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

COMMENTARY NUMBER 958

May 2018 Construction Spending and Benchmarking

July 3, 2018

Construction Spending Benchmark Revisions Were Net-Neutral, but Patterns of Activity Shifted to Show a More-Negative Current Economic Trend

May 2018 Inflation-Adjusted (Real) Construction Spending Held Shy of Its Pre-Recession Peak by 19.8% (-19.8%); Pre-Benchmarking, April 2018 Previously Had Been Down by 19.4% (-19.4%)

Revisions Flattened Out the Level of Inflation-Adjusted (Real) Construction Spending of Recent Years

Recent Large Spikes to Annual Growth in Real Spending Revised Away; Year-to-Year Change Has Resumed Its Downtrending Flat-to-Minus Pattern

PLEASE NOTE: A July 6th Commentary will review summary detail of June Employment and Unemployment and the May Trade Deficit reporting, with full coverage and analysis in an expanded Commentary on July 9th.

The initial posting of the standalone *Hyperinflation Watch*, covering June Monetary Conditions, is slated for late-day July 5th. *Consumer Liquidity Watch No. 2* was posted on June 29th.

Schedule revisions and updated Notes are posted regularly near the top of the left hand-column (under the *Latest Commentaries* heading) of the *ShadowStats* home page.

COMMENTARY-TRANSITION UPDATE. Previously noted, ShadowStats is transitioning to more-concise, more-frequent and more-timely publication of its *Commentaries*. All material, analysis and commentary that standardly have been covered and reviewed will continue. The full formatting transition should be completed by mid-July.

Today's Commentary incorporates into the Construction Spending reporting most of the new formatting and structural changes needed to make the missives more concise and easier to follow, including a *Table of Contents* that links to the key sections and graphs.

The previous *Executive Summary* section has been replaced opening summaries and what had been regular *Commentary* sections of the *Consumer Liquidity Watch* (*CLW*) and *Hyperinflation Watch* (*HIW*) now are updated and posted as separate entities, when meaningful new information becomes available. The latest *Watches* are available on the ShadowStats Web site and by link from current *Commentaries*, with updates advised by e-mail.

Your comments and suggestions always are invited.

Best wishes to all for a most Happy Fourth of July! John Williams (707) 763-5786

Today's (July 3rd) *Opening Comments* covers this mornings' (July 3rd) reviews the current economic circumstance.

The *Reporting Detail* reviews the May 2018 Construction Spending detail and the annual benchmark revisions published along with the monthly release on July 2nd.

The *Consumer Liquidity Watch*, updated on June 29th for faltering measures of the June 2018 consumer outlook, and for Sentier Research's May 2018 estimate of Real Monthly Median Household Income, is available by link at *Consumer Liquidity Watch - No. 2*.

The *Week, Month and Year Ahead* provides background on recent *Commentaries* and previews July 6th releases of the May 2018 Trade Deficit and June 2018 Employment and Unemployment numbers.

Commentary No. 958 contents, including graphs and tables, are indexed and linked on following page.

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OPENING COMMENTS

Construction Spending Revisions Have Negative Near-Term GDP Implications

June 2018 Help-Wanted Advertising. ShadowStats had planned to review the June 2018 release of the Conference Board Help-Wanted Online Advertising[®] (HWOL) in today's *Commentary*, but it has not been published as we go to press. Accordingly, coverage will follow in the next *Commentary* following the data release. Originally, the release had been scheduled for July 2nd, then rescheduled for July 3rd.

Benchmarking Showed Real Construction Spending Largely Has Been Flat Since 2015, With Annual Growth Turning Flat-to-Minus in 2017. Discussed in <u>Consumer Liquidity Watch No. 2</u>, the U.S. consumer is in an intensifying liquidity bind that already has begun to impair headline U.S. economic activity. That also was noted in prior <u>Commentary No. 956</u>. The circumstance promises weaker economic growth in at least the next couple of quarters. Yet, as discussed in <u>Commentary No. 954</u>, benchmark revisions to major series (Industrial Production, Manufacturers' Shipments, Retail Sales and the Trade Balance, for example) broadly have signaled downside revisions to the Gross Domestic Product (GDP) of recent years, in its pending comprehensive July 27th benchmark revision.

The last major economic benchmarking before that GDP overhaul was that of the Construction Spending series, reviewed in today's *Reporting Detail*. Implications for headline GDP are negative for revisions to the last couple of quarters, and for the initial estimate of second-quarter GDP. Yet, the Construction Spending revisions did not have meaningful implications for the GDP, going back before 2017.

ShadowStats shortly will publish a *Special Commentary* providing greater detail on the likely GDP revisions at the end of this month.

REPORTING DETAIL

May 2018 Construction Spending and Annual Revisions

Benchmark Revisions Hit Annual Real Growth Hard, Shifting the Economic Trend Sharply Negative Again. The Commerce Department published its initial estimate of May 2018 Construction Spending along with the annual benchmark revisions to the series, on July 2nd (<u>Press Release</u>). The underlying not-seasonally-adjusted data were restated back to January 2016, while the seasonally-adjusted data were revised back to January 2011.

Where the net revisions to the aggregate numbers were minimal, the pattern of activity level revised somewhat higher in 2017, along with sharp downside revisions to recent, bloated headline details, including a sharp slowing and renewed downtrend in year-to-year change in inflation-adjusted, real activity for the total Construction Spending series.

The recent disaster-recovery boost from last-year's natural disasters remained in place, albeit somewhat reduced in magnitude and duration.

By sector, recent residential construction in Private Construction Spending tended to revise higher, largely offset by downside revisions to the nonresidential-construction sectors in both Private and Public Construction.

Consider that before the benchmarking, real Construction Spending in April 2018 had gained by 1.5% month-to-month, by 3.3% year-to-year. Post-benchmarking, April 2018 reflect a gain of 0.5% month-to-month and a contraction of 1.1% (-1.1%) year-to-year. Headline real May 2018 activity reflected a month-to-month "unchanged" at 0.0% and a gain of 0.2% year-to-year.

Before the benchmarking, April 2018 aggregate real Construction Spending was shy by 19.4% (-19.4%) of recovering its pre-recession peak. Post-benchmarking that April shortfall now is 19.8% (-19.8%), which is the same shortfall for the headline May 2018 reporting.

Revision details are plotted in *Graphs 1* to 14, which follow shortly.

GDP Implications. These new numbers have somewhat negative implications for the pending "advance" estimate of second-quarter 2018 GDP real growth and negative implications for pending benchmark revisions to quarterly real GDP growth in third-quarter 2017, fourth-quarter 2017 and first-quarter 2018, as will be detailed shortly in a pre-GDP benchmarking *Special Commentary*.

A Note on Inflation-Adjustment of Economic Measures and Use of the Terms "Current-Dollar," "Nominal," "Constant-Dollar" and "Real." When assessing economic activity, it often is useful to look at it net of inflation. We all live in world where day-to-day prices of goods and services change over time. At present, prices generally are rising at the consumer level and that inflation will impact the level of reported activity as commonly measured and reported.

For example, if prices rise 3% in a year for merchant, and his cash register sales are up by 5%, that means that the 5% increase in his receipts reflected a 3% gain in inflation plus a 2% gain in the physical volume of merchandise sold.

Accordingly, economic measures commonly are reported both before and after adjustment for inflation. As the headline cash-register receipts are tallied before inflation adjustment, terms describing that circumstance include "current dollar" and "nominal," which are used interchangeably here. When those receipts are adjusted for inflation, the related terms are "constant dollar" and "real," also used interchangeably. The inflation-adjusted details often have an indication of the year that was used as the base for the inflation numbers, such as "Billions of Constant November 2009 Dollars" used in *Graph 2*. That means simply that the numbers were adjusted as though they were priced in November 2009, with the effects of inflation netted out of the nominal data, going both forward and backward in time.

At the moment, the real GDP numbers reflect 2009 dollars (that will change in a pending grand-scale benchmarking of the GDP series, including recasting it into 2012 dollars see <u>Commentary No. 957</u>). Changing the base year alters the level of the number, but it leaves intact the exact same levels of month-to-month and year-to-year percent changes.

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 revisions to related price indices in first-quarter national-income reporting, and private surveying, CCD year-to-year inflation was 4.27% for May 2018, versus revised annual gains of 4.15% [previously 4.37%] for April 2018, 4.04% [previously 4.25%] for March 2018, 3.79% [previously 4.15%] for February 2018 and 3.53% [previously 3.75%] for January 2018. Month-to-month inflation was 0.39% in May 2018, versus revised gains of 0.37% [previously 0.26%] for April, 0.86% [previously 0.74%] for March, 0.42% [previously 0.56%] for February and 0.28% [previously 0.38%] for January.

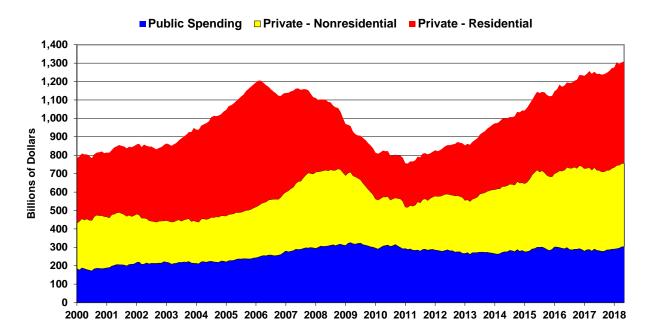
Please note: The graphs that follow of the benchmark revisions show benchmarked details and prior reporting using only the latest CCD numbers. Accordingly, the plots of the comparative before-and-after Construction Spending series revisions reflect only the changes generated by the Census Bureau's headline benchmarking of the nominal series.

[Graphs 1 to 14 begin on the next page.]

Construction Spending Benchmark Revisions and New Headline Detail

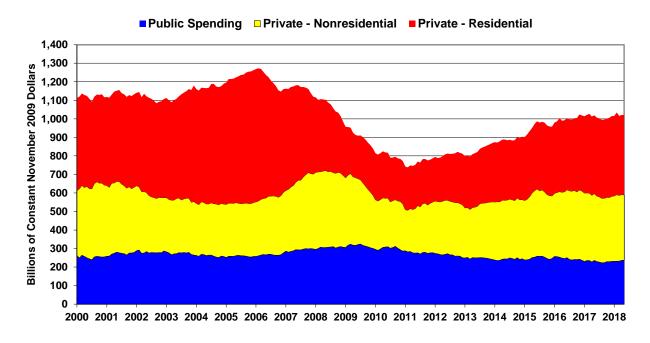
Graph 1: Benchmark-Revised Aggregate Nominal Construction Spending by Major Sector to Date

Revised Current-Dollar Construction Spending to May 2018 Seasonally-Adjusted Annual Rate [ShadowStats, Census]



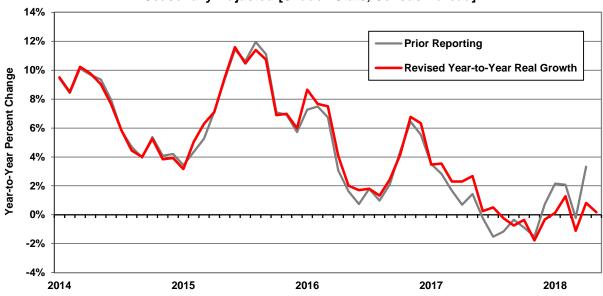
Graph 2: Benchmark-Revised Aggregate Real Construction Spending by Major Sector

Revised Constant-Dollar Construction Spending (\$2009) to May 2018 Seasonally-Adjusted Annual Rate [ShadowStats, Census]



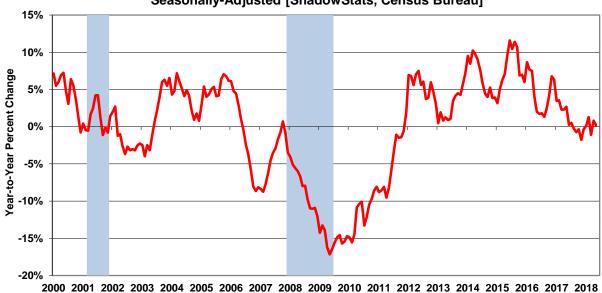
Graph 3: Benchmark-Revised Changes to Annual Growth in Total Real Construction Spending

Revisions to Year-to-Year % Change in the Real Value of Total U.S. Construction Put in Place, 2014 to May 2018 Seasonally-Adjusted [ShadowStats, Census Bureau]



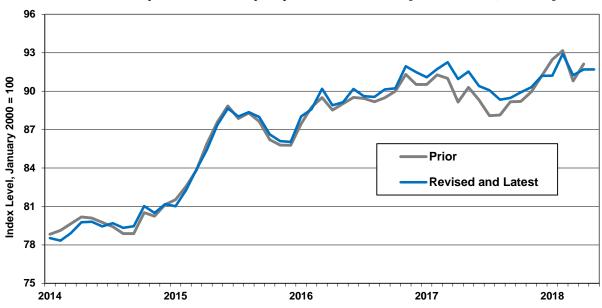
Graph 4: Revised Year-to-Year Change in Total Real Construction Spending

Revised Real Total Value of U.S. Construction Put in Place Year-to-Year Percent Change to May 2018 Seasonally-Adjusted [ShadowStats, Census Bureau]



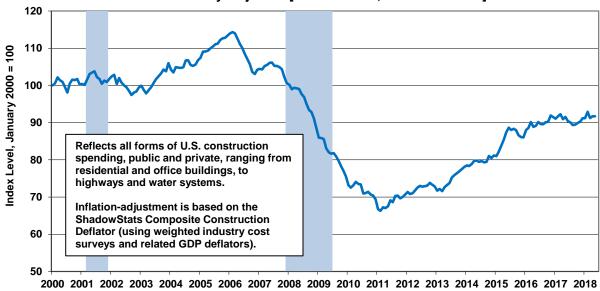
Graph 5: Benchmark-Revised Changes in the Level of Real Total Construction Spending

Revisions to the Level of Real Total Construction Spending 2014 to May 2018 Seasonally-Adjusted Annual Rate [ShadowStats, Census]



Graph 6: Revised Level of Real Total Construction Spending

Revised Index of Real Total Value of Construction Put in Place To May 2018, Inflation Adjusted (Jan 2000 = 100) Seasonally-Adjusted [ShadowStats, Census Bureau]



Graph 7: Benchmark-Revised Changes in the Level of Total Nominal Construction Spending

Revisions to Nominal Total Construction Spending To May 2018, Seasonally-Adjusted Annual Rate [ShadowStats, Census]



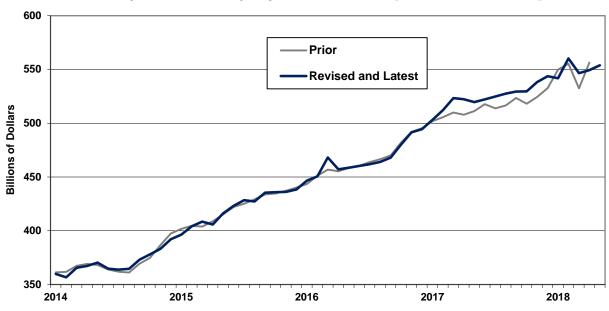
Graph 8: Revised Level of Total Nominal Construction Spending

Revised Level of Nominal Total-Construction Spending to May 2018 Seasonally-Adjusted Annual Rate [ShadowStats, Census]



Graph 9: Benchmark-Revised Changes in the Level of Nominal Private Residential Construction Spending

Revisions to Level of Nominal Private Residential Construction To May 2018, Seasonally-Adjusted Annual Rate [ShadowStats, Census]



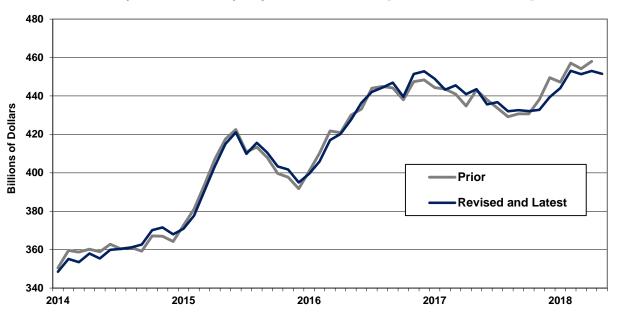
Graph 10: Revised Level of Nominal Private Residential Construction Spending

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



Graph 11: Benchmark-Revised Changes in the Level of Nominal Private Nonresidential Construction Spending

Revisions to Nominal Private Nonresidential Construction To May 2018 Seasonally-Adjusted Annual Rate [ShadowStats, Census]



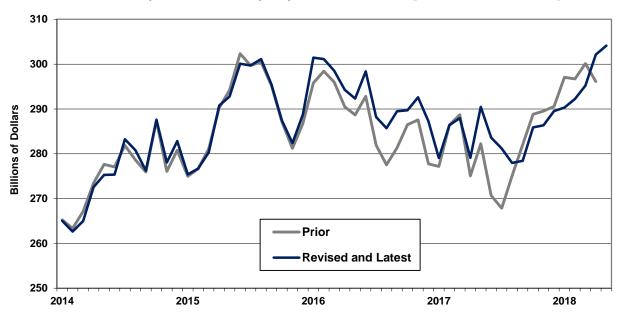
Graph 12: Revised Level of Nominal Private Nonresidential Construction Spending

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



Graph 13: Benchmark-Revised Changes in the Level of Nominal Public Construction Spending

Revisions to Nominal Public Construction 2014 to May 2018, Seasonally-Adjusted Annual Rate [ShadowStats, Census]



Graph 14: Revised Level of Nominal Public Construction Spending

Nominal Public Construction to May 2018 Seasonally-Adjusted Annual Rate [ShadowStats, Census]



Construction Spending—May 2018—Headline Activity. In the context of annual benchmark revisions, seasonally-adjusted, annualized nominal May 2018 Value of Construction Put in Place in the United States was \$1,308.5 billion, versus a benchmark-revised \$1,304.5 billion [\$1,310.4 billion prebenchmark] in April, a revised \$1,293.1 [previously \$1,286.8] billion in March, \$1,305.5 [previously \$1,309.2] billion in February and \$1,276.3 [\$1,294.0] billion in January 2018.

Again, in the context of the benchmark revisions, the nominal month-to-month change in May 2016 construction spending was a statistically-insignificant gain of 0.4% +/- 1.8% (all confidence intervals are at the 95% level), versus benchmark revised monthly gains of 0.9% [previously 1.8%] in April, a decline of 0.9% (-0.9%) [1.7% (-1.7%)] in March, gains of 2.3% [1.2%] in February and 0.3% [1.7%] in January.

Headline annual nominal growth was a statistically-significant gain of 4.5% +/- 1.9% in May 2018, versus revised annual gains of 5.0% [previous 7.6%] in April 2018, 2.9% [2.8%] in March 2018, 5.1% [5.9%] in February 2018 and 3.7% [5.8%] in January 2018. Net of inflation, May 2018 growth was up year-to-year by 0.2%, having gained a revised 0.5% [previously 3.2%] in April 2018, having declined by 1.1% (-1.1%) [0.4% (-0.4%)] in March 2017, having gained in February 2018 by 1.3% [1.7%] and by 1.3% [1.9%] in January 2018.

Consider that the nominal monthly gain of 0.4% in aggregate May 2018 Construction Spending, versus the gain of 0.9% in April 2018, included a gain of 0.7% in May Public Construction versus a gain of 2.3% in April. Private Construction Spending gained by 0.3% in May, having gained by 0.4% in April. Within total Private Construction Spending, Residential Construction rose by 0.8% in May, versus 0.5% in April, while Nonresidential Construction declined by 0.3% (-0.3%) in May, having gained 0.4% in April

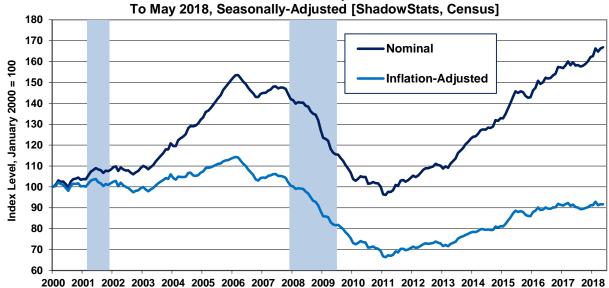
The preceding headline details are reflected in accompanying *Graphs 15* to *18* and in the earlier *Graphs 1* to *14*, which generally headline detail both before and after adjustment for inflation.

[Graphs 15 to 18 begin on the next page.]

Patterns of Nominal and Real Construction Activity Compared Across Sectors

Graph 15: Revised Index, Nominal versus Real Value of Total Construction

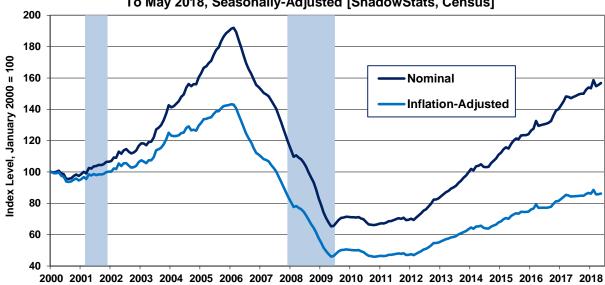
Revised Index of Total Value of Construction Put in Place Nominal versus Inflation-Adjusted (Jan 2000 = 100) Real Data Reflect ShadowStats Composite Construction Deflator



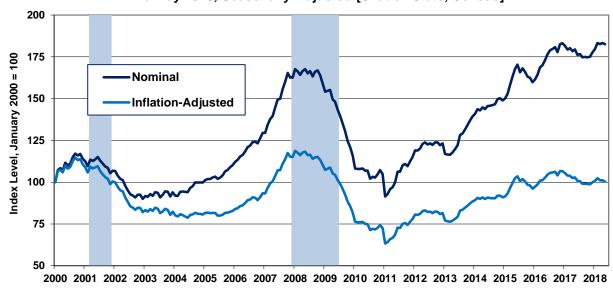
Graph 16: Revised Index, Nominal versus Real Value of Private Residential Construction

Revised Index of Value of Private Residential Construction Nominal versus Inflation-Adjusted (Jan 2000 = 100)

Real Data Reflect ShadowStats Composite Construction Deflator To May 2018, Seasonally-Adjusted [ShadowStats, Census]



Graph 17: Revised Index, Nominal versus Real Value of Private Nonresidential Construction
Revised Index of Value of Private Nonresidential Construction
Nominal versus Inflation-Adjusted (Jan 2000 = 100)
Real Data Reflect ShadowStats Composite Construction Deflator
To May 2018, Seasonally-Adjusted [ShadowStats, Census]



Graph 18: Revised Index, Nominal versus Real Value of Public Construction

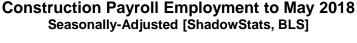
Index of Value of Public Construction Nominal versus Inflation-Adjusted (Jan 2000 = 100) Real Data Reflect ShadowStats Composite Construction Deflator To May 2018, Seasonally-Adjusted [ShadowStats, Census]

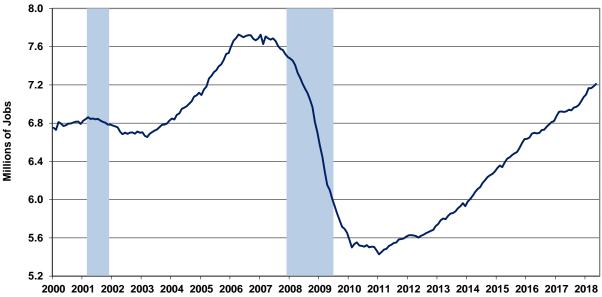


May 2018 Construction Payrolls Gained Month-to-Month by 0.3%, Rose 4.2% Year-to-Year, but Remained Down by 6.7% (-6.7%) from the Series' Pre-Recession Peak. Discussed previously Commentary No. 953-B (see page 28), May 2018 construction payrolls gained month-to-month by 0.35% and by 4.16% year-to-year, as plotted in accompanying Graph 19. 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, May 2018 real Construction Spending remained shy of recovering its pre-recession high by 19.8% (-19.8%).

The detail and graph will be updated in the *ShadowStats* coverage of the June 2018 Employment and Unemployment details that are due for release on Friday, July 6th.

Graph 19: Construction Employment (Payroll Survey) - 2000 to Date





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

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WEEK, MONTH AND YEAR AHEAD

U.S. Dollar and Financial-Market Turmoil Remain Intensified High Risk, Amidst Mounting Fiscal Concerns, Consumer Liquidity Issues and Non-Expanding, Real-World Economic Activity. In the context of the weakening trends in May Construction Spending, discussed today, and in New Orders for Durable Goods and Industrial Production, and intensifying negative stresses on basic consumer-liquidity conditions, discussed *Commentary No. 957* and *Consumer Liquidity Watch - No. 2*, the headline economic outlook is dimming rapidly. The U.S. consumer remains the primary and fundamental driving force behind domestic business activity, and continued likely deterioration of liquidity conditions should be followed by negative headline monthly surprises in the regular economic reporting ahead. Already play are likely net negative revisions to the GDP in its pending, comprehensive annual benchmarking (July 27th). The broad outlook on the economy has not changed. Weaker economic growth and renewed, faltering economic headlines should continue to follow.

The *Opening Comments* and *Hyperinflation Watch* of *Commentary No. 955* reviewed the broad outlooks for the U.S. economy, the U.S. dollar, gold, silver and the financial markets. Such updated and expanded upon annual review covered in *Special Commentary No. 935* (see the *Executive Summary*, with *Contents* and links to *Major Sections* and *Graphs* beginning there on page 6). The broad, faltering economic outlook also was reviewed in the *Opening Comments* and *Industrial Production Benchmark Revisions* sections of *Commentary No. 942-B*. The fundamental outlook for U.S. dollar and related market circumstances broadly have not changed from the related vulnerabilities discussed in those earlier missives. The *Hyperinflation Watch* will be updated late-day July 5th as a standalone posting on the ShadowStats Web site, which will be advised by e-mail. This *Week, Month and Year Ahead* will be updated fully, shortly thereafter.

In the dollar and financial markets remain at an 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 RELEASES

Trade Deficit (May 2018). Details for the headline May 2018 Trade Deficit will be released on Friday, July 6th, with ShadowStats coverage of at least summary headline detail in *Commentary No. 959-A* of that date, with full coverage likely following in *Commentary No. 959-B* over the weekend. Expectations are for some narrowing of the monthly trade shortfall, based on the sharp narrowing in the "Advance" May goods deficit on June 27th. Recent volatility in these numbers, however, leaves the results wide open, albeit the odds do favor a narrowing.

Employment and Unemployment (June 2018). The Bureau of Labor Statistics (BLS) will publish the headline June labor data on Friday, July 6th, with at least summary coverage of the detail s in *Commentary No. 959-A* of the date, with extended coverage in *Commentary No. 959-B* over the weekend. The consensus outlook purportedly is for some narrowing of the payroll gain from June's gain, with headline U.3 unemployment likely to hold at 3.8%, its lowest level since the days of President Nixon.

Some negative shocks here are overdue, however, where a greater-than-expected weakening in payroll growth is a good bet, as would be some back-up in the headline U.3 unemployment rate.

Heavily-stressed measures of labor market health in the Household Survey (Employment-Population Ratio and Participation Rate) and in the Payroll Survey likely will continue under negative pressure. Annual growth in the May 2018 payrolls held at recession-signal levels, a pattern that not only should continue but also intensify in June 2018.

LINKS TO PRIOR COMMENTARIES, SPECIAL REPORTS AND OTHER WRITINGS

New: The *Consumer Liquidity Watch* has become a standalone entity, updated June 29th and posted on the *ShadowStats* Web Site, available there by link at *Consumer Liquidity Watch - No. 2*.

The first standalone *Hyperinflation Watch* will follow late-day Thursday, July 5th, covering June 2018 Monetary Conditions.

The latest Watches always will be available on www.ShadowStats.com and by link from the current Commentaries, with updates advised by e-mail.

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 www.ShadowStats.com (left-hand column of home page).] These regular Commentaries and now Consumer Liquidity and Hyperinflation Watches usually are published least weekly, or updated every two weeks for the Watches, updating general economic and financial-market circumstances as they develop.

<u>Commentary No. 957</u> (July 1st) covered May 2018 New Orders for Durable Goods and the third estimate of First-Quarter 2018 Gross Domestic Product (GDP) and the coincident second estimates of Gross National Product (GNP) and Gross Domestic Income (GDI).

<u>Commentary No. 956</u> (June 27th) reviewed May 2018 Retail Sales, Industrial Production, New Residential Construction (Housing Starts and Building Permits), New- and Existing-Home Sales, along with detail on the May 2018 Cass Freight IndexTM and some potential twists to the pending July 27th Comprehensive Benchmark Revision to the GDP.

<u>Commentary No. 955</u> (June 18th) analyzed May 2018 inflation as reported with the May 2018 Consumer and Producer Price Indices (CPI and PPI), Real Average Weekly Earnings, along with the latest *Hyperinflation Watch* covering FOMC policy, the U.S. dollar and financial markets. Summary headline details also were provided for May Retail Sales, Industrial Production and the Cass Freight Index TM.

<u>Commentary No. 954</u> (June 8th) reviewed the comprehensive annual benchmark revisions to the Trade Deficit, in the context of recent benchmark revisions to other major economic series and implications for the pending GDP benchmark revisions. Such also covered the headline reporting of the April 2018 headline Trade Deficit detail and an updated Consumer Liquidity Watch.

<u>Commentary No. 953-B</u> (June 5th) analyzed the discrepancies between the record-low headline unemployment rate and near-record-high readings of labor-market stress, in the context of extended coverage the May 2018 Employment and Unemployment and April 2018 Construction Spending, previously headlined in *No. 953-A*.

<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 the supplemental coverage of *Commentary No. 953-B*. Current monetary conditions 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[®] Advertising.

<u>Commentary No. 951</u> (May 25th) reviewed April 2018 New Orders of Durable Goods, 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[®] 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 First-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 IndexTM 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[®] 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 IndexTM.

<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[®] 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 IndexTM.

<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[®] 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 IndexTM 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[®] 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 year-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[®] Advertising and the May Cass Freight IndexTM.

<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[®] Advertising and April 2017 estimates of the Cass Freight IndexTM, 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 IndexTM.

<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.

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

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