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

Barnett Sivon & Natter P.C.
ATTORNEYS at LAW
WASHINGTON, DC

The Longbrake Letter*

Bill Longbrake

March, 2011

I. Economic Recovery Progressing But the Emergent Global Oil Price Shock Amplifies Risks

1. Global Oil Price Shock

During the last month we have been reminded why economic forecasting is so difficult. That is because it is nearly impossible to anticipate consequential events that can shock the global economy and force a fundamental change in direction. The revolution in Tunisia, regime change in Egypt, civil war in Libya, unrest in Bahrain and chaos in Yemen were surprises that few, if any, anticipated. And the repercussions these events have unleashed are far from spent. Like a nuclear chain reaction, each event has emboldened people in other Arab countries to challenge long-entrenched, unpopular regimes.

Broadly-based political crises of the sort that are current underway in the Middle East are not unlike global financial crises. Both often times seemingly erupt without warning and their virulence takes most by surprise. However, upon closer examination, it becomes clear that unsustainable imbalances had built up over time and what had passed as stability was an increasingly fragile and unstable situation vulnerable to abrupt correction. Once the spark is lit, conflagration quickly ensues because the rot of persistent and large imbalances provides ample fuel. Tunisia was the spark and now the conflagration rages.

Political imbalances, like economic imbalances, correct but the process usually is a messy one and can take a long time to unfold. Furthermore, political intervention, as is also true with economic policy intervention, can

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

prevent complete correction of an imbalance and can set in motion nascent imbalances.

There are several things that make the current Middle East political crisis especially worrisome and will bedevil economic forecasters. First and foremost among them is the global oil price shock that the crisis has spawned. It is a simple fact that energy-hungry emerging economies have been driving up demand for oil faster than new sources of supply can be found. While this fact has been well understood and has been behind forecasts of rising oil prices, what is new is that civil war in Libya has reduced supply by 1.5 million barrels per day, which equals about 30% of OPEC's spare capacity of 5.2 million barrels per day, and perceived threats to interruption of supply in other Middle Eastern countries have combined to lift oil prices by more than 20% in a few weeks time. Algeria is a prime candidate for interruption of 1.8 million barrels per day in exports. While not much in the news, protests have been underway in Algeria since late December and foreign policy experts consider the Algerian situation to be very fragile.

It is impossible to foresee precisely whether the oil price shock is temporary and will fade away as civil war in Libya is resolved and a semblance of political calm returns to the rest or the Middle East or whether political upheavals will continue and spread and result in persistently higher oil prices and perhaps at much higher levels than those that prevail currently.

By and large most Middle Eastern countries have not participated in accelerating economic growth that has engulfed most of the world's emerging economies. This naturally leads to the question of whether the new political order that eventually emerges in the Middle East out of the current crisis will provide the kind of leadership which fosters more rapid economic growth or whether religious theocracies of the sort that currently rules Iran will emerge. And, there is also the question of the longer-term Middle Eastern balance of power between the political ambitions of Iran and the rest of the Arab nations. Oil, for better or worse, is the key to economic power and thus is the prize for which those who are seeking political dominance aspire.

All of these forces are in play. We cannot with any certainty know where they will lead as they interact with each other. What we do know, as we have learned from the recent global financial crisis, is that once the process has begun there will be new events and further disruptions. All we can be certain of is that volatility has increased and will continue unabated for a

period of time.

2. Risks to the U.S. and Other Economies Posed by Global Oil Price Shock

Europe appears likely to be affected adversely to a much greater degree than the U.S. for several reasons. First, the lost Libyan oil is predominantly low-sulfur "sweet" crude, which goes mostly to Europe. While Saudi Arabia has the capacity to increase oil production to close the shortfall created by the loss of Libyan oil, it is "sour", high-sulfur content crude. Unlike the U.S., Europe has little capacity to refine high sulfur content crude, so the replacement of lost supply is far from perfect. That is one of the reasons that a large price gap has opened up between the Brent and West Texas Intermediate (WTI) oil prices. As of March 12, 2011 WTI was about $101 per barrel while Brent was $114 per barrel. Prior to the crisis Brent averaged about $1 more per barrel than WTI. Another reason that the price of WTI has not escalated to the same extent is that the current ample supply of natural gas in the U.S. is an effective energy substitute and it is currently cheap and abundant. Europe does not have access to cheap U.S. natural gas. The impact of the Libyan situation will be the greatest for Italy, which is not a happy prospect because Italy is not totally immune from possible sovereign debt issues.

Second, commodity prices have a greater impact on measured inflation in Europe. For a variety of reasons unrelated to oil prices, inflation had already been rising in Europe, so the run up in oil prices simply exacerbates matters. Unlike in the U.S. where the Federal Reserve has a dual policy mandate covering both inflation and employment, the European Central Bank (ECB) is only responsible for limiting inflation. That mandate lead to the untimely increase in European interest rates in June 2008 just prior to the worst phase of the global financial panic. The ECB is once again telegraphing the likelihood that it will have to raise interest rates to contain inflationary pressures.

Third, if the ECB raises interest rates, this most certainly will have two consequences, both negative, for the peripheral European members of the European Union (EU) that are struggling with sovereign debt problems. First, higher oil prices and interest rates will depress economic growth and second, higher interest rates will increase the cost of sovereign debt. The first

will depress tax revenues, the second will increase expenditures. Already, in anticipation of the next round in the on-going sovereign debt crisis, interest rates have risen on sovereign debt to levels that are simply not sustainable without intervention of some sort. In other words, it is not a matter of whether but when financial crisis will engulf Greece, Portugal, Spain and perhaps other European countries.

While the consequences in the U.S. are likely to be lesser in scope, they are not trivial. Already, consumer optimism has plummeted, although this has yet to show up in reduced consumer spending.

There will also be consequences for emerging economies because most are net importers of oil. The increase in oil prices that has already occurred is expected to have a modest negative effect on global growth over the next two years. But, further escalation in oil prices would result in much greater damage to global growth.

What to watch for is that when shocks occur, if they persist for any length of time, consequences will emerge and those consequences will set in motion responses that could have further adverse impacts on the global economy.

3. Economic Policy in U.S. Remains on Course To Become Less Supportive of Growth Later On in 2011

Monetary policy, through the Fed's large scale asset purchase (LSAP) program, and fiscal policy, through the additional federal tax and spending stimulus authorized in December, like a shot of adrenalin, have combined to give the economy an injection of high-powered stimulus. Several economic indicators, such as the unemployment rate and various measures of business activity, verify that the U.S. economy is gathering favorable forward momentum. But, while monetary and fiscal policies are at maximum power right now, by mid-year most of the benefits will be behind us. At that juncture one of two things can happen. As occurred last year, economic growth could slow because the economy is not yet healthy enough to withstand withdrawal of massive doses of government pump-priming. Or, healing in the private economy will have progressed to the point that expansion will continue on its own momentum with diminishing need of help from the government. While I continue to lean toward the greater likelihood of

the self-sustaining growth outcome, the global oil shock and the possibility of significant fiscal spending restraint have lessened my confidence in that outcome.

4. Economic Imbalances Are Significant and Growing

As I said in the February 2011 Longbrake Letter, deep-seated economic imbalances remain, which were not resolved during the Great Recession. Indeed, some of these imbalances have worsened.

What is important to understand is that the mere existence of an imbalance does not mean that a correction is imminent. Indeed, the correction may take years to assert itself. It is also important to understand that since the Great Depression active government intervention in times of economic and financial crisis has been the rule, not the exception.

But there is a disturbing pattern in the historical record. Government, in its zeal to contain and limit the damage of a financial and economic crisis, has not permitted all of the imbalances that built up prior to the crisis to be rooted out. Thus, each new economic expansion starts with some of the problems of the previous expansion left unresolved. The disturbing pattern is that the magnitude of unresolved problems has grown over time. What this means is that each new expansion starts on a flimsier foundation. It also means that when the expansion cycle inevitably tops out and the next financial/economic crisis ensues, the crisis tends to be greater than the last one and the extent of government intervention required to avert the potential for collapse escalates as well.

I had thought for awhile that the severity of the recent crisis might mark the turning point in this vicious circle of escalation; that policymakers would accept the necessary pain and implement long-term remedial policies to address and reduce the size and extent of imbalances. But, as I watch the economic recovery unfold and the political process focus predominately on a limited set of short-term issues, my cynicism is growing that we do not yet understand what needs to be done. Thus, we seem doomed to yet another cycle, which could last for several years, but which will ultimately lead to yet another crisis, and to my way of thinking, a crisis that could surpass the recent one. Even if I am overly pessimistic in this view, by not addressing the imbalances discussed below, sooner than later, I believe improvement in

the standard of living for Americans will be retarded and social and political consequences are possible.

There is one more point that is fundamental to my assessment. Economic stability over time depends upon key economic phenomena maintaining a balance with each other. This is not a matter of exact precision that is reducible to equations. But, it is based on intuitive logic. For example, if we save too little and consume too much, this will limit investment and in time lack of investment will retard productivity and limit advances in the standard of living. Another example is that we can accelerate the rate of growth for a while by increasing debt, but as we do so we reduce our ability to withstand unexpected adverse shocks. We don't know the exact level of debt that will constitute an unstable imbalance, but we do know that more debt will take us closer to that point. And we know that if don't make people accountable for the consequences of their actions and let them transfer risk to others, then moral hazard will take hold and lead to unreasonable and dangerous risk taking.

My point is this. An economy that grows at its potential and maintains stability overtime must contain the tendency for imbalances to build up. And, if imbalances do occur, policies need to be crafted and pursued to diminish the threats they pose. Regrettably, this does not seem to be understood.

5. The Lords of Finance: The Bankers Who Broke the World

Sometimes it is instructive to look back at history to understand how political and economic events combined to create imbalances that subsequently resulted in violent upheavals. The benefit of looking at history is we can see both the causes and the results and we can link the two. Such an exercise can provide insights into our current situation, but because the results of current political and economic policies and processes have yet to occur, it will only be with the benefit of hindsight that we come to understand more clearly the causes and how they lead to their ultimate consequences. So, study of history can be a guide, but it cannot provide us clear and certain answers to questions about future outcomes.

The Lords of Finance: The Bankers Who Broke the World was written by Liaquat Ahamed. The four lords of finance were: Montagu

Norman, governor of the Bank of England; Hjalmar Schacht, president of the German Reichsbank; Emile Moreau, governor of the Bank of France; and Benjamin Strong, president of the New York Federal Reserve Bank.

The book recounts the economic and political history of Europe and the United States from the late 1800's through the onset of World War II from a financial markets and monetary policy perspective. While it is an interesting tale that occurred before most of our lifetimes, it has much to say about what happens when significant economic, financial and political imbalances are not addressed or are addressed in the wrong way. In that sense the book is not just about what happened long ago, it is a cautionary tale for our own time.

Before turning to this bit of history, the next part of this month's letter addresses updates for four economic variables — U.S. gross domestic product (GDP), U.S. employment, U.S. fiscal policy and European sovereign debt.

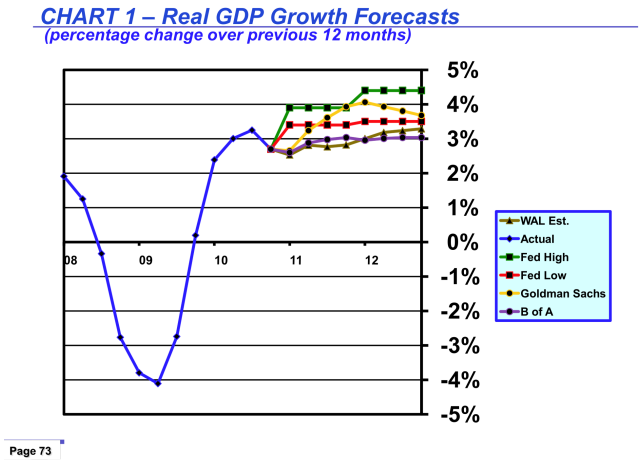
II. U.S. GDP Growth

1. Forecasts

In the wake of the oil price shock, forecasters are beginning to shave GDP growth forecasts for 2011 and 2012. Merrill Lynch/Bank of America (B of A) has already put out a new forecast based upon what has already happened. Goldman Sachs (GS) has yet to do so formerly but has issued an analysis of what would happen if the shock persists and how the negative impacts would escalate if oil prices continue to climb. Forecasts are shown in **Chart 1**.

The Federal Reserve's most recent forecast increased the expected range of GDP growth in 2011 from 3.0% to 3.6% to 3.4% to 3.9%. This upward adjustment reflected stimulative monetary and fiscal policies initiated in December. However, the Fed reduced the 2012 GDP forecast range moderately from 3.6% to 4.5% to 3.5% to 4.4%, most likely because of impacts stemming from the withdrawal of monetary and fiscal stimulus by the end of 2011.

Once again, however, this time courtesy of the oil price shock, the Fed's forecast appears to be at the optimistic end of the range. Both the B of A



forecast and my forecast, labeled "WAL Est.", fall below the lower end of the Fed's forecast range. B of A has reduced its 2011 GDP forecast by 0.2% and its 2012 forecast by 0.2%.

GS's forecast falls in the middle of the Fed's forecast range for 2011 but approaches the bottom end of the Fed's forecast range in 2012. However, GS projects that if the current 20% oil price shock persists, GDP growth in 2011 could slow as much as 0.4% and 0.5% in 2012, which would be similar to my and B of A's forecasts and below the lower bound of the Fed's forecast range.

GS presents a second forecast in which the oil price shock doubles to 40% and persists. That would mean a sustained Brent oil price of about $125 per barrel. In that scenario, GS expects GDP growth to slow to between 0.5% and 2.0% by the first quarter of 2012 and then rebound to about 3.0% by the end of 2012.

2. Impact of an Oil Price Shock on GDP Growth

Rising oil prices result in a wealth shift from nations that are net oil importers to those that are net exporters. Rising prices in importing nations force changes in consumption patterns and are known to depress GDP

growth and consumer spending for a period of time. Research generally indicates that each $10 per barrel sustained increase in the price of oil depresses GDP growth in oil consuming nations by about 0.5%, with a somewhat greater impact in emerging economies.

GS has conducted analysis more specific to the U.S. and estimates that each 10% sustained increase in the price of oil reduces the level of GDP by 0.2% in the first year and 0.4% in the second year, which would translate in a reduction in the rate of GDP growth approximately equal to 0.2% each year. Most of the initial decline in GDP is linked to reduced consumer spending, but if the shock persists, part of the decline in the second year comes from reduced business investment.

3. Impact of an Oil Price Shock on Inflation

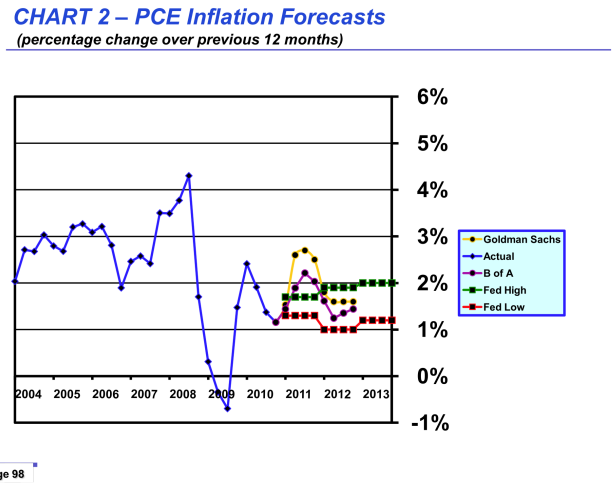
Changes in oil prices also impact inflation measures. Prior to the mid-1980's research shows that oil price increases impacted both core and total inflation measures, but since then only the total, not the core, measure has been affected. The change in behavior has to do with increased credibility of the Fed's inflation-fighting credentials and structural changes that virtually have eliminated automatic inflation adjustments in union wage contracts and other kinds of legal agreements.

In fact, recent research indicates that core inflation actually declines a modest amount after an oil-price shock. That is the result one would expect if the Fed reduces interest rates in the wake of an oil-price shock to offset its contractionary effects rather than raising rates to forestall potential inflationary consequences.

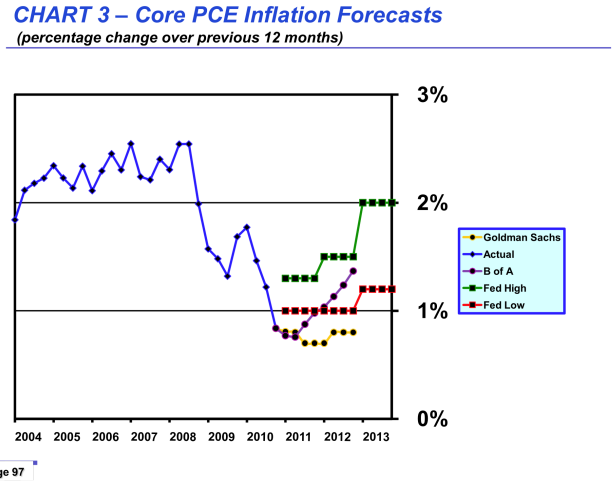
Nonetheless, the rise in oil prices has stoked inflation anxieties. According to the March University of Michigan consumer survey, 5-10 year inflation expectations rose from 2.9% in February to 3.2% in March, which is near the top end of the range over the last several years. In the Treasury Inflation Protected Securities market the 5-year, 5-year forward inflation yield has risen recently to about 3.0%. While this yield is high by historical standards it is lower than levels that prevailed during late 2009 and early 2010 and during the summer of 2010. Also, it is important to note that both of these measures of expected inflation spiked to high levels when oil prices peaked at more than $140 per barrel in mid-2008. What this means is that

the recent rise in inflation expectations probably means little in terms of prospects for core inflation; however, total inflation will rise during 2011 but should fall back in 2012 unless oil prices continue to rise on a sustained basis.

Chart 2 shows inflation forecasts for total PCE (personal consumer ex-



penditures) inflation and **Chart 3** shows inflation forecasts for core PCE,



which excludes volatile food and energy prices. The GS and B of A forecasts for 2011 reflect the expected impact on total inflation of oil prices increases that have already occurred. If oil prices rise further, these forecasts will need to be raised further. If that were to occur, the pattern in total inflation could end up looking more like the pattern that occurred in 2008-09. Generally, both GS and B of A expect core inflation to remain relatively low and unaffected by oil price increases. However, an important aspect of these forecasts is that deflation is no longer a real possibility. Either core inflation will remain at a low level (GS forecast) or move up gradually (B of A forecast).

4. 2010 Q4 GDP

The "second estimate" of fourth quarter GDP growth was reduced to 2.8% from 3.2% for the "advance estimate" (see **Table 1**).

Table 1
2010 Fourth Quarter GDP Estimates

	Advance Estimate	Second Estimate	Final Estimate
Personal Consumption	3.04%	2.88%	
Private Investment			
Nonresidential	.43%	.51%	
Residential	.08%	.06%	
Inventories	-3.70%	-3.70%	
Net Exports	3.44%	3.35%	
Government	-.11%	-.31%	
Total	**3.18%**	**2.79%**	

The downward revision occurred in personal consumption, net exports and government spending, offset by a small increase in nonresidential investment. The overall reduction to 2.8% has some importance for two reasons. First, forecasters expected an upward revision. Second, GDP has to grow

considerably above a 2.8% annual rate to absorb the very large amount of slack that persists in the economy. For example, according to Congressional Budget Office estimates of full employment GDP potential, the output gap was 6.35% in the fourth quarter of 2010, down only modestly from the peak gap of 7.76% in the third quarter of 2009.

III. U.S. Employment

1. February Data

Following the confusing January employment report, which was impacted by a change in population controls and affected by weather, the February report painted a picture of a slowly improving labor market. The one statistic which usually receives the greatest amount of attention, the unemployment rate, fell to 8.9% and has now fallen sharply from its recent peak of 9.8% in November in just four months time.

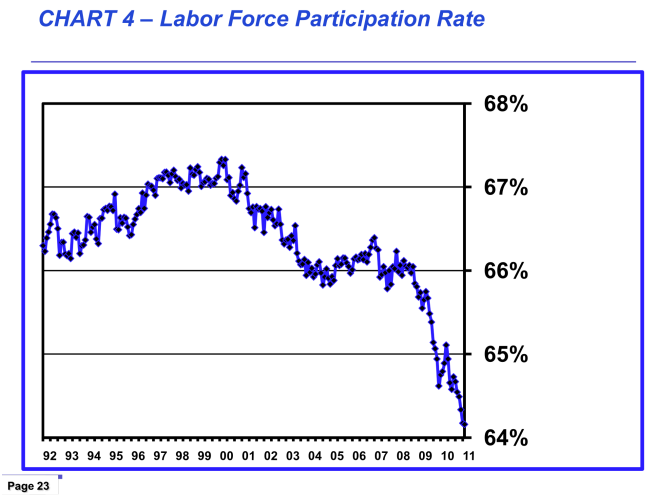
On the surface this paints a rosier picture of labor market than a detailed examination of the data supports. During this same four month period, the labor force, those working or willing to work, has shrunk by 704,000. The number employed has fallen more than 336,000, while the number of unemployed workers has fallen by 1.4 million. The story these data tell is one in which unemployed workers are simply dropping out of the labor force altogether. This means that they are neither counted in the eligible labor force or the ranks of the unemployed.

2. Shrinking Labor Force Participation Rate

Falling labor force participation is responsible for the simultaneous shrinkage in the labor force and the falling rate of unemployment. Labor force participation was 66.2% in January 2008 at the start of the Great Recession. Since then it has fallen precipitously to 64.2% in February 2011. Participation changes over time because of demographic changes and cultural considerations, such as greater entry of women into the labor force. Over shorter periods of time labor participation is also influenced by workers who exit the labor force during difficult times only to re-enter the labor force

during good times.

As mentioned above and as can be seen in **Chart 4**, demographic factors

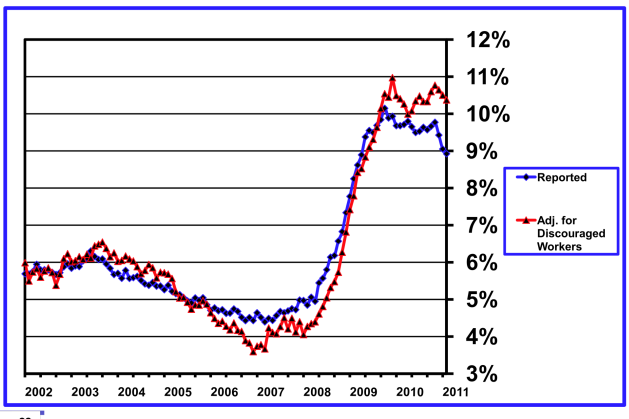


have driven a slow decline in labor force participation since it peaked just prior to the 2001 recession. There was a bit of a rebound in the late part of the cyclical expansion prior to the start of the Great Recession in December 2007. However, the decline in participation over the last three years is much greater than can be explained by demographic factors alone.

The primary demographic reasons for declining participation are an aging workforce with a lower participation rate in the oldest cohorts and a declining participation rate among young workers, probably reflecting a larger proportion going to college. Demographic considerations have accounted for about a 0.5% decline in the participation rate since the start of the Great Recession. Other factors have contributed to the remaining 1.5% decline. See **Chart 5**. These would include discouraged workers who have given up and dropped out of the work force. Such workers could well re-enter the labor force when job prospects improve and the labor market tightens. However, some of the decline could also stem from structural unemployment for workers that are simply unemployable because they do not have skill sets any employer needs.

There are currently approximately 2.2 million workers who have dropped out of the labor force for reasons unrelated to demographic considerations.

CHART 5 – Reported Unemployment Rate & Adjusted for Discouraged Workers



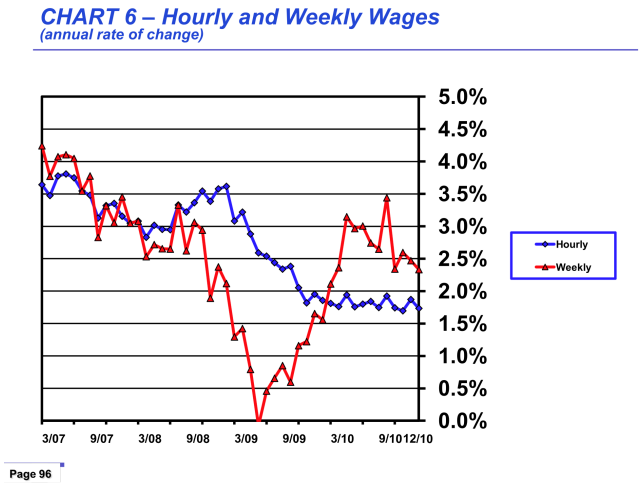
If all of these workers are discouraged and plan to re-enter the labor force as the labor market improves the February unemployment rate would have been 10.4%. Again, reflecting the drop-out phenomenon of the last four months, this adjusted unemployment rate has improved from 10.8% to 10.4%, while the official unemployment rate has improved from 9.8% to 8.9%.

Goldman Sachs (GS) recently published research that assigns a much larger share of the decline in the participation rate to demographic factors. GS expects the demographic decline in the participation rate to continue but simultaneously expects some discouraged workers to re-enter the labor force. GS expects this combination to result in an increase in the participation rate from 64.2% currently to 64.7% by the end of 2012. My forecast is slightly higher at 64.8%.

A steady, but gradual, decline in the labor force participation rate means that employment will grow more slowly in the future, but it will probably not affect the unemployment rate or, for that matter, other growth rates to any material extent. What it will affect, however, is the level of personal income, the level of retail sales and any other aggregate measures of household income and spending. This trend will matter in the following way. A 2% to 3% permanent decline in the labor participation rate means that household income, and probably spending as well, will be approximately 2% to 3% lower for the same population base. This is not good news for nominal tax collections that are geared to income or sales taxes.

3. Wage Growth

Average hourly wage growth, which is an indicator of the intensity of excess labor supply relative to demand, has stabilized over the last year. **Chart 6** shows the annual rate of change in the hourly average employee wage rate



and the annual rate of change in weekly wages. The growth rate in average weekly wages adjusts for the average number of hours worked. The growth rate in weekly wage earnings is a measure of spending power of consumers. Weekly wages had grown since mid-2009 as average hours worked slowly increased, but now appear to be converging downward toward the growth rate in average hourly wages. Overall **Chart 6** tells a story of a very weak labor market that is in the process of stabilizing.

In the long run, the more important of the two measures is growth in the average hourly wage rate. Average weekly hours fluctuate with the strength of the business cycle, fallings during recessions and rising when the economy is expanding. Early in the recovery phase of the business cycle, employers increase the number of hours worked by employees. But, as employers gain confidence in the sustainability of the expansion, they begin to hire additional workers. We appear to be at the transition point. What that means is that the number of people hired will increase at a more rapid rate, which is what most, including myself, expect. It also means that the expansion in the number of hours worked per week will begin to

flatten out and that is what has happened over the last several months. That means that growth in the average hourly wage rate is once again the better indicator of the tightness of labor supply relative to demand.

The rate of growth in the average hourly wage rate is also a leading indicator of inflationary pressures. As long as it remains at a very low and stable level there will be little to no upward pressure on inflation.

IV. U.S. Fiscal Policy

In the March 2011 Economic Policy Survey of 263 members of the National Association for Business Economics, 87% support comprehensive tax reform along the lines of the Bowles/Simpson National Commission on Fiscal Responsibility and Reform (see December 2010 Longbrake Letter), but 71% believe that ***Congress will not act*** on meaningful fiscal reform in 2011.

Indeed, propelled by Tea Party anti-spending fervor and a large Republican majority including 87 freshmen, the House of Representatives is focused on using the budget continuing resolution process and the looming inability of the U.S. Treasury to increase borrowings because of the debt ceiling limit to curtail federal spending. Broader-based tax reform is not a matter of serious congressional discussion just yet, except for a small bi-partisan group of Senators. But this could change once the fiscal-year 2012 budget is taken up.

While a majority of the public embraces the generic concept of reducing the size of the federal government, a significant majority is opposed to spending cuts in most programs. This is an unworkable contradiction which opens the door wide to political gamesmanship. It has become a matter of which party can convey its message most effectively to the public to gain political advantage. Unfortunately, it is not about dealing with very hard issues in a way that serves the public interest best in the long run.

1. Continuing Resolution and Debt Ceiling

Republicans and Democrats are playing a game of chicken and each is maneuvering to score political points. Ordinarily, Congress adopts a budget

resolution prior to the start of the fiscal year on October 1. In fact, the formal deadline for the next year's budget resolution is April 15th. The annual budget resolution is not binding but gives direction to various committees, which then work out appropriation details for programs under each ones jurisdiction. Sometimes, Congress has been unable to pass a budget resolution and, if none is in place by September 30th, Congress must pass a continuing resolution, usually at the previous fiscal year's levels, so that the government can continue to operate. However, it is not unusual for a variety of amendments to be tacked onto a continuing resolution.

In spite of majorities in both the House of Representatives and the Senate, Democrats were unable to adopt a budget resolution for fiscal year 2011 and thus were forced to resort to the continuing resolution process. This played to Republican advantage when the party swept the House of Representatives in the November 2010 election. During the lame duck session, in which Congress extended the Bush tax cuts and authorized various fiscal stimulus measures, Congress also passed a continuing resolution to fund the government through March 4, 2011.

Prior to the expiration of the continuing resolution, the Republican-controlled House of Representatives passed legislation to reduce spending during the remainder of fiscal 2011 by $61 billion — on an annualized basis the reduction would have been nearly twice as large. However, the Senate, controlled by Democrats, refused to consider the House-passed bill. Rather than slip the deadline of March 4, 2011, which would have resulted in a government shutdown, Republicans and Democrats agreed to a two-week extension of the continuing resolution until March 18, 2011, but also agreed to $4 billion in immediate spending cuts.

During the week of March 7th, the Senate rejected both the House bill and a Democratic alternative. Thus, the political maneuvering continues and focus in the next week will be on how to extend the continuing resolution. A three-week extension to April 8th seems the likely outcome and it will incorporate additional immediate cuts in spending — perhaps as much as $6 billion.

This game of short-term extensions of the continuing resolution packaged with additional spending cuts will probably continue until the federal debt ceiling limitation becomes binding. The U.S. Treasury estimates that the ceiling will be reached between April 15th and May 31st. However, there

are a variety of short-term things that Treasury can do to extend its ability to fund government without breaching the debt ceiling. Those adjustments can buy up to about two months of time, which means that June, or July at the very latest, is most likely to be the month that Congress will have to resolve both fiscal-year 2011 spending and raise the debt ceiling. Until then, further short-term extensions of the continuing resolution with negotiated additional spending cuts are probable.

2. Entitlements

Congress should already be working on developing the fiscal-year 2012 budget resolution since the "formal" deadline for adoption of a fiscal-year 2012 budget resolution is April 15, 2011. It is virtually certain that this date will not be met.

House Republican leaders and Budget Committee Chairman Paul Ryan have stated that they intend to address entitlement program reforms in the fiscal-year 2012 budget. On the Senate side, Senator Kent Conrad has voiced interest in addressing entitlements and even broader-based tax reform.

Importantly, a bi-partisan group of 31 senators — 16 Republicans and 15 Democrats — has expressed support for tax reform and modification of entitlement programs to reduce the federal deficit along the lines outlined in by the Bowles/Simpson Commission, although it is unlikely that agreement goes very deeply into the details but rather reflects a consensus that long-term deficit reduction requires a broader approach than a simplistic focus only on spending cuts.

It is encouraging that such discussions are taking place, but it is hard to imagine much in the way of serious action beyond additional spending cuts based on the political agenda of the Republican Party in the House of Representatives and the onset of the 2012 presidential election campaign. Serious discussion of the issues without action is probably the best that can be hoped for until 2013.

V. European Sovereign Debt

While the headlines have been dominated by the Middle Eastern crises and the earthquake in Japan, financial conditions in several peripheral countries who are members of the European Union (EU) are deteriorating. For example, the auction of 2-year notes by Portugal on March 10th went very badly and resulted in a 130 basis-point jump in yields.

Simply put, the European sovereign debt problems are from being resolved, the situation remains very fragile, and the oil price shock could be the catalyst that triggers yet another financial market event in this on-going saga.

1. Causes of the European Sovereign Debt Crisis

I discussed the causes of the European sovereign debt crisis in the July 2010 Longbrake Letter and explained that it would take a long time to resolve and that resolution might eventually require default or debt restructuring.

To recap in brief there are three aspects to the crisis. First, certain countries, most notably, Greece, ran up budget deficits and public debt to unsustainable levels. The remedy has been austerity and fiscal consolidation to drive down budget deficits. This is an extremely painful process for the people of the countries subject to such agreements — so far Greece and Ireland. It is also a process that will not necessarily achieve the desired outcome of eventually reducing the ratio of public indebtedness to GDP for two reasons. First, austerity drives down economic growth and therefore reduces tax revenues. Second, the interest rates on the debt have been rising because of the risk of default or restructuring. Both tend to push the ratio of public debt to GDP up in the short run. Thus, while driving down budget deficits is essential for long-run financial stability, the size of the public debt relative to GDP makes achievement of this objective challenging and at some level of debt it may simply be impossible to accomplish.

Second, European banks are interconnected extensively, which means that a solution involving restructuring a country's sovereign debt at some fraction of its face value would very likely trigger a banking crisis and lead to contagion effects for sovereign debt of other countries who have sovereign

debt problems that are not nearly as severe as those in Greece and Ireland. Portugal and Spain are most frequently mentioned, but others could come into play such as Belgium and Italy.

Third, many of the countries with sovereign debt problems also are less competitive. By this I mean that their cost of producing goods and services is higher than in other countries, which puts them at a disadvantage in international trade. Ideally, part of the solution to over indebtedness is to grow out of the problem, but it is almost impossible to expand the rate of growth of GDP when a country's exports are uncompetitive. A principal means of restoring competitiveness is to reduce local wage costs, but this drives down domestic demand and thus tax revenues.

2. Responses

Thus far, the responses to the crises in Greece and Ireland have had two components. The first response involved requiring a country to agree to take actions to reduce its budget deficit to 3% of GDP within a specified time period. This involved raising taxes and decreasing expenditures.

The second response involved having access to backstop liquidity. At the time of the Greek crisis a year ago the EU agreed to structure a financing facility, the European Financial Stability Facility (EFSF), to formalize provision of liquidity in conjunction with funding provided by the International Monetary Fund. Eventually the EFSF was put in place and was tapped in late 2010 to provide financial support to Ireland. The size of the EFSF is 440 billion euros pledged by member EU countries. Actual funds are raised through public bond issues on an as needed basis. Because public issues must be over-collateralized and because a participating country who is a recipient of liquidity, such as Ireland, may not contribute to the EFSF, the actual effective fully funded size of the EFSF is closer to 250 billion euros.

History tells us that monetary unions that do not involve fiscal discipline often fail. Differences in individual country fiscal policies and economic competitiveness can frequently be resolved through flexible exchange rates. But, in a monetary union, by definition, exchange rates are fixed because there is only a single currency. The flaw in the EU monetary union is that fiscal discipline, although required by treaty, currently lacks an effective enforcement mechanism.

Recognizing this, France and Germany advanced a proposal for a "competitiveness pact" that would introduce more explicit fiscal discipline on EU members. Many members have pushed back on the proposal arguing that it would intrude too far into an individual country's sovereignty. For example, Ireland has intentionally maintained very low corporate tax rates with the direct intent of attracting business activity. When a tax rate differs materially from one country to the next it will act as a subsidy in one country and a penalty in another and result in winners and losers. The competitiveness pact envisions eliminating such ploys for competitive advantage.

3. Dismemberment of the European Monetary Union Is Not An Option

There is far too much at stake for it to be thinkable to permit any country to exit the European monetary union. For starters, the logistics of converting to a country specific currency is mind boggling. Also, there is serious question whether the European banking system would hold together because of extensive interconnectedness, if a country were to exit the monetary union.

This means that alternative solutions will ultimately be forged and those solutions are likely to include an element of bailout and more rigorous fiscal discipline and competitiveness requirements.

Resistance to France's and Germany's competiveness pact and hope that individual country austerity and fiscal consolidation programs will work mean that the timing is not yet at hand to enable crafting of a durable solution. Ultimately, some form of bailout will be required, probably coupled with sovereign debt restructuring, perhaps of a limited nature. The burden of that outcome will fall on Germany and to a slightly lesser extent on France. However, the German government is absolutely in no position politically at this time to support restructuring and will not be until there is a full scale crisis in financial markets and other EU members are willing to sacrifice a substantial measure of fiscal sovereignty in the interest of preserving the EU.

EU foreign ministers and finance ministers are meeting on March 21st. Germany and France are likely to continue pushing for adoption of a competitiveness pact at those meetings but action seems unlikely.

4. Oil Price Shock Heightens Risks of Renewed Crisis

Inflation has been rising in Europe in recent months. Some of it is the result of tax increases and other austerity initiatives that feed into the calculation of the inflation measure. Rising commodity prices have also been a very significant factor. Many European countries, especially Germany which has a strong manufacturing base, are heavily dependent on imports of commodities.

Even before the oil price shock escalated the European Community Bank (ECB) had revised its inflation forecast up sharply. The ECB's only mandate is to limit inflationary pressures. Thus, as oil prices ratcheted up in recent days it was hardly surprising that ECB President Jean-Claude Trichet signaled the possibility that interest rates would be increased at the April meeting. However, he was quick to add that a series of rate hikes is unlikely.

Trichet seems sanguine about the risk of a rate hike to European growth because of strong momentum. This may turn out to be a miscalculation similar to the one that occurred at the time the ECB last raised rates in June 2008 just prior to the global financial panic. Europe has benefited enormously from growth in emerging markets countries. But growth, while remaining comparatively strong in those countries, also seems poised to slow. And, if or when that occurs, it will have negative consequences for Europe.

In any event, the ECB tightening bias has already caused interest rate spreads in peripheral countries, relative to those in Germany, to widen. Simultaneously the cost of accessing the EFSF has also increased. Given the fragile financial condition of peripheral countries with sovereign debt problems, rising interest rates is most unwelcome indeed. This puts pressure on EU authorities to reduce the cost of accessing the EFSF. Ireland is already under pressure and should Portugal need to access the EFSF, it would have to pay substantially more than it would have just a few weeks ago. And even if a country, like Portugal, did not need access, it would still have to pay more to tap the capital markets because of the higher term structure of interest rates. A warning of what may be in the offing came on March 10th when Portugal had difficulty auctioning 2-year notes and had to increase the yield by 130 basis points to complete the financing.

5. March 21st Meeting — Possible Interim Steps

On Friday, March 11th, perhaps in response to the dismal auction of Portuguese 2-year notes the prior day, EU officials authorized the EFSF to purchase bonds at issuance of peripheral countries. This should alleviate access and cost pressures of the sort that Portugal experienced on March 10th.

Another step would be to increase the overall size of the EFSF so that the actual lending capacity is closer to the current nominal amount of 440 billion euros than the effective amount of approximately 250 billion euros. This can be accomplished simply by raising the quotas for all participating EU members.

Another step would be to reduce the cost of borrowing from the EFSF so as to offset rising interest rates and interest-rate spreads. However, Germany is likely to demand that this be accompanied by support of the French/German competitiveness pact proposal, including an Irish commitment to raise its corporate income tax rate.

In addition, it is possible that the EU members might agree to permit the EFSF to buy peripheral country bonds in the secondary market. This would begin the process of bailout because it would transfer default and restructuring risk from private investors, including European banks, to EU members.

Whether significant agreements emanate from the March 21st meeting remains to be seen and will probably depend upon whether there is significant financial turmoil in European financial markets in coming days.

VI. *The Lords of Finance: The Bankers Who Broke The World* by Liaquat Ahamed

This book tells the story of four men, Montagu Norman — Governor of the Bank of England, Benjamin Strong — President of the New York Federal Reserve Bank, Hjalmar Schacht — President of the Reichsbank, and Emile Moreau — Governor of the Banque de France and their roles in responding to the financial and political dislocations stemming from World War I which

impacted policies during the roaring twenties and ultimately climaxed in the catastrophe of the Great Depression. The book makes for fascinating reading of the events of another time but it also provides an understanding of the interaction of politics, policymaking and financial markets that provides insights into our own times.

A. Key Economic Concepts

1. An Economy's Potential Rate of Growth

A country's potential growth rate depends upon three factors: (1) population growth rate, (2) the percentage of income redeployed into saving and thus into investment into capital goods, and (3) productivity or technical progress, as it is often called by economists, which is simply defined as the ability to increase output per unit of resource inputs over time. While it is useful to distinguish these three factors, in practice it is difficult to separate and measure independently the second and third factors.

Thus, if population is growing 1% annually and, combining the second and third factors, output relative to resource inputs is growing 2% annually, the potential rate of growth will be 3%.

As is true for so much of economics this simple concept gets a lot more complicated when one looks at the data for individual countries. For example, production depends on the number of employed workers rather than the size of the population. If the ratio of employed workers to population is constant, then the growth rates of both will be identical and it will not matter which measure is used. However, if labor force participation is changing systematically over time, perhaps because of demographic irregularities such as the baby boom or cultural changes such as greater entry of women into the labor force, then growth in the labor force will be the better measure.

Capital deepening involves building up the stock of capital goods over time relative to the amount of available labor. This enables the same amount of labor over time to produce more. Policy can encourage or discourage investment in capital goods. In the U.S., policy tilts toward encouraging consumption and discouraging saving. Policy can also encourage overinvestment in less productive capital goods. An example of this is the mortgage

interest tax deduction which encourages the building of larger, more expensive homes. But it seems doubtful that investment in larger homes relative to other investment alternatives improves growth potential over time; more likely it is an inefficient allocation of investment that reduces growth potential.

Technical progress is even harder to measure. First, it is important to distinguish between a mature economy and a developing one. A developing economy can operate at a much higher level of productivity for a period of time by taking advantage of capabilities already developed in mature economies. That higher rate of productivity will persist until the developing economy closes the gap with the mature economy.

A good current case in point of how "catch up" accelerates economic growth is China. The rate of population growth is actually slower in China than in the U.S. The difference in the Chinese growth rate of 9% and the U.S. growth rate of 3% is entirely due to a productivity differential between the two countries, which stems directly from Chinese implementation of mature economies' technology. The same phenomenon happened in Japan from 1960 to 1990, but once the technology gap had closed, Japan's growth rate slowed sharply and today is barely positive because of declining population growth. China currently has a very high saving rate and foreign financing is abundant. Both are facilitating very rapid expansion of China's capital stock.

In mature economies the rate of technical progress can vary over time. Periodically there are game-changing technological breakthroughs. The impacts of these breakthroughs usually take many years to work their way through the economy as it takes time to transform business processes and often laws, regulations, institutional rigidities and cultural factors slow the process of adaptation. In the U.S., for example, extended periods of low productivity have been followed by extended periods of high productivity. The high productivity periods always follow a transformative technological breakthrough. Since 1889, there have been six distinct productivity periods — three high and three low. The low periods occurred from 1889-1916 (1.7% annual increase); 1928-48 (1.8% annual increase); and 1973-1997 (1.4% annual increase). The high periods occurred from 1917-27 (3.8% annual increase) — mass production of the automobile and electrification; 1949-73 (2.8% annual increase) — air travel, interstate highways and mass production of labor-saving appliances; and 1997 to the present (2.8% annual

increase) — telecommunications, internet, computing power.

If one drills down into the details of what drives productivity — now combining the effects of capital deepening and technical progress, many factors come into consideration. For starters, the form of government has tremendous impact. One only has to look at the difference between a centrally planned and managed economy and one that relies on markets and individual decision making to appreciate the importance of the form of government. However, even if the form of government embraces market and individual decision making, maturity in governance mechanisms such as accounting systems, contract law and the enforcement of private property rights, ethical codes of behavior, and regulatory rules and supervision can make enormous differences over time in the rate of technical progress.

Financial system maturity and efficiency also matters. Impediments to access to credit or unduly onerous terms will limit the ability to finance investment and thus slow the rate of technical progress.

One more point is important. Good governance matters. Overbearing governance can impede or discourage investment and technical progress. Governance that is dominated by special interests often leads to inefficient investment allocation. Corrupt governance destroys trust and interferes with efficient allocation of investment.

However, too little governance can also have negative consequences. An absence of law will create a climate of abuse and even criminality. What is powerful about market and individual decision making in promoting efficient allocation of investment is that such decision making is driven by the desire to profit. However, history shows that the quest for individual profit can be harmful to the collective public interest unless boundaries of acceptable behaviors are established and enforced.

2. Business Cycle Fluctuations

Business cycles consist of fluctuations in economic activity over time around the trend potential rate of growth.

Business cycles arise because of transmission lags that exist in the economy. A shock will affect certain parts of the economy first. These initial

impacts ripple through other parts of the economy with the passage of time. Often feedback loops develop, thus increasing the complexity of the interactions.

In conventional economic theory it is customarily assumed that an economy that experiences a shock will eventually return to a state of equilibrium — economists call this phenomenon "mean reversion".

However, it is possible to have economies that achieve a stable equilibrium at less than the potential rate of growth. This is true for economies in which corruption is prevalent or where there are embedded permanent frictions.

Business cycles can be amplified both during the expansion and contraction phases by positive and negative behaviors. Economists usually refer to this phenomenon as "expectations". The concept is mentioned most frequently in the context of inflation. If people expect prices to rise, they will accelerate purchases to get something as cheaply as possible before the price rises. This behavior stimulates demand relative supply and assures that prices will rise. This kind of behavior is a key ingredient in any bubble and can result in extraordinarily dangerous excesses as was the case for housing.

Another amplifier of business cycles is the use of debt leverage. I have discussed in other letters how debt can accelerate economic growth for a period of time and fuel asset bubbles, but also how too much leverage can increase financial fragility and lead to damaging contractions.

3. Money and Credit — The Financial System

An efficient system of money and credit is essential to achieving an economy's potential rate of economic growth. An efficient system is one in which there is a high degree of information transparency and a mature set of financial intermediaries which can engage in maturity transformation, interest rate risk management and credit risk management.

Investment requires access to credit. An investment is attractive as long as its expected return exceeds the cost of financing. The monetary authority can increase the attractiveness of investment by lowering the price of credit

— interest rates. Lower interest rates stimulate aggregate demand. However, if aggregate demand exceeds supply, price inflation will ensue. What is important is that the price of credit stimulates demand for investment and consumption at a level that is consistent with the growth potential of an economy. Or, put a bit differently, the growth in the supply of money and credit needs to be consistent with the growth in economic output at its full potential level.

We know from experience that when the price of money and credit is too low, this stimulates real asset and financial asset price inflation. Once such a process is underway speculation can amplify asset price inflation.

Net new credit creation boosts demand but if it boosts demand above the potential level of output and such an imbalance is sustained for a period of time, leverage will build up and the financial system will become increasingly unstable. However, as we learned during the "Great Moderation", the process of building leverage can create the illusion that the financial system is very stable.

4. International System — Multiple Economies

All too frequently economic analysis assumes that what is happening elsewhere in the world is not particularly important. That is to say, there is a tendency to view an economy as a closed system that is not influenced in any material way by external considerations.

That, of course, is a dangerous trap to fall into. That is truer today than ever before with the full-fledged entry of many emerging economies into the global market economy. It is important to understand differences in the potential rate of growth, governance systems, maturity of legal, accounting and financial systems and, very importantly, differences in national interests. Flexible currency exchange rates are a means of constantly rebalancing these differences so that potentially disruptive imbalances do not build to unsustainable and dangerous levels. Nonetheless, history is replete with abortive attempts to control exchange rates. We have grown a bit wiser with experience but national interest still intrudes, as is the case with China currently.

B. Historical Events

Now, keeping this abbreviated discussion of key economic concepts in mind, the following discussion is based on the economic and financial events that occurred from the late 1890's until World War II. This is the period of time covered in ***Lords of Finance***.

1. The Gold Standard

Prior to World War I currencies of the U.S. and major European nations were fixed to the price of gold which meant that exchange rates between individual currencies were also fixed.

While paper currency (fiat money) was issued, confidence in its value was maintained by making it fully redeemable in gold at a preset value. While the amount of paper currency exceeded the value of the supply of gold, the amount of paper currency generally was fixed to be proportionate to that supply in a ratio that did not exceed 2.5 to 1.

Gold standard countries that experienced a trade surplus would accumulate gold as payment while deficit countries lost gold. Since exchange rates were fixed, deficit countries could not devalue their currencies and thus were forced to reduce their stock of currency in circulation and pursue austerity measures. This would result in deflation in deficit countries. Surplus countries would expand their stock of currency and would experience inflation. In this way rebalancing would take place "automatically", while the exchange rate remained fixed.

The beauty of the gold standard was that it forced countries to engage in corrective adjustments sooner than might have occurred in a flexible exchange rate regime governed by purely political processes. However, it is actually surprising that it worked as well as it did for as long as it did for all of the reasons outlined in the discussion of economic concepts. And, the tidiness and elegance of the gold standard did absolutely nothing to prevent the outbreak of World War I.

There was one serious flaw, however. Over time the supply of gold did not grow as fast as the economies of the gold standard countries. This lead

to a declining ratio of gold to GDP and because gold and the money supply were synonymous, balance was achieved through a persistent deflation in the general level of prices.

2. World War I

During the gold standard era the financial system was extraordinarily simple compared to today's complexity. There did not exist a plethora of financial liabilities as is the case today. Most all liabilities were in the form of paper currency and coin.

Thus, when governments needed to raise funds to finance the war effort, all of them jettisoned the gold standard and resorted to printing currency and borrowing funds from each other and particularly from the United States. The gold standard ratio of paper currency to gold of 2.5 to 1 evaporated.

With a small time lag the general price level in all major belligerents rose in lock step with the increase in the amount of currency in circulation. We are all acquainted with the quantity theory of money and it is very clear that in the simpler financial system that prevailed in the early 20th century, this simple theory very accurately described the relationship between the quantity of money, the level of economic activity and the rate of inflation.

Because the U.S. entered the war late and was a major lender it ended the war with a huge increase in its supply of gold and a lot of debt from European countries. Germany and the United Kingdom had little gold at all. France had more gold, but less than it had had at the beginning of the war.

As we all know the peace was deeply flawed and set the stage for two subsequent catastrophes — the Great Depression and World War II.

Putting aside the political short-sightedness in the Treaty of Versailles, the major financial fiasco was the requirement that Germany pay substantial monetary reparations. John Maynard Keynes warned at the time that this was ill-advised and would end badly, but his counsel was ignored.

The other major mistake that set the stage for the ultimately disastrous

course events took during the 1920s was the belief that all nations should return to the gold standard with fixed exchange rates as soon as practicable. There might have been some merit to that except for the reality that gold was no longer relatively evenly distributed across the major economies and as we shall see in a moment hubris and nostalgia colored judgment and lead to bad decisions.

3. The 1920's

While I will summarize very briefly the key events involving Montagu Norman — United Kingdom, Benjamin Strong — United States, Hjalmar Schacht — Germany, and Emile Moreau — France, I would encourage those who are interested to read the ***Lords of Finance***. It is a most fascinating story and rich in detail.

Germany. Germany was saddled with huge reparations obligations and enormous costs of rebuilding. That would have been a challenge for any government but in the absence of an adequate tax revenue base the Weimar Republic simply chose to pay for government deficits by printing currency. Needless to say, inflation rose in lockstep with the increase in the supply of currency. Hyperinflation ensued and all internal German debt was totally wiped out. This was a boon to debtors but a disaster for savers. To this day the trauma of the hyperinflation of 1923 is burned in the German memory and is currently and directly affecting its politics and government policies with respect to the European sovereign debt problems. This legacy is also a factor in the ECB's inflation policy mandate, which, unlike the United States, is not required to consider the effect of monetary policy actions on employment.

The hyperinflation was stopped dead in its tracks in late 1923. The solution was a curious one but it worked for a period of time. But the policy that stopped the hyperinflation sowed the seeds that eventually lead to the Nazi takeover of the German government and World War II.

Hjalmar Schacht entered into a prominent role toward the end of the hyperinflation, was given credit for stopping it and eventually was made president of the Reichsbank.

The hyperinflation was stopped through a complex deal which involved

several steps that were linked, although it took several months to put all of the pieces in place. First, a new currency was issued backed by real estate as Germany had no gold reserves. Second, however, Germany returned to the gold standard. Of course, it was impossible to redeem the new currency in gold, but the United States in effect provided a guarantee which was solidified by large loans from major U.S. financial institutions. Benjamin Strong, President of the New York Federal Reserve Bank, had a strong hand in structuring this arrangement and getting the large U.S. banks to extend loans. In reality the arrangement amounted to pegging the German mark to the dollar and not really putting Germany back on the gold standard. But it had the same effect because the price of the U.S. dollar was fixed to gold.

Third, the amount of reparations was reduced to a lower, but still enormous level, and payment terms were stretched out over a much longer time frame. Fourth, the U.S. agreed to forebear on debt owed it by France and other countries and to apply any reparations payments Germany might make to that debt. This last arrangement had the effect of Germany making France's debt payments to the U.S. Fifth, and importantly, the German government stopped printing currency and implemented austerity measures to balance the budget.

Suddenly, all was well with Germany, or so it appeared. Very quickly employment and economic activity increased, thanks to American bank loans. And just as quickly Germany became the new hot investment destination. American bankers now swarmed to make loans to all manner of German corporate and governmental entities and the economy boomed. That is what abundant debt can do. But the debt was denominated in short maturities and constantly had to be rolled over and the amount continued to build rapidly as time passed. Thus, sustainability of the policy depended upon the willingness of U.S. bankers to continue rolling the debt over. And, for a while it worked that way. The story is similar to our recent housing bubble. Debt can feel very good during the expansion part of the bubble. This is exactly what happened in Germany from 1924 to 1928. But too much of it, particularly when it is denominated in short maturities sets the stage for dramatic and violent reversal when confidence wanes and the bubble bursts. This is exactly what eventually happened in Germany between 1928 and 1931.

United Kingdom. Like all other participants in World War I, the United Kingdom was forced off the gold standard and experienced severe

inflation. The value of the pound in dollar terms plummeted from its pre-war fixed value of $4.86 to $3.20 by 1920 and prices climbed to 250% of the pre-war level. Unlike Germany, the United Kingdom implemented stringent austerity measures after the war and was able to reduce prices to about 170% of the pre-war level by 1923. The pound's value climbed but stalled out about 10% below its pre-war level.

Montagu Norman was a strong advocate of returning the United Kingdom to the gold standard and eventually the government agreed to do so in 1925. However, in doing so, hubris got the better of the authorities and in returning to the gold standard its value was pegged to the pre-war value of $4.86. This turned out to be a serious mistake. In a fixed rate exchange system, an overvalued currency, which was now the case for the pound, forces austerity and deflation. Interest rates had to be maintained at a very high level to sustain the value of the pound. For the remainder of the 1920s the United Kingdom was saddled with high unemployment and lethargic economic growth.

France. France chose yet a third route, eventually returning to the gold standard, but with a value for the franc that was undervalued. Before that occurred the value of the franc went through wild gyrations based on lack of confidence in the constantly revolving governments and rampant speculation that had little to do with the fundamentals of the French economy.

As luck would have it, Emile Moreau arrived on the scene about the time that the franc was so excessively undervalued that just about anything would have triggered a reversal. A change in the government and the ascension of Raymond Poincare in July 1926 as premier was the triggering event and in a week's time the franc fell from 50 to the dollar to 35. The franc's value continued to rise in the weeks that followed and Moreau finally engineered a return to the gold standard in late 1926 with the franc pegged at 25 to the dollar. Even with this remarkable recovery, the franc was still undervalued. This became abundantly clear during 1927 and 1928 as the French economy boomed and gold flowed in. This outcome is not unlike the one that China is currently benefiting from by pegging an undervalued yuan to the dollar.

Unfortunately, this "good luck" fed French egos and pumped their sense of self importance in political negotiations.

United States. The U.S., which had never left the gold standard, had

most of the gold, but did not expand the currency in circulation commensurately. As a consequence, after a brief inflation during 1919 and 1920, U.S. prices deflated throughout much of the rest of the 1920's.

Deflating prices were accompanied by low interest rates and in due course, particularly after the Florida real estate bubble burst in 1926, money flowed into stock market speculation, which in turn was fueled by easy access to cheap broker call loans. It is again the old familiar story of abundant and cheap leverage that fuels a self-feeding speculative mania

4. Great Depression

While most think of the October 1929 U.S. stock market crash as being the triggering event for the Great Depression, the chain of events that led to global depression actually began about a year earlier when Germany entered recession. The German recession commenced as U.S. banks became increasingly reluctant to lend.

When a bubble bursts and the cycle tips in the other direction the unraveling occurs rapidly and gathers momentum but still takes time to unfold. For example, housing prices in the U.S. actually began to decline in mid-2006; however, the first real hint of financial distress did not occur until February 2007 when New Century failed. The first significant market event did not occur until August 2007 when the subprime securities and asset-backed commercial paper markets collapsed. Even then it took another full year before the failure of Lehman Brothers marked the apex of the financial crisis.

In this same fashion the excesses that had built up during the 1920s because of a variety of deeply flawed policies began to unravel slowly at first with the German recession in 1928. The pace picked up steam with the 1929 U.S. stock market crash. But even then, the damage might have been contained. But that did not happen because policymakers did not understand how tightly the global financial system was linked and what kinds of actions needed to be taken on a coordinated basis to provide liquidity and reflate economies. And, as the saying goes, as the hole is dug digger it is harder to get out.

At least we have learned quite a bit from history this time around. Poli-

cies that accelerated and deepened the unraveling process during the early 1930's were avoided in the recent crisis. Plenty of liquidity was provided and all impacted countries ran large budget deficits to interdict the vicious downward circle that was unleashed by the burst bubble. We are now far enough past the crisis to know that another Great Depression was avoided. Had similar measures been taken in the early 1930's a similar more favorable outcome would most likely have occurred.

But, that is not what happened. In 1931 the extensive over leverage of German and Austrian banks and the predominance of short-term funding lead to their collapse. The fragility of many European banks today is not terribly dissimilar from that of the German and Austrian banks in 1931. However, the governance and policy system that exists now through the EU and ECB is much better prepared to deal with sovereign debt and bank solvency problems. This gives considerable cause for optimism that unresolved problems, which still remain to be addressed, will eventually be handled in constructive ways that will not spiral out of control.

C. Observations

1. Quantity of Money

Too little money and credit stifles economic activity and fosters deflation. Too much leads to inflation.

The problem during the height of the gold standard prior to World War I was that the supply of gold did not grow as fast as economic output with the consequence that a moderate, but persistent deflation in prices took hold. Today the U.S. dollar provides global monetary reserves and acts in much the same way as gold reserves once did. Global growth, thanks to emerging economies is averaging 4% to 5% annually compared to U.S. growth of a little less than 3%. This means that U.S. economic output as a share of global output is steadily shrinking.

As the U.S. economy shrinks as a proportion of the global economy the ability of the dollar to serve as the only global reserve currency will become increasingly tenuous. Whether that will translate into a deflationary global bias as a shrinking supply of gold did 100 years ago is another matter, but

perhaps one worth pondering.

2. Exchange Rates

From experience we know that fixed exchange rates, if not set at the right level, can lead to destabilizing imbalances. However, fixed exchange rates do force a country to address imbalances through adjustments to the real economy rather than simply changing the value of the currency.

We also know that the both the United States and the European Union have fixed exchanges rates among their member states. However, the EU does not have the kinds of fiscal disciplines in place that exist in the U.S.

But, we also know that freely floating exchange rates are not necessarily a complete panacea. Speculators can manipulate currency values. Some countries can also choose to seek advantage by fixing their currency's value at a favorable level while most other currencies float. China today is like France in the 1920's in this regard.

Another shortcoming of floating exchange rates is that there is little to force a country to mend its ways when it pursues ill-advised monetary and economic policies.

3. Debt Leverage

Debt leverage can stimulate economic growth. But, too much debt leverage leads to financial crises. And, the magnitude of financial crises will be exacerbated if debt is denominated in short term maturities and other sources of liquidity are limited.

4. Liquidity

When confidence in financial institutions and the financial system is compromised, liquidity must be provided quickly and in ample amounts.

The challenge comes when deeply embedded loses exist. Then the provision of liquidity involves the state socializing losses. At some level this

could become counterproductive. That is what appears to be the case in Ireland where the government guaranteed all bank liabilities only to discover later that in so doing it had nearly bankrupted the nation. The lesson is that while providing liquidity quickly and amply to restore confidence and defuse the potential for contagion, governments and central banks need to understand the longer run potential consequences.

With the benefit of hindsight, the Irish government could have accomplished its stabilization objectives without bailing out creditors completely. In the U.S. investors in Fannie Mae and Freddie Mac preferred stock were not bailed out. This contributed to the failure of a few community banks but the overall impact was absorbed without cataclysmic consequences.

5. European Union

My detailed observations about the EU are contained in Section V of this month's letter. In summary, the EU has to do three things. First it will need to figure out how to spread the pain of restoring countries with significant sovereign debt problems to economic and fiscal health. Second, it will need to figure out how best to socialize losses to prevent potential contagion among European banks and other countries. Third, in the long run it must structure workable and acceptable ways that assure a much greater degree of fiscal discipline and responsibility among its member countries.

6. U.S. State and Local Governments

While the worst of the financial crisis has passed, many state and local governments are still struggling with substantial revenue shortfalls. This is forcing long overdue examination and revision to spending programs. It is and will continue to be a painful process. The Federal government needs to help by limiting spending mandates it imposes on states. Medicaid is an especially large challenge.

D. Future Prospects

When one reflects on the events between World War I and World War II and the more recent events of 2007 to the present, there are many similarities but there are also differences. A few issues that merit consideration in the context of our historical experiences are listed below. With the exception of the first issue, the others have been discussed in considerable detail in past monthly letters.

1. Potential Rate of Growth Slowing in Most Countries

   There is a direct inverse correlation between increases in the standard of living and population growth. This is a good thing because the earth's resource capacity is finite, which means that there is probably a limit to the size of the global population that can achieve a high standard of living. But, a race is underway and the outcome is uncertain. Will global population stabilize before resources limits become binding or will resource limits become binding sooner. If the latter occurs, it would have profound and negative consequences for global politics and social stability.

   Because so much in the way of economic growth and expansion in the standard of living depends on cheap and abundant energy supplies, the finite limitation of fossil fuels is particularly worrisome.

2. Income and Wealth Shifting from Younger People to Older People
3. Total Debt Leverage, Including Public Debt, Is High and Rising
4. The Special Challenge of China and Currency Pegging
5. Speculative Orientation of U.S. Financial System
6. Inadequate Infrastructure Investment in the U.S.

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