Our Perspectives:
Commentary on the economy & regulatory policies affecting financial companies

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The Longbrake Letter*

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I. Continued Strong Employment Growth Increases Prospects for a Self-Sustaining Recovery; Risks Abate, But Economy Is Still Fragile and Vulnerable to Potential Negative Shocks

Between October 2010 and April 2011, a period of seven months, payroll employment increased 1.3 million and the unemployment rate fell from 9.5% to 9.0%. The S&P 500 stock index rose from 1125 to 1340. Then, as now, optimism built that economic recovery was gaining momentum. But, those hopes proved premature. Employment growth slowed dramatically, the unemployment rate remained stuck at 9.0% and the S&P 500 stock index fell back to 1175. Real GDP eked out only a paltry 1.7% increase in 2011.

Between September 2011 and February 2012, a period of six months, payroll employment increased 1.2 million and the unemployment rate fell from 9.0% to 8.3%. The S&P 500 stock index rose from 1175 to 1350 (the index has continued its upward climb in March and closed at over 1400 on March 15^{th}). Once again optimism, like Spring flowers, is blossoming.

Is this another false start or have we finally achieved break out?

In pondering this question it is important not to lose sight of the severe damage the credit and housing bubbles inflicted on the economy. Healing is occurring but the patient remains in serious condition. While that is far

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better than being in critical condition, it means that the economy remains quite vulnerable to negative shocks.

Shocks knocked the wind out of the nascent recovery in Spring 2011. Oil and commodity prices surged courtesy of Chinese economic policy and the Arab Spring; Europe stumbled from crisis to crisis; Japan experienced an earthquake, tsunami and nuclear meltdown; and U.S. treasury securities lost their pristine AAA rating amid tragic-comic political dysfunction that threatened default.

There are reasons to be hopeful that events will not unfold in the same way in 2012 as they did in 2011. Risks remain but have abated or been deferred.

For the time being, both Democrats and Republicans have backed away from further fiscal policy confrontation until after the election. Thus, risks on this front are minimal in the near term. However, barring a one-party sweep of the presidency and Congress, the stage has been set for a shootout in 2013. As 2012 draws to a close anxiety will escalate. Those knowledgeable in the ways of Washington politics expect that tax issues will not be resolved until well into 2013. In the meantime tax increases and spending reductions amounting to about 4.5% of GDP will kick in on January 1, 2013.

Europe achieved an orderly default of Greek debt. Banking system meltdown has been corralled by the European Central Bank's aggressive €1 trillion LTRO (long-term refinance operation) intervention which assures abundant liquidity. Nonetheless, European banks continue to curtail lending and this, along with fiscal austerity in most European nations, is fostering recession in the Eurozone. The good news is that Europe's economic problems will not be as bad as they might have been in the short run, but they still could be pretty bad. In the long run, which now seems to extend to 2013 or later, the viability of the European Union in its present form is untenable. This means that there will be more crises ahead. And, even in the short run, if recession in Portugal and other weak European countries is severe enough, renewed financial crisis is possible in 2012.

Oil prices have risen since the first of the year, although the percentage increase is smaller than in 2011. Also, this year's price increases are focused on oil and not on a broader basket of commodities. A slowdown in Chinese and global growth should diminish the risk of a surge in prices of commodities comparable to what happened in 2011.

Housing risks stem primarily from the potential for prices to fall further as foreclosures accelerate in the wake of the recent settlement with the five largest loan servicers. Falling prices erode household wealth, feed pessimism and weigh on consumer spending. But, the passage of time is slowly reducing excess supply and rising consumer optimism about jobs could help stimulate demand, thus limiting or eliminating the potential for significant further house price declines. Housing is a long ways from becoming a driver of economic growth but the downside risks have lessened.

Increasingly, the economic expansion in the U.S. appears to have entered a stage where the feedbacks are having a favorable, self-reinforcing impact. Risk-taking behavior is making a slow come back and the wait-and-see malaise of the last few years is gradually abating.

But, before we break out the champagne, let us remember that unemployment, as conventionally measured, remains above 8% and GDP growth remains anemic. And, even though risks have diminished, a plethora of challenges still confront us — housing foreclosures, consumer debt burdens, unsustainable federal budget deficits, political dysfunction, slower global growth — to mention a few of the more prominent ones. Unless one or more of these challenges results in a negative shock, they will not derail the accelerating recovery but they will assure that acceleration in economic growth will be subdued. In other words, unemployment and the gap between actual and potential GDP will remain at historically high levels for quite some time to come.

Since the end of the Great Recession, the Federal Reserve's GDP and employment forecasts without exception have consistently been too optimistic. However, in recent months the Fed's optimism has been replaced by a more cautious outlook. The Federal Open Market Committee (FOMC) at its January meeting surprised markets with a decidedly dovish monetary policy statement, reflecting its view that while economic recovery is underway it is fragile and it will take as much as another two to three years to bring unemployment down to an acceptable level. *"To support a stronger economic recovery and to help ensure that inflation, over time, is at levels consistent with the dual mandate, the Committee expects to maintain a highly accommodative stance for monetary policy. In particular, the Committee . . . anticipates that economic conditions — including low rates of* *resource utilization and a subdued outlook for inflation over the medium run — warrant exceptionally low levels for the federal funds rate at least through late 2014.”*[1]

Notably, in spite of building market optimism, including a much better than expected retail sales report on March 13th for the months of December, January and February, the FOMC following its March 13th meeting reiterated almost word for word the exact same policy stance.[2] While acknowledging that the unemployment rate “. . . has declined notably in recent months . . . [it] remains elevated . . . and consequently [the Committee] anticipates that the unemployment rate will decline gradually toward levels that the Committee judges to be consistent with its dual mandate.”

While the FOMC noted the improved tone of recent data, it maintained its cautious outlook and, importantly, it did not change its policy stance.

In this month’s letter, I review recent developments in GDP growth and explore future prospects for potential GDP growth. Then I discuss several topics including personal income and outlays, employment, oil prices and monetary policy. The final three sections focus first on why the European Union is unlikely to survive in its current political configuration, second on slowing growth in China and finally, drawing upon summaries of the book, “*Why Nations Fail: The Origins of Power, Prosperity and Poverty*” by Daron Acemoglu and James Robinson, I end with a few thoughts about the importance of political environments and leadership is shaping the relative success of nations in raising the standard of living for their citizens.[3]

II. U.S. GDP

1. 2011 Q4 GDP Second Estimate

The “Second Estimate” of fourth quarter GDP growth was raised slightly to 2.98% from the “Advance Estimate” of 2.76%. **Table 1** provides details.

[1]Federal Open Market Committee. “Monetary Policy Statement” January 25, 2012.
[2]Federal Open Market Committee. “Monetary Policy Statement” March 13, 2012.
[3]Daron Acemoglu and James Robinson. *Why Nations Fail: The Origins of Power, Prosperity and Poverty*. Available for purchase, March 20, 2012.

Table 1
2011 Fourth Quarter GDP Estimate

	Advance Estimate	Second Quarter	Difference	2011
Personal Consumption	1.45%	1.52%	.07%	1.53%
Private Investment				
Nonresidential	.18%	.29%	.11%	.79%
Residential	.23%	.25%	.02%	-.03%
Inventories	1.94%	1.88%	-.06%	-.21%
Net Exports	-.11%	-.07%	.04%	.06%
Government	-.93%	-.89%	.04%	-.44%
Total	**2.76%**	**2.98%**	**.22%**	**1.70%**

Real GDP growth for all of 2011 was an anemic 1.70%. If inventory accumulation is omitted, fourth quarter real GDP growth was an even more disappointing 1.10%.

Consumer Spending. Consumer spending growth was a little stronger in the second estimate and nearly matched the 1.53% growth for all of 2011. Because consumer spending accounts for 71% of GDP, 1.53% growth in consumer spending implies real GDP growth of 2.16%. Consumer spending and GDP growth need to be stronger to return the economy to full employment. But this will not occur until disposable income growth accelerates. The recent acceleration in employment growth will be helpful, but stagnant real wages, declining government transfer payments and a stabilization in the saving rate will slow the rate of improvement.

Nonresidential Investment — Equipment and Software. This GDP category, which accounted for over half of GDP growth during the first three quarters of 2011, fell to 14% of fourth quarter growth. Even so, this component of GDP growth continued to grow faster than its 5% contribution to total GDP. This is the one bright spot in the data.

Residential Investment. Perhaps reflecting that a bottom may have been reached in residential construction, this GDP category eked out a small gain of .25% in the fourth quarter. Going forward the odds favor a gradual increase in the contribution of residential investment to GDP growth. However, the ongoing excess housing inventory and mortgage finance challenges will limit increases in residential construction for another one to two years.

Inventories. The large inventory growth in the fourth quarter reversed a large decline in the third quarter. Lingering supply chain disruptions probably depressed third quarter inventory accumulation and led to a restocking rebound in the fourth quarter. Over longer periods of time, inventory accumulation has only a moderate positive impact on GDP growth. Because net inventory accumulation actually subtracted -.21% from 2011 GDP growth, this implies that underlying GDP growth was somewhat stronger than 1.70%.

Net Exports. The small negative contribution of net exports in the fourth quarter means that imports grew a little more than exports. While the trade data tends to be volatile from quarter to quarter, a negative contribution to GDP growth from net exports tends to be weakly correlated with stronger consumer spending growth and inventory accumulation. The negative contribution of net exports to GDP is likely to continue in the first quarter of 2012 because of rising oil prices and the 5.3% appreciation of the trade-weighted dollar over the second half of 2011.

Government. Government expenditures include only direct spending on services and investment. Transfer payments are not included. Expenditures in this category have been decreasing in recent quarters with the impact roughly equally divided between state and local governments and the federal government. During all of 2011, government spending subtracted -0.44% from GDP growth. The sharp -.89% deterioration in the fourth quarter contribution to growth came primarily from a decrease in federal spending — 65% of the total. Declining government spending seems likely to continue and will depress future GDP growth.

2. 2012 Q1 GDP Growth

Monthly data reports during the first quarter generally have been better than expected. Consumer spending appears to be holding up. Manufacturing has strengthened a little. Goldman Sachs (GS) is currently estimating a 2.0% annual rate of growth and Bank of America/Merrill Lynch (B of A) also expects 2.0% growth. The decline from fourth quarter GDP growth stems primarily from a decrease in the rate of inventory accumulation offset by a slowing in the rate of decrease in government expenditures.

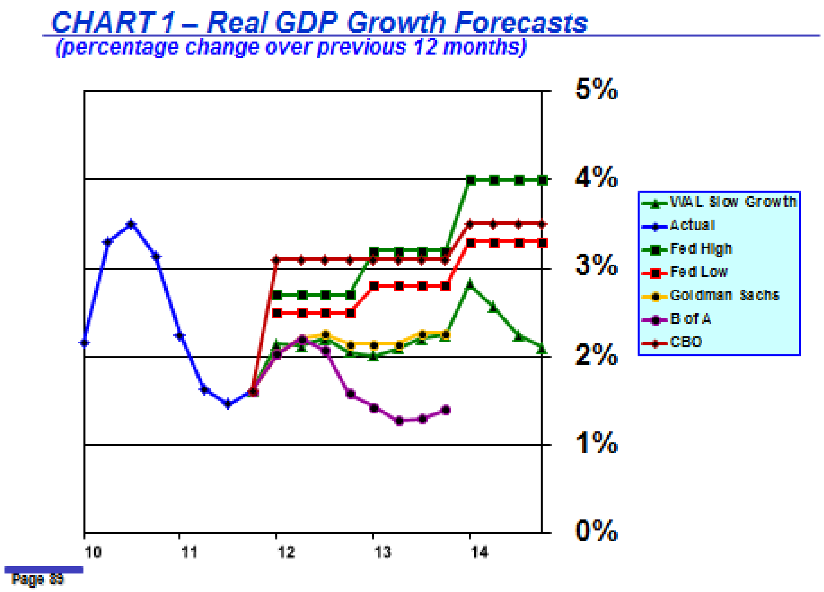
These GDP tracking estimates are weaker than what one might expect given the stronger tone of individual data reports. GS calculates a Current Activity Indicator (CAI) based on both survey and actual data reports. Based on February data, the CAI indicates that GDP was expanding at a 3.6% annual rate in February. This represents an unusually large gap from GS's first quarter GDP tracking estimate of 2.0%. GS offers several possible reasons for the difference:

- Different parts of the economy can grow at different rates. Employment has been strong over the last several months but the full impact of this may not yet have flowed through to other data that ultimately impact GDP.
- The GDP tracking indicator is based on data that is less timely than the CAI.
- Statistical sampling error can skew data in the short-run; subsequent revisions wash out errors in preliminary data.
- Our old friend or foe — the weather — may be giving recent data a positive skew because of the warmer than normal winter. GS estimates that warm weather lifted the CAI by 30 basis points in December and 20-40 basis points in January. Mean reversion would occur later on which would dampen growth, probably during the second quarter.

ML cautions that recent stronger data reports have benefited from the unwinding of last year's oil price and supply chain shocks, the delay in home foreclosures and unseasonably warm weather. These factors have pretty much run their course or, in the case of oil prices and home foreclosures, are reversing. ML still has one of the most pessimistic GDP outlooks and so far has not been swayed by market optimism.

3. GDP Forecasts for 2012 and Beyond

Chart 1 shows several GDP forecasts — the Federal Reserve's high and



low; B of A; GS; the Congressional Budget Office (CBO); and my "Slow Growth" scenario.

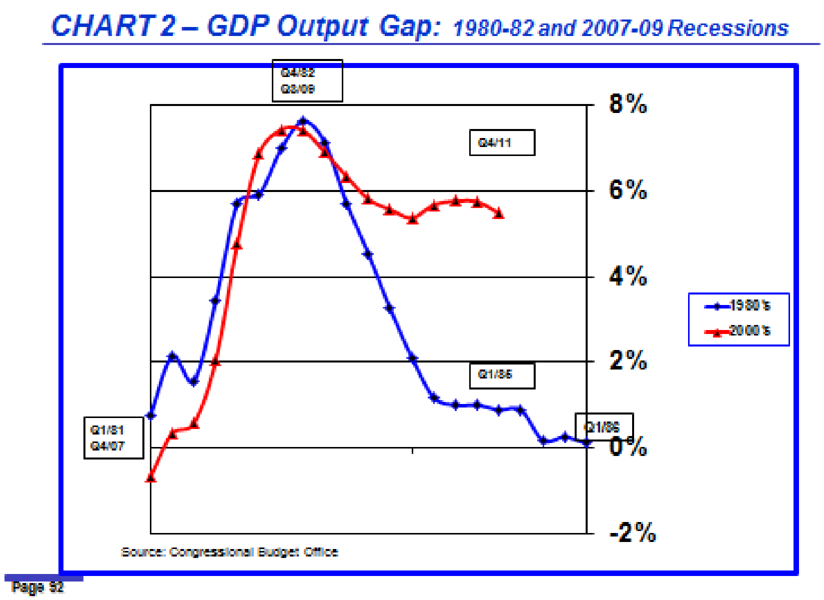
Both GS and B of A have upgraded their forecasts for the first half of 2012 modestly. The upward revisions reflect the stronger recent data flow. Nonetheless, both forecasts remain on the pessimistic end of the spectrum and are below the Federal Reserve's low forecast for 2012 and well below the Fed's low forecast for 2013. CBO's forecast is more optimistic than the Fed's high forecast in 2012 and falls between the Fed's high and low estimates in 2013 and 2014.

GDP growth averages 2.2% for the next eight quarters in GS's forecast and 1.7% over the next eight quarters in B of A's forecast compared to the FOMC's median of approximately 2.7% and CBO's 3.1%.

My "Slow Growth" scenario projects GDP growth in 2012 and 2013 similar to the GS forecast and stronger than the B of A forecast, particularly in 2013. Average GDP growth over the next eight quarters for the "Slow Growth" forecast is 2.1%.

4. GDP Output Gap

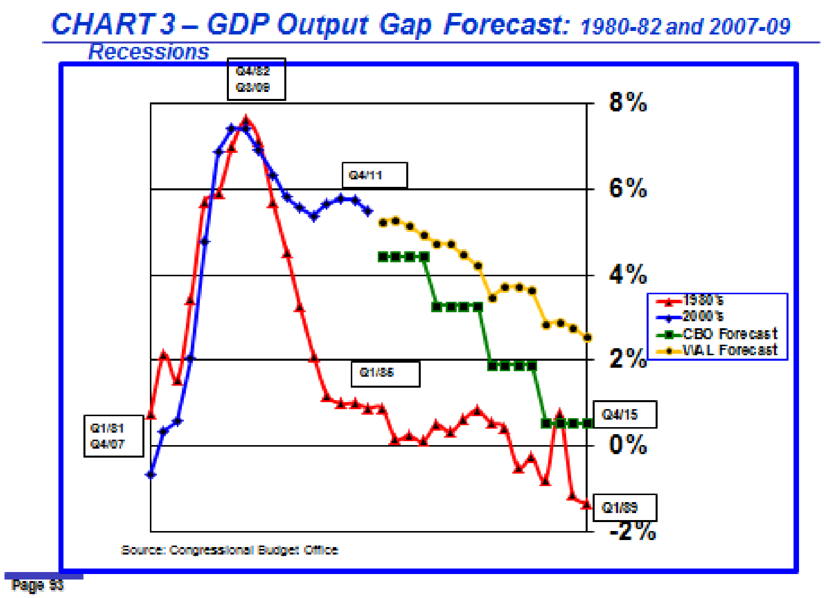
Chart 2 compares the size and trend of the GDP output gap, as calculated



by CBO, before, during and after the Great Recession to the output gap encompassing the severe recession in the early 1980s.

It is apparent that the GDP gap has not closed as rapidly following the Great Recession as it did in the early 1980s. Indeed, there was no improvement in the gap during 2011. It actually rose slightly from 5.37% to 5.47%.

Chart 3 shows CBO's forecast for the GDP gap, which is simply the difference between CBO's real GDP forecast and its estimate of potential GDP divided by potential GDP. The gap does not fully close until the end of 2015. This estimate is consistent with the FOMC's monetary policy to



maintain interest rates at exceptionally low levels until late 2014.

However, if the B of A, GS and my GDP growth projections, which are lower than CBO's, turn out to be more accurate, the GDP gap will close more slowly as shown in the "WAL Forecast" in **Chart 3**.

It is also possible that CBO's forecasts of both potential and actual GDP are too high. If that turns out to be the case, then my projection of the GDP gap would close more quickly, assuming, of course, that my forecast of GDP growth turns out to be closer to the mark. We will know the answer with the passage of time. What is important, however, is that the GDP output gap is likely to remain large for the next three years and will diminish gradually. This will maintain downward pressure on inflation and limit employment growth.

5. Potential GDP Growth

Potential GDP growth is determined by growth in the labor force and labor productivity.

Table 2 and **Chart 4** show CBO's estimates of potential GDP growth,

Table 2
Potential GDP Growth
(annual growth rates)

Time Period	Potential GDP	Potential Labor Force Growth	Potential Labor Productivity	Hours Worked
1950-1973	3.90%	1.56%	2.30%	1.35%
1974-1981	3.21%	2.50%	0.70%	2.25%
1982-1990	3.08%	1.61%	1.45%	1.64%
1991-2001	3.16%	1.23%	1.90%	1.18%
2002-2011	2.26%	0.85%	1.40%	0.46%
2012-2017	2.21%	0.66%	1.54%	0.60%
2018-2022	2.51%	0.66%	1.84%	0.72%

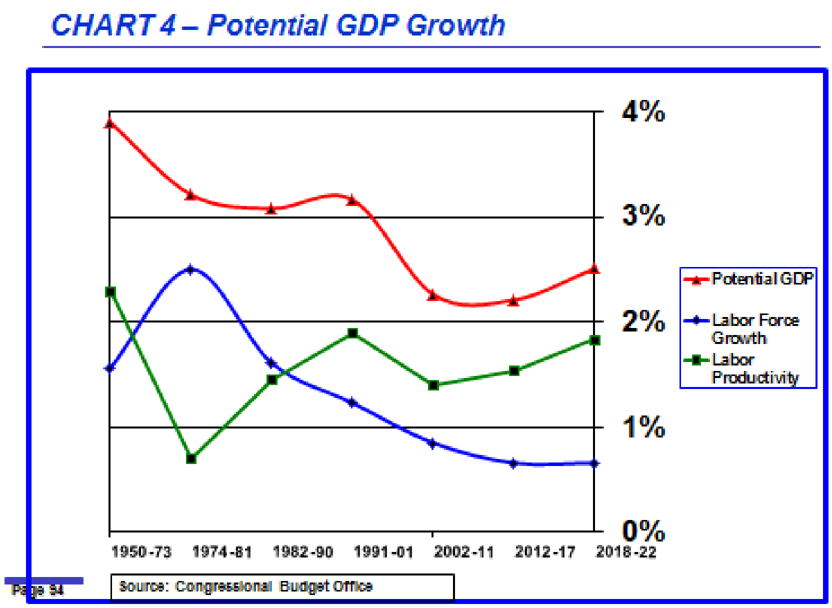
Source: Congressional Budget Office

potential labor force growth and potential labor productivity for the last 60 years and projections for the next 10 years.

It is immediately apparent that potential labor force growth is the more important variable. Also, there is a slight negative correlation between labor force growth and labor productivity. That relationship is most apparent during the period 1974-1981 when baby boom demographics led to the entry of large numbers of less productive younger workers.

However, labor productivity matters, too, and has varied considerably over time. CBO expects labor productivity to rise from recent levels and this would add 15 to 45 basis points to potential GDP growth over the next ten years, offsetting much of the slowdown in potential labor force growth.

It is important to understand that projections of potential labor



force growth are less subject to error than projections of potential labor productivity.

6. Potential Labor Force Growth

Population. Estimates of potential labor force growth begin with population and net immigration projections. These projections are reduced to the number eligible to work. The Bureau of Labor Statistics (BLS) refers to this number as the "Population". In December 2011 this number was 242,269,000 compared to the total population of 313,109,000.

Population growth is projected to slow over the next few years due to lower fertility rates.

Labor Force. The estimate of the "Population" is further adjusted for changing demographics and cultural changes, such as women entering the labor force in large numbers several years ago, and, more recently, younger people delaying entry into the labor force and older people delaying retirement. The adjusted number is called the "Labor Force". This number was 154,871,000 in December 2011.

BLS reports the size of the labor force monthly based upon a survey of 60,000 households. The reported number and the potential number are not the same but track each other relatively closely over time. Over the business cycle some workers voluntarily enter or exit the labor force. Since the Great Recession, the measured labor force has been depressed relative to potential by discouraged workers who have chosen to withdraw from the labor force.

Labor force growth is projected to slow more rapidly than population growth in coming years due to a declining labor participation rate.

Participation Rate. The relationship between the number of people eligible to work ("Population") and the number in the labor force ("Labor Force") is the employment participation rate. The participation rate fluctuates over long periods of time based on demographics, cultural trends and the discouraged worker effect.

Labor force participation will decline gradually as the overall labor force ages.

Household Employment. This is the number of people in the labor force who have jobs. This number is measured monthly by the BLS in its survey of household employment.

Unemployment. The number of unemployed workers is the difference between the measured labor force and the number who have a job.

Hours Worked. There is one more adjustment and that is the average length of the workweek. If the length of the workweek remains constant over time, this adjustment is unnecessary. Generally speaking the average length of the workweek has declined gradually over the last 62 years. However, as the last column in **Table 2** above indicates, COB is not projecting a big difference in the growth rates in the number of people in the potential labor force and the number of total hours worked over the next 10 years.

CBO's Projection of Potential Labor Force Growth. CBO estimates that the potential labor force will grow 0.660% annually over the next ten years and that potential hours worked will grow a slightly smaller

0.655%.

CBO's projections of the potential labor force and potential hours worked appear reasonable. Errors in CBO's estimate probably will not be large. If there is a bias it probably will be that the estimates are high. That would be the case if the immigration rate drops more than assumed and if labor force participation drops more than projected.

7. Potential Labor Force Productivity

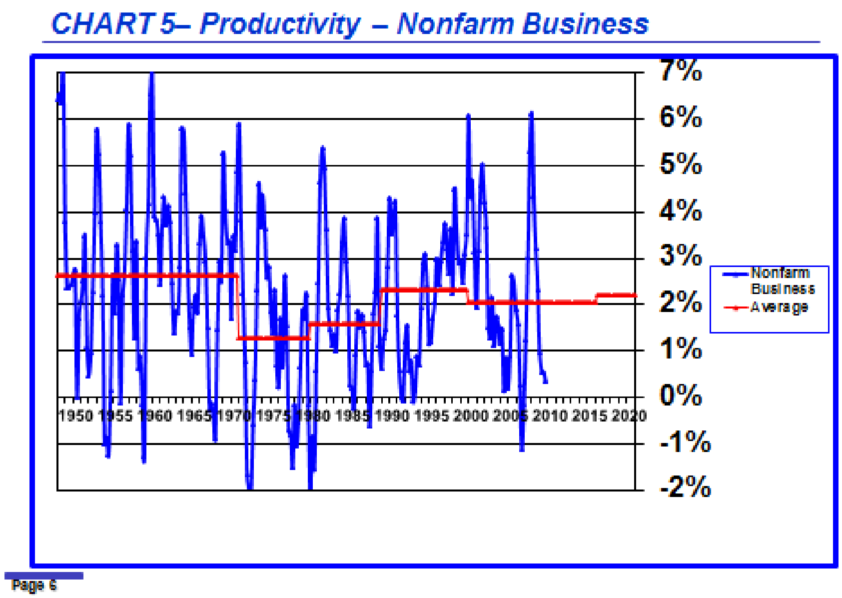
Labor productivity estimates are much more subjective and thus are likely to be much more susceptible to significant error. In **Table 2** above, CBO's estimate of potential labor productivity is simply the ratio of potential GDP growth to potential labor force growth. This means that CBO does not directly estimate labor productivity but derives it from a prior estimate of the potential GDP growth rate. CBO first estimates the potential growth rate for nonfarm business GDP and then adjusts that figure to the total economy. There are three components of nonfarm business GDP growth rate.

Potential Hours Worked. This is the same measure as described above except that hours worked are for the nonfarm business sector only. Thus, while potential hours worked are expected to grow 0.46% annually over the next 10 years in the nonfarm business sector, they are expected to grow 0.66% annually for the entire economy.

Capital Input. This is the component of labor productivity stemming from using capital investments to derive greater output per unit of labor input. This component is assumed to equal 1.07% annually and is marginally lower than the 1.16% annual average over the last 62 years.

Total-Factor Productivity. This measure includes all other influences on labor productivity such as advances in worker education and improved work methods. This measure is assumed to average 1.25% over the next 10 years.

Potential Labor Force Productivity. The sum of the capital input and total-factor productivity averages 2.32% over the next 10 years. Potential productivity for the nonfarm business sector can be derived alternatively by calculating the ratio of potential GDP to potential hours worked for the nonfarm business section. This number is 2.12% (see **Chart 5**), which is



20 basis points less. This difference is consistent with the last 62 years of actual experience over which the sum of the capital input and total-factor productivity averaged 2.56% but nonfarm business productivity averaged 2.15%.

Will Labor Productivity Match Historical Experience Over the Next 10 Years? CBO's analysis results in average nonfarm business sector productivity over the next 10 years equal to 2.12% annually compared to 2.15% over the last 62 years and total economy-wide labor productivity of 1.68% over the next 10 years compared to 1.75% over the last 62 years. Essentially, CBO's analysis results in the future mirroring the past closely so that the only significant factor driving a decline in potential GDP growth is slower potential labor force growth.

It is very difficult to forecast productivity trends because so many factors, such as the rate of technological innovation and changes in regulatory constraints, impact productivity and it is difficult to forecast trends in such factors. We do know that productivity oscillates over the business cycle. Productivity tends to fall as the business cycle matures because employers are forced to employ more marginal workers. When economic activity slows, productivity drops further because employers initially are reluctant to lay off workers. However, as a recession unfolds, employers increasingly ruthlessly cut costs and productivity surges. The ebb and flow in the growth rate in total hours worked explains about 51% of the quarterly variation in nonfarm business productivity with a 6.5-quarter average lag over the period 1985 to 2011.

When the economy underperforms for a lengthy period of time, it is possible that the existence of above normal amounts of excess capacity could depress investment in new labor-saving capital equipment and dampen pressures to reallocate labor to jobs which use their skills more effectively. This point was made by B of A in its March 13th Morning Market Tidbits, as it reflected on the BLS's Job Openings and Labor Turnover Survey (JOLTS): *"There really is no "creative destruction" in the labor market. In a healthy labor market we want to see job reallocation; that is, job gains and losses both rising. Rising reallocation would mean that the economy was simultaneously creating (presumably more productive) jobs and destroying (less productive) jobs. Today, we have an extremely low level of hires and an even lower level of separations, hence the positive payroll numbers."*[4]

Edward Lazear of Stanford University and James Spletzer from the Bureau of Labor Statistics estimate that the efficiency cost of the decline in job reallocation has reduced GDP growth by about 0.4% annually since the onset of the Great Recession.[5]

When the size of the CBO's GDP gap is included in a regression, its coefficient is statistically significant and indicates that nonfarm business productivity is depressed by 23 basis points for each 100 basis points of the gap between actual and potential GDP. The 2011 GDP gap of 5.47% depressed nonfarm business productivity by 1.27%.

While far from definitive, there is some reason to expect that potential GDP growth will fall short rather than exceed CBO's projections because productivity could be weaker than CBO assumes.

[4] "Morning Market Tidbits" Economic Analysis, Bank of America Merrill Lynch, p. 5.
[5] "Free Exchange: Go for the Churn" The Economist, February 11, 2012, p. 77.

8. Implications of a Lower Potential Rate of GDP Growth

Because lower productivity would be the most likely cause of a lower potential GDP growth rate, the trend in the size of the GDP output gap would not be much affected over time. Of course, potential GDP growth would be lower, but actual growth would also be lower. Both impacts would tend to be offsetting. This also means that the trend in inflation and interest rates would not be much affected in the long run.

If that is so, a natural question to ask is why my GDP gap, shown in **Chart 3**, closes more slowly than CBO's GDP gap. The answer is straightforward. CBO expects actual GDP to rise more quickly — see **Chart 1**. The difference in the two forecasts depends on how rapidly actual (not potential) employment rises. CBO is more optimistic, while GS, B of A and I are less optimistic.

However, lower potential productivity growth would negatively impact the standard of living. Real personal income would rise at a slower rate.

III. Personal Income and Outlays

In last month's letter I discussed the disappointing growth in personal income, particularly in the second half of 2011. I was reminded of the poor quality of initial data reports when the Bureau of Economic Analysis found a lot more personal income when it reported revised data in early March. Persona¡l income was revised upwards by a hefty $96.6 billion for 2011. All of the adjustment and then some — a total of $113.9 billion — occurred in "Compensation". The unrevised data are shown in **Table 3A** and the revised data are shown in **Table 3B**. The revised data don't change last month's analysis — it just isn't quite as bad as it originally seemed.

GDP growth is driven primarily by growth in consumer expenditures which in turn rely on growth in personal income. Since the end of the Great Recession growth in personal income has been depressed by slow recovery in employment and hours worked and depressed by slow nominal wage growth. Initially personal income was boosted by increases in government transfer payments and decreases in taxes. However, during 2011 transfer payments

Table 3A
Change in 2011 Personal Income and Its Disposition
(in billions of dollars)

	Nominal	Pct. Change	Real	Pct. Change
Personal Income	**$484.6**	3.85%	**$142.7**	1.27%
Compensation	276.6	3.44%	62.0	0.86%
Proprietors' Income	34.0	3.14%	5.6	0.58%
Rental Income	73.8	20.80%	56.5	17.79%
Asset Income	45.6	2.62%	0.9	0.06%
Government Transfers	- 9.3	-0.40%	-60.3	-2.88%
Less: *Personal Taxes*	143.7	6.43%	75.6	3.78%
Disposable Income	**277.1**	2.44%	**-10.8**	-0.11%
Less: *Consumption*	**435.9**	4.06%	**141.0**	1.46%
Personal Saving	**-158.8**	-27.00%	**-151.8**	-28.82%

declined and taxes grew at a faster rate than income. These negative developments overwhelmed growth in employment and hours worked and would have depressed consumption had consumers not chosen to reduce saving to support existing consumption levels.

Table 3B shows the components of personal income, taxes, consumption and saving for 2011. These data are shown before inflation adjustment (nominal) and after inflation adjustment (real).

Nominal personal income increased 4.62% in 2011 compared to 5.36% in 2010. But, disposable income, what people have available to spend after paying taxes increased only 3.39% in 2011 compared to 4.86% in 2010. Thus, not only did the growth rate in total personal income decelerate in 2011, the growth rate in disposable personal income slowed even more.

These data reveal two negative trends:

Table 3B
Change in 2011 Personal Income and Its Disposition
(in billions of dollars)

	Nominal	Pct. Change	Real	Pct. Change
Personal Income	**$581.2**	4.62%	**$213.6**	1.90%
Compensation	390.5	4.85%	152.9	2.12%
Proprietors' Income	37.8	3.50%	7.8	0.80%
Rental Income	71.3	20.10%	53.9	16.97%
Asset Income	43.2	2.48%	-3.0	-0.19%
Government Transfers	-11.3	-0.48%	-64.4	-3.07%
Less: *Personal Taxes*	147.2	6.59%	76.3	3.81%
Disposable Income	**384.6**	3.39%	**71.1**	0.70%
Less: *Consumption*	**450.7**	4.19%	**142.5**	1.48%
Personal Saving	**-66.1**	-11.24%	**-71.4**	-13.55%

- Top line income growth slowed in 2011 to 4.62% from 5.36% in 2010 in spite of a pickup in payroll employment growth from 0.8% in 2010 to 1.4% in 2011.
    - The rate of growth in wages and salaries, which account for 64% of total personal income, increased from 3.14% in 2010 to 4.85% in 2011, which is more in line with increasing payroll employment growth.
    - Proprietors income, which accounts for 9% of total personal income, slowed from 14.02% to 3.50%.
    - Asset income, which accounts for 18% of total personal income, slowed from 6.57% to 2.48%, reflecting the lagged effect of lower interest rates.
- Government transfer payments decreased in 2011 and personal taxes rose at a faster rate (6.59%) than the growth in personal income (4.62%).

- ◦ The discrepancy would have been even worse had payroll taxes not been cut in 2011 from 6.2% to 4.2% of qualifying wage and salary income.
- ◦ Rising state and local taxes have offset some of the benefits of reduced federal taxes.

Looking to 2012 and beyond the question is one of whether growth in total and disposable income will accelerate as employment growth picks up. The answer to this question is important for two reasons. First, as is clear in Table 3B, consumption grew slightly faster than total disposable income in 2011. This required consumers to save less. The saving rate was 4.72% in 2011 compared to 5.30% in 2010. Note that the decline in the saving rate in 2011 is similar to the difference between growth in consumption (4.19%) and growth in disposable income (3.39%).

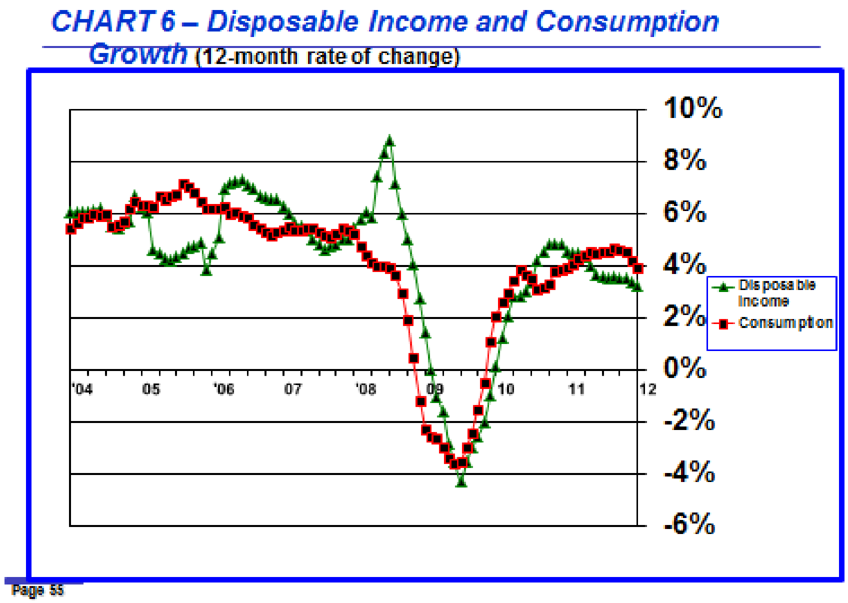
There probably is a little more room for consumers increase spending faster than their incomes are growing, but in the longer run robust consumer spending requires that income growth must pick up.

If disposable income growth does not accelerate and spending growth slows to at least match income growth, the incipient favorable feedback loops that appear to be developing in employment will be dampened. The unemployment rate would remain at the recent high level.

However, if disposable income growth does improve on the heels of improving employment, favorable feedbacks would sustain the virtuous circle of rising employment, rising income, rising spending, rising employment and so on. This virtuous circle would have a much greater effect if consumers do not attempt to restore the saving rate to a higher level.

In summary, weakness in consumer disposable income growth supports a slow and gradual recovery forecast.

Chart 6 shows the nominal rate of growth in disposable income and consumer spending. The rate of growth in disposable income began slowing in late 2010 and has declined from its high 4.9% in December 2010 to 3.2% in January 2012. Growth in consumer spending peaked later at 4.6% in July 2011, but now is declining and reached 3.9% in January 2012. This is not a favorable trend, but perhaps the recent acceleration in payroll employment will result in reversal.



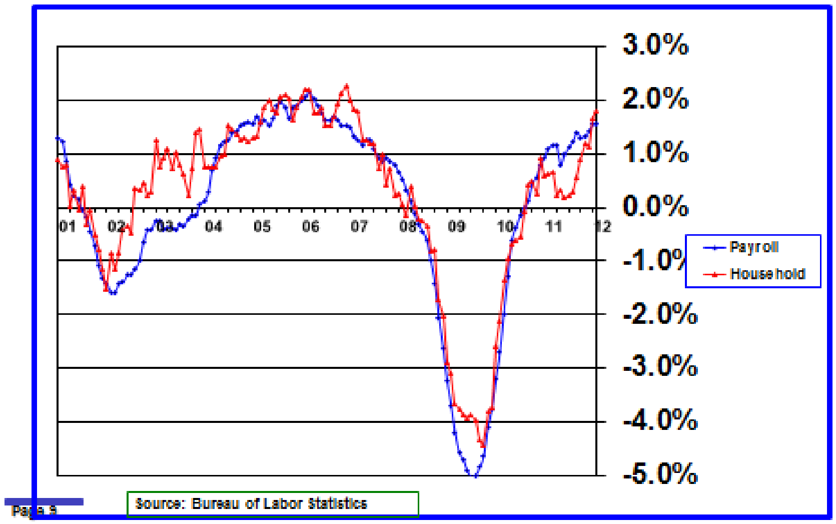
IV. Employment

February's employment report had an abundance of good news. Payroll employment increased 227,000 and numbers for December and January were revised upwards by 61,000. Payroll employment now has risen 2.0 million or 1.5% over the last 12 months. Household employment rose a much greater 428,000 and has grown 2.5 million or 1.8% over the last 12 months.

1. Employment Growth

Chart 7 shows that household employment after lagging behind payroll employment during much of 2011 has more than caught up. Household employment survey data are never revised, but payroll employment data are revised several times. This fact hints that future revisions of payroll data may show an even more favorable trend. Adjustment to payroll data for the creation of new businesses always lags the business cycle. If past experience is a reliable guide, payroll data will probably be revised upwards

CHART 7 – Employment Growth (annual rate of change)



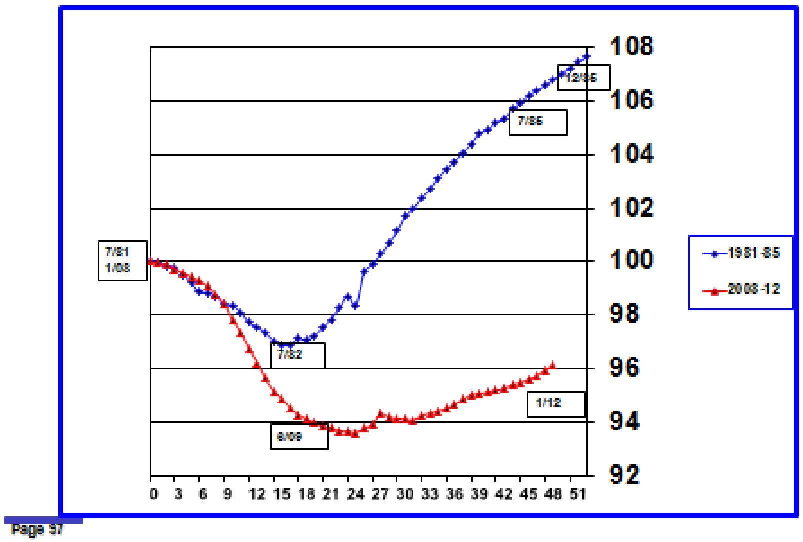
next January.

Although employment trends are favorable and prospects look encouraging, there is still much ground to be made up as **Chart 8** indicates. Payroll employment in February 2012 was 5.3 million less than peak employment of 138.0 million in January 2008. Indeed, when the level of employment is scaled to the starting month of the recession, **Chart 8** clearly shows how feeble the employment recovery has been. So before getting too excited about monthly employment gains averaging 200,000 over the last six months do the numbers. It would take another 26 months of similar gains simply to get back to 138.0 million. That would mean it would take 6 years just to get aggregate employment back to the pre-Great Recession peak.

2. Unemployment Rate

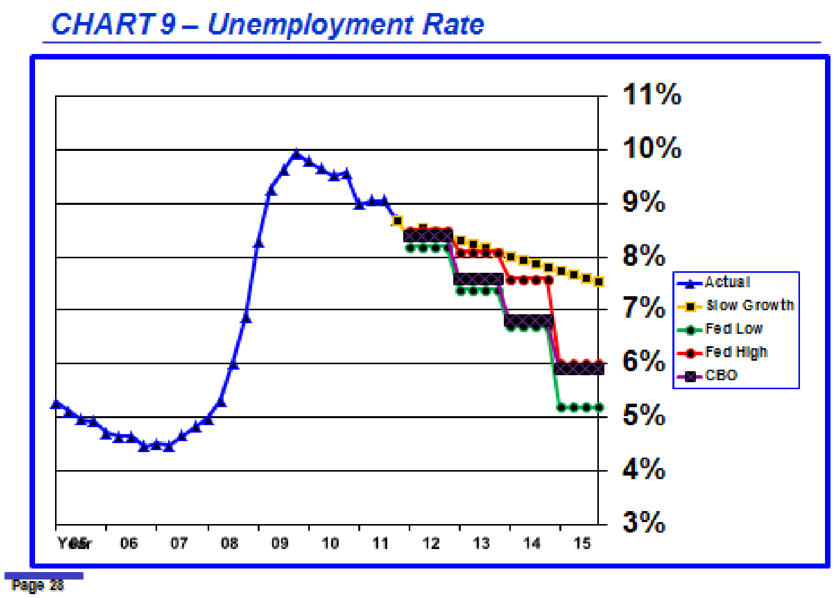
Chart 9 shows projections for the unemployment rate for my "Slow Growth" scenario, the FOMC's high and low projections and CBO. The high and low FOMC unemployment numbers for 2015 are not forecasts; rather they are

CHART 8 – Monthly Employment Growth Following 1981-82 and 2008-09 Recessions (Index = 100: January 2008 and July 1981)



the FOMC's upper and lower bounds for the long-run noninflationary rate of unemployment. While not shown, the GS and B of A unemployment forecasts both remain near the current level of 8.3% through the end of 2013; the unemployment rate in my "Slow Growth" scenario declines to 8.1% by the end of 2013.

CBO's forecast unemployment rate falls between the Fed's upper and lower bounds. CBO has begun publishing two different full-employment potential unemployment rates — a short-term rate which incorporates temporary factors and a long-term rate which incorporates CBO's assumptions about structural changes in the labor force that affect the long-term nonaccelerating inflation rate of unemployment (NAIRU). CBO estimates that the full employment potential short-run unemployment rate currently is 5.98%, which, given the 8.27% reported unemployment rate in February, means that labor market slack equaled 2.29% or about 3.5 million people. The long-term full-employment potential unemployment rate in February was 5.5% which means that employment slack in the long run equals 4.3 million people. The difference of 800,000 presumably consists of people who are temporarily structurally unemployed but will be able over time to become



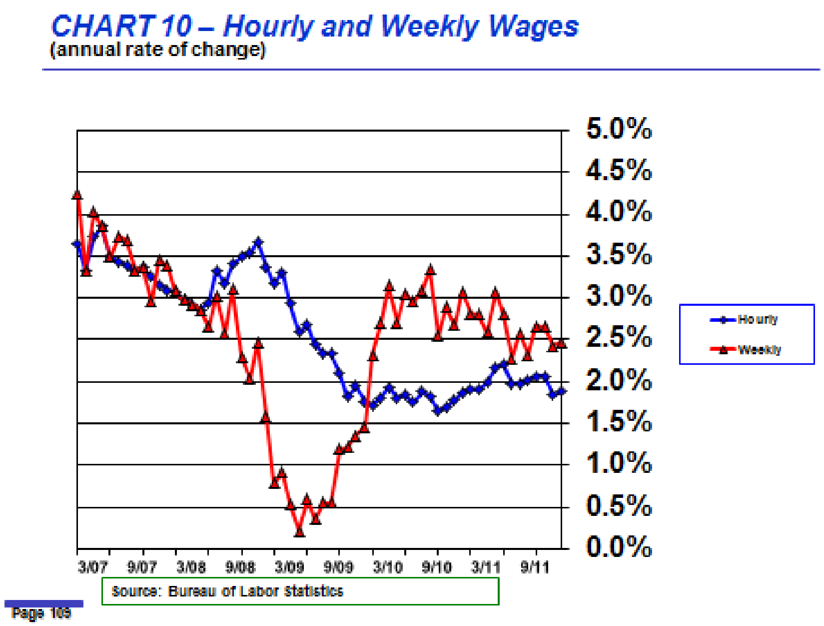
employable.

Notice in **Chart 9** that the FOMC's long-run noninflationary unemployment rate ranges between 5.2% and 6.0%. This range is similar to CBO's short-term and long-term potential full employment unemployment rates. Many believe that structural unemployment has risen and that the long-run full employment unemployment rate has risen to approximately 6.0%, which is the FOMC's upper bound and is CBO's short-term rate. Structural unemployment occurs when workers who would like to work and thus are counted in the labor force are unable to find jobs because their skills do not match available jobs. Structural unemployment tends to rise during and following recessions and also tends to worsen the longer workers are unemployed. Persistent unemployment has been much worse following the Great Recession than after other recessions over the last 60 years.

3. Growth in Wages

Weak growth in wages is the only meaningful negative piece of news in the last several BLS employment reports.

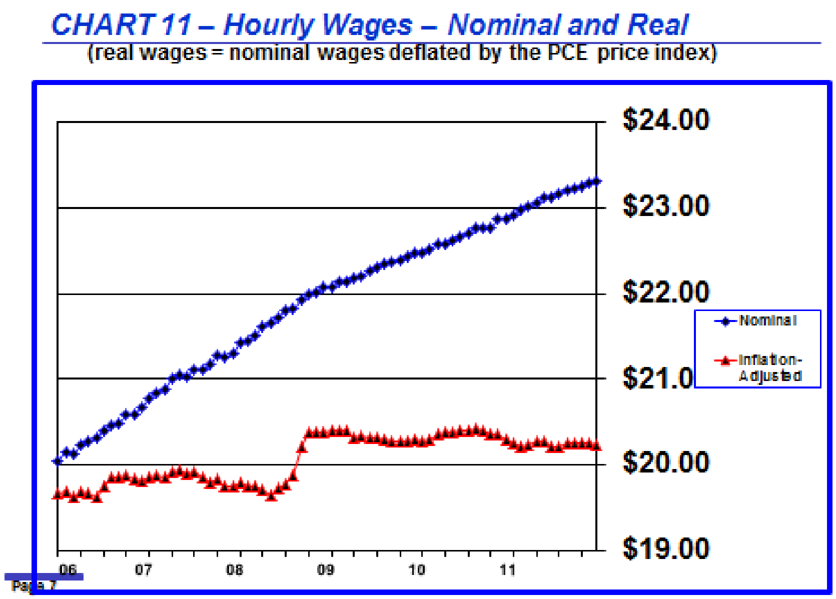
Weak employment translates into slow disposable income growth. This trend is exacerbated by limited improvement in wage rates. **Chart 10** shows that from 2007 to the end of 2009 the annual rate of growth in hourly



wages decelerated from about 3.5% to less than 2.0% and has remained near 2.0% ever since. The 12-month rate of hourly wage growth was 1.88% in February. The good news is that the rate of growth has stabilized. As long as the unemployment rate remains unusually high, labor will have very little bargaining power and this is likely to limit increases in hourly wages.

Weekly wage growth is more volatile than hourly wage growth because it incorporates the length of the workweek. When the length of the workweek is stable, the two measures will track each other closely. Divergences occur during and following recessions. During recessions employers tend to cut the length of the workweek before shedding workers. The opposite happens in recoveries — employers increase hours before adding workers. The recent convergence of the two measures means that there is little further room for expansion of the workweek. This is one of the reasons that hiring has picked up over the last several months.

Chart 11 shows growth in nominal and inflation-adjusted hourly wages.



Real hourly wages have remained unchanged since late 2008. A lengthening workweek has increased overall purchasing power but this boost is pretty much at an end as the workweek is no longer lengthening appreciably.

V. Oil Prices

1. WTI — West Texas Intermediate

Since bottoming last September and October at about \$86 per barrel U.S. oil prices (WTI — West Texas Intermediate) have risen about 24% to \$107 per barrel in March. Perhaps not coincidentally this is the same time period during which U.S. employment and other economic data have shown a stronger tone. This year's increase in oil prices, while large, is about half as much as the 45% increase which occurred a year ago in the seven-month span between September 2010 and April 2011. By implication this year's rise in oil prices should have a less negative impact on inflation and consumer spending in coming months.

Because it takes a while for crude oil price increases to pass through into gasoline prices, the full negative impact on consumer spending will not be felt until the second quarter. While estimates vary, real GDP growth decreases about 20 basis points within one year of a 10% price increase. This would mean that U.S. GDP might be depressed by as much as 0.5% in the next year unless the recent price rise reverses. This is consistent with GS estimates that recent oil price increases will have a negative 25 to 50 basis points impact on GDP.

2. Supply-Demand Dynamics

Global demand for oil is growing more rapidly than supply. Global oil production capacity is growing about 1% annually. Even with improvements in energy efficiency and expansion in the availability of alternative fuels, demand for oil is growing more rapidly. What this means is that upward pressure on the price of oil will continue until its price rises high enough to balance supply and demand.

For many years, Saudi Arabia has increased and decreased its oil production as a way of moderating fluctuations in prices due to short-run changes in supply and demand. However, Saudi Arabia has little cushion left to increase production further.

Unfortunately, the discovery of extremely large untapped supplies of natural gas in the U.S. and the plunge in natural gas prices won't have much impact on oil prices. In the short run there is very little capability to substitute natural gas for oil. U.S. consumers and businesses consume approximately nine times as much oil as natural gas. It will take time to convert infrastructure from oil to natural gas consumption capability. Also, environmental issues, such as contamination of ground water and release of methane — a more virulent climate warming pollutant than carbon dioxide — into the atmosphere, will slow exploitation of cheaper natural gas.

In addition, even though U.S. oil production has increased, largely due to extraction of shale oil, and demand has declined, the U.S. still imports nearly half of its oil requirements. This means that the U.S. remains sensitive to fluctuations in the global price of oil and to geopolitical developments that impact oil supplies.

3. Iran

Iran is the world's fourth largest oil producer following Russia, Saudi Arabia and the U.S. There has been much saber rattling recently about Iran's nuclear program and its potential to manufacture nuclear weapons. Iran's foreign policy is openly hostile to the continued existence of Israel. Thus, the prospect that Iran might produce nuclear bombs at some point in the future is totally intolerable to Israel.

Many believe that Israel will take unilateral military action to bomb Iranian uranium enrichment facilities. This could lead to attempted retaliation by Iran which has threatened to blockade the Strait of Hormuz through which 17.3 million barrels of oil per day pass. Any attempt to blockade the Strait of Hormuz would quickly fail because of the overwhelming dominance of U.S. naval power. But even temporary disruptions and lingering after effects involving reduced Iranian exports would adversely affect the price of oil.

Israeli military intervention could be relatively ineffective. At best it might slow the Iranian nuclear program for a few months. At worst it might do little critical damage. That result might occur because of precautions Iran has taken to protect its nuclear facilities from military attack and Israel's limited military capability. However, the U.S. probably does have sufficient military capability, but U.S. military intervention does not appear to be a current operative policy option.

President Obama, in a recent interview with *The Atlantic*, stated that: *"If Iran gets a nuclear weapon, this would run completely contrary to my policies of nonproliferation. . . . The dangers of an Iran getting nuclear weapons that then leads to a free-for-all in the Middle East is something that I think would be very dangerous for the world."* Thus, the Iran nuclear program is not just about Israel's security, it is also about U.S. and global security. And to emphasize this point, President Obama said: *"I think that the Israeli* *government recognizes that, as president of the United States, I don't bluff."*

Current U.S. Iranian policy is focused on diplomacy rather than military action. This involves the imposition of economic sanctions on Iran, including prohibiting import of Iranian oil. Because China and Russia have chosen not to participate in sanctions, their impact will be limited. However, Iranian oil exports have declined. The impact of this decline has contributed to rising oil prices. And, the uncertainty about possible military action and Iranian retaliation has added a risk premium to the price of oil.

It is difficult to discern how the Iranian nuclear issue will unfold. It seems unlikely that Iran will back down and dismantle its nuclear weapons program. Thus, uncertainty is likely to persist and the possibility of Israeli military intervention remains a significant risk.

4. Consumer Spending

Gas prices have risen more than 30 cents a gallon since the beginning of the year and are projected to rise another 25 cents to about $3.80 per gallon. Consumer confidence has been rising recently due to improvements in employment. Consumer confidence historically has been very sensitive to fluctuations in gas prices. It would take further increases in the price of oil from current levels to drive gas prices to $4.00 per gallon, which might be a threshold level that depresses consumer confidence. While the risk of $4.00 per gallon gas prices is high, it is not yet a preordained outcome. Oil supply constraints are being offset by slowing global growth and the developing European recession. U.S. WTI oil prices will need to move up from the recent $107 per barrel level to about $115 per barrel to raise gas prices above $4.00 per gallon.

VI. Monetary Policy

1. The Federal Reserve Is Currently in a Monitoring Mode

There is little further the Federal Reserve can do to stimulate the economy at this time. Its program to extend maturities of Treasury securities it holds is underway and will not be completed until June 2012. This action, called "Operation Twist" by some, is intended to flatten the yield curve by driving down longer term rates.

Minutes of the January FOMC meeting made it clear that a third round of large scale asset purchases, which the market would quickly dub "QE3", is under consideration. Whether the FOMC decides to implement such a program depends upon economic developments. Recent stronger data reports, if continued, argue against implementation of QE3.

However, the FOMC, while acknowledging recent stronger data at its March meeting, was quick to reaffirm its very accommodative monetary policy. This implies that it wouldn't take much weakening in economic activity over the next two months to prompt announcement at either the April or June FOMC meetings of QE3. Most analysts believe the FOMC has signaled a low threshold for implementation of additional large scale asset purchases.

Given the very low level of interest rates that has prevailed over the last several months, it is hard to perceive how effective QE3 would be and there is the potential for the liquidity effect to stimulate financial asset speculation rather than economic activity.

However, I expect that the Fed is not happy with the run up in long-term rates that immediately followed the March FOMC meeting. Bond market action suggests that it is buying into the view that the recent apparent acceleration in economic growth will be self-sustaining and that the odds of QE3 have greatly diminished. This emerging view may turn out to be premature just as previous bond market sell offs in the aftermath of the Great Recession were.

My sense of the FOMC is that collectively it is still deeply worried about the sustainability of the recent improving economic outlook and continues to be concerned about the fragility of the recovery to shocks.

The window for implementing QE3 appears to be tight. Given the political fall-out when QE2 was implemented in December 2010, it seems more likely than not that the Fed will not want to implement potentially controversial monetary policy initiatives during the presidential and congressional election period. That means for all intents and purposes that if there is to be another round of quantitative easing, it will need to be announced at the

April of June FOMC meeting. At the moment June seems the more likely meeting date because a softening of the economic data flow, if it occurs at all and which probably is necessary for QE3, is more likely to require more than another month or two of data. Softening data reports over the March to May time frame would probably assure announcement of QE3 at the FOMC meeting scheduled for the latter part of June.

2. FOMC's Options for Implementing a New Quantitative Easing Program

There are three options:

- Extend Operation Twist
- New large scale asset purchases
- New large scale asset purchases offset by reverse securities repurchase agreements or term deposits (sterilization)

Extend Operation Twist. The intent of Operation Twist (officially called the "Maturity Extension Program" by the Fed) was to drive down long-term interest rates by replacing short-term Treasuries on the Fed's balance sheet with long-term Treasuries. This would also have the benefit of avoiding injecting additional liquidity into the financial system.

It is the injection of additional liquidity that has caused political repercussions for the Fed because of concerns that increased liquidity is a driver of financial asset speculation and may eventually lead to inflationary consequences.

Operation Twist has been successful in driving down long-term Treasury rates. Ten-year Treasury rates fell from 3.0% in July 2011 to 2.0% in September following the announcement of Operation Twist and have remained at 2.0% since then, although they popped up to 2.29% following the March FOMC meeting. Various "fair value" models suggest that in the absence of Operation Twist the 10-year Treasury yield would be about 2.7%.

Extending Operation Twist is probably not a viable option for two reasons. First, by the conclusion of the current program in June, the Fed will have few short-term Treasury securities on its balance sheet, about $360 billion with maturities prior to June 2015. Second, the Fed is already buying a large portion of net new long-term Treasury securities. Of course, the end of Operation Twist will increase the supply of long-term Treasury securities to private investors and this could lead to a rise in yields. The Fed could prevent this through a temporary extension of Operation Twist, but the size would be limited by the small amount of remaining short-term Treasury securities. Alternatively, more could be done through additional large scale asset purchases, which is one reason why the second or third options are more likely than an extension of Operation Twist, although some combination is also possible.

New Large Scale Asset Purchases. This option would most likely amount to $500 to $600 billion or about $50 to $75 billion in monthly purchases over a six to nine month period. Because the Fed has been purchasing about $40 billion in long-term Treasuries per month under Operation Twist, if the Fed maintains a long-term maturity preference for purchases, some purchases would have to be agency mortgage backed securities. Such a mix would have the advantage of keeping mortgage rates low.

From a policy standpoint, the principal problem with this option is that it will rekindle the same kind of intense criticism that following announcement of QE2.

Sterilized Large Scale Asset Purchases. This option has been under active debate at the Fed for quite some time. When the Fed purchases securities it creates reserves of an identical amount. This injects liquidity into the financial system. It is the "printing money" aspect that frightens many.

Sterilization involves converting these reserves through reverse repurchase agreements to short-term liabilities. In effect, the Fed lends the securities it has just purchased to private market investors but agrees to repurchase the securities at a date certain. Thus, the two sets of transactions offset each other and no net new liquidity is injected into the financial system. The size of the Fed's balance sheet increases but the liability offset is an increase in reverse repurchase agreements rather than reserves. Alternatively, the Fed could sterilize by issuing term deposits.

Sterilization removes the liquidity effect which means that the effects that QE1 and QE2 had on financial speculation and stock prices presumably would be eliminated. However, there can still be a yield curve flattening effect. That is because the Fed buys long-term securities, thus reducing the supply available to private investors, and issues short-term securities in the form of repurchase agreements. The overall effect should be similar to Operation Twist.

However, there is some question as to the capacity of the private market to absorb a substantial increase in short-term repurchase agreements. This could lead to higher short-term interest rates and a tightening of financial conditions, an outcome which would defeat in part the objective of QE3 in easing monetary policy. This might be mitigated by substituting term deposits for repurchase agreements.

There is also question about how a sterilized large scale asset purchase program might affect inflation expectations. Unsterilized purchases would tend to raise inflation expectations while sterilized purchases probably would not. So, the use of sterilization may also depend to some extent on what kind of signal the Fed wishes to send about future inflation.

VII. More Difficult Days Ahead for the European Union

With the completion of an orderly default of Greek sovereign debt and the extension of unlimited amounts of 3-year credit to European banks, the European Union has backed away from a financial calamity that appeared to be just around the corner a few months ago.

But, underlying fundamental problems have not been resolved. Consequences of these problems for financial markets have been deferred for now, but because they have not been resolved, new crises will eventually erupt. A thorough understanding of the underlying problems leads to the conclusion that the European Union will not survive as currently configured.

There are four sets of problems:

1. Sovereign debt

2. Financial and economic system weaknesses
3. Balance of payments among member nations
4. Country relationships — sovereignty, cultural and language differences and governance paradigms

Sovereign debt and banks have been the focal point for the last two years. Temporary solutions have been crafted for both. However, in the longer term balance of payments — think trade — and country relationship present much more fundamental obstacles to the continued survival of the European Union in its present form.

1. Sovereign Debt

While all eyes have been on Greece, financing of sovereign debt in Portugal, Ireland, Spain and Italy still could escalate into significant problems.

Greece. Orderly default has been accomplished successfully. Greek debt has been restructured, private investors "accepted" new long-term securities with low interest rates in place of existing debt with a present value discount exceeding 70% of face value. An event of default was formally acknowledged which means that holders of Greek credit default swaps will be paid according to the terms of these obligations. The European Union agreed to provide €130 billion, primarily through the European Financial Stability Facility (EFSF) but with an undetermined amount of participation from the International Monetary Fund (IMF). These funds will be used to make payments to creditors.

Greece — Terms of the Bailout.

- Disbursement of €130 billion, conditionally, in tranches
  - ✓ Conditionality means that Greece must perform on commitments before funds are released
- Fiscal consolidation
  - ✓ Debt to GDP ratio targeted not to exceed 120.5% by 2020

  - ✓ Annual government budget must have a primary surplus in 2013
  - ✓ Structural economic reforms must be enacted and implemented to improve competitiveness
  - ✓ Reduce government spending
    - Cut €1 billion in pharmaceutical expenditures in 2012
    - Cut overtime pay for doctors — €50 million
    - Cut military procurements — €300 million
    - Cut deputy mayors and staffs — €30 million
    - 22% cut in the private sector minimum wage rate
    - And there is much more including putting teeth into Greece's tax collection system

- Permanent team of inspectors will be installed in Greece to monitor performance
- Bailout funds are to be placed in an escrow account — disbursements are prioritized to fund bondholder interest and principal payments
- Modification of Greece's legal framework
  - ✓ Amend constitution to establish priority of debt service payments
- Private sector involvement (PSI)
  - ✓ 53.5% haircut in value of new bonds swapped for old bonds
  - ✓ Interest rates on new bonds ranging from 2.0% to 4.2%, depending upon maturity
  - ✓ Total present value of haircut and reduced interest rates exceeds 70%
- European Central Bank (ECB) and National Central Banks (NCB)
  - ✓ Debt held by ECB and NCB not subject to haircut
  - ✓ ECB profits from Greek sovereign debt distributed to Eurozone governments
  - ✓ NCB profits from Greek sovereign debt distributed to Greek government
- EFSF to issue bonds
  - ✓ Bond proceeds used to buy ECB Greek sovereign debt

  - ✓ Remaining proceeds fund Eurozone share of bailout
  - ✓ Provide temporary credit guarantee to Greek banks for access to ECB funding
  - ✓ Bond proceeds used to recapitalize Greek banks

- Eurozone governments
  - ✓ Retroactively lower interest rates from Euribor + 200 to 300 basis points to Euribor + 150 basis points on their contributions to the EFSF that are used to fund the Greek bailout
  - ✓ ECB profits on Greek debt distributed to Eurozone governments are expected to offset the cost of a lower interest rate on EFSF contributions

- IMF
  - ✓ No commitment to support the bailout but could be €13 billion or more, depending upon funding of the European Stability Mechanism (ESM)

This is more detail than you are probability interested in, but I included it to make the following points. First, Greece effectively has relinquished fiscal sovereignty to a team of inspectors. The constitutional amendment is an unprecedented intrusion into Greek sovereignty. Second, the essence of the bailout is making sure that creditors are protected and are first in line. In this sense, the agreement is not a bailout of Greece; it is a bailout of creditors. By the time the agreement was struck a great deal of Greek debt was held by governments and European central banks. Third, no real attempt was made to help the Greek economy recover. All bailout funds are controlled through an escrow account and will go to pay creditors.

There is no hope that Greece will be able to meet the fiscal requirements of a primary budget surplus in 2013 and a debt to GDP ratio less than 120.5% in 2020.

Greece — Economic Performance. The Greek economy is in free fall. GDP fell 6.8% in 2011 compared to an IMF forecast decline of 2.6% when the first bailout was put in place in Spring 2010. Most of 2011's GDP decline occurred in the fourth quarter.

Since the onset of the crisis Greek GDP has fallen 14%, industrial production has declined 25%, the money supply has plummeted 30% as depositors moved their euros to non-Greek banks, and unemployment has risen above 21%. Austerity requirements in the latest bailout agreement will only serve to accelerate economic collapse. The budget deficit was 10% of GDP in both 2010 and 2011. The 2011 target was 8%. Getting to a primary surplus by 2013, particularly now that interest rates on new Greek debt have been cut, seems nigh on to impossible.

A leaked troika (ECB, IMF and European Union) report indicated that Greece's debt to GDP ratio would likely exceed 160% by 2020 and that another €50 billion in bailout funds would probably be required. If anything, the numbers in this leaked report will probably prove to be optimistic.

Greece — Economic Reasons Bailout Will Fail. The fundamental reason that the bailout will fail is that the Greek economy is simply uncompetitive with other members of the European Union.

Greece's uncompetitiveness has many facets. First, the prices of Greek goods and services need to decline relative to prices in other European Union countries. This could be accomplished in a single stroke if Greece could devalue its currency — but it doesn't have its own currency, so this is not an option.

Second, Greek wages need to decline relative to wages in other countries. It does not matter whether they are already lower, which they are, than wages in other European countries. They just need to decline, thus the requirement that the minimum wage be reduced by 22%. While this is a good textbook solution, it is not a politically viable solution because it requires high levels of unemployment to force wage deflation. Greek unemployment is already 21% and rising. Moreover, deflation would raise the value of debts denominated in the euro and increase the likelihood and cost of bankruptcies. In short, deflation is an ugly, destructive solution.

Third, Greece can boost productivity. That is easier said than done because it means breaking entrenched cultural and institutional behavioral contracts. Moreover, productivity enhancing reforms take a very long time to bear fruit.

No amount of austerity or economic restructuring will cure Greece's uncompetitiveness. Indeed, austerity is worsening the problem. Greece can resolve the competitiveness problem by leaving the euro and devaluing its substitute currency — the new drachma. Of course, this solution will not be without significant consequences and costs for Greece. But, this alternative may eventually come to be seen as less bad than the course Greece is currently on.

Greece — Political Reasons Bailout Will Fail. Greece is rapidly devolving into social chaos. Archbishop Ieronymos of the Greek Orthodox Church warned recently that *"Greeks' unprecedented patience is running out, fear is giving way to rage and the danger of a social explosion cannot be ignored any more, neither by those who give orders nor by those who execute their deadly recipes."*[6] Indeed, severe riots occurred in Athens in late February at the time the Greek parliament was forced to accede to bailout terms. Since then all has been quiet, but it is doubtful this will continue as the economy continues to collapse at a rapid rate. The upcoming elections in April may be a triggering event.

Unemployment surged in November to 20.9% from 18.2% in October. Unemployed Greek workers receive 30 weeks of unemployment insurance. Once these financial safety net programs are exhausted, there is a high likelihood that angst will turn into anger.

While elections have yet to be scheduled they are widely expected to take place in April. Only the leaders of the two major political parties, Pasok and New Democracy, have pledged to implement the mandated austerity program. Polling in mid-February showed only 11% support Pasok (former Prime Minister George Papandreou's party) and 27% support New Democracy. Support for a combination of far let parties was 44% and the extreme-right party, Golden Dawn, polled nearly 3%. Needless to say the situation is very fluid and the increasing sense of desperation could lead to near total annihilation of the two centrist parties — Pasok and New Democracy. If that occurs, all bets are off in terms of Greece's compliance with terms of the bailout.

At best Greece appears headed for significant social and political upheaval as 2012 unfolds. This probably would lead to an attempt to renegotiate the terms of the bailout. At worst, revolution might occur. In any event it is hard to see how Greece can stay in the Eurozone and increasingly its exit probably will occur well before 2020. It is difficult to discern how

[6] Archbishop Ieronymos. Letter to Greek Prime Minister Lucas Papademos.

renewed unrest might impact financial markets. Measures already taken may be sufficient to limit contagion. Nonetheless, markets do not thrive on uncertainty.

Portugal — Next in Line? Market implied default probabilities can be derived from credit default swap prices. The 5-year default probability is approximately 65% for Portugal and the 10-year probability is 75%. The next most troubled European nation is Ireland with a 40% 5-year default probability and a 60% 10-year default probability. Interest rates on Portuguese sovereign debt remain at very high levels. Fortunately, the terms of last year's bailout eliminate the need for Portugal to go to the debt markets until late 2013.

Terms of Portugal's €78 billion bailout require it to cut spending and raise taxes the equivalent of 6% of GDP in 2012. This is plunging Portugal into deep recession which the Portuguese central bank forecasts will reduce GDP by 3% in 2012. Based on what has happened in Greece, this estimate is probably very optimistic. Portugal's debt to GDP ratio is forecast to rise from 107% to 118%, but again this will turn out to be optimistic if GDP falls by more than 3%.

Odds of a more favorable outcome would rise sharply if Portugal's debt were restructured sooner than later when it becomes obvious to all that there is no other choice. That, too, would have been the case for Greece had its debt been restructured in the Spring of 2010 rather than two years later. By waiting two years and by forcing draconian austerity on Greece, not only did debt restructuring become inevitable, the economy was so damaged in the process that the haircut ended up being far larger than would have been necessary if restructuring had occurred earlier. Unfortunately, the same logic applies to Portugal and European policymakers are following the same disastrous pathway.

However, restructuring Portugal' debt will produce a sustainable long-run solution. Like Greece, Portugal suffers from a significant lack of competitiveness and like Greece it cannot solve this problem through the traditional mechanism of currency devaluation. The Bank Credit Analyst estimates that Portugal's currency would need to depreciate by 32% to eliminate its current account deficit. To put this into perspective, comparable figures are 35% for Greece, 21% for Spain, 17% for Italy, and just 6% for Ireland.

Spain. Like Portugal, Spain is being fully cooperative in pursuing recommended fiscal consolidation policies, even though it is not subject to any formal agreement. However, Spain is having difficulty in meeting voluntary budget targets. The target deficit for 2011 was 6.0% but ended up at 8.5%. Prime Minister Mariano Rajoy surprised European officials by unilaterally announcing that Spain was revising its 2012 budget deficit target from 4.4% to 5.8% but still intended to hit the European Union's overall target of 3% in 2013. This may prove very difficult as unemployment is 23% in Spain and recession appears to be deepening.

Spanish officials are caught between a desire to comply with the European Union's new fiscal compact and a realistic desire not to kill the economy as the European recession gathers momentum. In this sense, although Rajoy was soundly criticized, he seems to be walking the tightrope ably. However, my sense is that Spanish deficit reduction targets are still too aggressive. Since Rajoy has already demonstrated a degree of independence, he may do so again if circumstances deteriorate further. Nonetheless, he will need to do so with care to avoid an outright loss of credibility within the European Union, which in the last year, engineered replacement of two prime ministers of member nations.

Perhaps the good news is that Spain's deficit to GDP ratio is under 100%. This means there is some maneuvering room to let deficits run a little higher if economic growth falls short of expectations. What Spain must not do is breach the "fiscal speed limit" whereby fiscal consolidation would contribute to worsening the debt to GDP ratio over time rather than setting it on a course of eventual improvement.

Italy. In a way, Italy's situation is worse than Spain's. It's debt to GDP ratio is expected to rise to 126% by 2013. While Italy's budget deficit is not a serious problem, it, too, suffers from a lack of competitiveness within the European Union. At the moment, Prime Minister Mario Monti has a very high approval rating and is working hard to address the causes of Italy's uncompetitiveness. This is admirable and it would be in Italy's best long-run interests for him to be successful. However, his job is not just getting parliament to pass laws to increase competitiveness, it is much more difficult than that. He must persuade Italians to change deeply entrenched social and institutional structures which block competition and impair productivity. If he is successful, Italy may yet avoid a full-scale financial crisis, but Italy will be consistently at a competitive disadvantage which will lead to deflationary consequences and reductions in the standard of living.

2. Financial and Economic System Weakness

Bank Solvency. As the Greek sovereign debt crisis unfolded and then spread to Ireland, Portugal, Italy and Spain, deep concern developed about the prospective solvency of many European banks. That concern was amplified by thin capitalization and large holdings of sovereign debt. This in turned prompted many creditors to withdraw funding, most notably American mutual funds. Also, liquidity dried up in the interbank funding market as many banks ceased to be willing to lend to other banks.

These developments led to increasingly tight financial conditions in Europe with some spillover into global financial markets. The initial response of banking authorities was two-fold. First, the required capital ratio was raised. Banks were given until early 2012 to submit a plan of compliance and until mid-2012 to comply with the higher standard. Second, bank regulators conducted a new stress test in which sovereign debt of certain countries was marked to market. In previous stress tests sovereign debt was valued at contractual rather than market value. That approach was based on the presumption that sovereign debt could not default. Similar reasoning had resulted in assigning a zero weight to sovereign debt for bank capital adequacy calculations.

However prudent these steps might have seemed on a bank-by-bank basis, they exacerbated market angst and resulted in a severe tightening of financial conditions.

The initial stress test identified specific banks which were required to increase capital €106 billion. A second iteration a month later raised the amount to €115 billion. Predictably, most impacted banks chose to achieve compliance by shrinking assets rather than raising additional capital. This launched a credit crunch which contributed further to tightening financial conditions. At this juncture recession in the euro area became inevitable. Fiscal consolidation already had weakened many economies, particularly those in Europe's periphery.

As November ended the potential for a full-scale financial crisis was palpable. Then in early December the new president of the ECB, Mario Draghi, taking a page from the Federal Reserve's 2007-09 financial management crisis handbook, announced a three-year term lending program with a 1% rate of interest. Importantly, the ECB greatly expanded collateral eligibility. For all intents and purposes the Long-Term Refinancing Operation, or LTRO as it came to be called, provided unlimited liquidity to any member institution. During the first round 523 banks borrowed €489 billion. A second round in late February 2012 resulted in 800 banks borrowing €530.

Almost all of LTRO funds were used to replace other sources of funding. Little found their way into new lending. While there may have been hopes that recipient banks would use LTRO funds to purchase sovereign debt, this has not happened to any great extent.

This massive injection of liquidity had the desired effect. Credit spreads contracted and financial conditions eased. However, because of the impact of higher capital requirements lending continued to contract but probably to a lesser degree than would have occurred absent LTRO funding.

The LTRO program not only averted a financial panic it will also give European banks time to recapitalize and the low rate of interest will provide arbitrage profits that will strengthen capital positions over time.

Overall, the LTRO program appears to have been enormously successful and certainly that is the way in which most market participants view it.

What has been lost from sight is that the ECB has weakened its balance sheet by inflating its size with arguably weak collateral. Clearly, the program bought time to allow banks to recapitalize and strengthen their balance sheets. But, because sovereign debt problems still abound, bank solvency issues still lurk in the shadows. When, or if, Portugal defaults, the ESM may be sufficient to prevent contagion. But, risks will escalate sharply if Spain or Italy need to be bailed out.

European Recession Unfolding. Consensus thinking is that Europe will experience a brief shallow recession during the first half of 2012. The ECB downgraded its GDP growth forecast for the Eurozone in March to -0.1%, with a range of 0.3% to -0.5%, from +0.3% in December. This seems optimistic in light of the annualized -1.3% contraction in real GDP during the fourth quarter of 2011. The IMF's forecast is somewhat more negative for the Eurozone — it expects real GDP to contract -0.5% in 2012. Other forecasts are generally more negative. For example, ISI expects real GDP in the Eurozone to contract -1.5% in 2012.

Risks appear to be tilted to the downside. On the positive side, the LTRO program has diminished risks. However, bank recapitalization and tighter credit underwriting cut the other way. One should also remember that deteriorating economic conditions can result in self-fulfilling feedback loops by prompting even greater credit underwriting caution. Also, on the positive side is the apparent strengthening of the U.S. economy.

There are several other risks that point in the direction of deeper recession. While policy intervention appears to have been immunized the rest of the Eurozone from Greece's problems, social unrest and political meltdown in Greece is a distinct possibility and could overwhelm immunizing actions. Fiscal policy is decidedly contractionary in every Eurozone country. This is opposite of what is called for to combat a recession. The question is one of whether the negative consequences of fiscal consolidation in a recessionary environment have been underestimated. That is certainly the case in Greece and may also prove to be the case in Portugal, Spain, Italy and elsewhere. The ECB sees no need for another round of LTRO funding, although, if liquidity pressures rear up again, that is an easy policy to reverse.

Finally, slowing global growth will dampen European exports to the rest of the world. That would be especially troublesome for the German economy which is heavily geared to exports. The telltale sign of slowing global trade is commodity prices and they are weakening even as optimism of economic acceleration dominates U.S. investors.

As always the answer will be clear to all of us in a few months' time. My sense is that just as the extent of optimism in the U.S. currently is not warranted, limited pessimism in Europe denies the consequences of significant potential risks.

3. Balance of Payments

The balance of payments includes all financial flows between one country and other countries. The largest component is trade in goods and services. But the balance of payments also includes net capital flows.

Sovereign debt problems and financial and economic system weaknesses are manifestations of deeper-seated issues. Treating these problems is like giving a patient aspirin. Aspirin takes the fever down and relieves the pain, but it does not deal with the underlying disease that caused the fever and pain. Bailing out Greece and providing unlimited liquidity to banks treats the symptoms, but these remedies don't deal with the underlying disease. Thus, in time, the medicine wears off and the pain and fever return.

There are two sets of issues — one economic and one cultural — that make survival of the Eurozone and even the European Union in their current forms unlikely in the long run. The first has to do with the balance of payments among member countries. The second has to do with vastly different cultures and institutional structures. The second issue is addressed in the next section.

Germany's Economic Policy. If you read the February Longbrake Letter, Section VI contained a discussion of how growing income inequality eventually led to the financial panic of 2007-09. The reasoning for this conclusion was that bargaining power between workers and investors tilted in favor of investors. This enabled investors to accumulate an increasing share of income and wealth over time. But, investors needed to deploy their increasing wealth and did so by lending to workers to buy houses and maintain living standards. Overtime worker debt increased relative to their earning power and as that occurred worker resilience to withstand financial shocks diminished. Eventually the tipping point was reached and panic ensued.

The same sequence of events is playing out in Europe. The role of investor is played primarily by Germany and the role of the workers is played by most other European countries, particularly the so-called peripheral countries of southern Europe.

Prior to reunification of eastern and western Germany in 1991 Germany's balance of payments was positive sometimes and negative at other times. However, after reunification Germany developed an export-based economic strategy. Just as is the case with China, this policy enabled Germany to create jobs for eastern Germany's underemployed population. In effect, Germany was able to create more jobs than its own economy on a closed basis could have accommodated. The additional jobs were ones that produced goods and services for people in other countries.

European Union, Eurozone and Euro. About the same time the European common market was converted into the European Union and in 1999 some of the members of the European Union formed a currency union. Thus the euro was born. Today 17 countries are members of the currency union, typically referred to as the Eurozone, and 29 countries are members of the European Union.

Creation of the euro greatly increased the effectiveness of German economic policy. By definition an export-oriented economy will consistently run trade surpluses. This is exactly what has occurred in Germany. But trade must be paid for and when a country runs a trade surplus it will also run a balance of payments surplus. The balance of payments surplus usually is invested in securities or other assets of countries with a balance of payments deficit.

Imbalances Build. Thus, Germany tilted bargaining power in its favor through its export-based economic policy and the creation of the euro. Like U.S. "investors" it needed to redeploy its increasing share of income and wealth and did so by buying securities and assets of deficit countries. This was made easy by the existence of a common currency. For many years interest rates on euro-denominated obligations reflected the strength and risk profile of the German economy rather than the somewhat weaker and riskier profile of the Eurozone collectively.

And, like what happened with the workers in the U.S. who were able to maintain living standards through borrowing, deficit Eurozone countries were able to do likewise by borrowing from Germany at low interest rates.

A law of economics is that imbalances in fundamental economic relationships must eventually correct. A corollary is that the bigger imbalances are allowed to become the greater will be the agony of correction when it finally occurs.

Today Eurozone members absorb 60% of Germany's exports and account for 80% of its trade surplus.

There Are No Truly Viable Solutions Possible As the Eurozone Is Currently Configured. It did not occur to Germany that its economic policy would set in motion a process that eventually would be destructive. While the common currency greatly facilitated economic growth throughout the Eurozone for several years, it eliminated the possibility of using the exchange mechanism to correct imbalances in the balance of payments. The belief was that if all countries adhered to rigorous fiscal discipline all would be well. This belief misunderstands economics. Government finances are only one part of overall financial balances in an economy. Other parts include the household and business sectors and the balance of payments with other countries. Thus a focus only on the government fiscal balance amounted to a partial solution and as such it was not one which could prevent buildup in debt imbalances across all sectors.

In addition, as I have discussed in this and other letters, competitive imbalances, which presumably were small when individual country currencies were converted into euros, built with the passage of time. Because of Germany's focus on efficiency, prices for its goods and services inexorably became more attractive over time and this benefited its own economic growth and enlarged its trade surplus.

But competitive differences that accumulate over time cannot be corrected quickly without the ability to reset the value of a country's currency. The alternative is to force the uncompetitive country to narrow the competitive gap through deflation, which is the policy the Eurozone is currently pursuing. (The obverse of this would be for Germany to inflate prices of its goods and services but this is anathema to Germans who still remember and abhor the hyper-inflation of the Weimar Republic and how it facilitated Nazi political takeover.) The deflation solution is ugly and painful as it destroys many lives. Also, it is doubtful that such a policy could sustain political support for as long as might be needed to make it effective.

4. Sovereignty, Language, Culture and Governance Paradigms

One possible solution to the balance of payments problem would be to establish a fiscal as well as a monetary union. This would require countries to relinquish sovereignty. It would require relatively free mobility of labor between countries. Mobility enables competitive differences to be resolved without engaging in forced austerity programs. And, it would require wealthier countries to support poorer countries through intentional fiscal transfers. All of these features are present in the United States which is why the U.S. economy does not suffer from the kinds of problems that afflict the Eurozone economy.

This is a solution that works in the U.S. But it is not one that can work in Europe because of language differences and deeply-seated differences in culture and governance paradigms.

As Daron Acemoglu and James Robinson argue in their new book, differences in government may be the most important factor.[7]They describe two opposing governance paradigms — one is extractive and the other is inclusive. Their thesis is discussed in greater detail in Section IX. In short, an extractive government is one which is driven by a parasite elite which exploits its citizens. Governance of this sort discourages investment and innovation. It protects the elite from competition. Nations with this governance focus create less wealth and have much lower living standards. This sounds a lot like Greece.

Inclusive governance paradigms protect individual rights, encourage investment and innovation and reward effort. Great wealth creation flows from this governance paradigm. Does this sound like Germany?

While Acemoglu and Robinson argue that culture has little to do with economic success, governance paradigms customarily have deep historical and cultural roots which assure their persistency over time. This suggests that a European Union with a constitution and approach similar to what exists in the United States would not by itself assure a successful outcome. Old governance paradigms would tend to persist. Attempting to change them, even exploitive ones, would be subject to popular rejection in the interests of nationalism and preservation of sovereignty.

VIII. China's Growth Slows

Imbalances in the Chinese economy continue to grow. An increasing share of Chinese GDP comes from investment in infrastructure. And a massive property bubble is unwinding. The question is whether the necessary transition will be managed and orderly or whether it will be disorderly and disruptive. What we know from past experience is that the longer these imbalances continue to build, the greater will be the correction whenever it eventually occurs. There is evidence that China is in the early stages of attempting

[7]Daron Acemoglu and James Robinson. *Why Nations Fail: The Origins of Power, Prosperity and Poverty*. Available for purchase, March 20, 2012.

to manage an orderly transition. Because the Chinese economy relies heavily on exports slowing global growth will have immediate consequences. In this regard a strengthening U.S. economy and the improvement in Europe's near-term outlook is a welcome development.

Acknowledging these developments China officially lowered its 2012 growth target to 7.5%. This does not mean it expects growth to fall to this level. It has always been China's policy to announce a target growth rate that it expects to be able to exceed. However, the importance of the announcement is the recognition that as the Chinese economy matures and transforms from an export-infrastructure economy to a consumer economy, the rate of growth, while still high, is likely to be lower than in recent years.

With the exception of oil the recent softening in commodity prices may be an indicator of slowing Chinese growth. There are many stories of unutilized infrastructure projects and there is anecdotal commentary that while infrastructure projects in progress are being completed, few new projects are being initiated.

While many believe that China continues to manipulate the value of the yuan to support its export-based economic strategy, recent currency market forward contracts suggest this may no longer be the case. Forwards are actually predicting depreciation in the yuan in coming months rather than appreciation. Supporting evidence is a shrinkage in China's trade surplus and foreign exchange reserves. A shrinkage in foreign exchange reserves suggests China may be trying to support the value of the yuan rather than increase it.

Could it be that Chinese growth has been impacted to a greater extent by the global growth slowdown and the unwinding of its property bubble than market participants believe?

One analyst posed a speculative analysis which, if correct, portends a deeper slowdown in Chinese growth during 2012. The analysis begins with an assumption that real estate investment accounts for approximately 10% of GDP. Apparently, there is basis for this to be a reasonably accurate figure. Then, if one assumes that real estate investment grew 30% in 2011 but falls to 0% in 2012 and all other economic activity grows at the same rate in both years, GDP would fall from 8.5% for 2011 to 5.5% in 2012. This is simple math and may be wrong but it illustrates the vulnerability of Chinese growth to an outsized reliance on real estate investment and a crash in that activity. There is plenty of evidence that real estate activity has slowed dramatically but Chinese data are not transparent, so it is difficult to discern whether the consequences will be as great at the thought experiment above suggests they might be.

IX. Why Nations Fail: The Origins of Power, Prosperity and Poverty

The book, Why Nations Fail: The Origins of Power, Prosperity and Poverty, was released for purchase on March 20, 2012. It is written by two eminent scholars, Daron Acemoglu, an economist at the Massachusetts Institute of Technology, and James Robinson, a professor of government at Harvard University.

1. Extractive Versus Inclusive Political and Economic Institutions

The authors examine the issue of why some nations have been able to create enormous wealth for their populations while others have not. Their answer is that differences in rich versus poor countries flow directly from differences in a nation's institutions. Differences in outcomes are not a matter of geography or culture.

They argue that differences in outcomes are directly linked to whether a nation's political and economic institutions are "extractive" or "inclusive". Extractive institutions are structured to serve the interests of elites and to extract income and wealth from the masses. Inclusive institutions are distinguished by broad participation of all segments of a nation in ways that prevent entrenchment of elites.

Inclusive institutions embrace the rule of law and individual rights. They enable free entry of new businesses. This encourages investment and innovation which eventually creates great wealth.

Extractive institutions control economic and political processes to serve the interests of the elite. They often are distinguished by open corruption of those in power or accomplish similar outcomes through laws and regulations which protect the interests of the elite. Societies with extractive political and economic institutions discourage investment and innovation. Laws, rules and practices block and the ever-present threat of confiscation inhibits attempts by non-elites or outsiders to establish new businesses.

Acemoglu and Robinson argue that political and economic institutions, whether they collectively are extractive or inclusive, are self-perpetuating. This results either in a virtuous circle of economic development and wealth creation in the case of inclusive institutions or a vicious circle that discourages economic development and wealth creation in the case of extractive institutions.

Unfortunately, history indicates that extractive institutions are the rule and inclusive institutions are the exception.

This raises the question as to what leads to the development of societies where inclusive institutions drive out extractive ones. The authors suggest that this is the result of historical accident such as different colonization strategies. They cite the different colonization strategies in the Americas. Spain established extractive institutions in its American colonies. Perhaps a large indigenous population facilitated this approach. Nonetheless, once established, extractive institutions became deeply entrenched. Inclusive institutions evolved in English colonies for a variety of reasons. There was not a large indigenous population. Many of the early colonists came to America to escape tyranny and have control over their own lives. England, itself, experienced an extended period of revolution during the middle 1600's which opened the way to the development of inclusive institutions in England. The American revolution was fought to free Americans from English power elites and the American constitution entrenched inclusive institutions.

Then, what is one to make of the recent economic success of China whose economic and political institutions are clearly extractive? Law and order is clearly a factor. The authors argue that extractive societies, such as China, can mandate economic growth, but they will never be able to realize wealth creation potential to the same extent as occurs in inclusive societies.

2. How Do Societies Change?

There is no natural process to create inclusive institutions. Elites cede power only if threatened with loss of power. Usually this means revolution. But, oftentimes revolution does not change the outcome. Extractive institutions remain entrenched and the only change is that one power elite is substituted for another. Change comes about when there are nascent inclusive institutions with strong leadership which is able to capture the support of the masses to effect significant and lasting change in a nation's political and economic institutions. Clearly this happened in many parts of Europe following the discovery of the Americas by Christopher Columbus. Once established, the economic success of inclusive societies in Europe created pressure for change in extractive societies. Some migrated over time to predominantly inclusive political and social institutions; others, such as Russia, have never changed.

But, can inclusive institutions be so weakened that power elites' natural extractive tendencies gain the upper hand? The authors do not address this question. However, it is an important one because some believe that the U.S. is straying from a predominantly inclusive society toward an extractive one. For example, the apparent capture of the political elite by the financial elite in the U.S. is an example of how powerful the extractive tendencies of elites can be. I expect that Acemoglu and Robinson would argue that the ascendency of Wall Street cannot long continue because of the deep entrenchment and power of America's inclusive institutions.

I would add that culture and social norms are important. Acemoglu and Robinson do not give much credit to culture in establishing and perpetuating inclusive political and economic institutions. However, I do think that culture in terms of social norms and values plays an important role. But, having said this, and reflecting on Charles Murray's book Coming Apart, there is some question as to whether America's culture is changing in ways that are facilitating the emergence of the extractive power of America's financial elite. If this is so, it is not absolutely certain that the tradition of the dominance of U.S. inclusive political and economic institutions will continue to drive economic development and wealth creation.

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