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

#### **COMMENTARY NUMBER 953-B**

May 2018 Employment and Unemployment, April Construction Spending

June 5, 2018

Massive Inconsistencies Arise in the Headline Household-Survey Numbers Due to Severity of Great-Recession Increase in Discouraged and Displaced Workers

Despite Historically-Low Unemployment Rates, the Number of Discouraged Workers and those Wanting a Job Are on the Rise

May 2018 Participation Rate and Employment-Population Ratio, Which Are Traditional Measures of Labor-Market Health, Remained Consistent with Unemployment Much Closer to a Record High of 10% than a Record Low of 3.8%; Headline Circumstance Could be Supporting a Further 11.1 Million Employed

May U.3 Unemployment Declined to 3.8% (3.75%), Lowest Rate Since April 2000, at the First Decimal Point, at a Post-1994 (Modern-Series) Record Low, at the Second Decimal Point; Otherwise at the Lowest Level Since December 1969

On Top of U.3, May U.6 Unemployment Declined to 7.59%, from 7.79%, On Top of U.6, ShadowStats-Alternate Unemployment Eased to 21.4%, from 21.5%, Still Tempered by Long-Term Discouraged and Displaced Workers

May Payroll Jobs Gained 223,000 (up by 238,000 Net of Revisions), but with Annual Growth of 1.61% Still in Recession-Signal Territory

Real Construction Spending Held Shy of Its Pre-Recession Peak by 19.5% (-19.5%), Despite Increased Headline Activity in April 2018, and in the Context of Unstable Reporting and Pending Benchmark Revisions

\_\_\_\_\_

PLEASE NOTE: The next regular Commentary will review the May 2018 Trade Deficit and accompanying annual benchmark revisions to the series. ShadowStats coverage should follow on June 7th or 8th, dependent on the complexity of the data overhaul (see Week, Month and Year Ahead section).

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

**Today's (June 5th)** *Opening Comments and Executive Summary.* The *Opening Comments* assesses the increasingly disparate headline indicators of record-low U.3 unemployment versus near-record-high levels of stress in employment conditions. The *Executive Summary* (beginning on page 7 largely repeats the early highlights and summary detail of Friday's "flash" coverage of the May 2018 Employment and Unemployment and April 2018 Construction Spending in *Commentary No. 953-A* of June 1st.

The *Reporting Detail* (beginning on page 11) reviews in greater depth and detail, the May 2018 labor numbers, with background labor-reporting issues covered in the *Supplemental Labor-Detail Background* (page 29), and April 2018 Construction Spending (page 37).

*Hyperinflation Watch* reviewing current monetary conditions along with the May 2018 estimate of annual growth in the ShadowStats Ongoing Estimate of Money Supply, will be found on page 9 of *Commentary No. 953-A*.

The *Consumer Liquidity Watch* (page 46) has not been revised from its prior version other than for updated links and minor language revisions.

The *Week, Month and Year Ahead* (page 60) provides background on recent *Commentaries* and previews tomorrow's June 6th releases of the April 2018 Trade Deficit and accompanying annual benchmark revisions.

OPENING COMMENTS AND EXECUTIVE SUMMARY

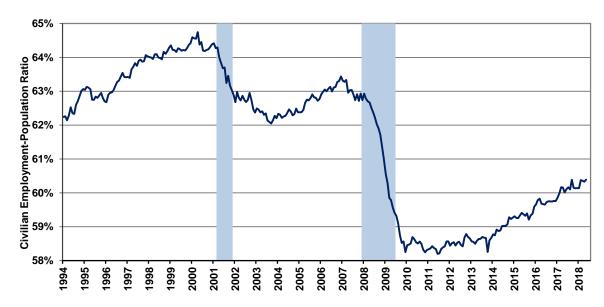
**Reconciling Record "Low" Unemployment with Near-Record Levels of Labor-Market Stress: It Is in the Gimmicked Unemployment Definitions.** *Graphs OC-1* and *OC-2* plot measures of broad labor-market health. *Graph OC-1* shows the ratio of headline employment to the working age population, the *Employment-Population Ratio*. *Graph OC-2* shows labor-force participation (the total of the headline employed plus headline unemployed) as a percent of the working age population, the *Participation Rate*. The higher those ratios, the healthier is the economy. Correspondingly, the weaker those ratios the more intense is the labor-market stress. Also consider *Graph OC-3*, which plots the headline U.3 Unemployment Rate, but with an inverted scale, since the 1994 beginning of the current unemployment series.

May 2018 unemployment just tied the record low of 3.8% of April 2000 (the low April unemployment is the early high point with the inverted scale of *Graph OC-3*), April 2000 also is the happy high point for the *Employment-Population Ratio* and the *Participation Rate*. That is as it should be. The problem comes with the May 2018 "low" unemployment rate (the final high point in *OC-3*) going against relatively low points (severe levels of labor-market stress) in *Graphs OC-1* and *OC-2*.

Those three graphs move pretty much in unison (particularly *OC-1* and *OC-3*) until they pass the second blue recession bar, when the unemployment rate turns lower (rises in with the inverted-scale in *OC-3*), while the measures of labor-market stress begin to bottom-bounce. Now consider *Graph OC-4* of the inverted-scale ShadowStats Alternate Unemployment rate, which includes long-term discouraged or displaced workers. [*Text continues on page 5.*]

Graph OC-1: Civilian Employment-to-Population Ratio

### Civilian Employment-Population Ratio To May 2018, Seasonally-Adjusted [ShadowStats, BLS]



Graph OC-2: Labor-Force Participation Rate

### Participation Rate [Labor Force as a Percent of Population] To May 2018, Seasonally-Adjusted [ShadowStats, BLS]



Graph OC-3: Inverted-Scale Headline U.3 Unemployment Measure

### U.3 Unemployment Rate (Inverted Scale) To May 2018, Seasonally-Adjusted [ShadowStats, BLS]



Graph OC-4: Inverted-Scale ShadowStats Alternate Unemployment Measure

### ShadowStats-Alternate Unemployment Rate (Inverted Scale) Long-Term Discouraged/Displaced Workers Included (BLS Excluded Since 1994) To May 2018, Seasonally-Adjusted [ShadowStats, BLS]



The problem and the conflict with the headline numbers out of the Bureau of Labor Statistics is that the current unemployment series was redefined in 1994 (at the onset of NAFTA) so as not to count "discouraged workers" for more than one year. Otherwise that population (and share of the total population) would aggregate, rather than be retired after twelve months (see *Supplemental Labor-Detail Background* page 34).

Subsequent to the redefined series, the U.S. economy collapsed into its most severe downturn since the Great Depression, and as the headline unemployment rate dropped (rose on the inverted scale) the ShadowStats measure (also on an inverted scale) continued to track the accumulating discouraged workers. The ratio differences here reflect issues with population. Some argue the difference here is due to an increased portion of the population entering retirement. While that is a partial factor, many who had planned to retire are finding that they cannot afford to do so, at present, as originally planned.

Allowing for the build-up of the discouraged/displaced worker population allows for some non-conventional employment/unemployment estimates. With calculations shown in the footnotes, the current *Employment-Population Ratio* and *Participation-Rate* suggest that a realistic unemployment, as the public might sense it, would be closer to 10% in instead of 3.8%. With the *Participation-Rate* suggesting room for another 11.1 million employed. Separately, despite the record-low U.3, the headline count of discouraged workers and those not counted in the headline labor force "wanting a job" both increased in the May 2018 survey.

Economy Remains Far From Full-Employment (Part 1); 3.8% U.3 Unemployment Historically Is Consistent with 67.3% Participation Rate, Not the Current 62.7%, Which is Consistent with a 10.3% U.3. Argued here for many months, the U.S. economy is not at, or close to, full employment. As with much-earlier comments from former Fed Chair Janet Yellen, Treasury Secretary Steven Mnuchin (Treasury Secretary Mnuchin: Economy is not really at full employment yet) recently noted, "My comment is we're not really at full employment because of the participation rate." The near-historically-low level of the headline participation rate (labor force/working-age population) is despite the series-low 3.8% headline U.3 unemployment rate. The headline participation rate should be at an all-time high. In like manner, the employment-to-population ratio, also near its historic low, also should be at an historic high. Something very much is amiss in the government's headline Household Survey detail.

Discussed in the *Fedspeak* portion of the *Fed* section of <u>No. 859 Special Commentary</u> and the *Opening Comments* of <u>Commentary No. 870</u>, certain members of the Federal Reserve Board (<u>Commentary No. 827</u>) had suggested that an unemployment rate near 5.0% (U.3 now is at 3.8%) reflected full-employment conditions in the United States. Noted in <u>Commentary No. 845</u>, one would expect that "full employment" not only would be consistent with a certain headline unemployment rate, traditionally about 5.0%, but also with a coincident labor-force participation rate, traditionally of about 66%.

For example, at the formal onset of the recession in December 2007, the headline unemployment rate was 5.0%, with the participation rate at a 66.0% near-term peak (higher peaks in participation, in the early 2000's, were coincident with U.3 unemployment of about 4.0%). The last time the U.3 rate was at 3.8% [3.84%] was in April 2000, versus the May 2018 reading of 3.8% [3.75%]—certainly a more-realistic full-employment rate—the participation rate then was the series-high of 67.33%.

Full employment with unemployment at 5.0% or the current 3.8%, also minimally should be reflected at a relative near-term peak in the participation rate, not close to its historic trough. The May 2018 headline

unemployment rate of 3.8%, for example was in the context of a 62.7% participation rate. Yet, that historically-consistent participation rate, in the current circumstance (where the count of Household Survey employed generally is not gimmicked), would generate a consistent, current headline unemployment rate (U.3) of 10.3%, instead of the headline 3.8%.<sup>1</sup>

Far From Full-Employment (Part 2); 3.8% U.3 Is Consistent with a 64.7% Employment-to-Population Ratio, Not the Current 60.4%, Suggestive of a 9.9% U.3 and a Missing 11.1 Million Employed. In like manner<sup>2</sup> the last time the U.3 unemployment rate was at 3.8% in April 2000, the employment-to-population ratio also was an historic high of 64.7%. Detailed in the accompanying footnote, historical consistency would suggest a parallel headline unemployment rate for May 2018 at 9.9%, instead of the headline 3.8%, otherwise with a missing 11.1 million "employed" individuals.

The reason for the heavily-distorted current headline unemployment details, largely is definitional, reflecting the unusual nature of the post-recession drop in headline unemployment. The declining unemployment rate heavily has reflected discouraged and displaced, unemployed persons being defined out of the labor force, instead of the more-traditional and positive circumstance of the unemployed being reemployed.

[The Executive Summary begins on the next page.]

<sup>&</sup>lt;sup>1</sup> Consider with the May 2018 working-age population of 257.454 million, the implied labor force at a full-employment participation rate of 67.3% (last seen when headline unemployment was 3.8% in April 2000) would show 0.673 x 257.454 = 173.267. That labor force less current headline employed, 173.267 - 155.474 = 17.793 million implied unemployed, which divided by the labor force of 173.267 = 10.3% unemployment. The problem with the assumptions underlying these numbers and concept, again, remains that the economy is not at full employment, as would be suggested normally by a headline 3.8% U.3; there are serious flaws in the surveying and/or definitional concept of U.3.

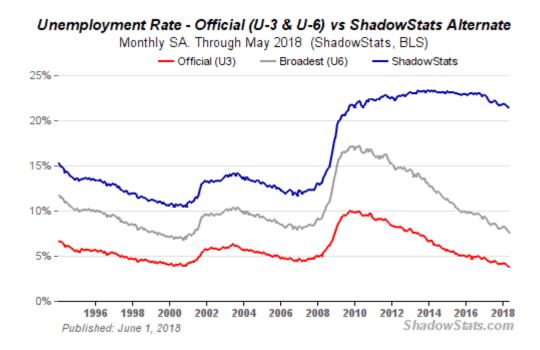
<sup>&</sup>lt;sup>2</sup> Consider with the May 2018 working-age population of 257.454 million, the implied level of employment, given an historically consistent employment-to-population ratio of 64.7% (last seen when headline unemployment was 3.8% in April 2000) would show 0.647 x 257.454 = 166.573 million employed. Yet, the current headline employed count of 155.474 – 166.573 implied employed = a current shortfall of 11.099 million employed, based on historical norms with a headline unemployment rate U.3 of 3.8%.

To the extent one could count those implied missing employed as unemployed, such would suggest a consistent headline U.3 unemployment rate in May 2018 of 9.9% (Unemployed of 17.164 million = headline 6.065 unemployed + the missing 11.099 employed) / (Labor Force of 172.638 = 155.474 headline employed + the headline unemployed of 6.065 + the missing 11.099 employed). The problem with the assumptions underlying these numbers and concept, again, remains that the economy is not at full employment, as would be suggested normally by a headline 3.8% U.3; there are serious flaws in the surveying and/or definitional concept of U.3.

Executive Summary—Employment and Unemployment (May 2018)—Low Headline Unemployment Rate Runs Counter to Underlying Reality and Systemic Stresses. The U.3 unemployment rate dropped to a current-series (post-1994 definitions) low of 3.75% in May 2018, or to a 49-year low against the earlier series. That was accompanied by a solid gain in payroll employment, on top of an upside revision to April's payrolls. Yet, all was not quite as positive as hyped.

Discussed in the *Opening Comments* and reviewed in the *Reporting Detail*, the record-low unemployment measures ran counter to other indicators of labor-market stress, and the reporting of better-quality economic numbers. Some of the distortions are an artefact of long-term discouraged workers being defined out of existence in 1994, exacerbated by the economy crashing into 2009, in its worst downturn since the Great Depression.

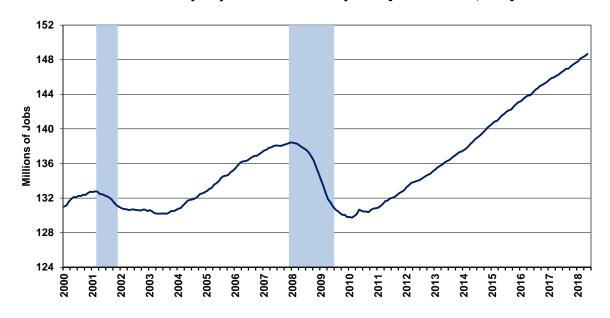
Graph 1: Comparative Unemployment Rates U.3, U.6 and ShadowStats
(Same as Graph 9 in the Reporting Detail)



May 2018 payrolls rose month-to-month 223,000, versus a revised 159,000 [previously 164,000] gain in April, shown in *Graph 2*. Reflected in *Graph 3*, unadjusted annual payroll growth of 1.61%, versus an unrevised 1.55% in April 2018, broadly remained in a downtrend that has reached a level and pattern of growth usually preceding and signaling the onset of a recession.

Graph 2: Nonfarm Payroll Employment 2000 to Date
(Same as Graph 19 in the Reporting Detail)

### Nonfarm Payroll Employment Seasonally-Adjusted Levels to May 2018 [ShadowStats, BLS]



Graph 3: Payroll Employment, Year-to-Year Percent Change, 2000 to Date
(Same as Graph 21 in the Reporting Detail)

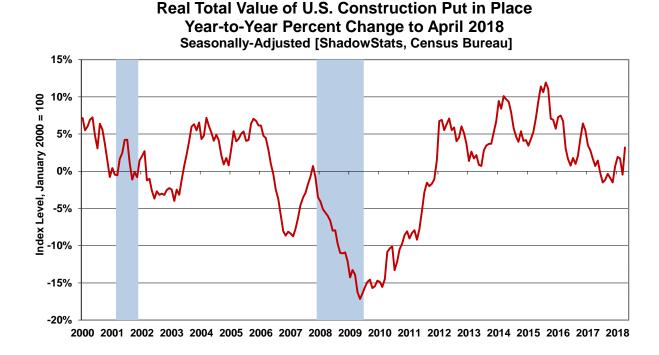
#### Nonfarm Payrolls Year-to-Year Percent Change 2000 to May 2018, Not Seasonally Adjusted [ShadowStats, BLS]



Extended coverage of May 2018 Employment and Unemployment follows in the Reporting Detail.

Construction Spending—April 2018—Activity Surged in April 2018, Pushing Annual Real Growth to Its Highest Level Since January 2017. The regularly-volatile Construction Spending series, saw an unusually-large month-to-month gain of 1.8% in April, up by 7.6% year-to-year. The aggregate headline movement in April was enough to boost inflation-adjusted real annual growth to 3.2%, its highest level since January 2017 (see *Graph 4*). While that is a positive economic signal, it likely will not survive next month's July 2nd benchmarking of the series. The various signals from this series will be reassessed following what likely will be major revisions.

Graph 4: Total Real Construction Spending, Year-to-Year Percent Change
(Same as Graph 28 in the Reporting Detail)



The headline gain in aggregate April 2018 activity largely offset the monthly decline in March. Where the gain primarily was in private, single-unit residential construction, contrary to indications in recently reported Housing Starts activity (see *Commentary No. 950*), yet again, the gains and losses by each major category largely offset the prior month's changes in the highly unstable, short-term reporting of those same categories.

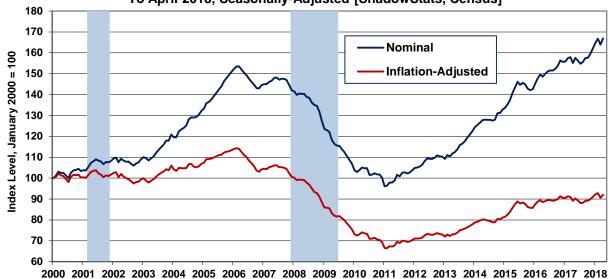
Consider that the nominal gain of 1.8% in aggregate April 2018 Construction Spending, versus a decline of 1.7% (-1.7%) in March 2018, included a decline of 1.3% (-1.3%) in April 2018 Public Construction versus a gain of 1.2% in March. Private Construction Spending gained by 2.8% in April, having declined by 2.6% (-2.6%) in March. Within total Private Construction Spending, Residential Construction boomed by 4.5% in April having declined by 4.1% (-4.1%) in March, while Nonresidential Construction rose by 0.8% in April, having declined by 0.6% (-0.6%) in March.

The preceding headline details are reflected in accompanying in *Graphs 5* to 8, which show headline detail both before and after adjustment for inflation. Despite the aggregate headline monthly and annual gains, April 2018 Real Construction Spending held shy by 19.5% (-19.5%) of regaining its March 2006

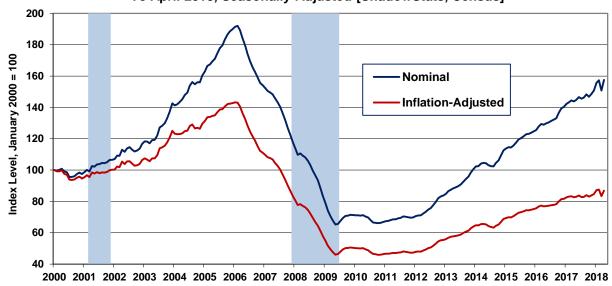
pre-recession high (see *Graph 5*). That general pattern also was reflected in its major subsidiary series seen in *Graphs 6* to 8.

Graph 5: Index, Nominal versus Real Value of Total Construction

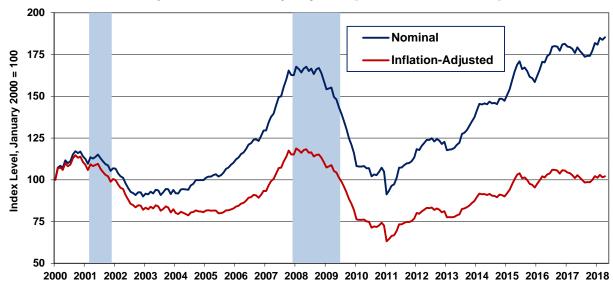
#### Index of Total Value of Construction Put in Place Nominal versus Inflation-Adjusted (Jan 2000 = 100) Real Data Reflect ShadowStats Composite Construction Deflator To April 2018, Seasonally-Adjusted [ShadowStats, Census]



Graph 6: Index, Nominal versus Real Value of Private Residential Construction
Index of Value of Private Residential Construction
Nominal versus Inflation-Adjusted (Jan 2000 = 100)
Real Data Reflect ShadowStats Composite Construction Deflator
To April 2018, Seasonally-Adjusted [ShadowStats, Census]



Graph 7: Index, Nominal versus Real Value of Private Nonresidential Construction
Index of Value of Private Nonresidential Construction
Nominal versus Inflation-Adjusted (Jan 2000 = 100)
Real Data Reflect ShadowStats Composite Construction Deflator
To April 2018, Seasonally-Adjusted [ShadowStats, Census]



Graph 8: Index, Nominal versus Real Value of Public Construction

## Index of Value of Public Construction Nominal versus Inflation-Adjusted (Jan 2000 = 100) Real Data Reflect ShadowStats Composite Construction Deflator To April 2018, Seasonally-Adjusted [ShadowStats, Census]



[Extended analysis and graphs of Employment and Unemployment, and Construction Spending follow in the Reporting Detail, beginning on the next page.]

\_\_\_\_\_

#### REPORTING DETAIL

#### **EMPLOYMENT AND UNEMPLOYMENT (May 2018)**

In Conflict With Record-Low Unemployment, Negative Labor-Market Stresses Show Extremely Troubled Conditions. Broad labor circumstances generally have remained bleak, despite the headline U.3 unemployment rate setting a new series low in May 2018, and despite headline payroll jobs showing solid monthly growth. Explored in today's *Opening Comments*, the record-low unemployment rate was accompanied by near-record levels of stress in labor-market conditions, due to the unusual severity—length and depth—of the economic collapse into 2009 and the related, extraordinary buildup of displaced and discouraged workers, otherwise masked by the 1994 unemployment redefinitions of "discouraged" workers. Separately discussed in this *Reporting Detail*, despite the month-to-month gains in payroll employment, year-to-year payroll growth continued to signal recession.

The Bureau of Labor Statistics (BLS) released details of its May 2018 Household Survey (Unemployment Rate) and Payroll Survey (Payroll Employment) on Friday, June 1st, in the context of the regular reporting distortions discussed in <u>Special Commentary No. 885</u> as well as in the **Supplemental Labor-Detail Background**, beginning on page 34, incorporated here by reference.

Household Survey. Again, Household Survey details remained highly stressed despite headline U.3 unemployment hitting a new low of 3.8% in May, down from 3.9% in April. As usual, the inverted-scale plot of the ShadowStats Alternate Unemployment Rate measure is shown in *Graph 10*, for comparison with the *Graphs 11* and *12* of the Civilian Employment-to-Population Ratio and the Labor-Force Participation rate. Where the latter two series gyrated around recent hurricane disruptions, and had weakened anew in January, they bounced back minimally with an unusual surge in "other industries" employment in February, only to weaken anew in March and April, and minimally mixed in May.

Nonetheless, the lower the reading of those ratios, the more-distressed are employment conditions, as correlated with the heavily negative impact of an estimated significant level of discouraged and displaced workers in the ShadowStats Alternate Unemployment Measure. That circumstance is reviewed in today's *Opening Comments* and otherwise discussed, here, where the new low in headline unemployment was despite continued signals of extreme stress in labor-market conditions.

The dominant issue with that dichotomy remains that headline unemployment numbers out of the BLS have not aggregated long-term discouraged or displaced workers, since the redefinitions of unemployment reporting in 1994. Those issues became a factor here given the severity of the economic collapse from 2007 into 2009 (see *Supplemental Labor-Detail* ...).

Indeed, the May 2018 headline U.3 unemployment rate dropped to a record low 3.75% for the current, unemployment series, which was redefined in 1994. Where the May 2018 unemployment rate at the first decimal point of 3.8%, matched the prior headline low in the series of 3.8% in April 2000, the second-decimal-point reading in April 2000 was 3.84%, a difference of 0.09%, nearly a full tenth of percentage point higher than May 2018, masked otherwise at the extreme limits of rounding. In the context of pre-1994 reporting, the May 2018 3.75% unemployment rate was the lowest since 1969.

Headline month-to-month changes in Household Survey details, which are reported consistently only once per year in December, showed a gain of 293,000 employed versus a decline of 281,000 (-281,000) unemployed, which looked like consistent good news. Yet, in the context of non-comparable detail, that cannot be considered any more than just a happy coincidence.

Consider, for example, that April 2018 headline employed gained only 3,000, still holding down by 34,000 (-34,000) from the level of employed in February 2018, where the intervening March 2018 employed count had declined by 37,000 (-37,000) month-to-month. Simply put, 239,000 unemployed people just disappeared then and U.3 dropped, the apparent inconsistencies were difficult to explain or to rationalize. Those inconsistent monthly changes most often reflect shifting seasonal-adjustment factors that were not applied consistently month-to-month (that again is the deliberate circumstance each month, again, as discussed in the *Supplemental Labor Detail* ...).

*Payroll Survey.* The headline May 2018 monthly payroll gain of 223,000 (238,000 net of prior-period revisions) was headline statistically significant, although it was bloated heavily, as usual, by upside bias factors, by counting multiple jobholders as multiple jobs and by shifting seasonal adjustment factors that can borrow or lose growth from or to the months before March, which are not reported in consistent detail with the headline March 2018 to May 2018 numbers (again, see the *Supplemental Labor-Detail...*).

Where the Household Survey counts an employed person only once, irrespective of how many jobs or part-time jobs he or she may hold, the Payroll Employment counts only the number of jobs, irrespective of the number of people holding those jobs. In that circumstance, a person holding two or more part-time jobs is counted as employed with each job in the Payroll Survey. The Household Survey estimated that a seasonally-adjusted 7.442 million individuals held multiple jobs in May 2018, which was down by 225,000 (-225,000)from April 2018.

Seen in *Graph 21*, annual growth in unadjusted payroll employment continued to hold at low levels, seen historically with economies either coming out of recession or, in the current circumstance, falling into recession, with the May 2018 annual growth rate of 1.61% minimally above the near-term trough in January 2018.

*Underlying Reality.* In terms of underlying reality, the seasonally-adjusted 223,000 monthly payroll jobs gain in May, likely was unchanged, plus-or-minus, again, given upside biases added into the series (see *Supplemental Labor-Detail...*). In the context of the *ShadowStats-Alternate Unemployment Rate Measure* discussion (also in the *Supplemental Labor-Detail...*), headline May 2018 unemployment at 3.8% for the U.3 rate was much closer to 21.4%, when viewed from the perspective of common experience. Extended assessment of labor-reporting distortions, again, is found separately in *No.* 885.

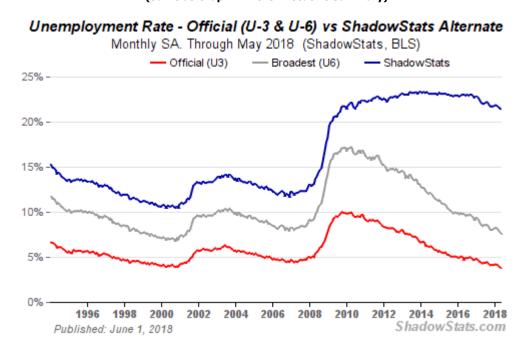
Household Survey: Counting All Discouraged and Displaced Workers, on Top of Declining U.3 and U.6 Unemployment Rates, May 2018 Unemployment Declined to 21.4%. The headline detail from the Household Survey continued nonsensically positive in May 2018, although showing internal changes that were consistent in the month, for once. Again, discussed in the *Supplemental Labor-Detail...*, the headline month-to-month seasonally-adjusted changes in numbers are not consistently reported, because each headline month is calculated using "concurrent" seasonal adjustments that are not consistent with what was reported the month before (except in December catch-up reporting).

These household-survey numbers never recovered from heavily-distorted (boosted) hurricane impacts in September and October 2017, were negligibly revised in December's annual benchmarking and boosted in terms of population in January 2018.

Adding back into the total unemployed and labor force the ShadowStats estimate of effectively displaced long-term discouraged workers—a broad measure of unemployment more in line with common experience—the ShadowStats-Alternate Unemployment Estimate for May 2018 eased to 21.4%, versus 21.5% in April, 21.7% in March and 21.8% in February. The broadest government unemployment measure U.6 eased to 7.6% in May, from 7.8% in April, 8.0% in March and 8.2% in February, while the headline U.3 rate dropped to 3.8% in May, from 3.9% in April, following six straight months at 4.1%. Both U.6 and the ShadowStats measures partially declined on top of the underlying drop in the headline U.3 number, as shortly detailed at the second decimal point.

The ShadowStats estimate generally shows the toll of long-term unemployed leaving the headline labor force, effectively becoming long-term discouraged or displaced workers. That broad ShadowStats unemployment level depends heavily on underlying level U.6 unemployment, on top of which it is constructed (the *ShadowStats* series is described in the *Supplemental Labor-Detail* ..., page 34).

Graph 9 Comparative Unemployment Rates U.3, U.6 and ShadowStats
(Same as Graph 1 in the Executive Summary)



*Unemployment Circumstances Remained Heavily Distressed.* In the context of the review in today's *Opening Comment, Graphs 9* to 12 reflect various aspects of the Household Survey detail, which generates the unemployment rate. Moving beyond wild internal data gyrations of recent months (see *Commentary No. 915, Commentary No. 919-B* and *Commentary No. 924*) the headline unemployment rate U.3 declined to 3.75% in May 2018, setting an historic low for the series that was introduced/redefined in 1994, down from 3.93% in April and 4.07% in March. The broader U.6 rate eased to 7.59% in May 2018, down from 7.79% in April and 8.00% in March. The ShadowStats-Alternate measure, published only at the first decimal point, and built upon U.6, notched lower to 21.4% in May 2018, from 21.5% in April and versus 21.7% in Match. Those headline rates are plotted *Graph 9 (Graph 1* in the *Executive Summary*).

Graphs 10 to 12 are shown here, as usual, for the regular comparison with a number of better-quality economic indicators, although they are repeated today from inclusion in the *Opening Comments* review of the dichotomy between headline indications of "full employment" versus "extreme labor market stress." *Graph 10* shows the inverted-scale plot of the ShadowStats Alternate Unemployment Rate measure, for comparison with the plots in *Graphs 11* and 12 of the Civilian Employment-to-Population Ratio and the Labor-Force Participation rate, where both those measures jumped sharply with September hurricane disruptions to the data, falling back sharply in recent months, with some pick-up in February, easing back in March and April, and with minimal mixed movement in May 2018. The higher those ratios, the healthier are the employment conditions in the economy. Nonetheless, both measures currently are just off all-time lows, running strongly counter to the positive unemployment news.

Reviewed and expanded upon in the *Opening Comments*, those employment-stress ratios are holding at low levels, consistent with extremely stressed labor-conditions and severe recession, despite the headline May 2018 U.3 unemployment rate of 3.75% setting a record low for the current series, and First-Quarter 2018 GDP at an annualized pace of 2.17%. In theory, that low May 2018 unemployment rate is as strong an economic positive as you can get. Yet, it is the context of not recognizing long-term discouraged and displaced workers, who were defined out of existence the 1994 overhaul of unemployment reckoning.

*Dysfunctional, Seasonally-Adjusted Headline Detail from the Household Survey.* Despite the headline U.3 unemployment holding at a record low, employment circumstances remained heavily stressed and unstable, suggestive of an economy still deep in non-recovery and non-expansion, instead of one purportedly expanding rapidly at full employment. Systemic imbalances and instabilities are signaled by the labor-force participation rate (labor force/population) and the employment-to-population ratio (headline employment/population) near historic lows. With the headline unemployment rate so low, those ratios should be approaching historic highs, not holding near historic lows, as seen in *Graphs 11* and *12*.

Graphs 10 to 12 reflect longer-term unemployment and discouraged-worker conditions. Graph 10 is of the ShadowStats unemployment measure, with an inverted scale. The higher the unemployment rate, the weaker will be the economy, so the inverted plot tends to move visually in tandem with plots of most economic statistics, where a lower number means a weaker economy. Movement in the inverted-scale plot of the headline ShadowStats measure broadly has been in tandem with these broad indicators of relative stress in employment conditions.

The inverted-scale of the ShadowStats unemployment measure tends to move with the employment-to-population ratio over time, which widened minimally to 60.39% in May 2018, versus 60.33% in April, 60.36% in March, 60.38% in February and against 60.14% in both January 2018 and December 2017, then down from higher, post-hurricane disruptions. That said, the ShadowStats unemployment measure declined a notch May 2018, from April, on top of a headline decline in the U.6 rate. Nonetheless, that

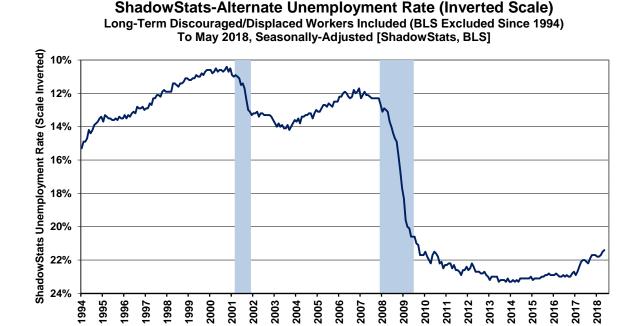
ratio remained off its post-1994 record low, the historic low and bottom subsequent to the 2007 economic collapse (only the period following the series redefinition in 1994 reflects consistent reporting), as shown in *Graph 11*.

The labor force containing all unemployed (including total discouraged/displaced workers) plus the employed, however, tends to be correlated with the population, so the employment-to-population ratio remains something of a surrogate indicator of broad unemployment and, again, with a strong correlation to the ShadowStats unemployment measure. *Graph 12* shows the May 2018 participation rate (ratio of the headline labor force to the population) easing to 62.7% in May 2018 from 62.8% In April, 62.9% in March and from 63.0% in February, having held at a rounded 62.7% for the three months before that, after having jumped to a hurricane-distorted 63.0% in September 2017, from 62.9% in August. Suggestions that the low participation rate is due to the large number of people in retirement (a partial factor), as muted by the many people who had expected to retire by this point in their lives, but find that they still have to work in order to make ends meet.

*Graphs 10* through *12* reflect labor data available in consistent detail only back to the 1994 redefinitions of the Household Survey and the related employment and unemployment measures. Before 1994, employment and unemployment data consistent with the May 2018 Household-Survey reporting simply are not available, irrespective of any protestations to the contrary by the BLS.

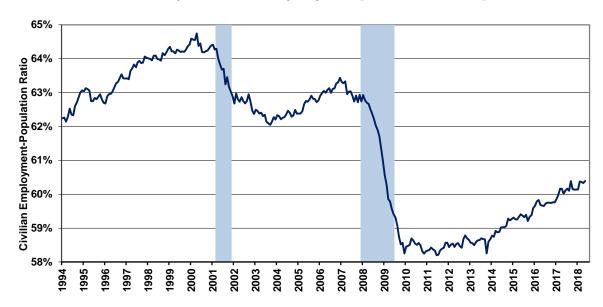
Discussed in the *Opening Comments*, *Graphs 10* to *12* reflect the buildup of a significant base of long-term discouraged or displaced workers. That circumstance reflects an economy that never fully recovered from its collapse into 2009 and still is not expanding (growing above its pre-recession peak level). *Graphs 13* to *18*, show series of comparative graphs of broad economic activity that tend to confirm the non-recovery, non-expansion circumstance.

Graph 10: Inverted-Scale ShadowStats Alternate Unemployment Measure
(Same as Graph OC-4 in the Opening Comments)



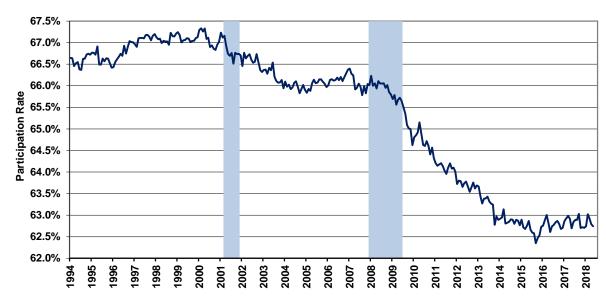
Graph 11: Civilian Employment-to-Population Ratio
(Same as Graph OC-1 in the Opening Comments)

### Civilian Employment-Population Ratio To May 2018, Seasonally-Adjusted [ShadowStats, BLS]



Graph 12: Labor-Force Participation Rate
(Same as Graph OC-2 in the Opening Comments)

### Participation Rate [Labor Force as a Percent of Population] To May 2018, Seasonally-Adjusted [ShadowStats, BLS]



Other Major Indicators Do Not Show a Growing, Expanding—Let Alone Recovered—Economy. Regularly plotted here are various graphs that mirror the patterns of Graphs 10 to 12 (1994-to-date where available), which do not confirm the purported headline recoveries in either the GDP or relative unemployment. That detail was expanded upon and covered in <u>Special Commentary No. 935</u>; see also <u>Commentary No. 952</u> covering the GDP, where some of those series are updated in this section.

Consider *Graph 13*, which shows the ShadowStats version of that GDP, also plotted from 1994, but now through the May 30th second-estimate of first-quarter 2018 GDP, where the plot has been corrected for the understatement of inflation used in deflating the headline GDP.

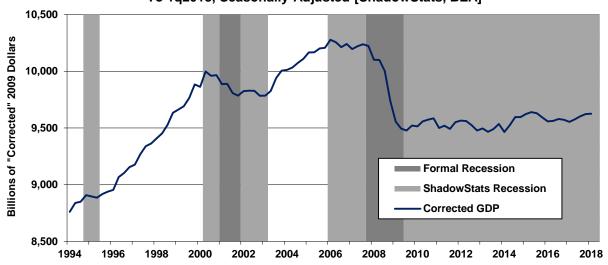
Other graphs range from the April 2018 Cass Freight Index (*Graph 14*) to March 2018 U.S. Petroleum Consumption (*Graph 15*), April 2018 U.S. Industrial Production Components of Manufacturing (*Graph 16*) and related Consumer Goods Production (*Graph 17*), which, along with April Housing Starts (*Graph 18*) [Consider also *Graph 30* of Real Construction Spending in the *Reporting Detail* on page 42], generally are uptrending, but all show patterns of non-expansion. Economic "expansion" traditionally is defined as growth beyond the prior (pre-recession) peak in activity. All but the Petroleum Consumption graph are from *Commentary No. 950*.

[Graphs 13 to 18 begin on the next page.]

Graph 13: Corrected Real GDP through 1q2018, Second-Estimate

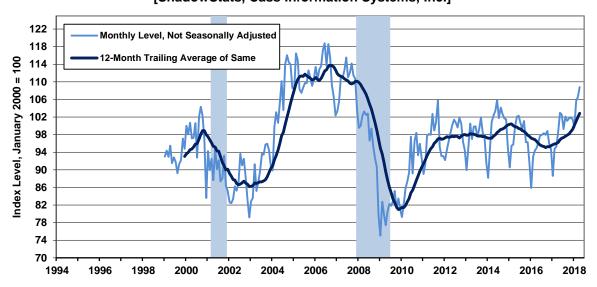
#### **Corrected Real GDP**

Nominal GDP Deflated by Implicit Price Deflator Adjusted for Understatement of Annual Inflation
To 1q2018, Seasonally-Adjusted [ShadowStats, BEA]



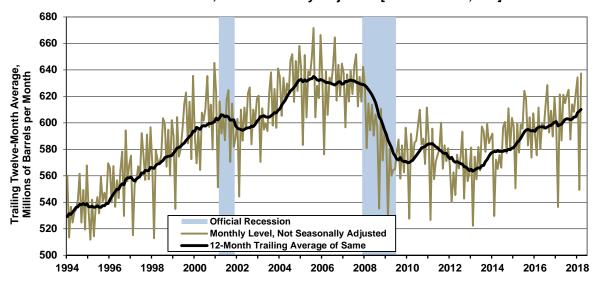
Graph 14: Cass Freight Index for North America (2000 – April 2018), Indexed to January 2000 = 100

Cass Freight Index<sup>™</sup> (Jan 2000 = 100)
To April 2018, Not Seasonally Adjusted
[ShadowStats, Cass Information Systems, Inc.]



Graph 15: U.S. Petroleum Consumption to March 2018

U.S. Product Supplied of Crude Oil and Petroleum Product
Millions of Barrels per Month, Trailing Twelve-Month Average
To March 2018, Not Seasonally Adjusted [ShadowStats, EIA]



Graph 16: Benchmarked Manufacturing Sector of Industrial Production (1994 to April 2018)

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



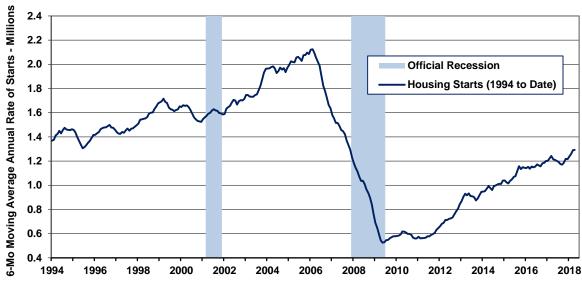
Graph 17: Industrial Production – Consumer Goods Sector (1994 – April 2018)

### Production - Consumer Goods (2012 = 100) Level 1994 to April 2018, Seasonally-Adjusted [ShadowStats, FRB]



Graph 18: Housing Starts, Annual Rate by Month (1994 – April 2018)

### Housing Starts (Six-Month Moving Average by Month) 1994 to April 2018, Seasonally-Adjusted [ShadowStats, Census]



*Headline Unemployment Rates.* The headline May 2018 U.3 unemployment rate of 3.8% [3.75% at the second decimal point] declined from 3.9% [3.93%] in April, versus 4.1% [4.07 %] in March, 4.1% [4.14%] in February, 4.1% [4.15%] in January, 4.1% [4.09%] in December 2017, 4.1% [4.12%] in

November, and 4.1% [4.07%] in October, which followed 4.2% [4.20%] in September, 4.4% [4.44%] in August, 4.3% [4.33%] in July, 4.3% [4.35%] in June, 4.3% [4.28%] in May, 4.4% [4.38%] in April, 4.5% [4.48%] in March, 4.7% [4.68%] in February and 4.8% [4.78%] in January 2017.

Formally, the month-to-month decline of 0.18% (-0.18%) in the headline May 2018 U.3 was shy of being statistically-significant (+/- 0.23% at the 95% confidence interval). Other than for the once-per-year December benchmarking, such consideration broadly is nonsense, given that the comparison of monthly numbers otherwise is on an inconsistent basis, a circumstance that resumed for the next eleven months beginning with the January 2018 headline detail (see the *Supplemental Labor-Detail Background*).

On an unadjusted basis, unemployment rates are not revised and, in theory, are consistent in post-1994 methodology. The unadjusted unemployment rate U.3 eased to 3.56% in May 2018, from 3.68% in April, versus 4.13% in March, 4.39% in February, 4.49% in January, 3.93% in December 2017, 3.92% in November, 3.89% in October, 4.07% in September, 4.53% in August, versus 4.60% in July, 4.49% in June, 4.11% in May 2017, 4.11% in April, 4.56% in March, 4.95% (rounds to 4.9%) in February and 5.14% in January.

Unemployment rate U.6 is the broadest unemployment rate published by the BLS. It includes accounting for those marginally attached to the labor force (including short-term discouraged workers) and those who are employed part-time for economic reasons (*i.e.*, they cannot find a full-time job).

On top of the seasonally-adjusted May 2018 U.3 unemployment rate, upside pressure on the unadjusted monthly count of marginally-attached workers (including discouraged workers) and a decline in the adjusted number of people working part-time for economic reasons, the adjusted May 2018 U.6 unemployment rate declined to 7.59%, from 7.79% in April, versus 8.00% in March, 8.24% in February, versus 8.19% in January, 8.08% in December 2017, 7.99% in November, 7.99% in October, 8.29% in September, 8.56% in August, 8.53% in July, 8.54% in June, 8.42% in May, 8.57% in April, 8.82% in March, 9.20% in February and 9.39% in January.

The unadjusted U.6 unemployment rate was 7.26% in May 2018, versus 7.40% in April, 8.10% in March, 8.60% in February, 8.85% in January, 8.00% in December 2017, 7.66% in November, 7.61% in October, 8.29% in September, 8.64% in August, 8.86% in July, 8.59% in June, 8.10% in May, 8.15% (rounds to 8.1%) in April, 8.94% in March, 9.54% in February and 10.08% in January 2017.

*Marginally-Attached and Displaced Workers.* New discouraged and otherwise marginally-attached workers always are moving into U.6 unemployment accounting from U.3, while those who have been discouraged or otherwise marginally-attached for one year, continuously, are dropped from the U.6 measure. As a result, the U.6 measure has been easing along with U.3, for a while, but those being pushed out of U.6 still are counted in the ShadowStats-Alternate Unemployment Estimate, which has remained relatively stable, despite recent monthly declines. Monthly counts in May 2018 showed an increased level of 1.455 million marginally attached workers (never seasonally adjusted), of which 378,000 were discouraged workers, down from 408,000 in April.

That latest, official "discouraged" number, again, reflected the flow of the headline unemployed—giving up looking for work—leaving the headline U.3 unemployment category and being rolled into the U.6 measure as short-term "marginally-attached discouraged workers," net of the further increase in the

number of those moving from short-term discouraged-worker status into the netherworld of long-term discouraged-worker status.

It is the displaced worker—the long-term discouraged-worker category—that defines the ShadowStats-Alternate Unemployment Measure. There is a continuing rollover from the short-term to the long-term category, with the ShadowStats measure encompassing U.6 and the short-term discouraged workers, plus the long-term discouraged workers. In 1994, "discouraged workers"—those who had given up looking for a job because there were no jobs to be had—were redefined so as to be counted only if they had been "discouraged" for less than a year. This time-qualification defined away a large number of long-term discouraged and displaced workers. The remaining redefined short-term discouraged and redefined marginally-attached workers were included in U.6.

ShadowStats Alternate Unemployment Estimate. Adding back into the total unemployed and labor force the ShadowStats estimate of effectively displaced long-term discouraged workers—a broad measure of unemployment more in line with common experience—the ShadowStats-Alternate Unemployment Estimate for May 2018 was 21.4%, versus 21.5% in April 2018, 21.7% in March , 21.8% in February, 21.8% in January, 21.7% in December 2017, 21.7% in November, 21.7% in October 2017, 21.9% in September, 22.2% in August, 22.1% in July, 22.0% in June, 22.0% in May, 22.1% in April, 22.4% in March, 22.7% in February and 22.9% in January 2017. The ShadowStats estimate generally shows the toll of long-term unemployed leaving the headline labor force—effectively becoming long-term discouraged/displaced workers— discussed in the Supplemental Labor-Detail Background, page 34.

Payroll Survey: May's Jobs Gain of 223,000 Was 238,000 Net of Revisions, With Annual Growth of 1.61% Holding in Recession-Signal Territory. In the context of heavily distorted headline reporting and inconsistent and non-comparable seasonal-adjustments, the headline month-to-month payroll employment gain in May 2018 was 223,000, versus revised gains of 159,000 in April, 155,000 in March and an unrevised but inconsistent 324,000 February, all as reflected in *Graphs 19* and 20.

*Non-Comparable and Inconsistent Seasonally-Adjusted Monthly Changes*. The adjusted headline May total payroll gain detail was stated on a consistent basis with the March and April headline details, but not with prior periods, from which recent headline growth was borrowed (see the *Supplemental Labor-Detail Background*, page 29, for discussion on the various reporting distortions and gimmicks).

*Headline Payroll Detail.* The headline May 2018 payroll gain of 223,000 formally was statistically-significant +/- 135,000 (but that 95% confidence interval more appropriately should be closer to the range +/- 300,000) at the 95% confidence interval (all confidence intervals used are at the 95% level). Noted in the opening paragraph in this subsection, that followed revised gains of 159,000 [previously 164,000] in April and 155,000 [previously 135,000, initially 103,000] in March, see *Graphs 19* and 20.

Annual percentage change in payroll employment picked up minimally, but it remained in recession-signal territory with a 1.61% year-to-year increase in May 2018, versus an unrevised 1.55% in April 2018, a revised 1.59% [previously 1.58%, initially 1.55%] in March 2018 and unrevised annual gains of 1.56% February 2018 and 1.42% in unadjusted January 2018 payrolls, which was the weakest standard level of annual growth since coming out of the headline 2007 recession in August 2011, other than for a benchmark-revised, hurricane-induced trough of 1.38% in September 2017, (*Graphs 21* and 22).

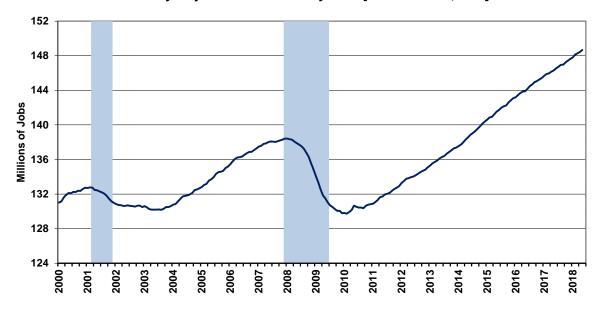
Contrary to claims by economists at the San Francisco Fed, far from being healthy or normal, such low-level annual growth rates are seen either coming out of recession, or going into recession, but never seen consistently in the regular variability of ongoing, sustainable, normal economic activity, as discussed in *Commentary No.* 843. Current levels of annual growth in unadjusted payrolls likely are at the threshold, on the downside, of heading into recession.

*Graphs 19* to 22 show the headline payroll series, level and annual change, both on a shorter-term basis, since 2000, and on a longer-term historical basis, from onset of the series in 1939. In perspective, the longer-term graph of the headline payroll-employment levels shows the extreme duration of what had been the official non-recovery in payrolls, the worst such circumstance of the post-Great Depression era.

[Graphs 19 to 24 begin on the next page.]

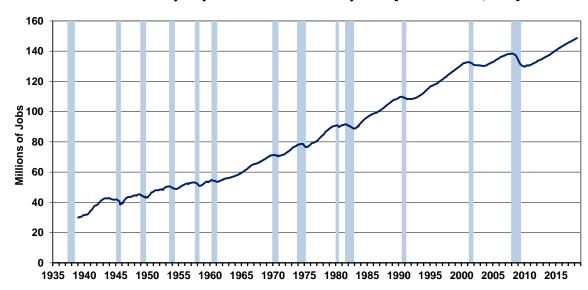
Graph 19: Nonfarm Payroll Employment, 2000 to Date
(Same as Graph 2 in the Executive Summary)

#### Nonfarm Payroll Employment Seasonally-Adjusted Levels to May 2018 [ShadowStats, BLS]



Graph 20: Nonfarm Payroll Employment, 1939 to Date

### Nonfarm Payrolls (Jobs not Employment Count) Seasonally-Adjusted Jobs 1939 to May 2018 [ShadowStats, BLS]



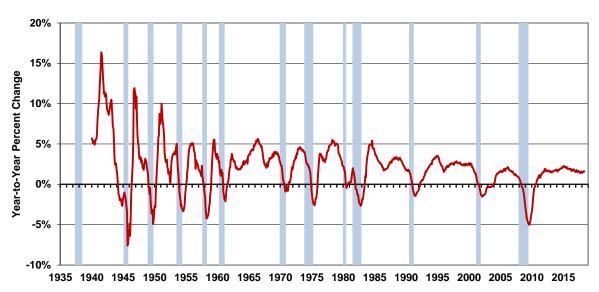
Graph 21: Payroll Employment, Year-to-Year Percent Change, 2000 to Date
(Same as Graph 3 in the Executive Summary)

#### Nonfarm Payrolls Year-to-Year Percent Change 2000 to May 2018, Not Seasonally Adjusted [ShadowStats, BLS]



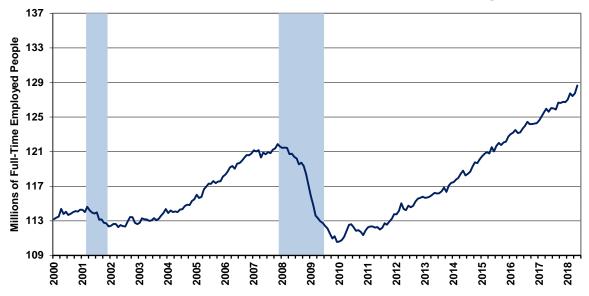
Graph 25: Payroll Employment, Year-to-Year Percent Change, 1940 to Date

### Nonfarm Payrolls Year-to-Year Percent Change 1940 to May 2018, Not Seasonally Adjusted [ShadowStats, BLS]



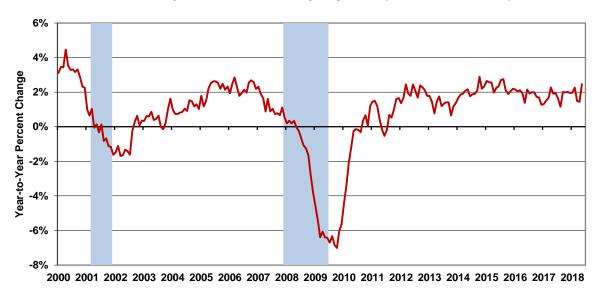
Graph 26: Full-Time Employment (Household Survey), 2000 to Date

Civilian Full-Time Employment Level - (Household Survey)
Counts Number of People Who Are Employed (Not Number of Jobs Held)
Seasonally-Adjusted Levels to May 2018 [ShadowStats, BLS]



Graph 27: Full-Time Employment (Household Survey), Year-to-Year Percent Change, 2000 to Date

Full-Time Employment Year-to-Year Percent Change 2000 to May 2018, Not Seasonally Adjusted [ShadowStats, BLS]



Unlike the Payroll Survey, which counts "employed" people with more than one job (such as part-time jobs) for each job counted, the Household Survey counts employed individuals only once, irrespective of the number of jobs held.

Where, out of the Payroll Survey, headline payroll employment (again, counting each part-time job as an employed person) rose month-to-month by 223,000 in May 2018, out of the Household Survey, the total "employed" count rose by 293,000 (including agriculture, not counted in the payroll reporting). Again, though, the headline Household Employment series are not reported consistently for the headline month, while Payroll Reporting is.

Where full-time employment out of month-to-month Household Survey inconsistencies gained by 904,000 in May 2018, part-time employment declined by 625,000 (-625,000), with multiple job holders (already counted as employed individuals) declined by 225,000. The seasonally-adjusted sub-categories in the Household Survey rarely up, due to the seasonal adjustments. Again, among other differences between the Payroll and Household series, the Payroll Survey is nonfarm, where the Household Survey covers agricultural employment.

Year-to-year change in unadjusted full-time employment (Household Survey) jumped to 2.46% in May 2018, versus 1.44% in April 2018, 1.49% in March 2018 and 2.26% in February 2018.

May 2018 Construction Payrolls Gained by 0.35% Month-to-Month, Rose by 4.16% Year-to-Year and Remained Down by 6.7% (-6.7%) from Its Pre-Recession Peak. Headline May 2018 construction payrolls gained 0.35% month-to-month, on top of minimal upside revisions to seasonally-adjusted April and March activity, as reflected in Graph 33 in the Construction Spending section, page 42.

Headline Construction Detail. Headline May 2018 construction payrolls rose month-to-month by 0.35%, versus a revised 0.29% [previously 0.24%] monthly gain in April, and a revised monthly decline of 0.04% (0.04%) [previously down by 0.14% (-0.14%), initially 0.21% (-0.21%)] in March. Unadjusted year-to-year change was 4.16% in May 2018, versus an upwardly revised 3.02% [previously 3.84%] in April 2018 and a revised 3.85% [previously 3.80%, initially 3.71% in March 2018].

The May 2018 payroll series remained down from its pre-recession peak by 6.7% (-6.7%), while the April 2018 real construction spending series remained down from its pre-recession high by 19.5% (-19.5%).

[The Supplemental Labor-Detail Background Begins on the Next Page.]

#### SUPPLEMENTAL LABOR-DETAIL BACKGROUND

The following material provides background on issues with headline monthly reporting of labor data from the Bureau of Labor Statistics (BLS) surveys: the Establishment Survey (nonfarm payrolls) and the Household Survey (unemployment and employment detail). The text here is not revised each month from its prior version, except for updated monthly numbers through the latest headline detail (currently May 2018), which also are referenced separately in the related standard employment and unemployment text in the *Executive Summary* and *Reporting Detail*. Note: Accompanying Household (December 2017) and Payroll-Survey (January 2018) comments reflect the indicated, recently-published annual benchmarkings.

- (I.) Headline Distortions from Shifting Concurrent Seasonal-Adjustment Factors
- (II.) Payroll-Employment Monthly Bias Factors (Birth-Death Modeling)
- (III.) ShadowStats Alternate-Unemployment Rate (Accounting for Displaced Workers)
- (I.) Headline Distortions from Shifting Concurrent Seasonal-Adjustment Factors. There remain serious and deliberate flaws with the government's seasonally-adjusted, monthly reporting of both employment and unemployment (there are parallel issues with the Retail Sales, New Orders for Durable Goods and Trade Deficit series). Each month, the BLS uses a concurrent-seasonal-adjustment process to adjust both the payroll and unemployment data for the latest seasonal patterns. As new headline data are seasonally-adjusted for each series, the re-adjustment process also revises the monthly history of each series. A new seasonally-adjusted history is recalculated for every month, going back five years, so as to be consistent with the new seasonal patterns generated for the current headline number. The problem remains that the historically-comparable revised data are not published along with the new headline detail.

Detailed in the regular monthly BLS press release covering employment/unemployment BLS (second page of the *Technical Note*, subheading *Seasonal Adjustment*):

For both the household [unemployment] and establishment [payroll] surveys, a concurrent seasonal adjustment methodology is used in which new seasonal factors are calculated each month using all relevant data, up to and including the data for the current month. In the household survey, new seasonal factors are used to adjust only the current month's data. In the establishment [payroll] survey, however, new seasonal factors are used each month to adjust the three most recent monthly estimates. The prior 2 months are routinely revised to incorporate additional sample reports and recalculated seasonal adjustment factors. In both surveys, 5-year revisions to historical data are made once a year.

Discussed in the following paragraphs, the historical data never are published on a consistent basis for the Payroll Survey, even when accompanying headline benchmark revisions. The Household Survey is published only once per year on a consistent basis, in December (see the opening note above), but the numbers become inconsistent, once again, with the ensuing January reporting. Headline month-to-month inconsistencies in the seasonally-adjusted Household Survey are highly variable every month, but that detail never is published and is not knowable by the public.

<u>Effective Reporting Fraud.</u> The problem remains that the BLS does not publish the monthly historical revisions along with the new headline data. As a result, current headline reporting is neither consistent nor comparable with published historical data, including the most-recent months, and the unreported

actual monthly variations versus headline detail can be meaningful. The deliberately-misleading reporting effectively is a fraud. The problem is not with the BLS using concurrent-seasonal-adjustment factors; it is with the BLS not publishing the consistent data, where those data are calculated each month and are available internally to the Bureau. The BLS expressed reasons for not publishing the revised monthly numbers on a consistent basis: "Numerous revisions during the year, however, should be avoided, because they tend to confuse data users and to increase publication costs substantially."

Household Survey. In the case of the published Household Survey (unemployment rate and related data), the seasonally-adjusted headline numbers usually are not comparable with the prior monthly data or any month before. Accordingly, the published headline detail as to whether the unemployment rate was up, down or unchanged in a given month is not meaningful in terms of statistical significance, and what actually happened is not knowable by the public. Month-to-month comparisons of these popular numbers are of no substance, other than for market hyping or political propaganda. In theory, the headline month-to-month reporting in the Household Survey is made consistent only in the once-per-year reporting of December data, with annual revisions back for five years. Again, though, all historical comparability disappears, with the ensuing headline January reporting, and with each monthly estimate thereafter.

Consider *Graphs SLD-1* and *SLD-2*, where data are available from the BLS to calculate the month-to-month seasonal-adjustment variability in the Payroll Survey. Similar detail is not available for the Household Survey, yet the monthly instability likely is of similar magnitude. Shown here as an example with the Payroll Survey, the headline January 2017 payroll level was prepared on a consistent basis with the levels of December 2016 and November 2016, but not with October 2016, with the result the headline monthly gains were consistent only for January and December. With the Household Survey, except for December, seasonally-adjusted monthly detail is not comparable with any other month, so seasonally-adjusted, month-to-month Household Survey comparisons have no meaning, even for the headline month.

<u>Payroll or Establishment Survey.</u> In the case of the published Payroll Survey data (payroll-employment change and related detail), again, the current monthly changes in the seasonally-adjusted headline data are comparable only with the prior month's month-to-month reporting, not before. Due to the BLS modeling process, the historical data never are published on a consistent basis, even with publication of the annual benchmark revision (see the comments with *Graphs SLD-1* and *SLD-2*).

Where the BLS does provide modeling detail for the Payroll Survey, allowing for third-party calculations, no such accommodation has been made for the Household Survey. ShadowStats affiliate ExpliStats has done such third-party calculations for the payroll series, and the resulting detail of the differences between the current headline reporting and the constantly-shifting, consistent and comparable history are reflected here in *Graph SLD-1*, showing the full monthly variability in the 2016 historical seasonal adjustments in the period since the 2015 payroll benchmark revision. As seen here, consistent data never are published. The benchmark-revised system is run in the background for three months before the headline January publication, which allows the initial headline publishing to stray from the actual initial benchmarking. *Graph SLD-1* shows how far the system strayed from the initial 2016 benchmarking, in its formal benchmark reporting of January 2017.

Where the red line reflected seasonal-factor straying through December 2016 from the 2015 benchmarking, the blue line indicates the straying in January 2017 versus the initial 2016 benchmarking. The January 2017 detail suggested a reversal of seasonal factors, consistent with the benchmarking detail

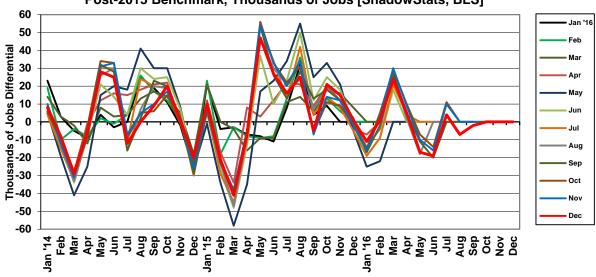
and the new "selective" seasonal adjustment processes. Such variability in seasonal factors, though, rarely is seen in a stable economic series. These data again suggest heavily-gamed headline reporting.

Graph SLD-1: Concurrent-Seasonal-Factor Irregularities - December 2016 Detail versus 2015 Benchmarking

### Seasonal-Factor Misreporting versus 2015 Benchmark

Seasonally-Adjusted Nonfarm Payroll Employment
Difference Between Actual Series and

Distorted Official Reporting Levels by Reporting Month Post-2015 Benchmark, Thousands of Jobs [ShadowStats, BLS]

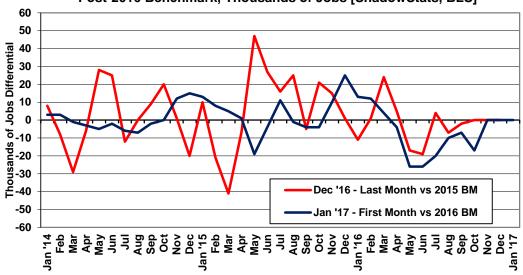


Graph SLD-2: Concurrent-Seasonal-Factor Irregularities — January '17 Detail versus 2016 Benchmarking

#### Seasonal-Factor Misreporting versus 2016 Benchmark

Seasonally-Adjusted Nonfarm Payroll Employment
Difference Between Actual Series and

Distorted Official Reporting Levels by Reporting Month Post-2016 Benchmark, Thousands of Jobs [ShadowStats, BLS]



As seen in the detail, the differences go both ways and often are much larger. Such was the case for November 2014, coming out of the 2014 benchmark revision, as detailed and discussed in the *Opening Comments* of *Commentary No. 784*. Subscribers interested in the modeling of specific industry payroll components on a consistent month-to-month basis—not otherwise available—should contact johnwilliams@shadowstats.com or at (707) 763-5786.

(II.) Payroll-Employment Monthly Bias Factors (Birth-Death Modeling: BDM). Despite the ongoing, general overstatement of monthly payroll employment (see <u>Special Commentary No. 885</u>, entitled Numbers Games that Statistical Bureaus, Central Banks and Politicians Play), the BLS adds in upside monthly biases to the payroll employment numbers. The continual overstatement is evidenced usually by regular and massive, annual downward benchmark revisions (2011, 2012 and 2017 excepted), with the 2017 benchmark revision of February 2, 2018 on the upside by 138,000 (initially estimated at 95,000).

As a separate matter, though, formalized, downside revisions increasingly have been more than offset by upside revisions to the monthly bias factors, going forward, as was the case in 2016 (see <u>Commentary No. 864</u>). The initial estimate (summary number) for the 2016 benchmarking was for a downside revision in total payrolls for March of 2016 by 150,000 (-150,000), down for March 2016 by 224,000 (-224,000) in just private-sector employment (see <u>Commentary No. 830</u>). Those changes, however, were massaged and recast to an aggregate downside revision of 81,000 (-81,000) jobs. That change then was used to impute adjustments back to April 2015, and it should have been carried forward to December 2016, but that did not happen, again, as discussed in the *Opening Comments* of <u>No. 864</u>.

Despite the published downside revision of 206,000 (-206,000) to March 2015 payrolls in the 2015 benchmarking (see <u>Commentary No. 784</u> and <u>Commentary No. 784-A</u>), the BLS upped its annual upside-bias factors since then by 65,000. Such discrepancies, however, are not unusual for the BLS.

Considering related actions of recent years, discussed in the benchmark detail of <u>Commentary No. 598</u>, the benchmark revision to March 2013 payroll employment was to the downside by 119,000 (-119,000), where the BLS had overestimated standard payroll employment growth.

With the March 2013 revision, though, the BLS separately redefined the Payroll Survey so as to include 466,000 workers who had been in a category not previously counted in payroll employment. The latter event was little more than a gimmicked, upside fudge-factor, used to mask the effects of the regular downside revisions to employment surveying, and likely was the excuse behind an increase then in the annual bias factor, where the new category could not be surveyed easily or regularly by the BLS. Elements here likely had impact on the unusual issues with the 2014 benchmark revision.

Abuses from the 2014 benchmarking were detailed in <u>Commentary No. 694</u> and <u>Commentary No. 695</u>. With the headline benchmark revision for March 2014 showing understated payrolls of 67,000 (-67,000), the BLS upped its annual add-factor bias by 161,000 for the year ahead.

Historically, the upside-bias process was created simply by adding in a monthly "bias factor," so as to prevent the otherwise potential political embarrassment to the BLS of understating monthly jobs growth. The creation of "bias factor" process resulted from such an actual embarrassment, with the underestimation of jobs growth coming out of the 1983 recession. That process eventually was recast as the now infamous Birth-Death Model (BDM), which purportedly models the relative effects on payroll

employment of jobs creation due to new businesses starting up, versus jobs lost due to bankruptcies or closings of existing businesses.

May 2018 Add-Factor Bias. In context of the recently published 2017 benchmarking (see the *Opening Comments* of *Commentary No. 934-B*), the not-seasonally-adjusted monthly add-factor bias in May 2018 was 215,000, previously up by 230,000. The revamped, aggregate upside annual bias for the trailing twelve months through May 2018 is estimated from the current headline bias reporting at 1,085,000, up by 193,000 or 21.6% from the last prior count of 892,000 in December 2017. That is a monthly average now of 90.417, versus 74,333 in December 2017, jobs created out of thin air, on top of some indeterminable amount of other jobs that are lost in the economy from business closings. Those losses simply are assumed away by the BLS in the BDM, as discussed below.

<u>Problems with the Model.</u> The aggregated upside annual reporting bias in the BDM reflects an ongoing assumption of a net-positive jobs creation by new companies versus those going out of business. Such becomes a self-fulfilling system, as the upside biases boost reporting for financial-market and political needs, with relatively good headline data, while often also setting up downside benchmark revisions for the next year, which traditionally are ignored by the media and the politicians. The BLS cannot measure meaningfully the impact of jobs loss and jobs creation from employers starting up or going out of business, on a timely basis (within at least five years, if ever), or by changes in household employment that were incorporated into the 2017 redefined payroll series. Such information simply is guesstimated by the BLS, along with the addition of a bias-factor generated by the BDM. Private surveying runs counter to the BLS contentions.

Positive assumptions—commonly built into government statistical reporting and modeling—tend to result in overstated official estimates of general economic growth. Along with these happy guesstimates, there usually are underlying assumptions of perpetual economic growth in most models. Accordingly, the functioning and relevance of those models become impaired during periods of economic downturn, and the current, ongoing downturn has been the most severe—in depth as well as duration—since the Great Depression.

Indeed, historically, the BDM biases have tended to overstate payroll employment levels—to understate employment declines—during recessions. There is a faulty underlying premise here that jobs created by start-up companies in this downturn have more than offset jobs lost by companies going out of business. Recent studies continue to suggest that there has been a net jobs loss, not gain, in this circumstance. Nonetheless, if a company fails to report its payrolls because it has gone out of business (or has been devastated by a hurricane), the BLS assumes the firm still has its previously-reported employees and adjusts those numbers for the trend in the company's industry.

The presumed net additional "surplus" jobs created by start-up firms are added on to the payroll estimates each month as a special add-factor. On top of that, the monthly BDM add-factors have been increased now to an average of 90,467 jobs per month for the current year. As a result, in current reporting, the aggregate average overstatement of employment change easily exceeds 200,000 jobs per month (the underlying positive base-assumption upside bias, plus the monthly Birth-Death Model add-factor).

(III.) ShadowStats Alternate-Unemployment Rate (Accounting for Displaced Workers). At the same time, as reviewed in today's Opening Comments and otherwise discussed, here, the new low in headline unemployment was despite continued signals of extreme stress in labor-market conditions. The dominant issue with that dichotomy remains that the headline unemployment numbers out of the BLS have not counted the aggregation of long-term discouraged or displaced workers, since the 1994 redefinitions of the unemployment reporting. Those issues have become a factor here since the severity of the economic collapse from 2007 into 2009.

In 1994, the Bureau of Labor Statistics (BLS) overhauled its system for estimating unemployment, including changing survey questions and unemployment definitions. In the new system, measurement of the previously-defined discouraged or displaced workers disappeared. These were individuals who had given up looking for work, because there was no work to be had. These people, who considered themselves unemployed, had been counted in the old survey, irrespective of how long they had not been looking actively for work. These were individuals who were and would be considered displaced workers, due to circumstances of severely-negative economic conditions or other factors such as changing industrial activity resulting from shifting global trade patterns.

The new survey questions and definitions had the effect of minimizing the impact on unemployment reporting for those workers about to be displaced by the just-implemented North American Free Trade Agreement (NAFTA). At the time, I (John Williams) had close ties with an old-line consumer polling company, whose substantial economic monthly surveys were compared closely with census-survey details. The new surveying changed the numbers, and what had been the discouraged-worker category soon became undercounted or effectively eliminated. Change or reword a survey question, and change definitions, you can affect the survey results meaningfully.

The post-1994 survey techniques also fell far shy of adequately measuring the long-term displacement of workers tied to the economic collapse into 2008 and 2009, and from the lack of subsequent economic recovery. In current headline reporting, the BLS has a category for those not in the labor force who currently want a job. Including the currently-defined level of "marginally attached workers," which incorporates the currently-defined and undercounted "discouraged workers" category used in the U.6 calculation, those not in the labor force currently wanting a job was an unadjusted 5.696 million in May 2018, up from 5,010 million in April 2018, or 5.183 million on a seasonally-adjusted basis in May 2018, versus 5.115 million in April 2018 (both sets numbers up for a second month despite declining unemployment rates). While some contend that that number includes all those otherwise-uncounted discouraged workers, such is extremely shy of underlying reality due to changes in survey methodology since 1994.

The ShadowStats number—a broad unemployment measure more in line with common experience—is my estimate. The approximation of the ShadowStats "long-term discouraged worker" category—those otherwise largely defined out of statistical existence in 1994—reflects proprietary modeling based on a variety of private and public surveying over the last two-plus decades. Other than using the BLS's U.6 estimate as an underlying monthly base with my modeled adjustments, I have not found a way of accounting adequately for the current unemployment circumstance and common experience using just the monthly headline data published by the BLS.

Some broad systemic labor measures from the BLS, though, are consistent in pattern with the ShadowStats measure, even allowing for the shifts tied to an aging population with retiring "baby

boomers." Discussed in today's *Opening Comments* and shown in the *Reporting Detail*, the graph of the inverted ShadowStats unemployment measure has a strong correlation with the employment-to-population ratio, in conjunction with the labor-force participation rate (see *Graphs 10* to *12* there). Other measures, such as the ShadowStats-Alternate GDP Estimate, the Cass Freight Index, U.S. Petroleum Consumption, etc. are highlighted in subsequent *Graphs 13* to *18* there and in the *Economy* section of *Special Commentary No. 935*.

Headline May 2018 Detail. Adding back into the total unemployed and labor force the ShadowStats estimate of effectively displaced workers, of long-term discouraged workers—a broad unemployment measure more in line with common experience—the ShadowStats-Alternate Unemployment Estimate for May 2018 was 21.5%, moving lower on top of the underlying U.6 rate, versus 21.5% in April 2018, 21.7% in March, 21.8% in February 2018, 21.8% in January 2018, 21.7% in December 2017, 21.7% in November, 21.7% in October, 21.9% in September, 22.2% in August, 22.1% in July, 22.0% in June, 22.0% in May, 22.1% in April, 22.4% in March 2017, 22.7% in February, and 22.9% in January. Built upon the headline U.3 and U.6 estimates, the May 2018 ShadowStats reading was down by 190 (-190) basis points or 1.9% (-1.9%) from the 23.3% series high seen in May 2014.

In contrast, the May 2018 headline U.3 unemployment rate of 3.8% was down by 620 (-620) basis points or by 6.2% (-6.2%) from its peak of 10.0% in October 2009. The broader U.6 unemployment measure of 7.6% in May 2018, was down by 960 (-960) basis points or 9.6% (-9.6%) from its peak of 17.2% April 2010.

A subscriber raised the question as to why the ShadowStats Alternate Unemployment Estimate had been holding around 23%, at the time. Recalculated each and every month, the ShadowStats estimate generally picks up the net flows of headline "discouraged" workers, who have been redefined out of existence after having been inventoried in the BLS accounting of the U.6 rate for about eleven months (where individuals have not looked actively for a job in one year). In turn, U.6 picks up as "discouraged workers" those in U.3 who have not actively looked for work in the last four weeks. It is the resulting reduction in the U.3 and U.6 "unemployed" and the related labor forces used in calculating those respective headline unemployment rates that has accounted for the bulk of the reduction in those headline rates, with much of the difference flowing into and holding reasonably steady in the ShadowStats alternate measure.

Seen in the usual graph of the various unemployment measures (*Graph 1* in the *Executive Summary*, *Graph 9* in the *Reporting Detail*), there indeed is a noticeable divergence in the ShadowStats series versus U.6 and U.3, with the BLS headline U.3 unemployment measure broadly flat-to-minus recently, against a higher level, fluttering U.6 and a still-higher level, relatively stagnant, but mixed-trend ShadowStats number, which had been flat for several months, yet all have notched lower with the headline May 2018 detail.

The reason for the longer-term divergence versus the ShadowStats measure, again, is that U.6 only includes discouraged and marginally-attached workers who have been "discouraged" for less than a year. As the discouraged-worker status ages, those that go beyond one year fall off the government counting, even as new workers enter "discouraged" status. A similar pattern of U.3 unemployed becoming "discouraged" or otherwise marginally attached, and moving into the U.6 category also accounted for the early divergence between the U.6 and U.3 categories.

With the continual rollover, the flow of headline workers continues into the short-term discouraged workers category (U.6), and from U.6 into long-term discouraged worker or displaced-worker status (the ShadowStats measure). There was a lag in this happening as those having difficulty during the early months of the economic collapse, first moved into short-term discouraged status, and then, a year later they began moving increasingly into longer-term discouraged or displaced status, hence the lack of earlier divergence between the series. The movement of the discouraged unemployed out of the headline labor force had been accelerating. While there is attrition in long-term discouraged numbers, there is no set cut off where the long-term discouraged workers cease to exist. See the *Alternate Data* tab at www.ShadowStats.com for historical detail.

Generally, where the U.6 largely encompasses U.3, the ShadowStats measure encompasses U.6. To the extent that a decline in U.3 reflects unemployed moving into U.6, or a decline in U.6 reflects short-term discouraged workers moving into the ShadowStats number, the ShadowStats number continues to encompass all the unemployed, irrespective of the series from which they may have been ejected and correspondingly has been reasonably stable over a longer timeframe.

Great Depression Comparisons. Discussed in these regular Commentaries covering the monthly unemployment circumstance, an unemployment rate in the 21% to 23% range might raise questions in terms of a comparison with the purported peak unemployment in the Great Depression (1933) of 25%. Hard estimates of the ShadowStats series are difficult to generate on a regular monthly basis before 1994, given meaningful reporting inconsistencies created by the BLS when it revamped unemployment reporting at that time. Nonetheless, as best estimated, the current ShadowStats level likely is about as bad as the peak actual unemployment seen in the 1973-to-1975 recession and the double-dip recession of the early-1980s.

The Great Depression peak unemployment rate of 25% in 1933 was estimated well after the fact, with 27% of those employed then working on farms. Today, less than 2% of the employed work on farms. Accordingly, a better measure for comparison with the ShadowStats number might be the Great Depression peak in the nonfarm unemployment rate in 1933 of roughly 34% to 35%.

[Extended Coverage of Construction Spending Begins on the Next Page.]

### **CONSTRUCTION SPENDING (April 2018)**

Nominal Construction Spending Rebounded in April, Reversing March's Plunge, Real Spending Held Shy of Its Pre-Recession Peak by 19.5% (-19.5%). In the context of regularly unstable monthly volatility, and in advance of next month's annual benchmark revisions, April 2018 nominal construction spending rose by 1.8% in the month, reversing a drop of 1.7% (-1.7%) in March. Nominal growth was 7.2% year to-year in April 2018, versus 3.81% in March 2018. Nominal growth in each major subcategory broadly reversed its monthly gain or decline from the month before.

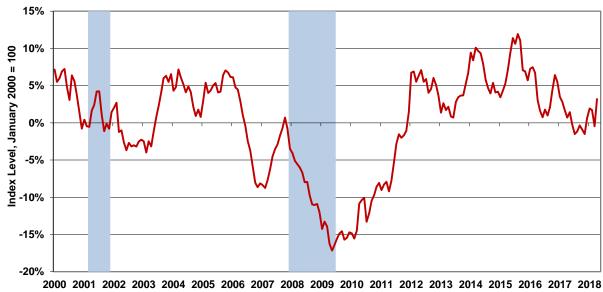
Where March activity remained negative month-to-month, both before and after inflation adjustment, but gained year-to-year before, and declined year-to year after inflation adjustment, April activity jumped month-to-month and year-to-year, both before and after inflation.

The strong monthly gain in April's nominal activity reflected a surge in residential, private construction.

Revisions standardly go back only two months in the construction-spending series, subject to an annual benchmarking, which is scheduled this year for July 2nd. Noted in the current <u>Press Release</u>, "With the May 2018 release, unadjusted data will be revised back to January 2016 and seasonally adjusted data will be revised back to January 2011. With each May release, seasonally adjusted data will now be revised for an additional five years beyond the revision period for unadjusted data. Research has shown that this revision span should produce more reliable seasonally adjusted time series."

Graph 28: Total Real Construction Spending, Year-to-Year Percent Change
(Same as Graph 4 in the Executive Summary)





Accordingly, the current February 2018 to April 2018 details are not necessarily consistent with the level of prior-year activity reported before February 2018. The Construction Spending series likely has seen some mixed, but continued wild distortions from recent natural-disaster-recovery bloating, and the

reversal of same. Those numbers should be brought into some balance with the pending July 2nd revisions. A significant shifting in relative headline construction spending always is a fair bet with the regular benchmarkings of this standardly-unstable series.

*Fluttering Annual Growth.* Net of the Composite Construction Deflator (CCD), April 2018 year-to-year growth in construction spending jumped to 3.2% (boosted some by relatively low activity a year ago), versus an annual contraction of 0.4% (-0.4%) in March 2018, following annual gains of 1.7% in February 2018 and 1.9% in January 2018. By quarter, year-to-year growth contracted by 0.8% (-0.8%) in third-quarter 2017, by 0.6% (-0.6%) in fourth-quarter 2017, but gained by 1.1% in first-quarter 2018, and is on early track for 2.7% annual growth in second-quarter 2018.

Prior the latest detail, the series was showing a pattern last seen as last seen in the housing collapse of 2005/2006. Despite the recent monthly swings, real year-to-year change continued in broad annual contraction, in onset and scope, again, in a manner last seen during the housing collapse of 2006, leading into the 2007 recession (see *Graph 28*). While such still largely is the case, that circumstance will be reassessed after the clarification from next month's benchmarking.

At present, the year-to-year change in real construction spending for the trailing 12 months ended April 2018 was a gain of 0.24%, versus an annual gain of 2.67% for the twelve months ended April 2017.

*April 2018 Construction Spending.* The seasonally-adjusted, annualized nominal April 2018 Value of Construction Put in Place in the United States was \$1,310.4 billion, versus an upwardly-revised \$1,286.8 [previously \$1,284.7] billion, an upwardly-revised \$1,308.2 [previously \$1,306.4, initially \$1,273.2] billion in February 2018 and an unrevised \$1,294.0 billion in January 2018.

In the context of the small upside revisions to February and March activity, the nominal month-to-month change in April 2018 construction spending was a statistically-significant contraction of 1.8% [up by 1.84% at the second decimal point] +/- 1.8% (all confidence intervals are at the 95% level), versus an unrevised decline of 1.7% (-1.7%) in March, a revised gain of 1.2% [previously 1.0%, initially down by 0.6% (-0.6%)] in February and an unrevised monthly gain of 1.7% in January. Net of the Composite Construction Deflator inflation (see the next section), those were a real monthly gain of 1.6% in April 2018, a decline of 2.4% (-2.4%) in March, a gain of 0.6% in February, a gain of 1.3% in January and a 1.4% gain in December 2017.

Headline annual nominal growth was a statistically-significant gain 7.6% +/- 2.1% in April 2018, versus a revised annual gain of 3.8% [previously 3.6%] in March 2018, 5.9% [previously 5.7%, initially 3.0%] in February 2018 and an unrevised 5.8% in January 2018. Net of inflation, April 2018 growth was up year-to-year by 3.2%, having declined by 0.4% (-0.4%) in March 2017, having gained in February 2018 by a 1.7% and by an unrevised 1.9% in January. Again, the preceding headline details are reflected in accompanying *Graphs 29* to *32* and in *Graph 5* in the *Executive Summary*.

The statistically-significant, nominal gain of 1.8% in aggregate April 2018 Construction Spending, versus a decline of 1.7% (-1.7%) in March 2018, included a decline of 1.3% (-1.3%) in April 2018 Public Construction versus a gain of 1.2% in March. Private Construction Spending gained by 2.8% in April, having declined by 2.6% (-2.6%) in March. Within total Private Construction Spending, Residential Construction boomed by 4.5% in April having declined by 4.1% (-4.1%) in March, while Nonresidential Construction rose by 0.8% in April, having declined by 0.6% (-0.6%) in March.

The preceding headline details are reflected in accompanying *Graphs 31* and *31* and in *Graphs 5* to 8 in the *Executive Summary*, which show headline detail both before and after adjustment for inflation.

Construction Inflation—ShadowStats Composite Construction Deflator (CCD). ShadowStats produces a Composite Construction Deflator (CCD) for use in converting current-dollar or nominal (not-adjusted-for-inflation) headline construction spending into inflation-adjusted, real or constant-dollar terms. Detailed in <u>Commentary No. 829</u>, previously used measures from the Producer Price Index (PPI) lacked historical consistency and did not measure inflation appropriately for the construction-spending series.

Updated for the latest related price indices in the national-income reporting, and private surveying, CCD year-to-year inflation was 4.37% for April 2018, 4.25% [previously 4.23%] for March 2018, 4.15% previously 4.12% for February 2018 and an unrevised 3.75% for January 2018. Month-to-month inflation was 0.26% for April 2018, a revised 0.74% [previously 0.73%] for March 2018, 0.56% [previously 0.53%] for February 2018 and an unrevised 0.38% for January 2018.

*Quarterly Year-to-Year and Annualized Quarterly Real Changes.* In the context of April 2018 reporting in this regularly, heavily-revised and volatile detail, initial real first-quarter 2018 year-to-year change was a gain of 1.1% [previously 1.0%], with annualized real quarterly growth of 8.3%.

Fourth-quarter 2017 activity grew at an annualized pace of 6.5%, having contracted year-to-year by a revised 0.6% (-0.6%).

Third-quarter 2017 real growth contracted at an annualized quarterly pace of 4.0% (-4.0%) and contracted year-to-year by 0.8% (-0.8%).

Second-quarter 2017 real growth contracted at an annualized real pace of 5.8% (-5.8%), versus first-quarter 2017, with year-to-year real growth at 0.6%.

The pattern here, again, coming into first-quarter 2018, had been one of annual slowdown and annual contraction, generally of a form not seen since the housing crash coming into the headline 2007 recession.

[Graphs 29 to 32 begin on the next page.]

Graph 29: Total Nominal Construction Spending

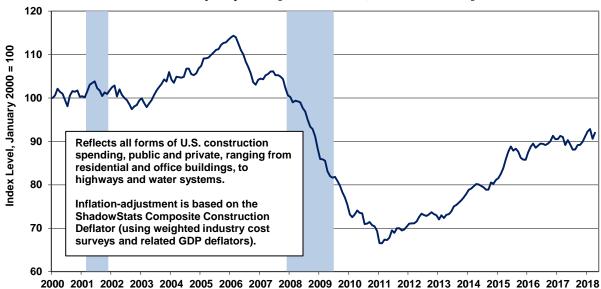
### Nominal Total-Construction Spending to April 2018 Seasonally-Adjusted Annual Rate [ShadowStats, Census]



Graph 30: Index of Total Real Construction Spending

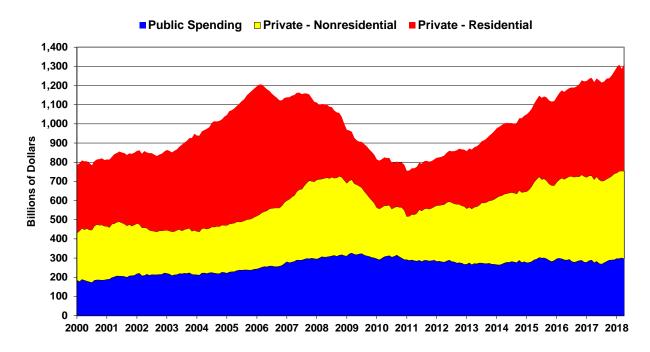
### Index of Real Total Value of Construction Put in Place

To April 2018, Inflation Adjusted (Jan 2000 = 100) Seasonally-Adjusted [ShadowStats, Census Bureau]



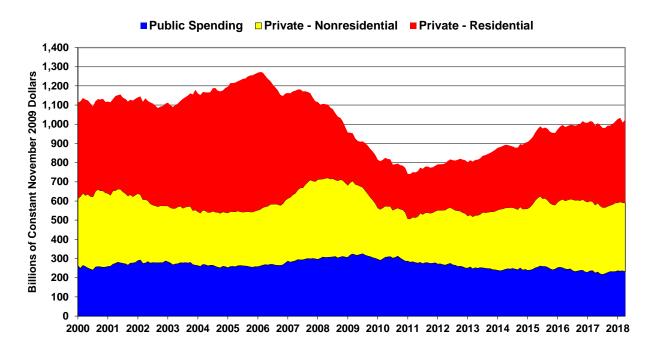
Graph 31: Aggregate Nominal Construction Spending by Major Category to Date

### Nominal Construction Spending to April 2018 Seasonally-Adjusted Annual Rate [ShadowStats, Census]



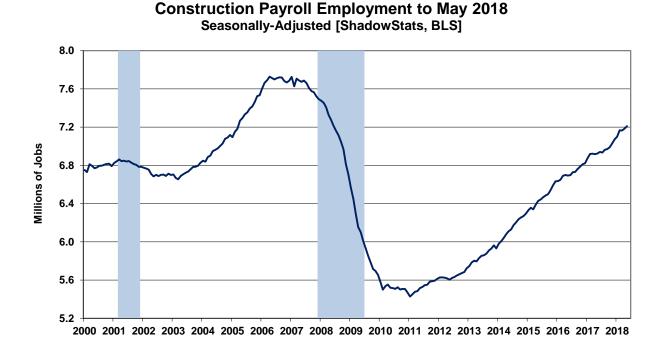
Graph 32: Aggregate Real Construction Spending by Major Category (Billions of November 2009 Dollars)

### Real Construction Spending (\$2009) to April 2018 Seasonally-Adjusted Annual Rate [ShadowStats, Census]



April 2018 Construction Payrolls Gained Month-to-Month by 0.3%, Rose 4.2% Year-to-Year, but Remained Down by 6.7% (-6.7%) from the Series' Pre-Recession Peak. Discussed earlier in the Employment and Unemployment section (see page 28), April 2018 construction payrolls gained month-to-month by 0.35% [by 0.50% net of the prior-month's revision] and by 4.16% year-to-year, as plotted in accompanying Graph 32. The seasonally-adjusted May 2018 construction-payroll-employment level held shy of recovering the pre-recession high for that series by 6.7% (-6.7%). Again, April 2018 real Construction Spending remained shy of recovering its pre-recession high by 19.5% (-19.5%).

Graph 33: Construction Employment (Payroll Survey) - 2000 to Date



Construction Spending and Related Graphs. Graphs 5 to 8 in the Executive Summary show comparative nominal and real construction activity for the aggregate series as well as for private residential- and nonresidential-construction and public-construction. Seen after adjustment for inflation, the real aggregate series generally have remained in low-level stagnation, now effectively flat to turning down, from mid-2015 into second-quarter 2018. Areas of recent relative strength in the major subcomponents generally have flattened out after inflation adjustment.

The general pattern of real activity had been one of low-level, up-trending stagnation but, again, that now has turned generally flat. The aggregate nominal detail, before inflation adjustment, is shown in *Graph* 29 of this *Reporting Detail*, with the real, inflation-adjusted activity plotted in *Graph 30*, while *Graphs 31* and 32 show the relative patterns of nominal and real activity aggregated by sector.

Construction and Related Graphs of Physical Activity. Again, Graphs 29 and 30, and Graphs 31 and 32 reflect total construction spending through April 2018, both in the headline nominal dollar terms, and in real terms, after inflation adjustment. Graph 30 is on an index basis, with January 2000 = 100.0, where Graph 28 reflects the same detail in terms of annual change. Adjusted for the CCD, real aggregate

construction spending showed the economy slowing in 2006, plunging into 2011, then turning minimally higher in an environment of low-level stagnation, trending lower from late-2013 into mid-2014, then with some boost into early-2015. Activity declined in fourth-quarter 2015, with a rebound in 2016, sinking anew into 2017, with annual growth having turned negative, again as indicated in *Graph 28*, albeit mixed but generally higher into 2018. The pattern of non-recovered, inflation-adjusted construction spending has continued to move contrary to the purported economic recovery and expansion indicated by headline GDP reporting.

The Data and Graphs Here Reflect Monthly Levels, Not Smoothed, Moving Averages. Unlike the housing-starts and home-sales series (see <u>Commentary No. 950</u> and <u>Commentary No. 951</u>)—where ShadowStats smooths the irregular and continually-revised monthly data with accompanying plots of smoothed, six-month moving averages—the construction spending series is shown here only on a monthly basis, as published. While the spending series is extremely volatile in its monthly revisions, it tends to remain reasonably smooth in the residual month-to-month change. Discussed in the opening paragraphs of this Construction Spending section, the Census Bureau's benchmark-revision notice previewed an extended historical base of seasonal-adjustment revisions, which purportedly will result in more-stable, less-violent revisions to the headline monthly reporting.

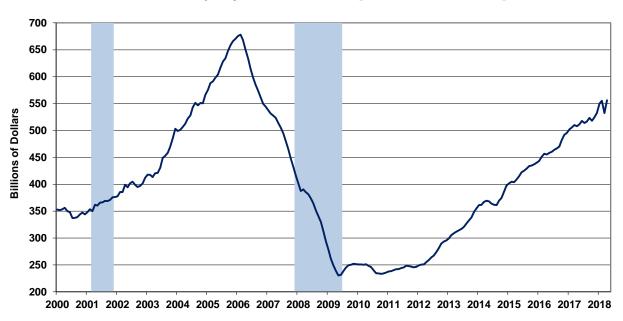
Note the comparative month-to-month volatilities in the non-smoothed *Graphs 34* and *35*, which cover private residential construction spending, along with housing starts (combined single- and multiple-unit starts) for April 2018 (see *Commentary No. 950*). Keep in mind that the construction spending series is in nominal dollar terms, while housing starts reflect unit volume, which should be parallel with the inflation-adjusted series shown in *Graph 6* in the *Executive Summary* section and *Graph 30* here.

The final two graphs (*Graphs 36* and *37*) show the patterns of the monthly level of activity in nominal private nonresidential-construction spending and in public-construction spending. Private Non-Residential Construction spending surged beyond its pre-recession nominal peak in 2016, hitting a new high in February 2018, the backing off in March 2018. Public Construction spending, which is 98% nonresidential, had continued in a broad downtrend into 2014, with intermittent bouts of fluttering stagnation and then some upturn in 2015. From 2016 and into 2018, the nominal series still is fluttering into and out of a low-level top, still shy of its pre-recession peak. Viewed net of inflation, in *Graphs 6* and 8 in the *Executive Summary* and in accompanying *Graph 31*, both series still appear stalled shy of their pre-recession peaks.

[Graphs 34 to 37 begin on the next page.]

Graph 34: Nominal Private Residential Construction Spending to Date

### Nominal Private Residential Construction to April 2018 Seasonally-Adjusted Annual Rate [ShadowStats, Census]



Graph 35: Combined Single- and Multiple-Unit Housing Starts to Date

### Aggregate Housing Starts (Monthly Rate) Single- and Multiple-Unit Starts



Graph 36: Nominal Private Nonresidential Construction Spending to Date

### Nominal Private Nonresidential Construction to April 2018 Seasonally-Adjusted Annual Rate [ShadowStats, Census]



Graph 37: Nominal Public Construction Spending to Date

Nominal Public Construction to April 2018

Seasonally-Adjusted Annual Rate [ShadowStats, Census]



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

\_\_\_\_\_

### **CONSUMER LIQUIDITY WATCH**

**CONSUMER LIQUIDITY, INCOME, CREDIT AND RELATIVE OPTIMISM.** [Not revised from its prior version in Commentary No. 952, other than for links and related language.]

Consumer Optimism Has Peaked, At Least Temporarily, Pulling Back on Both a Monthly and Smoothed Basis, Net of Revisions, Amidst Tightened Real Growth in Consumer Earnings and Credit. Today's Consumer Liquidity Watch incorporates by reference the Opening Comments of the May 9th Commentary No. 948, which reviewed various economic signals ranging from tightening systemic liquidity tied to sinking, inflation-adjusted real annual growth in M3 money supply, to Sentier Research's reintroduction of monthly Real Median Household Income, highlighted later in this text.

May 2018 details for the Conference Board's Consumer Confidence Index (May 29th) and the University of Michigan's final estimate for May Consumer Sentiment (May 25th) showed a faltering outlook. While headline Consumer Confidence took a hefty jump in May, that was in the context of a downside revision of 2.4% (-2.4%) to the previously-estimated level of April Confidence, which the new initial May estimate did not top. The final May Sentiment number revised lower by 0.8% (-0.8%) from its initial estimate. While both measures remain at high levels, both remain shy of levels seen in November 2017.

Mounting financial stress on the U.S. consumer bodes poorly for pending domestic economic growth. Noted in today's *Opening Comments* and the *Opening Comments* of <u>Commentary No. 952</u>, mounting liquidity issues likely already have taken some hit on headline real first-quarter 2018 GDP activity, where consumer real consumption of goods actually and real investment growth in residential real estate actually declined in the quarter. See also *Commentary No. 948* and *Commentary No. 949*.

Liquidity conditions have been tightening for consumers, with Real Consumer Credit Outstanding having continued to falter in March 2018, with headline Real Average Weekly Earnings contracting quarter-to-quarter in first-quarter 2018, with continued faltering in April, and with monthly Real Median Household Income in April 2018 slowing anew in terms of annual growth. These factors are among the likely elements driving the early signs of a downturn in consumer optimism and consumer consumption and residential investment (a shrinking 72.9% of First-Quarter 2018 GDP). In combination, these various factors should exacerbate financial-market, policy-maker and FOMC concerns as to any ongoing, positive direction in broad U.S. economic activity (see the *Hyperinflation Watch* of *Commentary No. 953-A*).

Weakening consumer liquidity conditions previously had been mirrored in weakening, headline economic activity coming into the series of major natural disasters that disrupted the economy, beginning in August 2017. Intensifying weakness had included Payroll-Employment, Real Retail Sales, Housing and Construction, and the Manufacturing/Production sector, generally pre-natural disaster activity.

Net of what have been mixed, but significant, hurricane and later-wildfire distortions, initial hits to activity were followed by related and transient economic boosts from recovery, replacement and restoration activity, particular in fourth-quarter 2017. Funded by insurance payments and savings liquidation, those distortions increasingly had passed into the recent headline economic data and now begun to recede. Against artificially bloated third- and fourth-quarter 2017 activity of 3.2% and 2.9%, first-quarter 2018 economic activity slowed to a revised 2.2% and likely will revise still lower as better-quality numbers become available. Such effects are discussed in the separate analyses of relevant series in covered in the regular *ShadowStats Commentaries*. Where there are current signals of faltering consumer liquidity (again see Consumer Credit Outstanding and Real Earnings), headline consumer optimism has begun to falter, as discussed earlier. Net of a sharp downside revision to April, the May 2018 releases of the Conference Board's Consumer-Confidence Index<sup>®</sup> and the advance-estimate of the University of Michigan Consumer Sentiment for May 2018, again, both were off recent peak activity.

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 underlying pocketbook issues contributed to the anti-incumbent electoral pressures in the 2016 presidential race. The post-election environment showed a near-term surge in both the consumer confidence and sentiment measures to levels generally not seen since before the formal onset of the recession in 2001, let alone 2007. Yet, underlying liquidity conditions, economic reality and lack of positive actions out of the government to turn the economy meaningfully, so far, all have continued to remain shy of consumer hopes, and those numbers have begun to stumble in recent detail.

The temporary liquidity boost fueled by recent disaster effects, such as insurance payments or savings drawdowns to fund replacement of storm-damaged assets, was of a one-time nature and short-lived in terms of ongoing economic impact. The underlying, fundamental longer-term liquidity issues remain in place. Nonetheless, mirroring the disaster-fueled economic hype in the popular press, consumer optimism had rallied strongly, albeit, again, now faltering or mixed, as discussed shortly.

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

The combined issues here have driven the housing-market collapse and ongoing, long-term stagnation in consumer-related real estate sales and construction activity, and have constrained both nominal and real retail sales. Related, personal-consumption-expenditure and residential-construction categories accounted for 73.1% of the headline real, Fourth-Quarter 2017 U.S. GDP, now down to 72.9% in First-Quarter 2018.

Net of short-lived disaster distortions (insurance payments, savings liquidations), 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 boosts from disasters or political gimmicks, discussed recently in *General Commentary No.* 929 and the *Executive Summary* of *Commentary No.* 928.

Anecdotal Evidence of Business and Consumer Uncertainty Continue to Indicate a Seriously-Troubled Economy and Very Dangerous Financial Markets. Against what appears to be a headline economic consensus that all is right again with the U.S. economy and financial markets, underlying real-world common experience suggests a much different outlook. Regularly discussed here, ongoing non-recovery, low-level stagnation and signs of renewed downturn remain patterns common to key elements of headline U.S. economic activity. Consider factors ranging from housing sales and broad construction activity, to headline reporting of domestic manufacturing (and revisions), as well as those series that are heavily gimmicked, such as the Gross Domestic Product (GDP), also regularly discussed and dissected here.

Similar signals of such economic stress are seen in patterns of activity that move along with the real-world broad economy. They range from indicators such as freight volume and domestic consumption of petroleum to factors such as levels of real consumer debt outstanding, real average weekly earnings and measures of employment stress in the broad economy. Those stresses are reflected in historically-low levels of the employment-population ratio and the labor-force participation rate. With the liquidity-starved U.S. consumer driving three-quarters of the GDP, there is no way for the broad economy to boom—happy Retail Sales headlines aside—without some meaningful shift in underlying consumer circumstances. Links to background discussions in these various areas are found in the *Recent Commentaries* section of the *Week, Month and Year Ahead*, along with links to background discussions on the quality of the more-politicized GDP (*Commentary No. 938*) and employment/unemployment details discussed in the *Supplemental Labor-Detail Background* of *Commentary No. 939*.

Beyond assessing headline economic numbers, ShadowStats also looks at anecdotal evidence, including comments by subscribers and clients, who live in the real world. Two broad observations have come from a number of recent conversations. First, real estate activity appears to be slowing in recently strong areas. Second, a number of major companies are "sitting on their hands," holding back on issuing new contracts to third-party vendors in areas such as upgrading computer systems and other consulting. The companies cite the slowdown in contracts as "due to uncertainty," an issue, as well with the U.S. consumer, where that uncertainty encompasses:

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

Economic reporting, and business and financial-market stories sometimes receive happy year-end spikes in the press. That circumstance was supplemented in late-2017 by near-term hurricane boosts to, and distortions of, some current economic activity, such as the November Retail Sales reporting. The latter circumstance should prove fleeting. The underlying, broadly-faltering U.S. economy should be dominating headline economic reporting, once again, and all too soon, most likely in the next couple of months. That said, albeit reflecting some of the headline economic hype in the popular press, headline consumer optimism remains strong.

Consumer Optimism: Consumer Sentiment and Confidence Have Backed Off Recent Peaks. Reflected in Graphs CLW-1 and CLW-2, May 2018 details for the Conference Board's Consumer-Confidence Index<sup>®</sup> (May 29th) and the University of Michigan's final estimate for May Consumer Sentiment (May 25th) reflected faltering consumer optimism. While headline Consumer Confidence took a hefty jump in May, such was in the context of a downside revision of 2.4% (-2.4%) to the previously-estimated level of April Confidence, which the new initial May estimate did not top. The final May Sentiment number revised lower, by 0.8% (-0.8%). While both measures remain at high levels, both remain shy of levels seen in November 2017.

For both the Conference Board's seasonally-adjusted [unadjusted data are not available] Consumer-Confidence Index<sup>®</sup> (*Graph CLW-1*), and the University of Michigan's not-seasonally-adjusted Consumer-Sentiment Index (*Graph CLW-2*), the monthly and three-month moving averages remain above pre-2007 recession highs, yet the still-high moving averages have slowed in their gains, having begun to falter along with the softening detail and related headline consumer activity on a monthly basis.

Pre-election, September 2016 Confidence and Sentiment jumped and then plunged in October 2016, likely reflecting concerns as to the direction of the presidential race. Post-election, both measures rallied sharply, reflecting surges in consumer optimism into early-2017. Both series then topped and pulled back, with mixed numbers into August and September 2017, but with the October 2017 Sentiment measure showing a large jump, purportedly because consumers were willing to accept diminished prospects for their living standards (see *Commentary No. 916*)? Nonetheless, the Sentiment measure retrenched in November and December. The Conference Board blamed hurricane impact in Texas and Florida for its downturn in September 2017 Confidence, but those numbers exploded into October and November 2017, again reversing largely with December's headline downturn.

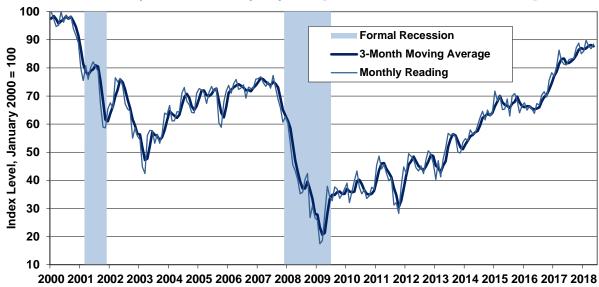
Showing the Consumer Confidence and Consumer Sentiment measures on something of a comparable basis, *Graphs CLW-1* to *CLW-3* reflect both measures re-indexed to January 2000 = 100 for the monthly reading. Standardly reported, the Conference Board's Consumer Confidence Index<sup>®</sup> is set with 1985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

The Confidence and Sentiment series tend to mimic the tone of headline economic reporting in the press (see discussion in <u>Commentary No. 764</u>), and often are highly volatile month-to-month, as a result. Recent press has been highly positive on the headline economic and employment news, reflecting short-lived hurricane boosts to activity particularly on unemployment (not payroll employment), retail sales and industrial production. As headline financial and economic reporting in the next month or two turn increasingly-negative and unstable, so too should the surging "optimism." Increasingly, a downturn in consumer outlook should take hold, despite any euphoric headlines, reflecting some deep-seated consumer liquidity issues.

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 into fourth-quarter 2017, although various consumer measures to hits in the initial first-quarter 2018 GDP. In the current environment of what had been surging optimism, beyond having happy feelings about the future, consumers still need actual income, cash-in-hand or credit in order to increase their spending.

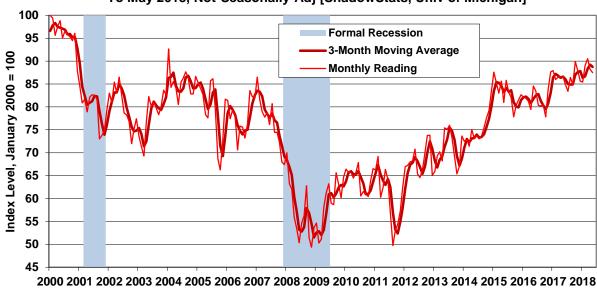
Graph CLW-1: Consumer Confidence (2000 to 2018)

### Consumer Confidence Survey® -- Conference Board Monthly and 3-Month Moving-Average Index (Jan 2000 = 100) To May 2018, Seasonally-Adjusted [ShadowStats, Conference Board]



Graph CLW-2: Consumer Sentiment (2000 to 2018)

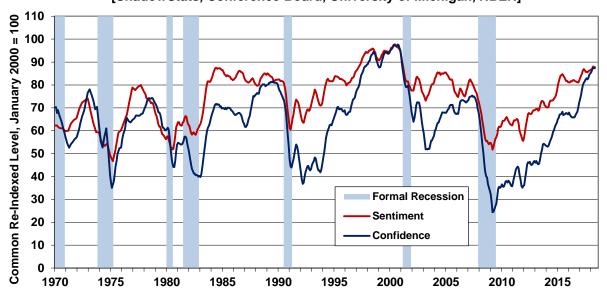
### Consumer Sentiment Index -- University of Michigan Monthly and 3-Month Moving-Average Index (Jan 2000 = 100) To May 2018, Not-Seasonally-Adj [ShadowStats, Univ of Michigan]



Smoothed for irregular, short-term volatility, the two series still generally had held at levels seen typically in recessions, until the post-2016 election circumstance. Suggested in *Graph CLW-3*—plotted for the last 48 years—the latest readings of Confidence and Sentiment recently have recovered levels seen in periods of normal, positive economic activity of the last four decades, with their six-month moving averages at levels last seen going into the 2001 recession, although increasingly, they appear to be topping out.

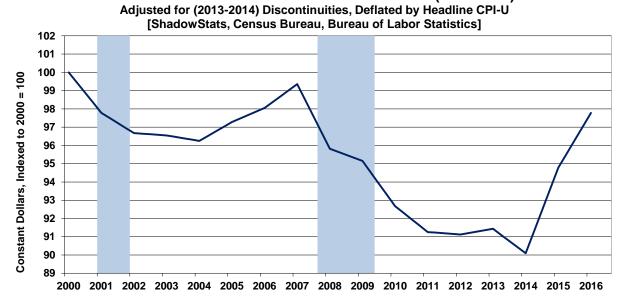
Graph CLW-3: Comparative Confidence and Sentiment (6-Month Moving Averages, 1970 to 2018)

Consumer Confidence and Consumer Sentiment Indices
Six-Month Moving Averages, 1970 to May 2018
[ShadowStats, Conference Board, University of Michigan, NBER]



Annual Real Median Household Income in 2016 Held Below Its 2007 Pre-Recession Peak, Below Late-1990s Activity and About Even with the Mid-1970s, Monthly Activity Has Been Broadly Stagnant. Graphs CLW-4 and CLW-5 show the latest plots of annual and monthly Real Median Household Income. Graph CLW-4: Annual Real Median U.S. Household Income (1967 to 2016)

Annual Real Median Household Income Index (2000-2016)



The Sentier Research Series of Monthly Real Median Household Income, Notched Higher in April, With Slowing Annual Growth, Broadly Showing Stagnant Activity. Discussed in the Opening Comments of Commentary No. 948, Sentier Research (www.SentierResearch.com) reinstituted its

monthly reporting of Real Median Household Income (the Household Income Index or HII), where publication had been suspended, temporarily, following the release of May 2017 detail.

Graph CLW-5: Monthly Real Median Household Income (2000 to April 2018) Index, January 2000 = 100

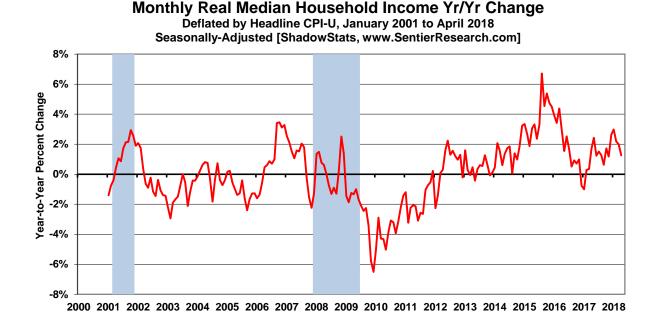
**Monthly Real Median Household Income Index** 

### Deflated by Headline CPI-U, January 2000 to April 2018 Seasonally-Adjusted [ShadowStats, www.SentierResearch.com] 103 = 100 102 101 Constant Dollars, Indexed to Jan 2000 100 99 98 97 96 95 94 93 92 91 90 89

The series was updated for the April 2018 detail on May 21st, showing a small monthly gain, along with sharply-slowing annual growth, and a continuing long-range pattern of stagnation in median household income, adjusted for CPI-U inflation. The current monthly series is plotted here, both as to level (*Graph CLW-5*) and as to year-to-year change (*Graph CLW-6*).

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

Graph CLW-6: Monthly Real Median Household Income (2000 to April 2018) Year-to-Year Change



Monthly Real Median Household Income, provided by Sentier Research generally can be considered a monthly version of the annual detail shown in preceding *Graph CLW-4*, based on the most-recent (2016) release by the Census Bureau in September 2017, and, again as discussed in the *Opening Comments* of *Commentary No. 948* (see also *Commentary No. 909*).

Methodological understatement of the CPI-U by the Bureau of Labor Statistics broadly has had the effect of overstating the growth in headline real or inflation-adjusted income series (see the *Public Commentary on Inflation Measurement*). In a related area, recent extreme volatility in monthly gasoline prices has had varying impact on the headline data. Details were reviewed the *Opening Comments* of *Commentary No. 948*, where annual average growth in the series since its January 2000 onset has been roughly 0.1% per year. Given the independence and quality of the Sentier research, and the known definitional biases and gimmicks used by Bureau of Economic Analysis (BEA) in its income and economic measures, the Sentier numbers suggest that actual domestic economic activity is not and has not been as robust as suggested by the BEA's headline reporting of Gross Domestic Product (GDP), for example.

*Differences in the Monthly versus Annual Median Household Income*. The general pattern of relative monthly historical weakness has been seen in the headline reporting of the annual Census Bureau numbers, again, shown in *Graph CLW-4*, with 2014 real annual median household income having hit a ten-year low, and, again, with the historically-consistent 2015 and 2016 annual number still holding below the 2007 pre-recession high.

The Sentier numbers have suggested a small increase in 2014 versus 2013 levels, low-inflation induced real increases in 2015 and 2016. Allowing for the direction difference in 2014, and continual redefinitions and gimmicks in the annual series (again, see the *Opening Comments* of *Commentary No.* 909) the monthly and annual series had remained broadly consistent, although based on separate questions within the Consumer Population Series (CPS), as conducted by the Census Bureau.

Where Sentier uses 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.

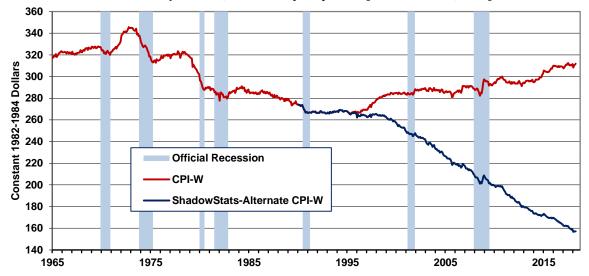
Real Average Weekly Earnings—April 2018—Third-Consecutive Quarterly Contraction Held in Place. For the production and nonsupervisory employees category—the only series for which there is a meaningful history (discussed in Commentary No. 949 and plotted here in Graph CLW-7), real average weekly earnings rose in April. Despite near-term monthly volatility, often triggered by unstable monthly inflation numbers, real earnings contracted quarter-to-quarter in first-quarter 2018 for the third-consecutive quarterly decline in real earnings for the production and nonsupervisory employees category, the fifth real quarterly contraction of the last six quarters. Separately, real quarterly earnings for the broader all-employees category had contracted in first-quarter 2018, for the second consecutive quarterly contraction, but it also was down in April 2018

*Graph CLW-7* plots the seasonally-adjusted earnings as officially deflated by the BLS (red-line), and as adjusted for the ShadowStats-Alternate CPI Measure, 1990-Base (blue-line). When inflation-depressing methodologies of the 1990s began to kick-in, the artificially-weakened CPI-W (also used in calculating Social Security cost-of-living adjustments) helped to prop up the reported real earnings. Official real earnings today still have not recovered their inflation-adjusted levels of the early-1970s, 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 CLW-7: Real Average Weekly Earnings, Production and Nonsupervisory Employees, 1965-to-Date (Same as Graph 1 in Commentary No. 949)

# Real Average Weekly Earnings Production and Nonsupervisory Employees Deflated by CPI-W versus ShadowStats-Alternate (1990-Base) 1965 to April 2018, Seasonally-Adjusted [ShadowStats, BLS]



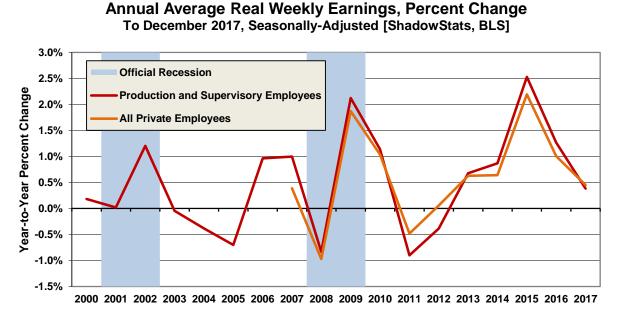
Graph CLW-7 plots the seasonally-adjusted earnings as officially deflated by the BLS (red-line), and as adjusted for the ShadowStats-Alternate CPI Measure, 1990-Base (blue-line). When inflation-depressing methodologies of the 1990s began to kick-in, the artificially-weakened CPI-W (also used in calculating Social Security cost-of-living adjustments) helped to prop up the reported real earnings. Official real earnings today still have not recovered their inflation-adjusted levels of the early-1970s, 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 <u>Public Commentary on Inflation Measurement</u> for further detail.

Shown in *Graph CLW-8*, and as discussed in <u>Commentary No. 931</u>, both the "all-employees" and "production and nonsupervisory employees" categories showed a sharply slowing pace in annual growth in 2017. Presumably coming off more-positive economic circumstances, the patterns there are consistent with a renewed economic downturn, not with a new economic boom, and the current pace of decline is greater than the average tax reduction to be seen by consumers in the year ahead.

Not all economic downturns are reflected in the headline economic data. For example, industrial production indicated the U.S. economic downturn intensified in fourth-quarter 2014, enough to qualify as

a new recession, which is consistent with the plot in *Graph CLW-8*. See the related discussions in <u>Commentary No. 928</u> and <u>Commentary No. 936</u>.

Graph CLW-8: Annual Average of Weekly Earnings, Annual Percent Change (2000 to 2017)



When income growth is inadequate to support consumption growth, consumers often make up the difference in debt expansion. Yet, real Consumer Credit Outstanding has shown a patterns of declining annual real growth for the last several quarters, irrespective of the specific series, as reflected in the plots

of real monthly year-to-year change in Graph CLW-13.

Consumer Credit: Lack of Expansion in Real Consumer Credit Constrains Economic Growth. The final five graphs on consumer conditions address consumer borrowing. Where debt expansion can help make up for a shortfall in income growth, expansion of consumer debt, which would help fuel expansion in personal consumption, has been nonexistent.

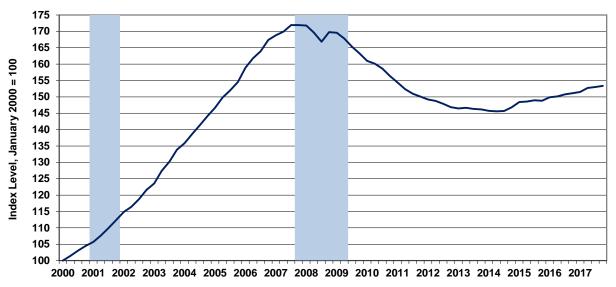
Quarterly Series. Consider Graph CLW-9 of Household Sector, Real Credit Market Debt Outstanding. The level of real household debt declined in the period following the Panic of 2008, reflecting loan defaults and reduced banking lending, and it has not recovered fully, based on the Federal Reserve's flow-of-funds accounting through fourth-quarter 2017, released on March 8th. Household Sector, Real Credit Market Debt Outstanding in fourth-quarter 2017 still was down by 10.8% (-10.8%) from its pre-recession peak of third-quarter 2007. That was against a revised third-quarter 2017 decline of 11.0% (-11.0%) [previously down by 10.9% (-10.9%)]. The flattened visual uptick at the latest point in Graph CLW-9 reflected a slowing in real year-to-year change from 1.72% [previously 1.70%] in second-quarter 2017, to 1.48% [previously 1.55%] in third-quarter 2017 and to 1.47% in fourth-quarter 2017. Such completes 41 straight quarters—a full decade-plus—of credit non-expansion, versus its pre-recession peak.

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 and intermittently into fourth-quarter 2017. Current activity also has reflected continuing relative strength from student loans, as shown in the *Graphs CLW-10* to *CLW-13*.

Graph CLW-9: Household Sector, Real Credit Market Debt Outstanding (2000 through Fourth-Quarter 2017)

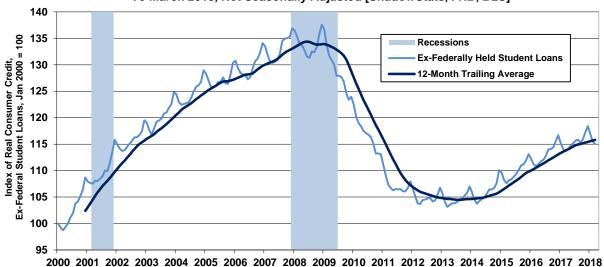
# Household Sector, Real Credit Market Debt Outstanding Deflated by Headline CPI-U. Indexed to First-Quarter 2000 = 100 To 4q2017, Seasonally-Adjusted [ShadowStats, FRB Flow-of-Funds, BLS]



Graph CLW-10: Real Consumer Credit Outstanding, Ex-Federal Student Loans (2000 to 2018)

## ShadowStats Index of Real Consumer Credit Outstanding Ex-Federally Held Student Loans (Deflated by CPI-U) Unadjusted by Month and Smoothed with a 12-Month Trailing Average

To March 2018, Not Seasonally Adjusted [ShadowStats, FRB, BLS]



Shown for comparative purposes is *Graph CLW-10*, real, not-seasonally-adjusted Consumer Credit Outstanding, Ex-Federally-Held Student Loans, has not recovered on a monthly, let alone the 12-month trailing-average basis used as a surrogate for seasonal adjustment. Discussed in the next section, this measure of consumer credit now has been through 123 months 41 quarters of non-expansion. That is reflected on a parallel basis through fourth-quarter 2017 reporting shown in *CLW-9*. Please note that the scale in *Graph CLW-10* is indexed to Consumer Credit Outstanding Ex-Federal Student Loans equal to 100 in January 2000. In *Graphs CLW-11* to 13, that indexing is applied to the total Consumer Credit Outstanding number, which is greater in amount than its dominant Ex-Federal Student Loans subcomponent.

*Monthly Series*. Indeed, the ShadowStats analysis usually focuses on the particular current and continuing weakness in monthly levels of consumer credit, net of what has been rapidly expanding government-sponsored student loans. Where detail on that series only is available not-seasonally-adjusted, the following three related graphs and the preceding *Graph CLW-10* are so plotted.

Shown through the March 2018 reading (released May 7th), the headline nominal monthly Consumer Credit Outstanding (*CLW-11*) is a subcomponent of the nominal Household Sector debt. Where *Graph CLW-12* reflects the real or inflation-adjusted activity for monthly Consumer Credit Outstanding terms of both level (*Graph CLW-12*) and year-to-year change (*Graph CLW-13*). *Graphs CLW-12* and *CLW-10* are comparable to the inflation-adjusted Household Sector plot in *Graph CLW-9*.

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 have fueled broad consumption or housing growth. Although in slow uptrend, the nominal level of Consumer Credit Outstanding (ex-student loans) has not recovered since the onset of the recession. These disaggregated data are available and plotted only on a not-seasonally-adjusted basis, with the pattern of monthly levels during one year reflecting some regular, unadjusted seasonal dips or jumps.

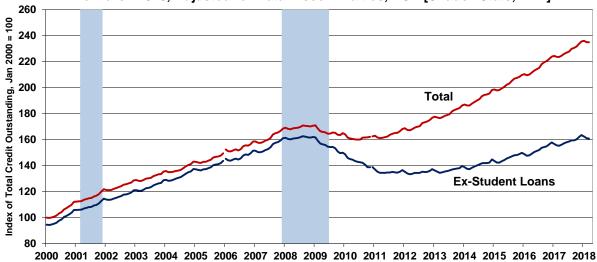
Adjusted for inflation, the lack of recovery in the ex-student loan area is more obvious. Where the recent monthly downside move in the not-seasonally-adjusted real consumer credit reflected something of a seasonal pattern, the pattern of year-to-year growth has been in downtrend, suggesting some tightening of credit conditions. Adjusted for discontinuities and inflation, ex-student loans, consumer credit outstanding in March 2018 was down from recovering its pre-recession peak of December 2007 by 16.0% (-16.0%). That is 123 months, 41 quarters or ten-plus years of non-expansion of credit. Year-to-year real growth shown in *Graph CLW-13* tends to resolve most monthly seasonal distortions in the not-seasonally-adjusted data.

[Graphs CLW-11 to CLW-13 begin on the next page.]

### Graph CLW-11: Nominal Consumer Credit Outstanding (2000 to 2018)

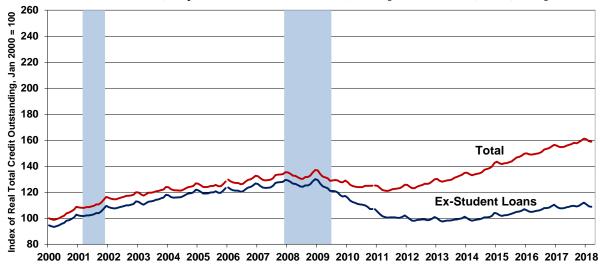
## ShadowStats Index of Nominal Consumer Credit Outstanding Total and Ex-Federally Held Student Loans

To March 2018, Adjusted for Data Discontinuities, NSA [ShadowStats, FRB]



Graph CLW-12: Real Consumer Credit Outstanding (2000 to 2018)

### ShadowStats Index of Real Consumer Credit Outstanding Total and Ex-Federally Held Student Loans (Deflated by CPI-U) To March 2018, Adjusted for Discontinuities, NSA [ShadowStats, FRB, BLS]



Graph CLW-13: Year-to-Year Percent Change, Real Consumer Credit Outstanding (2000 to 2018)





[The Week, Month and Year Ahead begins on the next page.]

Copyright 2018 Shadow Government Statistics, Walter J. Williams, www.shadowstats.com

### WEEK, MONTH AND YEAR AHEAD

U.S. Dollar and Financial-Market Turmoil Continue at High Risk, Amidst Mounting Fiscal Concerns, Consumer Liquidity Issues and Non-Expanding, Real-World Economic Activity. [Other than for links or references, the text in these opening paragraphs has not changed from Commentary No. 952.] In the context of intensified weakening of underlying fundamental drivers of broad economic activity and negative stresses on basic consumer-liquidity conditions, discussed respectively in the Opening Comments and Consumer Liquidity Watch of No. 950 and No. 952 (see today's sections, too), the revised first-quarter GDP reflected difficult economic times beginning to hit U.S. consumer activity. The U.S. consumer remains the fundamental driving force behind domestic business conditions. Continuing negative surprises likely will follow in the regular economic reporting and annual benchmark revisions of key economic series in the next couple of weeks and month. The broad outlook has not changed. Weaker economic growth and renewed, faltering economic headlines should follow.

Broad outlooks for the U.S. economy, the U.S. dollar, gold, silver and the financial markets were reviewed in <u>Special Commentary No. 935</u>, covered there in the <u>Executive Summary</u> beginning on page 2, with <u>Contents</u> and links to <u>Major Sections</u> and <u>Graphs</u> beginning there on page 6. The faltering economic outlook also was reviewed in the <u>Opening Comments</u> and <u>Industrial Production Benchmark Revisions</u> sections of <u>Commentary No. 942-B</u>. The circumstances broadly have not changed from the related financial market vulnerabilities discussed in the <u>Hyperinflation Watch</u> of <u>Commentary No. 945</u>, incorporated here by reference. U.S. dollar and related market conditions were updated in the <u>Opening Comments</u> and <u>Hyperinflation Watch</u> of <u>Commentary No. 949</u>, and will be reviewed anew in next week's planned <u>Commentary No. 955</u>.

The U.S. dollar and financial markets remain at extraordinarily-high risk of intense, panicked declines, still likely in the very near term. Holding physical gold and silver remain the ultimate hedges—stores of wealth—for preserving the purchasing power of one's U.S. dollar assets, during times of high inflation and currency debasement, and/or political- and financial-system upheaval, Please call (707) 763-5786, if you would like to discuss current circumstances, or otherwise.

Best wishes - John Williams

**PENDING ECONOMIC RELEASE: Trade Deficit (April 2018 and Annual Benchmark Revisions).** Details for the April 2018 Trade Deficit will be released tomorrow, Wednesday, June 6th, in the context of and along with major benchmark revisions to historical detail. The revisions likely will have significant impact on the July 27th Comprehensive GDP Benchmark Revision back to 1929.

Released coincident with the second estimate of first-quarter GDP on May 30th, the "advance" estimate of the April 2018 trade deficit narrowed, in the context of a revised widening to all of the earlier aggregate reporting. Such could be an early indication of the direction of the benchmark revisions. ShadowStats coverage is planned for *Commentary No. 954* of June 7th or 8th, dependent on the complexity of the overhaul to the historical data. Revisions to reporting of the last couple of years likely will show greater trade-deficit deterioration, with resulting negative implications for next month's comprehensive benchmark revision to the GDP.

As to what looms in the trade data overhaul, the <u>Commerce Department</u> offered in its May 3rd press release:

### **NOTICE: Upcoming Updates to Goods and Services**

On June 6, 2018, the U.S. Census Bureau and the U.S. Bureau of Economic Analysis (BEA) will release "U.S. International Trade in Goods and Services: April 2018" (FT-900) and "U.S. International Trade in Goods and Services: Annual Revision" (FT-900 Annual Revision). With these releases, statistics on trade in goods on a Census basis will be revised beginning with 2015, and statistics on trade in goods on a balance of payments (BOP) basis and on trade in services will be revised beginning with 2010. The revised statistics for goods on a BOP basis and for services will also be included in the "U.S. International Transactions: First Quarter 2018 and Annual Update" report and in the international transactions interactive database, both to be released by BEA on June 20, 2018.

Revised statistics on trade in goods on a Census basis will reflect 1) corrections and adjustments to previously published not seasonally adjusted statistics, 2) reclassifications of several end-use commodities, and 3) recalculated seasonal and trading-day adjustments.

In addition to revisions to goods on a Census basis, revised statistics on goods on a BOP basis will reflect revised BOP adjustments, which are adjustments that BEA applies to goods on a Census basis to convert them to a BOP basis. With this annual update, BOP adjustments for estimating exports through the Foreign Military Sales (FMS) program will be discontinued because the Census-basis goods data now provide more complete coverage of these exports. BEA will use the Census-basis exports as the source for FMS goods for statistics beginning with 2010. Other revisions to BOP adjustments will reflect newly available and revised source data and recalculated seasonal and trading-day adjustments beginning with 2015.

Revised statistics on trade in services will reflect 1) a new method for estimating goods and services transferred through military grant programs, 2) newly available and revised source data, primarily from BEA's surveys of international services transactions, 3) recalculated seasonal adjustments, and 4) revised temporal distributions of quarterly source data to monthly statistics. Exports will be revised beginning with 2010 and imports will be revised beginning with 2013.

An article previewing BEA's 2018 annual update of the international transactions accounts will appear in the May 2018 issue of the *Survey of Current Business*. If you have questions, please contact BEA, Balance of Payments Division, at International Accounts @bea.gov.

### **Upcoming Change to the Real (Chained-Dollar) Series**

With the releases of the FT-900 and the FT-900 Annual Revision on June 6, 2018—and consistent with the release of the upcoming comprehensive update of the national income and product accounts—the reference year for the chained-dollar series will be updated to 2012 from 2009 to reference the time series on prices from a more recent year. The historical chained-dollar series, which begin in 1994, will also be revised to reflect the new reference year. See the "Adjustments for price change" section in the explanatory notes for more information.

If you have questions, please contact the Census Bureau, Economic Indicators Division, on (800) 549-0595, option 4, or at <a href="eigli:e

Note that the change from 2009 to 2012 for the new inflation-adjustment base is coincident with what will be a parallel change to the real GDP series, to be published in its <u>comprehensive benchmark revision</u> back to 1929.

#### LINKS TO PRIOR COMMENTARIES AND SPECIAL REPORTS

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

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

The two *Hyperinflation* installments remain the primary background material for the hyperinflation circumstance. Other references on underlying economic reality are the <u>Public Commentary on Inflation</u> <u>Measurement</u> and the <u>Public Commentary on Unemployment Measurement</u>.

**Recent Commentaries.** [Listed here are Commentaries of the last several months or so, plus recent Special Commentaries and others covering a variety of non-monthly issues, including annual benchmark revisions, dating back through the beginning of 2017. Please Note: Complete ShadowStats archives back to 2004 are found at <a href="www.ShadowStats.com">www.ShadowStats.com</a> (left-hand column of home page).] These regular Commentaries usually are published at least weekly and update the general economic and financial omarket outlook, as circumstances develop.

<u>Commentary No. 953-A</u> (June 1st) provided flash headlines and summary details of the May 2018 Employment and Unemployment and April 2018 Construction spending, expanded upon in today's supplemental coverage of *Commentary No. 953-B*. Current monetary conditions also were reviewed, along with the initial estimate of annual growth in the May 2018 ShadowStats Ongoing Estimate of Money Supply M3.

<u>Commentary No. 952</u> (May 30th) reviewed the second estimate of First-Quarter 2018 GDP, initial estimates of first-quarter GNP and GDI, extended detail on the annual benchmarking of the Retail Sales series, and headline coverage of the May 2018 Conference Board Help Wanted OnLine<sup>®</sup> Advertising.

<u>Commentary No. 951</u> (May 25th) reviewed April 2018 New Orders of Durable Durables, in the context of the annual revisions (see prior *No*, 950), New- and Existing-Home Sales and brief coverage of the annual benchmarking of the Retail Sales series.

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

<u>Commentary No. 949</u> (May 11th) reviewed inflation as reported with the April 2018 Consumer and Producer Price Indices (CPI and PPI), Real Average Weekly Earnings, along with the latest *Hyperinflation Watch* on the U.S. dollar and financial markets.

<u>Commentary No. 948</u> (May 9th) explored unusual circumstances with April 2018 Employment and Unemployment numbers, along with the April Conference Board Help Wanted OnLine<sup>®</sup> Advertising, April Monetary Conditions, the March Trade Deficit and Construction Spending, along with the reintroduction of Sentier Research's monthly Real Median Household Income to March 2018.

<u>Commentary No. 947</u> (April 27th) detailed the first estimate of Frist-Quarter 2018 GDP and the related Velocity of Money, March New Orders for Durable Goods, New- and Existing-Home Sales and the "advance" estimate of the March 2018 merchandise goods deficit.

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

<u>Commentary No. 945</u> (April 11th) reviewed the March 2018 Consumer and Producer Prices Indices (CPI and PPI), Real Average Weekly Earnings, along with the latest *Hyperinflation Watch* on the U.S. dollar and financial markets.

<u>Commentary No. 944</u> (April 8th) covered March 2018 Employment and Unemployment, the March Conference Board Help Wanted OnLine<sup>®</sup> Advertising, March Monetary Conditions and the full February Trade Deficit and Construction Spending.

<u>Commentary No. 943</u> (March 29th) covered the third-estimate of, second-revision to Fourth-Quarter 2017 GDP and the only estimates to be made in current reporting of the GDI and GDP, as well as the "advance" estimate of the February merchandise trade deficit.

<u>Commentary No. 942-B</u> (March 27th) reviewed the Industrial Production annual benchmark revisions, general reporting-quality issues, February 2018 New Orders for Durable Good, New- and Existing-Home Sales and the Cass Freight Index<sup>TM</sup>.

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

<u>Commentary No. 941</u> (March 19th) covered February Industrial Production and New Construction Spending (Housing Starts and Building Permits), along with a general discussion in the *Opening Comments* on economic conditions and a preview of the Industrial Production benchmark revisions.

<u>Commentary No. 940</u> (March 15th) covered February 2018 Retail Sales, CPI, PPI and related Real Average Weekly Earnings, real Annual Growth in M3 and updated financial market prospects.

<u>Commentary No. 939</u> (March 9th) covered the February 2018 Employment and Unemployment details, the full-reporting of the January 2018 Trade Deficit, February Conference Board Help Wanted OnLine<sup>®</sup> Advertising and February Monetary Conditions.

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

<u>Commentary No. 937</u> (February 27th) covered January 2018, New Orders for Durable, New- and Existing-Home Sales, the "advance" estimate of the January 2018 Merchandise Trade Deficit and the Cass Freight Index<sup>TM</sup>.

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

<u>Special Commentary No. 935</u> (February 12th) was the first part of a three part-series reviewing economic and financial conditions of 2017 and the year-ahead, inflation and the U.S. government's balance sheet and conditions in the U.S. banking system and Federal Reserve options.

<u>Commentary No. 934-B</u> (February 6, 2018) provided extended coverage on the January 2018 Employment and Unemployment details, the 2017 benchmark revisions to Payroll Employment and the January annual recasting of population, along with coverage of the December 2017 Trade Deficit.

<u>Commentary No. 934-A</u> (February 2, 2018) provided initial detail on the January 2018 Employment and Unemployment details and the 2017 benchmark revisions to Payroll Employment, along with coverage of January Conference Board Help Wanted OnLine<sup>®</sup> Advertising, January Monetary Conditions and December 2017 Construction Spending.

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

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

<u>Commentary No. 931</u> (January 15, 2018) reviewed December 2017 Retail Sales and the CPI and PPI, along with an update on the U.S. dollar, the financial markets and gold graphs.

<u>Commentary No. 930-B</u> (January 8th) expanded upon the December 2017 Employment and Unemployment numbers and Household Survey benchmarking, Conference Board Help Wanted OnLine<sup>®</sup> Advertising, December Monetary Conditions and the November 2017 Trade Deficit and Construction Spending, otherwise headlined in *No. 930-A*.

Advance Commentary No. 930-A (January 5, 2018) provided a brief summary and/or comments (all expanded in Commentary No. 930-B) on December 2017 Employment and Unemployment numbers, Household Survey benchmarking, Conference Board Help Wanted OnLine Advertising, December Monetary Conditions and the November 2017 Trade Deficit and Construction Spending.

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

<u>Commentary No. 926</u> (December 15, 2017) reviewed the headline November 2017 numbers for Retail Sales (both real and nominal), and Industrial Production, along a discussion on the dampening economic impact of business and consumer "uncertainty."

<u>Commentary No. 909</u> (September 14, 2017) assessed the annual release of 2016 Real Median Household Income, along with a review of August Consumer Price Index (CPI) and the Producer Price Index (PPI) and an updated *Alert* on the financial markets.

<u>Special Commentary No. 904</u> (August 14, 2017) issued an "Alert" on the financial markets (including U.S. equities, the U.S. dollar gold and silver, as well as FOMC policy), in the context of historical activity and unfolding circumstances of deteriorating economic and political conditions. Separately, headline details were reviewed for the July Consumer Price Index (CPI) and the Producer Price Index (PPI).

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

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

<u>Commentary No. 897</u> (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<sup>®</sup> Advertising and the May Cass Freight Index<sup>TM</sup>.

<u>General Commentary No. 894</u> (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.

<u>Commentary No. 890</u> (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<sup>®</sup> Advertising and April 2017 estimates of the Cass Freight Index<sup>TM</sup>, and the monthly trade deficit and construction spending.

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

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

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

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

<u>Commentary No. 877</u> (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.

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

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

<u>General Commentary No. 867</u> (February 24, 2017) assessed mixed signals for a second bottoming of the economic collapse into 2009, which otherwise never recovered its 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.

<u>Commentary No. 864</u> (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.

<u>Commentary No. 861</u> (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.

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