



The Longbrake Letter*

Bill Longbrake

April, 2014

I. As the U.S. Economy Gains Momentum, Will Inflation (Or Deflation) Be the Next Problem?

Now that spring has sprung, the U.S. economy is beginning to look a little more spritely. Two weeks after Washington, D.C.'s last measurable snowfall, the cherry blossoms were out in their full glory. The U.S. economy may also be exiting the winter doldrums, but perhaps not in quite so dramatic a manner as the cherry blossoms, as a variety of recent reports have been more upbeat. In particular, real progress appears to be occurring in the labor market.

But someone forgot to tell the stock market. Perhaps the stock market's recent snit is due to rotation from momentum stocks to value stocks, as expert observers opine. Or, perhaps it is reflecting nascent anxieties that faster economic growth will unleash inflation, although the decline in long-term bond yields since the beginning of the year certainly isn't what one would expect if the market truly believed inflation were just around the corner.

Martin Feldstein, a renowned scholar who teaches at Harvard University, in a recent Wall Street Journal op ed piece, counseled the Fed to set out clear plans for battling future inflation. He warned that, "experience shows that inflation can rise very rapidly." The Fed is at risk of falling behind the inflation curve. Some recent research suggests that the labor market is already tightening and that wage rates, and subsequently inflation, are poised to rise rapidly in the not too distant future.

In a recent speech, Federal Reserve Chairwomen Janet Yellen countered that considerable slack remains in the labor market and she specifically cited the large number of underemployed workers, the large percentage of long-duration unemployed workers, and the low labor force participation rate. She was very clear that she believes that, "... *evidence for slack is that the decline in unemployment has not helped raise wages as in past recoveries. Workers in a slack market have little leverage to demand raises.*" By implication this means that there is additional slack in the labor market that is not being captured directly by the unemployment rate. And this also means that there is little upward pressure on inflation currently

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

and there is likely to be limited pressure for a long time to come until the growth rate in wages increases from the recent 2 percent level by at least 1 to 2 percentage points.

John Makin, a respected economist at the American Enterprise Institute, is deeply worried about the global threat of deflation. He points out that inflation is falling in the U.S., Europe, and China. He worries that if recent trends continue there is considerable danger that deflation will ensue and become entrenched. He is critical of central bank complacency and includes the U.S. Federal Reserve Bank among the guilty.

Paul Krugman frets that the Federal Reserve's 2 percent inflation target is too low. It favors the wealthy and makes it extremely difficult in an over-indebted society to push down the real burden of debt.

So, as the U.S. economy continues to recover, which all would agree is a healthy development, there is a wide diversity of views about how inflation, or possibly deflation, might be affected and what policies should be pursued.

In several sections of this month's letter the strength of the evolving U.S. economic recovery and its possible impact on trends in inflation is explored. The specific sections include **III. Employment Trends**; **VI. Inflation or Deflation**; and **VII. Monetary Policy**.

II. Real U.S. GDP Growth — Weak First Quarter, But Stronger Growth on the Way

First quarter 2014 real GDP growth is shaping up to be 1.5 percent or less. Most, including myself, view this development as a temporary departure from an otherwise slowly improving growth trend of near 3 percent growth over the remainder of 2014.

Severe winter weather in much of the U.S. depressed first quarter growth but much of this "lost" growth is likely to be recaptured during the second quarter. At least a portion of outsized inventory accumulation gains in the third and fourth quarters of 2013 are likely to reverse in the first quarter and decrease real GDP growth as well. This is also a temporary factor. Employment growth has been solid and points to steady improvement in consumer income and spending.

So, all-in-all, 2014 still looks to be on track to be a reasonably good year. In the near term the risks of negative shocks that could significantly depress U.S. real GDP growth appear to be limited.

However, in the longer run forces are at work which will result in slowing employment growth and could also lead to low productivity growth. This would cause growth in potential real GDP to be considerably lower over time than it has been in the past. That, in turn, would mean that improvements in the standard of living, as conventionally measured, would be limited and growing income and wealth inequality could be aggravated. In this respect the 12.6 percent record-high share of corporate profits and the record low 52.2 percent share of labor income in fourth quarter gross domestic income is a decidedly negative trend.

So, prospective good news for 2014 should not be mistaken as having turned the corner of the U.S.'s long-term growth challenge

1. 2013 Q4 GDP — Final Estimate

Annualized fourth quarter real GDP growth in the Bureau of Economic Analysis's "Final Estimate" was raised from 2.4 percent in the "Preliminary Estimate" to 2.6 percent. Details are shown in **Table 1**. Private GDP, which omits inventory growth and government spending, improved from 3.3 to 3.6 percent. However, net exports contributed 1.0 percent to growth. Typically, over longer periods of time, the contribution of net exports is close to zero. So, if the outsized contribution of net exports to growth in the fourth quarter is set aside, private real GDP growth was still a strong 2.6 percent. As we move into a world in which the potential rate of growth in real U.S. GDP is closer to 2.0 percent than to 3.0 percent, fourth quarter 2013 growth was quite healthy.

Table 1
Composition of 2013 Quarterly GDP Growth

	Fourth Quarter 2013 Advance Estimate	Fourth Quarter 2013 Preliminary Estimate	Fourth Quarter 2013 Final Estimate	Third Quarter 2013	Second Quarter 2013	First Quarter 2013
Personal Consumption	2.26%	1.73%	2.22%	1.36%	1.24%	1.54%
Private Investment						
Nonresidential	.46%	.87%	.68%	.58%	.56%	-.57%
Residential	-.32%	-.29%	-.26%	.31%	.40%	.34%
Inventories	.42%	.14%	-.02%	1.67%	.41%	.93%
Net Exports	1.33%	.99%	.99%	.14%	-.07%	-.28%
Government	-.93%	-1.05%	-.99%	.08%	-.07%	-.82%
Total	3.22%	2.39%	2.62%	4.14%	2.47%	1.14%
Final Domestic Sales	2.80%	2.25%	2.64%	2.01%	0.21%	0.21%
Private GDP	3.73%	3.30%	3.63%	2.39%	2.08%	1.03%

Personal consumption expenditures, which account for 67.9 percent of real GDP, contributed 2.22 percent to fourth quarter GDP growth. This sizable upward adjustment from the "Preliminary Estimate" nearly returned consumption growth to the initial number in the "Advance Estimate." This was a positive development, especially since it was accompanied by a downward adjustment in inventory accumulation.

Severe winter weather was reflected in weak retail sales in both January and February and possibly also for March. Thus, it is probable that growth in personal consumption expenditures will be slower in the first quarter of 2014. Bank of America/Merrill Lynch (**B of A**) expects consumer spending to grow at an annual rate of 2.5 percent in the first quarter of 2014, which would contribute 1.70 percent to real GDP growth. Goldman Sachs' (**GS**) forecast is a more pessimistic 1.8 percent, which would contribute 1.22 percent first quarter real GDP growth. Both **B of A** and **GS** expect real consumer spending growth to exceed 3.0 percent over the remainder of 2014, which would lead to a contribution of 2.2 to 2.3 percent to real GDP growth.

Nonresidential investment's contribution to real GDP growth in the fourth quarter was revised

downward to 0.68 percent in the “Final Estimate,” reversing about half of the upward adjustment from the “Advance Estimate” to the “Preliminary Estimate.” Software, which accounted for much of the improvement from the “Advance Estimate” to the “Preliminary Estimate” returned to the originally reported level. Most all of the increase in nonresidential investment from the “Advance Estimate” to the “Final Estimate” came from the “Equipment” category.

Nonresidential investment accounts for 12.7 percent of GDP and contributed substantially more than its fair share, 27.0 percent, to GDP growth.

To a substantial extent, a significant improvement in real GDP growth in coming quarters will depend upon strong acceleration in private investment spending including residential and nonresidential. This is exactly what most forecasters expect to occur. This is a very important assumption because above trend growth in investment is critical to accelerating employment and income growth, which, in turn are necessary outcomes if consumer spending is to strengthen appreciably. Fundamentals, such as growth in corporate profits, are supportive of acceleration in investment spending. This is a bit of a “chicken and egg” problem because stronger consumer spending depends upon increased investment activity to drive employment and income, but increased investment activity depends upon expectations that consumer demand will improve. Thus, improvements in business and consumer confidence are important. Once investment growth rises a virtuous and self-reinforcing circle will set in with employment, income and spending steadily accelerating.

Forecasts of rising investment spending during 2013 turned out to be prematurely optimistic. For example, in early 2013 GS forecast the annual rate of growth in nonresidential investment during 2013 would be 4.5 percent. Actual growth was 2.7 percent. Growth estimates for 2014 may still be on the optimistic side, but improving employment and a better tone to the economy overall support better investment growth. **B of A** is forecasting 5.2 percent growth and **GS** expects 6.9 percent. This would contribute between 0.7 and 0.9 percent to real GDP growth in 2014.

Residential investment accounts for 3.1 percent of GDP but contributed 18.2 percent of GDP growth in 2013. However, residential investment reduced fourth quarter real GDP growth and is likely to be a negative contributor to first quarter 2014 real GDP growth, reflecting the impact of higher mortgage rates since last summer on housing demand and construction activity, tight mortgage underwriting, and severe winter weather.

Inventories subtracted a tiny amount from real GDP growth in the “Final Estimate.” However, growth in inventories during the fourth quarter was still considerably above a stable trend level. This, coupled with the substantial rise in inventories in the third quarter, argues for a substantial slowdown in inventory accumulation in coming quarters, which would subtract from measured real GDP growth. Over the last 12 quarters inventories have grown at an annual rate averaging \$58 billion. Growth shot up to \$116 billion in the third quarter of 2013 and \$112 billion in the fourth quarter. A return to \$58 billion in the first quarter would subtract \$54 billion from first quarter real GDP and result in a -1.4 percent contribution to first quarter real GDP growth. This is probably a worst case outcome, but it is another reason to expect weak real GDP growth in the first quarter of 2014.

Government expenditures comprise 18.0 percent of real GDP and reduced fourth quarter GDP growth by -37.8 percent. This negative outcome was entirely due to the federal government component. Federal expenditures continue to shrink and reduced fourth quarter real GDP growth by -1.00 percent.

Government expenditures will probably rise modestly during 2014 because state and local spending is expanding and federal government spending cuts will be smaller. Q4/Q4 growth could be about 0.6 percent, but Y/Y growth would actually be slightly negative in a range of -0.2 to -0.7 percent compared to -2.2 percent in 2013.

Net exports contributed an unusually large 35.9 percent of real GDP growth in the fourth quarter. This reflected a narrowing of the oil trade balance by about 20 percent during 2013. This trend seems likely to continue as U.S. energy production continues to grow. An increase in exports to China, which may prove to be temporary, also was a positive contributor.

Exports of goods as a percentage of GDP have edged up and imports of goods have edged down over the last 14 months. Over this period the U.S. trade deficit, which includes both goods and services, declined from 3.26 percent in December 2012 to 2.74 percent in February 2014. If consumer spending accelerates in 2014, as expected, imports should grow more rapidly and this could cause the trade deficit to rise modestly. However, through February, the trade deficit has declined a little. My statistical model forecasts the trade deficit should rise to about 3.01 percent by the end of 2014. If this occurs, net exports would subtract a basis point or two from 2014 real GDP growth compared to its 12 basis point contribution in 2013.

The current account deficit is a more comprehensive measure of U.S. international financial flows and includes the trade deficit as a component. Since peaking at 6.0 percent prior to the Great Recession, this deficit has fallen to 1.9 percent. Over the same period the trade deficit has fallen from 5.5 percent to 2.7 percent. These declines have been driven primarily by a declining dollar exchange rate and, since the onset of the Great Recession, a significant decline in consumer spending on imported goods.

Both of these trends appear poised to reverse. As mentioned above, stronger consumer spending will boost imports. And, the decline in the value of the dollar appears to be over. The trade-weighted index has risen 5.8 percent since October 2010. This means that U.S. exports are becoming less competitive and imports are becoming more attractively priced. These developments will cause net exports to decrease real GDP growth, but the impact may not be visible for several quarters because the adjustment time lags are very long.

2. Longer-Run Trend in Total Real GDP and Private GDP

Table 2 compares total real GDP growth from 2008 through 2013 with a measure of private sector real GDP growth, which is derived by subtracting changes in inventories and government spending from total GDP.

Table 2
Composition of 2008 to 2013 Annual GDP Growth

	2008	2009	2010	2011	2012	2013
Personal Consumption	-.24%	-1.05%	1.34%	1.74%	1.52%	1.37%
Private Investment						
Nonresidential	-.09%	-2.03%	.28%	.84%	.85%	.33%
Residential	-1.06%	-.71%	-.07%	.01%	.32%	.33%
Inventories	-.47%	-.77%	1.43%	-.16%	.20%	.16%
Net Exports	1.05%	1.04%	-.49%	.10%	.10%	.12%
Government	.54%	.64%	.02%	-.68%	-.20%	-.43%
Total	-.29%	-2.80%	2.51%	1.85%	2.79%	1.88%
Final Domestic Sales	.18%	-2.03%	1.08%	2.01%	2.59%	1.72%
Private GDP	-.36%	-2.67%	1.06%	2.69%	2.79%	2.15%

There are two takeaways from **Table 2** — one good, and one troublesome. The good story is that private sector real GDP growth was approaching 3 percent in both 2011 and 2012. However, the bad news is that this measure decelerated to 2.2 percent in 2013. This reflects the negative effects of higher personal and payroll taxes implemented at the beginning of 2013 on consumption, reduced government spending, and a sharp slowdown in business investment growth.

Private GDP growth should increase in 2014 as the one-time impact of higher taxes on personal income and consumption falls out of the data and, if business and residential investment accelerate as anticipated. Also, the drag from reduced government spending shouldn't be as great. It is these expectations that drive the higher real GDP growth forecasts for 2014 shown in **Table 3**

3. 2014 Q1 GDP Forecasts and the Impact of Weather

Table 3 shows forecasts/projections for 2014 through 2016 and a long-run estimate of potential growth in 2023.

Table 3
Real GDP Growth Forecasts

	2014	2014	2014	2015	2016	2023
	Q1	Q4/Q4	Y/Y	Y/Y	Y/Y	Y/Y
B of A	1.4	2.9	2.8	3.3		2.20
GS	1.3	2.8	2.7	3.3	3.1	
Global Insight			2.7	3.2	3.4	
Blue Chip Average*			2.8	3.0	2.8	
Bill's Steady Growth		2.6	2.6	2.2	2.0	2.14
Bill's Strong Growth		3.3	2.9	3.1	2.6	2.56
FOMC - High[#]		3.0		3.2 [#]	3.0 [#]	2.10
FOMC - Low[#]		2.8		3.0 [#]	2.5 [#]	2.10
CBO*			2.6	3.3	3.4	2.11

*CBO GDP estimates were prepared in the third quarter of 2013.

[#]Measured from Q4 to Q4

Due to severe winter weather and slower inventory growth, **GS** expects first quarter GDP growth to be 1.3 percent and **B of A** is a tad higher at 1.4 percent.

Just how big an impact is weather likely to have on first quarter growth? The importance of this question lies in whether the weak data reports are indicative of slowing growth or whether they simply reflect temporary dislocations caused by severe weather. The popular view is that the expected acceleration in growth during 2014 is intact and that weather is responsible for most of the recent weakness. **GS** and **B of A** have conducted a more thorough analysis and have concluded that weather appears to be responsible

for much, but not all, of the weakness.

GS's current activity index, which tracks real GDP growth, decelerated from 2.75 percent last summer to 2.0 percent in December and January and further to 1.4 percent in February. About half of the decline, or 0.7 percent, can be explained by weather with weather-related impacts concentrated on housing, employment, and retail sales. **GS** estimates that weather impacts will depress first quarter real GDP by 0.50 percent, but will increase second quarter real GDP by 0.50 percent to 0.70 percent. With many March data reports now in, **GS's** March current activity index has surged to 3.6 percent. This measure is consistent with **GS's** expectation that real GDP growth will range between 3.0 percent and 3.5 percent over the remaining three quarters of 2014.

B of A conducted a statistical analysis which indicated that during January and February weakness was widespread across many economic sectors, which is indicative of a generalized shock, such as the weather, rather than any specific sector, such as an inventory correction. **B of A** concluded that regardless of whether recent weakness stems from the weather or an inventory correction, the effects are temporary and will dissipate in a relatively short period of time as the shocks play out.

March data on balance have improved and support an interpretation of temporary economic weakness.

4. GDP Forecasts for 2014 and Beyond

As **Charts 1A** and **1B** and **Table 3** show, forecasters expect real GDP growth to be near 3.0 percent in 2014, 2015, and 2016, which would be well above the level of potential growth. As a result, the output gap, which the Congressional Budget Office (CBO) estimated to be 4.0 percent at the end of 2013, would shrink substantially.

Charts 1A and **1B** show the same data, but the starting date in **Chart 1A** is the first quarter of 2012 and the starting date in **Chart 1B** is the fourth quarter of 2013. It is easier to see the differences in the various forecasts in **Chart 1B** because of the changes in timing and scale.

Real GDP Y/Y growth forecasts for 2014 range from 2.6 to 2.9 percent (also see **Table 3**), although the top end of the FOMC projection range is 3.0 percent. So, there is substantial consensus that growth will accelerate in 2014 from 2013's 1.9 percent pace.

For the last couple of years both **B of A** and **GS's** forecasts have been at the pessimistic end of the spectrum and their conservatism proved to be well founded. However, both are now optimistic that growth will accelerate in 2014 and that the case for that call is strong for several reasons.

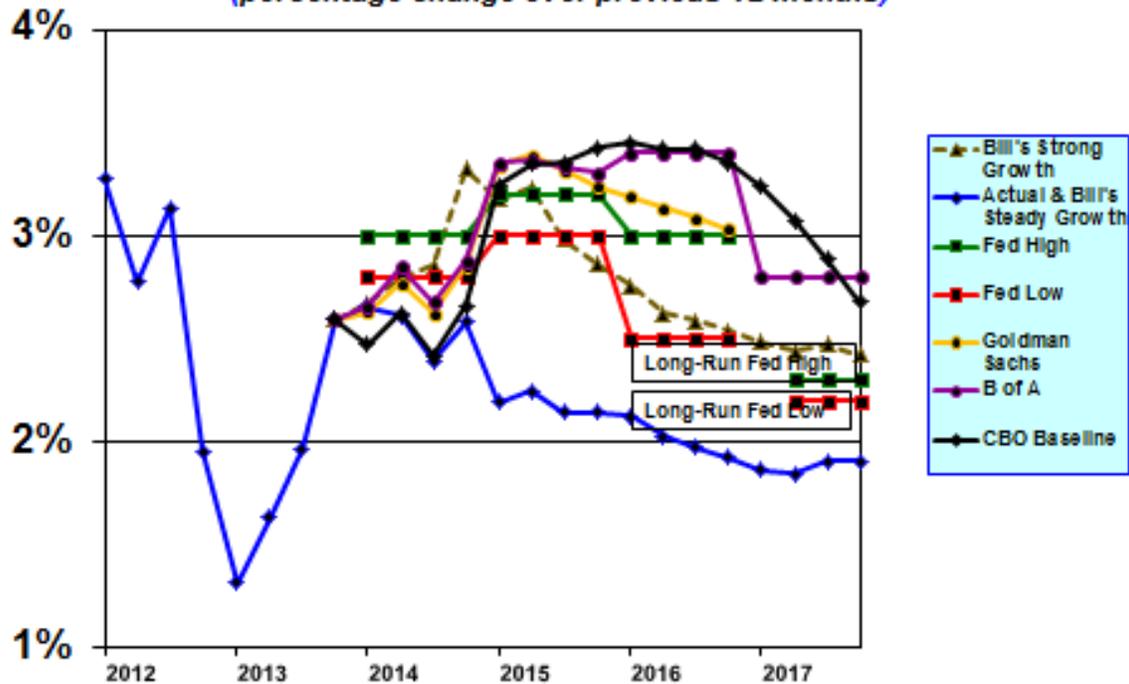
Bill's "**Strong Growth**" scenario of Y/Y 2.91 percent growth in 2014 is in the upper end of the forecast range and Bill's "**Steady Growth**" scenario forecast of 2.56 percent growth is at the bottom end of the range.

Although Federal Open Market Committee (FOMC) projections have been systematically overly optimistic in the past (see **Table 4**), FOMC projections for 2014 and 2015 are similar to those of most forecasters, but the FOMC's projections are lower than other forecasters in 2016.

There are several reasons supporting optimism that real GDP growth will accelerate in 2014.

First, fiscal policy will not be highly contractionary as it was in 2012 and 2013. Recovery in state and local spending will marginally exceed a small negative impulse from federal spending.

CHART 1A – Real GDP Growth Forecasts
(percentage change over previous 12 months)



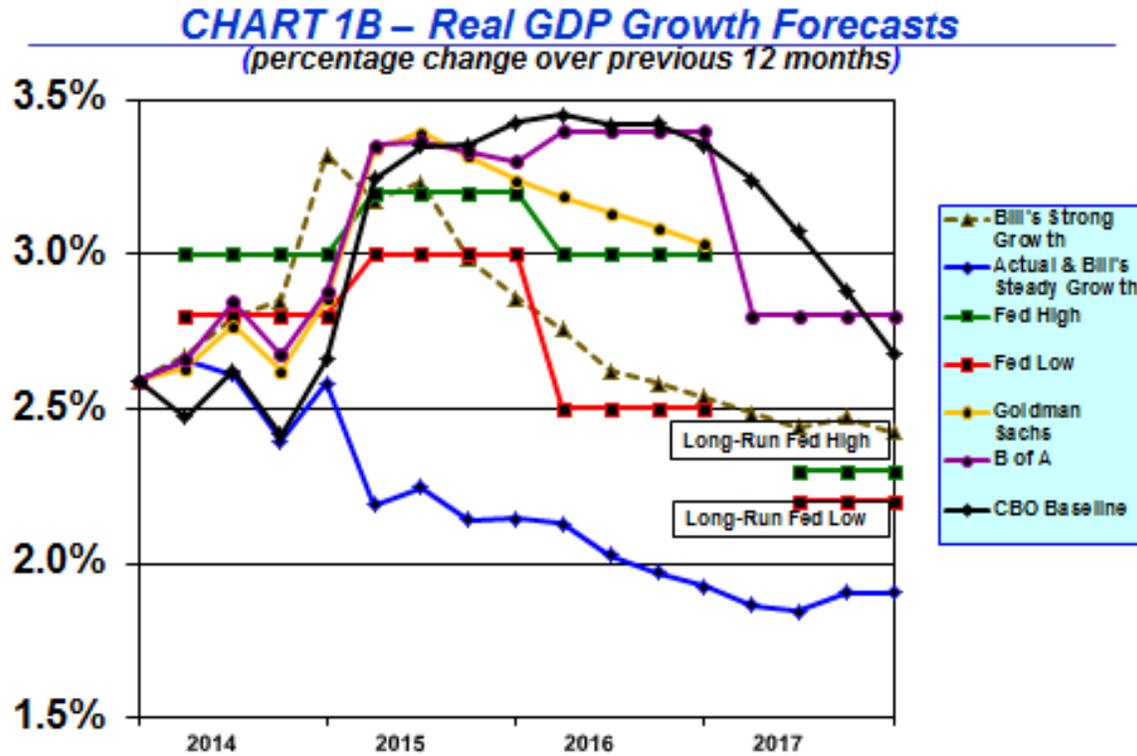
Page 1

Second, corporate profits are high and balance sheets are strong. This should support an increase in investment spending. Note, however, that investment spending depends primarily on sales growth and pressures on capacity utilization. Excess capacity remains high and sales growth has been weak. Nonetheless, improving employment and consumer income should boost consumption and this, in turn, should stimulate greater investment.

Third, banks have rebuilt capital and are more willing to lend. Bank loan growth, which was very weak in 2013, has accelerated somewhat since the beginning of the year, although severe weather could be a factor in the recent acceleration.

Fourth, housing prices are rising, excess inventory has diminished considerably but, surprisingly, household formation has slowed. Notwithstanding the fourth quarter set back, residential investment could increase further from already relatively strong levels in 2013, but access to mortgage credit remains constrained and higher home prices and interest rates are reducing affordability and could depress demand.

Fifth, households have reduced debt burdens and rising prices for houses and financial assets are boosting wealth, which should increase consumer spending. Note, however, that the increase in wealth is almost entirely concentrated at the top of the distribution. Wealthy households have a much lower propensity to spend. Also, wealth accumulation could slow down in 2014 because the rate of appreciation in the prices of financial assets is likely to slow. Indeed, as of April 7, the S&P 500 stock index was unchanged.



Page 2

Acceleration in real GDP growth in 2014 and beyond depends primarily on consumer spending and investment, both residential and nonresidential. Optimism about employment gains leads to optimism about sales growth and optimism about sales growth leads to optimism about increases in business and residential investment. Should employment grow a little more slowly than the consensus expects, much slower growth in real GDP will occur. That is the assumption that underlies Bill’s *“Steady Growth”* scenario. Employment growth in Bill’s *“Strong Growth”* scenario is consistent with consensus expectations.

Table 5 shows consumption growth forecasts for 2014, 2015, and 2016. About 85 percent of the difference in consumption growth between the 2014 *“Steady Growth”* and *“Strong Growth”* scenarios is due to the wealth effect. The remaining 15 percent is divided between 10 percent from faster employment growth and 5 percent from a lower saving rate.

Business and residential investment growth forecasts are shown in **Table 6**. Both **GS** and **B of A** have trimmed forecast investment growth for 2014 in recent months, but both still expect investment growth to accelerate in 2014. **GS** forecasts stronger residential and business investment growth of 6.5 percent Y/Y in 2014 compared to 4.5 percent Y/Y in 2013. **B of A** forecasts investment growth Y/Y of 6.0 percent in 2014. Both **GS** and **B of A** forecast further investment growth acceleration in 2015.

Investment in Bill’s *“Steady Growth”* scenario accelerates in 2014 to 6.3 percent, which is similar to **B of A**’s and **GS**’s forecasts, and then drops off sharply in 2015 and 2016. Investment in Bill’s *“Strong Growth”* scenario accelerates to a robust 7.2 percent in 2014, which is more optimistic than **GS**’s or **B of A**’s forecasts, then maintains a high growth rate of 8.5 percent in 2015 similar to **GS** and **B of A** before slowing to 4.5 percent in 2016.

Table 4
Median of FOMC's Central Tendency Real GDP Growth Projections Compared to Actual Results — 2011 to 2016

Meeting Date	2011	2012	2013	2014	2015	2016	Long Run
Jan 2011	3.70	3.95	4.00				2.7
Apr 2011	3.30	3.65	4.00				2.7
June 2011	2.75	3.10	3.75				2.7
Nov 2011	1.70	2.90	3.35	3.60			2.6
Jan 2012		2.55	3.10	3.55			2.6
Apr 2012		2.55	3.10	3.60			2.6
June 2012		2.05	2.85	3.40			2.6
Sep 2012		1.80	2.90	3.40	3.35		2.6
Dec 2012		1.80	2.60	3.40	3.35		2.6
Mar 2013			2.50	3.20	3.15		2.5
June 2013			2.30	2.90	3.05		2.5
Sep 2013			2.10	2.75	2.95	2.85	2.3
Dec 2013			2.30	2.75	2.90	2.80	2.15
Mar 2014				2.55	2.85	2.80	2.1
Actual Q4 to Q4	2.01	1.95	2.59	2.85*	3.24*	3.03*	
Actual Y/Y	1.85	2.78	1.88	2.72*	3.32*	3.11*	
Long Run Potential							2.1-2.6#

*GS forecast

#Bill's "*Steady Growth*" long-run potential = 2.14%; Bill's "*Strong Growth*" long-run potential = 2.56%

Real GDP growth forecasts for 2015 and 2016 for Bill's "*Steady Growth*" scenario (Table 3) are considerably lower than other forecasts. The difference has principally to do with the assumption that investment growth and, therefore, productivity growth will remain low relative to historical levels. Slow investment growth will hold back employment growth and retard income growth, which implies that consumer spending growth will continue to be disappointing.

Almost all of the difference between the 2.58 percent real GDP growth forecast in Bill's "*Steady Growth*" scenario for 2014 and the 2.93 percent real GDP growth forecast in Bill's "*Strong Growth*" scenario is due to higher investment growth, with a small fraction due to higher consumption growth.

Table 5
Real Consumer Spending Growth Rate Y/Y Forecasts — B of A, GS, Bill’s “Steady Growth” and Bill’s “Strong Growth”

Real Consumer Spending Growth	2010	2011	2012	2013	2014	2015	2016
Actual	1.66	2.36	2.07	1.93			
B of A					2.83	3.24	3.07
GS					2.61	2.98	2.64
Bill’s Steady Growth					2.32	2.17	2.26
Bill’s Strong Growth					2.55	2.86	2.85

Table 6
Real Investment (Residential and Nonresidential) Growth Rate Y/Y Forecasts — B of A, GS, Bill’s “Steady Growth” and Bill’s “Strong Growth”

Real Consumer Spending Growth	2010	2011	2012	2013	2014	2015	2016
Actual	1.51	6.25	8.28	4.46			
B of A					6.02	8.46	
GS					6.46	8.58	7.53
Bill’s Steady Growth					6.33	3.98	2.60
Bill’s Strong Growth					7.17	8.45	4.50

5. Potential Real GDP Growth

Potential real GDP growth is the product of growth in hours worked and productivity. (Details have been provided in previous Longbrake Letters.) The “gold standard” for estimates of potential real GDP is provided by CBO. However, CBO’s estimate is just that — an estimate. CBO’s estimate is based upon its assumptions about labor force growth and productivity. Different assumptions for either will result in different estimates of potential real GDP.

In 2007, the year preceding the Great Recession, CBO estimated potential growth to be 2.45 percent. This was well below the long-term potential growth rate of 3.2 percent. However, in the four and a half years since the recovery from the Great Recession commenced CBO estimates that potential growth averaged 1.54 percent. CBO expects potential growth to improve to 1.92 percent over the next three years. **GS** is much more optimistic and expects potential growth to be 2.5 percent, composed of 0.9 percent labor growth and 1.6 percent productivity (note that 1.6 percent economy wide productivity growth requires nonfarm productivity of 2.0 percent).

My potential growth rates are 1.77 percent for the “**Steady Growth**” scenario and 1.93 percent for the “**Strong Growth**” scenario. My assumption for labor growth is 0.8 percent, which means that the preponderance of the difference between my projections of potential GDP growth and **GS**’s has to do with

GS's optimism about strong productivity compared to my pessimism.

Together estimates of potential real GDP and forecasts of actual real GDP growth define the output gap.

There appears to be a growing consensus that potential real GDP growth will not improve materially as economy heals and the output gap closes. CBO expects potential growth to be 2.0 percent in 2024. FOMC members have become progressively less optimistic. As can be seen in **Table 4**, the central tendency of FOMC member long-term anticipated potential real GDP growth has fallen from 2.7 percent in June 2011 to 2.1 percent in March 2014. Diminished expectations appear to be a passive acknowledgment of declining U.S. economic vitality. Declining labor force growth should not have come as a surprise, so the preponderance of this significant downward adjustment in expectations, by default, has come from lowered expectations for productivity. This is not a foreordained outcome. Policies could be pursued that would amplify productivity prospects. But, political obsession with cutting government spending and monetary policy that has depressed the real rate of interest are having and could continue to have a combined depressing impact on investment activity essential in the long run to boost productivity.

6. GDP Output Gap

The output gap is the percentage difference between actual or forecast real GDP and estimates of potential full-employment real GDP.

In **Chart 2** my estimates of the output gap in the “*Steady Growth*” and “*Strong Growth*” scenarios are based on my estimates of potential real GDP and not on CBO’s estimates. By 2023 my estimate of potential real GDP in the “*Strong Growth*” scenario is 0.1 percent higher than CBO’s estimate, but my estimate of potential real GDP in the “*Steady Growth*” scenario is 2.6 percent lower. Even though I have lowered expected potential real GDP in my “*Steady Growth*” scenario, the output gap does not close. This means that forecast growth in actual real GDP by 2023 in my “*Steady Growth*” scenario is even weaker than one might guess by looking at **Chart 2** — 4.4 percent lower than CBO’s potential and 4.0 percent lower than CBO’s actual estimates of real GDP.

Chart 2 benchmarks the GDP output gap as 4.0 percent at the end of 2013 and then shows how the output gap would change over time based upon CBO’s GDP projections and my “*Steady Growth*” and “*Strong Growth*” scenarios. CBO expects the output gap to close by 2017. The output gap also closes in my “*Strong Growth*” scenario by the end of 2017, but the gap does not close in my “*Steady Growth*” scenario.

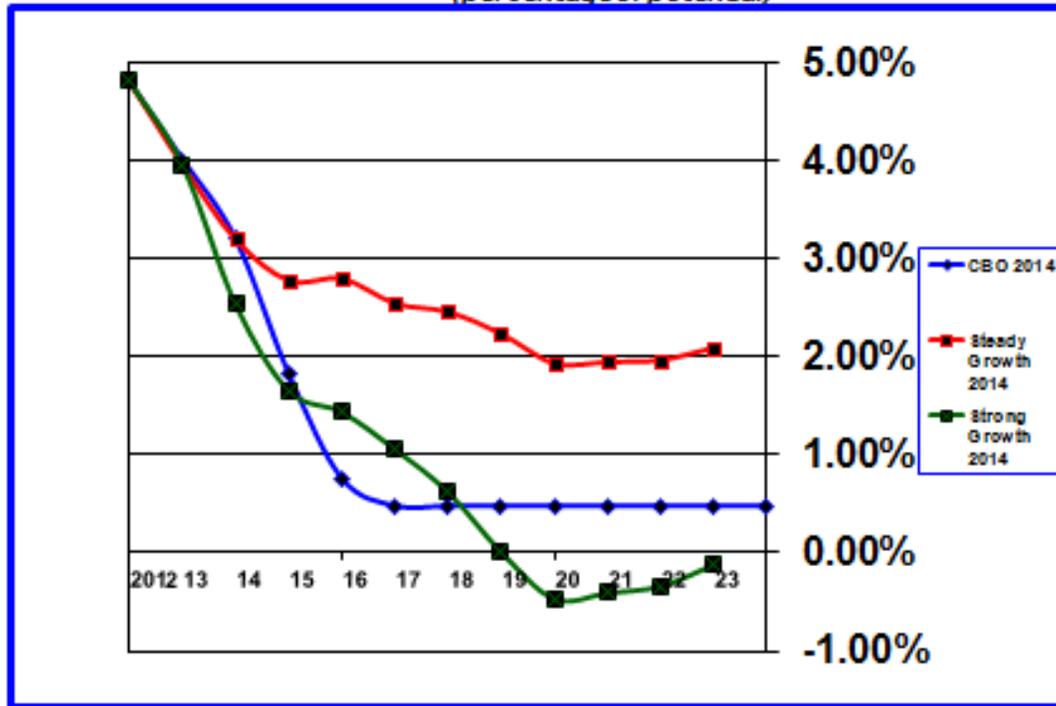
In my “*Strong Growth*” scenario, which assumes strong labor force growth, strong investment growth, and robust productivity, the output gap shrinks more rapidly than CBO’s estimates initially, but then the rate at which the gap shrinks slows and it closes in about 2018. Employment growth and investment assumptions are intentionally optimistic in this scenario.

In my “*Steady Growth*” scenario the output gap shrinks slowly and does not close. This scenario assumes slow labor force growth, tepid investment growth, and lackluster productivity. It is intentionally structured to be a pessimistic scenario. My expectation is that the eventual realized trend of GDP growth and the output gap are likely to fall somewhere between the “*Strong Growth*” and “*Slow Growth*” scenarios.

Chart 3 adds **B of A's** and **GS's** estimates of the output gap to those for my two scenarios and CBO’s. **B of A's** estimated gap is based upon CBO’s estimates of potential real GDP, but **GS's** estimated gap is

CHART 2 – Real GDP Output Gap

(percentage of potential)



Page 3

based on its own analysis and estimates of potential real GDP. The time period is also shortened in **Chart 3**.

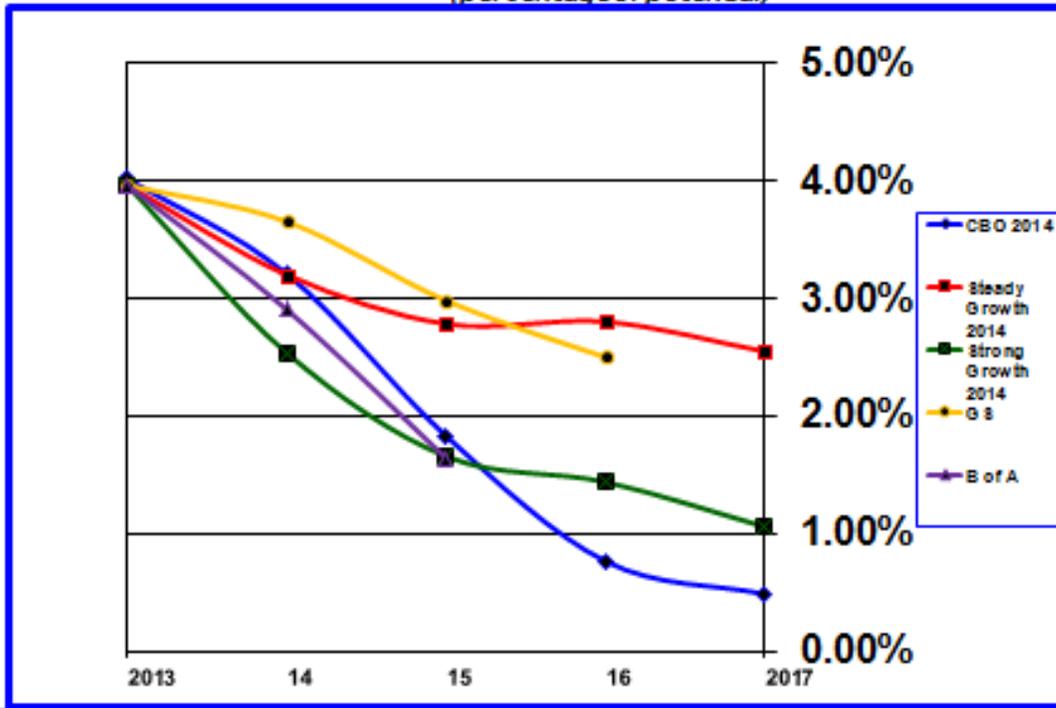
B of A's estimate of the output gap closely tracks CBO's estimate. **B of A** is a little more optimistic in 2014 and 2015.

Although **GS**'s real GDP forecast is virtually identical to **B of A**'s forecast, its much higher estimate of potential real GDP growth results in a much slower decrease in the size of the output gap. Indeed, **GS**'s output gap shrinks even more slowly than my pessimistic "**Steady Growth**" scenario in 2014 and 2015. My sense is that **GS**'s expectation for high productivity growth, which is linked to its expectation that investment accelerates significantly, is too optimistic. But, if **GS**'s optimism proves to be on the mark, then it will take longer for the output gap to close.

Probably the most important take-away is that the output gap is large and it will take at least another four years for the economy to reach full potential, and perhaps longer. If the time ends up being shorter, it will either be because growth accelerates from the expected trend, which is possible but seems unlikely, or that potential real GDP is less than CBO believes, which would be a very negative development.

Because the output and employment gaps are highly correlated, full employment is about as far off as achieving full potential real GDP. If this is not the case and the employment market is tightening rapidly, it is for the wrong reasons, namely that eligible workers are permanently leaving the labor force. Such an outcome would reduce potential real GDP and, as I said, would be a very negative development for the

CHART 3 – Real GDP Output Gap
(percentage of potential)



Page 4

U.S. economy.

Notwithstanding all the recent talk about a tightening labor market and the risk of an imminent inflation outbreak because of upward pressure on wages, history, analysis, and experience all strongly suggest that this is a phantom concern. Changes in inflation lag real economic activity which implies that inflation will remain subdued at low levels for a long time. Indeed, there is reason to worry that the risk of deflation or near-deflation is a greater threat than the risk of higher inflation.

III. Recent Employment Trends

March’s increase in payroll employment was 192,000, which was just slightly below the consensus expectation. Upward revision to January added another 15,000 jobs. Over the first three months of 2014, monthly payroll jobs have increased an average of 178,000. This is not much different than the 2013 monthly average of 194,000. Monthly payroll data can be volatile due to reporting and statistical issues and also due to short-term phenomena, such as the government closure last year or severe winter weather this year. Short-term phenomena are just that. Their effects quickly disappear. Over time data revisions correct statistical and reporting problems. It is best to focus on the trend in payroll jobs over several months rather than obsessing about the twists and turns in the monthly data. Thus, a reasonable conclusion, based on recent payroll data, is that the labor market continues to heal in a steady, yet unspectacular, fashion.

The companion monthly household survey is even more volatile and is never revised except for periodic

updates to monthly seasonal adjustment factors. Household employment increased 638,000 in January, 41,000 in February, and 476,000 in March. The three-month average was 385,000. This seems really strong, but recent strength is probably just correcting the weakness reported during 2013 when household job growth averaged only 115,000 per month. The 15-month average is now 169,000 for the household survey compared to 191,000 payroll jobs. Historically, the two data series track each other closely. While the two diverged significantly during 2013, with the addition of 2014 data the long-term equivalence of the two different methodologies appears to remain intact.

1. Payroll and Household Employment

Employment trends can be observed more easily by viewing **Chart 4**, which shows the annual growth rates for both the payroll and household employment surveys on a year-over-year basis.

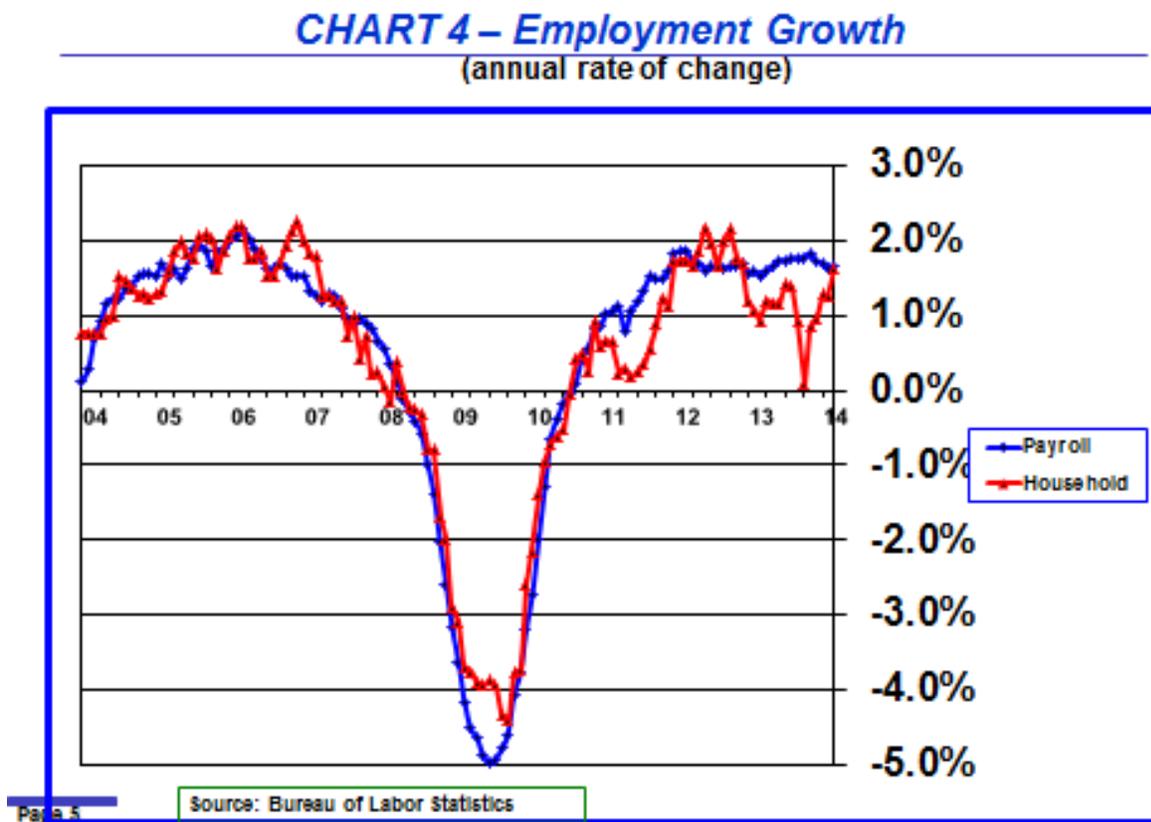
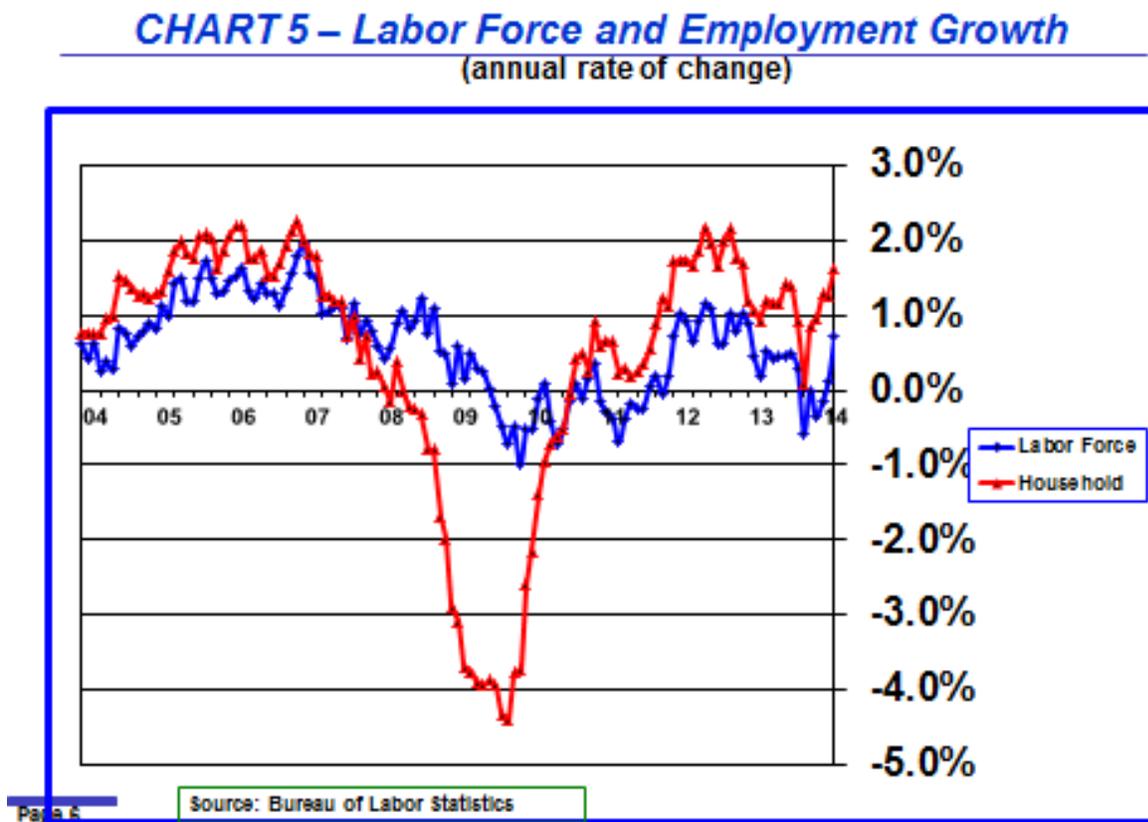


Chart 4 indicates that payroll employment is growing at an annual rate of 1.66 percent and household employment is growing at an annual rate of 1.64 percent. Employment growth is above CBO's long-term labor force trend level of 0.5 to 0.7 percent, which is necessary for the unemployment rate to fall and the economy to return to full employment. Annual payroll employment growth peaked at 1.82 percent in November and has edged a bit lower since then. It is too early to conclude that the trend growth rate is slowing because of recent weather-related anomalies in the data. However, as the labor market approaches full employment it is certain that growth will slow to the long-term trend level dictated by growth in the labor force.

2. Labor Force

Over extended periods of time growth in the labor force depends upon growth in the population eligible to work and on demographic and cultural factors. As can be seen in **Chart 5**, labor force growth tends to exceed household employment growth during recessions and the reverse is true during economic expansions. The difference between the number of workers in the labor force and the number employed equals the number of unemployed workers — the U-3 measure of unemployment reported by BLS. Thus, when employment growth exceeds labor force growth, as typically occurs during economic expansions, the unemployment rate falls. Certainly, this has been the case since 2010.



Notice also that there is a moderate cyclical oscillation in labor force growth over the economic cycle, rising during expansions and falling during recessions. This oscillation is caused by changes in labor force participation.

Normally, labor force growth rises during expansions, as can be seen over the period 2004-2007, implying that participation is improving relative to its long-run trend. However, as can be seen in **Chart 5**, beginning in 2013 the growth rate in the labor force began to slow. Not only did it slow to CBO's long-term trend level of 0.5 to 0.7 percent, labor force growth was essentially zero between last October and January but has now improved to about CBO's expected long-term rate of growth. If discouraged workers reenter the labor force in coming months, the growth rate could rise even more for a period of time.

In recent months the apparent collapse in labor force growth and with it the plunge in the participation rate has engendered considerable debate. Slower or no growth in the labor force, if sustained for any length

of time, would result in a smaller economy — both the level and the growth rate in real GDP would be less. In addition, there are monetary policy implications should the labor market return to full employment sooner because of declining participation.

Noting the caveat about not relying on a single month's data, nonetheless, as is visually apparent in **Chart 5**, it appears that the apparent collapse in labor force growth and decline in participation may not be a trend at all but rather a statistical anomaly. Whether this is true will become clearer in coming months.

3. Three Components of Labor Market Slack

As long as significant amounts of slack persist in the labor market there will be limited upward pressure on wage rates and on inflation. The question, however, is one of how much slack exists in the labor market. A related question is one how of fast that slack will disappear. If there is a great deal of slack and it will only decline slowly, then monetary policy should be very accommodative for an extended period of time. But, if slack is small and declining rapidly, then policy should be tightens sooner than later to prevent a potential surge in inflation. To get policy right it is important to find answers to the two questions of how much slack exists in the labor market and how fast is it likely to diminish. Unfortunately, there is no clear answer to either of these questions.

There are three components of labor market slack. The first is the U-3 *unemployment rate* reported monthly by BLS. This rate counts the number of workers who are eligible to work but who report they do not have a job but are looking for one. This is the measure that most analysts follow to assess the degree of labor market slack. It is also the measure that the Federal Reserve targeted until the March FOMC meeting.

But there are two other components of the labor market that impact the amount of slack. The second component is the *participation gap*. This gap includes workers who are eligible to work but who are underemployed or have dropped out of the labor force and are not looking for work. Many of these workers will reenter the labor force or move from part-time to full-time employment as jobs become easier to find and employment slack diminishes. Such workers are often referred to as “discouraged,” although the connotation of “discouraged” in this context is considerably broader than the BLS’s definition of discouraged workers.

While there are various ways of counting discouraged workers, there is no universally accepted measure of the participation gap. The absence of an unequivocal metric has led to debate as to the actual number of discouraged workers who will eventually reenter the labor force. Some discouraged workers might never reenter the labor force or find a full-time job because they no longer have the necessary skills (skills mismatch) or employers are reluctant to hire them because they have been out of work for a long time (stigma).

BLS reports the U-6 unemployment rate, which provides partial, but not complete information about the participation gap. The U-6 rate adds involuntary part-time workers (4.7 percent of the labor force currently) and marginally attached workers (1.4 percent of the labor force currently) to the U-3 unemployment rate. The U-6 unemployment rate in March was 10.7 percent. Involuntary part-time workers are those who are working part time but want to have a full-time job. Marginally attached workers do not have a job currently and are not looking for one, but are available to work and have actually looked for work sometime during the previous 12 months. BLS includes its definition of “discouraged” workers in its measure of marginally attached workers.

There is a third component of labor market slack and that is the *hours gap*. An hours gap exists when employed workers are working fewer hours than they would like to work. To a certain extent this phenomenon is picked up in BLS's U-6 measure of involuntary part-time workers. But that measure is probably incomplete to the extent that some workers do not report that they are involuntary part-time workers but who would be willing to work more hours. Typically, employers cut back on overtime and even on regular time during recessions before terminating employees. The reverse occurs as the economy improves as employers increase hours and employ more part-time workers before committing to full-time hires.

It is likely that each of these measures of labor market slack will have some impact on wage increases but that does not necessarily imply that each has similar relative importance.

4. Unemployment Rate — Duration of Unemployment

To add further complexity to the issue of how to measure labor market slack, BLS reports the duration of unemployment for several categories of the first component of labor market slack — U-3 unemployed workers.

Some argue that the measure of short-duration unemployment, defined as the percentage of the labor force willing to work that has been unemployed for fewer than 27 weeks, is a better measure of labor market tightness than the U-3 total unemployment rate. The rationale behind this argument is that those unemployed for more than 26 weeks are less likely to find jobs either because their skills have atrophied (hysteresis) or because of stigma. Thus it is asserted, many of the long-term unemployed will eventually stop looking for work and drop out of the labor market. If that is the case, then the labor market is tighter than implied by the conventional U-3 unemployment rate.

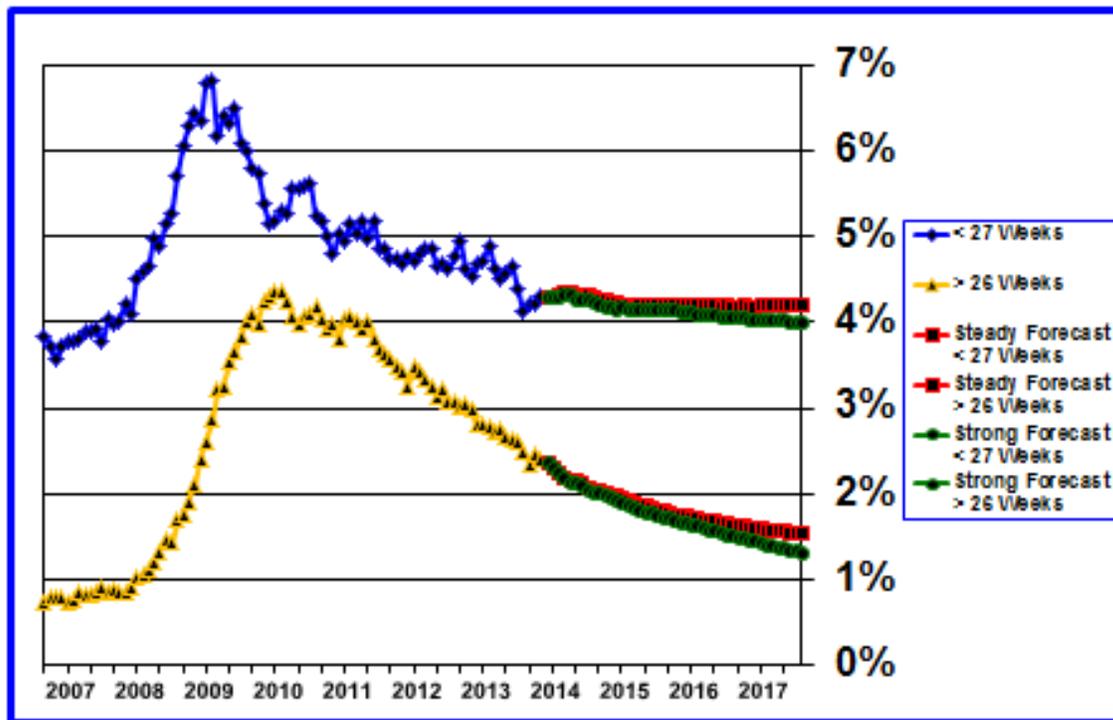
Chart 6 divides the U-3 unemployment rate into two unemployment rates — one for short-duration unemployment and one for long-duration unemployment. The short-duration unemployment rate is almost back to its pre-Great Recession level. It averaged 3.81 percent in 2007 compared to 4.24 percent over the last three months. In contrast, the long-duration unemployment rate averaged 0.81 percent in 2007 compared to 2.40 percent over the last three months.

Chart 6 also shows my forecasts for the short-duration and long-duration unemployment rates. The short-duration unemployment rate changes little in the forecasts indicating that it has, indeed, returned to a “normal” labor market level. However, the long-duration unemployment rate continues to decline, but very gradually. The sum of the two forecast unemployment rates equals the forecast total unemployment rate, which reaches 5.75 percent by December 2017 in the “**Steady Growth**” scenario (4.20 percent short-duration and 1.55 percent long-duration) and 5.35 percent in the “**Strong Growth**” scenario (4.02 percent short-duration and 1.33 percent long-duration).

Now, if the argument that the short-duration unemployment rate is a more reliable measure of inflation risks has merit, then the recent trend in that rate implies that there is little remaining slack in the labor market. The implication is that the FOMC better get busy and start raising interest rates before inflation gets up a head of steam. At first blush the argument sounds plausible, if one accepts the assumption that the long-duration unemployed are not a factor in wage rate determination.

It is a hypothesis that thus far lacks definitive statistical proof. The presumed imminent risks are not visible in historical economic cycles. But, perhaps this time is different because elevated long-duration unemployment has not persisted for such an extended period of time in previous cycles.

CHART 6 – Unemployment Rate – Duration of Unemployment: Actual and Forecasts



Page 7

My statistical analysis, which includes both the total unemployment gap and the short-duration unemployment gap separately, indicates that core PCE inflation should rise in coming months, but the increase is moderate and tops out at about 2.0 percent in 2015. **Table 9** includes forecasts for 2015, 2016, and 2017.

Including the short-duration unemployment rate adds about 50 basis points to my PCE inflation forecast in the next couple of years. The coefficient of the short-duration gap is 1.29 which means that for every one percentage point decrease in the short-duration employment gap, the core PCE inflation rate rises 1.29 percentage points. The coefficient of the total employment gap is a somewhat smaller 1.05. The average lag in time between a change in the size of the employment gap and its impact on inflation is 3 years for both the total and short-duration labor gap measures. What this means is that the substantial decline in the short-duration employment gap which has already occurred will feed into higher inflation over the next two to three years. After that the short-term duration employment will have only a further very modest impact on inflation. However, because the total employment gap is still falling, it will continue to put upward pressure on inflation for a somewhat longer time. Of course, there are other economic variables that impact inflation such as demand and productivity (included in the forecast model) and inflation expectations (not included in the forecast model). Omitting inflation expectations from the forecast model should not matter as long as inflation expectations are well-anchored as they have been for several years.

Including the short-duration unemployment rate in my interest-rate forecasting model increases the forecast interest rates for both the federal funds rate and the 10-year Treasury note. The timing of the first federal funds rate increase in the “**Steady Growth**” scenario occurs between late 2016 and early 2017, which is later than the market’s current expectation that the first increase will occur in mid-2015 (see

Chart 16). The first federal funds rate increase in the “**Strong Growth**” scenario occurs in mid-2015 consistent with market expectations.

Thus, although I do find evidence that the short-duration unemployment rate matters, its forecast impact on inflation and interest rates is moderate and generally within existing consensus expectations.

There is also an indirect argument that supposedly supports the threat of imminent inflation risks. One of the constructs economists use to measure the relationship between unemployment and inflation is called the “Phillips Curve.” When the unemployment rate rises, inflation falls. The difficulty recently is that inflation has not fallen as much as the Phillips Curve predicts. It could be that there has been a “structural” shift in the relationship between the unemployment rate and inflation, or, as argued by those who believe inflation risks are imminent, the U-3 unemployment rate is an imperfect measure of labor market slack. Some recent research finds that when the short-duration unemployment rate is substituted for the U-3 unemployment rate the Phillips Curve works as expected. Given that finding, the conclusion that inflation risks are imminent follows because the short-duration unemployment rate is nearly down to the “normal” level that typically exists during the maturing phase of an economic expansion.

From my point of view the recent analysis is statistically incomplete because it is based on the simplistic concept of the Phillips Curve, which describes a general relationship between the unemployment rate and inflation, but which hardly qualifies as a reliable deterministic guide given the many other phenomena that affect inflation. GS conducted an extensive analysis of recent statistical analysis, conducted its own statistical analysis, and reached a similar conclusion that relying solely on the short-duration unemployment rate to forecast future inflation rates is incomplete and results in unreasonably high estimates.¹

Expect to hear more arguments about structural unemployment and inflation risks as the monetary policy debate shifts from tapering quantitative easing to speculating about the timing of interest rate increases. There is ample potential for all of this to confuse market participants and lead to a premature spike in longer-term interest rates in anticipation of FOMC action. That potential could be reinforced during springtime, if economic growth bounces back from the winter doldrums. So far that has not occurred. In fact, the ten-year Treasury rate has fallen from 3.04 percent at the beginning of 2014 to 2.63 percent on April 11.

5. Outlook for the U-3 Unemployment Rate

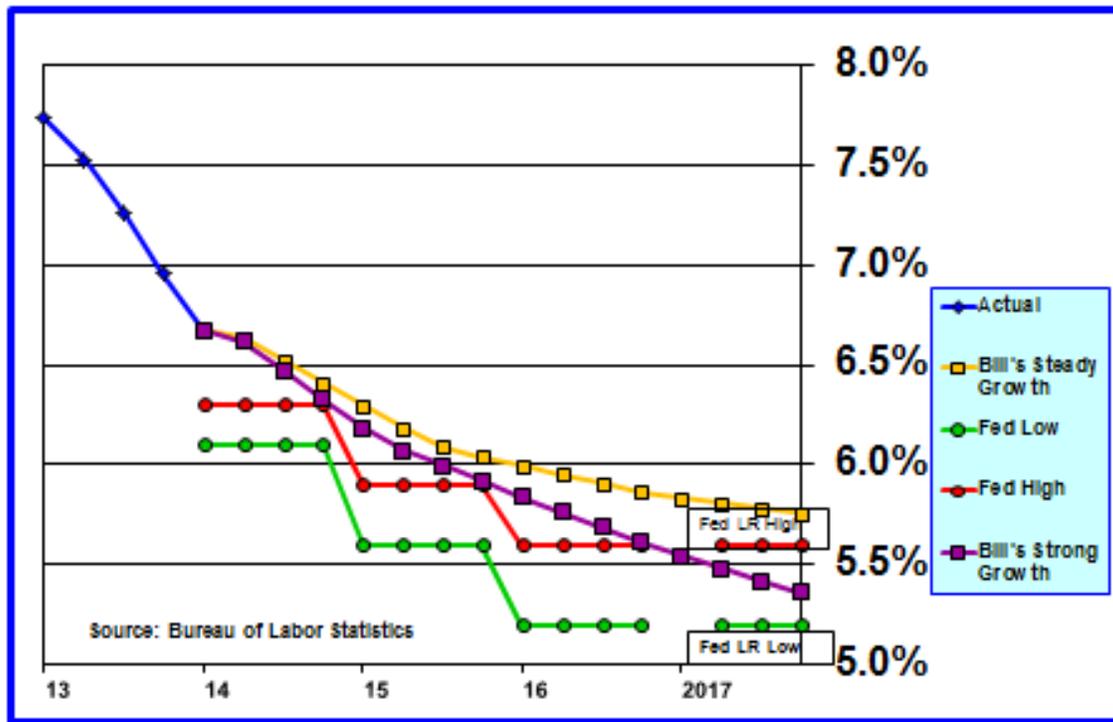
After falling from 7.91 percent in January 2013 to 6.68 percent in December, the unemployment rate has barely budged and was 6.71 percent in March. The recent stabilization in the unemployment rate has been caused by a surge in labor force and household employment growth over the last three months. As noted above, labor force growth after being depressed during much of 2013 appears to have returned to a higher growth level which is more consistent with payroll employment growth. This implies that the rapid decline in the unemployment rate during 2013 was overstated. The worker participation rate in the labor force over the last four months has also improved. The decline in the participation rate during 2013 was probably overstated for the same reasons that the unemployment rate decline was overstated. It is also possible that some discouraged workers returned to the labor force in recent months and this has contributed to a stabilization in the U-3 unemployment rate.

Chart 7 shows the FOMC’s high (red line and circles) and low (green line and circles) unemployment rate projections for 2014, 2015, and 2016. FOMC members marked down their unemployment rate projec-

¹Jan Hatzius. “Slack and Inflation: Not So Fast,” US Economics Analyst, Global Investment Research, The Goldman Sachs Group, Inc. Issue No: 14/13, March 28, 2014.

tions to reflect the better than expected 2013 performance. This may turn out to be premature, if some of the 2013 improvement in the unemployment rate was the consequence of statistical sampling errors.

CHART 7 – Unemployment Rate
(quarterly average)



Page 8

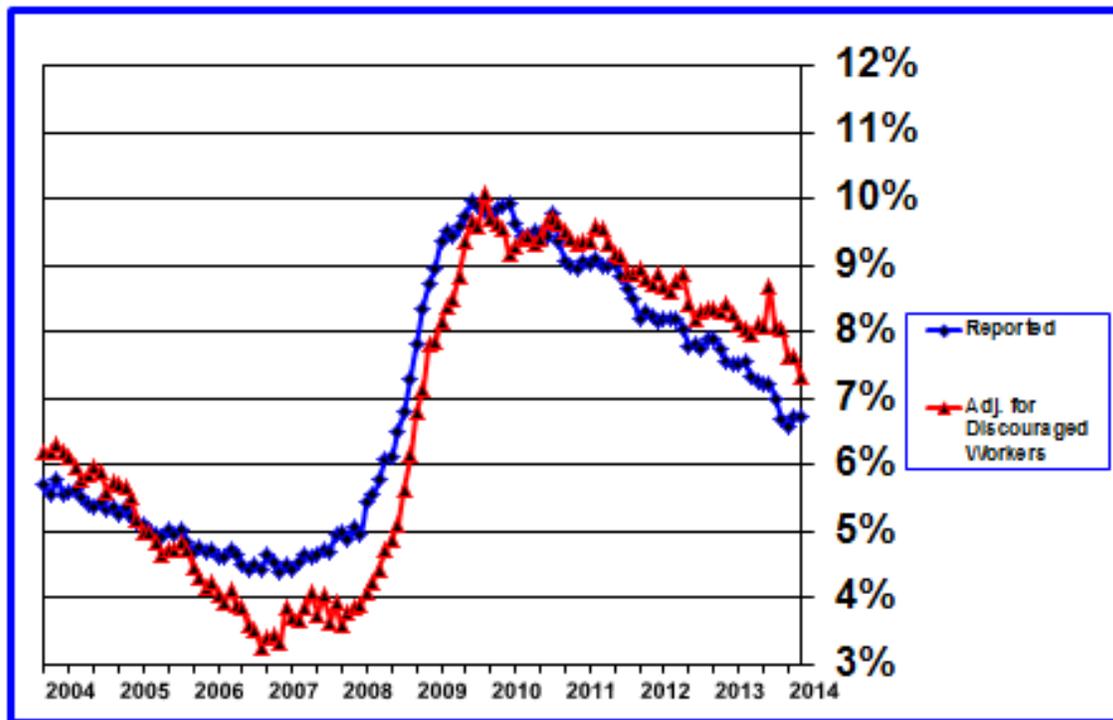
I have included in **Chart 7** unemployment rate forecasts for both my “*Steady Growth*” (yellow line and squares) and “*Strong Growth*” (purple line and squares) scenarios. Given the FOMC’s revisions, the “*Steady Growth*” unemployment rate forecast now exceeds the FOMC’s high unemployment rate projections in all years. The “*Strong Growth*” unemployment rate projection tracks the upper end of the FOMC’s range in all years.

6. Discouraged Workers — Participation Gap

Chart 8 shows the historical relationship between the BLS U-3 unemployment rate and an alternative measure I calculate that includes an estimate of what the unemployment rate would be if discouraged workers are included. The alternative measure is adjusted for demographic trends, such as the aging of baby boomers. The difference in the two measures in March was 0.63 percent or 985,000 discouraged workers who have dropped out of the labor force and are not counted as unemployed. Over the past 15 months, the number of “discouraged workers” has ranged from 659,000 to 2.3 million and averaged 1.3 million. The data clearly are highly volatile. That is because the data used to calculate the U-3 unemployment rate are volatile as pointed out in the discussion of the labor force above.

(I included an extensive analysis of the issue of discouraged and structurally-unemployed workers in the *February Longbrake Letter*)

CHART 8 – Reported Unemployment Rate & Adjusted for Discouraged Workers



Page 3

Again, the question under debate is whether “discouraged” workers will reenter the labor force as the economy improves or whether a portion of them will never return. There is no shared consensus as to the answer to this question. However, the March data suggest that some may already have returned to the labor force. Such a pattern would be consistent with historical data that indicates that the number of discouraged workers declines as the employment market improves.

In previous reported analysis, **GS** has presented evidence that the *participation gap* is quite sizable and will have a moderating effect on inflation until it diminishes. Recently, **GS** extended its analysis to cover the U-6 unemployment rate which includes involuntary part-time workers (4.7 percent of the labor force currently) and marginally attached workers (1.4 percent of the labor force currently).² Relative to long-term historical norms, **GS** concluded that the additional U-6 employment gap is currently 1.6 percent, including 1.2 percent for involuntary part-time workers and 0.4 percent for marginally attached workers. This 1.6 percent is in addition to the 1.2 percent total unemployment gap. Because **GS**’s U-6 employment gap covers only part of the participation gap, the total gap is higher than 2.8 percent.

As is the case for the long-duration unemployment, the involuntary part-time workers gap and the marginally attached workers gap will close more slowly than the short-duration unemployment gap. This implies that not only is there still a large amount of slack in the labor market, it will also take a considerable period to return to a more normal level. **GS** believes it will take until mid-2018 for that to occur for the U-6 employment gap.

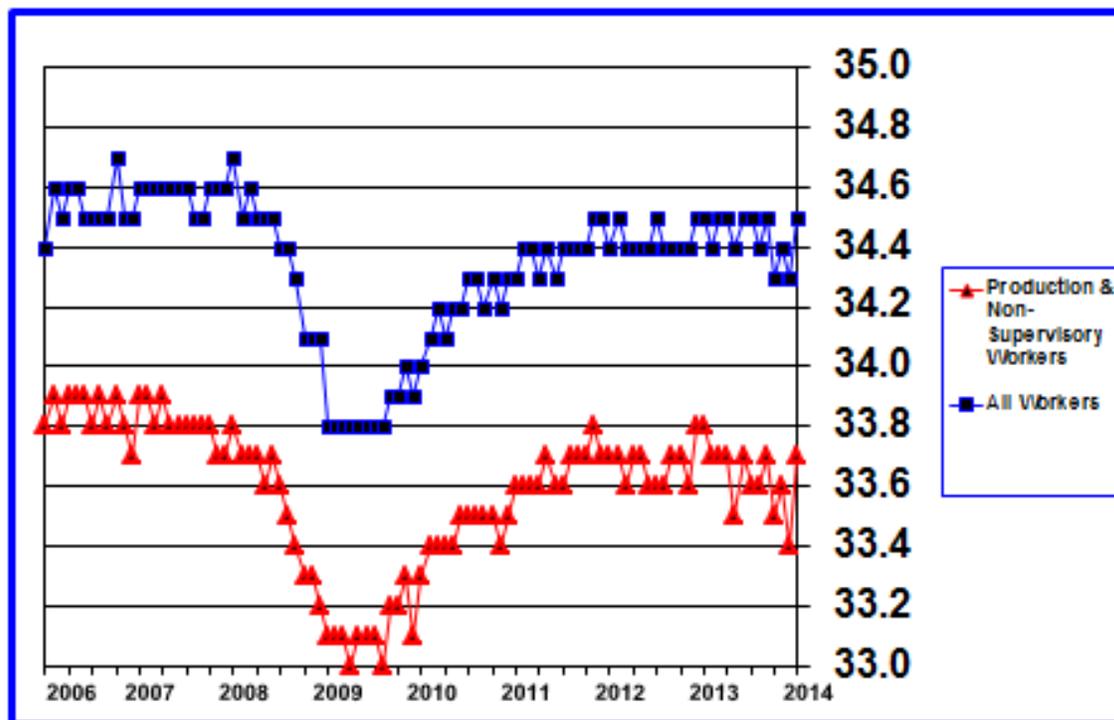
²David Mericle. “US Daily: When Will U6 Reach Its Structural Rate?” Goldman Sachs Research, April 8, 2014.

7. Hours Worked — All Private Employees and Production & Non-Supervisory Employees — Hours Gap

Average weekly hours are reported each month in the BLS Employment Situation Report for all private sector employees and for production and non-supervisory employees. The more inclusive “private sector employees” data series begins in March 2006; data for “production and non-supervisory employees” goes back to 1964.

Average weekly hours cover both full-time and part-time workers and include overtime hours. Hourly data for production and non-supervisory employees have trended downward over the 50 years these data have been reported as the proportion of part-time workers has increased. Hours worked also fluctuate cyclically as employers cut down on hours first when economic conditions deteriorate and only later terminate employees. The cyclical pattern is clearly evident in **Chart 9** during the Great Recession. The rebound in hours worked following the Great Recession did not quite reach the pre-Great Recession level, which is indicative of a further increase in the proportion of part-time workers.

CHART 9 – Average Weekly Hours
(All Workers; Production and Non-Supervisory Workers)



Page 10

Source: Bureau of Labor Statistics

Secular trends and cyclical fluctuation patterns for both hourly data series are similar.

Average weekly hours worked for all employees dipped from 34.5 in November to 34.3 in February but returned to 34.5 in March. Typically, a decline in the length of the work week is an indication of a weakening labor market as employers cut down on overtime and rely to a greater extent on part-time employees. It appears that the February dip was weather related and temporary. The 12-month average peaked at 34.46 hours in November and has fallen only slightly to 34.43 in March. These data indicate the

trend in hours worked is stable.

Average weekly hours worked for production and non-supervisory workers peaked at 33.8 in February and March 2013, dipped to 33.4 in February, but rebounded to 33.7 in March. While much of the recent fluctuation in average weekly hours worked for production and non-supervisory workers is probably due to weather effects, it appears that part may also be due to increases in the proportion of part-time workers. This latter trend matters because the measure of the number of workers employed is not adjusted for hours worked. A part-time worker counts the same as a full-time worker. To the extent this is the case, the recent decline in the U-3 unemployment rate may be overstated.

Proprietary research conducted by ISI explored the question of whether an *hours gap* exists in addition to the employment and participation gaps. The research concludes that an hours gap exists and estimated it to equal 0.9 percent of the full-employment trend level. ISI's methodology appears to duplicate to a certain extent GS's U-6 involuntary part-time employee gap analysis. ISI focuses on the average number of hours worked while GS focused on the number of involuntary part-time workers. So, it is not clear whether this gap is additive to the other labor market gaps. But what can be said with certainty is that it significant slack remains overall in the labor market.

8. Growth in Hourly and Weekly Wages — All Private Employees and Production and Non-Supervisory Workers

Growth in hourly wages is an important measure of labor market strength. An increasing rate of growth in hourly wages would be evidence of a tightening labor market in which labor, particularly in scarcer job categories, is gaining more bargaining power. Given the uncertainty about just how tight the labor market is becoming, even small increases in wage rate growth could point to incipient inflationary pressures.

Weekly average wages fluctuate more than average hourly wages over time due to cyclical oscillations in the number of hours worked. This pattern is clearly evident in **Chart 10** with the plunge in average weekly wages for all private employees during the Great Recession and the rapid rise during the ensuing recovery. However, since the beginning of 2012, the growth rates for both hourly and weekly wages have been similar, which is indicative of relative structural stability in the labor market.

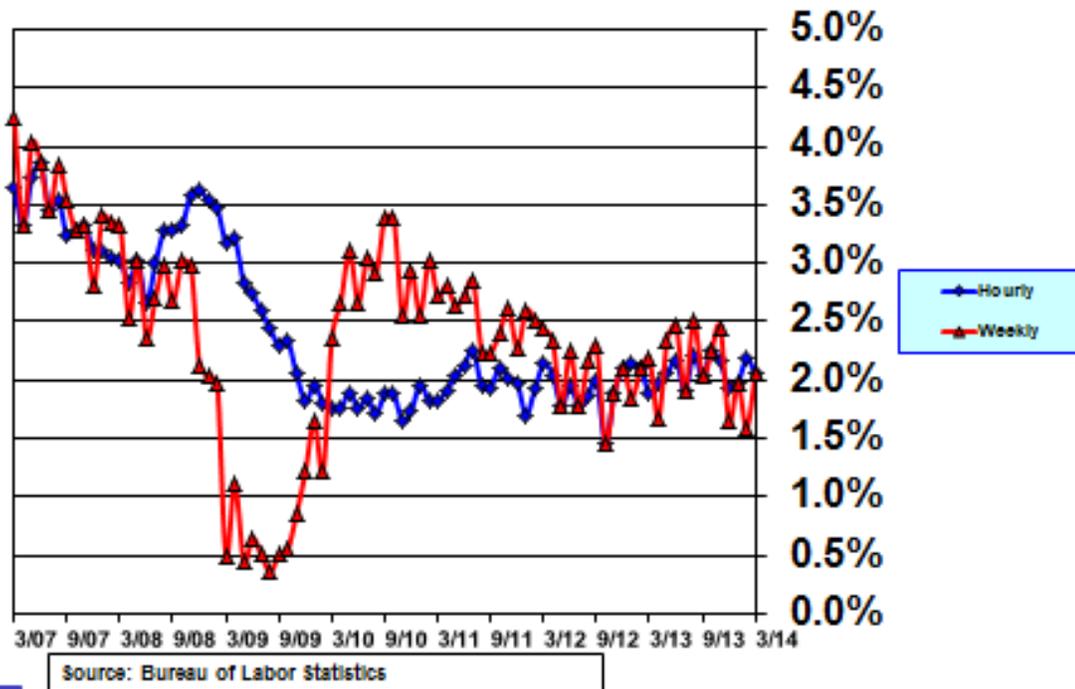
As can be seen in **Chart 10**, the rate of growth in hourly wages for all private employees has fluctuated in a narrow band in the vicinity of 2.0 percent for the last four years. This is good news because the large output gap and high unemployment rate, which have persisted for several years, have not put further downward pressure on average wage rate growth for all private employees.

Consistent with the decline in hours worked by all private employees from 34.5 in November to 34.3 in February, the growth rate in weekly wages fell from 2.45 percent to 1.59 percent. But the growth rate returned to 2.06 percent in March as average weekly hours returned to 34.5. In contrast, the rate of growth in hourly wages was little changed over this period, falling slightly from 2.16 percent in November to 2.06 percent in March.

Indeed, as the 12-month moving average, shown in **Chart 11**, indicates, until November there had been a slight improvement in the 12-month moving average rate of growth from 1.88 percent in November 2012 to 2.08 percent in November 2013. However, the growth rate has been essentially unchanged since then and was 2.08 percent in March.

There is reason to conclude that the February uptick in hourly wage growth for all private employees

CHART 10 – Hourly and Weekly Wages – All Workers
(annual rate of change)



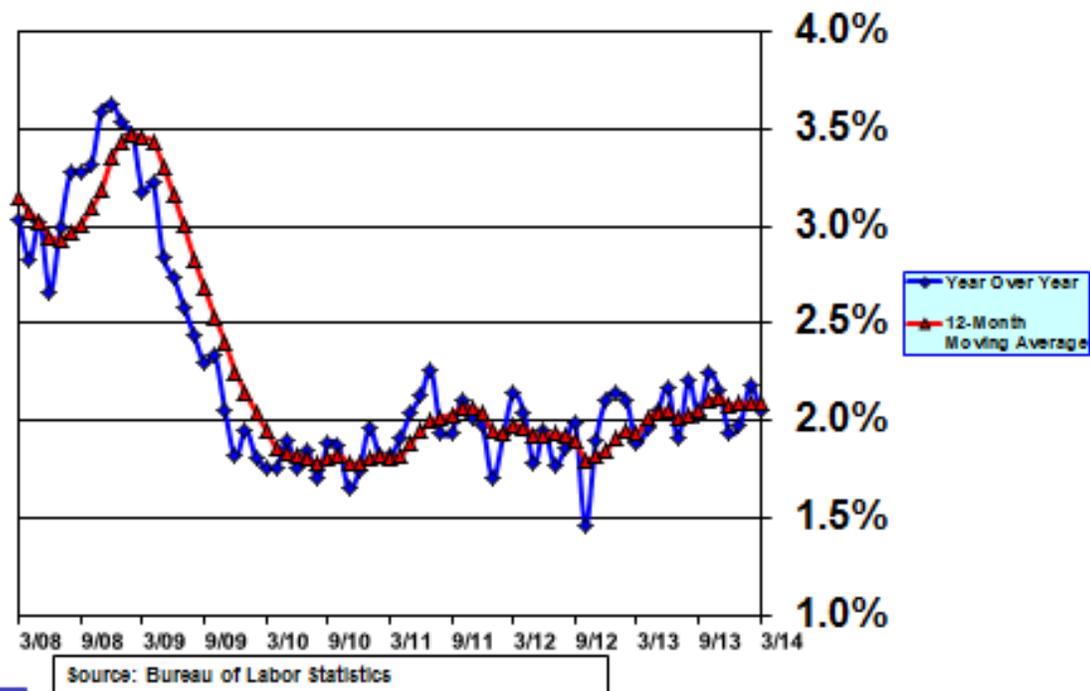
Page 11

was due to weather-related and temporary labor force composition shifts. This phenomenon is even more apparent in the production and non-supervisory hourly wages data in which the growth rate rose from 2.27 percent in November to 2.45 percent in February, while simultaneously the rate of growth in weekly wages fell from 2.27 percent to 1.24 percent. These contrary movements can be explained by low-wage workers being impacted to a much greater extent than high-wage workers by weather-induced shortened work weeks and temporary layoffs. Because the private worker data include production and non-supervisory workers, this impact would also show up in the all worker data movements, but to a lesser extent because the all worker data series includes high-wage job categories that are not included in the production and non-supervisory worker data series.

March data confirm that February’s data were temporary as hourly wage growth for production and non-supervisory workers fell from 2.45 percent to 2.25 percent and weekly wage growth rose from 1.24 percent to 1.95 percent.

While average hourly wages for all employees have been stuck at a relatively low level for several years, average hourly wages for production and non-supervisory workers in **Chart 12** show a clear upward trend that began in late 2012. Production and non-supervisory workers comprise 82.7 percent of total private employees and consist predominantly of lower skill, lower paid jobs. Over the cycle wages of this subgroup are much more volatile, rising more during good times and falling more during bad times. This is the data series that those who emphasize potential inflation risks focus on. That concern should be tempered by two considerations. First, average hourly wages for all employees are not yet rising. That will change, of course, but it could occur more slowly than what has been occurring for production and non-supervisory employees. Second, average hourly wages for production and non-supervisory workers will need to rise at

CHART 11 – Hourly Wage Rate Growth – All Workers (annual year over year and 12-month moving average rates of change)



Page 12

least another one to one and a half percentage points before they return to the level that prevailed prior to the Great Recession. In other words, wages will need to increase a lot faster before inflation becomes an issue.

Based on econometric analysis, **GS** has constructed a “wage tracker” measure from three data series: average hourly earnings for production and non-supervisory workers, the employment cost index, and hourly compensation in the nonfarm business sector. **GS**’s “wage tracker” is a derived aggregate measure of wage rate growth momentum. It has been relatively stable in the vicinity of 2.0 percent since the end of the Great Recession and was 1.5 percent in the fourth quarter of 2013. To gain insight into where the “wage tracker” might be heading in coming months, **GS** correlated its past movements with data from three consumer and seven business surveys. The survey measures act as leading indicators. Based on its analysis, **GS** concluded that the “wage tracker” could move up to about 2.3 percent over the course of 2014 from the recent 1.5 percent level. This reflects a reasonably modest tightening of the labor market.³

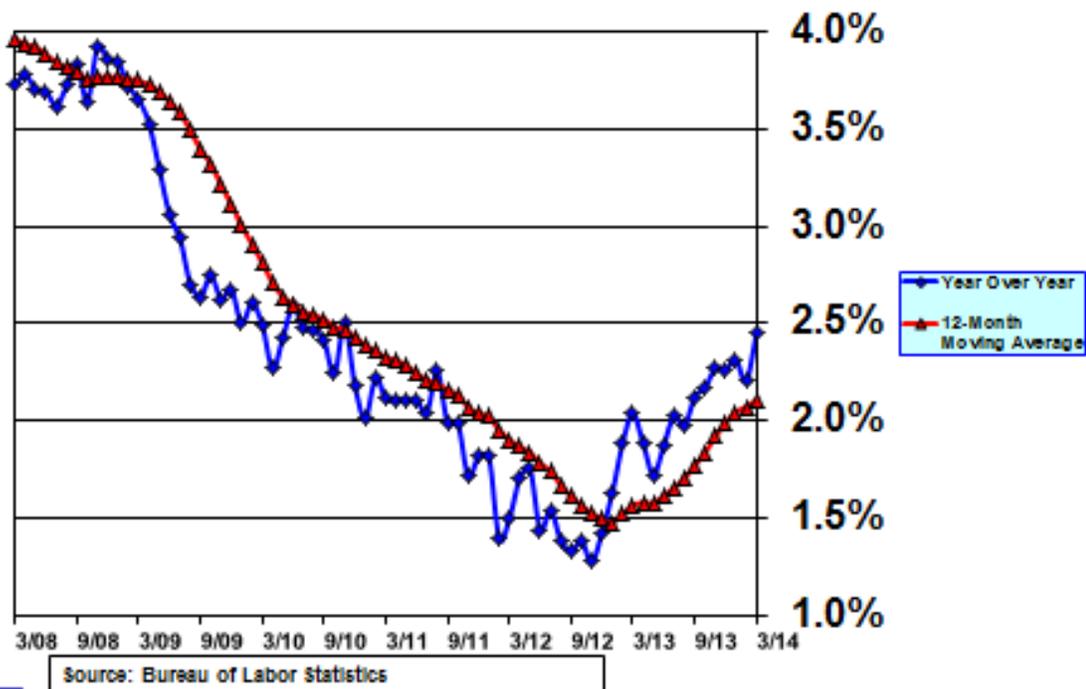
B of A observed recently that in recent cycles, inflationary pressures have not emerged until nominal wages were growing at a 4.0 percent rate and concluded, after surveying a variety of labor market indicators, that “. . . pressure on compensation is not moving to the upside in any economically meaningful amount.”⁴

As is discussed in **Section IV** below, personal and disposable income growth do not yet show clear

³David Mericle. “US Daily: Watching for Faster Wage Growth,” Goldman Sachs Research, January 28, 2014. Shuyan Wu and Jan Hatzius. “US Daily: Still Quiet on the Inflation Front,” Goldman Sachs Research, March 10, 2014.

⁴Bank of America/Merrill Lynch Morning Market Tidbits. “Viewpoint — Wages: Not Yet Worrisome,” March 11, 2014, pp.2-4.

CHART 12 – Hourly Wage Rate Growth – Production and Non-Supervisory Workers
(annual year over year and 12-month moving average rates of change)



Page 14

signs of acceleration. Thus, even though there is some evidence that wages are beginning to rise, it is premature to conclude that inflation is a near-term concern. This also implies that a data-driven FOMC is more likely to take longer to raise the federal funds rate than to accelerate the timing of the first increase. And, that is exactly what the most recent FOMC policy statement and remarks by Chairman Yellen make clear.

9. Relationship Between Wage Growth and Various Measures of Labor Market Slack As Guideposts to Monetary Policy

Because the rate at which wages is growing is a good indicator of the degree of labor market slack, it is possible to work backwards to determine which measures of labor market slack best explain changes in wage rates over time.

GS conducted an econometric analysis to gain insight into how different measures of unemployment impact changes in wage rates.⁵ There should be an inverse relationship between each of these measures and wage rate growth. The three measures of labor market slack included a short-duration unemployment rate (those unemployed up to 26 weeks as a share of the labor force), the standard U-3 unemployment rate, and the sum of the standard U-3 unemployment rate and CBO's estimate of the participation gap.

⁵David Mericle. "US Daily: What Does Wage Growth Tell Us About Labor Market Slack?" Goldman Sachs Research, February 5, 2014.

GS found that the short-duration unemployment rate, which has fallen recently, over-predicts wage rate growth. Adding the long-term (over 26 weeks) unemployment rate to the model improves the predictive power of the model in explaining changes in wage rates. The influence of the short-duration unemployment rate on changes in wage rates is about twice as important as the impact of the long-duration unemployment rate. (Note that the sum of the short-duration and long-duration unemployment rates equals the U-3 unemployment rate.) The model predicts an increase in wages over the next 12 months of between 2.1 and 2.4 percent. This result is consistent with the 2.3 percent in GS's "wage tracker" derived from survey measures. Both methodologies suggest an increase in the growth rate in average wages for all private employees of about 30 points over the next year.

Adding the participation gap as a separate variable did not improve the explanatory power of the model.

The takeaway from GS's analysis is that tracking wage growth is a better indicator of labor market slack than various conventional measures of employment market slack and forecasts of wage growth are more dependable as leading indicators to use in determining the timing of changes in monetary policy than attempting to anticipate changes in the inflation rate, which do not appear to be particularly sensitive to changes in the wage rate in the short run.⁶

10. Temporary and Permanent Employment Surveys

ISI conducts a weekly survey of "Temporary" and "Permanent" placement companies' employment activity and also a survey of "Temporary" and "Permanent" employee placement wage pressures. Both surveys use a diffusion index methodology which means that a reading above 50 indicates increasing employment activity and increasing wage pressures.

Chart 13 shows that temporary employment placement activity has been relatively strong over the last three years, with no discernible rising or falling trend. However, permanent employment placement activity contracted steadily until the third quarter of 2013. Since then activity has not only been rising but the pace has increased during 2014. These surveys provide solid evidence that improvement in the employment market has gotten considerably better in the last few months.

Chart 14 indicates that there was consistent downward pressure on temporary employee wages until the beginning of the third quarter of 2013. Upward pressure on permanent employee wages began about one quarter later in the fourth quarter of 2014. It should be noted, however, that the wage pressure diffusion indices for both temporary and permanent workers are just barely above 50 which means that upward wage pressure is still quite modest.

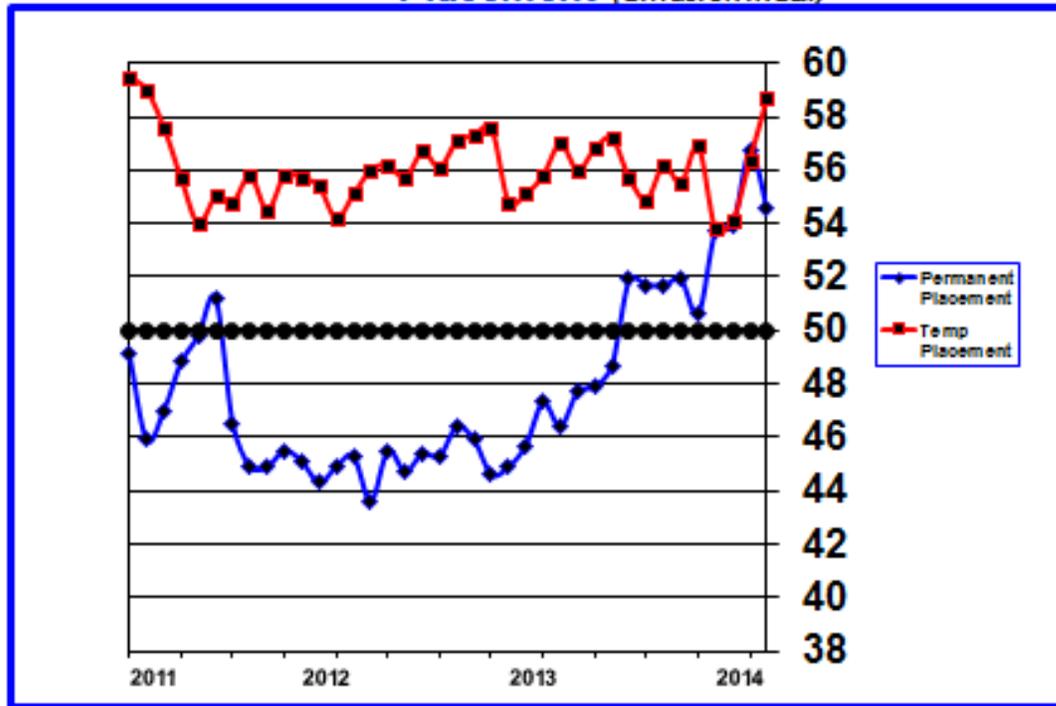
Both **Charts 13** and **14** are signaling that the labor market has improved considerably in the last few months and support forecasts of accelerating real GDP growth in 2014.

11. Implications of Labor Market Slack for Public Policy

If a large number of workers has permanently, rather than temporarily, left the labor force, the longer run consequences are profoundly negative.

⁶Sven Jari Stehn and Jan Hatzius. "Using Wages to Improve the Fed's Aim," US Economics Analyst, Global Investment Research, The Goldman Sachs Group, Inc., Issue No: 14/06, February 7, 2014.

CHART 13 – Temporary & Permanent Employment Placement (diffusion index)



Page 15

Source: ISI Company Surveys

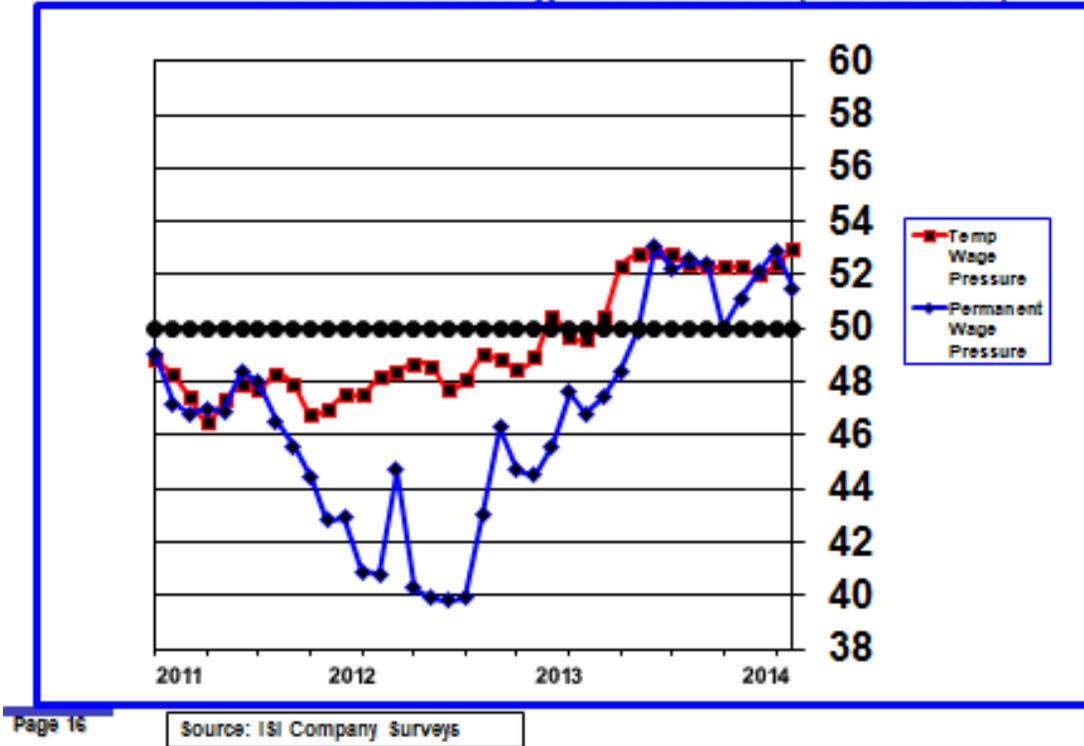
In the first place, the size of the economy will be smaller. But, more importantly, given the aging demographics of the population, it means that there will be fewer workers in the future to support funding of social security and Medicare.

For these reasons, it will be increasingly important for policymakers to consider ways to increase labor force participation. Also, the impact of major policy initiatives on labor force participation, such as the Affordable Care Act and immigration and minimum wage legislation, need to be scrutinized carefully so that the overall potential benefits and costs are understood to the greatest possible extent.

Kevin Hassett and Michael Strain recently released a paper in which they argued that extended unemployment benefits is an insufficient way to deal with unemployment because it permits long-duration unemployment to occur, which not only has severe negative consequences for a person's sense of self-worth but also leads to hysteresis — loss of job skills.⁷ Hassett's and Strain's policy recommendation is to reduce involuntary unemployment through worksharing. Rather than laying off employees a company would reduce the number of hours worked by all its employees. Unemployment insurance would be made available to employees in proportion to their percentage reduction in hours. For example, if an employee's workweek is cut from 40 to 32 hours, the employee would be eligible for 20 percent of the standard unemployment benefit. The recommendation does not change the burden on the taxpayer and it permits the company to cut aggregate wages by the same amount as it would if it laid off workers. The benefits to workers of working fewer hours rather than none at all are significant.

⁷Kevin A. Hassett and Michael R. Strain. "Worksharing and Long-Term Unemployment," Center on Budget and Policy Priorities, April 2, 2014.

CHART 14 – Temporary & Permanent Employment Placement Wage Pressures (diffusion index)



IV. Consumer Income and Spending

At the end of 2012 personal income, consumption expenditures, disposable income, and saving were very volatile from month to month. This was caused by timing of income recognition in late 2012 to optimize tax burdens in anticipation of changes in fiscal policy. This led to a substantial increase in reported personal income in late 2012 and a corresponding reduction in early 2013. Tax increases that took effect in January 2013 also negatively impacted disposal income. Data volatility and tax changes make it more difficult to track trends. Some, but not all, of these impacts are diminished by presenting the data in **Table 7** as 12-month moving averages. 12-month moving average data are presented in the three right-most columns of **Table 7**, while year over year data is presented in the three left-most columns.

1. Percentage Changes in Personal Income and Disposable Income Y/Y for December 2012, December 2013, and February 2014 and 12-Month Moving Average for December 2012, December 2013, and February 2014

Table 7 shows data which compare same-month year-over-year percentage changes for December 2012, December 2013, February 2014, and also the 12-month moving averages for December 2012, December 2013, and February 2014.

Growth in personal income and disposable income was much weaker in 2013 than it was in 2012. This difference was due almost entirely to increases in tax rates at the beginning of 2013. Changes in the payroll

Table 7
Percentage Change in Nominal Personal Income and Its Disposition for 2012, 2013,
February 2014; 12-Month Moving Average for 2012, 2013, and February 2014

	2012 Pct. Change Dec 11-Dec 12	2013 Pct. Change Dec 12-Dec 13	Pct. Change Feb 13 - Feb 14	Pct. Change Dec 2012 12-Month Moving Average	Pct. Change Dec 2013 12-Month Moving Average	Pct. Change Feb 2014 12-Month Moving Average
Personal Income	7.94%	-0.77%	3.07%	4.22%	3.23%	3.00%
Compensation	6.80%	0.76%	2.93%	3.93%	3.18%	2.92%
Proprietors' Income	5.07%	7.65%	2.20%	6.40%	9.74%	9.26%
Rental Income	7.28%	8.44%	6.05%	12.26%	9.00%	8.78%
Asset Income	18.90%	-10.52%	3.05%	-3.97%	3.27%	2.60%
Government Transfers	4.06%	2.29%	3.48%	2.07%	3.68%	3.56%
Less: <i>Personal Taxes</i>	9.47%	5.98%	3.68%	5.38%	11.07%	10.17%
Disposable Income	7.52%	-1.60%	3.00%	3.87%	2.31%	2.18%
Less: <i>Consumption</i>	3.73%	3.38%	2.95%	3.96%	3.13%	3.08%
Personal Saving	74.14%	-53.67%	3.93%	2.30%	-11.59%	-13.68%
Personal Saving Rate	8.73%*	4.11%*	4.29%*	5.61%	4.50%	4.55%
Adj. Personal Income [#]	7.84%	0.18%	3.09%	4.12%	4.03%	3.73%

*Saving rate for last month in the 12-month period

[#]Growth rate in personal income, assuming no change in the payroll tax rate. The payroll tax rate was lowered by 2 percentage points in 2011 and restored to its original level in 2013.

tax rates in recent years have distorted the growth rate in personal income. That is because payroll taxes are netted from personal income. That doesn't affect the growth rate in personal income if the payroll tax rate remains constant. However, Congress reduced the tax rate in 2011 and then returned it to its original rate in 2013. The bottom line in **Table 7**, labeled "Adj. Personal Income", shows what the growth rate in personal income would have been in each period, if the payroll tax rate had never been changed.

Because timing of income recognition accelerated in December 2012 to minimize the consequences of 2013 tax increases, the best sense of trend can be seen from the December 2012, December 2013, and February 2014 12-month moving averages, adjusted for the change in payroll taxes. Adjusted personal income grew 4.12 percent in 2012, declined slightly to 4.03 percent in 2013, and declined further to 3.73 percent in February 2014. The decline in disposable income growth from 3.87 percent in December 2012 to 2.31 percent in December 2013 and further to 2.18 percent in February 2014 was obviously much greater and reflects the impact not only of increased payroll taxes, but also the increase in personal income tax rates. Thus, it is not surprising that growth in consumption fell as well from 3.96 percent in 2012 to 3.09 percent in 2013. The downtrend in consumption growth continued in February 2014.

Beginning with January 2014 data, the effect of tax increases disappears in the year-over-year same-month comparisons and will phase out of the 12-month moving average over the next 12 months.

Although it is hard to draw any definitive conclusions from these noisy data, it appears that growth in nominal personal income, adjusted for tax rate changes, has slowed a little over the last 14 months. This seems consistent with the slow recovery of the labor market and relatively static wage growth.

2. Consumption

Retail sales, including auto sales, have been very weak over the last three months. Much of this appears to be related to severe weather. ISI's consumer surveys indicate that consumer spending may strengthen in coming weeks. The auto dealers survey rose from 52.4 at the beginning of March to 58.6 at the beginning of April. U.S. light vehicle sales in March were at an annual rate of 16.3 million, which was 10 percent higher on a year over year basis. While there appears to be positive momentum in durable goods sales, ISI's retailers survey has yet to improve and was at a sub-50 level of 48.0 in the week ending April 4. That index will need to rise above 50.0 to assure stronger consumer spending takes hold.

Moving average data in **Table 7** indicate that the growth rate in consumer spending has fallen in recent months. However, consumption growth has exceeded disposable income growth, which means households have reduced their saving rate to maintain consumption.

Forecasters generally expect consumption growth to accelerate in 2014. This is an easy call because the drag on consumption growth from higher taxes has gone away. However, how much consumption growth accelerates beyond that will depend upon four additional factors.

First, employment will need to continue increasing substantially each month. So far in 2014 employment growth is just about matching 2013's pace, which was good but not stellar. If employment growth accelerates, this would help accelerate consumption spending.

Second, wage growth will need to rise. As the labor market tightens, this will eventually happen but, as discussed in **Section III**, there is a very good chance that wage growth will remain at approximately 2.0 percent in 2014 or edge up, at most, to 2.25 percent.

Third, the saving rate would have to continue to decline. It has already declined from 5.61 percent in 2012 to 4.29 percent in February 2014. The normal tendency, however, would be for households to rebuild savings as disposable income growth accelerates. This would result in a higher saving rate and slower growth in consumption. However, pent-up demand, coupled with increased consumer optimism and easier access to credit, could lead to a further decline in the saving rate and an acceleration in consumption growth. Consumer optimism remains at cyclically low levels and has yet to show signs of a significant upside breakout, although this may be about to change. Credit conditions for revolving credit are easier, but access to mortgage and second equity credit is still tight.

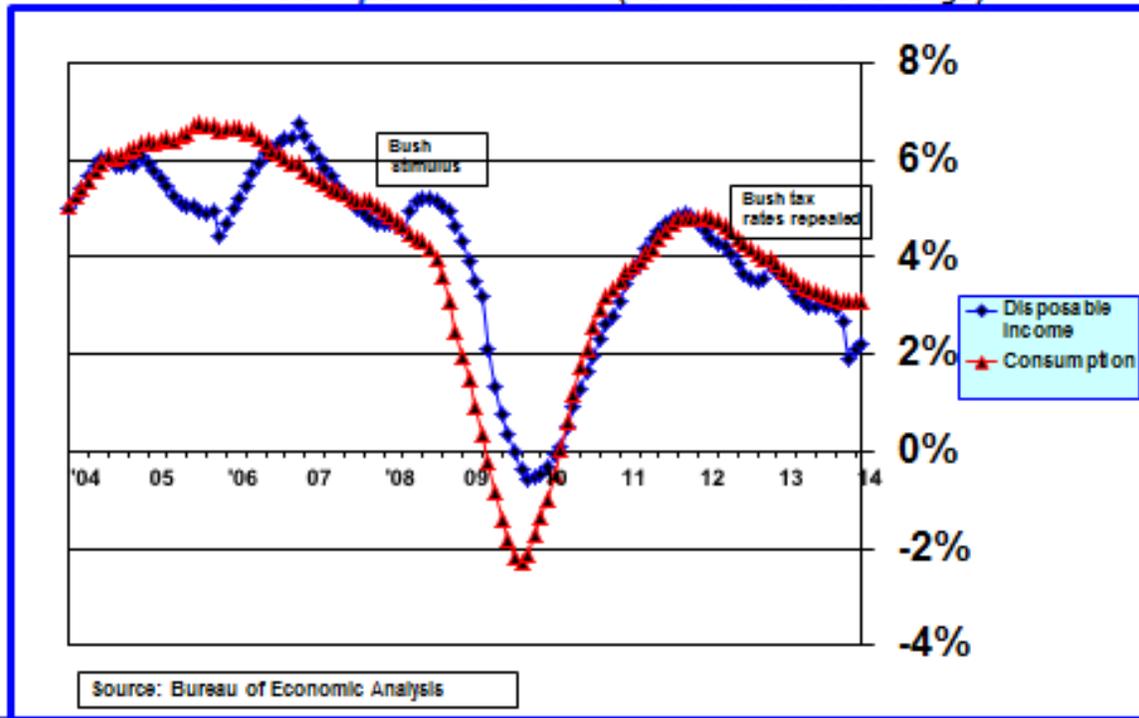
Fourth, increases in wealth need to continue. 2013 was a good year both in terms of significant increases in financial asset wealth and housing wealth. The lagged effects of wealth increases will support consumer spending in 2014. However, stock prices have increased very little so far in 2014 and housing price increases are slowing down.

All-in-all consumer spending seems likely to accelerate as 2014 wears on but achieving the kinds of increases that the likes of B of A and GS are forecasting could prove challenging (see **Table 5**).

3. Nominal Disposable Income and Spending

Chart 15 shows the nominal rate of growth in disposable income and consumer spending from 2004 to the present. Growth rates are calculated as the rate of change in the 12-month moving average on a year-over-year basis. This method smooths timing anomalies, although major events, such as occurred at the end of 2012, will still impact the observed trend for the following 12 months.

CHART 15 – Nominal Disposable Income and Consumption Growth (12-month rate of change)



Page 17

The annual rate of growth in nominal disposable income began slowing in late 2011 and declined from 4.9 percent in November 2011 to 1.9 percent in December 2013. Growth edged up to 2.2 percent in February 2014.

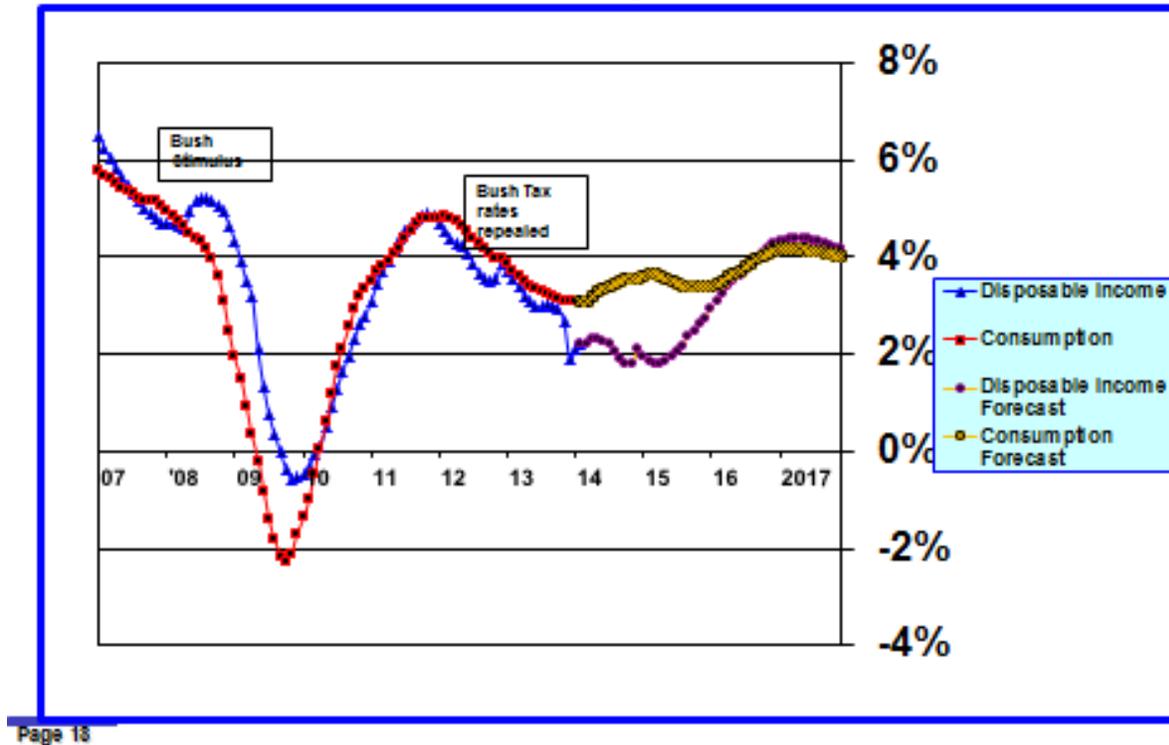
Chart 15 shows that growth in consumer spending, after peaking at 4.8 percent between October 2011 and March 2012, slowed to 3.1 percent in February 2014.

4. Outlook for Nominal Disposable Income and Spending

As can be seen in **Chart 16**, forecast nominal consumer disposable income growth is relatively stable between 1.8 percent and 2.3 percent through the third quarter of 2015. After that growth accelerates and converges with spending growth by the middle of 2016. Acceleration in income growth is delayed until the employment gap closes and wage rate growth picks up.

Chart 16 shows the forecast for the “*Steady Growth*” scenario. The forecast for the “*Strong Growth*” scenario follows the same pattern, but the level of growth is higher. In the “*Steady Growth*” scenario, nominal disposable income growth is 4.2 percent at the end of 2017 and nominal spending growth is 4.0 percent. Both growth rates are approximately 75 basis points higher in the “*Strong Growth*” scenario.

CHART 16 – Forecast Nominal Disposable Income and Consumption Growth – Steady Growth (12-month rate of change)



Page 18

5. Real Consumer Spending Forecasts

Chart 17 shows forecasts for quarterly real consumer spending growth at an annualized rate.

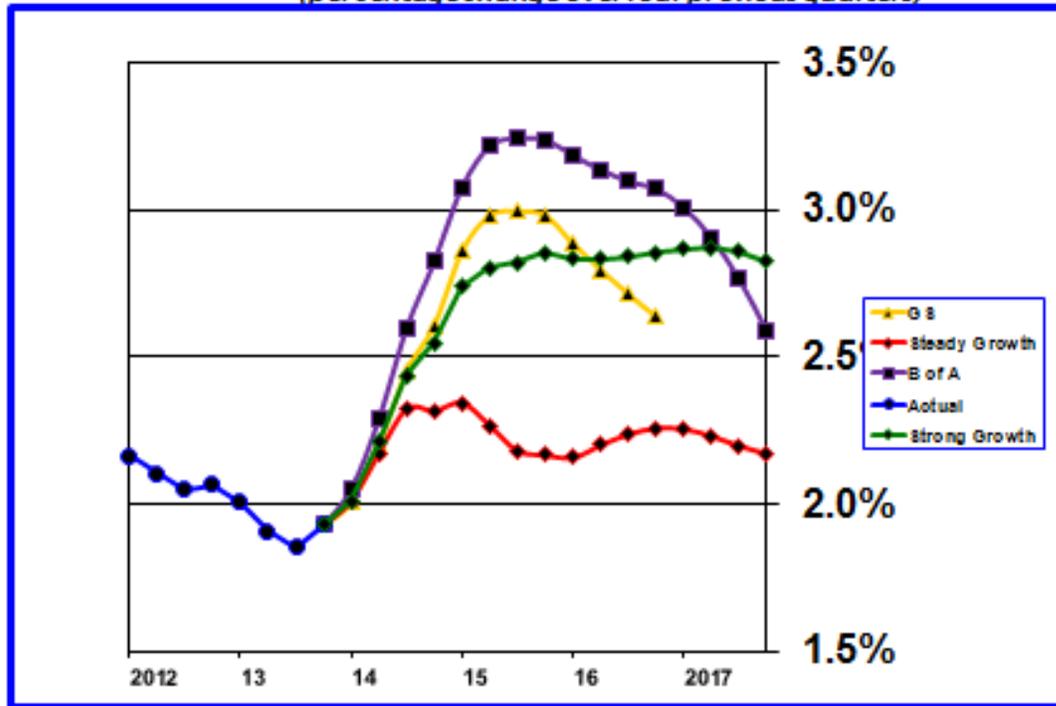
My “*Steady Growth*” scenario forecasts much weaker real consumer spending growth in 2014, 2015, and 2016 than either **GS** or **B of A**. My “*Strong Growth*” forecast is also lower than **GS**’s and **B of A**’s forecasts for most of the next two years. In 2016 it continues to underperform **B of A**’s forecast but is better than **GS**’s forecast (also see **Table 4**).

GS and **B of A** believe real consumer spending will accelerate during 2014 to between 2.6 and 2.8 percent. Y/Y growth is 2.61 percent for all of 2014 for **GS** and 2.83 percent for **B of A**. **B of A** forecasts real spending growth of 3.24 percent in 2015 and 3.07 percent in 2016, while **GS** projects growth will be 2.98 percent in 2015 and 2.64 percent in 2016.

The principal difference between **B of A**’s and my forecasts has to do with slower growth in disposable income in my forecast, which results from the assumption of low growth in productivity. This is very apparent in the “*Steady Growth*” scenario. Higher productivity growth in the “*Strong Growth*” scenario boosts real consumer spending growth so that the differences between **B of A**’s forecast and the “*Strong Growth*” forecast are not overly large in 2014, 2015, and 2016 and disappear in 2017.

In summary, there are four arguments for stronger consumer spending in 2014 and, therefore, strong real GDP growth. First, the tax rate increase shock will no longer be a factor. Second, households’ balance sheets have been cleaned up, which opens up borrowing capacity. Third, hiring is relatively strong and

CHART 17 – Real Consumer Spending Growth - Forecast
(percentage change over four previous quarters)



Page 20

firing is declining as reflected by the decline in new unemployment claims. Fourth, there is some evidence that wage rates are beginning to rise and a tightening labor market should lead to a more rapid increase in wages. But these favorable factors could be offset to some extent by an increase in the saving rate.

6. Prospects for Real Consumer Income Growth

Over the first 25 years following the World War II, household inflation-adjusted median income grew 2.1 percent annually. However, since the early 1970s, real median household income has grown only 0.1 percent annually. The sharp deceleration in growth began at the same time that productivity dropped significantly. And, since the early 1980s, paltry real income growth has been accompanied by steadily widening income inequality.

These long-run trends are not the stuff of a healthy economy. Will these trends continue? Some, like Robert Gordon, a professor at Northwestern University, don't see cause for optimism for a variety of reasons. Productivity growth will not improve because of population aging, rising income inequality, and insufficient government investment. Declining educational attainment will also contribute.

Others are more optimistic about prospects. GS recently released a report in which it argued that median real household income should rise between 1.0 percent and 1.5 percent annually over the next several years.⁸ First, GS disagrees with Gordon's pessimistic outlook for educational attainment. Second,

⁸Jan Hatzius. "Income Growth: A Dim Past, a Brighter Future," US Economics Analyst, Global Investment Research,

GS believes that cyclical recovery in the labor market will offset the negative effects of an aging population. Third, based on less than rigorous analysis of trends in the labor-capital share of income and the distribution of low-wage and high-wage jobs, GS believes the trend of rising income inequality is slowing. Finally, GS believes that government spending cutbacks will not have an adverse impact because household income will be unaffected. On this latter point I believe GS has the wrong focus because the problem is decreasing government investment and not the impact of spending and tax policies on disposable income.

Suffice it to say that prospects for median real household income growth will have a very important bearing on the future overall health of the U.S. economy and on the standard of living for the preponderance of Americans. While Gordon's view may be overly pessimistic, GS's alternative more optimistic outlook is not very compelling. My own sense is that the trends of the last 30 to 40 years are not susceptible to natural self-correction. Intentional policy changes will be required and there is little happening yet of a material nature to offer hope. Indeed, recent fiscal and monetary policies, as discussed elsewhere in this letter, could well be pushing in the wrong direction.

7. Consumer Confidence

Measures of consumer confidence mostly moved sideways in March, indicative of a consumer economy that is neither gaining nor losing momentum. However, ISI's consumer surveys, which are conducted on a weekly basis, and therefore are more timely than other surveys, have improved markedly over the last couple of weeks. This may be a harbinger of the kind of improving optimism that will be necessary to drive the acceleration in consumer spending that many forecasters expect.

The **University of Michigan's** consumer sentiment index fell to 80.0 in March from 81.6 in February and remains below its recent peak of 85.1 in July. Expectations decreased to 70.0 in March from 72.7 in February, while current conditions rose from 95.4 to 95.7.

According to the **Conference Board's** survey, overall consumer confidence rose to 82.3 in March from 78.3 in February. The Present Situation Index fell to 80.4 from 81.0 but the Expectations Index jumped to 83.5 from 76.5. The differential between jobs "easy to get" versus "hard to get" worsened from -19.0 in February to -19.9 in March.

ISI's weekly company surveys, which had been relatively stable for the better part of the last year, show preliminary signs of breaking out into higher ground. ISI's diffusion index, which had peaked at 52.3 in the week of June 7, finally broke through that barrier to 53.7 in the week ending April 11. While this is a relatively small increase, its significance lies in the fact that it is the strongest this measure has been since April 2007, well before the beginning of the Great Recession. The trucking survey, which is a precursor of increases or decreases in sales activity, has climbed to a very robust 60.4, the highest it has been since 2006.

Rasmussen conducts a daily consumer confidence poll. Prior to the government shutdown the Rasmussen index averaged 100 during September and was 103 on October 1. By October 9 the index had fallen to 92. By the end of 2013, this measure of consumer confidence bounced to 105, but then fell back to 101 on March 26. The recent peak in this index was 108, which was temporarily achieved in July 2013. During the expansion of 2005-07 this measure averaged 115 before plunging to about 60 during the Great Recession. Recent reading indicate weak, not strong, confidence and are consistent with the story told by other consumer confidence measures.

The Goldman Sachs Group, Inc., Issue No: 14/09, February 28, 2014.

V. Business Activity

Business activity, both manufacturing and services, is positive but is indicative of a slowly growing economy. Business investment continues to be lackluster, but may accelerate in coming months.

1. Recent Developments

Manufacturing has been one of the few bright spots in an otherwise lackluster economic recovery. The **ISM Manufacturing Index** is the traditional measure of manufacturing strength. The index remains firmly in expansion territory and edged up to 53.7 in March from 53.2 in February. Some regard an alternative index provided by Markit Economic Research as a more reliable indicator of manufacturing strength than the ISM index. The Markit index has been consistently a bit stronger than the ISM Manufacturing index and was 55.4 in March, but lower than 57.1 in February.

The ISM production sub-index has been quite volatile from month to month. It fell from 61.7 in December to 54.8 in January to 48.2 in February, only to rise sharply to 55.9 in March. March may have had something to do with this pattern. The new orders sub-index rose — from 54.5 in the ISM survey to 55. The ISM employment index eased to 51.1 from 52.3. Manufacturing remains a steady contributor to economic growth.

Similarly, the **ISM Non-Manufacturing Index** indicates steady, but not robust, expansion in services. The index was 54.0 in January, fell to 51.6 in February, and rose to 53.1 in March. The Markit alternative measure also improved in March. The ISM employment sub-index rebounded from a depressed weather related 47.5 in February to 53.6 in March. Services also remain a steady contributor to economic growth.

Small business optimism (**NFIB — National Federation of Independent Business**) recovered to 93.4 in March after falling sharply to 91.4 in February from 94.1 in January. This measure remains at an historically depressed level. However, there were hints of emerging optimism. A net 12 percent expect higher sales in coming months compared with 3 percent in February. But, other aspects of the report were less upbeat. For example, only a net 5 percent expect to hire additional employees in coming months. This was down from a net 7 percent in February.

GSAI (Goldman Sachs Activity Index) has followed a similar up and down pattern to other business activity measures. It was 57.0 in January, fell to 54.9 in February, but rose to 56.5 in March. The employment index also moved solidly back into expansion territory in March.

An encouraging data point is an acceleration in the growth rate in bank loans to businesses. However, although ISI's bank loan survey, which covers both individuals and businesses, has been rising in recent months and reached 48.4 in the week ending April 11, it remains below 50, which means that lending is still contracting a bit. Growth in loans ordinarily will occur when economic activity is expanding and an acceleration in bank loan growth would signal acceleration. However, there is some reason to believe that the recent surge in business lending may have resulted from above normal inventory accumulation due to inclement weather rather than improving economic conditions. So this may not be as positive development as it appears to be, but at least it is definitely not a negative development.

2. Prospective Adverse Inventory Investment Adjustment

Over time and absent any significant structural changes, inventories should grow at the same rate as the economy. In reality the change in the level of inventories is very volatile from quarter to quarter depending upon the relative strength of sales activity. When sales are stronger than expected, inventories will be drawn down or grow more slowly than normal. This results in a negative change in inventory growth which reduces measured GDP. If higher sales are expected, inventories may be built up in anticipation. In this case the change in inventories would exceed the normal increase and this would add to GDP growth.

Recently inventories have been growing at about an annual rate of \$58 billion. If inventories grow each quarter at that annual rate, inventory growth would neither add nor subtract from GDP growth. However, if inventories grow over two quarters from \$48 billion to \$70 billion and then to \$48 billion, GDP growth will be favorably impacted in the first quarter and negatively impacted in the second quarter.

In the second quarter of 2013 inventories grew at an annual rate of \$56.6 billion, about the normal amount. However, inventory growth soared to an annual rate of \$115.7 billion in the third quarter and added 1.67 percent to annualized real GDP growth. The rate of growth in inventories normally would have fallen back in the fourth quarter and subtracted from real GDP growth. That, in fact, did not happen as the \$111.7 billion increase in inventories in the fourth quarter, at an annual rate, was slightly less than the increase in the third quarter but it was still substantially above the recent annual average amount. But, because the amount accumulated in the fourth quarter was less than the amount accumulated in the third quarter, inventory accumulation subtracted .02 percent from fourth quarter GDP.

Let there be no doubt — an inventory correction is coming in the next couple of quarters. How much a decline in the amount by which inventories increase impacts real GDP will depend on whether the correction happens quickly or is extended over a couple of quarters. A drop from \$111.7 billion to \$58 billion in one quarter would reduce annualized real GDP growth by approximately 1.6 percent. Obviously, the negative impact would be even greater if the change in inventories was less than \$58 billion to compensate for the overstocking in the third and fourth quarters of 2013.

Unfortunately, publicly available information on changes in inventories is not of high quality which leads frequently to real GDP growth forecasting misses. What we know at this time is that real GDP growth was probably overstated in the second half of 2013 because of above trend inventory accumulation and this overstatement creates downside risks to real GDP growth in 2014.

Survey data indicate that inventories are a bit high, particularly for autos, but not to the extent implied by the large inventory accumulation reported in third and fourth quarter GDP data. Stronger auto sales in March should help reduce auto inventories, so this should have both positive and negative, and possibly offsetting, impacts on first quarter GDP data. Retailers also reported that inventories were a little too high.

We won't know the real story for a while. In fact, it is not unusual for inventory data to undergo substantial revision when the annual benchmarking occurs with the release of second quarter GDP data in July.

3. Shortfall in Private Investment Spending and Low Productivity

Private investment, which includes both residential and business investment, has grown at only a 0.2 percent annual rate over the last six years since the onset of the Great Recession. This compares to 3.5

percent annually over the previous 25 years from 1973 through 2007. Lack of investment has added a year to the age of the capital stock, which now averages 21.7 years.

Table 8 shows historical growth rates in private investment and forecasts for 2014, 2015, and 2016. It is evident that **B of A's** and **GS's** forecasts of investment growth greatly exceed the historical averages. There is no doubt that a capital investment boom is needed to catch up from the lack of investment over the last six years. But, recent investment deficiencies do not guarantee that an investment boom will materialize.

Table 8
Private Investment Growth Rates
— **Historical and Forecasts (B of A, GS, Bill's "Steady Growth", and Bill's "Strong Growth")**

	1973- 2007	2008- 2013	1973- 2013	2014	2015	2016	2014- 2023
Historical	3.53%	0.24%	3.04%				
B of A				5.82%	8.47%		
GS				6.57%	8.58%	7.52%	
Bill's Steady Growth				6.33%	3.98%	2.60%	2.75%
Bill's Strong Growth				7.17%	8.45%	4.50%	3.98%

There is a general belief that large corporations are awash in cash which could at any time be quickly put to work financing new investment initiatives. During the economic recovery much of this cash has been deployed into nonproductive uses such as share buybacks, dividends, and mergers and acquisitions. These activities fall into the category of financial engineering. They can boost share prices, but they do not contribute to expansion of economic activity.

In a world of repressed interest rates, courtesy of FOMC quantitative easing, the risk-adjusted rate of return on capital is simply inadequate to prompt significant investment activity. This is a demand feature. But, it is reinforced on the supply side by tight underwriting standards that are a legacy of the Great Recession, tighter regulatory capital and liquidity requirements for banks, and closer prudential supervision.

In remarks to the American Economic Association in early January, former Federal Reserve Chairman, Ben Bernanke, noted that productivity recently has been disappointingly weak for reasons that are "not entirely clear." He mentioned some possible reasons including the impact of the Great Recession on credit availability, slow growth in sales revenues, mis-measurement, or unspecified long-term trends. Notably, he did not mention the possibility that the FOMC's own policy of depressing long-term interest rates may be contributing to the investment shortfall and miserable productivity gains.

The potential rate of real GDP growth depends importantly on the level of productivity. And, higher productivity depends on robust investment spending. However, both private and public investment spending has been extremely weak. In the case of private investment spending the depressed risk-adjusted rate of return on capital incents firms to deploy cash in financial engineering, which returns capital to investors, rather than pursue new capital projects. The shortfall of public investment is simply the result of budget

deficit anxiety and significant cutbacks in government spending.

It is interesting that economists do not agree on the repressive effects of quantitative easing on capital investment. In fact, it is argued by many, including FOMC participants, that lower interest rates, particularly on safe assets, should induce greater investment spending. The mystery to them, as Chairman Bernanke notes, is finding a reason why this has not happened. What we do know with certainty is that quantitative easing depresses the long-term discount rate on financial assets and in so doing boosts their nominal value. Stock market investors do very well and paper wealth is created. However, this increase in paper wealth is not translating into greater capital investment.

To be fair, part of the rationale for quantitative easing is intentionally to create financial wealth with the expectation that this will increase consumer spending. Then, as consumer spending increases, sales revenues will improve and firms will be less hesitant about investing cash and borrowing funds to finance capital investment projects. In this way, it is argued, quantitative easing helps accelerate economic recovery.

But, as is so often the case in economics, the supply and demand dynamics are complicated and what appear to be simple logical explanations of what should happen overlook or misunderstand the complexity of these dynamics. But with the passage of time we can assess outcomes and look back and better understand consequences of policy actions.

It may turn out that quantitative easing, which is intended to accelerate economic recovery, has contributed in a meaningful way to a sustained lower potential rate of real GDP growth by discouraging investment necessary to boost productivity. So, although FOMC officials may not understand why the long-run potential rate of growth is declining, they have acknowledged the reality by steadily reducing the median of the central tendency range of long-term real GDP projections from 2.7 percent in January, 2011 to 2.1 percent at the March, 2014 meeting. That low value is consistent with CBO's analysis and mine as well. But, unless investment activity increases significantly, even today's lowered expected potential rate of real GDP growth could prove to be too optimistic.

4. GS's Case for Much Higher Nonresidential Capital Investment Spending

GS is much more optimistic than I am that investment spending will increase substantially over the next few years. Importantly, **GS** supports its optimism with solid analysis.⁹

GS cites four factors that impact capital investment spending: (1) increased economic activity and less fiscal drag; (2) reduced market and policy uncertainty; (3) market value of capital assets exceeds replacement value; and (4) mean-reversion — underinvestment should be followed by catch up investment. **GS** has created a capital expenditure leading indicator based on surveys of capital spending intentions. It has also constructed a forecast model based on the following variables: (1) current consumption growth; (2) one-year lagged consumption growth; (3) policy uncertainty index; (4) stock market price-to-book ratio; and (5) investment's share of total GDP.

Collectively, these two analytical methodologies point to acceleration in nonresidential investment spending to approximately 7 percent in 2014 (see **Table 9**). Contingent upon **GS**'s consumption forecasts, growth in investment spending should remain near the 2014 level in 2015 and 2016.

GS followed up on this analysis with another one that specifically focused on nonresidential construc-

⁹Kris Dawsey. "Keeping the Faith in Cap-ex Recovery," US Economics Analyst, Global Investment Research, The Goldman Sachs Group, Inc., Issue No: 14/10, March 7, 2014.

tion investment, which accounts for 17 percent of total private investment and 22 percent of nonresidential investment. Based on a bottoms-up analysis of individual components of nonresidential structures investment, **GS** finds support for a 6 percent increase in nonresidential construction spending in 2014.¹⁰

Although the **GS** analysis is based on hard numbers, three cautions are in order. First, growth in consumer spending is a critical catalyst. The increased growth rate in consumer spending **GS** forecasts is by no means certain. It will depend upon the strength of the labor market and gains in wages. Second, the predictive reliability of **GS's** forecast model diminishes quickly over time. Thus, the 2014 forecast may turn out to be reasonably accurate, but that does not mean that forecasts for subsequent years will be realized. Third, as is the case for all forecasts based on models fitted with historical data, the reliability of the forecast depends upon the historical structural relationships remaining essentially unchanged in the future. The model does not accommodate potentially significant structural changes such as more restricted access to credit or less attractive expected rates of return on investment relative to the cost of financing.

VI. Inflation or Deflation?

Now that economic expansion in the U.S. finally appears to be gaining traction and the Federal Reserve has begun the process of normalizing monetary policy by slowly reducing the quantity of large scale asset purchases, attention has turned toward whether renewed inflationary pressures might be just around the corner. But, some warn that the pending threat is not one of inflation but rather one of deflation.

With the exception of Japan, courtesy of Abenomics, global inflation rates are either stable at very low levels or are still declining. In the U.S., core PCE inflation has been stable between 1.1 percent and 1.2 percent for the last eleven months, while total PCE inflation has fallen to 0.9 percent. In Europe, total inflation continues to fall steadily and was 0.5 percent in March. Europe's core inflation rate in March was 0.8 percent. Global inflation was relatively stable at a low 2.0 percent rate in February, reflecting modest downward pressure from some developed economies and an absence of upward pressures from emerging economies.

Conventional wisdom assumes that global growth will improve during 2014 and 2015 and that as that occurs output gaps will narrow and upward pressures on inflation will naturally emerge. But, the question is whether the conventional wisdom is right or whether other forces are at work which threaten deflation, notwithstanding improvements in global growth.

1. Inflation or Deflation?

Capitalism is inherently deflationary. That tendency is not fully appreciated because we have lived in an era marked by persistent inflation. The name of the game in capitalism is to produce more with less and to maximize profits, which creates unrelenting pressure to cut costs and to use inputs more efficiently. One need only study the causes of persistent deflation in the U.S. between the Civil War and World War I to understand how market-driven capitalism results in deflation.

Everyone is taught that inflation occurs when demand exceeds supply. But, in a market-based economic system relatively free of government and regulatory interference, supply tends to lead demand. So what is it that leads to self-sustaining inflation?

¹⁰Kris Dawsey. "Building a Case for Strength in Nonresidential Construction," US Economics Analyst, Global Investment Research, The Goldman Sachs Group, Inc., Issue No: 14/14, April 4, 2014.

There are two sets of conditions that result in persistent inflation. The first set involves macroeconomic policies, both monetary and fiscal, driven by government and central banks. The second set involves how participants in an economy adjust behaviors to inflationary expectations. If one expects prices to rise tomorrow, then it is best to purchase goods and services today at lower prices. But, the very act of accelerating purchases increases demand relative to supply and the increase in prices becomes self-fulfilling. Of course, expectations can also reinforce deflation — postpone purchases today because prices will be lower tomorrow. Japan's lost two decades of persistent deflation leave no doubt that expectations are a powerful reinforcer of trends in prices and can work in either the inflationary or deflationary direction.

Monetary policy's impact on inflation is well understood. If there is too much money chasing too few goods and services, prices will rise. Of course, the opposite is also true. Part of the deflation problem of the late 19th century was that the money supply was tied to the stock of gold and the stock of gold did not grow sufficiently rapidly to facilitate the more rapid growth in economic activity.

In recent times global central banks have become generally paranoid about their role in fostering a self-sustaining inflationary process. For that reason, most have adopted specific inflation targets with 2 percent being the favorite target level. However, 2 percent is generally viewed as a ceiling, not as an average level to hit over the economic cycle. Some, such as Paul Krugman, question whether a 2 percent target, especially since policy treats it as a ceiling, provides a sufficient buffer to prevent unintended embedding of deflation.

When central banks are behaving and limiting inflationary pressures through monetary policy, inflationary pressures can still emerge through fiscal policy. Government policies intended to stimulate economic activity, particularly if they result in substantial debt creation, will stoke inflationary pressures. Debt creation can occur directly in the public sector but it can also occur in the private sector, as the recent U.S. housing bubble amply demonstrated, by virtue of specific government legislative and regulatory policies.

It is understood that debt creation can accelerate economic growth by boosting demand. That is what the Chinese miracle is all about. But, as Hyman Minsky pointed out, if debt growth is excessive it will result in nonproductive speculative activity, and in the extreme Ponzi financial activity, which, if left unchecked, will result in financial instability and an eventual painful correction.

There is a natural rate of growth in debt that is neither inflationary nor deflationary. This natural rate is a function of the **natural rate of interest** as the famous economist Knut Wicksell theorized. The natural rate of interest is that rate of interest at which **intended investment** and **intended saving** balance. The **equilibrium natural rate of interest** occurs at the rate that induces enough savings — **supply of funds** — to fund investments — **demand for funds** — whose expected returns exceed the equilibrium rate of interest. Since the natural rate of interest is not observable, actual decisions are based upon the **market rate of interest**. But, if the market rate of interest is different from the natural rate, some decisions will be “incorrect.” This initiates policy risk and its magnitude will depend on the size, direction, and persistence of the divergence between the natural and market rates of interest.

Debt will grow too rapidly if the market rate of interest is persistently less than the natural rate of interest. This will foster speculative activity rather than productive investments. Usually, this is thought to be a monetary phenomenon, not a fiscal policy driven one. However, fiscal policy can affect the natural rate of interest by increasing or decreasing investment activity. When there is a great deal of slack in an economy, governments can create investment initiatives with good rates of return that the private sector is unwilling to undertake. All else equal, this would soak up excess saving and lower the natural rate of interest. But not all government spending has equal value in terms of investment. If increased government spending goes into transfer payments, it boosts demand, not supply and contributes to inflationary pressures.

Governments can also create an inflationary bias by constraining competition. For example, rules intended to protect industries or workers or policies that subsidize demand for certain products can limit price competition and depress productivity. Implementation of economic reforms, whether it be Japan's Abenomics third-arrow, China's Third Plenum reforms, or Europe's requirements for Greece, Spain, and Portugal, are intended to increase economic efficiency and boost productivity.

2. On Balance, Global Economic Conditions in Recent Years Have Been Deflationary, Not Inflationary

China's rise and the rapid growth of other emerging economies has expanded global economic capacity and supply enormously and rapidly. This process is continuing. It is a process that is inherently deflationary. Relatively open trade, buttressed through the World Trade Organization, has contributed to global deflationary pressures. Central bank inflation targeting has limited the past tendency of monetary policy to be an inflation ingredient.

Some other more recent developments are amplifying these fundamental global trends. First, commodity prices, which skyrocketed during the initial phase of growth in emerging economies, are now drifting downward. That is occurring because substantial new supplies of resources have been brought on line, in fact, more than needed. Declining commodity prices are now contributing to deflationary forces.

Second, governments in many developed economies have adopted fiscal policies intended to contain or reduce public-debt-to-GDP ratios. These policies have constrained spending both on discretionary short-term transfer payments as well as longer-term investment initiatives. In the short run reduced spending is deflationary. In the longer run, reduced investment will depress productivity and potential real economic growth.

Third, the rate of growth in global population is slowing. In fact, it is slowing more rapidly than expected. Slowing population growth is a natural outcrop of improvements in the standard of living. However, when depopulation sets in, as it has in Japan and many European nations, it is inherently deflationary because it depresses demand relative to the existing capacity of an economy.

Nearly all of these trends reinforce global deflationary tendencies. However, conventional wisdom is that as the global economy recovers from the Great Recession and as the output gap diminishes, deflationary forces will be countered by building inflationary forces. For this to be a valid expectation, the demand side of the global economy must grow faster than the supply side and global monetary policies must have a decidedly accommodative bias. Although this may turn out to be the case, the forces driving increases in global supply are very powerful which creates the risk that supply will continue to outpace increases in demand and if that occurs deflationary pressures will not abate.

3. John Makin — Central Banks Are Too Complacent About the Threat of Deflation

John Makin, a respected economist at the American Enterprise Institute, is deeply worried about the global threat of deflation.¹¹ He points out that inflation is falling in the U.S., Europe, and China. He worries that if recent trends continue there is considerable danger that deflation will ensue and become entrenched. He is critical of central bank complacency and includes the U.S. Federal Reserve Bank among

¹¹John H. Makin. "Now Is the Time to Preempt Deflation," American Enterprise Institute for Public Policy Research, April, 2014.

the guilty. “*Global deflation is a more insidious possibility today given the widespread drift toward falling prices evident in most major economies.*” Makin’s policy recommendation is that central banks need to commit to promising inflation, as Japan’s central bank has done, rather than simply setting a “not to exceed” target level of inflation.

4. Martin Feldstein — The Risk of Much Higher Inflation Is Rising — the Fed Needs to Develop Plans To Combat This Risk

At the opposite end of the spectrum is Martin Feldstein, a renowned scholar who teaches at Harvard University. In a recent Wall Street Journal op ed piece, Feldstein counseled the Fed to set out clear plans for battling future inflation. He warned that “experience shows that inflation can rise very rapidly.” The Fed is at risk of falling behind the inflation curve.

Those who worry about the potential for substantially higher inflation in the future believe that the labor market has already tightened considerably and that the Federal Reserve will not move quickly enough to normalize monetary policy. Some recent research, which is described in detail in **Section III.** of this month’s Letter, suggests that the labor market is already tightening and that wage rates, and subsequently inflation, are poised to rise rapidly in the not too distant future.

In a recent speech, Federal Reserve Chairwomen Janet Yellen countered that considerable slack remains in the labor market and she specifically cited the large number of underemployed workers, the large percentage of long-duration unemployed workers, and the low labor force participation rate. She was very clear that she believes that “... *evidence for slack is that the decline in unemployment has not helped raise wages as in past recoveries. Workers in a slack market have little leverage to demand raises.*” By implication this means that there is additional slack in the labor market that is not being captured directly by the unemployment rate. And this also means that there is little upward pressure on inflation currently and there is likely to be limited pressure for a long time to come until the growth rate in wages increases from the recent 2 percent level by at least 1 to 2 percentage points.

5. Is The Federal Reserve’s 2 Percent Inflation Target Too Low?

Paul Krugman frets that the Federal Reserve’s 2 percent inflation target is too low.¹² It favors the wealthy and makes it extremely difficult in an over-indebted society to push down the real burden of debt. In his article, Krugman cites the recent edition of the IMF’s World Economic Outlook that “... *describes problems created by low inflation, which is nearly as destructive as outright deflation.*” The IMF report “... *makes a compelling case for raising inflation targets above 2 percent, the current norm in advanced countries.*” An earlier edition of the IMF’s World Economic Outlook went so far as to assert that “... *countries that were willing to let inflation erode their debt — including the United States — fared much better than those, like Britain after World War I, that clung to monetary and fiscal orthodoxy.*” That conclusion was deleted from the current IMF report, perhaps, as Krugman suggests, because it is at odds with recent conventional policy wisdom.

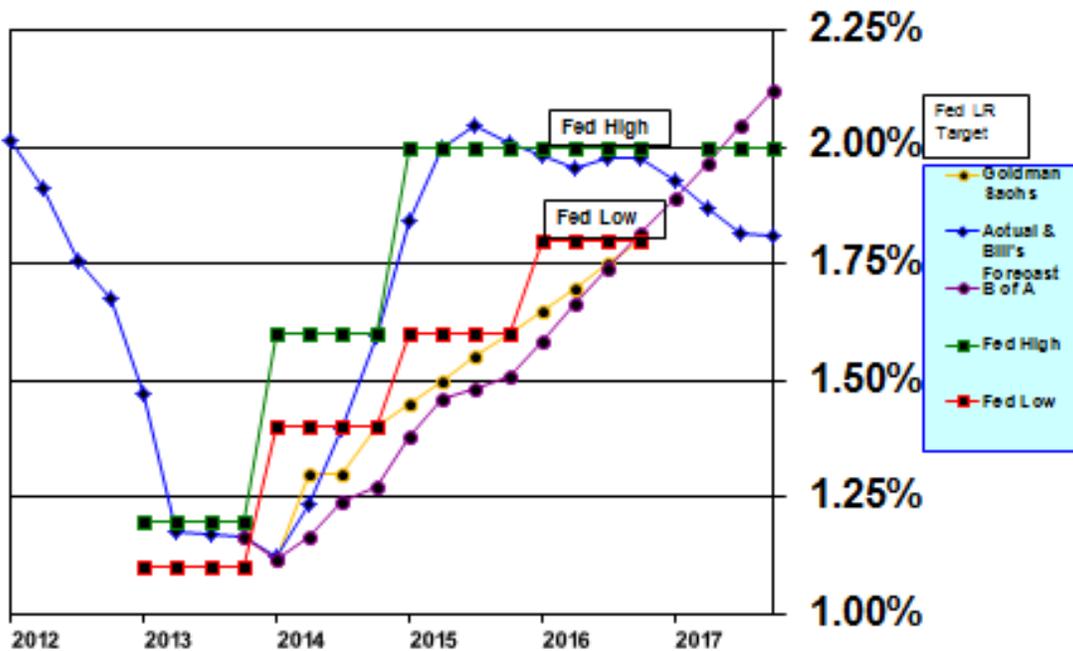
So, as the U.S. economy continues to recover, which all would agree is a healthy development, there is a wide diversity of views about how inflation, or possibly deflation, might be affected and what policies should be pursued.

¹²Paul Krugman. “Oligarchs and Money,” The New York Times, April 7, 2014.

6. Prospects for PCE Inflation

Core PCE inflation was 1.09 percent in January and total PCE inflation was 1.18 percent (see **Chart 18**). Compared to core PCE inflation, total PCE inflation is much more volatile and has been negative for short periods of time in the past. For that reason the FOMC prefers to focus policy deliberations on the core PCE inflation measure.

CHART 18 – Core PCE Inflation Forecasts
(percentage change over previous 12 months)



Page 21

Core PCE inflation currently is well below the FOMC’s target level of 2 percent and is not much above the lows experienced briefly in mid-2009 and late-2010 when the FOMC was concerned about the threat of deflation.

Chart 18 compares my core PCE forecast for the “*Steady Growth*” scenario with the FOMC’s projections and **GS’s** and **B of A’s** forecasts.

Table 9 shows **B of A’s** and **GS’s** core PCE forecasts and the FOMC’s core PCE projections. It also shows my core PCE forecasts for my “**Steady Growth**” and “**Strong Growth**” scenarios.

As can be seen in **Table 9** (**Chart 16** shows historical core PCE price index data and data from **Table 9** in graphical form), forecasts of the core PCE inflation index indicate that inflation should edge up slowly in 2014 from its 2013 fourth quarter level of 1.1 percent to 1.3 to 1.7 percent, which is consistent with the FOMC’s 2014 central tendency projection range of 1.5 to 1.6 percent. **GS’s** and **B of A’s** 2015 forecasts track the lower end of the FOMC’s projection range of 1.5, while my forecasts track the upper end of the FOMC’s projection range of 2.0. By 2016 all forecasts converge toward the FOMC’s 2.0 percent long-run

Table 9
Core PCE Inflation Forecasts — B of A, GS, Bill’s “Steady Growth”, Bill’s “Strong

Core CPE	2013	2014	2015	2016	2017
B of A	1.1	1.3	1.5	1.8	2.1
GS	1.1	1.4	1.6	1.8	
Bill’s					
Steady Growth	1.1	1.7	2.0	2.0	1.8
Strong Growth	1.1	1.7	2.0	2.0	1.9
FOMC — High	1.2	1.6	2.0	2.0	
FOMC — Low	1.1	1.5	1.5	1.7	

*Inflation rates are end of year.

guideline. Since inflation risks appear benign, this suggests that the FOMC should not be in any hurry to raise the federal funds rate.

GS has constructed an “inflation tracker” measure. Based on January data the inflation tracker was 1.2 percent, slightly above the actual reported core PCE inflation rate of 1.1 percent in January. The inflation tracker is slightly lower than it was in mid-2013. **GS** believes that the risk of further declines in core PCE inflation is limited and that core inflation will move up gradually but remain below 2.0 percent through 2016.

Because the full extent of the impact on core PCE inflation of the three components of labor market slack — standard employment gap, participation gap, and the hours gap — is not fully understood, the risk is that forecasts of rising inflation are biased upwards. In other words, the chance that inflation could be lower than forecast is greater than the chance that it will be higher.

Note that inclusion of the short-duration unemployment rate, which is already close to its long-run normal full-employment level, raises the core PCE inflation forecast by about 50 basis points, but importantly, the forecast is still within the FOMC’s projection range and does not exceed the FOMC’s 2.0 percent inflation target. This analysis does not indicate that inflation risks are significant enough for the FOMC to alter the course it has been on. Rather, it reinforces the need to continue to monitor all relevant measures of employment, wages, and inflation and to exercise patience in determining when to tighten monetary policy.

7. Inflation or Deflation — Where Are Headed?

There is no agreed upon answer to the question of whether deflation will gather momentum or be replaced by a renewed bout of inflation. I am no more prescient on this topic than anyone else.

My own sense is that the most likely outcome is persistently low inflation, neither deflation nor much higher inflation. I think the Federal Reserve will find it harder than it thinks to drive PCE inflation back to its 2 percent target. My statistical analysis suggests that the 2.0 target will be achieved, but the model does not include measures of labor market slack, such as the large number of involuntary part-time workers, which seem likely to inhibit wage increases and limit increases in inflation. I also expect little chance of a political consensus that would enable increased government spending on investment — fiscal austerity will continue to dominate policymaking.

Although muddling through with continued low rates of inflation seems to be the most likely outcome, the global forces that are at work indicate that the risk of further disinflation or outright deflation are greater than the risk of higher inflation.

VII. Monetary Policy and Interest Rates

The FOMC met on March 18 and 19. As expected the Committee updated its forward guidance for monetary policy. Both the economic assessment and the revised policy statement contained no surprises.

1. FOMC Assessment of the Economy

In the March statement the FOMC acknowledged that improvement in economic had slowed but noted the adverse effect of weather conditions. While the overall tone was constructive about progress, the language in the statement made it clear that the Committee remains concerned about the significant amount of slack that remains in the economy. There was no change in the assessment of inflation and no concern expressed about the recent low level of inflation relative to the Committee's long-term 2.0 percent target, although the Committee reiterated that it is "... *monitoring inflation developments carefully for evidence that inflation will move back toward its objective over the medium term.*"

2. FOMC Policy Statement

The Committee reiterated that it sees the risks to the economic outlook in terms of economic activity and inflation as "*nearly balanced,*" which means that there is slightly more downside risk than upside risk. In conjunction with its judgment that significant slack remains, its risk assessment supports continuing a strongly accommodative monetary policy.

One significant change in the policy statement was substitution of "*labor market conditions*" for "*unemployment rate.*" This change was consistent with deleting the reference to a 6.5 percent unemployment rate threshold for considering increases in the federal funds rate. The market had fully expected this change and the inclusion of language that signaled that it would monitor a wide variety of labor market indicators. Perhaps the only disappointment was that no specifics were contained in the statement.

As expected the Committee continued tapering of large scale asset purchases and beginning in April will purchase \$25 billion in mortgage backed securities and \$30 billion in Treasury securities monthly. There were no other changes to the two paragraphs dealing with quantitative easing.

The main policy matter addressed by the FOMC was clarification of its forward guidance about interest rate increases.

Revised forward guidance reads as follows:

- "*In determining how long to maintain the current 0 to percent target range for the federal funds rate, the Committee will assess progress — both realized and expected — toward its objectives of maximum employment and 2 percent inflation.*" This replaced the Committee's previous language: "*for a considerable period after the asset purchase program ends and the economic recovery strengthens,*"

which was moved to the third sentence in the policy paragraph. This change appears to be an attempt to make it clearer that policy will not be time driven but will be data dependent. The addition of the word “expected” is significant because it emphasizes that the Committee will not simply react to observed data but will carefully assess risks to the outlook.

- *“This assessment will take into account a wide range of information including measures of labor market conditions, indicators of inflation pressures and inflation expectations, and readings of financial developments.”* This is slightly broader language than was in the January statement.
- *“The Committee continues to anticipate, based on its assessment of these factors, that it likely will be appropriate to maintain the current target range for the federal funds rate for a considerable time after the asset purchase program ends, especially if projected inflation continues to run below the Committee’s 2 percent longer-run goal, and provided that longer-term inflation expectations remain well anchored.”* The previous language *“well past the time that the unemployment rate declines below 6-1/2 percent”* was replaced by *“for a considerable time after the asset purchase program ends.”*
- *“When the Committee decides to begin to remove policy accommodation, it will take a balanced approach consistent with its longer-run goals of maximum employment and inflation of 2 percent.”* This language was not changed.
- *“The Committee currently anticipates that, even after employment and inflation are near mandate-consistent levels, economic conditions may, for some time, warrant keeping the target federal funds rate below levels the Committee views as normal in the longer run.”* This replaces language that stated the Committee would take a *“balanced approach”* once it decides to remove policy accommodation. This revised language appears meant to convey that once the FOMC begins to raise the federal funds rate, it will do so slowly. It is a commitment to raise the federal funds rate slowly, assess the impact of increases, and run the risk of being too slow to raise rates rather than too fast.

Then, to make absolutely sure that there would be no misunderstanding that the revised language does not signal any change in the Committee’s monetary policy, the Committee added a final sentence: *“With the unemployment rate nearing 6-1/2 percent, the Committee has updated its forward guidance. The change in the Committee’s guidance does not indicate any change in the Committee’s policy intentions as set forth in recent statements.”*

3. FOMC Economic Projections

FOMC participants updated projections for real GDP, the U-3 unemployment rate, both total and core PCE inflation, and the federal funds rate. The March projections, along with those of the five previous quarters are shown in **Table. 10**.

Projections for real GDP growth were marked down a little in all three years. The long-run potential rate of growth was marked down as well. The pattern of small mark downs in real GDP growth at each quarterly FOMC meeting has continued for several quarters as members increasingly have come to realize that future potential real GDP growth is considerably lower than it was in the past.

Projections for the unemployment rate were also reduced in each of the three years as was the range for long-run full-employment rate. This does not reflect members’ belief that the employment market is improving faster than expected so much as it is a necessary adjustment to reflect the actual drop in the unemployment rate. As time has passed, members generally have come to realize that the U-3 unemployment rate is an incomplete measure of labor market slack and that other measures of labor

market slack are not improving nearly as rapidly. Thus, the U-3 unemployment rate is not an unbiased simple measure of labor market slack.

PCE total and core inflation projections were relatively unchanged in the March update. Committee members continue to expect inflation to move back toward its 2.0 percent target rate, but gradually over the next few years. But it is clear from the historical record of the Committee's inflation projections that members have consistently underestimated near-term downward pressures on inflation. The question of interest is whether the Committee's sanguine view of future inflation will also turn out to be too optimistic.

Finally, Committee members provide projections for the year-end federal funds rate in what has become known as the "dots plot." Averages for 2015 and 2016 rose a little as did the medians (not shown in **Table 10**). It has been pointed out that the "dots plot" is "time inconsistent" with the qualitative guidance in the FOMC's policy statement; that is, it overstates the extent to which the federal funds rate might rise in 2015 and 2016. Chairman Yellen specifically dismissed the importance of the "dot plot," commenting during the press conference following the FOMC meeting that federal funds rate projections will "*move a little bit this way or that,*" but "*I really don't think it's appropriate to read very much into it.*" Nonetheless, the market appears to be more comfortable with specific numerical estimates rather than nonspecific qualitative guidance and so the forward yield curve closely tracks the "dots plot."

4. FOMC Meeting Minutes

Minutes of the March 18 and 19 FOMC meeting reinforced the message conveyed in the policy statement that the transition from a highly accommodative policy to a neutral policy will occur slowly and cautiously. Low interest rates will continue for a considerable time after the first increase in the federal funds rate occurs.

It was clear that members are comfortable that the economy is continuing to improve and that the recent weakness in the data was temporary. More attention was given to low inflation and Minneapolis Federal Reserve Bank president dissented in part because the Committee did not "*communicate purposeful steps to more rapidly increase inflation to the 2 percent target and by suggesting that the Committee views inflation persistently below 2 percent as an acceptable outcome.*" There was also commentary that faster wage growth would be consistent with a move in inflation back to the 2.0 percent target. This commentary is important because Committee members believe that wage increases are a normal part of economic recovery and are not a harbinger of an outbreak in unacceptable inflationary pressures.

There was also commentary in the minutes that the shift in the "dot plot" of the federal funds rate and the increase in the median projections overstated matters and should not be viewed as "*a move by the Committee to a less accommodative reaction function.*"

Finally, there was a discussion of financial stability in the minutes, even there is no mention of financial stability in the FOMC policy statement. Several members commented about the ongoing compression in credit spreads. There has been increasing commentary by some that monetary policy may be driving up the prices of financial assets and setting the stage for renewed financial instability.

In a speech delivered on February 25, Governor Daniel Tarullo expressed his view that the kinds of financial excesses that might warrant a monetary policy response do not exist. In particular, Governor Tarullo noted risks inherent with short-term wholesale funding and mentioned the possible need for margin requirements. But, he added that the work of maintaining financial stability cannot be reserved solely to prudential supervision of financial institutions and markets because of limitations in the effectiveness of

Table 10
Economic Projections of Federal Reserve Board Members and Federal Reserve Bank Presidents, June 2013

Variable	Central Tendency				
	2013	2014	2015	2016	Longer Run
Real GDP % <i>Mar</i>		<i>2.8-3.0</i>	<i>3.0-3.2</i>	<i>2.5-3.0</i>	<i>2.2-2.3</i>
Dec	2.2-2.3	2.8-3.2	3.0-3.4	2.5-3.2	2.2-2.4
Sep	2.0-2.3	2.9-3.1	3.0-3.5	2.5-3.3	2.2-2.5
June	2.3-2.6	3.0-3.5	2.9-3.6		2.3-2.5
Mar	2.3-2.8	2.9-3.4	2.9-3.7		2.3-2.5
Dec	2.3-3.0	3.0-3.5	3.0-3.7		2.3-2.5
Unemp. Rate % <i>Mar</i>		<i>6.1-6.3</i>	<i>5.6-5.9</i>	<i>5.2-5.6</i>	<i>5.2-5.6</i>
Dec	7.0-7.1	6.3-6.6	5.8-6.1	5.3-5.8	5.2-5.8
Sep	7.1-7.3	6.4-6.8	5.9-6.2	5.4-5.9	5.2-5.8
June	7.2-7.3	6.5-6.8	5.8-6.2		5.2-6.0
Mar	7.3-7.5	6.7-7.0	6.0-6.5		5.2-6.0
Dec	7.4-7.7	6.8-7.3	6.0-6.6		5.2-6.0
PCE Inflation % <i>Mar</i>		<i>1.5-1.6</i>	<i>1.5-2.0</i>	<i>1.7-2.0</i>	<i>2.0</i>
Dec	0.9-1.0	1.4-1.6	1.5-2.0	1.7-2.0	2.0
Sep	1.1-1.2	1.3-1.8	1.6-2.0	1.7-2.0	2.0
June	0.8-1.2	1.4-2.0	1.6-2.0		2.0
Mar	1.3-1.7	1.5-2.0	1.7-2.0		2.0
Dec	1.3-2.0	1.5-2.0	1.7-2.0		2.0
Core PCE % <i>Mar</i>		<i>1.4-1.6</i>	<i>1.7-2.0</i>	<i>1.8-2.0</i>	
Dec	1.1-1.2	1.4-1.6	1.6-2.0	1.8-2.0	
Sep	1.2-1.3	1.5-1.7	1.7-2.0	1.9-2.0	
June	1.2-1.3	1.5-1.8	1.7-2.0		
Mar	1.5-1.6	1.6-2.0	1.8-2.1		
Dec	1.6-1.9	1.6-2.0	1.8-2.0		
Federal Funds % <i>Mar</i>		<i>.30</i>	<i>1.13</i>	<i>2.42</i>	<i>3.88</i>
Dec	.25	.34	1.06	2.18	3.88
Sep	.25	.40	1.25	2.26	3.93
June	.26	.43	1.34		4.01
Mar	.29	.55	1.30		4.01
Dec	.30	.61	1.47		4.04

such tools. Therefore, there is a role for monetary policy in assuring financial stability. In that regard Governor Tarullo suggested that if the Federal Reserve maintains a portfolio of short-term and long-term securities, it could influence financial stability by adjusting monetary policy to influence the shape of the yield curve.

As yet there is no consensus within the FOMC as to how to deal with financial stability concerns within the context of monetary policy. That this is recognized as an important issue is a good thing. Over time, debate and research may result in viable policy approaches that integrate the Federal Reserve's responsibility for financial stability over and beyond its function as lender of last resort with its dual mandate to maximize employment consistent with maintaining price stability.

5. Chairman Yellen's Chicago Speech

If there was any doubt about the FOMC's commitment to an accommodative monetary policy for a long period of time, Chairman Yellen in a speech delivered on March 31 in Chicago left absolutely no doubt. She emphasized that considerable slack remains in the labor market and specifically cited the large number of underemployed workers, the large percentage of long-duration unemployed workers, and the low labor force participation rate. She was very clear that the U-3 unemployment rate understates the extent of slack in the labor market. In this latter respect, she noted that "*A second form of evidence for slack is that the decline in unemployment has not helped raise wages as in past recoveries. Workers in a slack market have little leverage to demand raises. Labor compensation has increased an average of only a little more than 2 percent per year since the recession, which is very low by historical standards.*" By implication this means that there is additional slack in the labor market that is not being captured directly by the unemployment rate.

6. Federal Funds Rate

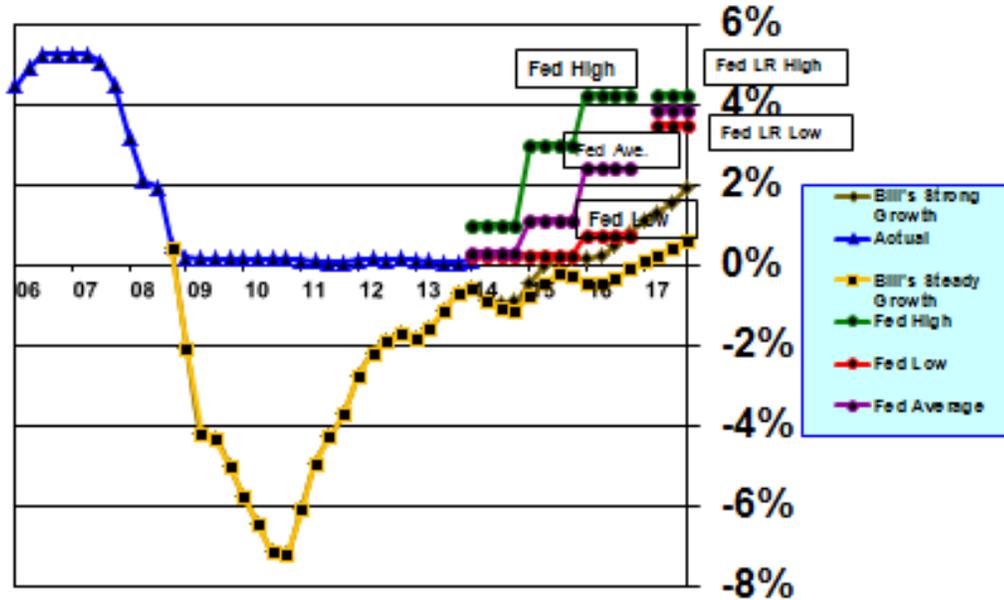
Chart 19 shows the FOMC's central tendency range for high and low projections for the federal funds rate for 2014, 2015, and 2016. The purple line (circles) is the average of projections for the current 16 FOMC members (4 governors and 12 presidents). The FOMC's projections imply that the first increase in the federal funds rate will take place during 2015. However, the median expected federal funds rate is 1.00 percent by the end of 2015 — the average is skewed up to 1.13 percent by three high estimates.

Both **B of A** expects the first federal funds rate increase to occur no sooner than the fourth quarter of 2015. **GS** is sticking with early 2016 and **ISI** expects the first increase to occur in mid- to late-2015. The market expects the first increase in the federal funds rate to occur in mid-2015 .

My "**Steady Growth**" and "**Strong Growth**" forecasts are shown by the yellow line (squares) and brown line (diamonds). My "**Steady Growth**" forecast indicates that the federal funds rate is not likely to increase until late 2016 or early 2017. In my "**Strong Growth**" forecast, the first increase in the federal funds rate occurs in mid-2015. My projections assume that the employment gap remains high for an extended period of time, the short-duration employment gap returns to a normal level, and inflation remains low. However, if the employment gap is smaller because discouraged workers are really structurally unemployed and, therefore, will not re-enter the labor force, the employment gap will close more quickly, inflation will start rising sooner and the FOMC could begin raising the federal funds rate before my forecast dates.

t

CHART 19 – Federal Funds Rate Forecast



Page 22

7. Long-Run Neutral Federal Funds Rate

As the time for the first increase in the federal funds rate nears, the market will focus increasingly on what the level of the *long-term neutral rate* should be. FOMC members’ estimates of the neutral rate range from 3.50 percent to 4.25 percent. The median is 4.00 percent and the average is 3.88 percent. The neutral rate is composed of the rate of inflation plus the real rate of interest. Because all members agree that the long-run rate of inflation will be 2.00 percent, this necessarily implies that members believe the real rate of interest will be between 1.50 percent and 2.25 percent.

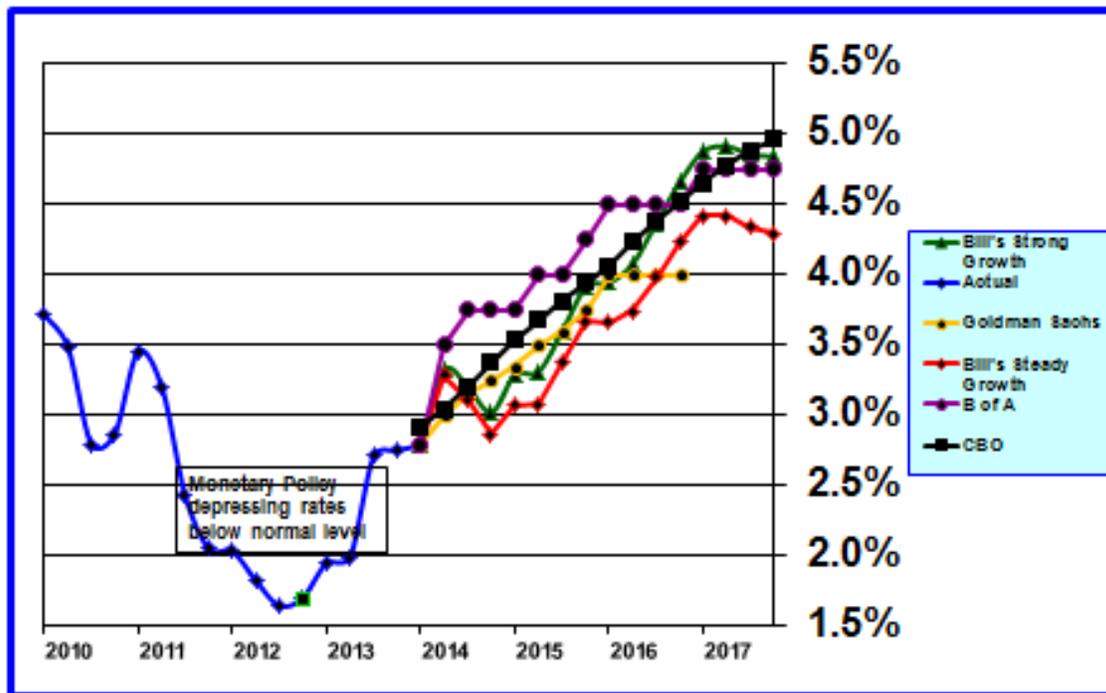
The neutral rate increases with a higher rate of growth in the labor force and a higher level of productivity. Understanding this should rule out a 2.25 percent real rate for two and possibly three reasons. First, between 1997 and 2007 the nominal federal funds rate averaged 3.82 percent and the PCE inflation rate averaged 1.98 percent. Thus, the real rate was 1.84 percent, already well below 2.25 percent. Second, all agree that labor force growth in the future will be slower, which implies that the real rate should be lower than the 1.84 percent 1997-2007 average. Third, if productivity is lower in the future because of insufficient investment, that would put further downward pressure on the neutral rate. I estimate that for each one percentage point difference in productivity the neutral rate is affected by 0.66 percent. When all of this is put together it points to a long-run neutral rate that is probably lower than 1.50 percent. My estimate in my “**Strong Growth**” scenario is 1.00 percent. It is much lower in the “**Steady Growth**” scenario. That implies that the neutral long-run federal funds rate would be between 3.00 percent and 3.50 percent (or considerably lower in the “**Steady Growth**” scenario), assuming long run PCE inflation

is 2.00 percent.

8. 10-Year Treasury Rate

Chart 20 shows forecasts for the 10-year Treasury rate for my “*Steady Growth*” (purple line and diamonds) and “*Strong Growth*” (red line and triangles) scenarios, which incorporate the effect of the short-duration unemployment rate. **GS**’s forecast is also shown (yellow line and circles). Also included are forecasts from **GS**, **B of A**, and **CBO**.

CHART 20 – 10-Year Treasury Rate Forecasts



Page 23

As can be seen in **Chart 20**, my 10-year forecast for the “*Steady Growth*” scenario changes little through the middle of 2015, fluctuating in a narrow band around 2.0 percent. After the middle of 2015, the 10-year rate moves up gradually to 4.25 to 4.50 percent by the end of 2017. This is only slightly lower than the pathways forecast by **B of A** and **GS**. The forecast for the “*Strong Growth*” scenario tracks the pattern of the forecast for the “*Steady Growth*” scenario but rises a little faster reaching nearly 5.00 percent by late 2017 and follows a pathway very similar to **CBO**’s forecast.

What is important to note is that none of these forecasts indicates a surge in the 10-year rate, but rather merely a steady upward movement as the employment and output gaps diminish.

There is one potential disconnect in the inflation and 10-year Treasury rate forecasts. A long-term inflation rate of 2.0 percent and a long-term interest rate of 5.0 percent imply a 3.0 percent real rate of interest, which would be considerably higher than the historical average. This suggests that the interest-

rate forecasts are too high, the inflation forecast is too low, or timing lags are involved in the sense that either the inflation rate will move higher or the 10-year rate will move lower after 2017. My own analysis suggests that the third explanation is the relevant one. The real 10-year Treasury yield falls from 2.48 percent in the “*Steady Growth*” scenario in 2017 to 1.76 percent in 2023 and the real yield falls in the “*Strong Growth*” scenario from 2.95 percent to 2.06 percent over the same period. This also implies that once the economy returns to full employment, inflation will not spiral out of control, even in the “*Strong Growth*” scenario, and long-term interest rates will not exceed 5.0 percent.

VIII. Fiscal Policy Developments

It’s a relatively quiet year so far for fiscal policy. No big issues with imminent deadlines face Congress at this time. But, there is still plenty of activity.

Federal tax revenues continue to be strong and the deficit appears to be falling faster than CBO expected. The 12-month deficit through March was \$494 billion, which is already below CBO’s forecast of \$514 billion for fiscal year 2014 and there are six months remaining in the fiscal year. Clearly, the deficit is on a trajectory to be smaller, perhaps much smaller, than expected. However, this better than expected trend could easily reverse, if Congress passes tax extender legislation later this year without finding revenue offsets.

Declining budgetary deficits in the short run have taken the pressure off Congress to deal with longer run fiscal issues — in particular, how to fund burgeoning entitlements. Based upon CBO budget deficit projections, which assume certain expiring expenditures will be extended, there will not be serious pressure on Congress to deal with entitlement spending reforms for another five to ten years.

1. President Obama’s Fiscal Year 2015 Budget

On March 4, 2014, the Obama Administration released its budget proposals for the next ten years and characterized it as an “Opportunity, Growth, and Security Initiative.” The budget is a blueprint for taxes and expenditures for the next ten years.

Because Congress already has agreed to budget caps for fiscal 2015, the Obama budget is more of a political document than a real budget that Congress will actually consider. Indeed, after a flurry of coverage immediately following release, the President’s budget has dropped from sight. However, a few individual recommendations could find their way into specific pieces of legislation.

2. Congressman Paul Ryan’s Fiscal Year 2015 Budget

On April 1, 2014, House Budget Committee Chairman Paul Ryan released his fiscal year 2015 budget proposal, “The Path to Prosperity.” Ryan’s budget also covers the next ten years.

It differs significantly from President Obama’s budget by cutting \$5.1 trillion in spending over the next ten years and achieves a balanced budget by 2024. Ryan assumes his budget would result in a “fiscal dividend” of \$175 billion which is supposed to result from stronger economic growth that would come from reducing the size of government.

- \$2.1 trillion in spending cuts would come from repealing the insurance coverage expansion provisions of the Affordable Care Act, but the Affordable Care Act's increased taxes and Medicare reductions would be left in place.
- \$732 billion in spending cuts come from capping Medicaid. This is a nonstarter for Democrats.
- \$791 billion in non-defense discretionary spending.
- But, \$483 billion in increased defense spending.
- \$783 billion in interest expense savings.
- Other spending cuts including tort reform, means-tested Medicare premiums, increased federal employee retirement contributions, food stamp reductions, and reductions in farm subsidies.

Neither President Obama's budget nor Congressman Ryan's budget are going anywhere. The most likely outcome is a business as usual fiscal year 2015 budget, but that won't be decided on until sometime in September. There is always the possibility of a continuing resolution, if a budget can't be agreed to by September 30. A continuing resolution would not present the kinds of problems that have occurred in the past because the Murray-Ryan budget compromise set spending limits that cover fiscal year 2015. What is missing still are the details.

3. Tax Reform — Representative Camp's Proposed "Tax Reform Act of 2014"

On February 26, 2014, Representative Camp, Chairman of the House Ways and Means Committee, released a discussion draft of the "Tax Reform Act of 2014."

The overall thrust is to broaden the tax base, reduce tax rates and scale back or eliminate many tax preferences, while maintaining tax revenue neutrality over the next ten years. The proposal, however, is not revenue neutral beyond ten years because it relies on one-time revenue increases to offset permanent tax rate reductions.

Importantly, House Republican leadership did not endorse Chairman Camp's proposals. Democrats, of course, have their own and very different ideas about tax reform. Consequently, there is no chance that tax reform legislation will become law in 2014. However, it is constructive that serious proposals have now been put on the table. Senator Wyden, if he is still chairman of the Senate Finance Committee after the November mid-term elections, will probably also develop specific tax reform proposals next year.

Thus, although significant tax reform is still a long ways away from becoming law, the active engagement by Congress is encouraging and moves the process of more serious consideration forward.

4. Sen. Patty Murray's 21st Century Worker Tax Cut Act

This legislation would make adjustments to the Earned Income Tax Credit (EITC). It would remove the marriage penalty embedded in the existing EITC by permitting a second-earner deduction on a joint return. It would also expand the EITC for childless workers. The legislation also includes President Obama's proposed changes in the federal minimum wage.

5. Extended Unemployment Insurance Benefits

On April 7, 2014, the Senate approved legislation to extend emergency unemployment benefits from January 1, 2014 to May 31, 2014. While there is a possibility that the Republican-controlled House will take up the Senate legislation, this is far from certain.

6. Infrastructure Funding

Federal transportation infrastructure funding authorized by legislation entitled “Moving Ahead for Progress in the 21st Century” expires on September 30, 2014 unless Congress enacts legislation to extend it. The highway trust fund also needs to be replenished to avoid insolvency. In general, transportation spending is not a partisan issue. However, as with many spending initiatives these days, the challenge lies in finding sources of funding and that is where partisan differences surface. A possible sequence of events includes stopgap funding for the highway trust fund sometime this summer, a one-year extension to provide time to develop long-term funding sources, followed by long-term legislation in 2015.

7. Doc Fix

For the 16th time Congress extended Medicare physician reimbursements, which had been scheduled to expire on March 31 and would have cut reimbursements by 24 percent. The extension is for one year and the cost is \$21 billion.

8. Tax Extenders

About 60 tax breaks (called tax extenders) expired at the end of 2013. The Senate Finance Committee has approved legislation that would extend almost all of the tax extenders through the end of 2015. The cost is estimated to be \$85 billion over ten years with most of it occurring in 2014 and 2015. The Senate Finance Committee legislation does not include funding offsets.

Even though Representative Camp, Chairman of the House Ways and Means Committee, would rather pursue tax reform, there is reason to expect the House to be sympathetic to some form of tax extender legislation. But, the challenge will be finding revenue sources to cover the cost. This will be no small task. The betting is that tax extender legislation will become law, although not all of the extenders will survive, and that at least part of the cost will be offset. That is because there is bipartisan interest in many of the extenders. Because of the complexity, if legislation ultimately passes, that will not likely occur until sometime this fall.

9. House Democratic Whip, Steny Hoyer, Urges Congress To Address Long-Term Fiscal Sustainability

In a speech delivered at a Third Way event on March 24, 2014, House Democratic Whip, Steny Hoyer, made an impassioned case for addressing long-term fiscal sustainability now rather than continuing “kicking the can down the road.” *“We owe it to our successor generations to summon the political courage, the wisdom, the common sense, and a deep sense of personal responsibility, to show that we are worthy of our offices*

and the trust of our fellow citizens. If we do so, the American people will regain their faith and their respect for their government. They will know with confidence that our nation will continue to lead the world. And they will experience a renewed optimism that America's best days are still ahead."

Hoyer did not outline a specific proposal in the way that Representative Camp recently did. Reading between the lines of his speech, what Hoyer wants to have happen is for Democrats and Republicans to engage in serious debate to develop significant compromises that deal with the big spending and tax issues and that put the U.S. federal budget and entitlement programs on a long-term sustainable footing. Unfortunately, nothing is likely to happen any time soon. The partisan rancor is too great and the rapidly shrinking deficit makes it easy to postpone consideration.

IX. 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. As events unfold during 2014, this will enable the reader to track my analytical prowess. Beginning in February I will add current assessments follow each item with the following identifiers: "+" tracking forecast; "-" not tracking forecast; "?" too soon to know.

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 tightened to 2.6% to 3.0%; the FOMC revised its projection range down from 2.8% to 3.2% to 2.8% to 3.0%; I remain comfortable with Y/Y growth near the bottom end of the revised forecast range
 - ✓ ? no data for 2014 will be available until late April; based on projections of Q1 GDP, the four-quarter Y/Y would be 2.2% compared to 1.9% for 2013
- **Real GDP output gap** will remain very high, but will close a little faster during 2014 (I intend to supply numerical estimates once CBO updates its GDP gap analysis).
 - ✓ ? CBO updated its output gap analysis on February 4, 2014; 2013 Q4 gap was 4.02%; projected 2014 Q4 gap is 3.21%; I expect actual results to be close to or a little better than CBO's projected gap
 - ✓ ? no data for 2014 will be available until late April
- **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 in coming years to between 2.1% and 2.4%.
 - ✓ - CBO expects 2014 potential growth to be 1.7%; my estimate has risen to 1.8%

- ✓ + I now estimate future potential growth to range between 2.14% and 2.56%
- **Productivity** should rise as growth improves and investment increases, but should still fall well short of the historical 2.1% average.
 - ✓ ? no data for 2014 will be available until late April
- **Employment** should grow about 190,000 per month in 2014, about the same as in 2013.
 - ✓ + employment averaged 178,000 over the first three 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 has risen from 63.5% in December to 63.7% in March; the unemployment rate has remained unchanged at 6.7% over this period
- **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 6.7% in March and will probably about 6.4% by the end of the year
 - ✓ + some discouraged workers appear to be reentering the labor force
- **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 the Q4/Q4 growth rate should be a much higher 2.9%.
 - ✓ + the 12-month moving average was 2.2% in February and I project it to be 2.1% by the end of the year
- **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 3.1% in February and I project it to be 3.6% by the end of the year
- **Household personal saving rate** will decline slightly as growth in spending exceeds growth in disposable income.
 - ✓ + the saving rate was 4.29% in February compared to 4.54% in 2013
- **Stock prices**, as measured by the S&P 500 average, should rise about 5%.
 - ✓ - through April 11, S&P 500 average is down 1.8% year to date
- **Manufacturing** growth will continue to be relatively strong and the PMI index will exceed 50.
 - ✓ + March ISM index was above 50
- **Business investment** spending growth should improve to about 5 to 6% as employment and consumer spending growth gathers momentum.
 - ✓ ? no 2014 data will be available until late April
- **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%.
 - ✓ ? data for residential housing investment will not be available until late April, although first quarter growth is likely to be negative
 - ✓ - housing starts were down 2.4% in February from the 2013 average

- **Residential housing prices** should rise about 5% in 2014, more slowly than 2013's 10% increase.
 - ✓ + *Housing prices were up at an annual rate of 6.0% in January 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 2.74% in February compared to the 2013 trade deficit of 2.78%, but should rise later in 2014 as consumer spending strengthens*
 - ✓ - *the value of the dollar has risen 0.5% so far in 2014*
- **Monetary policy** — the Federal Reserve will end quantitative easing by mid-year and will clarify forward guidance.
 - ✓ - *the FOMC is on a course to end quantitative easing by the end of 2014*
 - ✓ + *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 increase will occur slowly after the initial increase takes place*
- **Inflation** will rise slightly in 2014 but will remain well below the FOMC's 2% objective at least through 2016.
 - ✓ ? *core PCE inflation was 1.10% in February compared to 1.20% in December;*
 - ✓ ? *total PCE inflation was 0.87% in February compared to 1.15% 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.
 - ✓ + *outlook for federal funds rate is unchanged*
 - ✓ + *the 10-year Treasury rate was 2.63% on April 11, which is near 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.
 - ✓ - *federal budget deficit is decreasing faster than expected and was 2.87% in March and is on track to decline to 2.60% by the end of 2014*

2. Rest of the World

- **Global growth** is likely to improve to 3.5% in 2014 from 2.9% in 2013.
 - ✓ ? *no data for 2014 are available yet; however, growth appears to be moderately slower than 3.5% at around 3.4%, but B of A's GLOBALcycle indicator indicates that global growth should accelerate to 3.6%*
 - ✓ ? *the IMF's most recent forecast for the next 5 years to 2018 is 4.0% annual global growth, which would be about the same as the 3.9% average from 1998 through 2007.*
- **European growth** will be positive but will fall short of the ECB's forecast of 1.1%.
 - ✓ ? *no data for 2014 are available yet; 2013 Q4 euro area growth was 0.3%, which is consistent with an annual growth rate of 1.2%*
 - ✓ - *Euro area inflation fell to 0.5% year over year in March and core inflation fell to 0.8%*
- **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.

- ✓ + *all is quiet so far*
- **European banking union** will do little to solve deep-seated European and Eurozone structural problems; ECB stress tests will contribute to slow credit expansion.
- ✓ +
- **European political dysfunction, populism and nationalism** will continue to worsen gradually.
- ✓ + *Italy recently replaced its prime minister without triggering new elections; established parties seem intent on postponing new elections for as long as possible; in advance of the May European parliamentary elections, Eurosceptic parties appear to be gaining momentum*
- ✓ + *in advance of the May European parliamentary elections, Eurosceptic parties appear to be gaining momentum*
- ✓ + *French municipal elections were won by the center right, but the right wing Euroskeptical party also made significant gains*
- **U.K. growth** will continue to be robust as the housing and debt bubble continue to build.
- ✓ + *early reports indicate that U.K. growth is getting stronger*
- **China's GDP growth** will slow below 7% as economic reforms are implemented.
- ✓ ? *no 2014 data are available yet but Chinese officials have confirmed the 7.5% growth target*
- **China's leadership** will focus on implementing **economic reforms** and will overcome resistance and maintain stability.
- ✓ ? *it's really too early to make a call; however, investor anxiety is increasing in the wake of weaker than expected data reports*
- **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 and is reflected in a moderately stronger yen; 2014 Q4 GDP 0.7 percent annual rate of growth was much slower than expected due to a greater than expected trade deficit*
- **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.
- ✓ + *emerging markets countries with large balance of payments deficits are already under severe pressure that will stunt 2014 growth*
- countries with large balance of payments deficits.
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
- **U.S. potential real GDP growth** falls short of expectations
- ✓ +
- **U.S. employment growth** is slower than expected; the **participation rate** continues to decline
- ✓ + *participation rate has actually risen over the first three months of 2014 falls less than expected*
- **US. Unemployment rate** falls less than expected

- ✓ + *unemployment rate has not fallen at all so far in 2014 does not improve*
- **U.S. productivity** does not improve
 - ✓ +
- **Real U.S. consumer income and spending** increase less than expected
 - ✓ +
- **U.S. financial asset prices** rise more than expected posing increased bubble risks
 - ✓ + *Stock prices are down slightly*
- **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; starts have been disappointing, perhaps due to weather, but perhaps due to tight credit availability and slow household formation*
- **U.S. residential housing price increases** slow more than expected
 - ✓ +
- **U.S. private business investment** does not improve as much as expected
 - ✓ +
- **U.S. manufacturing growth** slows
 - ✓ + *manufacturing activity is stable*
- **U.S. trade deficit** widens and the *value of the dollar* falls
 - ✓ + *the trade deficit continues to edge down; the value of the dollar has been relatively stable*
- **U.S. monetary policy** spawns financial market uncertainty and contributes to financial instability
 - ✓ +
- **U.S. inflation** falls, rather than rising, and threatens deflation
 - ✓ + *Inflation has been stable at a low level*
- **U.S. interest rates** rise more than expected
 - ✓ + *long-term rates have fallen approximately 40 basis points so far in 2014*
- **U.S. fiscal policy** is more restrictive than expected and the **budget deficit** falls more than expected
 - ✓ - *in the first three months of 2014 the budget deficit has fallen considerably 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
 - ✓ + *growth appears to be edging a bit higher*
- **Europe** — financial market turmoil reemerges
 - ✓ +
- **Europe** — political instability and social unrest rises more than expected threatening survival of the Eurozone and the European Union
 - ✓ ? *European Parliament election scheduled in May could bolster anti-European Union political parties' strength*

- ***U.K. growth*** falters as housing bubble collapses
✓ +
- ***Chinese*** leaders have difficulty implementing ***economic reforms***
✓ ? *too early to determine but crisp policies to deal with the underperformance of state owned enterprises have not yet been developed*
- ***China's growth*** slows more than expected
✓ ? *growth may fall short of the target of 7.5% in Q1 but is expected to rebound in Q2; financial stresses may be building, but visible signs of stress are absent*
- ***Japan*** — markets lose faith in Abenomics
✓ ? *Abenomics is at a critical juncture — stock price appreciation has stalled; the yen is no longer appreciating in value; the trade deficit is larger than expected and has depressed GDP growth; the increase in the consumption tax may depress consumer spending*
- Severe and, of course, unexpected ***natural disasters*** occur, which negatively impact global growth
✓ +
- ***Middle East oil supply*** is disrupted and oil prices rise sharply
✓ +
- **New — Russia's annexation of the Crimea and Civil Unrest in Ukraine**
✓ - *political tensions between Russia and member nations of NATO have risen; however, there are no discernible economic consequences yet*

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