI-U or any other benchmarking revisions. The February measure tentatively is scheduled for release on March 31st.

This measure of real monthly median household income generally can be considered as a monthly version of the annual detail shown in *Graph 2*, but the monthly specifics are generated from separate surveying and questioning by the Census Bureau.

On a monthly basis, when headline GDP purportedly started its solid economic recovery in mid-2009, the monthly household income number nonetheless plunged to new lows. Generally, the income series had been in low-level stagnation, with the recent upturn in the monthly index boosted specifically by collapsing gasoline prices and related negative or flat headline consumer inflation. The index reached pre-recession levels in the December 2015 reporting, and in January 2016 it remained minimally below the pre-recession highs for both the formal 2007 and 2001 recessions. It should top out or turn down anew when headline CPI-U inflation begins to rebound in the months ahead.

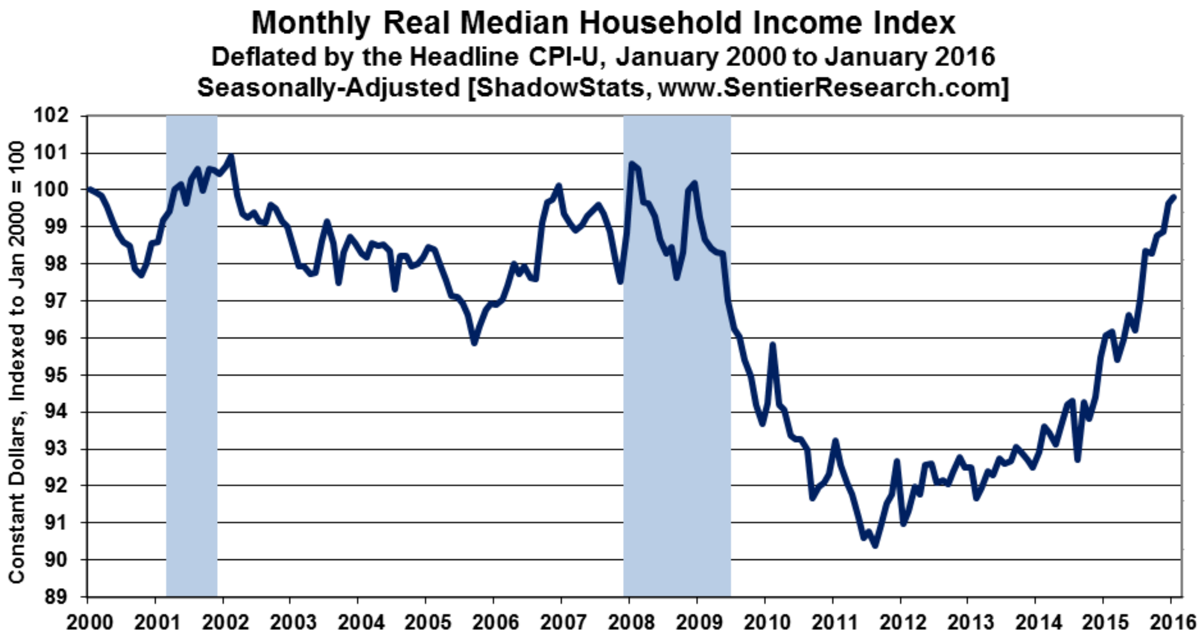
Where lower gasoline prices have provided some minimal liquidity relief to the consumer, indications are that any effective extra cash generally has been used to pay down unsustainable debt or other obligations, not to fuel new consumption.

***Differences in the Monthly versus Annual Median Household Income*.** That general pattern of relative historical weakness also has been seen in the headline reporting of the annual Census numbers, shown in *Graph 2*, with the latest 2014 real annual median household income at a ten-year low. 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.

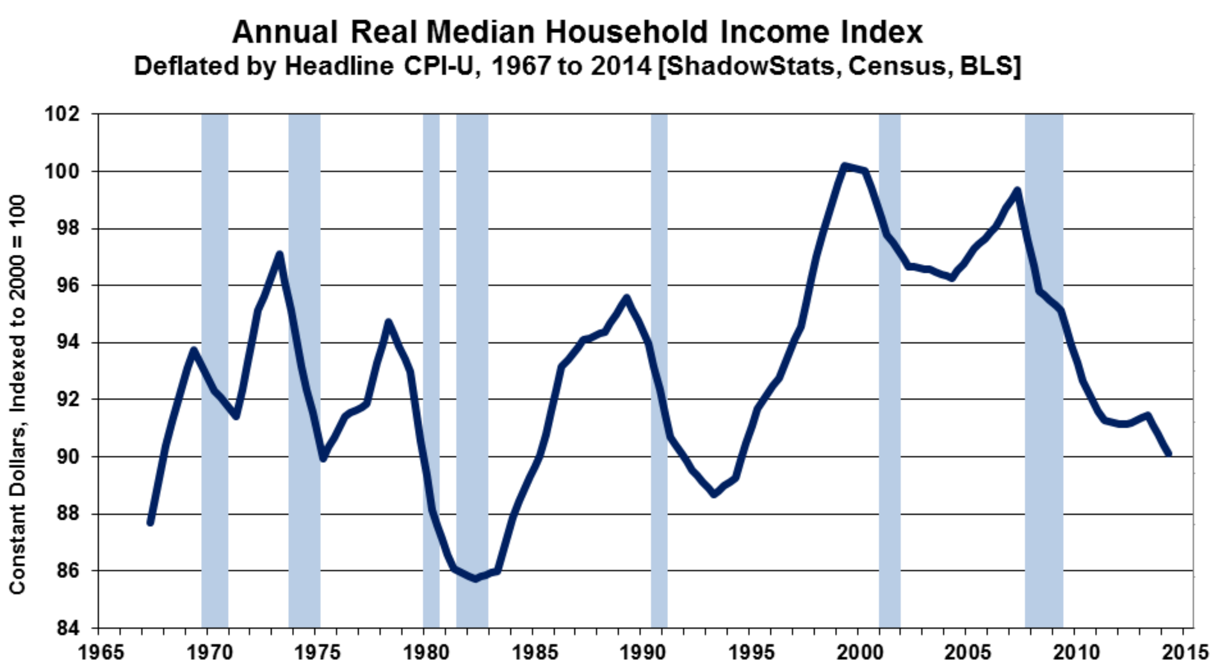
Where Sentier uses monthly questions surveying current annual household income, the headline annual Census detail is generated by a once-per-year question in the March CPS survey, as to the prior year's annual household income.

Discussed in *Commentary No. 752*, the Census Bureau changed its annual income questionnaire for 2014, with the effect of boosting income reported in 2014. The details on changes between 2013 and 2014, however, also were available on a consistent and comparable basis, and the consistent aggregate annual percentage change of median household income in 2014, versus 2013, was applied to the otherwise consistent historical series to generate *Graph 2*.

Graph 1: Monthly Real Median U.S. Household Income through January 2016



Graph 2: Annual Real Median U.S. Household Income through 2014



In historical perspective from *Graph 2*, 2011, 2012 and 2013 income levels were below levels seen in the late-1960s and early-1970s, with the 2014 income level below the readings through most of the 1970s, aside from being at a ten-year low. Such indicates the long-term nature of the evolution of the major structural changes squeezing consumer liquidity and impairing the current economy (see related discussions in *2014 Hyperinflation Report—The End Game Begins* and particularly *2014 Hyperinflation Report—Great Economic Tumble*).

Producer Price Index (PPI)—February 2016—Goods Inflation Fell By 0.56% (-0.56%), Services Profit Margins Were "Unchanged" at 0.00%, with Aggregate PPI down by 0.18% (-0.18%). On the goods side, where headline wholesale inflation declined by 0.56% (-0.56%) in the month of February 2016, the dominant effect was from declining energy prices. along with some downside movement in foods inflation and a minimal offset from a gain in "core" inflation (net of food and energy).

The relative upside offset to the drop in goods inflation was an "unchanged" reading in the more-heavily-weighted services sector. Boosted by margins earned in securities brokerage, the services side also began to see some margin hits from fuel, which has started to catch up with the perverse, early counterintuitive price movements attributed to declining prices for oil and oil–related products within the context of those services profit margins.

Discussed in the *Reporting Detail*, the conceptual differences between goods inflation and services profit margins do not blend well and are not merged easily or meaningfully in the PPI. The dual measures are more meaningful viewed independently than as the hybrid measure of the headline Producer Price Index Final Demand.

February 2016 Headline PPI Detail. The Bureau of Labor Statistics (BLS) reported this morning, March 15th, that the seasonally-adjusted, month-to-month, headline Producer Price Index (PPI) Final Demand inflation for February 2016 was a decline of 0.18% (-0.18%), versus a monthly gain of 0.09% in January 2016. The broad impact of seasonal adjustments on the headline PPI reporting was negative in February, with the unadjusted monthly February measure unchanged at 0.00%.

On a not-seasonally-adjusted basis—all annual growth rates are expressed unadjusted—year-to-year PPI Final Demand inflation in February 2016 also was unchanged at 0.00%, versus a January 2016 annual contraction of 0.18% (-0.18%).

For the three major subcategories of February 2016 Final Demand PPI, headline monthly Goods inflation fell by 0.56% (-0.56%), Services inflation was unchanged at 0.00%, and Construction inflation fell in the month by 0.09% (-0.09%).

Final Demand Goods (Weighted at 33.60% of the Aggregate Index). Running somewhat in parallel with the old Finished Goods PPI series, headline month-to-month Final Demand Goods inflation in February 2016 declined by 0.56% (-0.56%), having dropped in January by 0.65% (-0.65%). There was negative impact on the aggregate headline February reading from underlying seasonal-factor adjustments. Not-seasonally-adjusted, February Final Demand Goods inflation fell by 0.28% (-0.28%) for the month.

Unadjusted, year-to-year goods inflation in February 2016 fell by 2.66% (-2.66%), versus a January 2016 annual contraction of 2.48% (-2.48%).

Headline seasonally-adjusted monthly changes by major components of the February 2016 Final Demand Goods:

- "Foods" inflation (weighted at 5.56% of the total index) fell month-to-month in February 2016 by 0.34% (-0.34%), having gained 1.04% month-to-month in January. Seasonal adjustments were a positive factor for the February monthly change, which was down by 0.52% (-0.52%) unadjusted. Unadjusted and year-to-year, annual February 2016 foods inflation declined by 2.53% (-2.53%), versus an annual decline of 3.48% (-3.48%) in January 2016.
- "Energy" inflation (weighted at 5.23% of the total index) declined by 3.43% (-3.43%) in February 2016, following a monthly decline of 5.00% (-5.00%) in January, with the February reading hit by seasonal adjustments. Unadjusted, monthly energy inflation fell by 2.24% (-2.24%) in February 2016. Unadjusted and year-to-year, the February 2016 annual contraction in energy prices widened to 14.46% (-14.46%), versus an annual decline of 11.49% (-11.49%) in January 2016.
- "Less foods and energy" ("Core" goods) monthly inflation (weighted at 22.81% of the total index) rose by 0.09% in February 2016, versus an unchanged reading at 0.00% in January. Seasonal adjustments were neutral for monthly core inflation, with an unadjusted gain of 0.09% in February. Unadjusted and year-to-year, February 2016 was up by 0.18%, having been unchanged at 0.00% in January 2016.

<u>Final Demand Services (Weighted at 64.32% of the Aggregate Index).</u> Headline monthly Final Demand Services inflation was unchanged at 0.00% in February 2016, having gained 0.54% in January. The overall seasonal-adjustment impact on headline February services inflation was negative, with an unadjusted monthly February gain of 0.27%. Year-to-year, unadjusted February 2016 services inflation was 1.46%, versus 0.91% in January 2016.

The headline monthly changes by major component for February 2016 Final Demand Services inflation:

- "Services less trade, transportation and warehousing" inflation, or the "Other" category (weighted at 38.97% of the total index), rose by 0.27% in February 2016, having gained 0.37% in January. Seasonal-adjustment impact on the adjusted February detail was negative, where the unadjusted monthly gain was 0.36%. Unadjusted and year-to-year, February 2016 "other" services inflation was 1.76%, up from 1.57% in January 2016.
- "Transportation and warehousing" inflation (weighted at 4.99% of the total index) fell month-to-month in February 2016 by 0.70% (-0.70%), versus a monthly gain of 0.44% in January. Seasonal adjustments had positive impact on the headline February number, where the unadjusted monthly reading had been a decline of 0.96% (-0.96%). Unadjusted and year-to-year, February 2016 transportation inflation fell by 2.33% (2.33%), versus an annual contraction of 2.23% (-2.23%) in January 2016.
- "Trade" inflation (weighted at 20.36% of the total index) declined for the month of February 2016 by 0.35% (-0.35%), having gained 0.89% in January. Seasonal adjustments had a negative impact here, where unadjusted monthly inflation rose by 0.44% in February. Unadjusted and year-to-year, February 2016 trade inflation rose by 1.90%, having increased by 0.45% in January 2016.

<u>Final Demand Construction (Weighted at 2.08% of the Aggregate Index).</u> Although a fully self-contained subsection of the Final Demand PPI, Final Demand Construction inflation receives no formal headline coverage. Nonetheless, headline numbers are published, and month-to-month construction inflation

contracted by 0.09% (-0.09%) in February 2016, versus a decline of 0.35% (-0.35%) in January. The impact of seasonal factors on the February reading was neutral, where the unadjusted monthly change also was a contraction of 0.09% (-0.09%).

On an unadjusted basis, year-to-year construction inflation rose by 0.98% in February 2016, versus an annual gain of 1.16% in January 2016.

- "Construction for private capital investment" headline monthly inflation (weighted at 1.40% of the total index) declined month-to-month by 0.09% (-0.09%) in February 2016, versus a monthly contraction in January of 0.26% (-0.26%). As usual, seasonal adjustments had neutral impact here, where the unadjusted February monthly inflation also was a contraction of 0.09% (-0.09%). Unadjusted and year-to-year, February 2016 private construction inflation was up by 0.89%, versus 0.98% in January 2016.

- "Construction for government" inflation (weighted at 0.68% of the total index) declined month-to-month by 0.09% (-0.09%) in February 2016, having declined by 0.44% (-0.44%) in January. Seasonal adjustments had neutral impact, where unadjusted monthly February inflation was a negative 0.09% (-0.09%). Unadjusted and year-to-year, February 2016 government construction inflation was 1.25%, versus 1.43% in January 2016.

[The *Reporting Detail* section includes additional detail on the nominal Retail Sales and PPI.]

REPORTING DETAIL

NOMINAL RETAIL SALES—February 2016

As the First-Quarter Outlook Gets Pushed into Contraction, the Headline February Decline of 0.1% (-0.1%) Would Have Been 0.6% (-0.6%) but for Covert Seasonal Adjustment Shifts. In the context of a downside revision in headline January 2016 nominal retail sales from a statistically-insignificant gain of 0.2% [0.18% at the second decimal point], to a statistically-significant decline of 0.4% (-0.4%) [down by 0.40% (-0.40%) at the second decimal point], the headline monthly decline in February 2016 nominal Retail Sales of 0.1% (-0.1%) [down by 0.15% (-0.15%) at the second decimal point], resulted from underlying and historically-inconsistent seasonal-factor shifts, which boosted the headline February activity by 0.45%.

Discussed in the *Seasonal-Factor Distortions* section of this *Reporting Detail,* the issues here were within the usual inconsistent and non-comparable shifts in the published seasonally-adjusted data, based on monthly "concurrent seasonal adjustment" calculations and lack of relevant publication of consistent, historical data. Accordingly, using old-fashioned consistent reporting, headline nominal February 2016 retail sales likely were down by 0.6% (-0.6%) month-to-month.

As to the headline revisions, ShadowStats affiliate www.ExpliStats.com has charted the revisions to nominal retail sales, viewable here: *Nominal Retail Sales Revisions*.

Separately, before inflation consideration, seasonally-adjusted, annual nominal growth remained sharply higher (despite a downward revision to January) against extraordinarily-weak activity in January 2015 and February 2015, which purportedly had been hammered by bad weather. In nominal terms, year-to-year change in sales widened to 3.1% in February, from a revised 3.0% [previously 3.4%] in January 2016, versus a revised 2.6% [previously 2.4%] in December 2015.

***Structural Liquidity Issues Constrain Consumer Economic Activity*.** Constraining retail sales activity, the consumer remains in an extreme liquidity bind, as updated briefly, again in today's *Opening Comments*, in prior *Commentary No. 791* and as discussed broadly in *Commentary No. 790* and *No. 777 Year-End Special Commentary*. Without sustained 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 has been unable to sustain positive growth in domestic personal consumption, including retail sales, real or otherwise. That circumstance—in the last eight-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.

***Nominal (Not-Adjusted-for-Inflation) Retail Sales—February 2016*.** In the context of a sharp downside revision to headline January 2016 retail sales, and boosted sharply by the implied seasonal-factor shifts from a large upside revision to February 2015 relative to January 2015, February 2016 headline nominal sales declined by 0.1% (-0.1%) at the first decimal point, as reported this morning (March 15th) by the Census Bureau.

At the second decimal point, February 2016 retail sales showed a statistically-insignificant, seasonally-adjusted decline of 0.15% (-0.15%) +/- 0.59% (this and all other confidence intervals are expressed at the 95% level). Net of prior-period revisions, nominal February retail sales fell by what would have been marginally statistically-insignificant at 0.58% (-0.58%).

Such followed a statistically-significant, revised monthly decline of 0.40% (-0.40%) +/- 0.35% [previously a gain of 0.18%] in January 2016, and a revised gain of 0.31% [previously up by 0.16%, initially down by 0.11% (-0.11%)] in December 2015.

Year-to-Year Annual Change. Year-to-year nominal change in February 2016 retail sales was a statistically-significant increase of 3.09% +/- 0.82%, versus a downwardly-revised 2.99% [previously up by 3.44%] in January 2016, and an upwardly revised 2.59% [previously up by 2.44%, initially up by 2.20%] in December 2015.

***Annualized Quarterly Changes*.** Reflecting the inconsistent seasonal-adjustment shifts both in the current and year-ago data, the pace of annualized nominal retail sales decline in first-quarter 2015 narrowed to a contraction of 3.67% (-3.67%) [previously down by 4.26% (-4.26%), by 4.48% (-4.48%), by 4.42% (-4.42%), by 4.23% (-4.23%), and initially down by 4.04% (-4.04%)], still the worst quarter-to-quarter showing since the economic collapse. Once again, these revisions to first-quarter 2015 had nothing to do with better-quality historical detail, only with the use of concurrent seasonal-adjustment revisions to help shift headline sales activity into current headline reporting, as discussed in the *Seasonal-Factor Distortions* section.

In like manner, with the creeping seasonal-factor inconsistencies now in both January 2015 and February 2015, relative second-quarter 2015 retail sales growth softened to a revised annualized growth rate of 5.91% [previously estimated at 6.57%, initially finalized at 6.81%], while the annualized third-quarter 2015 growth held at an unrevised 4.51% annualized gain. Revised reporting for fourth-quarter 2015 nominal retail sales had the annualized growth rate at 1.19% [previously 1.00%, initially up by 0.75%].

Based solely on January and February 2016, first-quarter 2016 growth was on track for an annualized nominal contraction of 0.64% (-0.64%). Based solely on last month's initial January 2016 reporting, the outlook for first-quarter 2016 had been for an annualized quarterly gain of 1.59%.

Annualized quarterly real retail sales growth will be updated with tomorrow's CPI-U *Commentary No. 793* of Wednesday, March 16th. That said, adjusted for realistic inflation (see *Commentary No. 787* and *No. 777 Year-End Special Commentary*), real retail sales and the broad economy never truly recovered from the economic collapse into 2008 and 2009.

February 2016 Core Retail Sales—Core Monthly Sales Change. Reflecting an environment that should be seeing rising food prices and a seasonally-adjusted decline [an unadjusted drop of 8.99% (-8.99%) per the Department of Energy] in gasoline prices, seasonally-adjusted monthly grocery-store sales fell by 0.33% (-0.33%) in February 2016, with gasoline-station sales down by 4.42% (-4.42%) for the month.

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 preference for ignoring food and energy prices when "core" inflation is lower than full inflation—are estimated using two approaches:

Version I: February 2016 versus January 2016 seasonally-adjusted retail sales series—net of total grocery store and gasoline station sales—reflected a monthly gain of 0.26%, versus the official headline aggregate sales contraction of 0.15% (-0.15%).

Version II: February 2016 versus January 2016 seasonally-adjusted retail sales series—net of the monthly change in revenues for grocery stores and gas stations—reflected a month-to-month gain of 0.21%, versus the official headline aggregate sales contraction of 0.15% (-0.15%).

Likely-Downside Annual Retail Sales Revisions Scheduled for April 29th. Subsequent to the headline reporting of March 2016 nominal and real Retail Sales, respectively on April 13th and 14th, the Census Bureau has planned its annual benchmark revision of retail sales for April 26, 2016. Encompassing results of the 2014 Annual Retail Trade Series and the long-delayed final results from the 2012 Economic Census, the historical Retail Sales history (and related July 29th GDP benchmark revisions) should suffer meaningful down side revisions. Such has been the common experience over time, where overlyoptimistic assumptions—standardly built into the headline economic reporting—generally are brought down to more-realistic levels with underlying, hard data.

Real (Inflation-Adjusted) Retail Sales—February 2016. The monthly decline of 0.15% (-0.15%) in nominal February 2016 retail sales was before accounting for inflation. The monthly change in real retail sales for February awaits the headline estimate of the CPI-U consumer inflation for February 2016, in tomorrow's *Commentary No. 793* of Wednesday, March 16th. Discussed in the *Week Ahead* section, the headline CPI-U outlook is for roughly a 0.3% (-0.3%) decline in headline monthly inflation, which would boost the headline change in real Retail Sales by a parallel amount, likely into positive territory. Annual inflation, however should remain positive, muting the headline nominal annual gain in real, inflation-adjusted terms, while the developing quarter-to-quarter change in first-quarter 2016 real Retail Sales easily could be shown in prospective contraction.

***Seasonal-Factor Distortions Generated Artificially-High Headline February Sales, and Other Reporting Instabilities*.** Without inconsistent shifting in seasonal-adjustment factors, the February 2016 headline change would have been a contraction of about 0.6% (-0.6%), instead of 0.1% (-0.1%). Headline detail in this series is subject to a pattern of distorted revisions, unique to the inconsistent reporting of the government's concurrent-seasonal-factor-adjustment process, as seen regularly in recent reporting of retail sales. The usual seasonal-factor games were at play, again, in the February 2016 reporting, where the headline data reflected new seasonal-factor adjustments, but the purportedly comparable historical series did not. The only "comparable" headline historical detail published with today's headline February 2016 sales data were the sales levels for the prior two months of January 2016 and December 2015, and the year-ago months of February and January 2015.

Revisions to the year-ago periods are tip-offs as to how the current, headline month's seasonal factors have been altered. The month-to-month contraction of 0.15% (-0.15%) in February 2016, actually reflected a positive boost of 0.45% that came from inconsistent, shifting adjustment patterns. Net of these distortions, the headline contraction in February 2016 sales would have about 0.60% (-0.60%).

Of the initial headline gain of 0.18% in January 2016 sales, 0.17% of that was set up in last month's seasonal-adjustment revisions. In like manner, of the 0.16% gain in December, 0.32% of that was set up in December 2015 seasonal adjustment revisions. Of the 0.32% gain in November, 0.18% of that was set up in November 2015 seasonal adjustment revisions.

In today's headline detail, the year-ago revisions simply were junk reporting, due solely to shifts in their seasonal adjustments that resulted from the unique calculations of the seasonal factors generated with the headline January 2016 detail. These revisions were not due to the availability of any new historical data back in January or February 2015, but rather due to just the inconsistent shifts in the published versus unpublished seasonal adjustments. Shifting patterns of relative quarterly growth in just the first- and second-quarter 2015 also were seen due solely to the "inconsistent" revision to the adjusted January and February 2015 numbers.

Given Census Bureau reporting procedures, the headline detail is not comparable with most earlier reporting. As a result, current data can reflect growth shifts from earlier periods, without those specifics being published. The adjustment issues here are the same as with the employment and unemployment series. The principles and issues with the way the government reports economic series adjusted by concurrent seasonal factors were explored, in-depth, in *Commentary No. 695* and discussed in prior

Supplemental Commentary No. 784-A. The reporting fraud is not in the use of concurrent seasonal-factor adjustments *per se*, but rather in the Census Bureau's not publishing fully-consistent, historical data each month.

Reflective of shifting seasonal adjustments in what would be fully comparable detail, if published, January 2015 detail was revised higher by 0.1%, while February detail was revised higher by 0.46%, indicative of a relative shift in seasonality for the headline month-to-month February 2016 detail of a positive 0.45%.

Seen broadly in reporting of the prior year, and again in the headline February 2016 data, the year-ago number most commonly was revised higher each month, with the effect—desired or otherwise—of boosting the seasonal adjustments for the current headline month, minimizing the reporting of headline monthly contractions or maximizing the headline gains. All this happens without the specifics as to where headline activity has been shifted month-to-month. Full detail is available internally to the Census Bureau, but the Bureau chooses not to publish the detail.

Beyond inconsistencies in the published, adjusted historical data, the stability of the seasonal-adjustment process (particularly the concurrent-seasonal-adjustment process) and sampling methods have been disrupted severely by the unprecedented depth and length of the current economic downturn in the post-World War II era, the period of modern economic reporting.

PRODUCER PRICE INDEX—PPI (February 2016)

February 2016 PPI Goods Inflation Fell By 0.56% (-0.56%), Services Profit Margins Were "Unchanged" at 0.00%, with Aggregate PPI down by 0.18% (-0.18%). On the goods side, where headline wholesale inflation declined by 0.56% (-0.56%) in the month of February 2016, the dominant effect was from declining energy prices. along with some downside movement in foods inflation and a minimal offset from a gain in "core" inflation (net of food and energy).

The relative upside offset to the drop in goods inflation was an "unchanged" reading in the more-heavily-weighted services sector. Boosted by margins earned in securities brokerage, the services side also began to see some margin hits from fuel, which has started to catch up with the perverse, early counterintuitive price movements attributed to declining prices for oil and oil–related products within the context of services profit margins.

Discussed below, the conceptual differences between goods inflation and services profit margins do not blend well and are not merged easily or meaningfully in the PPI. The dual measures are more meaningful viewed independently than as the hybrid measure of the headline Producer Price Index Final Demand.

The current headline detail was generated in the context of PPI annual benchmark revisions as published with the January 2016 PPI detail of *Commentary No. 786*. Where the re-weightings of the PPI components had negligible impact on the aggregate inflation numbers, the new weightings generally were shifted away from the measures tied to food and energy inflation.

Inflation that Is More Theoretical than Real World? *[This background text is as published previously.]* 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 and 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 new 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 six years of post-2008-panic data) to establish any meaningful relationship to general inflation or other economic or financial series.

February 2016 Headline PPI Detail. The Bureau of Labor Statistics (BLS) reported this morning, March 15th, that the seasonally-adjusted, month-to-month, headline Producer Price Index (PPI) Final Demand inflation for February 2016 was a decline of 0.18% (-0.18%), versus a monthly gain of 0.09% in January 2016. The broad impact of seasonal adjustments on the headline PPI reporting was negative in February, with the unadjusted monthly February measure unchanged at 0.00%.

On a not-seasonally-adjusted basis—all annual growth rates are expressed unadjusted—year-to-year PPI Final Demand inflation in February 2016 also was unchanged at 0.00%, versus a January 2016 annual contraction of 0.18% (-0.18%).

For the three major subcategories of February 2016 Final Demand PPI, headline monthly Goods inflation fell by 0.56% (-0.56%), Services inflation was unchanged at 0.00%, and Construction inflation fell in the month by 0.09% (-0.09%).

Final Demand Goods (Weighted at 33.60% of the Aggregate Index). Running somewhat in parallel with the old Finished Goods PPI series, headline month-to-month Final Demand Goods inflation in February 2016 declined by 0.56% (-0.56%), having dropped in January by 0.65% (-0.65%). There was negative impact on the aggregate headline February reading from underlying seasonal-factor adjustments. Not-seasonally-adjusted, February Final Demand Goods inflation fell by 0.28% (-0.28%) for the month.

Unadjusted, year-to-year goods inflation in February 2016 fell by 2.66% (-2.66%), versus a January 2016 annual contraction of 2.48% (-2.48%).

Headline seasonally-adjusted monthly changes by major components of the February 2016 Final Demand Goods:

- "Foods" inflation (weighted at 5.56% of the total index) fell month-to-month in February 2016 by 0.34% (-0.34%), having gained 1.04% month-to-month in January. Seasonal adjustments were a positive factor for the February monthly change, which was down by 0.52% (-0.52%) unadjusted. Unadjusted and year-to-year, annual February 2016 foods inflation declined by 2.53% (-2.53%), versus an annual decline of 3.48% (-3.48%) in January 2016.

- “Energy” inflation (weighted at 5.23% of the total index) declined by 3.43% (-3.43%) in February 2016, following a monthly decline of 5.00% (-5.00%) in January, with the February reading hit by seasonal adjustments. Unadjusted, monthly energy inflation fell by 2.24% (-2.24%) in February 2016. Unadjusted and year-to-year, the February 2016 annual contraction in energy prices widened to 14.46% (-14.46%), versus an annual decline of 11.49% (-11.49%) in January 2016.
- “Less foods and energy” (“Core” goods) monthly inflation (weighted at 22.81% of the total index) rose by 0.09% in February 2016, versus an unchanged reading at 0.00% in January. Seasonal adjustments were neutral for monthly core inflation, with an unadjusted gain of 0.09% in February. Unadjusted and year-to-year, February 2016 was up by 0.18%, having been unchanged at 0.00% in January 2016.

Final Demand Services (Weighted at 64.32% of the Aggregate Index). Headline monthly Final Demand Services inflation was unchanged at 0.00% in February 2016, having gained 0.54% in January. The overall seasonal-adjustment impact on headline February services inflation was negative, with an unadjusted monthly February gain of 0.27%. Year-to-year, unadjusted February 2016 services inflation was 1.46%, versus 0.91% in January 2016.

The headline monthly changes by major component for February 2016 Final Demand Services inflation:

- “Services less trade, transportation and warehousing” inflation, or the “Other” category (weighted at 38.97% of the total index), rose by 0.27% in February 2016, having gained 0.37% in January. Seasonal-adjustment impact on the adjusted February detail was negative, where the unadjusted monthly gain was 0.36%. Unadjusted and year-to-year, February 2016 “other” services inflation was 1.76%, up from 1.57% in January 2016.
- “Transportation and warehousing” inflation (weighted at 4.99% of the total index) fell month-to-month in February 2016 by 0.70% (-0.70%), versus a monthly gain of 0.44% in January. Seasonal adjustments had positive impact on the headline February number, where the unadjusted monthly reading had been a decline of 0.96% (-0.96%). Unadjusted and year-to-year, February 2016 transportation inflation fell by 2.33% (2.33%), versus an annual contraction of 2.23% (-2.23%) in January 2016.
- “Trade” inflation (weighted at 20.36% of the total index) declined for the month of February 2016 by 0.35% (-0.35%), having gained 0.89% in January. Seasonal adjustments had a negative impact here, where unadjusted monthly inflation rose by 0.44% in February. Unadjusted and year-to-year, February 2016 trade inflation rose by 1.90%, having increased by 0.45% in January 2016.

Final Demand Construction (Weighted at 2.08% of the Aggregate Index). Although a fully self-contained subsection of the Final Demand PPI, Final Demand Construction inflation receives no formal headline coverage. Nonetheless, headline numbers are published, and month-to-month construction inflation contracted by 0.09% (-0.09%) in February 2016, versus a decline of 0.35% (-0.35%) in January. The impact of seasonal factors on the February reading was neutral, where the unadjusted monthly change also was a contraction of 0.09% (-0.09%).

On an unadjusted basis, year-to-year construction inflation rose by 0.98% in February 2016, versus an annual gain of 1.16% in January 2016.

- "Construction for private capital investment" headline monthly inflation (weighted at 1.40% of the total index) declined month-to-month by 0.09% (-0.09%) in February 2016, versus a monthly contraction in January of 0.26% (-0.26%). As usual, seasonal adjustments had neutral impact here, where the unadjusted February monthly inflation also was a contraction of 0.09% (-0.09%). Unadjusted and year-to-year, February 2016 private construction inflation was up by 0.89%, versus 0.98% in January 2016.

- "Construction for government" inflation (weighted at 0.68% of the total index) declined month-to-month by 0.09% (-0.09%) in February 2016, having declined by 0.44% (-0.44%) in January. Seasonal adjustments had neutral impact, where unadjusted monthly February inflation was a negative 0.09% (-0.09%). Unadjusted and year-to-year, February 2016 government construction inflation was 1.25%, versus 1.43% in January 2016.

Discussed in *Commentary No. 790*, ShadowStats uses the Final Demand Construction index for deflating headline activity in the monthly construction-spending series. The April 1st release of February 2016 U.S. Construction Spending will be covered in ShadowStats *Commentary No. 796* of the same date.

PPI-Inflation Impact on Pending Reporting of New Orders for Durable Goods. As to the upcoming reporting of February 2016 new orders for durable goods, monthly inflation (reported only on a not-seasonally-adjusted basis) for new orders for manufactured durable goods was unchanged at 0.00% in February 2016, the same monthly rate as in January. The decline in annual inflation, however, narrowed slightly to a contraction of 1.25% (-1.25%) in February 2016, versus a drop of 1.31% (-1.31%) in January 2016. February 2016 durable goods orders will be reported on March 24th and covered in ShadowStats *Commentary No. 794* of that date.

WEEK AHEAD

Economic Reporting Should Continue on the Downside of Expectations, Pummeling the Dollar and Boosting Gold, Silver and Oil Prices. Likely moving to the downside, again, amidst intensifying, negative headline reporting in week ahead, market expectations for business activity should be in increasing deterioration, even as reviewed in the popular media. The broad trend in weakening expectations for business activity has continued, and movement towards looming recession recognition has accelerated, as discussed in *Commentary No. 789* and in *No. 777 Year-End Special Commentary*.

Nascent negative reaction had surfaced in trading of the U.S. dollar and in related financial markets, with some upside movement recently in prices for gold and silver (see *Commentary No. 784* and *Commentary No. 785*). Circumstances here also should limit further heavy selling in the oil market and turn the pricing there to the upside, as the dollar comes under steadier, heavy selling pressure.

Weaker headline reporting of the regular monthly economic numbers increasingly should be accompanied by much worse-than-expected—negative—reporting for at least the next several quarters of GDP (and GDI and GNP), still for fourth-quarter 2015 and well into the looming 2016 detail. That includes an eventual outright quarterly contraction in revised fourth-quarter 2015 GDP activity, as well as other pending downside revisions to GDP history in the 2016 annual benchmark revisions, due on July 29th.

CPI-U consumer inflation—intermittently driven lower in 2015 and early-2016 by collapsing prices for gasoline and other oil-price related commodities—likely has seen its near-term, year-to-year low. Although month-to-month headline inflation was unchanged for January 2016, annual CPI-U jumped sharply, against year-ago weak inflation, to a 15-month high. Although headline monthly February inflation should be negative (see *Pending Releases*), annual inflation will remain positive, albeit at a lower level than the month before. Monthly prices should turn sharply positive, again, pending an environment of a weakening U.S. dollar and a related upturn in otherwise battered oil prices and other commodities. Separately, fundamental reporting issues with the CPI are discussed here: *Public Commentary on Inflation Measurement*.

Note on Reporting-Quality Issues and Systemic-Reporting Biases. 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 to understate actual inflation and to overstate actual economic activity, ongoing headline reporting issues are tied largely to systemic distortions of monthly seasonal adjustments. Data instabilities—induced partially by the still-evolving economic turmoil of the last nine-to-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, when concurrent seasonal adjustments are used (as with retail sales, durable goods orders, employment and unemployment data). That has been discussed and explored in the labor-numbers related *Supplemental Commentary No. 784-A* and *Commentary No. 695*.

Separately, discussed in *Commentary No. 778*, a heretofore unheard of spate of "processing errors" has surfaced in recent 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. At the same time, it indicates an openness of the involved statistical agencies in revealing the reporting-quality issues.

Combined with ongoing allegations in the last year or two 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*).

PENDING RELEASES:

Consumer Price Index—CPI (February 2016). The Bureau of Labor Statistics (BLS) will release the February 2016 CPI tomorrow, Wednesday, March 16th. The headline February CPI-U should be on the downside-side, by roughly 0.3% (-0.3%), or so, reflecting a continuing decline in gasoline prices. Gasoline prices already have turned enough higher in March, however, to shift the gasoline contribution to the plus-side for that month's subsequent headline CPI.

Despite the likely month-to-month decline in the seasonally-adjusted February CPI-U, annual unadjusted headline inflation should remain well in positive territory, although off the headline 1.4% annual pace reported in January 2016.

Gasoline Impact. Average gasoline prices declined, again, in February 2016, down by 8.99% (-8.99%) for the month on a not-seasonally-adjusted basis, per the Department of Energy (DOE). Where BLS seasonal adjustments to gasoline prices in February traditionally are on the downside, they should exacerbate the headline downturn in adjusted gasoline prices, barring significant "intervention-analysis" by the BLS. Based on the seasonal factors used in February 2015, gasoline prices fell by enough to make a net-negative contribution of about 0.38% (-0.38%) to the aggregate, seasonally-adjusted monthly headline February 2016 CPI-U change. Somewhat higher food and "core" (net of food and energy) inflation should provide some positive offset, muting the headline CPI-U decline to about 0.3% (-0.3%).

Annual Inflation Rate**.** Year-to-year, CPI-U inflation would increase or decrease in February 2016 reporting, dependent on the seasonally-adjusted monthly change, versus the adjusted, headline gain of 0.20% in February 2015 CPI-U. The adjusted change is used here, since that is how consensus expectations are expressed. To approximate the annual unadjusted inflation rate for February 2016, the difference in February's headline monthly change (or forecast of same), versus the year-ago monthly change, should be added to or subtracted directly from the January 2016 annual inflation rate of 1.37%. For example, a seasonally-adjusted, headline monthly decline of 0.3% (-0.3%) in the February 2016 CPI-U would reduce the annual February inflation rate to roughly a positive 0.9%, plus-or-minus, depending on rounding.

Real (Inflation-Adjusted) Retail Sales (February 2016). The nominal monthly decline of 0.15% in February 2016 retail sales was before accounting for inflation (see *Opening Comments* and *Reporting Detail*). The monthly change in real retail sales for February awaits tomorrow's headline estimate of February 2016 CPI-U consumer inflation, to be detailed in the next *Commentary No. 793* of Wednesday, March 16th. With the headline CPI-U inflation likely to show a contraction of roughly 0.3% (-0.3%), the headline real retail sales would be boosted by a parallel amount, meaning a likely positive month-to-month reading for the headline real gain.

Annual inflation should remain positive, however, muting the headline nominal annual gain in February retail sales of 3.09% as restated in real, inflation-adjusted terms, with a recession signal likely continuing as indicated by low-level annual growth. Separately, a headline CPI-U inflation reading more positive than a 0.3% (-0.3%) monthly contraction should show an unfolding trend for a first-quarter 2016 contraction in real retail sales.

Constraining retail sales activity, the consumer remains in an extreme liquidity bind, as updated briefly, again in today's *Commentary* and in prior *Commentary No. 791*, and as discussed broadly in *Commentary No. 790* and *No. 777 Year-End Special Commentary*. Without sustained 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 is unable to sustain positive growth in domestic personal consumption, including retail sales, real or otherwise.

Index of Industrial Production (February 2016). The Federal Reserve Board will release its estimate of Industrial Production activity for February 2016, also tomorrow, Wednesday, March 16th. Headline reporting detail remains a good bet to come in below consensus expectations, which appear to be slightly negative month-to-month at present. That likely reflects some pullback in what had been a sharply-positive, weather-induced utility surge in January, which had contributed to the headline 0.9% gain in January reporting. As recently has been the case with the production series, headline reporting has tended to come in on the downside of expectations, often in the context of downside historical revisions.

A meaningful monthly downturn in production should intensify "new" recession expectations, with prospective first-quarter 2016 quarter-to-quarter activity turning to contraction, with a deepening year-to-year decline in headline activity.

Also likely to be announced is the publication date for the annual benchmark revisions to industrial production currently specified as "around the end of the first quarter of 2016."

Residential Construction—Housing Starts (February 2016). Rounding out the major February economic reporting in the current week, tomorrow, Wednesday, March 16th, the Census Bureau will release February 2016 residential construction detail. 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. While consensus expectations are strongly on the upside, as usual, they also remain well shy of statistical significance.

Irrespective of the generally meaningless headline detail, the broad pattern of housing starts should remain consistent with the low-level, stagnant activity, seen in the series at present, where January 2016 current activity remained down by about 52% (-52%) from its pre-recession high. Such is particularly evident with the detail viewed in the context of a six-month moving average. This series also is subject to regular and extremely-large, prior-period revisions. Nonetheless, less-than-robust headline detail and revisions would leave the series on track for a quarter-to-quarter contraction in first-quarter 2016

As discussed in *Commentary No. 660* on the August 2014 version of this most-unstable of major monthly economic series, the monthly headline detail here simply is worthless. The series best is viewed in terms of a six-month moving average. Again, not only is month-to-month reporting volatility frequently extreme, but also those headline monthly growth rates rarely come close to being statistically significant.

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