



Our Perspectives:

Commentary on the economy & regulatory policies affecting financial companies

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The Longbrake Letter

Assessment of 2016 Forecasts

Outlook for 2017*

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In this month's letter, I include a final assessment of observations I made a year ago about how the U.S. and global economies might fare in 2016. You will find that I got some things right and many things wrong. The U.S. and global economies are dynamic and ever changing. Some trends are foreseeable. But, governmental policy intervention, whether it be political or economic, can alter outcomes and set in motion feedbacks that significantly affect economic developments. In this respect, 2016 was no different from any previous year.

Such will also be the case in 2017. Nonetheless, I once again attempt to summarize key U.S. and global economic developments that seem possible, perhaps likely, in 2017. I also list risks to the 2017 outlook.

I wish all a very joyous holiday season!

*The information contained in this newsletter does not constitute legal advice. This newsletter is intended for educational and informational purposes only.

I. Outlook — 2016 and Beyond — Forecast Summary for the U.S. and the Rest of the World, Highlights of Key Issues, and Identification of Risks

Observations about the 2016 U.S. and global economic outlook and risks to the outlook were contained in the *December 2015 Longbrake Letter* and are included below without any changes. As events unfold during 2016, this will enable the reader to track my analytical prowess. Current assessments follow each item with the following identifiers: “+” **tracking forecast**; “-” **not tracking forecast**; “?” **too soon to know**. As events unfold during 2016, this will enable the reader to track my analytical prowess.

As 2016 progressed, actual results for many economic Indicators diverged from beginning-of-the year forecasts, as evidenced by the large amount of red ink, “not tracking,” below. In addition, many of the risks have materialized.

Financial markets started the year off in ugly fashion with stock prices plunging in all global stock markets, prices of commodities in free fall, and long-term bond yields heading toward zero or below in many global markets. Concerns about slowing global growth and potential recession in the U.S. were amplified by unexpectedly weak data reports during the opening weeks of 2016. Consequently, many forecasters lowered their estimates of economic activity during 2016, but virtually none expected recession.

Market sentiment reversed rather abruptly in late February as it became evident that markets had overreacted and as central banks moved to stabilize markets. Data reports since then have generally been more upbeat, particularly in the U.S. Thus, it was not at all surprising that recession fears faded into the background during the spring.

In late June the British vote to leave the European Union reverberated through global financial markets. Although Brexit is likely to result in significant consequences, particularly for the U.K. and E.U. economies, over time, the market quickly determined that interest rates would remain much lower for longer and reverted to “risk-on” dynamics, driving U.S. stock prices to an all-time high and U.S. interest rates to the lowest level in the 240-year history of the nation.

During the second half of the year global growth has ground higher but has been uninspiring. Markets were relatively stable and volatility declined. There was no significant shock to stir up global market anxieties.

This changed with the election of Donald J. Trump’s to be America’s next president. In the U.S. stock prices and the dollar rebounded initially to match the year’s highs. But America’s reflation rally gained momentum as the year closed as investors decided that President Trump and an all-Republican Congress would boost growth through aggressive fiscal policy and regulatory relief. Interest rates rose sharply and stock prices hit all-time highs.

There is a saying, “When the U.S. sneezes, the rest of the world catches a cold.” It remains to be seen how recent U.S. political and financial markets shocks will impact politics and economic activity in other nations. What is relatively certain is that the risks of

potentially adverse consequences have risen.

Overall, the 2016 U.S. and global growth outlooks were less favorable than when forecasts were prepared in December 2015. In addition, even the year ended on a decidedly optimistic note, uncertainty about the future courses of the U.S. and global economies has risen.

1. **U.S. — December Assessment:** relatively steady growth, but at a low level; consumer spending growth has weakened slightly; presidential election has fostered uncertainty
 - ✓ *Employment growth remains strong, little slack remains as the unemployment rate dipped to 4.6%, but wage growth remains weak; labor market conditions index was a relatively strong 1.5 in November*
 - ✓ *Consumer confidence improved to the best readings of the year*
 - ✓ *Consumer spending has slowed from an above trend pace in the second quarter*
 - ✓ *Manufacturing and services PMIs and small business sentiment, which had been relatively stable for most of the year, broke out on the up side*
 - ✓ *The Economic Cycle Research Institute's (ECRI) weekly leading economic index continues to strengthen and is near the high achieved just prior to the onset of the Great Recession*
 - ✓ *Retail sales were much weaker than expected in November and October growth was revised down*
 - ✓ *After spiking prior to the election, the uncertainty index has improved but still remains at an historically high level*
- **2016 real GDP Y/Y** growth projections range from 2.3% to 2.5%. The FOMC's central tendency Q4/Q4 projections range from 2.3% to 2.5%. (Q4/Q4 projections are highly dependent upon potential anomalies in Q4 data; therefore, Y/Y estimates, which average all four quarters, usually are more stable estimates.) Risks are tilted to the upside because of the substantial federal tax reductions and spending increases Congress enacted at the end of 2015.
 - *Based upon mid-year GDP revisions and Q4 forecasts, B of A and GS have reduced their estimates of 2016 year-over-year growth to 1.60% and 1.57%, respectively; my estimate is 1.56%; IMF forecast is 1.6%; the FOMC reduced it's 2016 Q4/Q4 projection range from 2.3%2.5% at the beginning of the year to 1.8%1.9% in December*
 - *Forecasts for Q4 real GDP range between 1.3% and 2.0%*
- **Real GDP output gap** will remain high, but will close rapidly during 2016 from about 2.6% to 2.0%. (*CBO revised potential GDP assumptions in January and again in August; these revisions along with BEA's revisions to GDP data in July reduced the beginning of the year output gap from 2.6% to 1.65%; CBO's revised forecast is for the output gap to close to 1.35% during 2016. Other analysts believe the current output gap is smaller than CBO's estimate.*)
 - + *My estimate of the output gap at the end of 2016 is 1.20%; CBO's estimate is 1.34%*
- **Potential structural rate of real GDP growth** has declined significantly in recent years. I expect potential growth to be about 1.4% in 2016. Long-term potential real GDP growth will edge up in coming years to between 1.8% and 2.1%.

- + My current estimate of potential growth in 2016 is 1.5%*
- B of A reduced its estimate of long-term potential growth to 1.7%; GS's estimate is 1.75%; JPMorgan's 1.5% long-run estimate is more pessimistic.*
- + CBO's updated long-term potential estimate is 1.9%; and the FOMC's central tendency range is 1.8%2.0%*
- + My long-term potential estimate is between 1.75% and 2.0%, depending upon employment and productivity growth*
- **Productivity** should rise during 2016 as growth improves and investment increases, but should still fall well short of the historical 2.1% average.
 - Nonfarm productivity was 0.44% in 2015; the five-year average was 0.45%; my current productivity projection for 2016 is between 0.0% and -0.1%; B of A's is 0.1%*
- **Employment** growth should slow considerably during 2016 as full employment is reached and slow growth in the labor force becomes binding; payroll growth should average 130,000 to 165,000 per month.
 - Payroll employment increased an average of 180,182 per month over the first eleven months of 2016*
- **Employment participation** will be relatively stable during 2016 as labor market conditions tighten and discouraged workers find jobs, offsetting the demographically-embedded decline stemming from retirements of baby boomers.
 - + Participation was 62.66% in November compared to 62.65% last December and up from the recent low of 62.42% in September 2015*
- **Unemployment rate** should edge down to between 4.6% and 4.8%.
 - + Unemployment rate was 4.64% in November slightly below the long-term structural rate of 4.74%, according to CBO*
 - ? U-6 unemployment rate, which adds marginally attached workers and those working part-time for economic reasons to the number unemployed but looking for work, was 9.29% in November, which is 1.0% above the 2006-2007 average*
- **Nominal consumer disposable income**, measured on a Y/Y basis should slow as employment growth slows; this will be offset partially by an increase in average hourly wage rates; growth should be in a range of 2.2% to 2.5%.
 - Disposable income growth in October was 3.8% ahead of the year earlier level due to strong employment gains during the last year; growth is projected to fall to 3.68%*
- **Nominal consumer spending growth** on the Y/Y basis will be relatively stable in a range of 3.3% to 3.5%.
 - + Nominal spending growth over the past year as of September was rising at a 3.5% annual pace; I project nominal spending growth in 2016 to be approximately 3.6%*
 - ? Consumer sentiment measures were relatively soft during much of the year but most measures strengthened after the presidential election:*
 - ✓ University of Michigan's index was 98.0 in December compared to 93.8 in November, 87.2 in October, 91.2 in September, 89.8 in August, 90.0 in July and 93.5 in June; it was 92.6 in December 2015;*

- ✓ *Conference Board's measure was 107.1 in December compared to 100.8 in November, 98.6 in October, 103.5 in September, 101.8 in August, 96.7 in July, 97.4 in June, 92.4 in May, 94.7 in April, and 96.2 in March;*
- ✓ *Evercore ISI's weekly company surveys index has been edging down and has fallen from 52.4 to 48.9 since March 2015, but it is up from an interim low of 47.7 in late April*
- **Household personal saving rate** will decline slightly as growth in spending exceeds growth in disposable income.
 - ? *In July the Bureau of Economic Analysis revised the saving rate sharply higher for the last several years*
 - *The revised saving rate was 5.97% over the first ten months of 2016 compared to the revised 2015 average rate of 5.80% (prior to revision the 2015 saving rate was 5.12%) (nominal income growth has exceeded spending growth so far in 2016)*
- **Stock prices**, as measured by the S&P 500 average, should be between 5% higher or lower, reflecting the slowing growth in profits and rising short-term interest rates.
 - *Stock prices are up 10.5% since the beginning of the year*
- **Manufacturing** will continue to be weak with the PMI index just slightly above or below 50.
 - + *The PMI manufacturing index improved from slightly below to slightly above 50 during 2016: it was 53.2 in November compared to 51.9 in October, 51.5 in September, 49.4 in August, 52.6 in July, 53.2 in June, 51.3 in May, 50.8 in April, 51.8 in March, 49.5 in February, 48.2 in January and 48.0 in December 2015*
 - + *The operating rate declined to 75.0% in November, well below the 80% level that historically is indicative of tightness, and implies that capital investment spending will remain weak*
 - + *The PMI non-manufacturing index remained well above 50 throughout the year: it was 57.2 in November compared to 54.8 in October, 57.1 in September, 51.4 in August, 55.5 in July, 56.5 in June, 52.9 in May, 55.7 in April, 54.5 in March, 53.4 in February, 53.5 in January, and 55.8 in December 2015*
 - + *The NFIB optimism index for small businesses, after a lackluster year rose sharply in December to 98.4 compared to 94.9 in November, 94.7 in October, 94.1 in September, 94.4 in August, 94.6 in July, 94.5 in June, 93.8 in May, 93.6 in April, 92.6 in March, 92.9 in February, 93.9 in January, and 95.2 in December 2015; however, this index remains below its recent cyclical peak of 100.3 reached in December 2014*
 - + *GS's business conditions index spent most of the year in contraction territory: it was 48.6 in November compared to 48.0 in October, 56.5 in September, 49.2 in August and 47.1 in July, 55.5 in June, 48.6 in May, 44.9 in April, 46.5 in March, 40.4 in February, 39.9 in January, and 48.6 in December 2015; this indicator has been above 50 only twice in the last 20 months (a value of 50 indicates trend growth; thus, business conditions were below trend for 14 months until June)*
- **Business investment** spending growth should edge down slightly and be in a range of 2.0% to 3.5% as employment and consumer spending growth slows.
 - *Business investment fell at an annual rate of -0.8% over the first three quarters of 2016, reflecting in part energy investment cutbacks; however, investment in non-energy areas has fallen short of expectations*

- *GS expects business investment to fall -0.6% on a year-over-year basis during 2016; B of A expects business investment to decline -0.5% in 2016*

? *An Evercore ISI's Q3 2016 survey indicated that U.S. capital spending plans have reached the lowest level since the survey began in 2010; global capital spending plans turned negative for the first time since the survey began in 2010 in Q2 but rebound to a positive, but weak, level in Q3*

? *Evercore ISI's Q3 2016 survey indicated that inventories have decreased but remain slightly above optimal levels, particularly for industrial companies*

? *Average age of U.S. government infrastructure has declined from about 18 years in the 1950s to 27 years in 2014*

- **Residential housing investment** should remain relatively strong in a range of 6% to 8%, but should edge down a bit from 2015's level; housing starts should rise 10% to 15%.

- *Residential housing investment has fallen at an annual rate of -1.7% over the first three quarters of 2016; a strong Q4 is expected to boost 2016 year-over-year growth to 4.7% to 5.0%*

- *Over the first eleven months of 2016 housing starts are 5.0% above 2015's average, but 5.4% above the first eleven months of 2015, which is well below the expected growth rate*

- **Residential housing prices** should rise more slowly in 2016 in a range of 2% to 4% in 2016.

- *B of A is forecasting housing prices to increase 4.1% in 2016 instead of 1.8% it expected at the beginning of the year; GS expects prices to increase 3.5% in 2016*

- *The Federal Housing Finance Agency's purchase only price index rose 6.0% over the 12-month period through September 2016*

- *The Case-Shiller national home price index was up 5.5% over the previous 12 months in September*

- *CoreLogic reported that home prices were up 6.3% year over year in September; prices of sales of nondistressed homes were up 5.8%*

- **Trade deficit** should rise in 2016 as the increase in the value of the dollar continues to depress exports and increase imports. The **dollar's value** on a trade-weighted basis should rise slightly. *(Trade data were revised for the last several years in April 2016, which reduced the size of the deficit, with reductions being greater in more recent months)*

- *The trade deficit has fallen over the last 12 months from 2.75% to 2.61% in October; this decline benefited from a stable dollar, the decline in oil prices and the decrease in U.S. energy imports*

+ *Through December 9 the trade-weighted (major currencies) value of the dollar has risen 1.0% since the beginning of the year*

- **Monetary policy** — the Federal Reserve will raise the federal funds rate two to three times during 2016 in 25 basis point increments.

- *The FOMC raised rates only once in 2016 and that did not occur until the December meeting*

- **Total inflation** measures (CPI and CPE) will rebound sharply in 2016 as the depressing effects of 2015's collapse in oil prices passes out of the indices.

+ *B of A expects CPI to rise from 0.7% in 2015 to 2.1% in 2016 and PCE to rise from 0.6% to 1.6%*

- **Core PCE inflation** will be relatively stable in a range of 1.2% to 1.6%, reflecting global disinflationary trends offset somewhat by the closing U.S. employment and output gaps. Core PCE inflation will remain well below the FOMC's 2% objective at least through 2018 and perhaps much longer.
 - *Core PCE inflation forecasts for 2016 have been raised to 1.8%; FOMC's December projection range for 2016 was 1.7%1.8%; my 2016 forecast for core PCE inflation is 1.7%*
 - The **10-year Treasury rate** is likely to fluctuate in a range between 2.25% and 2.75% in 2016. Faster than expected real GDP and employment growth would push the rate toward the top end of the range; greater than expected declines in inflation and/or heightened financial instability would push the rate toward the bottom end of the range.
 - + *The 10-year rate was 2.60% on December 16, up from a low of 1.37% following the Brexit vote and reflecting the market's expectation that President Trump's policies will boost inflation and interest rates*
 - **Fiscal policy** will have a positive impact on real GDP growth during both fiscal year and calendar year 2016, raising real GDP growth by 0.4 to 0.6%. The deficit as a percentage of nominal GDP will increase substantially from fiscal year 2015's level of 2.46% to a range of 3.25% to 3.50%. Stronger than expected growth would push the deficit toward the lower end of the range.
 - *With GDP revisions, the 2015 calendar year fiscal deficit was 2.42%; both growth and the deficit are rising less rapidly than forecast; the fiscal year 2016 deficit-to-GDP ratio was 3.15%, slightly better than forecast (the final ratio will change, depending future revisions in 2016 Q3 nominal GDP)*
 - **State and Local investment** spending growth should range between 1.5% and 2.0%.
 - ? *The Bureau of Economic Analysis revised state and local investment growth much higher in 2015 from 1.36% to 2.92%*
 - *State and local investment spending was unchanged over the first three quarters of 2016, but is expected to increase 0.9% for all of 2016 on a year-over-year basis*
 - *Tax revenues, especially sales taxes, have been weakening for several months*
2. **Rest of the World: December Assessment:** current activity, on balance, has improved slightly over the last few months from early in the year.
- ✓ *B of A/Merrill Lynch's GLOBAL cycle indicator improved in October and November after declining in August and September; this measure is higher than at the beginning of the year*
 - ✓ *OECD's global leading economic indicator and Evercore ISI's global economic diffusion index have both improved in recent months*
 - ✓ *There was deep unease at the recent IMF meetings about the longer-term effects of ultra-low/negative interest rates and weak growth in advanced economies — short-term risks are down but medium-term risks are up*
 - ✓ *The IMF has concluded that political risk in advanced economies has emerged as the biggest threat to the health of the global economy*

- ✓ *WTO reduced its forecast growth in global trade in 2016 to 1.7% from 2.8%*
- ✓ *Global manufacturing activity expanded at the fastest pace in two years in November*
- **Global growth** is likely to improve to 3.4% in 2016 from 3.1% in 2015. Risks are tilted to the downside.
 - *Global 2016 growth forecast declined to 3.0% (IMF forecast is 3.1%)*
 - ? *The global manufacturing index continues to improve slowly and reached its highest level in two years; the index was 52.1 in November compared to 52.0 in October, 51.1 in September and 51.6 in August; this favorable trend implies acceleration in global growth in 2017*
 - ? *The global services index was 52.9 in October compared to 52.8 in September*
- **European growth** will be positive but will likely fall short of the consensus 1.7% as the benefits of 2015's fall in the value of the euro wane and social and political disruptions occur.
 - + *European growth forecast has declined to 1.6% in 2016, (IMF forecast is 1.6%)*
- **European inflation** will rise from 2015's 0.1% but will probably fall short of the expected 0.9%.
 - + *Final 2015 European inflation was 0.0%; 2016 forecast is 0.2%; core inflation is 0.9%*
 - *The ECB is slowly losing its battle to push inflation to 2.0% but appears to have been successful in preventing deflation*
- **European financial markets** should be relatively stable with periodic episodes of volatility prompted by specific events.
 - + *European stock markets declined broadly in early 2016; bank stocks plunged 45% during the first half of 2016 to a level not experienced in 30 years; however, stock prices rallied vigorously in March and then again following the U.S. presidential election; overall the ECB has been successful in engineering financial market stability*
- **European political dysfunction, populism and nationalism** will continue to worsen gradually. Countries to watch closely include Greece, Spain, Italy and Portugal.
 - + *Political fragmentation is worsening slowly; the immigration crisis is hollowing out centrist political parties*
 - + *Spain's second election was inconclusive but a weak minority government was formed, but it may have a short tenure*
 - + *Italy's banking crisis is simmering and has the potential to spin out of control; Italy's constitutional referendum was defeated; Prime Minister Renzi resigned, but a new government was formed; new elections are possible in 2017 but are more likely to occur on schedule in 2018*
 - + *Greece's third bailout is increasingly in jeopardy of failing; however, Greece's parliament has enacted spending cuts and tax increases necessary to meet the requirements for disbursement of funds under the current bailout agreement; eventually debt relief will be necessary according to the IMF — creditors have promised to consider that possibility in 2018 after the French and German elections*
- **U.K. growth** is expected to remain a solid 2.5% in 2016 compared to 2.4% in 2015; some risk to this outlook could evolve from the proposed referendum for the U.K. to leave the European Union.

- *In the aftermath of the Brexit “Leave” vote, U.K. growth forecast declined to 2.0% in 2016 (IMF forecast is 1.8% in 2016)*
- *U.K. consumer confidence plunged following the Brexit “Leave” vote but has recovered; the negative consequences of Brexit will unfold gradually over the next several years*
- **China’s GDP growth** will slow below 6.5% and could be as low as 6.0% by the end of 2016 as economic reforms are implemented and the shift to a consumer-focused economy gathers momentum.
 - *China reported year-over-year real GDP growth of 6.7% through the third quarter of 2016; growth of 6.7% is expected for all of 2016*
 - ? *The difference between reported results and forecasts is that policy makers have deliberately taken actions to boost housing construction and public investment, which has resulted in a short-term boost to the economy; however, this force-feeding of economic growth could worsen future economic performance as debt leverage continues to grow faster than economic output*
- **China’s leadership** will continue to be slow in implementing **economic reforms** but financial and political stability will be maintained.
 - + *President Xi’s anticorruption campaign and centralization of power is smothering the consensus governance approach in place for the last 30 years and may be creating latent political instability*
 - ? *China’s mid-term plenum was held in late October; President Xi was declared “the core of the party,” a title that previously has been given only to Mao Zedong, Deng Xiaoping, and Jiang Zemin*
- **Japan’s** economic policies will continue to fall short of achieving the 2.0% inflation target; inflation is expected to rise from 0.5% in 2015 to 1.0% in 2016. GDP growth will also continue to fall short of the policy target, but should rise from 0.7% in 2015 to 1.2% in 2016. Population decline and slow implementation of market reforms will continue to weigh heavily on both growth and inflation.
 - *2016 GDP growth is expected to be 1.0%, falling a bit short of the forecast*
 - *Japanese markets responded very negatively to the Bank of Japan’s imposition of negative interest rates early in 2016*
 - *the yen strengthened against the dollar during much of the year but then weakened after Donald Trump’s election*
 - *Inflation is now expected to be -0.1% in 2016, well below the Bank of Japan’s 2.0% target*
 - *Evidence is increasing that Abenomics is not lifting inflation or accelerating growth*
 - *There is increasing skepticism that the Bank of Japan can do much more to boost inflation and economic growth*
 - *Abe’s political position was strengthened by the outcome of the elections in the Upper House; Abe has no effective political opposition*
- **India** should continue to experience relatively strong real GDP growth in a range of to 6.0% to 7.0% in 2016.
 - + *GDP growth is expected to be 7.7% in 2016 and 8.3% in 2017; IMF is forecasting 7.6%*

- **Emerging market countries** should experience better growth in 2016 than in 2015 when falling prices for commodities depressed economic activity in many countries.
 - *Declines in the prices of commodities and capital outflows depressed growth in most emerging market economies in 2016; however, easier U.S. monetary policy and rebounding prices of commodities averted a potential meltdown*
 - *2016 GDP forecast has been revised downward from 4.3% to 4.1% and is 2.6% if China is omitted*
 - **Brazil, Russia, and Venezuela** will continue to struggle the consequences of the steep decline in the prices of commodities and particularly in the price of oil.
 - + *It has been a very difficult year for all three countries; escalation of political tensions and the potential for social disruption is greatest in Venezuela; political stability may be re-emerging in Brazil with the impeachment and removal of President Dilma Rousseff; the worst may be past for Russia*
 - + *Russia's 2016 GDP forecast has been revised from -1.0% to -0.5%*
 - + *Brazil's 2016 GDP forecast is -3.5%*
3. **Risks** — stated in the negative relative to the forecast (*+ risk realized; - risk not realized*).
- **U.S. potential real GDP growth** falls short or exceeds expectations; falling short is the more serious risk.
 - + *Forecasts of actual 2016 growth have been reduced; lower than expected productivity has depressed potential growth*
 - **U.S. employment growth** is slower or faster than expected; slower growth is the more serious risk.
 - + *Employment growth was above the upper end of the expected range*
 - **Employment participation rate** rises rather than remaining stable or falling modestly.
 - *The participation rate was stable*
 - **U.S. hourly wage rate growth** falls from its 2015 level of 2.2% or rises much more rapidly than expected; falling wage growth is the more serious risk.
 - *Risk not realized — growth in average hourly wages of all employees rose from 2.30% in December 2015 to 2.55% in November (12-month moving average); however, the rate of increase in weekly average wages has fallen from 2.42% in December to 2.18% in November because the length of the workweek decreased; other measures of wages indicate a slight acceleration in the growth rate*
 - **U.S. Unemployment rate** falls less than expected.
 - *Risk not realized, unemployment rate is with the expected year-end range*
 - **U.S. productivity** remains below 1%.
 - + *Productivity rose at a rate of 0.76% in the first three quarters of 2016 but has fallen -0.04% over the last four quarters; when 2016 Q4 data are reported productivity is expected to decline -0.1% for the year*
 - **Real U.S. consumer income and spending** increase less or more than expected; less than expected increases are the more serious risks.

- + Income is rising faster than forecast and spending is rising about as expected*
- **U.S. stock prices** fall more than or rise more than the expected range of -5% to +5%.
 - + Risk realized; stock prices are up 10.5% through mid-December*
- **Growth in U.S. residential housing investment and housing starts** are less than or more than expected; below expectations is the more serious risk.
 - + Housing investment growth was slightly below the expected range*
 - + Housing starts increased much more slowly than expected*
- **U.S. residential housing price increases** are less than expected.
 - Risk not realized; prices are rose faster than expected, although the rate of increase is expected to slow somewhat when Q4 data are reported*
- **U.S. private business investment** does not improve as much as or more than expected; falling short of expectations is the more serious risk.
 - + Business investment declined during the first three quarters of 2016 and is expected to be negative for the entire year*
- **Oil price declines** that occurred in 2015 trigger bankruptcies and cause tighter financial conditions with negative implications for economic activity and growth.
 - Early in the year it appeared that this risk might be realized; however, the rebound in the price of oil prevented realization of serious problems*
- **U.S. manufacturing growth** contracts or expands more than expected; contraction is the more serious risk.
 - Risk not realized, manufacturing improved slightly*
- **U.S. trade deficit** does not widen as expected.
 - + Deficit declined slightly*
- **Value of the dollar** rises substantially.
 - Risk not realized; value of the dollar rose only 1.0% during the year*
- **U.S. monetary policy** spawns financial market uncertainty and contributes to financial instability.
 - Risk was realized briefly at the beginning of the year but abated due to easy monetary policy; financial conditions tightened only modestly and temporarily following Brexit and eased considerably since early in the year; however, financial conditions have tightened a little in the aftermath of Donald Trump's election*
- **U.S. inflation** decelerates, rather than remaining stable or rising as expected.
 - Risk not realized; inflation is rising a bit more rapidly than expected*
- **U.S. interest rates** fall or rise more than expected
 - Risk not realized; rates after falling sharply earlier in the year have returned to about the same level they were at the beginning of the year*
- **U.S. fiscal policy** is more expansionary than expected.
 - Risk not realized — increase in spending about as expected*
- **Federal budget deficit** increases more than expected.

- Risk not realized deficit was slightly below the expected range

- **U.S. state and local spending** does not rise as fast as expected.
 - + Spending fell over the first three quarters of 2016 and is expected to increase below the bottom end of the forecast range for the entire year*
- **Global GDP growth** does not rise as fast as expected.
 - + Risk realized*
- **European growth** is considerably less than expected.
 - + Risk realized — modest reduction in forecast growth*
- **ECB's** quantitative easing program is not successful in raising inflation and stimulating the European economy.
 - + Risk realized — inflation forecast is 0.2% for 2016, but the threat of deflation appears to have been averted for the time being*
- **Europe** — financial market turmoil reemerges.
 - Risk realized temporarily early in the year; ECB's monetary policy was successful in maintaining financial market stability; bank stocks performed poorly relative to other industries during much of the year, reflecting continuing investor concerns about profitability and problem loans; however, bank stock prices have rallied more recently based on extension of the ECB's easy monetary policy and higher interest rates; markets took the Brexit "Leave" vote in stride; even though economic, political and financial market stresses in Europe continue to build, the ECB was successful in 2016 in maintaining stability*
- **Europe** — political instability and social unrest rises more than expected threatening survival of the Eurozone and the European Union.
 - + Risk realized — euro skeptic parties continued to gain ground and are forcing centrist parties to take policy positions that feed centrifugal forces eating away at the cohesion of the European Union; Donald Trump's election has increased this risk*
- **Chinese** leaders have difficulty implementing **economic reforms**
 - + Risk realized — reforms have been delayed in favor of economic stimulus implemented primarily through debt leverage via state-owned banks and the municipal bond market; President Xi appears more interested in cementing his political power through anti-corruption purges than in implementing economic reforms; excessive debt leverage continued to build and poses future risks to economic growth and financial stability*
- **China's growth** slows more than expected.
 - Risk not realized — policy makers are pulling out all the stops to hit the target growth rate; this will eventually backfire, but not during 2016*
- **Japan** — Abenomics and monetary policy are unsuccessful in raising inflation to the 2 percent target and economic growth continues to be below expectations.
 - + Risk realized; however, the prospects for strong growth in the U.S. during a Trump Administration have driven down the value of the yen which will boost profits; wage increases have been disappointing and the much touted fiscal stimulus initiative appears unlikely to have a significant favorable impact on economic activity and inflation*

- Severe and, of course, unexpected *natural disasters* occur, which negatively impact global growth
 - ? *Consequences of Japan's Kyushu earthquake appears to have been confined to Japan*

II. Outlook — 2017 and Beyond — Forecast Summary for the U.S. and the Rest of the World, Highlights of Key Issues, and Identification of Risks

Observations about the 2017 U.S. and global economic outlook and risks to the outlook are listed below. As events unfold during 2017, this will enable the reader to track my analytical prowess.

1. U.S.

- **2017 real GDP Y/Y** growth projections range from 2.0% to 2.4%. The FOMC's central tendency Q4/Q4 projections range from 1.9% to 2.3%. (Q4/Q4 projections are highly dependent upon potential anomalies in Q4 data; therefore, Y/Y estimates, which average all four quarters, usually are more stable estimates.) Risks are tilted to the upside because of fiscal policy activism to cut taxes and increase infrastructure spending.
- **Real GDP output gap** will remain high, but will narrow considerably during 2017 from about 1.2% to 0.5% to 0.8%. (The exact size of the output gap will be revised by CBO, probably in February 2017 and again in August 2017).
- **Potential structural rate of real GDP growth** has declined significantly in recent years. I expect potential growth to be about 1.3% to 1.4% in 2017. Long-term potential real GDP growth will edge up in coming years to between 1.75% and 2.0%.
- **Productivity** should rise during 2017 from near zero in 2016 but is still likely to be less than 1.0%, as growth improves and investment increases; it will fall well short of the historical 2.1% average.
- **Employment** growth should slow considerably during 2017; now that full employment has been reached actual employment growth should closely track growth in the labor force; payroll growth should average 125,000 to 150,000 per month.
- **Employment participation** will resume a gradual decline during 2017 due to demographically-embedded retirements of baby boomers.
- **Unemployment rate** should edge down slightly to between 4.3% and 4.5%.
- **Wage growth** should edge up slightly during 2017 to a range of 2.7% to 3.1%.
- **Nominal consumer disposable income**, measured on a Y/Y basis should slow as employment growth slows; this will be offset partially by an increase in average hourly wage rates; growth should be in a range of 2.75% to 3.25%.
- **Nominal consumer spending growth** on the Y/Y basis will rise due in part to upward pressure on inflation in a range of 3.5% to 4.0%.
- **Household personal saving rate** will decline slightly as growth in spending exceeds growth in disposable income in a range of 5.0% to 5.5%.
- **Stock prices**, as measured by the S&P 500 average, should be between 5% higher or 10% lower, on the downside reflecting rising wages, slowing growth in profit margins and rising short-term interest rates and on the upside reflecting growth friendly fiscal policy; there is analysis indicating that U.S. stock prices are overvalued as 2017 commences.

- **Manufacturing** will continue to be weak with the PMI index just slightly above or below 50, reflecting the negative consequences of dollar strength.
- **Business investment** spending growth should improve and be in a range of 1.0% to 3.0%.
- **Residential housing investment** should be about the same in 2017 as it was in 2016 in a range of 3% to 6%; housing starts should rise 2% to 5%.
- **Residential housing prices** should rise more slowly in 2017 in a range of 2% to 4% in 2016.
- **Trade deficit** should rise in 2017 as the increase in the value of the dollar depresses exports and increases imports.
- The **dollar's value** on a trade-weighted basis should rise due to stronger economic growth and higher interest rates relative to other developed economies.
- **Oil prices** are likely to trade in a narrow band of \$40 to \$55 because abundant and flexible supply in the U.S. will constrain prices if global demand accelerates.
- **Monetary policy** — the Federal Reserve will raise the federal funds rate one to three times during 2017 in 25 basis point increments.
- **Total inflation** measures (CPI and CPE) will be relatively stable in 2017: CPI will rise 2.0% to 2.4% and CPE will rise 1.7% to 2.0%.
- **Core PCE inflation** will rise slightly in a range of 1.6% to 1.9%, reflecting global disinflationary trends offset somewhat by the closing U.S. employment and output gaps.
- The **10-year Treasury rate** is likely to fluctuate in a range between 1.75% and 2.75% in 2017. Faster than expected real GDP and employment growth would push the rate toward the top end of the range; greater than expected declines in inflation and/or heightened financial instability would push the rate toward the bottom end of the range.
- **Fiscal policy** will have a positive impact on real GDP growth during both fiscal year and calendar year 2017, raising real GDP growth by 0.2 to 0.3%.
- The **deficit** as a percentage of nominal GDP will increase substantially from fiscal year 2016's level of 3.15% to a range of 3.50% to 4.25%. Stronger than expected growth and delayed implementation of tax cuts and infrastructure spending would push the deficit toward the lower end of the range.
- **State and Local investment** spending growth should range between 1.0% and 1.5%.

2. Rest of the World

- **Global growth** is likely to improve to 3.4% in 2017 from 3.0% in 2016. However, due to political instability in Europe and the possible negative impacts of a strong dollar on emerging market economies, risks are tilted to the downside.
- **European growth** will be positive but will likely fall short of the consensus 1.4% because of potential social and political disruptions, but a decline in the value of the euro would have favorable consequences.
- **European inflation** will rise from 2016's 0.2% but will probably fall short of the expected 1.2%.
- **European financial markets** should be relatively stable with periodic episodes of volatility prompted by specific events, such as the French and German elections or a potential banking crisis in Italy.

- **European political dysfunction, populism and nationalism** will continue to worsen gradually. Countries to watch closely include France, Italy, the Netherlands, Greece, Spain, and Portugal. Germany's election will occur toward the end of 2017 and could be significant, depending upon whether political and social turmoil escalates in other parts of Europe earlier in the year.
- **U.K. growth** is expected to decline to 0.9% in 2017 compared to 2.0% in 2016 as Brexit consequences begin to develop.
- **China's GDP growth** is expected to be 6.6% but risks are to the downside.
- **China's leadership** will continue to be slow in implementing **economic reforms** but financial and political stability will be maintained.
- **Japan's** economic policies will continue to fall short of achieving the 2.0% inflation target; inflation is expected to rise from 0.2% in 2016 to 1.2% in 2017. GDP growth will also continue to fall short of the policy target, but is expected to rise from 1.0% in 2016 to 1.5% in 2017. Population decline and slow implementation of market reforms will continue to weigh heavily on both growth and inflation.
- **India** should continue to experience relatively strong real GDP growth in a range of to 7.0% to 8.0% in 2017.
- **Emerging market countries** should experience better growth in 2017 than in 2015 and 2016 when falling prices for commodities depressed economic activity in many countries. Growth is expected to improve from 2.6% in 2016 to 3.5% in 2017. However, a major downside risk is a strong dollar, particularly for emerging economies that have large amounts of dollar-denominated debt.
- **Brazil, Russia, and Venezuela, in particular,** will continue to struggle with the consequences of the steep decline in the prices of commodities and particularly in the price of oil.

3. **Risks** — stated in the negative relative to the forecast.

- **U.S. potential real GDP growth** falls short or exceeds expectations; falling short is the more serious risk.
- **U.S. employment growth** is slower or faster than expected; slower growth is the more serious risk.
- **Employment participation rate** rises rather than remaining stable or falling modestly.
- **U.S. hourly wage rate growth** falls from its 2016 level of 2.6% or rises much more rapidly than expected; falling wage growth is the more serious risk.
- **US. Unemployment rate** rises.
- **U.S. productivity** remains below 1%.
- **Real U.S. consumer income and spending** increase less or more than expected; less than expected increases are the more serious risks.
- **U.S. stock prices** fall more than or rise more than the expected range of -10% to +5%.
- **Growth in U.S. residential housing investment and housing starts** are less than or more than expected; below expectations is the more serious risk.
- **U.S. residential housing price increases** are less than expected.

- *U.S. private business investment* does not improve as much as or more than expected; falling short of expectations is the more serious risk.
- *U.S. manufacturing growth* contracts or expands more than expected; contraction is the more serious risk.
- *U.S. trade deficit* does not widen as expected
- *Value of the dollar* rises substantially and triggers a global dollar squeeze.
- *Oil prices* rise above or fall below the expected range.
- *U.S. monetary policy* tightens more than 75 basis points, spawns financial market uncertainty and contributes to global financial instability.
- *Financial conditions* tighten and cause financial market volatility.
- *U.S. inflation* falls or rises more than expected.
- *U.S. interest rates* fall *or* rise more than expected
- *U.S. fiscal policy* is more expansionary than expected.
- *Federal budget deficit* increases more than expected.
- *U.S. state and local spending* does not rise as fast as expected.
- *Global GDP growth* does not rise as fast as expected.
- *Global trade* declines as the U.S. and other countries pursue protectionist policies.
- *European growth* is considerably less than expected.
- *ECB's* quantitative easing program is not successful in raising inflation and stimulating the European economy.
- *Europe* — financial market turmoil reemerges.
- *Europe* — political instability and social unrest rises more than expected threatening survival of the Eurozone and the European Union.
- *Chinese* leaders have difficulty implementing *economic reforms*
- *China's growth* slows more than expected.
- *Japan* — Abenomics and monetary policy are unsuccessful in raising inflation to the 2 percent target and economic growth continues to be below expectations.
- *Emerging economies* — a strong dollar leads to serious difficulties especially for countries with large amounts of dollar-denominated debt.
- Severe and, of course, unexpected *natural disasters* occur, which negatively impact global growth

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