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

COMMENTARY NUMBER 869
Second Estimate of Fourth-Quarter GDP, Revamping Government Statistics

February 28, 2017

New Administration Needs to Overhaul Economic Reporting

How Can Headline Real GDP Be Up 12.1% from Its Pre-Recession High, While Industrial Production Is Down 1.1% (-1.1%), and Manufacturing Is Down 5.7% (-5.7%)?

How Can GDP Be in Its 22nd Quarter of Expansion, When Industrial Production is in Its 36th Quarter of Non-Expansion, Rivaling Its Great Depression Run of 37 Quarters?

Underlying Economic/Financial Pain on Main Street U.S.A. Led to the Change of Government

Political Circumstances May be Disquieting to Some, but Underlying Economic Dislocations Have to be Addressed

Revised Fourth-Quarter GDP Growth of 1.88% (Previously 1.90%) Avoided Notching Down to a Rounded 1.8%, Thanks to Lowered Inflation

2016 Annual GDP Growth Still Was Weakest Since the Economic Collapse, Both Before and After Inflation Adjustment

Better-Quality Indicators of Broad Business Activity Continue to Show the Economy Never Recovered from Its Collapse into 2009

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PLEASE NOTE: Reflecting an intensifying near-term focus on underlying economic reality, the GAAP-Financial Statements for the U.S. Government have been shifted to a separate Special Commentary *that follows in the week ahead. The next regular* Commentary*, scheduled for Tuesday, March 7th will cover the January 2017 Trade Deficit and Construction Spending, with a subsequent* Commentary *covering February labor conditions on March 10th. Please call me at (707) 763-5786, if you have questions or would like to talk.*

Best wishes to all — John Williams

OPENING COMMENTS AND EXECUTIVE SUMMARY

Decades of Massaged Reporting Methodologies Have Distanced Headline Economic Activity from Common Experience and Underlying Reality. When I started the *Shadow Government Statistics* newsletter in 2004, it reflected my formal experiences of assessing the quality and nature of headline economic reporting since the early-1980s, and of a broad recognition that Main Street U.S.A. had a good sense of underlying economic reality.

By 2004, underlying economic reality clearly was not reflected in the headline numbers issued by most statistical agencies of the federal government. Headline business conditions broadly were overstated, while inflation was understated. A heavily-positive public response accompanied the *ShadowStats.com* introduction, broadly confirming that common experience was not reflected meaningfully in the government's headline data. Reporting quality and related circumstances have deteriorated since.

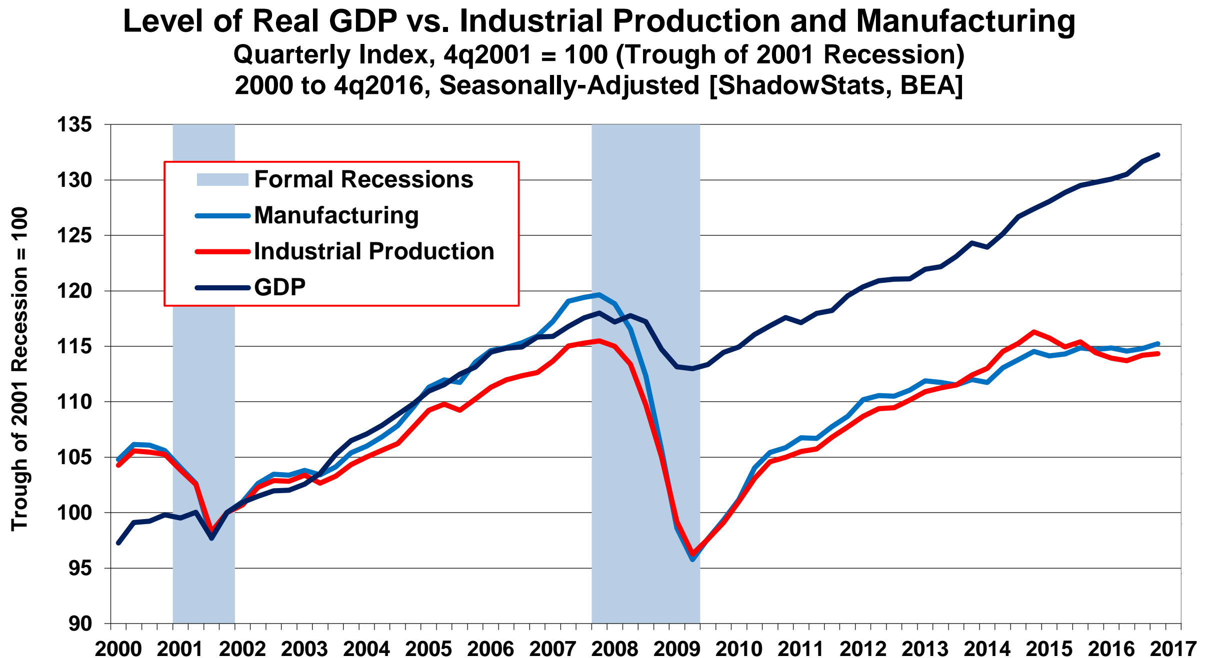
Headline GDP Reporting Is Not Close to Being Credible. Noted in *General Commentary No. 867*, despite a formal one-month full recovery and one-month expansion in November 2014, the Federal Reserve's Industrial Production Index—representing 61% of GDP—never otherwise broke above its pre-2007 recession high and still remains below its peak activity preceding that economic collapse into 2009 by 1.1% (-1.1%). The dominant manufacturing sector of production never entered a post-recession phase of expansion and still holds 5.7% (-5.7%) below its pre-recession peak. Yet, the second revision to fourth-quarter 2016 GDP showed that measure to have expanded 12.1% above it pre-recession high.

A conflict in theoretically-close series is highlighted in the accompanying *Opening Graph*, which plots real GDP level, versus Industrial Production and Manufacturing, with the three series indexed to 100 at the trough of the 2001 recession in fourth-quarter 2001. Headline real GDP growth just continued to rise from the 2009 trough, while the industrial sector topped out and turned down anew into 2015. The variations between production and manufacturing plots largely reflect changes in the mining (oil production) sector of industrial production, affected by large oil price swings (see *Commentary No. 866*). Manufacturing, which remained in low-level stagnation, largely was independent of oil-price activity.

Despite some internal inflation issues that overstate certain production growth, headline production has been through an extended period of non-expansion, and the details plotted in the graph all reflect headline

detail. As reported, the production series is at the brink of rivaling its non-recovery seen during the Great Depression of the 1930s. Again, from the opening headlines, despite the 22nd straight quarter of GDP economic expansion, industrial production is in its 36th quarter of non-expansion, just one quarter shy of rivaling its 37 quarters of non-expansion in the Great Depression. The end of the non-expansion in 1939 resulted from a build-up of orders at the onset of World War II in Europe.

Opening Graph: Real GDP versus Production and Manufacturing, Indexed to Trough of 2001 Recession



Industrial Production is the least-gimmicked of the widely followed official monthly statistics. It is prepared under the auspices of the Federal Reserve Board, instead of the Executive Branch-controlled Bureaus of the Census, Labor Statistics, and Economic Analysis. The various Bureaus tend to be more sensitive to electorate-driven political considerations. Various issues with reporting quality and built-in-biases for the popular headline data, ranging from employment to retail sales and housing, and, again, even industrial production, are discussed in *Commentary No. 866*, *Commentary No. 864*, *Commentary No. 863* and *No. 859 Special Commentary*.

Time to Overhaul Economic Reporting. The massive, domestic economic-reporting system, spread throughout various elements of the Executive Branch, the Congress and the Federal Reserve cannot be recast easily or quickly. Mr. Trump needs to form a Commission, dedicated to refocusing economic reporting on common experience, not on academic niceties, for example, that understate inflation. Such gimmicks have helped politicians to deny appropriate cost-of-living-adjustments (COLA) to Social Security recipients, to push taxpayers artificially into higher tax brackets, and help to overstate the usually inflation-adjusted (real) economic activity measures. Such feeds politicians and political hacks with visions of a false economic euphoria keeping the voters happy and purportedly ignorant of a not-so-happy underlying reality.

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Discussed in No. 859 Special Commentary, Main Street U.S.A.'s disbelief in, and lack of common experience with the "happy" headline economic data were primary factors in Mr. Trump's broadly-unexpected winning of the U.S. Presidency. Mrs. Clinton learned a hard lesson there, as members of Congress likely will in the 2018 election, if action is not undertaken now to stimulate economic activity.

Consider that the rigged economic reporting primarily is for the benefit of the Federal Government, not for the public, not for the electorate. The deliberately understated inflation was a creation of former Federal Reserve Chairman Alan Greenspan in a bipartisan effort with a democrat Clinton Administration and a republican Congress to help balance the budget deficit on the backs of Social Security recipients. Cutting COLA payments artificially was the effective equivalent of a tax levied on COLA recipients. It should have been treated openly as such, not masked by politically-driven statistical subterfuge. The Congress and the Administration might find a happy response to honest data, from a public and an electorate that generally do not trust politicians.

ShadowStats to Highlight Statistics That Will Help Track Underlying Economic Progress. In the months ahead, ShadowStats will emphasize assessment of existing measures, such as the employment-population ratio, or full-employment data among areas in which actual economic progress or backtracking should be indicated. Again, a meaningful overhaul of the government's economic reporting will be complex and time consuming, with issues extending into the arena of international data comparability.

Yet, there is precedent for disagreement. In the historical politicization of the U.S. use of hedonic quality adjustments to reduce inflation, and to boost related real GDP reporting, it took countries such as Germany and Japan sometime to sign on to using that reporting gimmick.

Today's *Commentary* (February 28th). These *Opening Comments* and *Executive Summary* review issues with headline economic reporting and the headline detail of the second-estimate of Fourth-Quarter 2016 GDP, with extended coverage in the *Reporting Detail*.

The *Week, Month and Year Ahead* section previews reporting of January Construction Pending, the January Trade Deficit and February Employment and Unemployment in the week or so ahead.

Executive Summary: Gross Domestic Product (GDP)—Second-Estimate, First Revision to Fourth-Quarter 2016—Negligible Real Downside Revision Aided by Softer Inflation. The second estimate of fourth-quarter 2016 GDP came in below consensus (expected at 2.1%), showing a statistically-insignificant, real (inflation-adjusted) annualized, quarterly headline increase of 1.86% [previously 1.88%], following gains of 3.51% in third-quarter 2016, 1.42% in second-quarter 2016, 0.83% in first-quarter 2016 and 0.87% in fourth-quarter 2015.

Headline year-to-year real GDP growth in fourth-quarter 2016 revised to 1.90% [previously 1.91%], versus 1.65% in third-quarter 2016, 1.28% in second-quarter 2016, 1.57% in first-quarter 2016, and 1.88% in fourth-quarter 2015. Annual 2016 GDP real growth held at an unrevised 1.60%, versus 2.60% in 2015, which tied with 2011 for slowest pace of annual growth in the post-2009 "recovery."

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Plots of the historical GDP levels as well as annual GDP changes are found in *Graphs 11* to *16* in the *Reporting Detail*, along with related *Graphs 1* to *10* later in this section.

Fourth-Quarter 2016 GDP, Second Estimate - Growth Distribution. The second estimate of fourth-quarter 2016 GDP came in at an annualized real growth rate of 1.86%, minimally changed versus a first-estimate of 1.88%, and down sharply versus headline 3.51% growth in third-quarter 2016 GDP growth.

The annualized growth number in each sub-category of consumer spending, business/residential investment, trade deficit and government spending is the additive contribution to the total, headline change in GDP, where 2.05% + 1.45% - 1.70% + 0.06% = 1.86%. *Commentary No. 863* of January 27th detailed the growth-distribution for the initial estimate of fourth-quarter 2016 GDP.

Regrouped by general product line, the BEA estimated that the headline 1.86% quarterly GDP growth rate included a 0.69% [previously 0.60%] growth-rate contribution from services, an unrevised 0.75% contribution from goods and a 0.41% [previously 0.52%] contribution from structures, with a rounding difference.

Contributing Growth Factors. Headline fourth-quarter 2016 GDP growth still was dominated by an involuntary buildup in inventories, gains in construction, vehicle sales and state- and local-government spending, and heavily offset by a sharply deteriorating trade deficit.

- ***Consumer Spending Contributed 2.05% [Previously 1.70%] to Fourth-Quarter 2016 GDP Growth; Third-Quarter Growth Contribution Was 2.03%.*** The consumer spending category, still was dominated by motor vehicle sales (including recreational) and food consumption. A revised upsurge in the nebulous details of the non-productive and heavily-guesstimated healthcare sector dominated the upside revision here.

- ***Business/Residential Investment Contributed 1.45% [Previously 1.67%] to Fourth-Quarter 2016 GDP Growth; Third-Quarter Growth Contribution Was 0.50%.*** Contrary to private indicators, surging real estate investment helped to prop activity here, but the dominant factor was a continued sharp spike in inventory growth, which contributed 0.94% [previously 1.00%] by itself of the headline 1.86% GDP growth rate. Accordingly, headline final sales—GDP net of inventory change—fell to a revised annualized quarterly growth rate of 0.92% [previously 0.88%], versus 3.02% in third-quarter 2016.

- ***Net Exports Subtracted 1.70% (-1.70%) [Previously 1.70 % (-1.70%)] from Fourth-Quarter 2016 GDP Growth, Third-Quarter Growth Contribution Was 0.85%.*** Still heavily hitting the headline growth estimate for fourth-quarter GDP was an unrevised sharp deterioration in the quarterly trade deficit. Such reversed the highly-suspect, sharp improvement in the headline third-quarter deficit, which was the primary prop behind the pre-election jump in third-quarter 2016 GDP (see *Commentary No. 860*). Further detail will follow the coverage of March 7th release of the headline January 2017 trade deficit (and December 2016 revisions), which was indicated as having deteriorated in the "advance" January reporting.

- ***Government Spending Added 0.06% [Previously 0.21%] to Fourth-Quarter 2016 GDP Growth, Third-Quarter Growth Contribution Was 0.14%.*** Federal government spending still subtracted 0.08% (-0.08%) from the headline fourth-quarter GDP growth. That was more than offset by a

reduced surge in state- and local government "investment," circumstances usually in the realm of highly unstable Affordable Care Act (ACA) issues.

Implicit Price Deflator (IPD). The second estimate of fourth-quarter 2016 GDP inflation, or the implicit price deflator, showed a revised annualized quarterly change of 2.02% [previously 2.12%], versus an annualized 1.41% in third-quarter 2016. Year-to-year, the headline fourth-quarter 2016 IPD inflation was a revised 1.54%, versus 1.27% in third-quarter 2016. In terms of year-over-year, average annual inflation, the 2016 IPD inflation was 1.31% [previously 1.32%], versus 1.08% in 2015. Generally, the stronger the pace of relative inflation used in deflating nominal economic data (not adjusted for inflation), the weaker will be the resulting inflation-adjusted "real" growth, and vice versa. The downside revision in the IPD offset a revised decline in nominal quarterly GDP growth from 4.03% to 3.92%, enough to prevent a downside, rounded revision to the headline real GDP growth. Extended detail and CPI-U comparisons follow in the *Reporting Detail*.

Gross National Product (GNP) and Gross Domestic Income (GDI). Standardly, the first estimates of fourth-quarter GNP and GDI are not published until the release of the third estimate of fourth-quarter GDP (March 30th this year). That circumstance is due to quality issues with the available data for the "advance" and second estimates of the year-end data, a problem also common to the headline GDP reporting (see the *Reporting Detail*). Still, a background upside revision was published today for third-quarter GDI growth, discussed in the *Reporting Detail*.

Underlying Economic Reality. *[Much of the regular discussion and all of the comparative economic series traditionally used in these monthly GDP* Commentaries *were updated and expanded upon in the* ECONOMY *section of* No. 859 Special Commentary *of January 8th, incorporated here by reference. Accordingly, the some comparative charts and some text are repeated here, updated as appropriate. Fundamentally, the broad U.S. economy never fully recovered from its collapse into 2009, with continued low-level stagnation that generally has turned down anew, although there are nascent indications of a possible, near-term bottoming, as discussed in General Commentary No. 867.]*

Despite the booming 3.51% real annualized GDP growth in third-quarter 2016 and the revised 1.86% gain in today's headline fourth-quarter GDP detail, realistic, underlying U.S. economic activity has continued in a deepening-to-flattening and as-yet-unrecognized "new" recession. Headline monthly reporting activity in better-quality subsidiary economic series continues to confirm that general direction (the ShadowStats contention remains that the "new" downturn is in reality just a continuation of the economic crash into 2009). Such is despite the Trump Administration trying to move quickly to generate new economic stimulus. Given basic economic lead times, the first major, positive impact on the economy from that could be in early-2018, at the earliest. Interim economic activity and even GDP reporting still should turn lower in the next several quarters.

Discussed in *Commentary No. 823*, the 2016 benchmark revisions effectively were neutral in aggregate, with the business-cycle reporting "smoothed" by the BEA. The revisions were not of a nature to trigger formal immediate recognition of a "new" recession, which likely still will be clocked from December 2014. While that should happen eventually, the focus now should be on the rapidly weakening economy in the next several months (the second revision to fourth-quarter 2016 GDP, and first- and second-quarter 2017 GDP), which could trigger the "formal" recession recognition.

Beyond the smoothing gimmicks of the 2016 benchmarking, last year's 2015 GDP annual benchmark revisions (covered in *Commentary No. 739*), noted that annual benchmarkings increasingly are reshaping the GDP-reporting history into a post-2007 collapse pattern of successive multiple dips. By the next "comprehensive" GDP benchmark revision in July 2018 (a restatement of activity back to 1929), post-2007 historical GDP reporting should be confirming a non-recovering, multiple-dip economic collapse including a "new" or ongoing recession.

That circumstance should encompass the evolving, current downturn in broad, domestic economic activity, discussed in *No. 859 Special Commentary*. Where again, the present "new" recession or multiple-dip downturn remains likely to be timed from December 2014, without headline back-to-back contractions of quarterly GDP currently in place. Formal recognition of same remains pending, where consecutive quarterly GDP contractions no longer are necessary for formal recession recognition (see the opening paragraphs of *Commentary No. 823*).

Headline Aggregate GDP Remains Heavily Overstated versus Underlying Reality. Formal headline GDP activity continues to run well above economic reality as signaled by a number of better-quality business indicators, as reviewed fully in *No. 859 Special Commentary*. A sampling of those indicators includes such varied series as domestic freight activity (*Graph 5*), the employment-population ratio (*Graph 6*), corporate revenues (*Graph 7*), U.S. petroleum consumption (*Graph 8*), consumer goods manufacturing ranging from automobiles to bread (*Graph 9*) and total real U.S. construction spending (*Graph 10*). Either the GDP reporting is wrong, or most other major economic series are wrong (see also the *Opening Comments*). While the GDP is heavily modeled, imputed, theorized and gimmicked, it also encompasses reporting from those various major economic series and private surveys, which still attempt to measure real-world activity. Flaws in the GDP inflation methodologies and simplifying reporting assumptions have created the headline post-2009 "recovery."

Accordingly, the broad ShadowStats economic outlook has not changed, and, again, the gist of most of following text remains along the lines as recently expounded upon in *No. 859*. The details and numbers here, however, are updated for the latest headline information. In combination, these various collapsing economic indicators eventually should engender a formal recession call, irrespective of the timing of actual, if any, headline quarterly contractions in real GDP, or what likely has been related political gaming of the data up through year-end 2016.

Fundamental, real-world economic activity shows that the broad economy began to turn down in 2006 and 2007, plunged into 2009, entered a protracted period of stagnation thereafter—never recovering—and then began to turn down anew in recent quarters. Irrespective of the reporting gimmicks introduced in the July 2013, July 2014 and July 2016 GDP benchmark revisions—including a recent pattern of inclusion and estimation of highly-questionable data on the Affordable Care Act (ACA) and related healthcare spending—a consistent, fundamental pattern of faltering historical activity is shown in the accompanying "corrected" GDP graphs.

Again, discussed in *Commentary No. 864*, with liquidity-strapped consumers unable to fuel sustainable growth in consumption, a full business recovery could not have taken place since 2009, and a recovery will not be forthcoming until consumer structural income and liquidity problems are resolved, including more-normal credit functioning of the domestic banking system.

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Official and Corrected GDP. The full economic recovery indicated by the official, real GDP numbers remains an illusion. It is a statistical illusion created at least partially by using a too-low rate of inflation in deflating (removing certain inflation effects) from the GDP series. The accompanying graphs tell that story, updated for the second estimate of fourth-quarter 2016, as well as reflecting a sampling of other elements of economic reality.

The first set of graphs (*Graphs 1* and *2*) updates the detail 1970-to-date, expressed in billions of 2009 dollars as used with the headline GDP. The graphs show official periods of recession as shaded areas, with ShadowStats-defined recessions indicated by the lighter shading in *Graph 2*, the second graph of the first set, as published initially in *2014 Hyperinflation Report—Great Economic Tumble*.

The second set of graphs (2000-to-date) is the one that traditionally has been incorporated in the GDP *Commentaries*. *Graphs 3* and *4* show short-term detail, expressed on an index base where first-quarter 2000 = 100.0.

Shown in the first graph of each set (*Graphs 1* and *3*) of official *Headline Real GDP*, GDP activity has been reported above pre-2007 recession levels—in full recovery—since second-quarter 2011, and headline GDP has shown sustained growth since (growth pauses or interruptions for second-half 2012 and first-quarter 2014 excepted). Adjusted for GDP inflation (the implicit price deflator - IPD), the second estimate of fourth-quarter 2016 GDP currently stands 12.1% above its pre-recession peak-GDP estimate of fourth-quarter 2007. As discussed in the opening details of *Commentary No. 844*, no major traditional GDP components or indicators are showing recovery close to the GDP's. None of the series covered here and in *No. 859* has shown significant recoveries, and many remain well shy of ever having recovered.

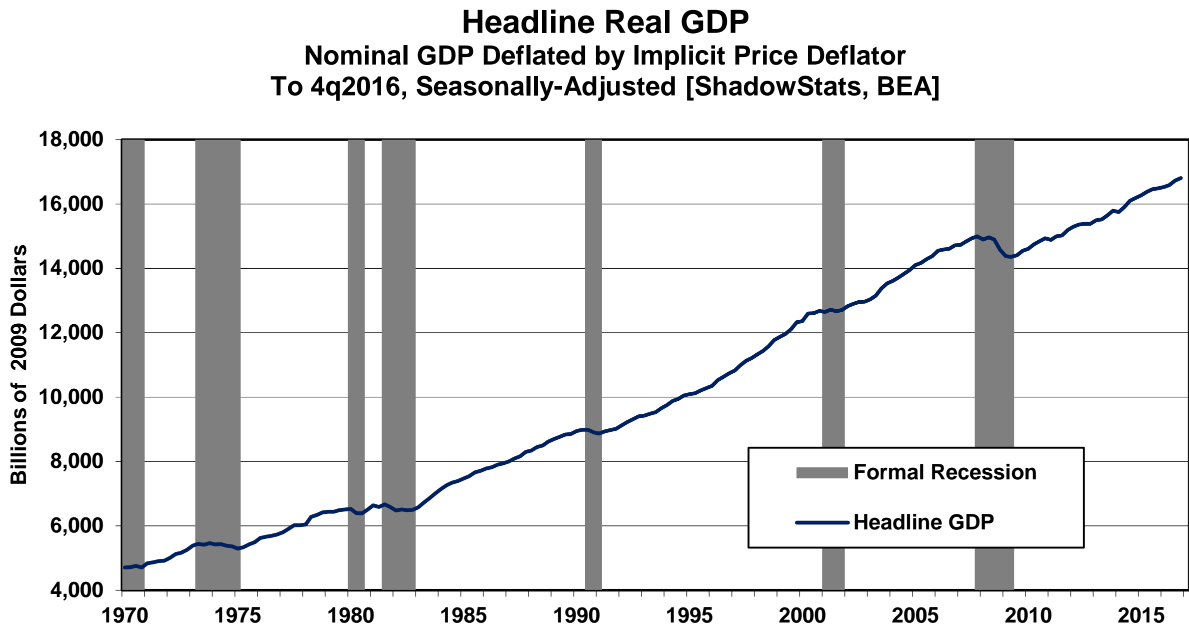
In contrast, the "corrected" GDP version, in the second graph of each set (*Graphs 2* and *4*), shows fourth-quarter 2016 GDP activity to be down from its pre-recession peak of first-quarter 2006 by 7.1% (-7.1%). As noted in *General Commentary No. 867*, the pattern of annual decline in industrial production is just fourth months shy of exceeding the period of protracted economic downturn seen during the Great Depression of the 1930s.

Again, the second graph in each series (*Graphs 2* and *4*) plots the *Corrected Real GDP*, adjusted for the understatement inherent in official inflation estimates (see *Public Commentary on Inflation Measurement*), with the deflation by the implicit price deflator (IPD) adjusted for understatement of roughly two-percentage points of annual inflation in recent years. The inflation understatement has resulted from hedonic-quality adjustments, also as discussed in the *Hyperinflation Reports*.

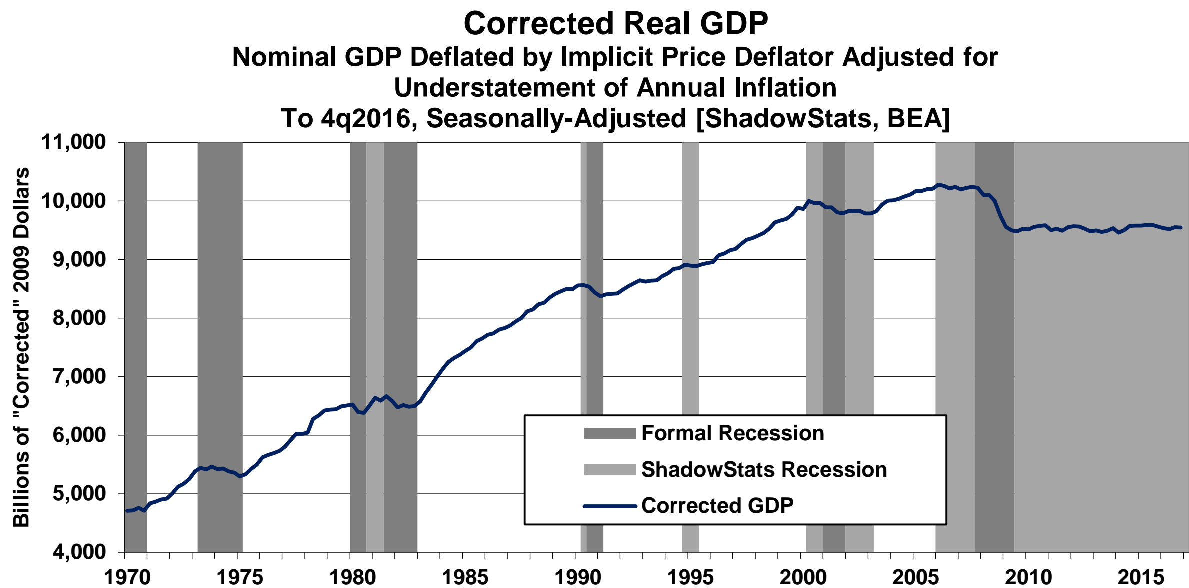
The pattern of economic collapse into 2009, followed by some minimal recovery, low-level stagnation and renewed contraction is seen with many series. As shown in *Graphs 5* to *7* (again see *No. 859*), better-quality independent numbers—including some U.S. government—put the lie to the gimmicked headline reporting that has been massaged for decades by government agencies and consulting academics.

[Graphs 1 to 10 begin on the following page.]

Graph 1: Real GDP Index (1970-2016), Second Estimate of Fourth-Quarter 2016



Graph 2: "Corrected" Real GDP (1970-2016), Second Estimate of Fourth-Quarter 2016



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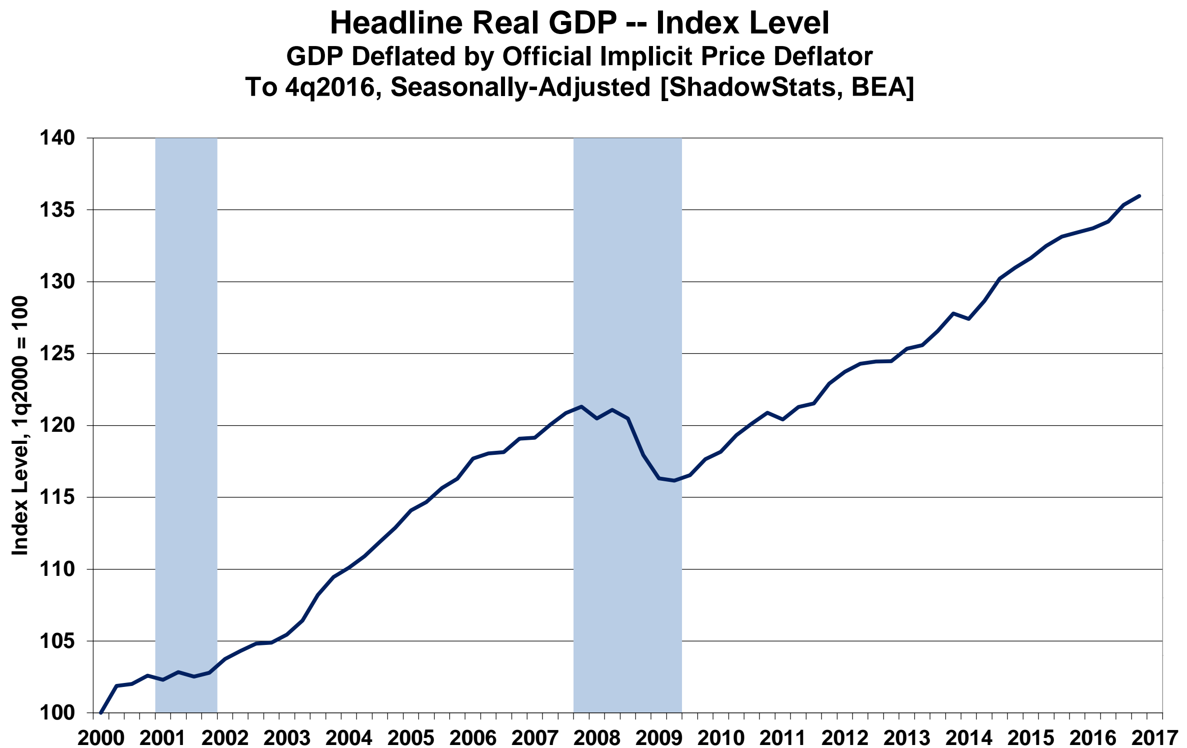
Graph 3: Real GDP Index – Headline Real GDP through Second Estimate of Fourth-Quarter 2016



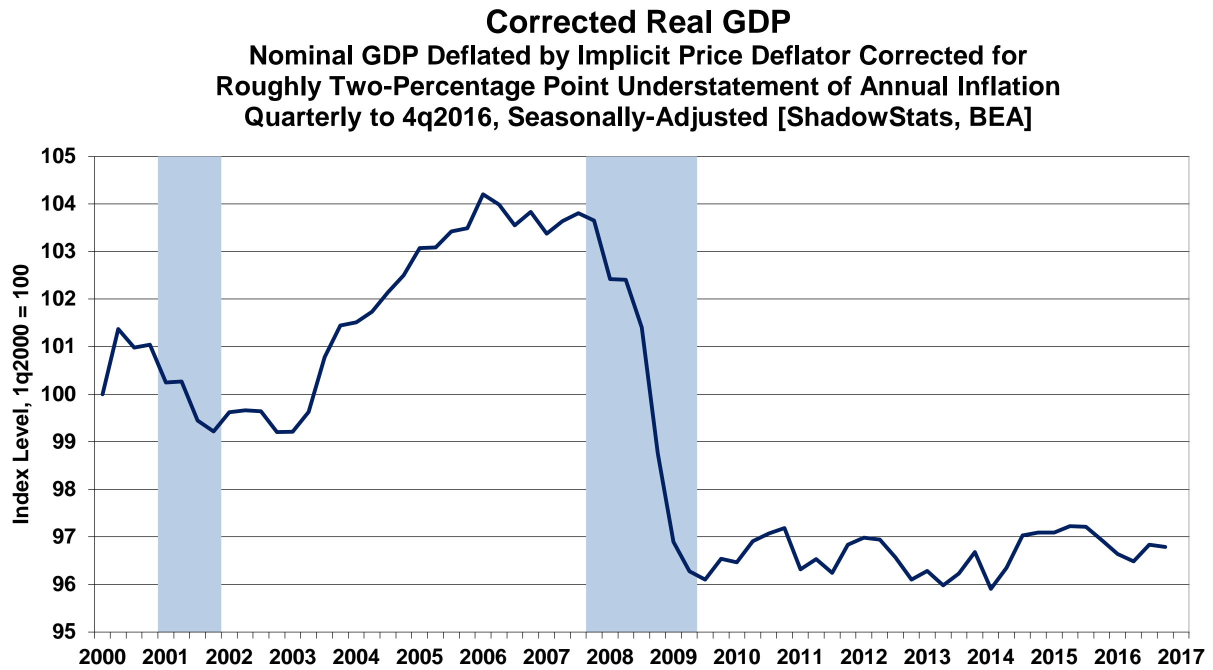
Comparative Indicators. *Graph 4* of the "corrected" GDP series follows, with subsequent, limited sampling of comparative economic indicators (see the expanded coverage in *No. 859*). The comparative indicators generally confirm the story from the "corrected" GDP graph, that the economy never recovered from its collapse into 2009 and is either in renewed downturn or in continuing low-level stagnation, albeit some of the latter still is slightly up-trending.

Graph 5 shows the Cass Freight Index™ measure of North American freight volume through January 2017, used with the permission of Cass Information Systems, Inc. Few measures better reflect the actual flow of goods in commerce than freight activity. As a broad measure of basic domestic economic activity, the index has much more in common with the "corrected" GDP in *Graph 4*, than with the headline GDP of *Graph 3*. It also tends to follow activity in New Orders for Durable Goods, as noted in yesterday's *868* (see *Graphs 8* and *9* there).

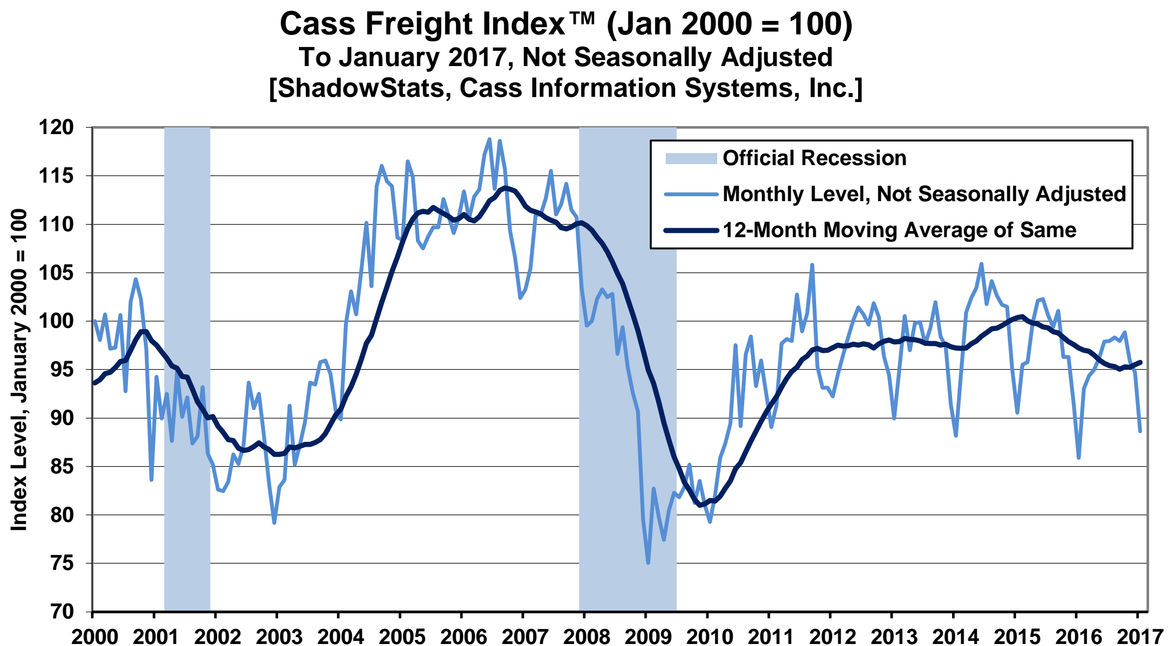
Graph 6 of the employment to population ratio remains a solid indicator of underlying labor conditions in the context of the broad population and long-term discouraged and displaced workers, reflected there through January 2017.

Graph 7 of S&P 500 revenues is plotted (not seasonally adjusted) on a quarterly basis, adjusted for the estimated impact of share buybacks and inflation. When real year-to-year change in U.S. corporate revenues turns negative, broad domestic economic activity invariably follows.

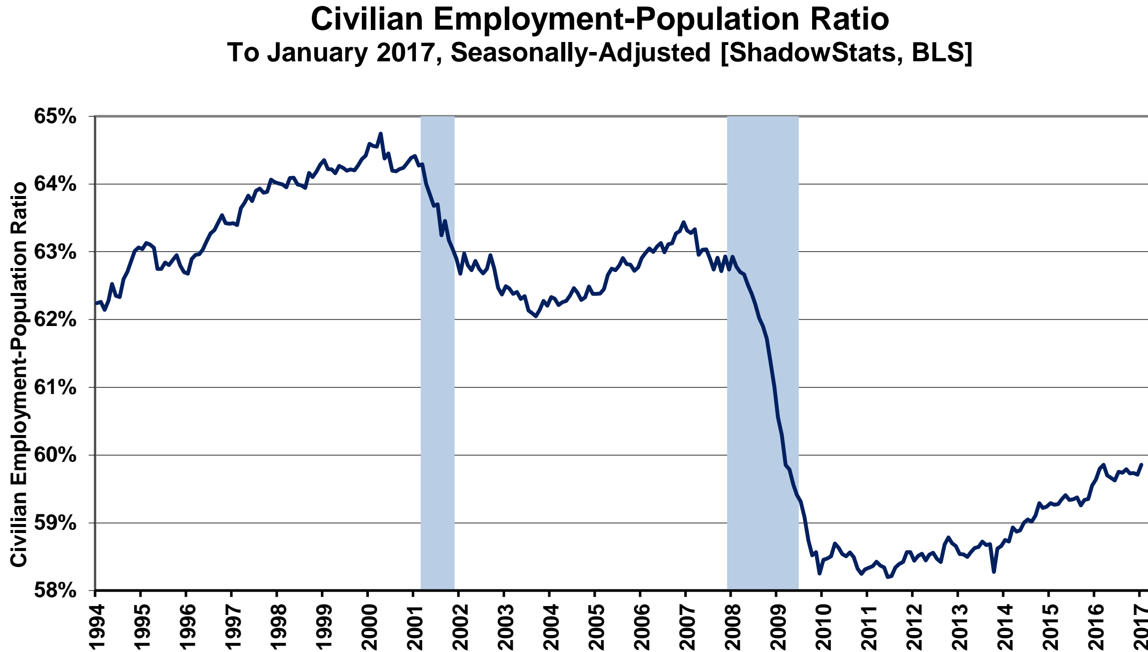
Graph 4: "Corrected" Real GDP Index (2000-2016), Second Estimate of Fourth-Quarter 2016



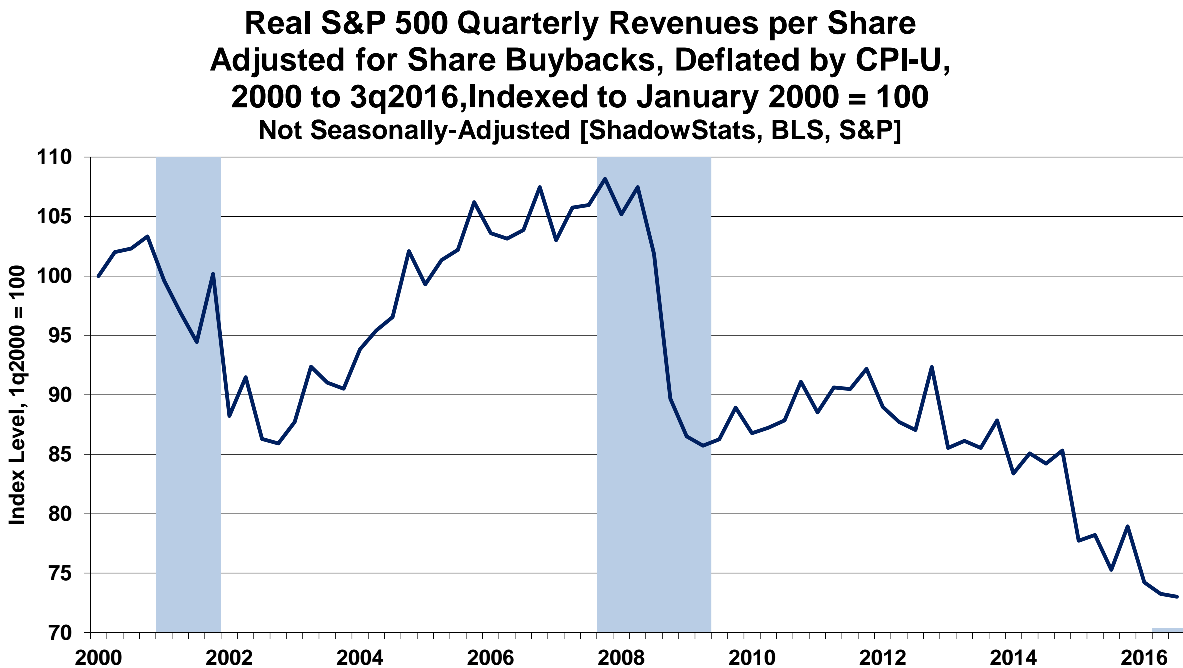
Graph 5: Cass Freight Index ™ (2000-November 2016)



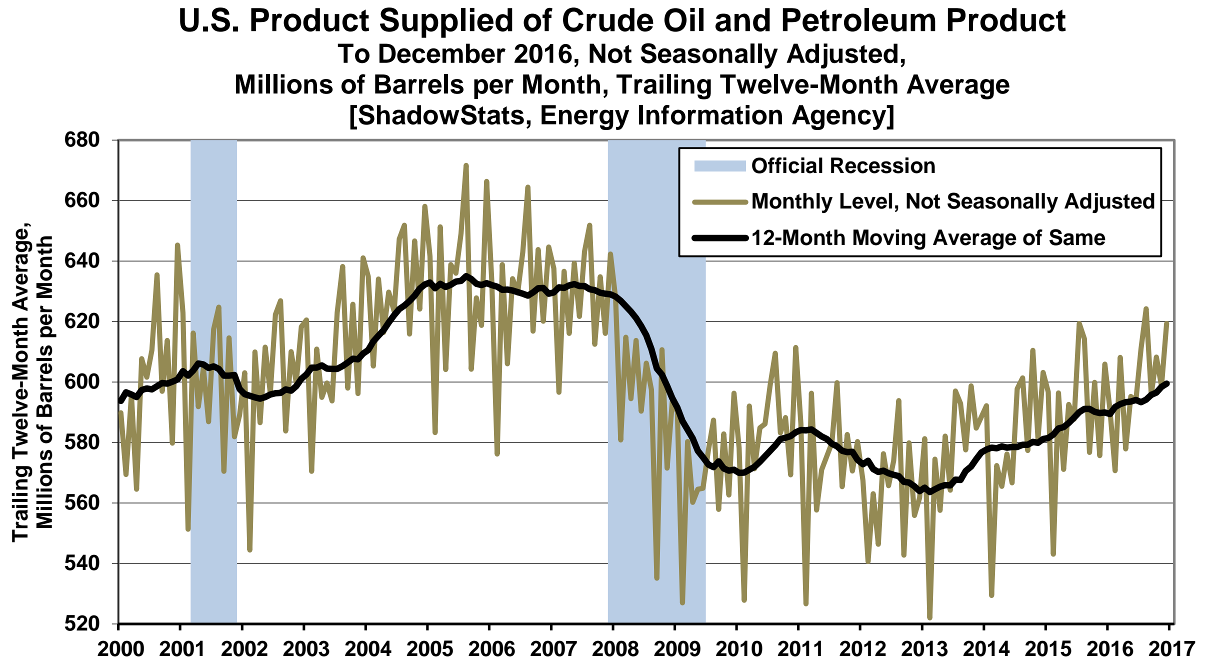
Graph 6: Civilian Employment-Population Ratio



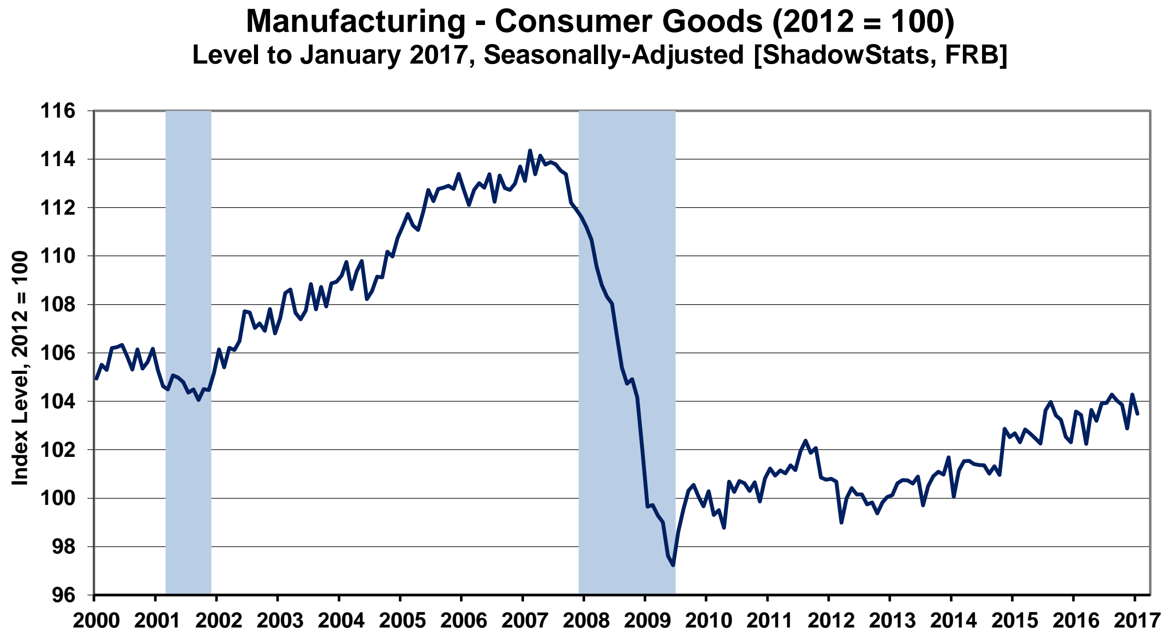
Graph 7: Real S&P 500 Sales Adjusted for Share Buybacks (2000 - 2016), Indexed to January 2000 = 100



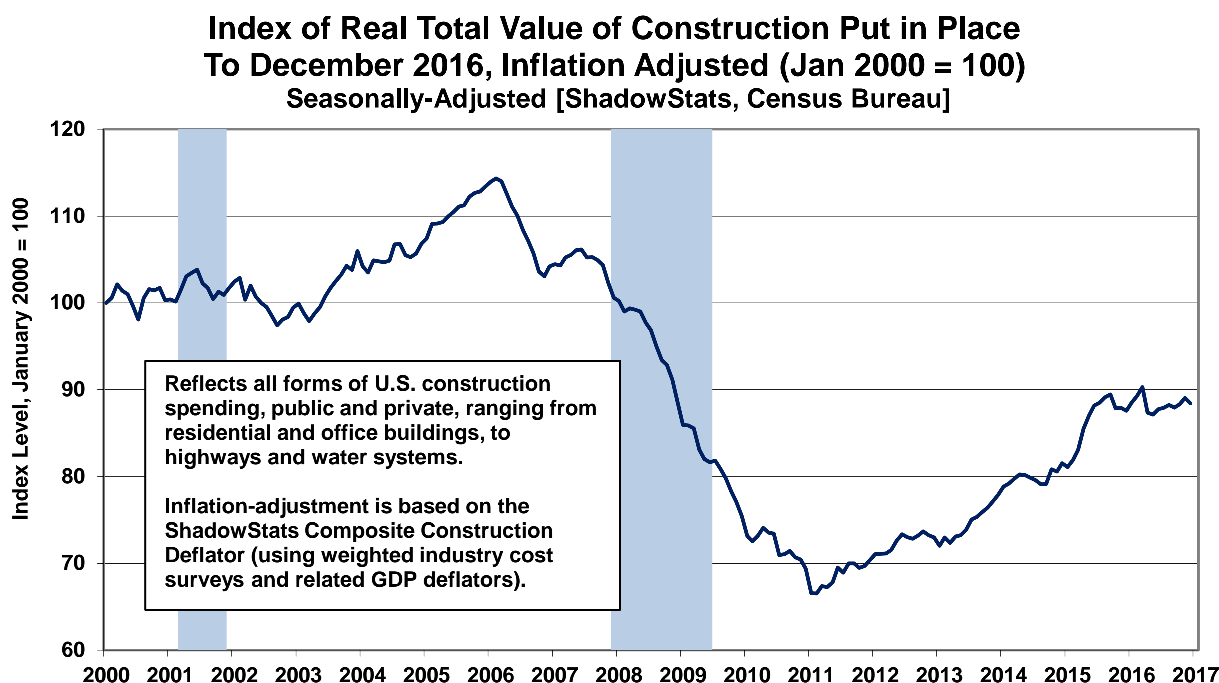
Graph 8: U.S. Petroleum Consumption (2000 – 2016)



Graph 9: Industrial Production – Consumer Goods Manufacturing (2000 - 2017)



Graph 10: Real Total U.S. Construction Spending (2000 - 2016)



[The **Reporting Detail** *contains extended analysis and graphs of the GDP revision.]*

REPORTING DETAIL

GROSS DOMESTIC PRODUCT—GDP—(Fourth-Quarter 2016, Second Estimate)

Underlying Recession Continued in Play, Despite Still-Bloated GDP Detail. Irrespective of the weaker-than-expected 1.86% annualized, quarterly real growth in the revised headline reporting of fourth-quarter 2016 GDP, underlying reality remained that broad U.S. economic activity never recovered fully from its crash into 2009, and that it began to turn down anew in December 2014. Those circumstances are discussed in the *Executive Summary* and in the *ECONOMY* section of *No. 859 Special Commentary*. Consider also today's *Opening Comments*.

Weakest Annual GDP Growth Since the Recession. With negligible downside revisions to the fourth-quarter 2016 GDP detail, worse-than-expected conditions remained in play. In nominal terms, before

inflation adjustment, annual change for the GDP in 2016 was a revised 2.93% (previously 2.94%), down from 3.70% in 2015. The 2016 nominal growth pace was the weakest since the annual contraction of 2.09% (-2.09%) in 2009, which was the trough year of the economic collapse. In real terms, adjusted for inflation, annual change for the GDP in 2016 held at 1.60%, down from 2.60% in 2015. The 2016 real growth pace was tied with 2011 (also 1.60%) as the weakest showing since the annual contraction of 2.78% (-2.78%) in 2009.

Heavily Followed but of Extremely Poor Quality. In this most-politically-sensitive of popularly followed economic series, the GDP does not reflect properly or accurately the changes to the underlying economic fundamentals and measures that drive the broad economy. Separately reported, real-world economic activity has shown that the general economy began to turn down in 2006 and 2007, plunged into 2009, entered a protracted period of stagnation thereafter—never recovering fully—and then began to turn down anew in late-2014 (see graphs in the *Executive Summary* and in the *ECONOMY* section of *No. 859 Special Commentary*).

The GDP (or the broader GNP detail headlined in earlier decades) simply remains the most worthless of the popular government economic series, in terms of determining what really is happening to U.S. business activity. The series is the most-heavily-modeled, politically-massaged and gimmicked government indicator of the economy. It has been so since at least the 1960s, and that reporting quality deteriorated anew, sharply in 2016 benchmarking (see the *Opening Comments* of *Commentary No. 823*).

Notes on GDP-Related Nomenclature and Definitions

For purposes of clarity and the use of simplified language in the text of the GDP analysis, here are definitions of several key terms used related to GDP reporting:

Gross Domestic Product (GDP) *is the headline number and the most widely followed broad measure of U.S. economic activity. It is published quarterly by the Bureau of Economic Analysis (BEA), with two successive monthly revisions, and with an annual revision in the following July.*

Gross Domestic Income (GDI) *is the theoretical equivalent to the GDP, but the popular press generally does not follow it. Where GDP reflects the consumption side of the economy and GDI reflects the offsetting income side. When the series estimates do not equal each other, which almost always is the case, since the series are surveyed separately, the difference is added to or subtracted from the GDI as a "statistical discrepancy." Although the BEA touts the GDP as the more accurate measure, the GDI is relatively free of the monthly political targeting the GDP goes through.*

Gross National Product (GNP) *is the broadest measure of the U.S. economy published by the BEA. Once the headline number, now it rarely is followed by the popular media. GDP is the GNP net of trade in factor income (interest and dividend payments). GNP growth usually is weaker than GDP growth for net-debtor nations. Games played with money flows between the United States and the rest of the world tend to mute that impact on the reporting of U.S. GDP growth.*

Real *(or* ***Constant Dollars****) means the data have been adjusted, or deflated, to reflect the effects of inflation.*

Nominal *(or* ***Current Dollars****) means growth or level has not been adjusted for inflation. This is the way a business normally records revenues or an individual views day-to-day income and expenses.*

GDP Implicit Price Deflator (IPD) *is the inflation measure used to convert GDP data from nominal to real. The adjusted numbers are based on "Chained 2009 Dollars," as introduced with the 2013 comprehensive revisions, where 2009 is the base year for inflation. "Chained" refers to the substitution methodology, which*

gimmicks the reported numbers so much that the aggregate of the deflated GDP sub-series missed adding to the theoretically-equivalent deflated total GDP series by $105.5 billion in "residual," as of the second estimate of second-quarter 2016.

***Quarterly** growth, unless otherwise stated, is in terms of seasonally-adjusted, annualized quarter-to-quarter growth, i.e., the growth rate of one quarter over the prior quarter, raised to the fourth power, a compounded annual rate of growth. While some might annualize a quarterly growth rate by multiplying it by four, the BEA uses the compounding method, raising the quarterly growth rate to the fourth power. So a one percent quarterly growth rate annualizes to 1.01 x 1.01 x 1.01 x 1.01 = 1.0406 or 4.1%, instead of 4 x 1% = 4%.*

***Annual** growth refers to the year-to-year change of the referenced period versus the same period the year before.*

Gross Domestic Product (GDP). Published this morning, February 28th, by the Bureau of Economic Analysis (BEA), the second estimate of, first revision to fourth-quarter 2016 GDP showed a minimally-revised, statistically-insignificant, real (inflation-adjusted), annualized, quarterly headline gain of 1.86% +/- 3.5% (95% confidence interval), previously 1.88%. Distribution of the revised fourth-quarter 2016 GDP growth by major category is detailed in the *Executive Summary*. The current headline detail remains in the context of the July 29, 2016 annual GDP benchmark revisions discussed in *Commentary No. 823* and is subject to one subsequent monthly revision and the next round of annual GDP benchmarking scheduled for July 28, 2017.

The second estimate of fourth-quarter GDP growth came in below consensus expectations of 2.1%, at a continuing still-not-credibly-positive pace of headline activity. The revised headline fourth-quarter 2016 annualized real growth of 1.86% followed gains of 3.51% in third-quarter 2016, 1.42% in second-quarter 2016, 0.83% in first-quarter 2016 and 0.87% in fourth-quarter 2015.

Fourth-quarter growth still was dominated by an involuntary buildup in inventories, gains in construction, vehicle sales and state- and local-government spending, heavily offset by a deteriorating trade deficit. Fourth-quarter 2016 Final Sales (GDP net of inventory change) grew at a revised annualized real quarterly pace of 0.92% [previously 0.88%], versus 3.02% in third-quarter 2016.

Graphs 11 and *13* plot headline levels of real quarterly GDP activity, respectively showing short-term (since 2000) and long-term (since the historical onset of the quarterly GDP series in 1947) perspectives. *Graph 16* shows the level of annual real GDP activity, as estimated beginning in 1929.

Shown in *Graphs 12* and *14*, headline year-to-year real GDP growth in fourth-quarter 2016 rose to a revised 1.90% [previously 1.91%], versus 1.65% in third-quarter 2016, 1.28% in second-quarter 2016, 1.57% in first-quarter 2016, and 1.88% in fourth-quarter 2015. Through second-quarter 2016 reporting, real annual growth had been in a continual slowing pattern since the near-term peak of 3.31% in first-quarter 2015, the post-recession high annual growth for the series. A sharp downtrend in annual growth is common at the onset of formal recessions. Shown in *Graph 16*, annual-average real GDP growth in 2016 slowed to an unrevised 1.60%, versus 2.60% in 2015, which tied with 2011 for slowest pace of annual growth in the post-2009 "recovery."

The current-cycle trough in quarterly annual change was in second-quarter 2009 (see *Graphs 12* and *14*), reflecting a year-to-year decline of 4.09% (-4.09%). That was the deepest year-to-year contraction for any quarterly GDP in the history of the series, which began with first-quarter 1947 (1948 in terms of

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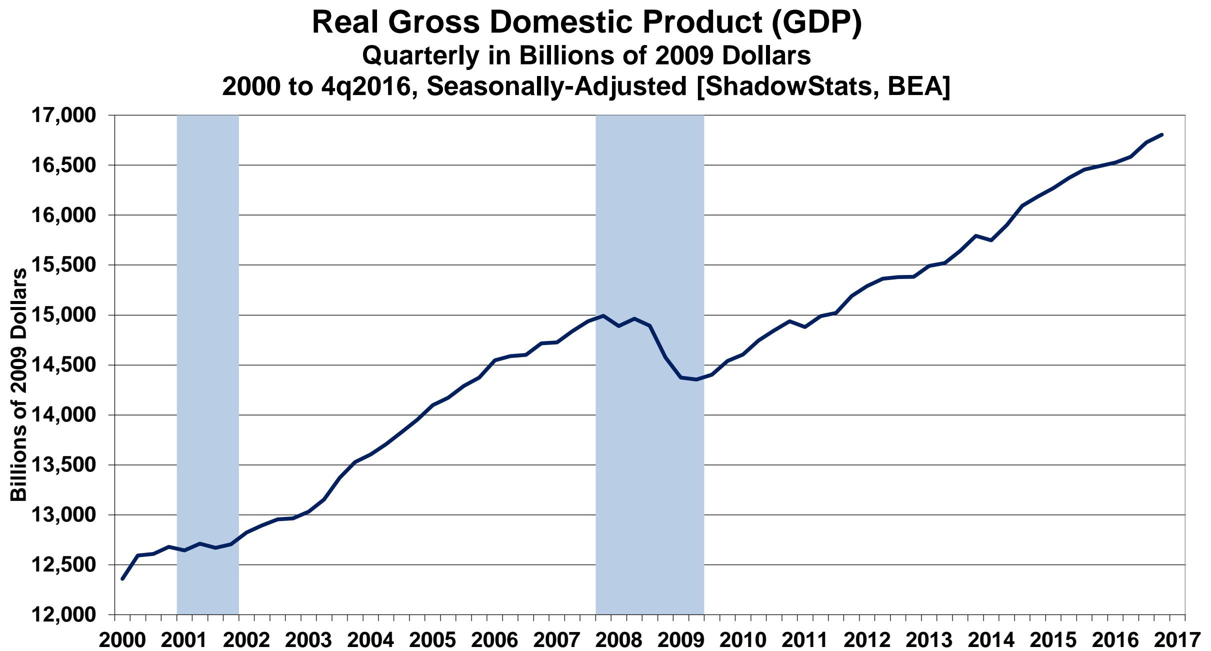
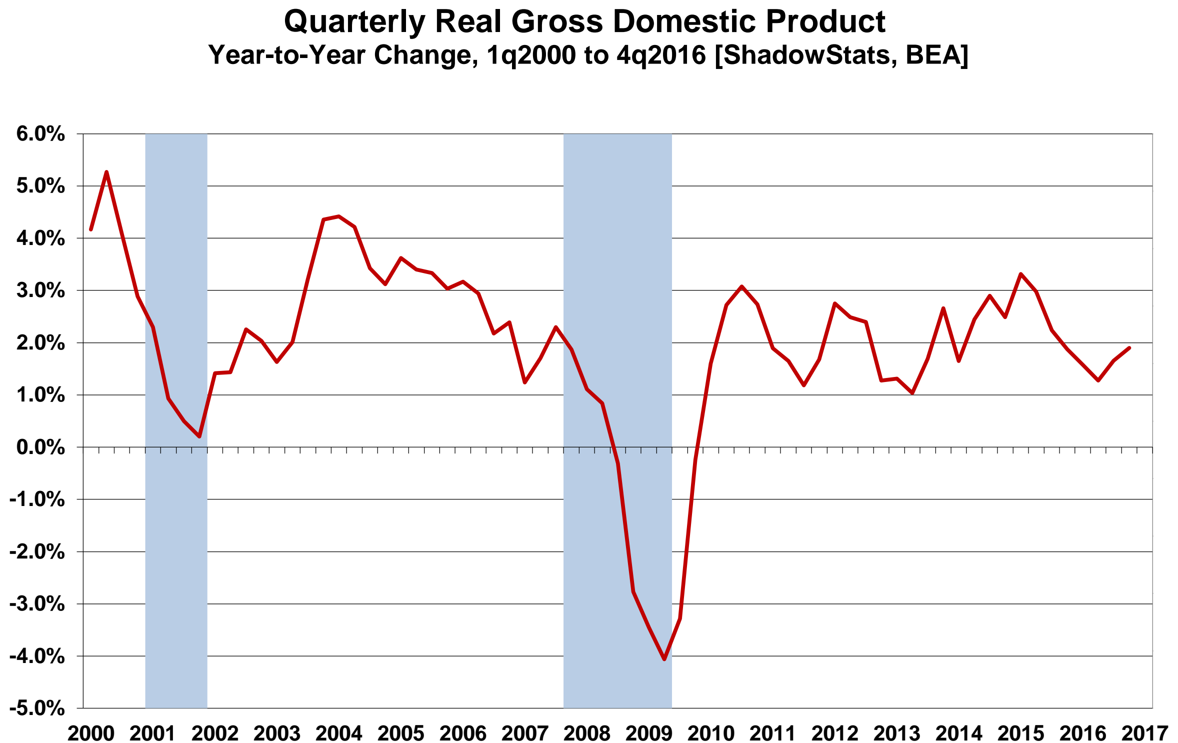
available year-to-year detail). *Graph 12* shows current year-to-year quarterly detail, from 2000-to-date, where *Graph 14* shows the same series in terms of its full quarterly, year-to-year history back to 1948. In annual terms (*Graph 16*), the year-to-year decline of 2.78% (-2.78%) in 2009 was the steepest regular annual drop in economic activity since the Great Depression. The 1946 production shutdown and economic reorganization following World War II, however, resulted in an annual GDP decline of 11.58% (-11.58%), minimally narrower than the 1932 annual economic crash of 12.89% (-12.89%).

[Graphs 11 to 16 begin on the next page]

Graph 11: Quarterly GDP in Billions of 2009 Dollars (2000 to 2016), Second Estimate of Fourth-Quarter 2016



Graph 12: Quarterly GDP Real Year-to-Year Change (2000 to 2016), Second Estimate of Fourth-Quarter 2016



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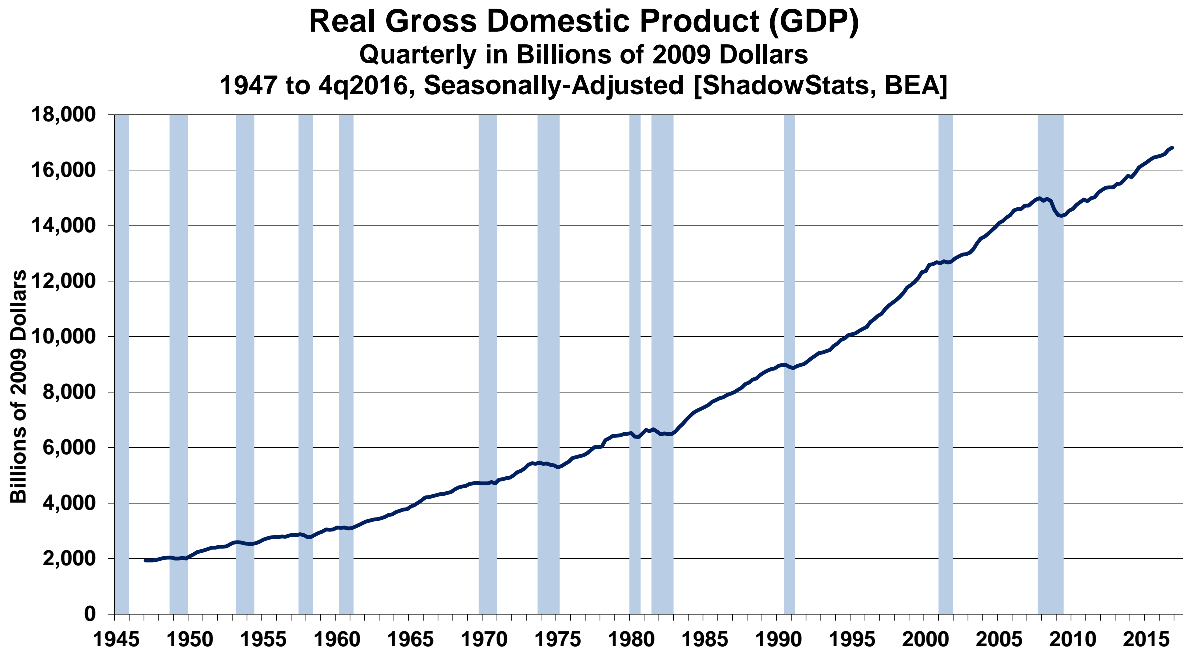
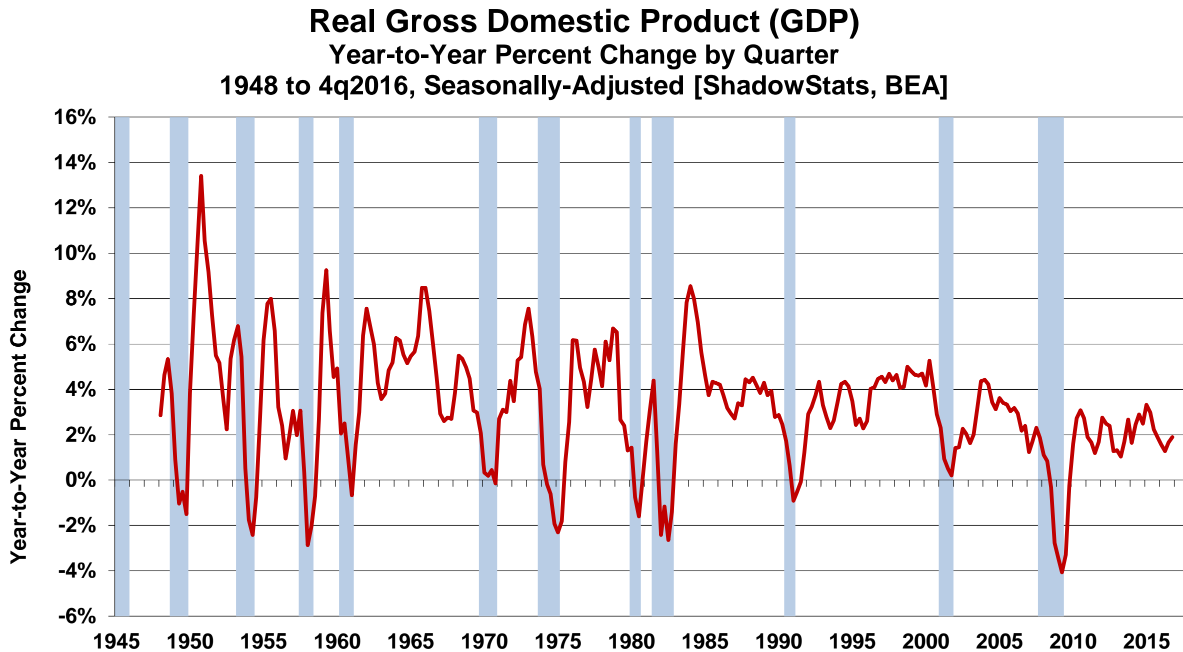
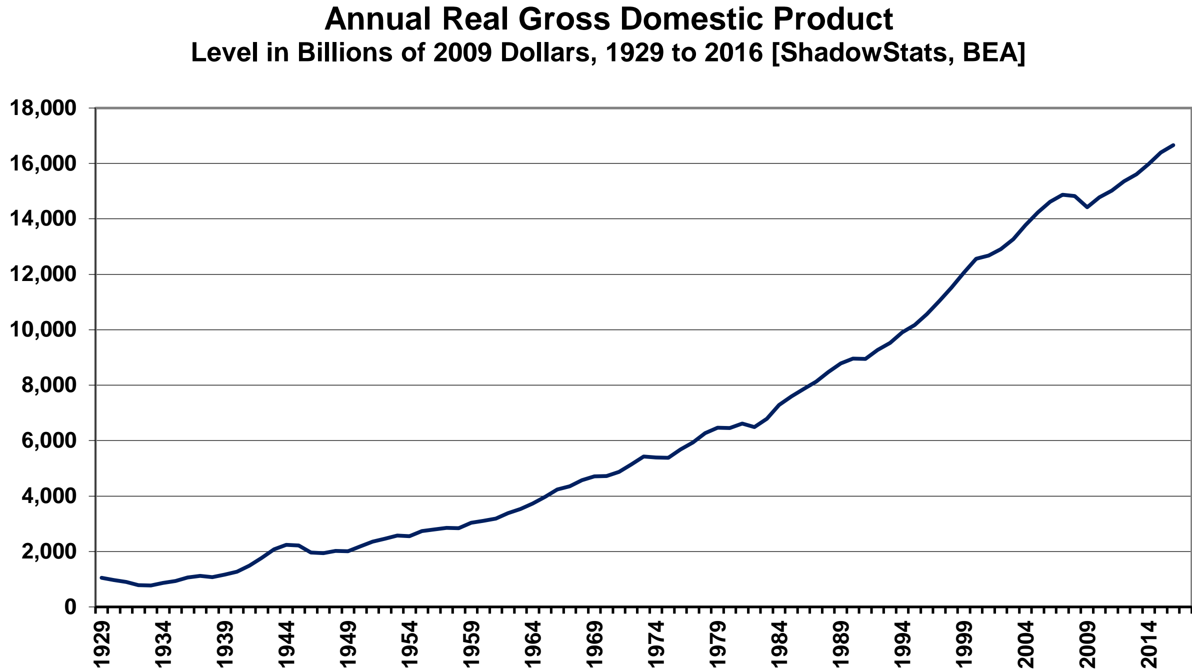
Graph 13: Quarterly GDP in Billions of 2009 Dollars (1947-2016), Second Estimate of Fourth-Quarter 2016



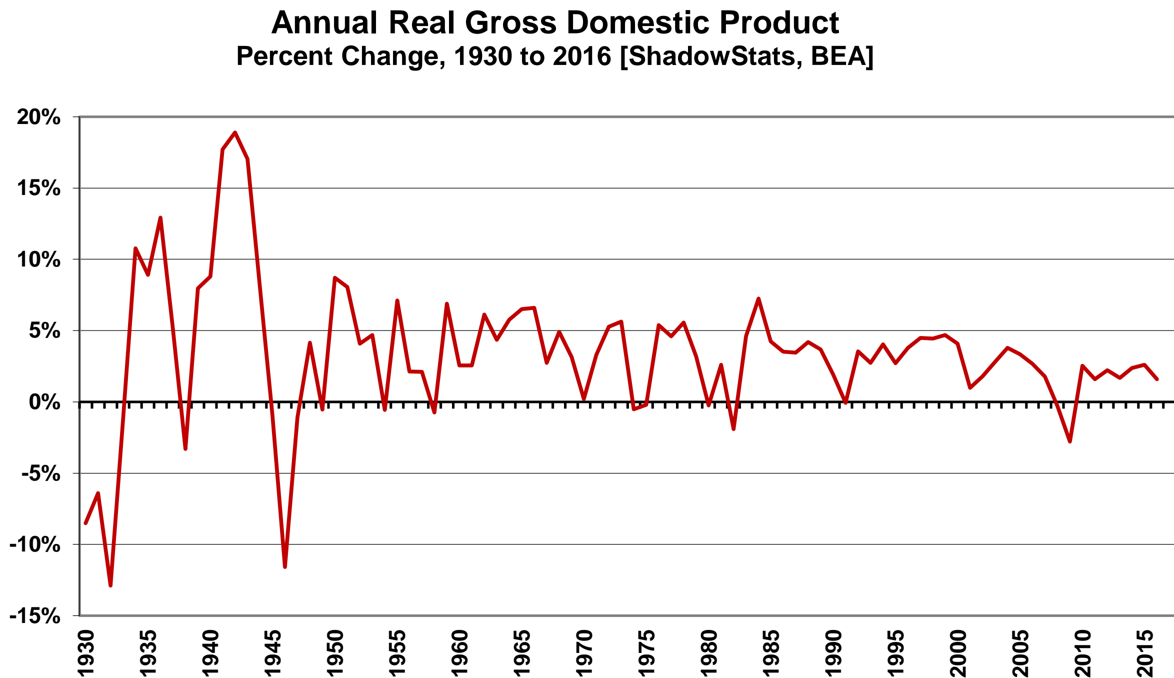
Graph 14: Year-to-Year GDP Real Change (1948-2016), Second Estimate of Fourth-Quarter 2016



Graph 15: Annual GDP in Billions of 2009 Dollars (1929-2016), Includes Second Estimate of Fourth-Quarter 2016



Graph 16: GDP Real Annual Percent Change (1930-2016), Includes Second Estimate of Fourth-Quarter 2016



Implicit Price Deflator (IPD). The second estimate of fourth-quarter 2016 GDP inflation, or the implicit price deflator (IPD), showed a revised annualized quarterly change of 2.02% [previously 2.12%], versus an annualized 1.41% in third-quarter 2016, 2.29% in second-quarter 2016, 0.46% in first-quarter 2016, 0.91% in fourth-quarter 2015, 1.22% in third-quarter 2015, 2.25% in second-quarter 2015 and 0.04% in first-quarter 2015.

As general guidance, the weaker the inflation rate used in deflating an economic series, the stronger will be the resulting inflation-adjusted growth, and vice versa. The downside movement in the second-estimate of fourth-quarter 2016 IPD of 0.10% was enough to keep the second estimate of real fourth-quarter GDP growth from revising lower to 1.8%, from the prior 1.9%, despite the downside revision in the annualized nominal fourth-quarter growth from 4.0% to 3.9%.

Year-to-year, the headline fourth-quarter 2016 IPD inflation revised to 1.54% [previously 1.57%], versus 1.27% in third-quarter 2016, 1.22% in second-quarter 2016, 1.21% in first-quarter 2016, 1.10% in fourth-quarter 2015, 1.00% in third-quarter 2015, 1.11% in second-quarter 2015 and 1.10% in first-quarter 2015.

In terms of year-over-year, average annual inflation, the 2016 IPD inflation was a revised 1.31% [previously 1.32%], versus 1.08% in 2015 and 1.79% in 2014.

For purposes of comparison, and in the context of annual revisions to seasonal adjustments, the seasonally-adjusted Consumer Price Index CPI-U rose by an annualized revised 3.04% [previously 3.44%] in fourth-quarter 2016, versus 1.78% [1.63%] in third-quarter 2016, 2.33% [2.53%] in second-quarter 2016, 0.11% [previously down 0.31% (-0.31%)] in first-quarter 2016, a 0.35% [0.77%] gain in fourth-quarter 2015, 1.50% [1.38%] gain in the third quarter 2015, 2.35% [2.44%] gain in second quarter 2015 and a quarterly contraction of 2.52% (-2.52%) [2.86% (-2.86%)] in first quarter of 2015.

Unadjusted and unrevised, year-to-year quarterly CPI-U inflation showed annual gains of 1.80% in fourth-quarter 2016, 1.12% in third-quarter 2016, 1.05% in second-quarter 2016, 1.08% in first-quarter 2016, 0.47% in fourth-quarter 2015, 0.11% in third-quarter 2015, and contractions of 0.04% (-0.04%) in second-quarter 2015 and 0.06% (-0.06%) in first-quarter 2015.

In terms of year-over-year, average annual inflation, the 2016 CPI-U inflation was 1.26%, versus 0.12% in 2015 and 1.62% in 2014 (see prior *Commentary No. 862* and *Commentary No. 866*).

Gross National Product (GNP) and Gross Domestic Income (GDI). Standardly, the first estimates of fourth-quarter GNP and GDI are not published until the release of the third estimate of fourth-quarter GDP. That circumstance is due to quality issues with the available "advance" and second estimates of year-end data, a problem also specifically common to the headline GDP reporting. Initial fourth-quarter 2016 estimates of GNP and GDI will follow on March 30th, along with the third estimate of, second revision to the fourth-quarter GDP. The available third-quarter GNP and GDI details are found in *Commentary No. 857* of December 23rd.

Still, a background revision was published today (February 8th) for third-quarter GDI, which strengthened in revision to annualized real third-quarter growth of 5.01% [previously 4.77%], and to year-to-year real change of 1.98% [previously 1.93%].

GNP remains the broadest measure of U.S. economic activity, where GDP is GNP net of trade flows in

factor income (interest and dividend payments). As a reporting gimmick aimed at boosting the headline reporting of economic growth for net-debtor nations such as the United States, international reporting standards were shifted some decades back to reporting headline GDP instead of what had become a relatively weaker GNP. Headline, annualized real third-quarter 2016 GNP growth stood at 3.35%, versus 2.16% in second-quarter 2016.

GDI is the theoretical income-side equivalent to the consumption-side GDP estimate. The GDP and GDI are made to equal each other, every quarter, with the addition of a "statistical discrepancy" to the GDI-side of the equation. Third-quarter 2016 GDI rose at an annualized pace of 4.77%, against a gain of 0.71% in second-quarter GDI.

Increasingly touted by the BEA as *the* GDP counterpart, the regularly-unstable GDI has been bloated heavily by effectively-worthless income reporting out of the Bureau of Labor Statistics (BLS). The purported income gains have reflected heavily-upside-biased income estimates out of the otherwise-rigged nonfarm payroll survey.

ShadowStats-Alternate GDP. The ShadowStats-Alternate GDP fourth-quarter 2016 GDP estimate is a year-to-year contraction of 1.8% (-1.8%), unchanged versus the unrevised headline second estimate of a fourth-quarter 2016 annual real headline GDP gain of 1.9%. That circumstance was against a ShadowStats 1.9% (-1.9%) annual-decline estimate for third-quarter 2016, versus the official headline annual gain of 1.7% in third-quarter 2016 GDP.

While the annualized, real quarterly growth rate is not estimated formally on an alternate basis, the unrevised statistically-insignificant, annualized, headline quarter-to-quarter gain of 1.9% in fourth-quarter 2016 was much weaker, net of all the happy assumptions, regular reporting gimmicks and any short-term political gaming coming into the headline detail. Actual quarterly contractions appear to have been a realistic possibility for inflation-adjusted GDP in most quarters since the official, second-quarter 2009 end to the 2007 recession.

Adjusted for understated inflation and other methodological changes—such as the inclusion of intellectual property, software and recent accounting for the largely not-measurable and questionable impact of the Affordable Care Act (ACA)—the business collapse that began in 2006/2007 is ongoing; there has been no meaningful economic rebound. The "corrected" real GDP *Graphs 2* and *4* in the *Executive Summary* (see also the *ECONOMY* section in *No. 859 Special Commentary* and *2014 Hyperinflation Report—Great Economic Tumble*), are based on the removal of the impact of hedonic quality adjustments that have reduced the reporting of official annual GDP inflation by roughly two-percentage points. It is not the same measure as the ShadowStats-Alternate GDP, here, which reflects reversing additional methodological distortions ("Pollyanna Creep") of recent decades.

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WEEK, MONTH AND YEAR AHEAD

Non-Recovering Economic Stagnation and Continued Downturn Promise a Frustrated Fed and Rapidly Deteriorating Support for the U.S. Dollar. Despite recent, mixed headline economic signals, the broad outlook for stagnant to down-trending economic activity has not changed. Separately, the problems with the Fed's loss of meaningful systemic control, and the long-term sovereign solvency issues of the United States government, threaten destabilization of the U.S. dollar and the financial markets. Accordingly, the following opening section here has not been revised:

No. 859 Special Commentary updated near-term economic and inflation conditions, and the outlook for same, including the general economic, inflation and systemic distortions evolving out of the Panic of 2008 that have continued in play, and which need to be addressed by the new Administration in the immediate future (see also the *Hyperinflation Watch* of *Commentary No. 862*).

Contrary to the official reporting of an economy that collapsed from 2007 into 2009 and then recovered strongly into ongoing expansion, underlying domestic reality remains that the U.S. economy started to turn down somewhat before 2007, collapsed into 2009 but never fully recovered. While the economy bounced off its 2009 trough, it entered a period of low-level stagnation and then began to turn down anew in December 2014, a month that should mark the beginning of a "new" formal recession (see *General Commentary No. 867*).

Coincident with and tied to the economic crash and the Panic of 2008, the U.S. banking system moved to the brink of collapse, a circumstance from which U.S. and global central bank policies never have recovered. As this ongoing crisis evolves towards its unhappy end, the U.S. dollar ultimately should face unprecedented debasement with a resulting runaway domestic inflation.

The current general mixed-trend in weakening data and what should become increasingly-negative expectations for near-term business activity, along with movement towards looming recession recognition, reflect an ongoing broad spectrum of likely market-disappointing headline data. That should pressure the FOMC back towards expanded quantitative easing, despite the Fed's December 2016 and rate hike and already-softening market hype as to multiple rate hikes looming in the year ahead.

In response to an intensifying downturn, financial market expectations should shift towards renewed Fed "easing," with the effect of triggering a massive U.S. dollar sell-off, accompanied by a sharp upturn in oil prices, domestic inflation and heavy flight to the safe-haven qualities of physical gold and silver, with a commensurate rally in the prices of those precious metals. Again, see *No. 859* for extended discussion.

Broad economic and systemic conditions are reviewed regularly, with the following *Commentaries* of particular note: *No. 777 Year-End Special Commentary* (December 2015), *No. 742 Special Commentary: A World Increasingly Out of Balance* (August 2015) and *No. 692 Special Commentary: 2015 - A World Out of Balance* (February 2015). Those publications updated the long-standing hyperinflation and

economic outlooks published in *2014 Hyperinflation Report—The End Game Begins – First Installment Revised* (April 2014) and *2014 Hyperinflation Report—Great Economic Tumble – Second Installment* (April 2014). The two *Hyperinflation* installments remain the primary background material for the hyperinflation circumstance. Other references on underlying economic reality are the *Public Commentary on Inflation Measurement* and the *Public Commentary on Unemployment Measurement*.

Recent Commentaries:

Commentary No. 868 covered the January 2017 reporting of New Orders for Durable Goods.

General Commentary No. 867 assessed mixed signals for a second bottoming of the economic collapse into 2009, which otherwise never recovered its level of pre-recession activity. Such is 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 January 2017 New- and Existing Home Sales.

Commentary No. 866 reviewed headline January 2017 detail of the CPI (and related series), PPI, Industrial Production, Residential Construction and Retail Sales, both nominal and real.

Commentary No. 865 updated the outlook on the Trade Deficit for December 2016, Fourth-Quarter 2016 and for the initial 2016 annual detail.

Commentary No. 864 analyzed the January 2017 Employment and Unemployment detail, including benchmark and population revisions, December Construction Spending, Household Income, along with an update to Consumer Liquidity.

Commentary No. 863 assessed the "advance" estimate of fourth-quarter 2016 GDP and reviewed the prior estimates of December 2016 New Orders for Durable Goods and for New- and Existing-Home Sales.

Commentary No. 861 covered the prior December 2016 nominal Retail Sales, the PPI, with a brief look at some summary GAAP reporting on the U.S. government's fiscal 2016 operations. The GAAP-detail will be reviewed in tomorrow's *Commentary No. 869* of February 28th.

No. 859 Special Commentary reviewed and previewed economic, financial and systemic developments of the year passed and the year or so ahead.

Note on Reporting-Quality Issues and Systemic-Reporting Biases. Significant reporting-quality problems remain with most major economic series. Beyond the pre-announced gimmicked changes to reporting methodologies of the last several decades, which have tended to understate inflation and to overstate economic activity—as generally viewed in the common experience of Main Street, U.S.A.—ongoing headline reporting issues are tied largely to systemic distortions of monthly seasonal adjustments.

Data instabilities—induced partially by the still-evolving economic turmoil of the last eleven years—have been without precedent in the post-World War II era of modern-economic reporting. The severity and ongoing nature of the downturn provide particularly unstable headline economic results, with the use of concurrent seasonal adjustments (as seen with retail sales, durable goods orders, employment and unemployment data). That issue is discussed and explored in the labor-numbers related *Supplemental Commentary No. 784-A* and *Commentary No. 695*.

Further, discussed in *Commentary No. 778*, a heretofore unheard of spate of "processing errors" surfaced in 2016 surveys of earnings (Bureau of Labor Statistics) and construction spending (Census Bureau).

This is suggestive of deteriorating internal oversight and control of the U.S. government's headline economic reporting. That construction-spending issue now appears to have been structured as a gimmick to help boost the July 2016 GDP benchmark revisions, aimed at smoothing the headline reporting of the GDP business cycle, instead of detailing the business cycle and reflecting broad economic trends accurately, as discussed in *Commentary No. 823*.

Combined with ongoing allegations in the last year or two of Census Bureau falsification of data in its monthly Current Population Survey (the source for the BLS Household Survey), these issues have thrown into question the statistical-significance of the headline month-to-month reporting for many popular economic series (see *Commentary No. 669*). John Crudele of the *New York Post* continues his investigations in reporting irregularities: *Crudele Investigation*, *Crudele on Census Bureau Fraud* and *John Crudele on Retail Sales.*

PENDING RELEASES:

Construction Spending (January 2017). The Commerce Department will release its estimate of January 2017 construction spending on Wednesday, March 1st. Detail will be covered in the ShadowStats *Commentary* of March 7th. As usual, headline monthly changes should not be statistically-significant. Irrespective of almost perpetually-positive market expectations for this series, the detail generally should continue in flat-to-downtrending stagnation, particularly in real terms, net of inflation.

U.S. Trade Deficit (January 2017). The Commerce Department and Bureau of Economic Analysis (BEA) will release their full version of the monthly U.S. trade balance for January 2017 on Tuesday, March 7th, which will be covered in the ShadowStats *Commentary* of that date. The full version of the January 2017 deficit will revise the often worthless "advance" estimate in merchandise trade, which showed a significant widening of the month-to-month deficit, as released today (February 28th). In the event that the revised hard detail for December shows greater trade deterioration, that would suggest some likely downside revision to the third estimate of Fourth-Quarter 2016 GDP on March 30th. Irrespective of any recent games that played with the headline trade detail, for the benefit of the fourth-quarter GDP data, the trade deficit generally should continue to widen in subsequent months and quarters.

Employment and Unemployment (February 2017). The Bureau of Labor Statistics (BLS) will publish its headline February 2017 labor data on Friday, March 10th, which will be covered in the ShadowStats *Commentary* of that date. Both the more-inclusive unemployment-rate numbers, as well as the headline payroll-employment details, are open for negative headline surprises, given the ongoing, general stagnant-to-weakening tone in a number of the better business indicators. The payroll detail will be published in the context of last month's heavily upside-biased annual benchmark revisions (see *Commentary No. 864*).

Underlying Reality Remains to the Downside of Expectations. In the context of recent the extreme volatility and inconsistencies in payroll and unemployment detail, almost anything is possible with the BLS reporting. Underlying reality remains a much weaker-than-expected economy, which increases the odds of negative surprises to the headline reporting of both the payroll and household-survey detail.

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Pending *SPECIAL COMMENTARIES*. *GAAP-Based Accounting of the U.S. Government (Fiscal-Year 2016).* With some prior review in *Commentary No. 861* and *No. 859 Special Commentary*, full analysis is planned in a *Special Commentary* of the week ahead.

Separately, the long-planned and delayed consolidation of the major *ShadowStats* reporting into one volume, including the recommended reading list, should follow in March.

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