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

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The Longbrake Letter*

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I. Suddenly Risk Aversion Is Ascendant As Investors Globally Worry About Slower Global Growth, Renewed Recession in Developed Economies and Banking Solvency

In spite of nearly universal optimism up until a few weeks ago that better economic times were emerging, it is now apparent that the last two years were merely an interlude in an ongoing global financial crisis. There is little doubt that we have entered phase two of the global financial crisis which began in 2007.

(Readers of this letter will recall my discussion of the "Lords of Finance: The Bankers Who Broke the World" in my March Longbrake letter. This fascinating book chronicled the events that led up to and culminated in the global Great Depression of the 1930's. While the initial financial cataclysm was kicked off by the U.S. stock market crash in the fall of 1929, phase two took hold two years later with the implosion of the European banking system. The cause? — excessive debt which could not be contained and precipitated insolvency. To a certain extent, the events of recent days have an eerie similarity to events of the summer of 1931.)

That optimism was based upon several assumptions. First, in the U.S. debilitating weaknesses in the financial system were repaired through TARP, massive recapitalization of financial institutions, and extraordinary liquidity support by the Federal Reserve as lender of last resort. Second, the Federal Reserve flooded the economy with massive amounts of liquidity by driving short-term interest rates to zero and engaging in not just one, but

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two, rounds of quantitative easing. Third, congress approved unprecedented amounts of fiscal stimulus, driving the budget deficit from -1.1% in fiscal year 2007 to a peak of -10.2% in fiscal year 2009. Fourth, in the wake of severe recession in developed economies, emerging economies, and in particular China, spurred recovery in global economic growth.

All of this was expected to result in sustained economic recovery and renewed growth. No less than the Federal Reserve with its hundreds of economists forecast a return to real GDP growth in the U. S. of 3% to 4%. Yet, with recent revisions, we now know that the actual real growth rate over the last year has been a paltry 1.6% and real GDP has yet to return to the peak level achieved in the fourth quarter of 2007. Unemployment remains mired above 9% and the labor force continues to contract even as the pool of eligible workers rises, signaling massive increases in the number of workers who are so discouraged that they have dropped out of the labor force.

What policy did accomplish in 2008 and 2009 was to prevent a downward spiral into depression of the sort that occurred in the 1930's. What it did not accomplish was to restore sustainable growth consistent with potential. While the reasons for that failure were understood by a few, an increasing number are coming to understand why policy crafted to stimulate demand has had limited effectiveness in an economic and financial system hobbled by an excessive burden of debt.

But now, and quite suddenly, financial markets have lost faith in the effectiveness of policy interventions to restore the economies of the U.S. and other developed nations to a stable growth trajectory. And, without growth, it can no longer be presumed that weaknesses in the balance sheets of consumers, financial institutions and nations will self-correct. In recent days investors have arrived at four conclusions. First, financial institutions are threatened by potentially significant unrealized losses, which until now have been hidden from view by accounting practices and forbearance policies. Second, global growth is slowing. Third, policymakers in developed nations have little ammunition left to stimulate their economies and, worse, excessive levels of public debt threaten solvency and will force fiscal austerity, which, in turn will slow growth even further and perhaps result in renewed recession in developed economies. And, fourth and perhaps the greatest destroyer of confidence in recent days, is the tragic-comedy in the U.S. and Europe of dysfunctional governance of policymakers milling about and acting blatantly

in narrowly-focused political self-interest rather than seeking to bury the quest for political advantage and to work together to craft policies that will put their nations on the road to sustainable recovery and growth.

This reassessment has resulted in a significant reduction in long-term growth expectations. It has also stoked fears of solvency risks in the financial system and the potential for contagion. Thus, the market is telling us that the financial crisis that began in 2007 is not over; rather it has entered the next stage. At the moment markets are consumed by deep anxiety about whether tepid economic growth will morph into recession and whether policymakers will be able to contain the accumulating negative momentum as they were able to do so in 2008-09.

II. The Curse of Excessive Debt Leverage

As for why policies have been ineffective in reigniting economic growth and why markets now are paranoid about renewed financial crisis and the potential for contagion, one needs look no further than the disease of excessive debt leverage. I have commented many times in these letters about this problem and its overriding importance in driving events in the global economy and financial markets. Until now markets have underestimated the consequences of excessive debt leverage for long-term economic growth and overestimated the ability of policymakers to fix the problem with relatively little pain. Perhaps that myopia is finally in the process of being swept away.

1. Role of Debt in the Economy

As I have commented in other letters, debt is an essential ingredient in enabling a modern market-based economy to operate efficiently, especially when its use is facilitated by a well-capitalized system of financial intermediaries. Debt provides the financial fuel to foster innovation and investment in productive enterprises that generate income and spur growth, productivity and increases in the standard of living. As credit underwriters, financial intermediaries work to place debt in well-managed entities in which risks are reasonable. Once the debt is placed, financial intermediaries conduct ongoing risk assessments and intervene, when and if necessary, to assure that management remains focused on the business at hand and addresses

effectively and timely any challenges that arise.

This is a somewhat idealized portrayal of debt and financial intermediation because actual events can diverge from the ideal. Mistakes occur. Assessments are not always thorough. Unexpected events can dramatically affect expected outcomes. And, importantly, human behavior can interfere — greed and speculation, unwarranted optimism, complacency, misplaced trust, myopia, laziness, to name a few of the more serious human behaviors that get in the way of rational action. That is why it is important in a modern economy with a complex financial system to have standards-setting bodies, laws and regulations governing activities, transparency and timeliness of information dissemination and regulatory oversight of conduct and compliance.

2. Good versus Bad Debt Leverage

But, even when all of these components are in place and operating effectively, they cannot prevent the disease of excessive debt leverage unless there is explicit understanding of the dividing line between good leverage and bad leverage. And, such an understanding must be accompanied by an ability to prevent excessive leverage from building up and spinning out of control.

Leverage becomes excessive when it becomes difficult to service interest and principal repayments out of usual and customary cash flows. Leverage can become excessive without an event of default being imminent simply if the surplus of cash flows available for responding to unexpected negative impacts on cash flows becomes too small. This is obvious for individuals and companies but it is also true for nations.

The dividing line between just enough leverage and too much is murky. Pressures to increase leverage are relentless, driven by optimism, speculation and greed. Episodes of financial bubbles followed by collapse course through all of recorded history. They are well documented, yet they recur with frightening regularity. Every one of these episodes is fueled by debt leverage and greed and an absence of effective governance mechanisms to corral the bubble.

Perhaps the best we can hope for is for authorities to intervene and contain the speculative bubble before it spins so far out of control that the

consequences when the bubble eventually bursts are cataclysmic.

In previous letters I have also pointed out that the greater the extent to which excessive leverage accumulates, the greater will be the pain and suffering in the ensuing correction. This is true because someone must absorb the loss from leverage which can no longer be supported by an ability to service the debt. And, the larger the amount of excess leverage is, the larger will be the loss that must be taken.

3. When Bubbles Burst Someone Ultimately Must Bear the Loss

When the bust finally comes, someone must bear the loss. In a simple world, the loser would be the holder of the debt instrument. But, we do not live in a simple world. When a financial intermediary is the holder of the defaulted debt, requiring it to absorb the loss could have negative ramifications that extend to other financial intermediaries and even to the entirety of the financial system. Contagion effects can occur because of linkages that cause losses for others. Contagion effects can also occur because of insufficient information transparency and the engagement of other financial intermediaries in similar credit instruments which could have embedded unrealized losses. Risk aversion can lead to loss of liquidity and panic selling.

Because no government is prepared to tolerate the collapse of its financial system and economy, the typical, but not necessarily first, response to a bursting debt-fueled bubble is to socialize losses. This means moving the losses from the holders of the defaulted credit instruments to taxpayers. Obviously, this is a very unpopular resolution method and one that frequently results in a fairly abrupt end to political careers. Politicians understand this risk and the natural human tendency to seek solutions that avoid risk leads them to devise forbearance and avoidance response strategies. We refer jokingly to these strategies as "pray and delay" or "pretend and extend" or somewhat more cynically as "kick the can down the road".

Sometimes, however, socialization of losses merely substitutes one problem for another. The idea of socializing losses is that the transference of debt to the sovereign benefits from a larger revenue base, so that what was excessive leverage at one level is manageable leverage at the sovereign level. But, this doesn't work if the sovereign already has high debt leverage or if

the sovereign's revenue base is too small. This has happened to Ireland. It socialized bank losses to avoid a collapse of the Irish banking system and the more extensive damage to the Irish economy that likely would have ensued had the collapse been permitted to occur. Ireland actually had reasonably low debt leverage prior to socialization. However, the transferred debt was so enormous that it impaired Ireland's ability to service it. The consequence was that the European Community Bank (ECB) through the European Financial Stabilization Facility (EFSF) and the International Monetary Fund (IMF) had to make bailout loans to Ireland to avert potential default. Yet, Moody's just reduced Ireland's debt rating to Ba1, which is the highest junk classification, and Ireland's credit default swap pricing implies that the market expects a 58% probability of default. Another bailout seems probable and that may not be the end of the story.

But the history of bubbles and busts makes it abundantly clear that strategies which do not address directly taking the loss as quickly as possible and determining who should bear that loss, usually have two outcomes. First, temporizing strategies are rarely successful and ultimately the day of reckoning is inevitable. Second, temporizing strategies usually result in making an ugly problem even worse. There is an old saying in banking: "Your first loss is your best loss". This is as true for economies and nations as it is for individuals and financial institutions. Only in rare circumstances are temporizing strategies successful and those successes appear to be limited to cases in which debt leverage was not overly excessive to begin with. Another way of putting this is that the healing process cannot get underway in any meaningful sense until the poison that caused it — in this case excessive leverage — is removed.

4. Public Policy Strategies to Date Have Focused Primarily on Forbearance and Loss Shifting Rather Than Loss Realization

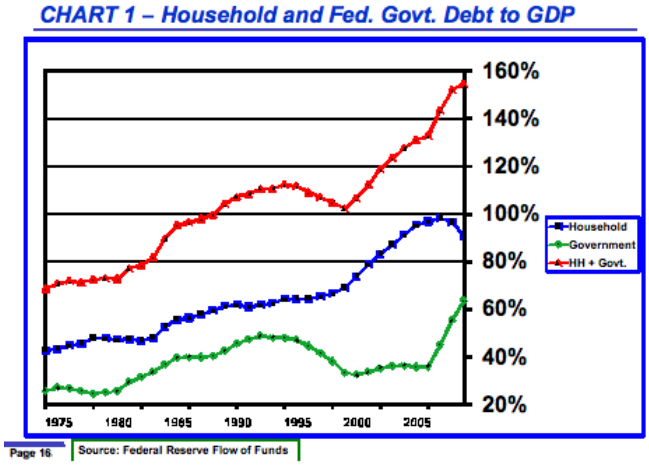
We are in a time of dealing with the fallout of excessive debt leverage in a number of spheres. The time has long since passed for preventive action. Instead, policymakers have been forced to respond by developing strategies to manage the unwinding of excessive leverage and prevent the potential for contagion. In nearly all cases policymakers are dancing around the problems rather than tackling them head on.

While some losses have been taken — just ask investors who had stock in

Countrywide or Washington Mutual or who lost their home in foreclosure, many have been shifted from the private sector, either directly or indirectly, to the public sector. Examples of direct loss shifting include the assumption of Irish banking debt by the Irish government and the protection of investors in Fannie Mae and Freddie Mac bonds and mortgage backed securities through direct U.S. government guarantees. Many other examples of direct loss shifting, usually involving socialization of losses, exist.

Indirect loss shifting also has occurred through massive government stimulus programs to cushion the pain of unemployment, to attempt to bolster demand through tax cuts and spending programs, and to support state budgets through transfer of federal funds, obtained through borrowing, to states. Such stabilization programs, while intended to reignite private sector economic growth, also result in transferring debt from the private sector to the public sector since stabilization programs are almost always financed through debt issuance rather than taxes. If stabilization programs fail to reignite growth as the recent evidence indicates, then all that has been accomplished is to shift the debt from the private sector to the public sector, heightening solvency risks in the public sector. This is a game that can be played only so long before it becomes a serious problem, which is exactly what we are now experiencing.

Chart 1 shows the ratio of household debt and U.S. federal public debt



to nominal GDP since 1975. The story embedded in this chart is not a

pretty one. Household debt rose from 45% in 1977 to 65% in 1998. But, then growth ratcheted up explosively to 98% in just another ten years. Household debt peaked at 99.5% in the first quarter of 2008 and has since fallen to 89.6% in the first quarter of 2011. Between the first quarter of 2008 and the first quarter of 2011 federal public debt rose from 37.4% to 64.9% of GDP. Doing the math, the 9.9% decline in the household debt ratio has been offset nearly three times over by the 27.5% increase in the public debt ratio.

The story doesn't end here. 75% of household debt is in the form of mortgage debt. About 24% of all home mortgages are underwater, which means that the amount of debt owed exceeds the current market value of the home. Thus, approximately 13 million households have unrealized losses in their homes. Eventually, if home prices do not recover, and prospects for that to happen any time soon appear remote, either the homeowners or creditors/investors will have to absorb these losses. For the most part public policy has favored forbearance over loss recognition. Some loss recognition is occurring through rate-reduction mortgage loan modifications, but in nearly all cases the present value of reduced interest payments from modified loans is considerably less than the amount of negative homeowner equity. Homeowners with negative equity are far more likely to default when trouble hits and increasing numbers are simply handing the keys back, a process known as "strategic default".

We know from comparative country studies that a ratio of public debt to GDP between 70% and 90% is a range where debt begins to become unmanageable. The U.S. is just a few months away from crossing the 70% threshold. While I am not aware of research which documents a similar threshold level of the ratio of household debt to GDP when the aggregate amount of household leverage becomes excessive and unmanageable, we are very clearly at an excessive level currently. Just eyeing **Chart 1**, the crossover zone from manageable to excessive household debt may fall in about the same 70% to 90% range as that for public debt.

5. Three Debt Crises Remain Unresolved — European Sovereign Debt, U.S. Public Debt and Budget Deficits, and U.S. Housing Debt

Three crises, all stemming from excessive levels of debt, continue to dominate the headlines. They are percolating and, regrettably, each is steadily

worsening. They include the European sovereign debt crisis, the U.S. budget deficit and public debt, and the U.S. housing market. Although each has its own set of complexities and nuances, the root cause of all three is excessive debt leverage. And, so far, the response in each case has been forbearance and avoidance. The first two are at critical junctures which demand the development and implementation of new policy strategies. Unfortunately, but not unexpectedly, the strategies devised in recent days will not resolve either crisis once and for all, but simply buy some time; that is, "kick the can down the road".

European Sovereign Debt. In Europe the ink was barely dry on the latest chapter in the on-going Greek sovereign debt crisis when financial markets drove interest rates on Spanish and Italian sovereign debt up to worrisome levels. The excessive debt problem is no longer limited to a few smaller countries in Europe, it is a problem that extends to most all European nations, including Germany. To calm markets, the ECB reluctantly agreed to buy Spanish and Italian debt. Interest rates for ten-year debt immediately fell 100 basis points from 6% to 5%. However, the rate premium relative to German bunds remains very hefty at well in excess of 200 basis points. Furthermore, the likelihood that Spain and Italy are heading into recession and the negative reinforcing impact of additional austerity measures in both countries will have on the extent of recession assure that the burden of debt in both countries will increase. Or, put succinctly, the near-term solution assures a worse outcome later on as the economies of Spain and Italy shrink.

U.S. Public Debt and Budget Deficits. As most expected, congress raised the U.S. debt ceiling, thus avoiding an event of default. But the failure to deal forthrightly with the budget deficit and the unsavory spectacle of congressional wrangling, served to destroy confidence. S&P in its analysis accompanying its downgrade of U.S. public debt put it well: "***The effectiveness, stability, and predictability of American policy-making and political institutions have weakened at a time of ongoing fiscal and economic challenges.***"

When confidence plummets within the context of an already extremely weak and fragile economy, it is likely to lead to delays and curtailments in consumer spending and delays and curtailment in business spending and hiring. While I had expected growth in the U.S. to be lethargic and not much greater than stall speed, plummeting confidence, which is currently

being reinforced by the dramatic sell off in stocks, increase the prospect of renewed recession. If we are lucky enough to escape that fate, growth will be so tepid that most Americans will believe we are in recession, regardless of what the official data indicate.

U.S. Housing Crisis. As for the U.S. housing crisis it is clear that the operative policy assumption is to bear the pain by doing little because it would be too painful and difficult to devise more direct remedial strategies. Anyways, it is assumed that the problem will eventually take care of itself as excess housing inventory is absorbed through population growth and household formation. Closer scrutiny of the data cast serious doubt on the validity of this assumption. And, if the assumption is wrong, the future consequences for homeowners, investors, the financial system and the U.S. economy could be severe. A slowdown in overall growth and recession, should it occur, will serve only to make an already bad problem even worse. While I had intended to explore the U.S. housing crisis in greater detail in this month's letter, in light of other developments, this is now a task I have decided to defer until the September Longbrake Letter.

III. Intersection of Financial Crisis With Political Crisis

Economic and financial crises have their genesis in government policies and regulation. Government policy and regulation, either by design or through operation of the law of unintended consequences, determine who makes or loses money and how much. Of course, government policy and regulation only serve to define the boundaries. What actually transpires depends on the decisions of the financial elite. In the case of the recent ill-fated housing bubble, the financial elite ran amok, while financial regulation was largely ineffective. In the end the financial system in the U.S. failed because of the misguided decisions of the financial elite. This failure, in the words of George Friedman "... created a massive political problem centered not so much on confidence in any particular financial instrument but on the competence and honesty of the financial elite itself."[1]

[1] George Friedman. "Global Economic Downturn: A Crisis of Political Economy." STRATFOR. August 9, 2011.

Friedman goes on to say that the financial crisis created a political crisis in which "The question was whether the political system was capable not merely of fixing the crisis but also of holding the perpetrators responsible." Unfortunately, based on recent events, the answer to both parts of the question appears to be "No" — the system has not been fixed and no one of any prominence has gone to jail. Friedman concludes that "... the perception is that having spent large sums of money to stabilize the financial system, the political elite allowed the financial elite to manage the system to its benefit." This in turn led to a second crisis involving the political elite. In the U.S. the direct response was the rise of the Tea Party movement, which took on the direct role of criticizing the political elite by arguing "... that the political elite had solved the financial problem both by generating massive debt and by accumulating excessive state power."

Friedman's essay is worth a careful reading because he documents the failures of the financial elite followed by the failures of the political elite, not just in the U.S., but also in Europe and China. These three powers account for the preponderance of global economic wealth and military power. Failures of the financial and political elites set the stage for the potential emergence of a third crisis — one in which the elites themselves "... become delegitimized and all that there is to replace them is a deeply divided and hostile force, united in hostility to the elites but without any coherent ideology of its own. In the United States this would lead to paralysis. In Europe it would lead to a devolution to the nation-state. In China it would lead to regional fragmentation and conflict." These are not forecasts of what will happen but of what could happen. What is clear is that what started as an economic problem led to a political problem, which is now exacerbating the economic problem.

In summary, policymakers (political elite) did not successfully resolve the economic problems stemming from the great bubble of excessive debt leverage. In fact, the solutions exacerbated the problem of excessive debt leverage and along with it created a political crisis that threatens the legitimacy of the political elite. As we enter the second phase of the financial crisis, our flexibility to respond is far more limited and the political risks are enormous.

When one considers all of this, the market crash of the last few days becomes less mysterious. Markets have a history of myopia, of engaging in the pursuit of hope and persisting in optimism in spite of evidence to the con-

trary until the relentless march of contrary information ultimately becomes too great to ignore any longer. Thus, while nothing of a dramatic nature set off the stampede, a series of events slowly undercut the foundation of optimism to the point that collapse became inevitable. In the U.S., the June employment report and rise in the unemployment rate was clear evidence that stimulus was not working and the economy was not turning around. Then second quarter GDP came in at a tepid 1.3% annual rate and first quarter GDP was revised down to 0.4% — neither figure was remotely close to the 3% to 4% GDP growth rate that had been forecast by many, including the Federal Reserve, at the beginning of 2011. This was quickly followed by the absurdity of the debt ceiling debate and failure of the politicians to agree on a substantive fiscal consolidation process. It appears that S&P's downgrade of U.S. public debt, although amply telegraphed in advance, was the final nail in the coffin. To this should be added the unraveling of the European financial system, which have given rise to a whiff of financial panic, in the wake of the failure of the European Union to deal effectively with sovereign debt issues. And, China with its declining competitiveness and rising inflation increasingly looks like it is becoming part of the problem rather than part of the solution. And, to the extent that that is the case, China and other emerging economies will not have an ability to come to the rescue of developed economies to nearly the extent that they did after the economic collapse in 2008.

IV. Ineffectiveness of Macro Fiscal and Monetary Policies

In past letters, I have discussed why I believe that macro fiscal and monetary policies have been unsuccessful in igniting a robust self-sustaining economic recovery and expansion. In short, policy has focused on attempting to create more jobs indirectly through programs to support income and boost spending, rather than pursuing initiatives directly that create jobs, such as infrastructure investment. While such consumption-oriented policies worked in the past, they have been much less effective in this recovery. There are many reasons including consumer over-indebtedness, loss of substantial wealth through housing price declines, tepid increases in nominal wages with a growing share of profits going to owners rather than labor, and broader-based and tenacious global competition covering not only man-

ufacturing but much of services as well. All these factors have combined to limit the effectiveness of macro policies focused on stimulating demand in creating jobs.

Unfortunately, policymakers do not seem to grasp why macroeconomic policies have not been working as expected. But, even if they did, the political policy agenda is now focused on limiting the size of the federal budget deficit and stabilizing the federal debt to GDP ratio. Attacking the problem of lack of job creation in a direct fashion would require new program approaches, undoubtedly requiring additional spending.

Thomas L. Friedman in an August 6, 2011 op ed column wrote, "... our country is now finding itself in the worst kind of decline — a slow decline, just slow enough for us to keep deluding ourselves that nothing really fundamental needs to change if our future is to match our past."[2] This decline, according to Friedman, has two causes. The first is excessive debt leverage, or more picturesquely — "credit steroids", which he likens to baseball players injecting themselves with massive amounts of steroids to raise performance levels — a quick fix with an eventual bad ending. But, the second cause is an even more important and more insidious driver of decline. What made America great was what Friedman refers to as the **five basic pillars of growth** — "*education, infrastructure, immigration of high-I.Q. innovators and entrepreneurs, rules to incentivize risk-taking and start-ups, and government-funded research to spur science and technology.*" But, sadly, since the end of the Cold War 20 years ago, we have taken our eyes off of the importance of nurturing these five pillars and, instead, have diverted scarce and precious resources into questionable wars and expensive social programs, such as Medicare and Medicaid.

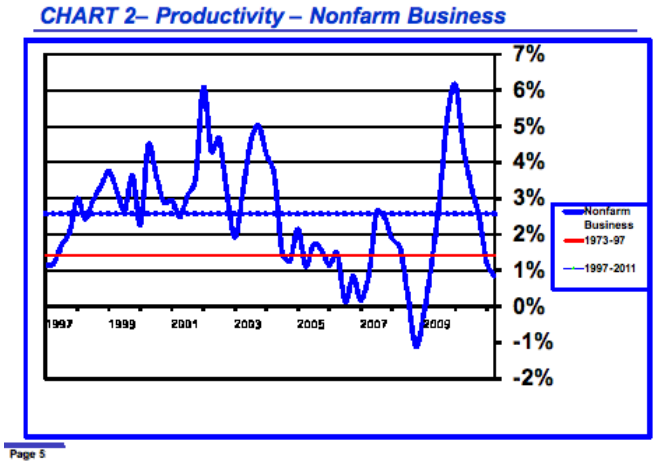
We learn in the study of economics that the foundation of long-term wealth creation is investment. When policy tilts toward redirecting the distribution of wealth in lieu of creating wealth through purposeful investment, as it has in the U.S. over the last 20 years, it is inevitable that wealth creation and improvements in the standard of living will erode over time. This is not to say that redistribution of wealth is bad policy. What is harmful is when policies focused on redistributing wealth crowd out policies intended to promote investment and wealth creation.

[2]Thomas L. Friedman. "Win Together or Lose Together". New York Times. August 6, 2011.

V. Prospects for Economic Growth

1. Potential GDP Growth = Stall Speed

Potential noninflationary GDP growth in an economy benefitting from full employment is equal to the population growth rate plus the rate of productivity improvement. The Congressional Budget Office estimates that potential GDP growth is likely over the next few years to be in a range of 2.2% to 2.4%. Because the rate of growth of that segment of the population which is technically employable is currently 0.75%, this would imply that CBO is assuming productivity growth ranging between 1.5% and 1.7%. Productivity growth encompasses both labor and capital productivity gains. While nonfarm labor productivity is highly volatile from quarter to quarter, it has averaged 2.58% over the last 14 years (see **Chart 2**). This level

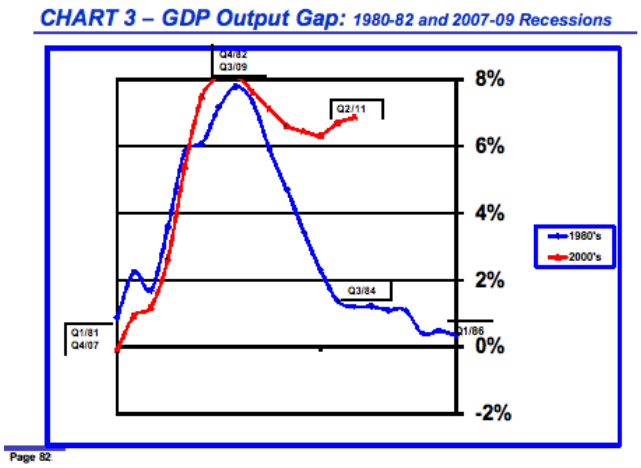


is considerably higher than the level of productivity embedded in CBO's potential GDP growth estimate. However, while it is premature to be absolutely sure, the recent sharp decline in productivity to negative rates in the last two quarters, bringing the annual rate of growth down to 0.85%, suggests that labor productivity growth may be in the process of moving down to a level, which could be sustained for several years, that is similar to 1.43% average annual labor productivity growth that prevailed between 1973 and 1997. If that turns out to be the case, then CBO's projection of

potential GDP growth could well turn out to be close to the mark.

When there is substantial slack in the economy, as is currently the case, real GDP growth equal to the potential rate becomes the "stall speed" rate of growth. That is because growth at the potential rate is not fast enough to reduce the amount of slack — it is just sufficient to maintain the output gap at the same high level. If one were applying the airplane analogy of stall speed to the economy, we know that what stall speed occurs in aerodynamics the plane ceases to have sufficient lift and crashes. This may or may not be an apt analogy for the U.S. economy. Over the last two quarters real GDP growth failed to attain stall speed and the output gap has increased. Now there is increasing talk about the possibility of renewed recession. With the passage of time we will know the answer.

Chart 3 compares the progression of the GDP output gap during and



after the recessions of 1980-82 and 2007-09. The output gap is measured as the difference between CBO's estimate of potential real GDP and actual reported real GDP divided by potential real GDP. A positive value in **Chart 3** indicates that an output gap exists — actual real GDP is less than potential real GDP.

During both recessions the output gap escalated rapidly as the recession unfolded from a level near zero at the onset of the recession. The output gap peaked at 7.8% in the fourth quarter of 1982 just after the end of the

1980-82 recession and peaked at a comparable level of 8.1% in the third quarter of 2009 just after the end of the 2007-09 recession.

But the behavior of the output gap differed dramatically between the two recessions during the recovery phase of the business cycle. Seven quarters have passed since the output gap peaked at 8.1% in the third quarter of 2009. During that time the output gap has fallen to 6.9%, and disappointingly, has actually gotten larger since hitting 6.3% in the fourth quarter of 2010. In contrast, seven quarters after peaking just following the 1980-82 recession, the output gap had virtually disappeared — it stood at just 1.2%.

Clearly, today's U.S. economy is a very different one from the one that responded so well to much smaller doses of fiscal stimulus in the early 1980's. And, monetary policy during that earlier time was anything but accommodative as the Volcker Fed continued a relatively tight policy for several years to assure that the runaway inflation of the 1970's and early 1980's would not reemerge.

2. Data Revisions Reduced GDP Growth Substantially

Every year in conjunction with the release of second quarter GDP and national income data, the Bureau of Economic Analysis (BEA) revises data for previous years. You are familiar with the "Advance", "Second" and "Final" quarterly estimates of GDP. Generally the "Advance" estimate is based on two months of data and estimates for the third quarter of the month. Subsequent revisions substitute actual data for estimates. What is less well known is that even the "Final" estimate has large components based on estimates and projections. Over time "original source" data become available and this enables the BEA to refine the reported data. The refinement process is a multi-year process, but the largest adjustments occur after one year. By the fifth year following the original report the data for the most part stabilizes and undergoes little subsequent adjustment; however, in this year's updates the BEA revised data all the way back to 1947, although the revisions for years prior to 2004 were small and immaterial.

Revised GDP data show that the 2007-09 recession was deeper than originally reported with a peak to trough decline of -5.0% compared to the original estimate of -3.7%. The peak rate of growth in the recovery, reached in the third quarter of 2010, was revised up from 3.2% to 3.5%.

However, growth was revised down in the fourth quarter of 2010 from 3.1% to 2.3% and in the first quarter of 2011 from 1.9% to 0.4%, showing a much steeper loss of forward momentum than originally reported. Perhaps the most disturbing part of the revisions was the revelation that real GDP of $13.27 trillion in the second quarter of 2011 was still $56 billion below the pre-recession real GDP peak level of $13.33 trillion reached in the fourth quarter of 2007. Thus, there has been no net growth in the economy in three and a half years.

Substantial revisions occurred also for consumer income, spending and saving data, inflation measures of personal consumption expenditures and productivity. Generally, consistent with downward revisions to GDP, income and spending data were revised downward. Changes to inflation measures generally were minor. However, estimates of productivity in recent years declined sharply.

All in all, the data revisions paint a picture of a much deeper recession and a more lethargic recovery.

3. 2011 Q1 GDP

Table 1 below compares the "final estimate" of first quarter GDP growth, which was originally reported in June, with the revision released with the annual benchmarking in July. The size of the decline from a "final estimate" of 1.92% to 0.36% was rather astonishing and certainly added to evolving market gloom. Nearly all of the change was concentrated in just two items — inventories, which decreased from an original estimate of 1.31% to 0.32%, and net exports, which declined from 0.14% to -0.34%. These two revisions decreased the first quarter GDP growth estimate by a combined 1.47% compared to an overall decline of 1.56%. Evidently, U.S. businesses were not building inventories as much as the original data suggested. This could be constructive in the sense that if we are heading into recession once again, the excess inventory overhang will be smaller and businesses will not need to cut back on production nearly as much to pare down inventories. The change in the net export data is not a good story because it indicates that we exported less and imported more during the first quarter than the original data portrayed.

Table 1
2011 First Quarter GDP Estimates

	Final Estimate	Revised Estimate
Personal Consumption	1.52%	1.47%
Private Investment		
Nonresidential	.20%	.20%
Residential	-.05%	- .06%
Inventories	1.31%	.32%
Net Exports	.14%	- .34%
Government	-1.20%	-1.23%
Total	**1.92%**	**.36%**

4. 2011 Q2 GDP

The "Advance Estimate" of 1.29% for second quarter GDP was also very disappointing. **Table 2** provides details. The biggest negative was in growth of personal consumption. The biggest positives were in nonresidential investment and net exports. However, because June trade data were considerably worse than expected, it is likely that the 0.58% growth in net exports will be revised down in the "Second Estimate" to be released at the end of August. Offsetting this partially are better than expect retail sales data which should lead to an increase in the estimate of consumer spending growth.

As a reminder, for GDP growth to approach potential or "stall speed" the contribution of consumer spending to GDP growth needs to be about 1.6% (70% of 2.3% potential growth rate). With plummeting consumer confidence and stock market turmoil it will be very difficult for consumer spending to reach the "stall speed" level.

Table 2
2011 Second Quarter GDP Estimates

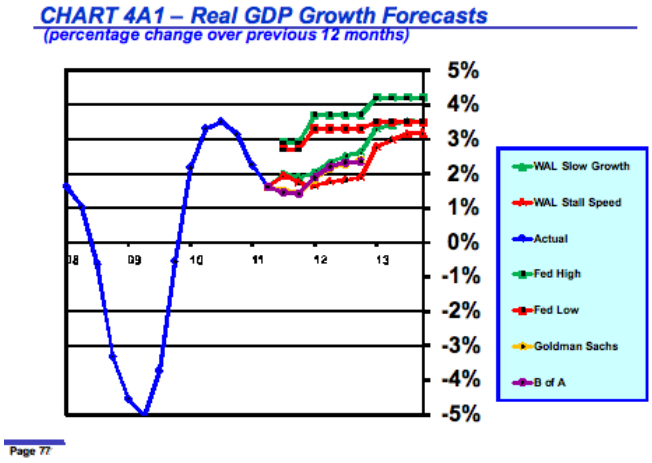
	Advance Estimate	Second Estimate	Final Estimate
Personal Consumption	.07%		
Private Investment			
Nonresidential	.61%		
Residential	.08%		
Inventories	.18%		
Net Exports	-.58%		
Government	-.23%		
Total	**1.29%**		

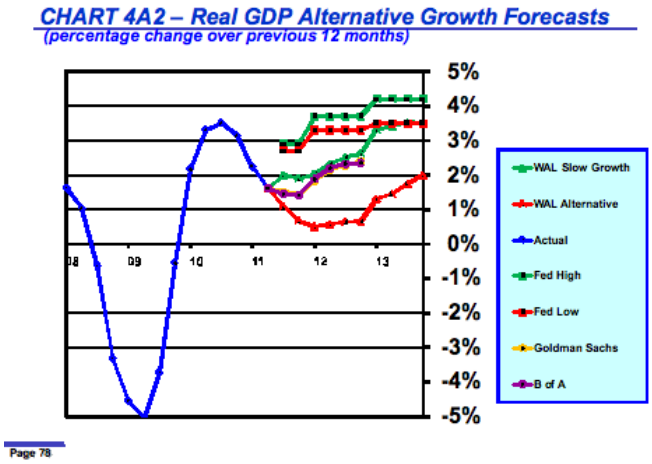
5. GDP Forecasts

GDP forecasts from the Federal Reserve, Goldman Sachs (GS), Merrill Lynch/Bank of America (B of A) and myself ("WAL Slow Growth" and "WAL Stall Speed") are shown in **Charts 4A1/4A2** and **4B1/4B2** **Charts 4B1** and **4B2** reduce the time period to 2010-13 and the scale of the chart has been altered to show better the differences in the forecasts.

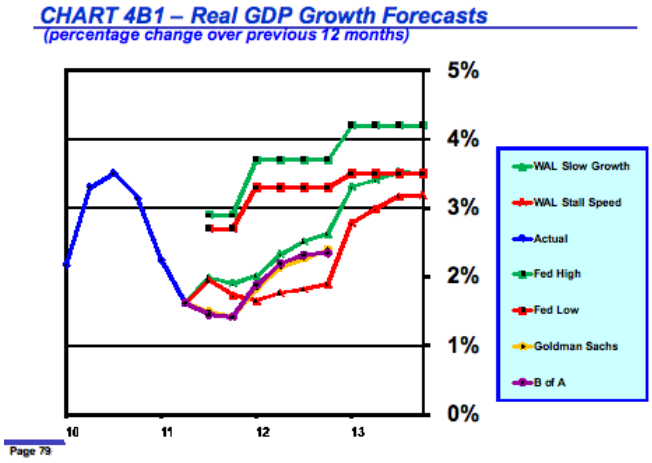
The only difference between the **4A1** (**4B1**) and **4A2** (**4B2**) charts is that I show an alternative forecast in **4A2** and **4B2**, based on my econometric model. The alternative forecast includes an estimate of the impact of housing wealth on GDP growth in **Charts 4A2** and **4B2**; whereas, the GDP growth estimates for "WAL Slow Growth" and "WAL Stall Speed" do not include the effect of housing wealth.

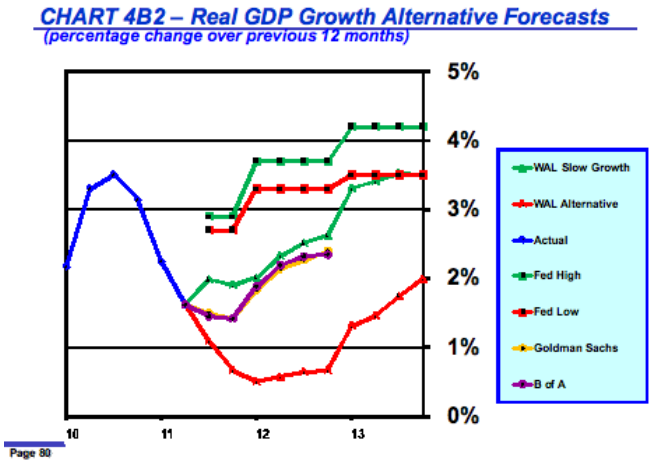
As the Federal Reserve acknowledged in the Federal Open Market statement released on August 9th, actual GDP growth is coming in substantially below the forecasts it released in June. This means that when the FOMC releases the next update in September, forecasts for 2011 and 2012 and probably for 2013 will be reduced considerably. The Fed's GDP forecast





in January for 2011was a range of 3.4% to 3.9%. The FOMC reduced its forecast range to 3.1% to 3.3% in April and further reduced it to 2.7% to 2.9% in June. The forecast will have to be taken down substantially in September. Unfortunately, with all of its economists and its sophisticated econometric models, the Fed's forecasting abilities appear to be no better than that of others and in a way they are worse because of the tendency for the Fed forecasts to include an "optimism bias".





Both Goldman Sachs (GS) and Bank of America/Merrill Lynch (B of A) recently revised their GDP forecasts down substantially to reflect data revisions and weak incoming data. In fact, as can be seen most clearly in **Chart 4B1**, the two forecasts through the end of 2012 are virtually identical. My "Slow Growth" forecast is slightly more optimistic and my "Stall Speed" forecast is more pessimistic than either the GS or B of A forecasts. In all of these forecasts, the output gap does not shrink to any material degree through the end of 2012.

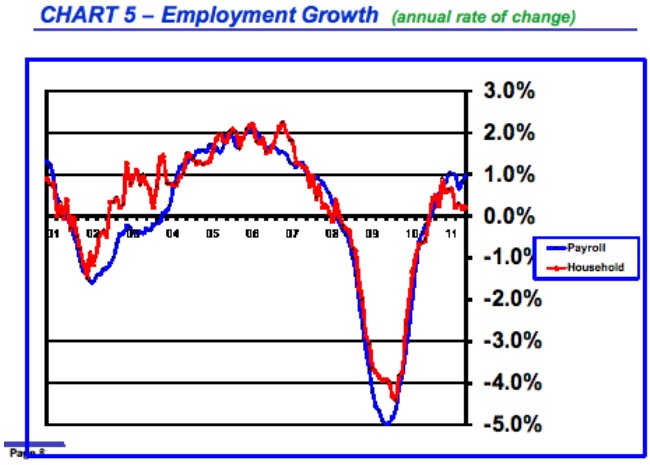
I have not shown the "WAL Alternative" GDP forecast before, which as I said above, incorporates the estimated impact of shrinking housing wealth, because it portrays a very pessimistic outlook and, as such, seemed somewhat ridiculous in comparison to other forecasts. It still projects an awful trend and one I hope does not materialize. But, I thought I would include it in this month's letter to give the reader a sense of a possible much worse case outcome. Now that talk of recession is bubbling up again, the alternative forecast doesn't look quite so ridiculous. And, as bad as it is, it does not project onset of a new recession.

In summary, as events are unfolding in financial markets, experience tells me that risks to the GS, B of A and my "Slow Growth" forecasts are decidedly to the downside. The possibility of recession, indeed, has risen sharply in recent days. If it were to occur the cause would be a buying strike on the part of consumers. Sinking consumer confidence suggests that such an outcome is a very real possibility. But, it is too early in my judgment to assert that recession is now inevitable. However, when the possibility is on the table and the odds that recession will occur are nontrivial, good risk management dictates that one should prepare for the worst while still hoping for the best.

VI. Employment

1. July Employment Data

You may recall from last month's letter that "stall speed" payroll employment growth is about 100,000 per month. The July employment report was viewed favorably by the market because payroll employment increased 117,000, the unemployment rate fell from 9.2% to 9.1% and May and June employment was revised up a combined 56,000. In reality, however, the July report confirmed that employment is stuck in a sideways pattern consistent with stall speed, or worse. The three-month average increase in payroll employment is a sub-stall speed 72,000, including the "favorable" July report. The household survey of employment, which generally closely tracks the payroll survey, revealed that employment has fallen an average of 126,000 per month over the last three months, including a decline of 37,000 in July. Which report is right? As shown in **Chart 5**, payroll employment growth

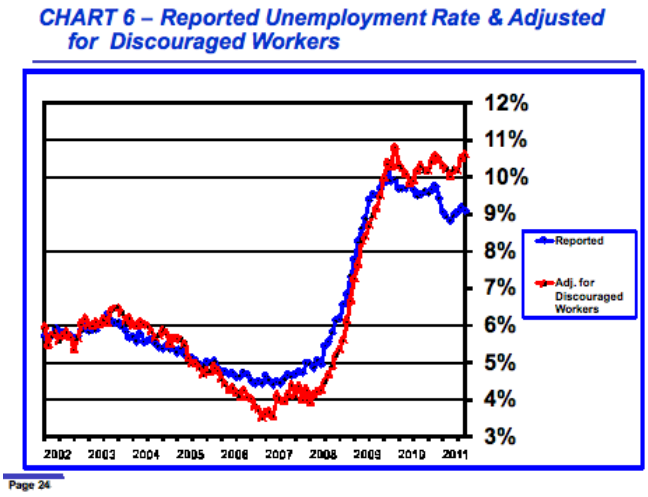


is up 1.0% over the last year, but household employment growth is up only 0.2%. Both reports are subject to statistical error. The payroll report will undergo several revisions over the next several years as more complete source data become available. So there is a reasonable chance that payroll data will be revised downward over the next two years and will end up more closely tracking the household report.

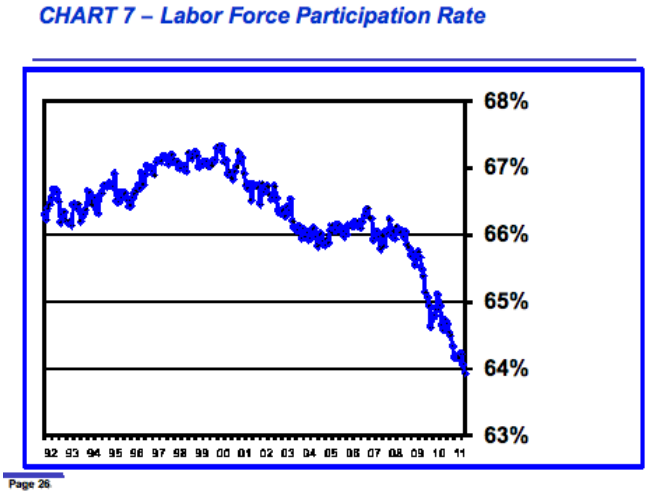
The household survey was discouraging in another very important respect. The labor force declined 193,000 in July and is down 400,000 over the last year, while payroll employment is up 1.3 million over the last year. The reason for this substantial divergence is simple and straightforward — a large number of people have become so discouraged that they have dropped out of the labor force, which means they aren't counted. Were they counted, the unemployment rate would be much higher than the reported 9.1%, or 10.6% by my calculations, which is up 0.1% over last month rather than down 0.1%. See **Chart 6**.

2. Labor Force Participation

Over the last year, the number of people eligible to work has increased 1.8 million. Many of those eligible to work voluntarily choose not to do so. The household employment survey asks those eligible to work whether they



are either employed or looking for work. This measure is called the labor force. The relationship between those eligible to work and those willing to work is termed the "participation rate". During the last 12 months the participation rate decreased from 64.58% to 63.93% (see **Chart 7**) and it is

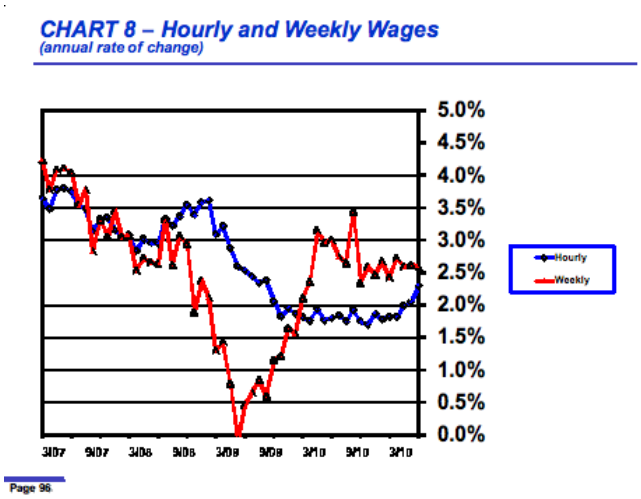


down 2.1% since the start of the Great Recession. While this might seem like a small percentage change, it amounts to 5 million potential workers who no longer are in the labor force and thus are not included in the unemployment

count. If all of these potential workers decided to look for employment, the number of unemployed workers would be 18.9 million, not the 13.9 million reported in July. And, the unemployment rate would be 12.0% rather than the reported 9.1% rate.

3. Wage Growth

In addition to the "favorable" 117,000 growth in payroll employment in July, there was one other piece of good news. The rate of growth in hourly wages appears to have made a breakout to the upside — growing from 1.8% to 2.3% over the last three months (see **Chart 8**). In previous letters I



speculated that hourly wage growth would converge to weekly wage rate growth. Convergence is occurring, but it is hourly wage rates that are converging, rather than the other way around. The reason that this is good news is that consumer spending depends not only on employment growth but also growth in hourly and weekly wages.

4. Other Employment Observations

Other employment data points are mixed, suggesting that continued sluggish employment growth, near stall speed, is the most likely prospect. If this

turns out to be the case, then recession will not occur, but it may still feel to many like a recessionary environment.

- **Favorable** — Unemployment claims fell below 400,000 in the weekly report released on August 11th.
- **Favorable** — The number of people quitting jobs and the number of job openings are both rising, signs of increasing confidence.
- **Unfavorable** — Productivity growth has been negative the last two quarters, which is often a precursor of belt tightening and layoffs by employers.
- **Unfavorable** — Reported layoffs rose sharply in July.
- **Unfavorable** — Declining stock prices and consumer confidence typically lead, with a lag, to reduced consumer spending and, thus, to reductions in employment.

VII. Consumer Confidence and Spending

1. Consumer Confidence

According to the University of Michigan Consumer Sentiment Index, consumer confidence fell sharply to 63.8 in July from 71.5 in June. Sentiment plummeted further in August to 54.9, eclipsing the Great Recession low point and was similar to the awful level recorded in May 1980 just after President Carter announced the ill-fated credit and price controls.

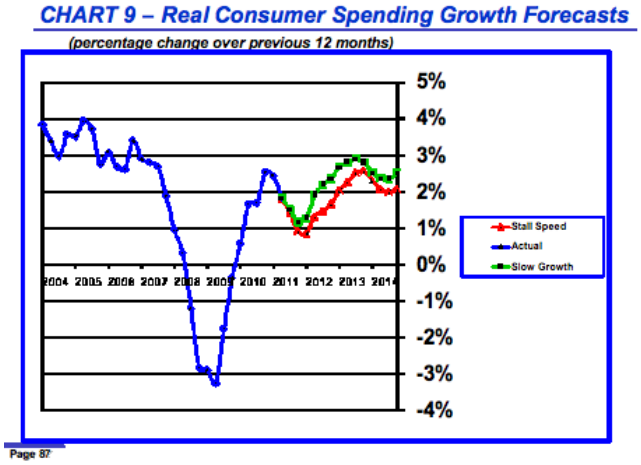
Rasmussen's survey of consumer confidence, which involves daily polling and is reported as a seven-day moving average, has fallen from a level of 80 (a reading above 100 is consistent with good economic growth) to 61.7 as of August 10th. To put this into stark perspective, the Rasmussen index bottomed at about 57 in March 2009 during the Great Recession and then rapidly recovered to a level ranging between 70 and 75. Simply put, both the Michigan and Rasmussen measures indicate just how gloomy consumers have become.

2. Consumer Spending

July retail sales were up 0.5% over June, which was less than the expected increase of 0.7%. However, the June increase over May was revised upward from 0.1% to 0.3%. Thus, in effect, retail sales were neither better nor worse than expectations. Overall, the retail sales data are consistent with slowly improving consumer spending.

However, nominal consumer spending data from the National Income Accounts, which includes all consumer spending and thus is much more comprehensive than retail sales, grew only 0.03% during the second quarter of 2011 and contributed 0.07% to GDP growth.

Chart 9 shows the annual rate of growth in aggregate consumer spending and includes forecasts for my "Slow Growth" and "Stall Speed" scenarios. My forecasts indicate that the annual rate of growth in consumer spending will continue to decelerate, bottoming in the fourth quarter of 2011 in the "Slow Growth" scenario and bottoming in the first quarter of 2012 in the "Stall Speed" scenario. These forecasts do not reflect recent declines in consumer confidence and in the stock market, which has a significant and rather immediate impact on consumer spending. Furthermore, it should be obvious that if the economy slows below stall speed or enters recession, the forecasts in **Chart 9** will turn out to be too optimistic. The recent decline



in stock prices, all else equal, if sustained through the first quarter of 2012, would result in a 0.4% to 0.7% reduction in the rate of consumer spending growth on top of the declining trend that is already likely.

My forecasts indicate that consumer spending growth recovers in 2012 but remains subdued thereafter relative to pre-Great Recession norms. Even that forecast favorable outcome will depend upon how well the economy holds up in coming months.

VIII. U.S. Fiscal Policy

As I mentioned in the opening sections of this month's letter, the political battle to raise the U.S. public debt ceiling and forge a long-term deficit reduction plan revealed the extent of current dysfunction in U.S. governance and produced a disappointing result at the eleventh hour, which has had negative impacts on consumer confidence and the performance of financial markets. Essentially, the Budget Control Act kicks the can down the road. While on the surface it lays out a road map for $2.1 to $2.4 trillion in deficit reduction over the next ten years through the end of fiscal year 2021, it is crafted in such a way that successful implementation appears to have a low probability.

There are four components of the Budget Control Act:

1. Increase in the Debt Ceiling

- Immediate increase of $400 billion.
- President Obama can request an additional $500 billion increase, which becomes effective unless both houses of congress pass a disapproval resolution. Even then, the president can veto the disapproval resolution and the likelihood that a presidential veto can be overridden is nil.
- A final $1.2 to $1.5 trillion increase depends upon either the passage of a balanced budget amendment by both houses of congress or passage of legislation by congress and signed by the president to cut the deficit by $1.2 to $1.5 trillion over ten years.

2. Discretionary Spending Caps

- Ten-year caps on spending are imposed that will save an estimated $750 billion ($920 billion including foregone interest expense).
- The burden of caps falls approximately 55% on non-security spending and 45% on defense (over and beyond savings already anticipated from reduction in war expenditures in Iraq and Afghanistan) and homeland security spending.
- Spending caps will be enforced through sequestration and point of order. Thus, the spending caps are discretionary because congress must take action to enforce them.

3. Balanced Budget Amendment

- Both houses of congress must vote on a balanced budget amendment by December 31, 2011.
- The debt ceiling may be raised and additional $1.5 trillion, if both houses pass the balanced budget amendment.

4. Joint Congressional Committee of 12

- The committee is composed of 12 members, 3 each from the House and Senate Democratic and Republican caucuses. Selections have been made and largely are from party leadership. These selections do not bode well for successful negotiation and compromise because the leadership of both parties appears dug into irreconcilable policy positions — the Democrats want tax increases for the rich and oppose further reductions in healthcare spending and the Republicans oppose any kind of revenue increase.
- The joint committee is directed to agree on $1.5 trillion in deficit reduction over ten years and is required to forward its recommendation to both houses of congress by November 23, 2011. It is notable that no one has defined the baseline upon which the $1.5 trillion in deficit reduction will be measured.

- Provided that the joint committee recommends at least $1.2 trillion in deficit reduction to the congress, congress may adopt the recommendations by simple majority without amendments and must take action by December 23, 2011. In other words, congress must vote the recommendations up or down by simple majority. If both houses of congress adopt the joint committee's recommendations, the president must still sign for the recommendations to become law.
- If the joint committee fails to agree on at least $1.2 trillion in deficit reduction, whatever recommendations they do reach agreement on will be forwarded to congress for action. However, the difference between the amount of the recommendations and the minimum $1.2 trillion would result in automatic across-the-board spending cuts beginning on January 1, 2013. The automatic cuts would be divided equally between security and non-security spending, but Social Security and certain low-income programs would be exempted and cuts in Medicare would be limited to a maximum of 2%.
- If both houses of congress pass a balanced budget amendment, the automatic spending cuts feature of the Budget Control Act would not take effect.

This plan, even if fully enacted, which is doubtful, would be insufficient to stabilize the debt to GDP ratio. It is estimated that the ratio would continue to rise from its current level of 64.5% to about 80% in 2021. If the upper income tax cuts are allowed to expire at the end of 2012, the ratio would rise somewhat less to about 76% by the end of 2021. It will take more than $4 trillion in deficit reduction just to stabilize the debt to GDP ratio at about 70% and, ideally as S&P has pointed out, the ratio needs to fall well below 70% over time.

IX. U.S. Monetary Policy

1. Federal Open Market Committee

The Federal Open Market Committee of the Federal Reserve System met on August 9th. In the statement following the conclusion of the meeting there

were several notable changes from previous statements which collectively reflected a more dovish tone:

- **Growth Outlook**. "... growth so far this year has been considerably lower than the Committee had expected ..." and "... the unemployment rate has moved up." The FOMC now sees downside risks to growth.
- **Inflation Outlook**. "... inflation has moderated as prices of energy and some commodities have declined from their earlier peaks." In other words, inflation is not a threat. Notably, however, there was no evidence of concern in the statement about inflation becoming too low.
- **Policy Change**. A significant change in policy was a conditional statement that the FOMC is prepared to keep the level of the federal funds rate at a low level until the middle of 2013: "The Committee currently anticipates that economic conditions — including low rates of resource utilization and a subdued outlook for inflation over the medium run — are likely to warrant exceptionally low levels for the federal funds rate at least through mid-2013." Three of the ten voting committee members dissented on this policy change, preferring instead to specify no date.
- **Policy Outlook**. The Committee pointedly added the following statement: "The Committee discussed the range of policy tools available to promote a stronger economic recovery in a context of price stability. It will continue to assess the economic outlook in light of incoming information and is prepared to employ these tools as appropriate." In other words, the Committee is saying that if the economy worsens, it will do something, including, possibly, a third round of quantitative easing.

2. Monetary Policy Options

In my view the ability of any additional monetary policy action to have a material favorable effect on economic activity is quite limited. Monetary policy works primarily through governing the price and availability of money and credit, which facilitate the financing of economic activity. The Fed can

reduce interest rates by buying securities which increases the amount of liquidity available to consumers and businesses. In the case of consumers, lower rates make it cheaper and easier to access credit to buy things like cars and houses. For businesses, lower interest rates reduce the cost of capital hurdle rate and make investment more attractive.

Monetary policy is effective, but after fairly long lag times, when the credit system is functioning normally. Since the onset of the financial crisis in 2007, the credit system has not functioned normally. This has been particularly evident for home mortgages and small business borrowing. In both sectors underwriting standards remain more restrictive than in normal times and this limits access to credit for all but the most creditworthy and raises the cost of credit even for those who are qualified. In the case of home mortgages, for all intents and purposes, no private market exists as Fannie, Freddie and the Federal Housing Administration now account for 97% of all new mortgage loan originations. Thus, lowering rates in an impaired credit market is likely to be of very limited help.

Moreover, we are in the infamous liquidity trap, which occurs when interest rates are zero. Once in the liquidity trap, no matter how much liquidity the Fed provides, rates cannot go any lower than zero. Of course, long-term rates are still positive, which means that the Fed can drive down longer-term rates through monetary policy actions. This is what quantitative easing is intended to accomplish. Yet, the impact will still be limited when the credit system is impaired.

Quantitative easing has another impact and one about which there is considerable debate whether that impact is helpful or harmful. By lowering longer-term interest rates, quantitative easing raises the value of long-dated assets, particularly stock prices. When Federal Reserve Chairman Bernanke announced the Fed's large scale asset purchase program in December 2010, raising the prices of risk assets was an explicitly stated objective. To the extent that stock prices rise, and they most certainly did rise until the recent market swoon, it creates additional financial wealth. We know that consumer spending is correlated with stock prices and economic theory posits that a certain portion of wealth will filter into current spending patterns provided that the increase in wealth is considered to be permanent.

But the dark side of rising stock prices is that it unleashes animal spirits, that is, speculation. And, speculation in this modern era of commodity

trading and exchange traded funds, spreads far beyond equities. In the last few months we have experienced a conjunction of speculation with an insatiable demand for commodities by emerging economies. Unfortunately, the two phenomena reinforced each other and drove prices, particularly the price of oil, up sharply. American consumers are very sensitive to the price of gasoline and the sharp rise in its price depressed sentiment and crushed spending, as the second quarter GDP report confirmed.

So, it is really questionable whether yet another round of quantitative easing would be helpful. Indeed, it could quite harmful. Yet, in light of the recent financial market turmoil, yet another round of quantitative easing is a prominent topic among financial market participants. And, from their perspective, why shouldn't it be? Another round of liquidity injection by the Fed would re-stoke the risk-on trades for another few months and it would be happy time for speculators.

So, having argued that monetary policy is close to impotent, what could the Federal Reserve do?

- The FOMC has promised to continue to reinvest proceeds of principal repayments of assets on the Federal Reserve's balance sheet in new purchases. It could announce that those purchases will be structured intentionally to extend the average maturity (duration) of the Federal Reserve's assets. This would help flatten the long-end of the yield curve.
- The Federal Reserve could decide to reduce the rate of interest, currently 0.25%, which it pays on excess reserves. The idea is that banks would seek to replace the lost earnings by making a greater amount of loans. First, the small amount of the rate reduction would seem on its face to be immaterial. Second, since banks already could use excess reserves to make loans and they aren't making them, why should a reduction in the interest rate on reserves make any difference?
- The Federal Reserve could implement a third round of large scale asset purchases. I have said enough already about the potential pitfalls of such a strategy.
- The FOMC could adopt an explicit inflation targeting communications strategy. The intent would be to establish firm expectations about what the Fed will do. The mid-2013 date commitment is intended to

manage expectations, but an explicit inflation target tied to a defined and observable measure of inflation would be more powerful in governing investor expectations. If the Fed is expected to act automatically in response to falling inflation, then investor inflation expectations should remain well-anchored at a higher level. And, hopefully, higher inflation expectations would result in decision making that limits the potential for actual inflation to fall.

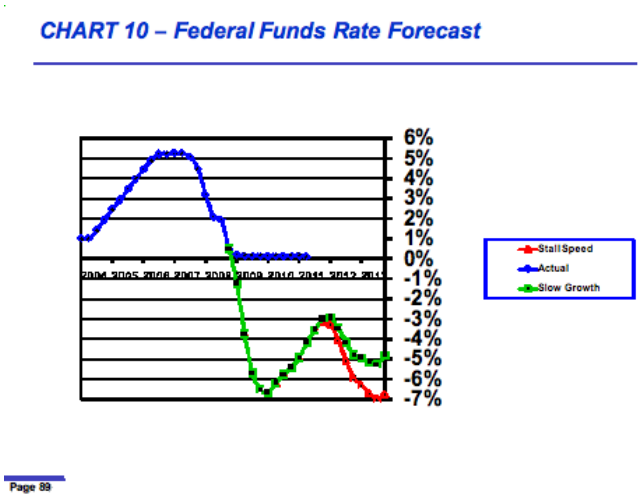
- At an extreme, the FOMC could peg interest rates. There is historical precedent for this. From the late 1930's until 1951, the Federal Reserve established a cap for long-term Treasury rates. Such a measure would have a two-fold effect. It would have an expectations impact similar to the one described in the previous bullet point. But, it would also compel the Federal Reserve to purchase Treasury securities anytime rates moved above the cap. The risk in such a strategy is that the Fed could lose control of the size of its balance sheet.
- And, in extremis, the Federal Reserve has its lender of last resort role, although the Dodd-Frank made it more difficult for the Fed to act unilaterally.

Overall, it appears to me that the bar is quite high for implementing most of these tools and even then their ability to have much, if any, positive effect seems quite limited.

3. Prospects for Interest Rates — Short-Term Rates (Federal Funds)

If the federal funds rate could be negative, it would be currently by a very substantial amount. It is generally argued by economists that the Federal Reserve's quantitative easing and its policy language of keeping the federal funds rates exceptionally low for an extended period have the effect of raising the current "warranted" federal funds rate well above the level shown in **Chart 10**. My econometric model only includes the impacts of employment growth, productivity, inflation and fiscal policy. It leaves out the impacts of unconventional monetary policy actions.

Thus, the warranted federal funds rate is higher than the level shown in Chart 10. However, the chart indicates that the warranted federal funds rate

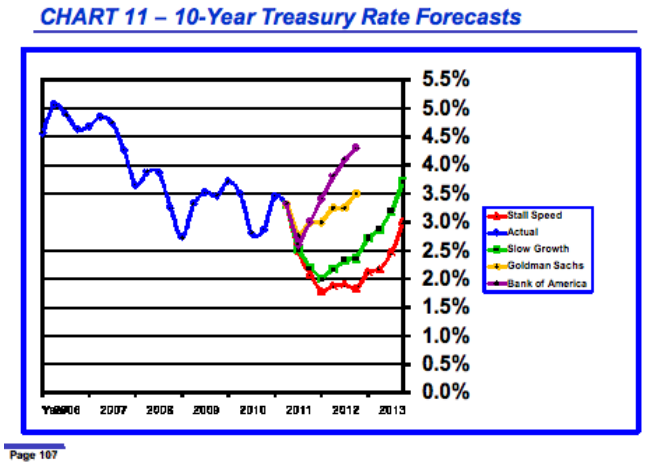


is poised to move back down beginning in the first quarter of 2012. That result stems from renewed weakness in employment growth and waning fiscal stimulus in recent months and is unrelated to financial market weakness in recent weeks. Were financial conditions to be incorporated into the model projections, the amount of the downturn would be amplified and the timing would be accelerated.

4. Prospects for Interest Rates — Long-Term Rates (10-year Treasury Note)

Chart 11 shows forecasts for the U.S. 10-year Treasury note for B of A, GS and my "Slow Growth" and "Stall Speed" scenarios. Although both B of A and GS recently marked down their rate forecasts, both expect the 10-year rate to rise, sharply in the case of B of A, during 2012. In contrast both of my forecasts show that the 10-year rate declines to approximately 2.0% by the end of 2011. This is a level not far removed from the current spot rate. In the "Slow Growth" scenario the 10-year rate begins a slow rise during 2012, but does not pass above 3.0% until well into 2012. In the "Stall Speed" scenario the 10-year rates spends most of 2012 just under 2.0% and then rises to 3.0% by the end of 2013.

As a reminder, all forecasts are based on assumptions. As market condi-



tions change, assumptions change. Because of this reality, with the passage of time the quality of any forecast quickly deteriorates. That is to say, forecasts shown in **Chart 11** are indicative of the balance of risks which currently exist. This balance is tilted more to further declines in long-term rates than rises over the next few months. Beyond that time frame, the B of A and GS rate forecasts embed a somewhat more optimistic view of economic growth and a much less pessimistic view about the possibility that inflation could decrease much more than most currently expect compared with the forecasts in my two scenarios.

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