



The Longbrake Letter*

Bill Longbrake

December, 2014

In this month's letter, I provide a brief overview of key global economic themes as we end 2014 and enter 2015. There is also an in-depth assessment of the impacts and potential consequences of the recent 45 percent crash in oil prices.

I also include a final assessment of observations I made a year ago about how the U.S. and global economies might fare in 2014. 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, 2014 was no different from any previous year.

Such will also be the case in 2015. Nonetheless, I once again attempt to summarize key U.S. and global economic developments that seem possible, perhaps likely, in 2015. I also list risks to the 2015 outlook.

I wish all a very joyous holiday season!

I. U.S. Economy Gathering Strength; Europe Stagnating; China Transitioning; Japan Struggling; India Emerging; Brazil and Russia Troubled; Oil Price Crash a Game Changer

What has been different about 2014 is that major global economies by and large have pursued courses driven by forces generally specific to each country or region. What this means is that each economy is evolving along a pathway of its own making — for better or worse — although the high degree of integration among global economies and especially financial markets means that what happens in one country or region continues to impact other global economies significantly.

- **U.S.** — The U.S. economy at long last appears to have broken out of its slow growth trend; growth is accelerating and economic slack is diminishing rapidly.

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

- **Europe** — But, stagnation has afflicted Europe and the potential for deflation is an imminent threat. Political turmoil is a rising threat.
- **China's** torrid growth rate continues to slow as its leaders intentionally transition the economy. China's slowing growth rate should not be mistaken as foreshadowing trouble. To the contrary, the transition to a consumer-driven economy is a healthy and necessary development to assure long-run economic growth and stability. But, it automatically leads to slower growth.
- **Japan's** aggressive policy mix, referred to as "Abenomics" after Shinzo Abe, Japan's Prime Minister, has had enormous impacts on its economy, but it is unclear yet whether these policies will extricate Japan from the deflationary trap it has been mired in for the last 20 years and foster faster real GDP growth. It may be successful in igniting inflation, but unless growth improves trouble surely lies ahead.
- **India** — Early returns suggest that Prime Minister Modi's policies may be successful in curtailing some of the stifling bureaucracy that has hobbled India's growth in the past and foster much faster growth over the next few years.
- **Brazil** — It has not been a good year for Brazil and its reliance on exporting commodities at a time when commodity prices are plummeting does not bode well for 2015.
- **Russia** faces recession in 2015 because of capital flight stemming from its adventures in Ukraine and reinforced by the crash in oil prices. Russia's predicament has gained global attention in recent days as the Russian central bank raised interest rates from 10 percent to 17 percent in an attempt to defend the value of the ruble. Difficult days lie ahead for Russia's economy.

II. Oil Prices Crash

Over the last six months the biggest game changer has been the sudden and unanticipated 40 percent crash in oil prices.

Although the timing and magnitude of the decline apparently came as a surprise to most, there were plenty of warning signals. The sharp downturn, which is likely to persist for a long time, is being driven by a combination of supply and demand dynamics and by policy choices. This is not the first time oil prices have crashed precipitously. There have been two previous episodes of consequence — 1986 and 1997. The first was followed by real estate and banking crisis in the U.S. The second culminated in the collapse of Long Term Credit Capital and the Russian debt default.

1. Investment Accelerator Cycle

Oil in particular, and commodities in general, have followed a classic investment accelerator cycle in recent years. The investment cycle in energy and commodities, just like other real assets, such as housing, is characterized by the inability of supply in the short run to adjust quickly to changes in demand. Thus, when there is an increase in demand, prices immediately rise. This phenomenon was driven primarily by the emergence of China and China's focus on building infrastructure and emphasizing manufactured goods exports. There were spillover impacts on other countries, particularly in Asia. Unrelated disruptions of supply, particularly in the Middle East, also contributed to higher prices.

When prices rise quickly three responses are triggered. One is immediate, another takes a little more time, and a third takes much longer to have impact. The immediate response is price speculation and that adds to upward pressure on prices. It takes slightly longer for conservation measures to kick in. These measures have the impact of reducing demand. The third impact, which takes much longer, is development of additional sources of supply. But there is an immediate impact as investment in developing new sources soars. That is exactly what has occurred in the U.S. in recent years with shale oil and shale gas and fracking. What until recently seemed like sensible investment in building energy capacity within the U.S. may be seen in retrospect as yet another financial bubble of overinvestment and speculation.

As the investment accelerator cycle proceeds, eventually the new sources of supply come on line and the gap between demand and supply closes. In the current situation, it is now clear that the advent of additional supply has caused supply to outstrip demand. At the same time, slower economic growth in Europe and China's shifting economic model have slowed the rate of growth in demand.

2. OPEC Response

Policy decisions, in particular those by OPEC, have contributed to the free fall in oil prices. Certain OPEC nations — Saudi Arabia, Kuwait, and the United Arab Emirates — could have chosen to curtail production and such an action would have reduced the extent of the price decline. These nations instead chose to defend market share in the full knowledge that this decision would drive prices lower in the short run. Why would they do that. For two reasons. First, by bearing the brunt of production reductions these countries would suffer a decline in oil revenues greater than they would experience if they maintained production, even though the price of oil would rise. Second, a strategy of driving prices lower for a period of time is intentionally aimed at driving high cost producers out of the market. This will take time. But, if successful, it will restore some pricing power to OPEC nations in the long run. This is a “tried and true” tactic of monopolists — give up short-term profits and drive out high-cost marginal producers to maximize long-term profits.

3. Producers Lose — Consumers Win

Dramatic changes in commodity prices shift wealth from producers to consumers. That is true within an economy but also between economies.

In the U.S. investors in energy production will suffer, but consumers will benefit. It is estimated that the decline in oil prices will act like an enormous tax cut as much as \$125 billion over the next 12 months and will stimulate consumer spending. If all of this windfall is spent, it would increase nominal consumer spending by as much as one percentage point. The impact on real GDP growth could be a boost of 0.5 percent during 2015, assuming some of the energy windfall is saved.

However, investment would be negatively affected, but to a much lesser extent — perhaps subtracting 0.1 to 0.2 percent from real GDP through lowered investment spending.

4. Enormous Investor Losses — How Will Their Realization Impact the U.S. and Global Economies?

If the decline in prices continues for an extended period of time, some investors will experience losses. The recent increase in junk bond credit spreads is concentrated in energy debt. Eventually, there will be bankruptcies and the capital positions of financial institutions which have significant concentrations in energy loans could be depleted.

Losses will come from inventory financing and investment in drilling. Global oil consumption is about 92 million barrels per day. As is the case for any commodity time elapses between production and use and results in the accumulation of inventories that have to be financed. If there is a massive decrease in prices between the time an inventory is acquired and the time it is sold for use, someone has to bear the loss. The potential losses on oil inventories are enormous and will have to be realized in coming months. More often than not, the owner of the inventory has insufficient resources to repay the inventory financing loans when the losses are very large. When that is the case the entity — investor or bank — that provided the financing ends up bearing the loss. To get a sense of the potential size of potential losses, assume that there are 100 days of inventory and prices fall \$40 per barrel, which is a close approximation to what has happen. The inventory loss in value would be \$368 billion (92,000,000 barrels times \$40 times 100 days). This amount does not rise to what was lost when the housing bubble collapsed, but it is not trivial either.

Losses will also occur on leveraged loans extended to finance drilling and oil exploration. That is why yields on energy financing junk bonds have spiked in recent days. About 20 percent of fixed income benchmark indices consist of energy bonds. The ability of borrowers to service energy debt and repay principal will depend upon whether there are sufficient cash flows from the sale of oil after meeting other expenses. As the price of oil falls, cash flows available to service debt also falls and an increasing amount of debt will not be repaid in full. This drama will unfold slowly as decisions are made to not to complete drilling and to stop production of completed facilities where the marginal cost to produce exceeds the current price of oil. New investment that does not pencil at the reduced price of oil will cease relatively quickly.

Whether financing losses become a major financial markets event depends upon both the amount of the loss and who the investors are. Investors who are highly leveraged will suffer substantial losses. Whether the sequence replicates what happened during the 2007-09 financial panic remains to be seen, when liquidity-driven fire sales and contagion ran rampant and greatly magnified the extent of the consequences. The magnitude appears to be substantially smaller and investor holdings may be less concentrated in thinly capitalized banks than was the case during the 2007-09 financial panic. At the moment the alarm bells are not clanging loudly, but the situation bears close watching.

5. Producing Countries Lose — Consuming Countries Win

Wealth will be transferred from energy producing countries to energy consuming countries. Those countries with limited foreign exchange reserves and dependent on oil revenues to balance government budgets, such as Venezuela and Russia, will find themselves in desperate straits, which could culminate in bankruptcy and political upheaval. Other producer countries will experience recession in the near term but may benefit in the longer run, if low prices succeed in driving supply out of the market.

Consuming nations, and Japan and Europe come to mind in particular, will benefit in terms of real GDP growth but price inflation will take a big hit. As long as stronger consumer spending lifts other prices, this should not be a problem.

But, it will be important to pay attention to how the energy price shock plays out over time. The boost to consumption and real GDP in consuming nations will involve a limited one-time positive adjustment. If it turns out, however, that global aggregate supply continues to outpace aggregate demand, price disinflation or even deflation will result. That would have negative consequences for interest rates and could spawn an increase in debt defaults over time. There is also the threat of deflationary expectations emerging, which would delay consumption spending and depress investment, resulting in slower growth.

Global stock markets reacted favorably initially to the decline in oil prices because of the expected boost to consumer spending and real GDP growth in consuming nations. But as prices have fallen further, markets are having second thoughts and have begun to worry about the potential negative consequences, which include debt defaults, tighter financial conditions, and deflation.

III. U.S. Economy Gaining Momentum

As 2014 comes to an end there is considerable evidence that the U.S. economy is gathering momentum, which is solid but hardly breathtaking. The dramatic plunge in global oil prices promises to energize consumption during 2015.

It has been five and a half years since the official end of the Great Recession. Following all other recessions since the end of World War II, after five and a half years the economy was operating near or above potential. As we come to the end of 2014, even as there is growing optimism that the U.S. economy will improve more rapidly in 2015, there is still a long ways to go to achieve full potential. Although there is disagreement about the size of the output gap, there is little disagreement that the gap is still large. The policy objective of eliminating the output gap will not be achieved in 2015 and probably not in 2016 either.

U.S. payroll employment finally exceeded the previous peak reached in January 2008 during 2014. Payroll employment grew 2.65 million over the first eleven months of 2014 and is growing at a healthy 2.0 percent annual rate. Household employment grew 2.70 million over the first eleven months of 2014 and is also growing at a healthy 2.0 percent annual rate.

Payroll employment is 1.7 million above and household employment is 909,000 above the pre-Great Recession peaks.

Unemployment during 2014 fell from 6.68 percent to 5.82 percent and is near the Congressional Budget Office's (CBO) short-term full-employment estimate of 5.7 percent and not much farther away from its long-term full-employment estimate of 5.5 percent. That is the good news. But the official unemployment rate overstates the extent of labor market improvement. Other labor market indicators have improved to a lesser extent and annual wage growth remains stuck at just over 2 percent.

IV. Real U.S. GDP Likely to Remain Below the Long-Term Trend and Growth Likely to Disappoint

Based upon the unemployment rate and growth in payroll and household employment, there has been considerable progress in closing the employment gap during 2014. However, other employment measures imply that the employment gap remains large. The employment participation rate did not improve during

2014. It was 62.85 percent in November compared to 66.02 at the start of the Great Recession in December 2007. If the participation ratio had not declined 4.7 million additional workers would have been employed in November. A substantial portion of the decline, however, is due to shifting labor force demographics, especially the aging of the baby boom generation. But even allowing for that, an estimated additional 1.1 million workers, which are not counted among the 9.1 million unemployed, have dropped out of the labor force. If these “discouraged” workers are added to the ranks of the unemployment, the unemployment rate in November would have been 6.52 percent rather than 5.82 percent. But, the good news is that the number of “discouraged” workers has declined approximately 800,000 during 2014. So, on balance employment is definitely heading in a good direction.

According to CBO estimates, there has been considerably less progress in closing the real GDP output gap. The gap was 3.7 percent at the end of 2013 and 3.4 percent at the end of the third quarter of 2014. However, strong consumption spending in 2015 propelled by 2014’s large employment gains and lower energy prices should result in a significant decline in the output gap during 2015. CBO estimates that potential real GDP growth will be 1.8 percent in 2015. Thus, if real GDP growth is 3.0 percent, the gap would close by 1.2 percent and if real GDP growth is 3.5 percent, as looks increasingly possible, given the decline in oil prices, the gap would close by 1.7 percent.

While significant progress in closing the employment and output gaps is likely to occur in 2015 and 2016, the level of potential real GDP and its rate of growth appear to have been permanently damaged by the Great Recession. There are two causes. First, much of the lower employment participation rate is permanent. That development is responsible for lowering the level of potential real GDP.

Second, the rate of growth in real GDP depends on labor force growth and productivity. Potential growth will be considerably less in the future for two reasons.

First, declining birth rates will reduce the growth rate in the number of people eligible to work. This impact could be countered to some extent if immigration increases. Demographic trends will continue to depress the number of eligible workers who actively participate in the labor force. Once the employment gap is eliminated the labor force growth rate should stabilize at 0.60 percent by 2019.

However, a more inclusive measure is total hours worked rather than the number of workers. If the length of the workweek is constant over time both growth rates would be identical. But, average weekly hours have trended down slowly over time for a variety of reasons. The most important reason is a gradual shift in the composition of the labor force to more part time workers. Thus, the annual rate of growth in hours worked is slightly less — between 0.50 percent and 0.55 percent.

Second, productivity depends upon strong private and public investment spending. The severity of the Great Recession and the lethargic recovery depressed investment spending. Private investment spending is likely to accelerate as consumer spending increases. Given the anti-spending focus of Congress, public investment spending is not likely to rebound. State and local investment spending remains depressed relative to historical experience. Collectively, growth in private and public investment spending will probably fall short of historical levels. To the extent this occurs, productivity will be lower. Historically, productivity averaged 2.1 percent annually. CBO estimates that productivity will average just 1.4 percent over the next ten years and will recover only to 1.6 percent by 2023.

Lower employment growth and lower productivity growth mean slower growth in real GDP. That, in turn, means that improvements in the standard of living, as conventionally measured, will fall short of historical experience.

V. Three Long-Run Scenarios — Steady Growth, Strong Growth, and Stagnation

In this section I update long-term projections of three economic scenarios for several key economic measures. *Scenario 1* is “*steady growth*” consistent with slowing growth in total hours over time and public and private investment that falls short of historical levels. *Scenario 2* is “*stagnation*” characterized by insufficient demand. *Scenario 3* is “*strong growth*” in which stronger employment participation offsets some of the demographic drag of a slower growth in the labor force and hours worked and also in which public and private investment grows at historical averages. CBO’s projections are also shown for some of the economic measures.

1. Larry Summers and Secular Stagnation

Former Secretary of the Treasury, Lawrence Summers, created quite a stir a year ago with a provocative speech he delivered at the International Monetary Fund (IMF) in which he argued that the U.S. economy has been in secular stagnation for the last 10 to 15 years. Secular stagnation occurs when there is persistent insufficient demand to bring the economy to full employment. Although Summers did not discuss why this has occurred, economists generally cite slowing population growth and technological innovation.

When a condition of secular stagnation prevails the interest rate necessary to move the economy to full employment is negative. But, nominal interest rates for all intents and purposes cannot be negative so long as holding cash is an option. Thus, even a near zero nominal interest rate is insufficient to generate sufficient investment in plant and equipment and intellectual property development to drive the economy toward full employment. The economy is caught in a liquidity trap. Put differently, monetary policy is virtually ineffective. However, monetary policy can foster asset price bubbles. But as we all know, and as Summers observed in his speech, bubbles may boost the economy temporarily toward full employment but bubbles inevitably burst, wreak much havoc, and have no lasting effect on boosting aggregate demand — secular stagnation continues. Bubbles are a financial phenomenon. They do not create real wealth.

Following Summers’ speech much skepticism was voiced about the existence of secular stagnation and in recent months there has been little discussion about it. Since there is no agreement about the theoretical basis for secular stagnation we probably won’t know whether it is a real problem for a long time.

Scenario 2 — “*Stagnation*” attempts to show how secular stagnation might play out over the next ten years.

2. \$1 Trillion in Government Spending on Infrastructure Investment

Traditional macroeconomic theory says that the way out of secular stagnation is substantial government investment spending. But, in the fervor to control the federal budget deficit and to cut spending, Congress has done exactly the opposite. Martin Feldstein, who was chairman of the Council of Economic Advisers from 1982 to 1984 when Ronald Reagan was president, Larry Summers, Paul Krugman, and Woody Brock have all emphasized the importance of public investment. Feldstein recommended that Congress enact a five-year, \$1 trillion infrastructure investment program, which he argued would move economic growth back to 3 percent or greater. Such a program would more than pay for itself through the higher tax revenues that a return to full employment at a higher rate of growth would generate. Feldstein added that this initiative should be accompanied by tax and entitlement reform. In essence Feldstein made an argument

not only for massive government fiscal stimulus to kick start the economy and wrench it out of secular stagnation, he also argued that existing tax and spending policies need to be revamped to improve their effectiveness in fostering strong economic growth.

Scenario 3 — “**Strong Growth**” embeds in part much higher growth in public investment spending, but also assumes that private investment spending would rise.

3. Secular or Cyclical

There are those who do not accept the argument that the U.S. economy is mired in a “new normal” of secular stagnation. Instead, some argue that the lethargic growth over the last five years is a natural outcome of the severity of the Great Recession and the premature withdrawal of fiscal stimulus over the last three years.

As the drag from fiscal policy has abated and with the rapid improvements in the labor market that have already occurred, the economy should move more rapidly in 2015 and move toward full employment. In other words, the current slack in the economy is cyclical, not secular, and time and the absence of new negative policy shocks will enable the economy to heal and return to full employment.

It should be noted that those who subscribe to the cyclical argument acknowledge that the potential real rate of GDP growth is about 2.3 percent, which is much lower than the historical average of 3.2 percent and Martin Feldstein’s expected level, assuming that his policy prescriptions were adopted. To reiterate, the slowing growth rate in the labor force is undeniable and largely irreversible. By itself this trend will reduce the potential rate of real GDP growth from the historical average.

Potential real GDP growth of 2.3 percent assumes productivity growth of approximately 2.0 percent, which is just slightly below the long-term historical average of 2.1 percent. Implicit in the concerns of those who believe in the new normal of secular stagnation is that productivity will undershoot its historical average. Those who believe we are merely experiencing a slow cyclical recovery expect the long-term level of productivity to be reestablished as the economy approaches full employment. But assuming this will happen does not mean it will happen. One of the important drivers of productivity growth in the past was government investment and for now, and it appears for the foreseeable future, government investment will have a smaller role. If the economy is in a liquidity trap, there is no chance that the private sector will make up the difference. Indeed, in a liquidity trap there is limited incentive for the private sector to invest, which means that productivity is likely to continue to be depressed below the historical level. This strongly argues in favor of the secular stagnation view rather than the cyclical view.

4. Long-Term Economic Scenarios — “Slow Growth,” “Strong Growth,” and “Stagnation”

In the following charts the pathways of key economic measures for the time period 2014 to 2023 are illustrated for the three scenarios — “**Steady Growth**,” “**Strong Growth**,” and “**Stagnation**.” These are scenarios and not forecasts. The primary drivers of the scenarios are differences in assumptions about the path of employment growth and productivity, although other economic variables, such as stock prices and investment, for example, vary in ways consistent with historical patterns in employment growth and productivity. The “**Stagnation**” scenario is characterized by an early on brief, shallow recession and slow recovery thereafter — the output gap never closes.

Table 1 shows key values for labor growth, measured as hours worked, productivity, real GDP, and potential GDP.

Table 1
Employment Growth, Productivity, Real GDP Growth, and Potential Real GDP Growth
for 2014-2017, 2018-2023 and 2014-2023 (percentages)

	Steady Growth	Strong Growth	Stagnation	CBO
Hours Worked				
2014-2017	1.47	1.77	1.42	1.25
2018-2023	.58	.74	.43	.62
2023	.48	.55	.40	.59
2014-2023	.93	1.16	.83	.88
Productivity				
2014-2017	1.36	1.66	1.19	1.43
2018-2023	1.59	1.86	1.38	1.69
2023	1.70	1.99	1.71	1.56
2014-2023	1.50	1.78	1.31	1.59
Potential Real GDP				
2014-2017	1.77	1.89	1.83	1.91
2018-2023	1.89	2.17	1.75	2.21
2023	1.98	2.34	1.92	2.09
2014-2023	1.84	2.06	1.78	2.09
Real GDP Growth				
2014-2017	2.31	2.79	1.97	2.94
2018-2023	1.96	2.35	1.84	2.22
2023	1.87	2.12	1.94	2.09
2014-2023	2.10	2.52	1.89	2.51

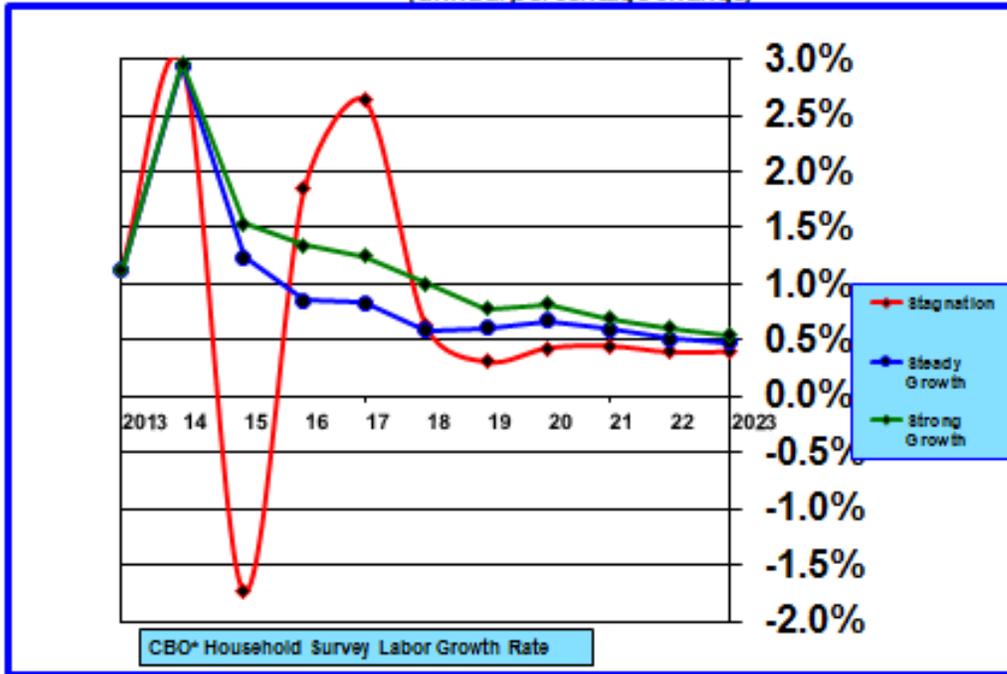
Some general observations follow:

- **Employment growth**, measured as hours worked, declines over time in all scenarios toward a level consistent with demographic trends. Differences over the ten-year period depend on the speed of closing the current employment gap (it does not close in the stagnation scenario) and impacts on labor force participation, which rises if growth is stronger.
- **Productivity** rises over time in all scenarios as the economy improves cyclically, but does not reach the historical average of 2.1 percent in any of the scenarios.
- **Potential real GDP** rises modestly over time as the benefits of improving productivity outweigh the depressing effects of slowing labor force growth.
- **Real GDP growth** is relatively flat in the “*Steady Growth*” scenario; starts out strongly as the output gap closes quickly in the “*Strong Growth*” scenarios, but then slows to potential after the gap has closed; and starts out very weak in the “*Stagnation*” scenario because of a brief period of recession and recovers very slowly thereafter.

Charts 1, 2, 3 and 4 show the time trends for employment growth (hours worked), productivity, potential real GDP, and realized GDP growth.

CHART 1 – Employment Growth (Hours Worked)

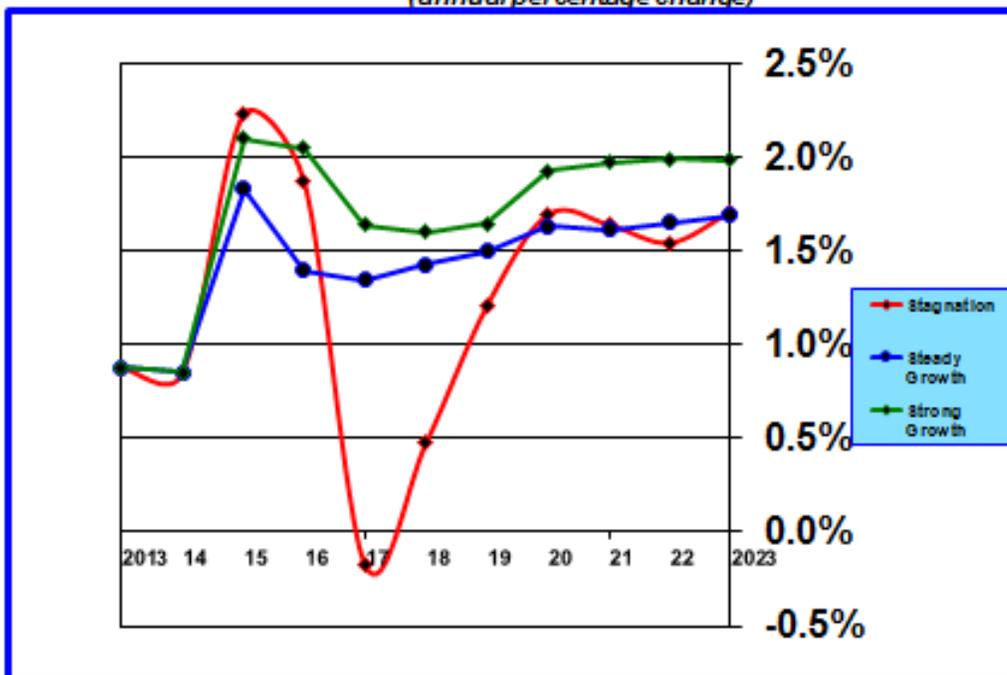
(annual percentage change)



Page 1

CHART 2 – Productivity

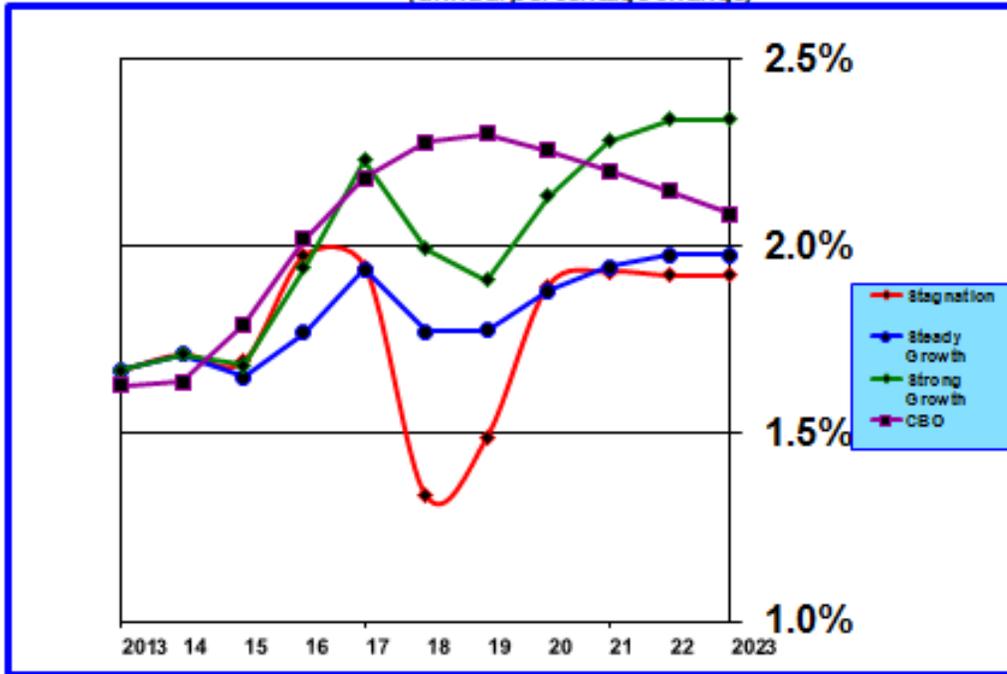
(annual percentage change)



Page 2

CHART 3 – Potential Real GDP Growth

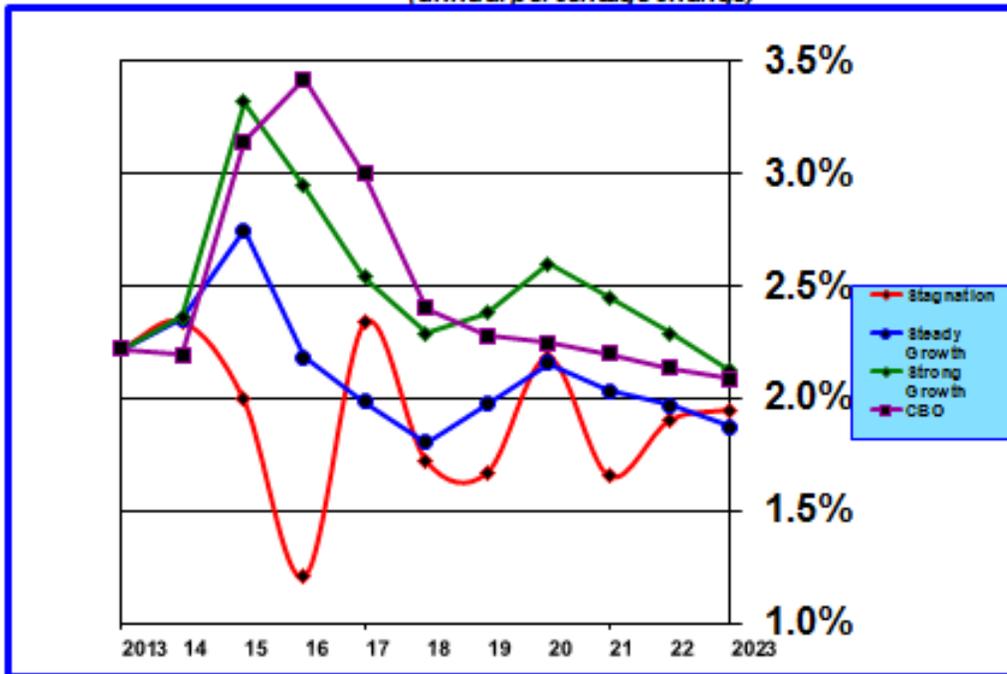
(annual percentage change)



Page 3

CHART 4 – Realized Real GDP Growth

(annual percentage change)



Page 4

Chart 5 shows the output gap for the “*Steady Growth*” and “*Strong Growth*” scenarios, as well as CBO’s August 2014 estimate. The output gap closes quickly in *CBO’s* estimate by 2017 because of strong real GDP growth over the next three years. The output gap closes more slowly in the “*Strong Growth*” scenario by 2019. The level of real GDP in 2023 is identical in both the *CBO* and “*Strong Growth*” scenarios.

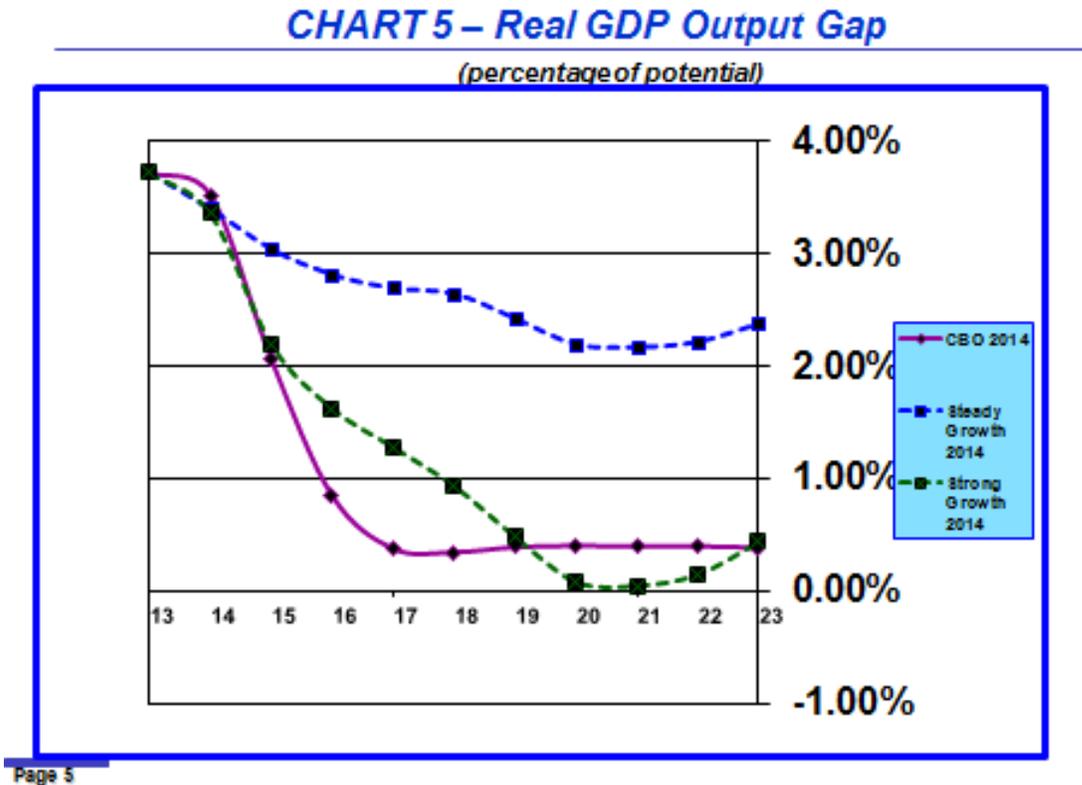


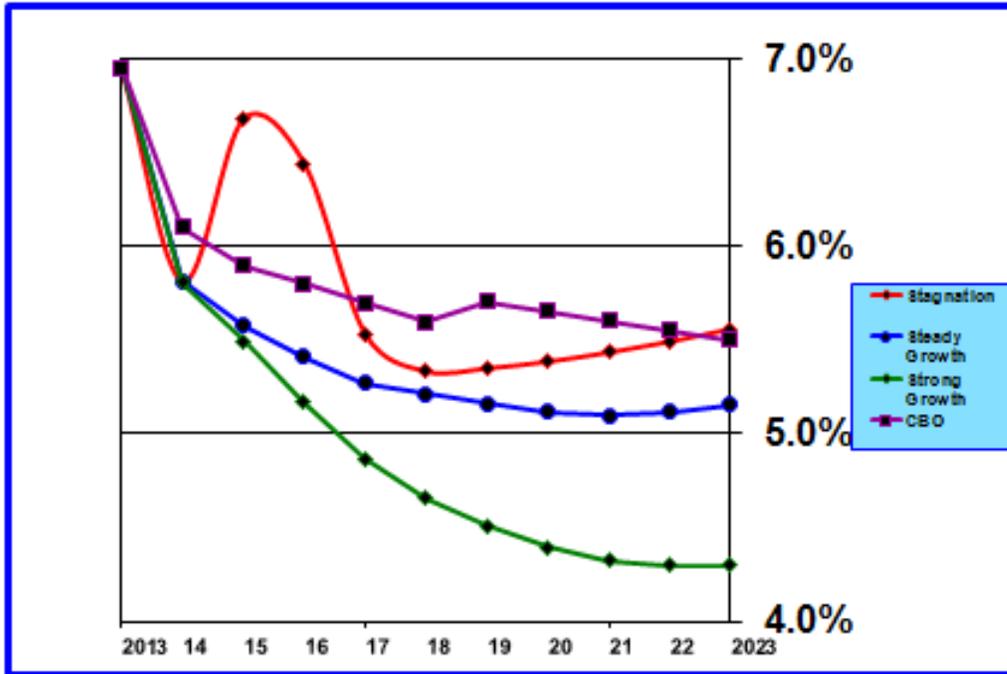
Chart 6 shows the unemployment rate. The decline in the unemployment rate in the “*Strong Growth*” scenario is probably overstated because it does not take into consideration improving participation in the labor force as the employment gap closes.

Chart 7 shows the core PCE inflation rate. Its strong rise in the “*Strong Growth*” scenario is probably overstated due to the understated unemployment rate.

Charts 8 and 9 show growth in nominal and real consumer spending. Notice that the differences in the real rate of growth in consumer spending are relatively small by 2023.

Charts 10 and 11 show the federal funds and 10-year Treasury rates. Obviously, the federal funds rate cannot be negative as indicated in **Chart 10** — the actual rate will be 0 to 25 basis points. Again, the federal funds rate in the “*Strong Growth*” scenario is probably overstated to the extent that the improvement in the unemployment rate is overstated.

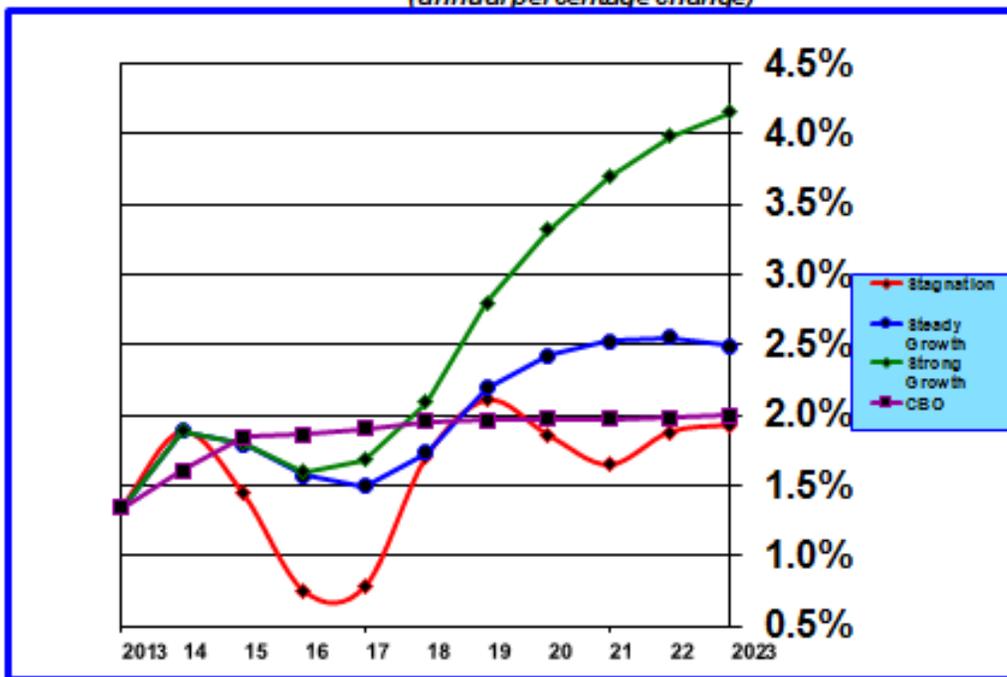
CHART 6 – Unemployment Rate



Page 6

CHART 7 – Core PCE Inflation Rate

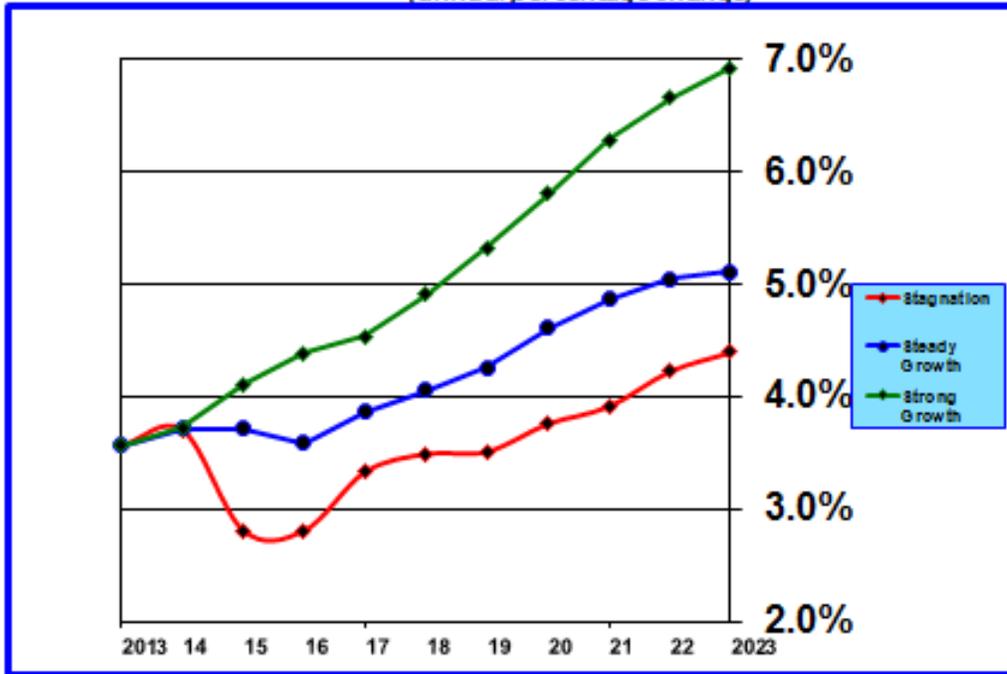
(annual percentage change)



Page 7

CHART 8 – Growth in Nominal Consumer Spending

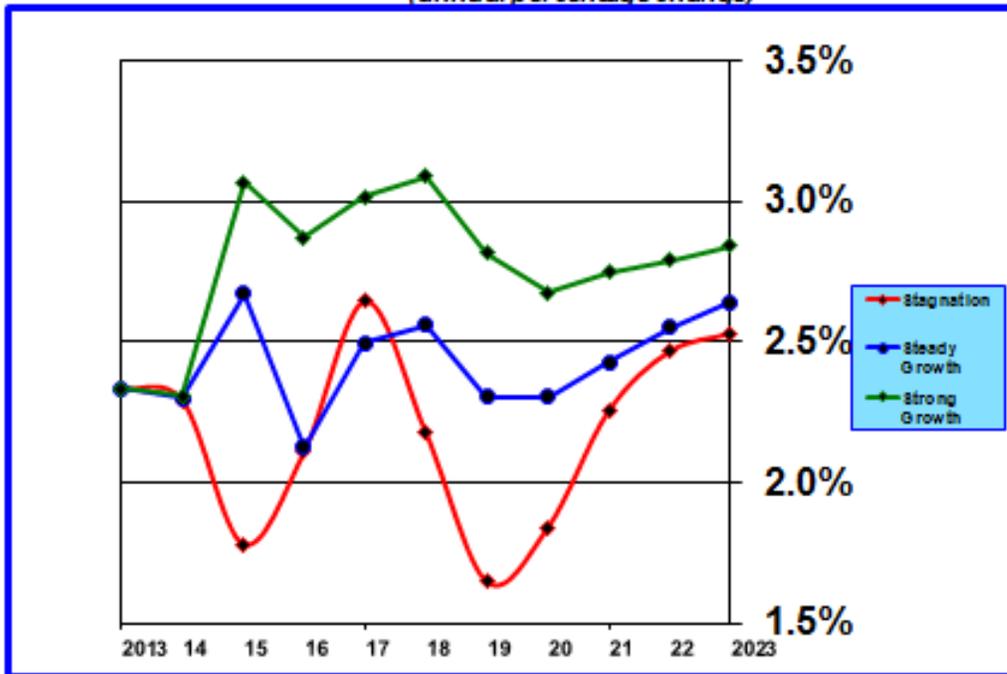
(annual percentage change)



Page 3

CHART 9 – Growth in Real Consumer Spending

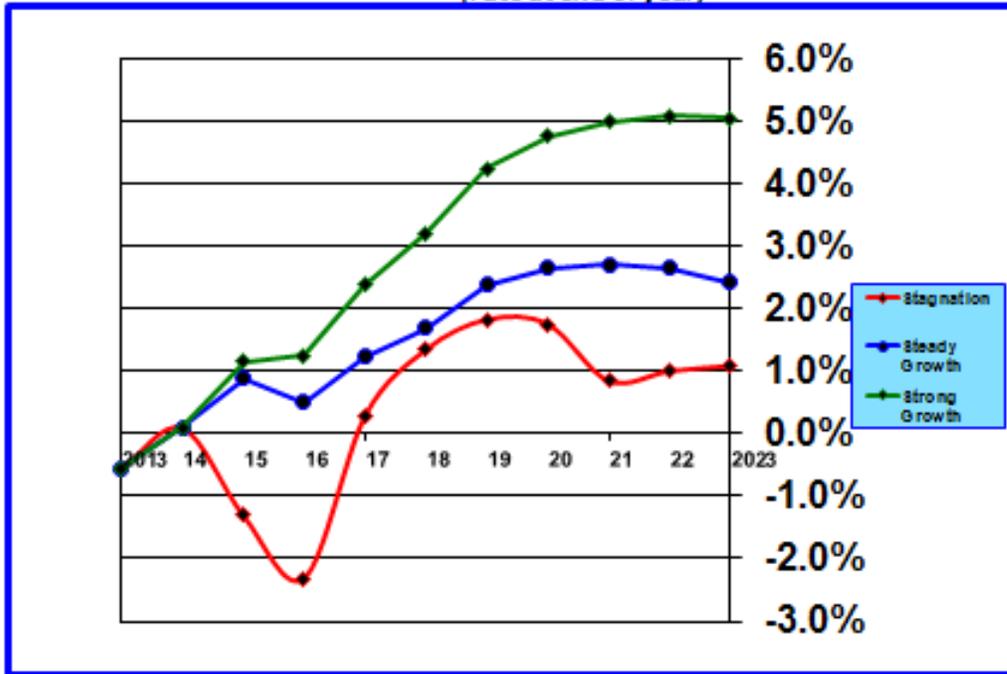
(annual percentage change)



Page 3

CHART 10 – Federal Funds Rate

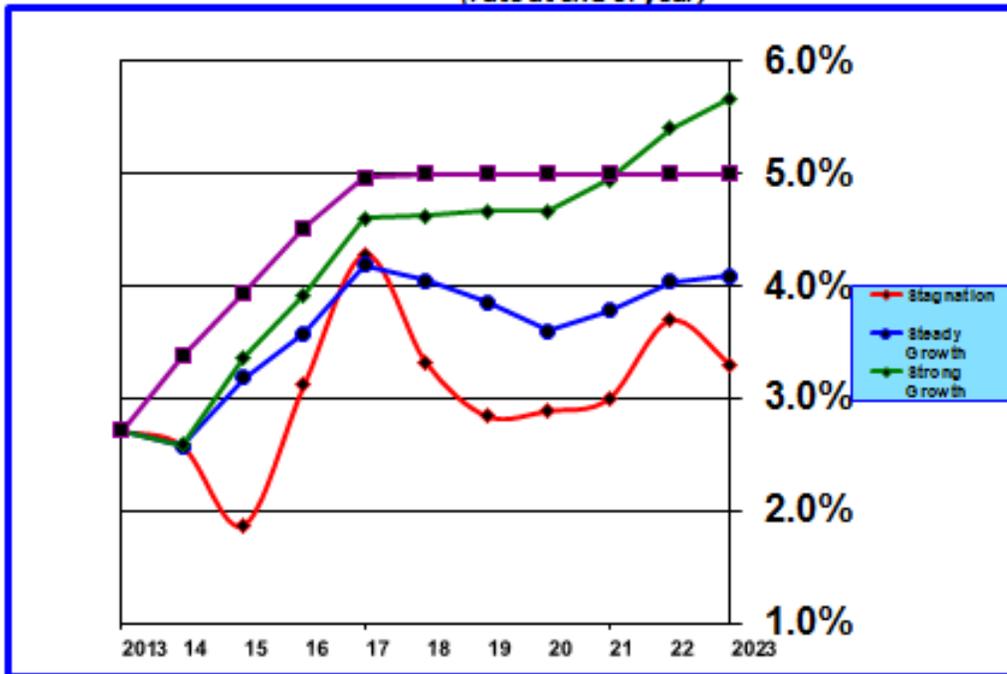
(rate at end of year)



Page 10

CHART 11 – 10-Year Treasury Rate

(rate at end of year)



Page 11

VI. APPENDIX: Outlook — 2014 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 2014 U.S. and global economic outlook and risks to the outlook were contained in the *December Longbrake Letter; 2013 Forecast Assessment and 2014 Outlook* and are included below without any changes. I provide final assessments for each item with the following identifiers: “+” tracking forecast; “-” not tracking forecast; “?” too soon to know. (Note that data for the month of December are limited to what is directly available in the market; other data are up to date only through October or November or through the third quarter.)

1. U.S.

- **2014 real GDP Q4/Q4** growth projections range from 2.9% to 3.4%; the FOMC’s projection range is 2.9% to 3.1%. **2014 real GDP Y/Y** growth projections range from 2.5% to 3.1%. (Q4/Q4 projections are highly dependent upon potential anomalies in Q4 data; therefore, Y/Y estimates, which average all four quarters, are more stable estimates.) Growth should improve gradually over the course of the year. I expect real GDP growth to track the lower end of the Y/Y range in 2014.
 - ✓ + Y/Y forecast range has been reduced to 2.2% to 2.3%; the FOMC’s Q4/Q4 projection range was adjusted to 2.3% to 2.4% at the December meeting
 - ✓ + Q3 GDP likely to be increased to 4.2% in the “final” report from 3.9% in the “preliminary” report
 - ✓ + Q4 GDP is expected to be about 2.1% to 2.3%
- **Real GDP output gap** will remain very high, but will close a little faster during 2014.
 - ✓ - CBO updated its output gap analysis in August 2014; 2013 Q4 gap was 3.72%; CBO’s projected 2014 Q4 gap is 3.52%; I expect the year-end output gap to be about 3.4%; the gap is closing, but not as rapidly as expected
- **Potential structural rate of real GDP growth** has declined significantly in recent years. I expect potential growth to be about 1.5% in 2014, which means the output gap could close by approximately 1.0%. Potential GDP growth is likely to rise slowly in coming years to between 2.1% and 2.4%.
 - ✓ - CBO expects 2014 potential growth to be 1.6%; my estimate for 2014 has risen to 1.8% to 2.1%
 - ✓ + My long-term potential growth range remains between 2.0% and 2.35% and most other forecasts now fall within this range
- **Productivity** should rise as growth improves and investment increases, but should still fall well short of the historical 2.1% average.
 - ✓ - nonfarm productivity is up 1.0% over the last 12 months and is projected to rise 0.5% from Q4 2013 to Q4 2014 compared to 2.0% in 2013
- **Employment** should grow about 190,000 per month in 2014, about the same as in 2013.
 - ✓ - payroll employment averaged 241,000 monthly over the first eleven months of 2014, which is stronger than expected; household employment averaged 246,000 over the first eleven months of 2014

- **Employment participation** will not rebound in 2014, which will contribute to a more rapid decline in the unemployment rate; the secular demographic decline will be offset by a small reduction in discouraged workers.
✓ + the participation rate in November was 62.85%, slightly higher than 62.79% in December 2013
- **Unemployment rate** should edge down to about 6.5%. A lower rate is not very likely unless discouraged workers do not re-enter the labor force or more exit the labor force.
✓ - the unemployment rate was 5.82% in November and will probably be about 5.7% by the end of the year
- **Nominal consumer disposable income**, measured on a Y/Y basis will rise about 2.0% with employment growth and a small increase in the nominal wage rate. Because of the depressing effect of increased taxes in 2013 on disposable income growth, the Q4/Q4 growth rate should be a much higher 2.9%.
✓ - the 12-month year-over-year average increase was 2.8% in October and I project it to be 3.7% by the end of the year (the substantial increase by the end of 2014 is due to eliminating the 2013 increase in payroll taxes from the year over year calculation); projected Q4/Q4 growth rate for 2014 is 3.7% (note that income and consumption data were revised substantially in July)
- **Nominal consumer spending growth** on the Y/Y basis will grow at a faster rate of approximately 3.3% (Q4/Q4 growth rate would also be about 3.3%, as spending was not affected materially by increased tax rates in 2013).
✓ + the 12-month moving average was 3.75% in October and I project it to be 3.7% by the end of the year; projected Q4/Q4 growth rate is 3.7%
- **Household personal saving rate** will decline slightly as growth in spending exceeds growth in disposable income.
✓ - the average saving rate was 5.00% through the first ten months of 2014 compared to 4.86% for all of 2013
- **Stock prices**, as measured by the S&P 500 average, should rise about 5%.
✓ + through December 17th, S&P 500 average is up 8.9% year to date
- **Manufacturing** growth will continue to be relatively strong and the PMI index will exceed 50.
✓ + December ISM index was 54.7 and has been above 50 the entire year
- **Business investment** spending growth should improve to about 5 to 6% as employment and consumer spending growth gathers momentum.
✓ + business investment spending, net of inventory accumulation, is on track to grow 5.9% to 6.0% in 2014
- **Residential housing investment** should rise about 10% and contribute 30 to 40 basis points to real 2014 GDP growth; residential housing starts should rise 20 to 25%.
✓ - residential investment spending is on track to grow only 2.0% to 2.4% in 2014
✓ - total housing starts are up 6.5% over the first eleven months of 2014 from the 2013 average; residential housing starts are up 2.9%
- **Residential housing prices** should rise about 5% in 2014, more slowly than 2013's 10% increase.

- ✓ + housing prices were up 4.6% from Q3 2013 through Q3 2014 and rose at an annual rate of 4.4% over the first three quarters of 2014, according to data compiled by the Federal Housing Finance Agency
- **Trade deficit** should rise slightly as economic growth improves because imports should grow more quickly than exports. The *dollar's value* should decline modestly on a trade-weighted basis.
 - ✓ + trade deficit was 2.80% in October compared to the 2013 trade deficit of 2.79%, but should rise slightly to 2.9% by the end of 2014
 - ✓ - the trade-weighted value of the dollar has risen 8.6% over the first ten months of 2014
- **Monetary policy** — the Federal Reserve will end quantitative easing by mid-year and will clarify forward guidance.
 - ✓ - the FOMC ended quantitative easing in October, a little later than expected
 - ✓ + the FOMC eliminated the 6.5% unemployment threshold and clarified forward guidance to embrace a broader set of labor market indicators and to emphasize that rate increases will be data dependent and will occur slowly after the initial increase takes place
 - ✓ + the FOMC substituted "... it can be patient in beginning to normalize the stance of monetary policy" for "... it will likely be appropriate to maintain ... the target range for the federal funds rate for a considerable time" at its December 2014 meeting; this change implies that rate normalization will begin during 2015
- **Inflation** will rise slightly in 2014 but will remain well below the FOMC's 2% objective at least through 2016.
 - ✓ + core PCE inflation was 1.55% in October compared to 1.34% in December 2013;
 - ✓ + total PCE inflation was 1.44% in October compared to 1.24% in December
- **Federal funds rate** is not likely to increase before mid-2015 and might not increase until late 2016 or early 2017. The 10-year Treasury rate is likely to fluctuate in a range between 2.5% and 3.5% in 2014.
 - ✓ + federal funds rate is most likely to increase in June or, possibly, September 2015, but could rise later if inflation declines and growth is weak
 - ✓ - the 10-year Treasury rate was 2.14% on December 17th, which is below the lower end of the expected range
- **Fiscal policy** will be significantly less contractionary in 2014, decreasing real GDP growth by about -0.4%; the **federal budget deficit** will decline to 3.0% by the end of 2014.
 - ✓ - fiscal policy will add about 0.1% to real GDP growth in 2014
 - ✓ + federal budget deficit was 2.76% in fiscal year 2014

2. Rest of the World

- **Global growth** is likely to improve to 3.5% in 2014 from 2.9% in 2013.
 - ✓ - growth is on track to reach 3.2% in 2014; China, Japan, and Europe have fallen short of expectations; Russia and Brazil are in recession
- **European growth** will be positive but will fall short of the ECB's forecast of 1.1%.
 - ✓ - euro area growth is on track to reach 0.8% in
 - ✓ - euro area inflation was 0.3% year over year in November; core inflation was 0.7%; inflation expectations have fallen to 0.4%
 - ✓ - deflation is a fact of life already in Greece, Spain, Sweden, Switzerland and Belgium

- **European financial markets** are likely to remain relatively calm thanks to the activist role of the European Central Bank; the May European parliamentary elections could lead to a new round of turmoil.
 - ✓ + no crises have erupted in European financial markets during 2014; nonetheless anxiety is building but has been held in check by the expectation that the ECB will engage in significant quantitative easing during 2015; the slow deterioration in political stability and decline in inflation expectations is worrisome
- **European banking union** will do little to solve deep-seated European and Eurozone structural problems; ECB stress tests will contribute to slow credit expansion.
 - ✓ + institutional structures to implement the banking union have been put in place; however, critics say the plan is fraught with uncertainties and weaknesses; the effectiveness of the banking union in stabilizing financial markets has yet to be tested
 - ✓ + results of stress tests were released in late October; they were not particularly uplifting but the market's reaction was muted
 - ✓ + private bank loans have contracted 2.2% over the last year; it is hoped that quantitative easing will help reverse the decline
- **European political dysfunction, populism and nationalism** will continue to worsen gradually.
 - ✓ + Eurosceptic parties are gaining momentum
 - ✓ + Scottish voters defeated an independence referendum by a narrow margin, but political fragmentation in the U.K. is growing in advance of parliamentary elections that must be held by May 2015
 - ✓ + the rapid rise of Podemos in Spain threatens political stability
 - ✓ + political instability is brewing in Greece and may lead to early elections which Syriza is expected to win
- **U.K. growth** will continue to be robust as the housing and debt bubble continue to build.
 - ✓ + GDP growth is on track to reach 3.0% in 2014, but this might be as good as it gets
- **China's GDP growth** will slow below 7% as economic reforms are implemented.
 - ✓ - forecasters expect full year growth to come in at 7.2% to 7.3%, worse than the expected 7.5%, but better than 7.0%; however, recent economic data have been disappointing; housing growth is slowing sharply
- **China's leadership** will focus on implementing **economic reforms** and will overcome resistance and maintain stability.
 - ✓ + policymakers are staying the course on restructuring the economy from an investment/manufacturing focus to a consumer focus, although progress has been slow
 - ✓ + the anti-corruption campaign is controlling potential resistance but at the possible cost of somewhat slower growth
- **Japan's** economic resurgence is likely to falter by the end of 2014, as Abenomics' third arrow of economic reforms fails to raise the level of potential growth sufficiently to overcome negative population growth.
 - ✓ + market skepticism has increased; third arrow market reforms have yet to have significant impact
 - ✓ + Q3 GDP contracted 0.5% versus an expected increase of 0.5%, placing Japan in a technical recession
 - ✓ + the planned increase in the value added tax in 2015 has been postponed

- ✓ + *Prime Minister Shinzo Abe has dissolved the diet and called for early elections with the intent of building public support for faltering Abenomics; Abe's party won the election with the loss of only 4 seats and retains a commanding parliamentary majority*
 - ✓ + *2014 GDP growth expectations have been downgraded to 0.5%; in response the Bank of Japan ratcheted up substantially the purchase of government bonds and corporate equity securities*
 - ✓ + *inflation is running at 2.7%, which is above the 2.0% target, but when the effect of higher taxes is stripped out, inflation is only about 1.0%*
 - **Emerging market countries** on balance will experience greater growth, as long as the U.S. and European economies do better in 2014; countries heavily dependent upon commodities exports for growth will do less well as will also be the case for countries with large balance of payments deficits.
 - ✓ - *growth in emerging market countries has fallen short of expectations as growth has slowed in Europe and China*
 - ✓ + *falling commodity prices have exacerbated growth shortfalls in export-oriented emerging economies, such as Brazil and Russia; plunging oil prices, if sustained, as seems likely, will drive even worse results*
 - ✓ + *Venezuela is experiencing serious economic difficulties which may lead to political unrest and regime change in 2015*
 - ✓ + *before the added burden of much lower oil prices, Russia's economy was already deteriorating because of capital flight and economic sanctions; in recent days the value of the ruble has plummeted*
3. **Risks** — stated in the negative, but each risk could go in a positive direction. “+” means risk not realized; “?” means risk may be developing; “-” means risk realized
- Note:** *Risks generally have remained subdued in the U.S., but have escalated considerably in the rest of the globe in recent weeks.*
- **U.S. potential real GDP growth** falls short of expectations
 - ✓ - *full year actual growth estimates have been revised sharply lower, however, an improving trend in actual growth is likely over the next year*
 - **U.S. employment growth** is slower than expected; the **participation rate** continues to decline
 - ✓ + *participation rate remains unchanged over the first eleven months of 2014*
 - ✓ + *employment growth is higher than expected*
 - **US. Unemployment rate** falls less than expected
 - ✓ + *unemployment rate has fallen more than expected*
 - **U.S. productivity** does not improve
 - ✓ - *productivity has risen 1.0% over the last 12 months, but has risen only 0.1% since the beginning of 2014 and is projected to rise 0.5% in 2014 compared to 2.0% in 2013*
 - **Real U.S. consumer income and spending** increase less than expected
 - ✓ + *consumer income and spending are increasing at a slightly faster rate than expected*
 - **U.S. financial asset prices** rise more than expected posing increased bubble risks
 - ✓ + *stock prices are up 8.9%; valuations appear reasonable*
 - **Growth in U.S. residential housing investment and housing starts** is less than expected

- ✓ - housing formation hit a new low in last year's fourth quarter; housing starts have been disappointing and are only 6.5% above 2013's average; year-over-year residential investment is forecast to rise approximately 2.0% to 2.4% in 2014 compared to 11.9% in 2013
- **U.S. residential housing price increases** slow more than expected
 - ✓ + prices are rising at about a 4.4% annual rate
- **U.S. private business investment** does not improve as much as expected
 - ✓ + business investment is on track to rise about 5.9% to 6.0% in 2014
- **U.S. manufacturing growth** slows
 - ✓ + manufacturing activity has remained strong, but slowing global growth and the rising value of the dollar are threats
- **U.S. trade deficit** widens and the *value of the dollar* falls
 - ✓ + the trade deficit has been stable
 - ✓ - the trade-weighted value of the dollar has increased 8.6%
- **U.S. monetary policy** spawns financial market uncertainty and contributes to financial instability
 - ✓ + financial conditions have been benign for most of the year except for a brief period during September; however, financial conditions are tightening as the year ends due to the 40% decrease in the price of oil
- **U.S. inflation** falls, rather than rising, and threatens deflation
 - ✓ + inflation has risen slightly since the beginning of the year, but declining oil and commodity prices and slower global growth will result in lower inflation in coming months
- **U.S. interest rates** rise more than expected
 - ✓ + long-term rates have fallen approximately 100 basis points so far in 2014; (Note: because rates have continued to fall, this is a negative trend, not a positive development, because it foreshadows the possibility of much lower inflation)
- **U.S. fiscal policy** is more restrictive than expected and the **budget deficit** falls more than expected
 - ✓ - the budget deficit was 2.75% for fiscal year 2014 — slightly lower than expected; although fiscal policy has been slightly more restrictive than expected, the lower deficit was driven by higher revenues, rather than lower spending, reflecting a somewhat stronger economy
 - ✓ + Congress renewed tax extenders for 2014 without offsets, which will boost the deficit by \$41.7 billion in 2015
- **U.S. state and local spending** does not rise as fast as expected
 - ✓ + state and local spending is rising slowly, supported by a gradual rise in tax receipts
- **Global GDP growth** does not rise as fast as expected
 - ✓ - 2014 growth is now forecast to be 3.2% compared to the forecast of 3.5%
- **Europe** slips back into recession
 - ✓ - although Europe has not slipped back into recession, economic conditions are deteriorating
 - ✓ - second quarter euro area GDP growth was near zero
 - ✓ - Q3 growth was -0.5% in Italy and is expected to be -0.4% for 2014
 - ✓ - German growth is deteriorating
 - ✓ - the European Commission reduced 2014 forecast GDP growth for the euro area to 0.8% and slashed 2015 expected growth from 1.7% to 1.1%

- **Europe** — financial market turmoil reemerges
 - ✓ + *financial conditions have deteriorated some, but turmoil has not reemerged*
- **Europe** — political instability and social unrest rises more than expected threatening survival of the Eurozone and the European Union
 - ✓ - *Euro-skeptic parties continue to gain strength in many countries (e.g., U.K., Spain, Greece, France)*
- **U.K. growth** falters as housing bubble collapses
 - ✓ + *2014 GDP growth is on track to reach 3.0%*
 - ✓ + *Scotland voted against independence*
 - ✓ - *rise of Scottish National party and United Kingdom Independence Party threaten political instability after the May 2015 parliamentary election*
- **Chinese** leaders have difficulty implementing **economic reforms**
 - ✓ + *Implementation is on track but proceeding slowly*
- **China's growth** slows more than expected
 - ✓ - *full year GDP growth is likely to slow to 7.2% to 7.3%; risks are tilted toward even slower growth*
 - ✓ - *housing prices are declining, the housing market price correction has been more severe than expected*
- cha
- **Japan** — markets lose faith in Abenomics
 - ✓ - *GDP growth has weakened to an expected 0.4% in 2014; GDP growth was negative in both the second and third quarters; the Japanese economy has not recovered as strongly as expected following last Spring's tax increase, forcing a substantial escalation in quantitative easing;*
 - ✓ - *implementation of supply-side reforms is lagging; value added tax increase scheduled for 2015 has been postponed to 2017*
- Severe and, of course, unexpected **natural disasters** occur, which negatively impact global growth
 - ✓ + *nothing of consequence has happened*
- **Middle East oil supply** is disrupted and oil prices rise sharply
 - ✓ + *oil prices have declined more than 40% over the last year; note that this is a favorable result for net consuming nations, but an unfavorable development for exporting nations, particularly Russia, Venezuela, and Nigeria*
- **New — Russia's annexation of the Crimea and Civil Unrest in Ukraine**
 - ✓ - *political tensions between Russia and member nations of NATO have risen; Russia's economy has slowed and probably is in recession; sanctions are contributing to recession risk in European economies*
- **New — Oil prices crash**
 - ✓ - *producing countries, particularly those with limited cash reserves and restricted access to global capital markets, are under severe stress — Russia, Venezuela, and Nigeria are the most exposed*

VII. Outlook — 2015 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 2015 U.S. and global economic outlook and risks to the outlook are listed below. As events unfold during 2015, this will enable the reader to track my analytical prowess.

1. U.S.

- **2015 real GDP Y/Y** growth projections range from 2.7% to 3.5%. The FOMC's central tendency Q4/Q4 projections range from 2.6% to 3.0%. (Q4/Q4 projections are highly dependent upon potential anomalies in Q4 data; therefore, Y/Y estimates, which average all four quarters, are more stable estimates.) Because the substantial decline in oil prices is likely to boost consumption growth more than it depresses investment growth, actual 2015 real GDP growth is likely to be at the high end of the forecast range.
- **Real GDP output gap** will remain high, but will close rapidly during 2015 from about 3.4% to 2.0%. (The exact size of the output gap will be revised by CBO, probably in February 2015).
- **Potential structural rate of real GDP growth** has declined significantly in recent years. I expect potential growth to be about 2.0% in 2014. Long-term potential real GDP growth will edge up in coming years to between 2.0% and 2.3%.
- **Productivity** should rise during 2015 as growth improves and investment increases, but should still fall well short of the historical 2.1% average.
- **Employment** growth should slow during 2015 as full employment approaches and grow about 185,000 per month.
- **Employment participation** will rise slightly during 2015 as the unemployment rate falls, labor market conditions tighten and discouraged workers find jobs. These cyclical factors will more than offset the downward pressure on the participation rate stemming from an aging population.
- **Unemployment rate** should edge down to about 5.25%. A higher rate could occur if substantial numbers of discouraged workers re-enter the labor force.
- **Nominal consumer disposable income**, measured on a Y/Y basis will rise about 3.2% (roughly 1.2% increase in hours worked; 1.8% increase in CPI inflation and .2% increase in the hourly wage rate).
- **Nominal consumer spending growth** on the Y/Y basis will grow slightly faster at approximately 3.5%, but could grow slightly faster if low oil prices persist.
- **Household personal saving rate** will decline slightly as growth in spending exceeds growth in disposable income.
- **Stock prices**, as measured by the S&P 500 average, should rise between 0% and 5%.
- **Manufacturing** growth will continue to be relatively strong and the PMI index will exceed 50.
- **Business investment** spending growth should remain relatively strong in a range of 4% to 6% as employment and consumer spending growth gathering momentum; however, low oil prices will depress energy investment.
- **Residential housing investment** should improve over 2014's disappointing level by 8% to 10%; residential housing starts should rise 15% to 20%.

- **Residential housing prices** should rise about 2% to 4% in 2015, more slowly than 2014's projected 4.5% increase.
- **Trade deficit** should be slightly higher in 2015 as economic growth improves growth in imports and the rising value of the dollar depresses growth in exports. The **dollar's value** on a trade-weighted basis should continue to rise.
- **Monetary policy** — the Federal Reserve will raise the federal funds rate at its June, or possibly, September 2015 meeting. Because inflation is likely to continue to fall short of the Federal Reserve's expectations, the pace of increases in the federal funds rate is likely to be slow.
- **Total inflation** measures (CPI and CPE) will fall sharply during the first half of 2015, reflecting the significant decline in oil prices. **Core PCE inflation** will be stable to slightly lower in a range of 1.3% to 1.5%, reflecting global disinflationary trends. Core PCE inflation will remain well below the FOMC's 2% objective at least through 2017.
- **Federal funds rate** is not likely to increase before mid-2015 and might not increase at all in 2015 if growth is less than expected and core inflation declines more than expected. The pace of increases is likely to be slow.
- The **10-year Treasury rate** is likely to fluctuate in a range between 2.0% and 3.0% in 2015. Faster than expected real GDP employment growth will push the rate toward the top end of the range; greater than expected declines in inflation and/or heightened financial instability will push the rate toward the bottom end of the range.
- **Fiscal policy** will have limited impact on real GDP growth during both fiscal year and calendar year 2015. The deficit as a percentage of nominal GDP will probably decline from fiscal year 2014's level of 2.75% to 2.50%. The decline could be greater if economic growth and tax revenues exceed expectations or less if Congress increases spending without offsets as it did in approving the tax extenders bill for 2014.
- **State and Local investment** spending growth rises slightly from 0.5% in 2014 to 1.0% in 2015, which is still well below the long-term average of approximately 1.4%.

2. Rest of the World

- **Global growth** is likely to improve to 3.7% in 2015 from 3.2% in 2014. Risks are tilted to the upside because of the substantial decline in oil prices.
- **European growth** will be positive but will likely fall short of the consensus 1.2%.
- **European inflation** will continue to decline and may even turn into outright deflation. Quantitative easing, assuming it occurs, may be too late and have too limited an impact to deflect emerging deflationary expectations. Europe may well be headed to the kind of deflationary trap Japan has been in for the last 20 years.
- **European financial markets** may face renewed turmoil. Markets expect the ECB to begin purchasing large amounts of securities, including sovereign debt, by March. This presumes that legal hurdles and German opposition will be overcome. Assuming that quantitative easing actually occurs, its impact is likely to disappoint.
- **European political dysfunction, populism and nationalism** will continue to worsen gradually. Countries to watch include the U.K., Greece, Spain, Italy and Portugal. **U.K. growth** is expected to slow from 3.0% in 2014 to 2.6% in 2015; however, political turmoil should the May parliamentary elections be inconclusive could drive growth lower.
- **China's GDP growth** will slow below 7% and gradually moved toward 6% as economic reforms are implemented and the shift to a consumer-focused economy gathers momentum.

- *China's leadership* will focus on implementing *economic reforms* and will overcome resistance and maintain stability.
 - *Japan's* economic policies may be successful in defeating deflation, but GDP growth will be hard pressed to achieve the expected 1.6% rate in 2015 if Abenomics' third arrow of economic reforms fails to raise the level of potential growth sufficiently to overcome the effect of negative population growth on labor force growth.
 - *India* should experience an improvement in real GDP growth to 6.3% in 2015.
 - *Emerging market countries* that are energy consumers will experience greater growth, as long as the U.S. does better in 2015; energy producing countries and those heavily dependent upon commodities exports for growth will do less well.
3. **Risks** — stated in the negative, but each risk could go in a positive direction.
- *U.S. potential real GDP growth* falls short of expectations
 - *U.S. employment growth* is slower than expected; the *participation rate* is stable or declines rather than rising modestly
 - *U.S. hourly wage rate growth* does not rise materially over its 2014 level of 2.1%
 - *US. Unemployment rate* falls less than expected
 - *U.S. productivity* remains low in the vicinity of 1%
 - *Real U.S. consumer income and spending* increase less than expected
 - *U.S. financial asset prices* rise more than expected posing increased bubble risks
 - *Growth in U.S. residential housing investment and housing starts* is less than expected
 - *U.S. residential housing price increases* slow more than expected
 - *U.S. private business investment* does not improve as much as expected
 - *Oil price declines* in the U.S. trigger bankruptcies and cause tight financial conditions with negative implications for economic activity and growth
 - *U.S. manufacturing growth* slows as the value of the dollar rises and global growth slows
 - *U.S. trade deficit* widens and the *value of the dollar* rises more than expected
 - *U.S. monetary policy* spawns financial market uncertainty and contributes to financial instability
 - *U.S. inflation falls, rather than rising, and threatens deflation*
 - *U.S. interest rates* fall or rise more than expected
 - *U.S. fiscal policy* is more restrictive than expected and the *budget deficit* falls 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
 - *Europe* slips back into recession
 - *ECB* does not engage in quantitative easing or the quantitative easing program it decides to pursue lacks market credibility
 - *Europe* — financial market turmoil reemerges
 - *Europe* — political instability and social unrest rises more than expected threatening survival of the Eurozone and the European Union
 - *Acute political turmoil* engulfs the **U.K.**

- *Chinese* leaders have difficulty implementing *economic reforms*
- *China's growth* slows more than expected
- *Japan* — markets lose faith in Abenomics
- Severe and, of course, unexpected *natural disasters* occur, which negatively impact global growth

Bill Longbrake is an Executive in Residence at the Robert H. Smith School of Business at the University of Maryland.