



The Longbrake Letter*

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September, 2011

I. U.S. and Global Growth Gradually Slowing; Risk of U.S. Recession Rising

August began with turmoil once again spreading like wildfire through global financial markets as hope that policy interventions to restore the economies of the U.S. and other developed nations to a stable growth trajectory were dashed by the undeniable reality of disappointingly weak data reports. As August ended, markets had recovered part of early-August losses. Perhaps this was due to exhaustion or perhaps it was due to summer vacations. It certainly was not due to improved data reports.

At least one technical analyst expects further market turmoil in coming weeks and new lows. The awful U.S. employment report on Friday, September 2 was an unwelcome cold shower for optimists and an inauspicious start to the month of September.

Debate increasingly has focused upon whether the U.S. has entered a new recession or is on the verge of doing so. Surveys of consumer confidence are at low levels only experienced during the very worst of past recessions. Yet, the data flow, while extremely weak, is not yet indicating clearly that the U.S. economy is contracting. What the data are signaling is that growth is barely positive. For example, second quarter GDP growth was revised down from an initial estimate of 1.3% to 1.0%, although consumer spending was revised upward a small fraction. Manufacturing activity, as measured by the Institute of Supply Management (ISM) diffusion index, fell in August to 50.6, indicating very limited growth (an index value of 50 is the dividing line between growth and contraction). However, ISM's service diffusion index rose from 52.7 in July to 53.3 in August.

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Then, on September 2, the Bureau of Labor Statistics released a dismal employment report for the month of August. Payroll employment growth was zero, but at least it was not negative and perhaps it was really positive if allowance is made for 45,000 striking Verizon workers officially counted as unemployed. The unemployment rate remained stable at 9.1%, but only because discouraged potential workers continue to give up and exit the labor force.

As we enter September, the mood in the country is sour and anxiety remains high.

Recessions typically occur when significant excesses have built up in an economy. The 2001 recession corrected the excesses of the dot com and telecommunications investment overshoot. The 2007-09 recession was triggered by huge imbalances spawned by the housing bubble. Today there are no obvious imbalances in the economy. Does that mean that recession is unlikely? The answer to this question is “No”. But, if recession does occur, it likely would be a mild one from a statistical standpoint. This is small solace, when unemployment is already at 9.1% and the GDP output gap remains at a recession-high level of 6.9%.

If there are not significant imbalances in need of correction, then what could trigger a new recession? The answer has to do with excessive debt leverage. As Carmen Reinhart and Kenneth Rogoff have chronicled in their seminal case study of countries that experienced financial crises¹, it typically takes ten years for an economy to re-attain full potential after it has experienced an acute financial crisis, such as the one the U.S. experienced in 2007-2009. The bad news is that the U.S. economy has only reached the four-year point since the financial crisis erupted in full fury during the summer of 2007. The further bad news comes from a follow up study conducted by Carmen and Vincent Reinhart². The study compared economic performance of 15 countries before and after each had experienced one of the worst financial crises to occur in the second half of the twentieth century. The Reinharts found that approximately half of the 15 countries experienced a second recession during the extended ten-year convalescence period. One

¹Carmen M. Reinhart and Kenneth Rogoff. *This Time Is Different: Eight Centuries of Financial Folly*. Princeton University Press, 2009.

²Carmen M. Reinhart and Vincent R. Reinhart. “After the Fall” in *Macroeconomic Challenges: The Decade Ahead*. Jackson Hole, Wyoming: Federal Reserve Bank of Kansas City, 2010.

has to look no further than Japan for a recent case in point.

Unfortunately, there are no quick or painless fixes to unwinding excessive debt leverage. The unwinding process is highly deflationary because financial resources are diverted to debt repayment rather than to new investment which is the lifeblood of economic growth. According to Reinhart and Reinhart, while the deleveraging process was underway in the decade following a financial crisis, real GDP growth averaged 1.5% below the pre-crisis trend level and unemployment remained at stubbornly high levels in most countries.

In short, during the deleveraging process an economy is extremely fragile. Its ability to absorb new negative shocks is limited and it is very susceptible to policy errors. During 2011 the U.S. economy has experienced two significant shocks. The first was the sharp run up in oil and gas prices which boosted inflation and decimated consumer spending. The second was the confidence destroying political dysfunction of the recent debt ceiling debate in Congress. To these shocks has to be added the observation that both monetary and fiscal policy actions, which were massive and intended to stimulate the economy, have had limited effectiveness in spurring economic recovery and appear to have worsened the problem of excessive leverage.

Thus, while a new recession is not inevitable, the risks of one are relatively high. Most forecasters place recession odds at 30% to 40%. Nouriel Roubini, renowned for his early and correct forecast of the U.S. financial meltdown, places the probability of recession at 60%.

While fiscal consolidation must occur in the U.S. to restore the economy to a healthy condition, too much fiscal austerity too quickly could unleash a negative circle of consequences which could end up pushing the U.S. economy into recession. Given congressional obsession with the federal deficit and cutting spending, this is not an idle concern.

And, even if a new recession is avoided, the reality, which markets have come to understand better over the last two months, is that economic growth will be subdued for a long time to come and unemployment will remain at stubbornly high levels.

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. 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 2008-2009, or whether policy actions might perversely increase the likelihood of recession.

II. The Curse of Excessive Debt Leverage

Although I have discussed “the curse of excessive debt leverage” in detail in the last two monthly letters, that discussion bears repeating. This is because when one understands that excessive debt leverage is the fundamental problem plaguing the U.S. economy, it becomes easier to understand why traditional monetary and fiscal policies have had limited effectiveness and may even have exacerbated the problem. While policymakers are now focused on the need to deleverage, there is not yet clear and shared understanding of how to design policies that accomplish this objective without crushing the economy in the process.

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 Financial Stabilization Facility (EFSF), contributing 2/3, and the International Monetary Fund (IMF), contributing 1/3, had to make bailout loans to Ireland to avert potential default. Yet, Moody's recently 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

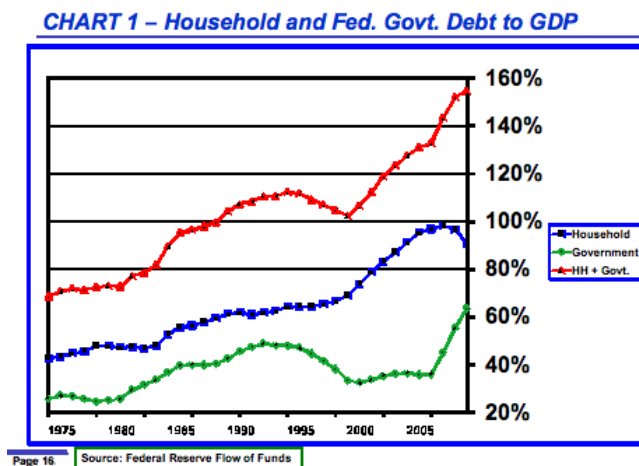
We are in a time of dealing with the fallout of excessive debt leverage in a number of spheres. The time has long since passed for preventive action. Instead, policymakers have been forced to respond by developing strategies to manage the unwinding of excessive leverage and prevent the potential for 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, policies currently in place are unlikely to 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. Lest there was any doubt, this development made it abundantly clear that the excessive debt problem is not limited to a few small peripheral countries in Europe. The problem encompasses most all European nations, including Germany.

As long as complacency pervades financial markets, high country debt-to-GDP ratios do not automatically trigger systemic risks. What has changed in recent weeks is that complacency has been replaced by fear. Markets have come to realize that European banks are undercapitalized relative to potential losses that excessive sovereign debt leverage poses. Christine Lagarde, managing director of the International National Monetary Fund, to the dismay of many European leaders was uncharacteristically candid in a speech she gave at the Kansas City Federal Reserve’s Jackson Hole event. In her speech she mentioned that the world economy is at a “dangerous new phase”. In particular, there is need for “urgent recapitalization” of European bank balance sheets. She added that “risks have been aggravated further by deterioration in confidence and a growing sense that policymakers did not have the conviction or simply are not willing to take the decisions that are needed.”

Undercapitalization of European banks is a necessary, not a sufficient, condition for fear. The sufficient condition for fear is slowing economic growth and the realization that fiscal consolidation policies being pursued by nearly all European nations could drive the euro zone into recession. Recession could turn potential insolvency into actual insolvency for a number of European banks.

Fear initially manifested itself in rising yields for Spanish and Italian sovereign debt. 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 nearly 300 basis points and in recent days the spread has begun to widen once again. 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 magnitude of a recession assure that the burden of debt in both countries will increase. Or, put succinctly, the near-term solution will probably lead to a worse outcome later on as the economies of Spain and Italy shrink.

Time appears to be running out for Europe's forbearance strategy. Events are evolving rapidly and are following a pattern similar to the crescendo of financial crisis in the U.S. during September and October 2008. As a reminder, it was not until Congress approved TARP and Treasury Secretary Paulson used TARP to recapitalize U.S. banks that the crisis was contained. Up to that point the crisis had been treated as a liquidity problem rather than the solvency problem it actually was. Remember that resolution of excessive debt leverage is all about who bears the losses; it is not about liquidity. Illiquidity, which is very real in the heat of the crisis, merely exposes the real problem of solvency, which was there all along.

It will be interesting to observe how the building European financial crisis plays out. European governance mechanisms, notwithstanding the political dysfunction in the U.S., are not structured in a way that rapid and incisive action can be taken. For example, while there is agreement to restructure and expand the role of the European Financial Stability Facility (EFSF), each nation must separately ratify the changes, a process that takes time and is not yet complete. Thus, it may become necessary for individual European countries to recapitalize their own banks. The potential for contagion is enormous. And, we know from experience that when contagion is unleashed it spreads like wildfire.

While it is generally assumed that the Greek problem has been resolved for now, that is not the case. IMF disbursements are conditional and EFSF disbursements hinge on individual country approvals of changes in the EFSF structure. The IMF walked out of negotiations with Greece last week. Thus, another round of headlines focused on Greece seems increasingly likely in coming weeks.

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 effec-*

tiveness, 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 was reinforced by the dramatic sell off in stocks during the first half of August, increased 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.

President Obama is scheduled to speak to a joint session of Congress and articulate proposals for creating jobs on September 8th, shortly after my letter has been completed. Pre-speech leaks suggest that the president will propose about \$300 billion in additional spending. This would include extension of both the 2% payroll tax cut for an additional year, worth about \$110 billion, and extension of unemployment benefits for another year, worth \$60 billion. Since both policies are currently in place and the economy has lost rather than gained momentum, about the best that can be said is that if these benefits are allowed to expire the U.S. economy probably would deteriorate at an even more rapid pace. The remaining \$130 billion would come from a variety of sources, including perhaps as much as \$50 billion for infrastructure and a similar amount for funding spending by states. Considering the Republican Party's steadfast commitment to cutting spending, it will be interesting to see how Republicans respond in light of pressure from constituents to find bi-partisan solutions which serve the best interests of the country by creating more jobs.

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.

In previous letters I examined the European sovereign debt and U.S. public debt crises. In this month's letter I explore the U.S. housing crisis in greater detail.

III. Prospects for Economic Growth

1. Potential GDP Growth

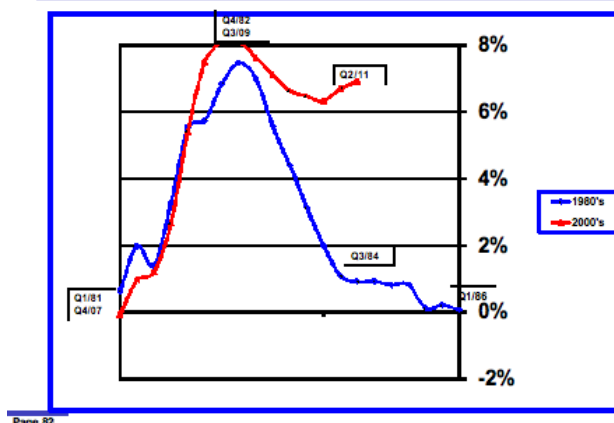
Potential noninflationary GDP growth in an economy benefitting from full employment is equal to the population growth rate plus the rate of productivity improvement. The Congressional Budget Office estimates that potential GDP growth is likely over the next few years to be in a range of 2.3% to 2.4%.

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. Over the last two quarters real GDP grew less than stall speed at an annual rate of 0.7% and the output gap increased from 6.34% to 6.92%.

Chart 2 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 2** 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 7.5% in the fourth quarter of 1982 just after the end of the 1980-82 recession and peaked at a slightly higher level of 8.1% in the third quarter of 2009 just after the end of the 2007-09 recession.³

³Note that the Congressional Budget Office (CBO) recently updated its analysis of potential GDP which reduced the output gap in the fourth quarter of 1982 from 7.8% to

CHART 2 – GDP Output Gap: 1980-82 and 2007-09 Recessions

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 0.9%.

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. Second Estimate of 2011 Q2 GDP

The "Second Estimate" of second quarter GDP growth was 1.00%, down from 1.29% for the "Advance Estimate". **Table 1** provides details. Improvements in consumer spending and nonresidential construction were more than

7.5%. CBO's 8.1% estimate of the peak in the output gap in the third quarter of 2009 remained unchanged.

Table 2
2011 Second Quarter GDP Estimates

	Advance	Second	Final
	Estimate	Estimate	Estimate
Personal Consumption	.07%	.30%	
Private Investment			
Nonresidential	.61%	.94%	
Residential	.08%	.08%	
Inventories	.18%	-.23%	
Net Exports	-.58%	.09%	
Government	-.23%	-.18%	
Total	1.29%	1.00%	

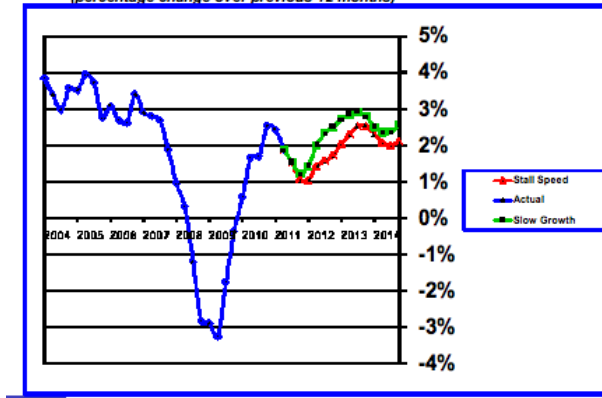
offset by declines in inventories and net exports. Even with a small increase, consumer spending growth, which accounts for approximately 70% of GDP, was far below potential of about 1.6% (70% of 2.3% potential growth rate).

With recession-level consumer confidence and stock market turmoil it will be very difficult for consumer spending to reach potential level, as is shown in **Chart 3**. I show two forecast scenarios — “Slow Growth” and “Stall Speed”. In both scenarios, consumer spending growth slows over the next two to three quarters. Annual growth bottoms at 1.2% in the “Slow Growth” scenario in the fourth quarter of 2011 and at 1.0% in the “Stall Speed” scenario in the first quarter of 2012. This slowdown reflects the lagged effects of recent weak employment and income growth which occurred during the first half of 2010. If a recession takes hold, growth in consumer spending would slow to an even greater extent.

In both forecast scenarios real consumer spending growth reaccelerates during 2012 and averages 2.3% over the next three and a half years in the “Slow Growth” scenario and 1.9% in the “Stall Speed” scenario, compared to a 30-year average of 2.9% from 1979 to 2011.

CHART 3 – Real Consumer Spending Growth Forecasts

(percentage change over previous 12 months)



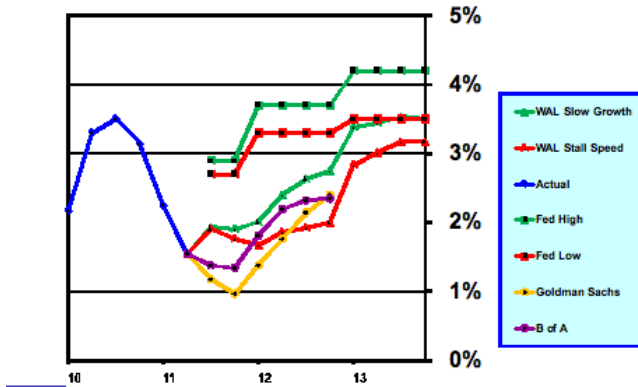
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3. GDP Forecasts

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 **Chart 4A1** and **Chart4A2**

CHART 4A1 – Real GDP Growth Forecasts

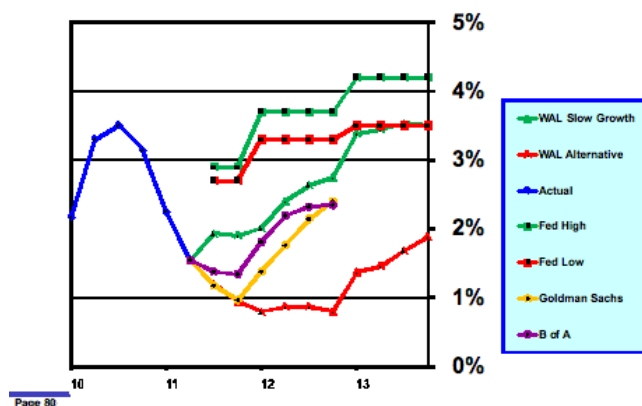
(percentage change over previous 12 months)



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The only difference between the 4A1 and 4A2 charts is that I show an

CHART 4A2 – Real GDP Growth Alternative Forecasts
(percentage change over previous 12 months)



alternative forecast in 4A2, based on my econometric model. The alternative forecast includes an estimate of the impact of housing wealth on GDP growth in **Chart 4A2**; whereas, the GDP growth estimates for “WAL Slow Growth” and “WAL Stall Speed” in **Chart 4A1** 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 on September 21st, forecasts for 2011 and 2012 and probably for 2013 will be reduced considerably. The FOMC reduced its forecast range to 2.7% to 2.9% in June. The forecast will have to be taken down substantially in September.

Both GS and 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 4A1**, the two forecasts through the end of 2012 track my “WAL Stall Speed” scenario more closely than my “WAL Slow Growth” scenario. In all of these forecasts, the output gap does not shrink to any material degree through the end of 2012.

The “WAL Alternative” GDP forecast incorporates the estimated impact of shrinking housing wealth. This scenario projects an awful trend which I hope does not materialize. I include this scenario to give the reader a sense

of a possible much worse case outcome. As bad as it the “WAL Alternative” scenario is, it does not project onset of a new recession.

GS has suggested that the underlying base GDP growth rate during the first half of 2011 was 3.0% rather than the reported 0.7%. Most of the difference was due to fiscal policy drag and higher oil prices and the remainder was due to supply shocks stemming from the Japanese earthquake. On the surface, this analysis suggests that GDP growth should rebound as the oil price shock fades and the Japanese supply-side shock passes. However, GS is forecasting only about an annual 1.25% real rate of GDP growth in the second half of 2011 and about 2.5% in 2012. Fiscal policy contributes a 1.0% to 1.5% negative impact, depending upon the nature and extent of fiscal actions the Congress takes in December. The recent tightening in financial conditions subtracts upwards of another 0.5% during the remainder of 2011.

In summary, as events are unfolding in financial markets, experience tells me that risks to the GS, B of A and my “WAL Slow Growth” forecasts are decidedly to the downside. The possibility of recession has increased. If recession 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. Limited evidence for the month of August suggests that consumer spending is weak but not consistent with the onset of recession. Thus, it would seem that the early August confidence shock has yet to translate in significant spending curtailment. However, lest we celebrate too quickly, zero employment growth will take its toll in coming months. What this means is that risks are tilted to the downside. It is premature to declare that recession has been avoided.

4. Longer Run U.S. GDP Growth Prospects

As a follow up to Carmen and Vincent Reinhart’s paper “After the Fall”, presented at the Kansas City Federal Reserve’s Jackson Hole conference in August 2010, Vincent R. Reinhart recently published an assessment of the U.S. economy compared to the 15 other countries which experienced a severe financial crisis in the second half of the twentieth century.⁴ He pegs the U.S. pre-crisis peak in 2006 and compares the performance of the U.S. economy

⁴Vincent R. Reinhart. “*Is the US Economy Freefalling?*”. American Enterprise Institute for Public Policy Research, August 2011.

over the last five years to the average performance of the other 15 countries during the first five years following their financial crises. The results of the comparison are distressing. The U.S. performance is considerably worse for every measure: -2.2% for real GDP per capita versus +3.7%; -15.6% for equity prices versus +4.6%; -37.9% for home prices versus -26.8%.

Reinhart suggests several sources for this worse than average performance including European sovereign debt and banking problems, unrealized credit losses, primarily real estate, on the books of U.S. banks, “deep dysfunction” in the U.S. political process, and potential additional fiscal restraint.

Moreover, Reinhart asserts that “. . . most of the policies pursued in those fifteen cases to reinvigorate expansion seem out of the realm of possibility over the next year in a gridlocked Washington.”

Countries that have fared best have offset fiscal consolidation with easy monetary policies. The ability to ease monetary policy to any significant extent in the U.S. is constrained by zero interest-rate boundary.

After considering Reinhart’s analysis it is very difficult to be optimistic about prospects for the U.S. economy.

IV. Employment

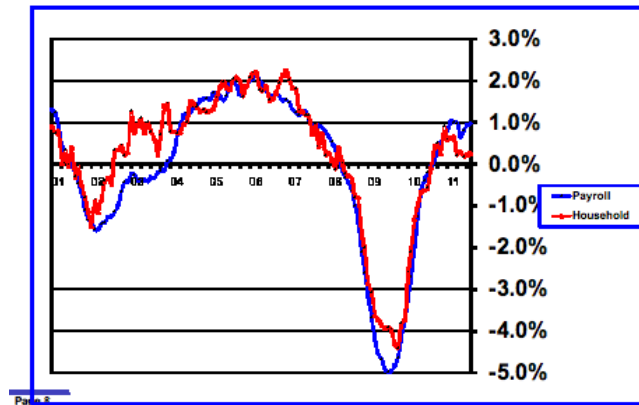
1. August Employment Data

Stall speed payroll employment growth is about 100,000 per month. Payroll employment growth was zero in August and the previous two months were revised down by a combined 58,000. Average monthly payroll employment growth over the last three months was 35,000, considerably below stall speed. The average over the first eight months of 2011 was 109, 000, just barely above stall speed. The unemployment rate has been stuck at 9.1% since the beginning of the year.

The household survey of employment, which generally closely tracks the payroll survey, indicates that employment has increased an average of 53,000 per month over the first eight months of 2011. Which report is right? As

shown in **Chart 5**, payroll employment growth is up 1.0% over the last year,

CHART 5 – Employment Growth (annual rate of change)



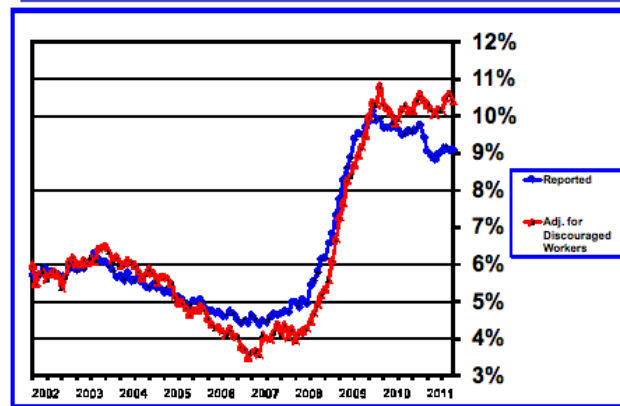
but household employment growth is up only 0.3%. Both reports are subject to statistical error. The payroll report will undergo several revisions over the next few years as more complete source data become available. So there is a reasonable chance that payroll data will be revised downward over the 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 has declined 96,000 since the beginning of the year, while payroll employment is up 872,000. The reason for this substantial divergence is simple and straightforward as shown in **Chart 6** — 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 10.4% by my calculations.

2. Wage Growth

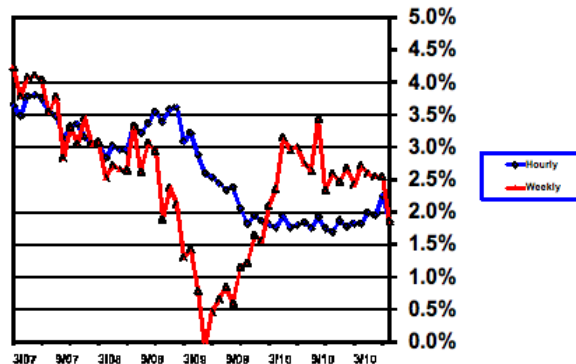
Last month it appeared that wage growth might finally be accelerating. This turned out to be a head fake as revisions to June and July data and the August data indicate that annual nominal hourly earnings growth remains stagnant at 1.7% (**Chart 7**).

CHART 6 – Reported Unemployment Rate & Adjusted for Discouraged Workers



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CHART 7 – Hourly and Weekly Wages (annual rate of change)



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More importantly, and a decidedly negative development, the rate of growth in weekly wages decelerated abruptly in August and converged with the rate of growth in hourly wages. What this means is that the average length of the workweek is contracting, which is a signal of a weakening labor market. Typically employers cut the length of the workweek before they cut back on increases in hourly wages. This pattern is evident in **Chart 7** and foreshadows the potential for a renewed decline in the rate of growth in average hourly wages in coming months.

Slowing employment growth and slowing wage growth is a double whammy which will depress growth in disposable income and will probably lead to reductions in consumer spending growth unless households draw down savings. I would note that the much heralded above consensus growth in consumer spending in July occurred at the expense of a decline in the household saving rate from 5.5% in June to 5.0% in July. This was very likely a one month aberration. The consumer saving rate tends to be inversely correlated with consumer confidence. Because consumer confidence fell significantly in August, a higher saving rate and lower spending growth in coming months is probable.

3. Other Recent Employment Indicators Are Negative

Other employment data points were negative in August, supporting the view that the labor market is likely to weaken further in coming months.

- **Unfavorable** — The Michigan consumer survey gap between households viewing “jobs as plentiful” minus viewing “jobs as hard to get” widened abruptly to -44.4% in August from -39.7% in July.
- **Unfavorable** — The Institute of Supply Management manufacturing employment index fell from 53.5 in July to 51.8 in August. An index value above 50 means that manufacturers are hiring on balance, but a decline in the index signifies a deteriorating trend.
- **Unfavorable** — The Conference Board’s Help Wanted online data series has declined an average of 160,000 monthly over the last three months. Ominously, the last time this index declined so abruptly was in early 2009 when employers shed several million jobs.
- **Unfavorable** — Layoffs announcements, which rose sharply in July, remained at a high level in August.

V. U.S. Fiscal Policy

If existing temporary tax benefits, such as the 2% payroll tax cut, are permitted to expire and spending cuts are implemented pursuant to the Budget

Control Act, fiscal policy would subtract more than \$270 billion or about 1.7% from GDP in 2012. Unquestionably this would have a substantial adverse impact on the U.S. economy in an election year.

Most agree that policies need to be crafted to limit further increases in the public-debt-to-GDP ratio with the longer run objective of eventually reducing that ratio. However, at a time when the economy remains incredibly weak and fragile, the extent of fiscal consolidation and the speed of implementation are of considerable importance. Substantial fiscal stimulus in the short run would help economic recovery but could exacerbate economic problems over the long run. Alternatively, substantial fiscal consolidation in the short run could lead to economic collapse, which would result in recession, higher unemployment and a higher, rather than lower, public debt-to-GDP ratio. The challenge for policymakers is to find the balance point between the two extremes so that the economy does not collapse but the problems are not deferred to another day and actually made worse. This challenge is sometimes referred to as the “**speed limit**” for fiscal policy.

Goldman Sachs (GS) estimates that the fiscal consolidation **speed limit** for large, relatively closed economies at the zero-interest-rate monetary policy boundary, like the U.S., is quite low — less than 2% of GDP. Thus, a 1.7% negative GDP impact in 2012 very well could exceed the speed limit with counterproductive consequences. GS projects a 1.25% fiscal contraction in 2012 which means it is assuming that Congress will provide some kind of limited fiscal stimulus in 2012, such as extending the 2% payroll tax cut for another year, which would continue the current stimulus of about \$110 billion.

VI. U.S. Monetary Policy

Tightening financial conditions, dismal consumer confidence levels and labor market stagnation collectively have prompted renewed discussion about the need for the Federal Reserve to ease monetary policy further.

1. Effectiveness of Monetary Policy Appears To Be Limited In An Economy Recovering from a Severe Financial Crisis

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.

When the credit system is functioning normally monetary policy is effective, but after fairly long lag times. 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 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 uncertain whether yet another round of quantitative easing would be helpful. Yet, in light of the recent financial market turmoil, additional 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 could re-stoke the risk-on trades for another few months and it would be happy time for speculators.

2. Monetary Policy Options

While there are several possible options, which I delineated in the ***August 2011 Longbrake Letter***, the most likely one would be implementation of another round of large scale asset purchases (quantitative easing) or QE III to distinguish it from the two earlier episodes. However, rather than increase the size of the Federal Reserve's balance sheet as occurred during QE I and QE II, most believe that QE III will involve substitution of long maturity Treasuries for short-term Treasuries. This would result in a potentially significant flattening of the Treasury yield curve, much of which already appears to have occurred in anticipation of just such a policy action.

3. Potential GDP Impact of QE III

Empirical research suggests that QE I may have boosted real GDP by as much as 2.0% over two years, while QE II should boost real GDP by about 0.6%. The smaller impact of QE II is the result of a smaller amount of purchases — \$600 billion versus \$1.75 trillion — and a diminished impact due to increasingly impaired credit markets. Arguably, the impact of QE III would diminish further. For example, GS suggests that the first-year GDP impact of the duration-equivalent of \$1 trillion in QE III purchases would be about a 0.5% boost in real GDP growth. While this is not much, it still could be a significant positive policy action if it offsets the potential for fiscal consolidation to exceed the speed limit.

4. Prospects for Federal Reserve Action

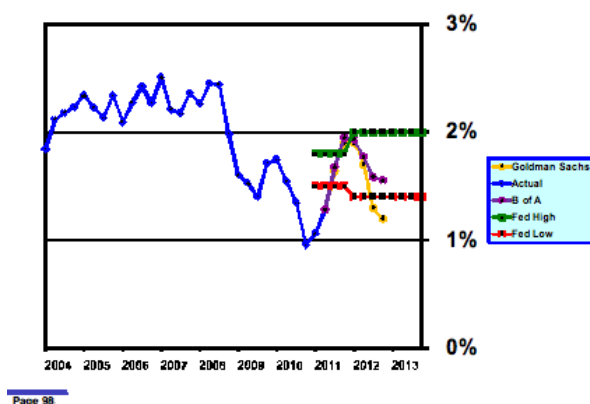
While most thought the bar for Federal Reserve action was high, recent negative events in Europe and the U.S. have lowered the bar. Thus, many now expect the Federal Open Market Committee (FOMC) to act at its September 20-21 meeting. Given the three dissents that occurred at the July FOMC meeting and the debate going on within the FOMC about the benefits and consequences of quantitative easing, it is not a foregone conclusion that the FOMC will take action at the upcoming meeting.

5. Inflation Prospects

One of the considerations arguing against the FOMC taking action at its September meeting is that deflation is not an imminent threat as it appeared to be a year ago when the FOMC implemented QE II. Since that time core PCE inflation has edged up from 1.0% to 1.6%. As can be seen in **Chart 8**, GS and B of A expect core PCE inflation to rise a bit further in the next couple of months and then fall. However, the forecast decline remains well within the Fed's policy comfort zone of 1.0% to 2.0%. Thus, members of the FOMC who are concerned about the potential inflationary consequences of more quantitative easing will likely not favor acting at this time.

GS and B of A's expected downturn in core PCE inflation is driven by the decline in oil prices since they peaked in April and labor market and

CHART 8 – Core PCE Inflation Forecasts
(percentage change over previous 12 months)



consumer spending weakness. My own sense is that the risks are tilted in favor of even greater declines in core PCE inflation. In fact, my model projects a small amount of deflation by the end of 2012.

VII. Housing — Part I — Supply, Demand and Prices

Historically, new housing construction has helped lead the economy out of recession and paved the way for renewed growth. In the aftermath of the 2007-09 Great Recession the historical role of housing has not occurred and, worse, housing continues to be an ongoing contributor to economic weakness.

There are three facets to understanding why housing is part of our ongoing economic problems. First, too many houses were built relative to underlying demand during the bubble years. To this must be added the facts that high unemployment and falling home prices have crushed demand. Second, the supply of mortgage finance has imploded as private label securities markets disappeared and underwriting standards tightened. Third, mortgage servicing dysfunctions have stretched out the process of dealing effectively with mortgage defaults and have contributed to falling home prices.

In this month's letter I examine supply and demand for housing and the implications of these dynamics for housing prices. Discussion of mortgage finance and servicing, both of which are badly broken and are negatively impacting economic recovery, will occur in a future letter.

Even though mortgage interest rates are at 50-year lows, improved affordability, which historically has stimulated housing recovery, has been totally overwhelmed by these three housing market problems. To date, policies intended to address these problems have had little beneficial impact and may even have worsened matters. Increasingly, it looks like it will take several more years before housing returns to health and becomes a positive contributor to economic growth. In the meantime, further home price declines remain a significant risk. Further home price declines would continue to depress demand, but much more importantly, they would increase the insolvency threat to financial institutions which were significant mortgage originators and securitizers and which currently have large mortgage holdings and mortgage servicing portfolios.

Returning housing to a healthy condition will require designing policies for each of the three housing issues that address fundamental underlying problems. In short this means designing policies which deal with too many houses relative to demand, which unwind excessive debt leverage, and which fix our broken mortgage servicing system.

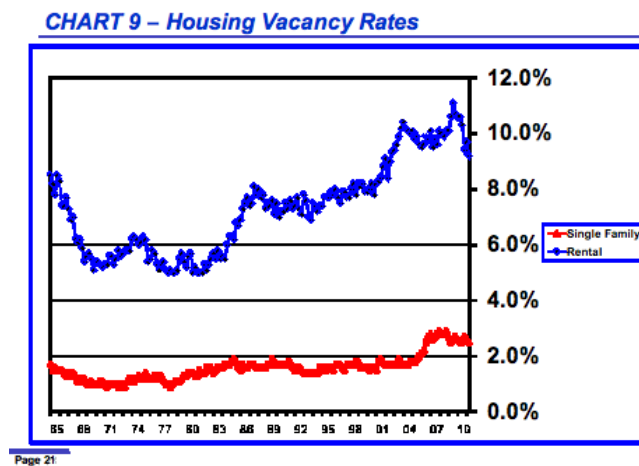
1. Demand Fundamentals

Projecting aggregate housing unit demand over a long period of time is relatively straightforward. Detailed demographic information is available from the U.S. Census Bureau, including population projections. That information when coupled with an assumption of average household size results in an estimate of the total number of required housing units. To this number must be added an amount for vacancies. Vacancies are necessary to facilitate home buying and selling and the movement of renters from one rental unit to another.

According to the Census Bureau there were 112.5 million occupied housing units as of the second quarter of 2011 averaging 2.778 persons per unit. 74.1 million of these units were owner occupied and 38.4 million were rentals. The seasonally-adjusted home ownership rate was 66.0%.

2. Vacancies — Excess Supply

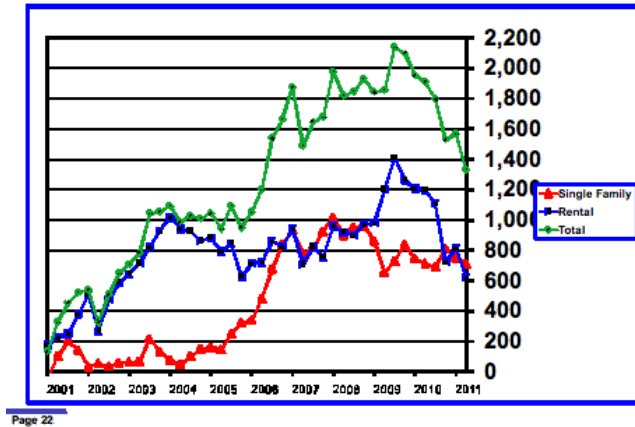
The overall percentage of vacant housing units has risen steadily over the past 35 years from 8.9% to 14.3% of total housing units. A greater percentage increase in supply relative to demand has occurred for rental units and may be linked in part to structural changes in the rental housing market (see **Chart 9**), but a good portion of the increase is due to overbuilding



of rental and owned units in recent years. Moreover, if recent decreases in labor mobility are sustained because of persistent high levels of unemployment, the frictional vacancy factor tied to a healthy balance between supply and demand may decline. If that occurs, then the vacancy levels shown in **Chart 10** understate the extent of excess supply relative to demand.

Chart 10 shows a crude estimate of the number of excess vacancies due to overbuilding during the bubble years. It is assumed that the period 1994-2000 just preceding the bubble period is reflective of “normal” vacancy levels. During that period, the average vacancy rate was 7.8% (1965-2011 average is 7.3%) for rental units and 1.6% (1965-2011 average is 1.6%) for owner occupied units. As of the second quarter of 2011, based on this formulation, there were 1.33 million more vacant units than the 1994-2000 norm, split between 622,000 rental units and 712,000 owner-occupied units.

Chart 10 shows that excess vacancies peaked in the third quarter of

CHART 10 – Number of Housing Units Above 1994-2000 Average

2009 at 2.14 million units.

This method of analyzing excess vacancies produces a lower number than other analyses, which range from 1.5 million to 3.5 million.

3. Supply — Required Average Annual New Construction

Estimates for the annual net addition to the number of housing units can be derived by multiplying the increase in population by the average number of persons per unit (2.778) and adding a vacancy factor equal to 11.5%, which is the average aggregate vacancy rate during the 1994-2000 period.⁵

The top panel of **Table 2** shows the number of net additional units needed annually if the average number of occupants per housing unit remains constant at its 2011 Q2 level of 2.778 persons. In recent years the annual rate of growth in the population has varied between 1.0% and 0.8%, but has been on a declining trend as immigration has dwindled. The annual population growth rate was 0.8% in the second quarter of 2011. Based on

⁵The average number of persons per occupied housing unit is slightly higher than other data series on average household size. This difference appears to be linked to data issues embedded in the Census Bureau's methodology for estimating the number of housing units.

Table 2
Estimate of Net Annual Addition to
Number of Housing Units

Population Growth with 2.778 persons per household	Required Units (net new households)	Required Units + 11.5% Vacancy Factor
0.8%	900,000	1,003,000
1.0%	1,125,000	1,254,000
1.2%	1,350,000	1,505,000
Population Growth with 2.788 persons per household	Required Units (net new households)	Required Units + 11.5% Vacancy Factor
0.8%	493,000	550,000
1.0%	717,000	800,000
1.2%	941,000	1,050,000
Population Growth with 2.768 persons per household	Required Units (net new households)	Required Units + 11.5% Vacancy Factor
0.8%	1,309,000	1,460,000
1.0%	1,535,000	1,712,000
1.2%	1,761,000	1,963,000

these assumptions, 1,003,000 net new units would be required annually. To determine the number of units that need to be constructed one must add an estimate of the number of units that are demolished each year. Thus, assuming 290,000 units are demolished, construction of about 1.3 million new units would be required.

The middle and bottom panels of **Table 2** show the impact of an increase and a decrease of .01 persons per occupied housing unit on net additions to the housing stock. As you can see, this very small change has a dramatic impact. Thus, it is important to probe the effects of changing demographics on the average number of occupants per housing unit.

Variations in the average number of occupants per housing unit have trend and cyclical components. The cyclical component is a function of the

business cycle with average occupancy falling when the economy is strong and rising when it is weak. During and following recessions unemployed persons double up, kids stay longer with mom and dad and new household formation is delayed. Longer-term trends turn on lifestyle choices and age demographics. For example, average persons per occupied housing unit trended down from 3.02 in 1975 to 2.65 in 1989, but then reversed course, rising to 2.78 by the second quarter of 2011. When the cyclical and trend components are disaggregated through statistical analysis, the trend effect overwhelmingly dominates the cyclical effect.

There are obvious implications of slowing population growth and rising average occupancy levels: *both trends will depress the need to add to net housing stock in coming years*. If labor mobility remains lower for an extended period of time, this would have a similar effect. All of these trends mean that it will take longer to absorb excess housing vacancies.

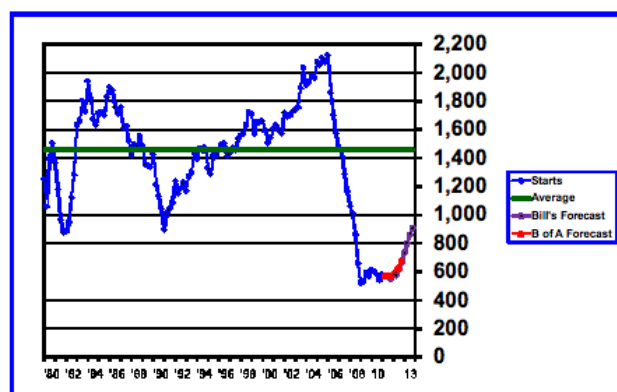
4. Supply — Absorption Rate of Excess Vacancies

Vacancy absorption arithmetic is straightforward. If net required additions to housing stock are 1.3 million annually, at recent construction rates of about 600,000 units, it would take about 2 years to clear out 1.33 million excess housing units. However, if average occupancy continues to rise about 0.006 persons per year as it has since 1989, then only 1.04 million net new housing units would be required annually and it would take 3 years to clear out excess inventory.

If the actual excess vacancy is higher than 1.33 million units, as others believe, then the time to absorb the excess would simply take even longer. B of A estimates that it could take up to five more years for the housing market to return to normal.

5. Supply — Forecast Housing Starts

Chart 11 includes my forecast and B of A's forecast for housing starts. The forecasting methodologies are different, but the forecasts over the next six quarters are almost identical. My forecast depends on changes in housing prices, population growth, and the ratio of completions to starts. Starts

CHART 11– Housing Starts (quarterly average)

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decline with falling prices, slowing population growth and a rising ratio of completions to starts. All of these variables statistically have multi-period lags, which means that the balance of momentum remains stable to slightly negative for the next few quarters even as excess inventory declines.

Also note that there is no assurance that starts will eventually revert to the long-term average, which is slightly above 1.4 million units. If average occupancy per housing unit size continues to increase gradually, population growth does not accelerate and labor mobility does not improve, a steady state level of starts in the range of 1.0 million to 1.1 million annually seems more likely.

6. Composition of Housing Demand

Life in the housing industry, when it comes to the dynamics of supply and demand, is far more complicated than the simplified analysis presented above. That is because demand for specific types of units is influenced by choices to rent versus own, by demographic trends and by life style choices. What this means is that the housing market is composed of many submarkets, some of which are in a state of excess supply, some of which have insufficient supply relative to demand and some where there is balance between supply and demand.

By far the greatest imbalance between existing supply and emerging demand has to do with the type of structure. **Table 3** shows the results of

Table 3
Housing Preferences Versus Supply

	Arthur C. Nelson	Robert Charles Lesser & Co.	National Association of Realtors	American Housing Survey
Attached	38%	38%	39%	28%
Small Lot	37%	37%	37%	29%
Large Lot	25%	25%	25%	43%

Source: New Urban News, June 2011

three separate surveys of household preferences for attached, small lot, and large lot housing compared to the 2009 American Housing Survey estimate of supply for each of these types. The three preference surveys produced almost identical preference results. When preferences are compared with actual supply there is an enormous excess of large lot (single family detached dwellings) and a shortage of attached and small lot dwellings. Since there were an estimated 112.5 million occupied housing units during the second quarter of 2011, each 1% difference amounts to about 1.12 million homes. That implies that the supply of large lot homes exceeds preferences by 20 million.

There is good news and bad news embedded in **Table 3**. The good news is that in coming years there will be strong demand for smaller homes and multi-family rentals and to a lesser extent condominiums. The bad news is that there will be limited demand for large detached single family homes and an enormous excess supply. Persistently high gas prices will reinforce the trend away from large lot suburban homes. With this kind of supply-demand imbalance, prices for large detached single family dwellings seem likely to remain under downward pressure in many markets for many years to come.

7. Housing Prices — Base Prices

Housing prices in the first order are determined by the cost of land, cost to build and cost to finance. I refer to this as the **base price**. But, **market**

prices will vary from this base price depending on supply-demand imbalances and shifting preferences for type and size of unit. From the analysis above we know that excess supply exists for most types of housing but the excess is considerably greater for large-lot, owner-occupied, single-family homes located in suburban areas. Homeownership rates have been declining and probably additional declines are coming. This phenomenon is shifting demand from owner-occupied to rental units.

The base price serves as the long-run equilibrium price. If demand exceeds supply, prices will exceed this base price and larger than normal profit margins will stimulate new construction. Of course, the base price, itself, varies over time depending on changes in its three components.

- **Price of Land**. This is the most volatile component and the one that adjusts most quickly to imbalances between supply and demand. In the recent downturn the price of land has plummeted.
- **Cost to Build**. This component depends on trends in materials costs and labor wages. Because of the global boom in commodities, costs of many materials have been rising, although this has not been the case for wood products which comprise a significant portion of building costs for detached single family dwellings. Labor wage inflation has been slowing and may slow further if the unemployment rate remains high. The unemployment rate for construction workers currently is much higher than the overall unemployment rate of 9.1%. Overall the cost to build probably is rising slowly over time, generally in line with the rate of increase in inflation.
- **Cost to Finance**. Mortgage and construction financing costs are at 50-year lows. Thus, this factor has been favorable for housing prices. However, more stringent underwriting and credit-extension qualification requirements and higher relative pricing for risk have offset some of the benefit. Going forward, it is unlikely that interest rates will go much lower and most think they will rise. Offsetting that, hopefully, will be a loosening of underwriting requirements and more favorable risk-based pricing. For at least the next two years, the cost to finance is not likely to change much, which means that this factor is likely to have a neutral impact on housing prices over that time period.

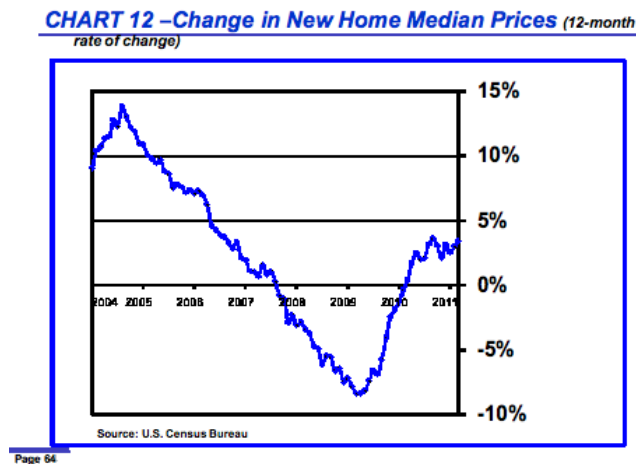
In summary, looking ahead, the base housing price is likely to be rel-

atively stable for a while. Land costs could decline some, particularly in market segments which have persistent large supply excesses; cost to build will be flat to slightly rising; and cost to finance should be relatively stable.

8. Housing Prices — Market Prices

While the **base price** needs to be constructed from its three components, a task I have not attempted, **market prices** are readily available. However, there are two general methodologies for reporting market prices of owner-occupied homes.

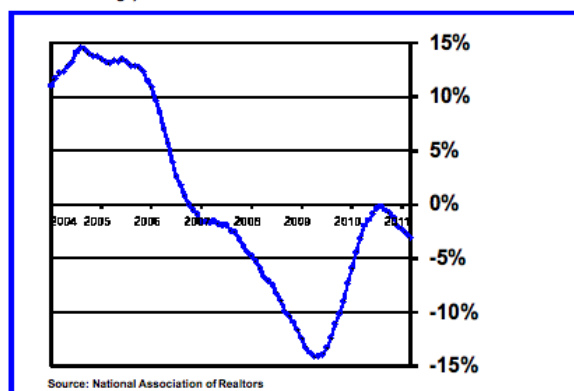
Median Sales Price Method. One method involves reporting median sale prices; the average price is also reported but contains an upward bias because of the impact of a few high-priced homes. There are two principal price series for this reporting method — new home sales shown in **Chart 12**, which is reported monthly by the Census Bureau, and existing home



sales shown in **Chart 13**, which is reported by the National Association of Realtors.

Charts 12 and **13** show the same general pattern in price changes over time. The rate of price increases peak at the beginning of 2005 and then begin decelerating. Price decreases then set in late 2006 with negative mo-

CHART 13 – Change in Existing Median Prices (12-month rate of change)



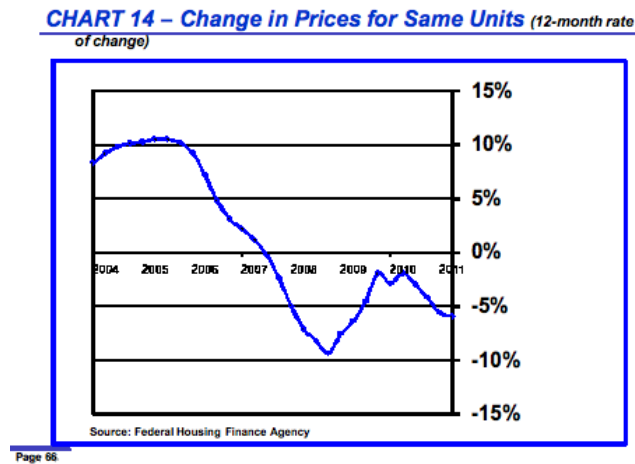
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mentum escalating before the rate of decline bottoms out in early 2009. Since that time there has been a slight divergence between the two price series with prices for new homes rising modestly since early 2010 but existing house prices continuing to decline. In fact, it appears that the decline in existing home prices has reaccelerated. The difference in the recent behavior of these two price series may be linked to the negative influence of sales of foreclosed homes on existing home sales price data. When foreclosures are eliminated from the alternative price methodology, which is described below, prices for voluntary sales of existing homes are rising modestly, similar to the price series for new homes in **Chart 12**.

Change in Prices of Same Units Method. Because there is considerable noise in the simple median price data, a more sophisticated data method involves comparing sales prices of the same housing units over time. The oldest and most comprehensive price data based on this methodology is reported by the Federal Housing Finance Agency (FHFA). Data are quarterly and begin in 1975. More recently, FHFA has begun reporting monthly data. The S& P Case-Shiller housing price index is constructed using a similar methodology, but the data series differs from FHFA's due to narrower geographic coverage, but also due to broader coverage of types of homes (FHFA prices are limited to homes financed with either Fannie Mae or Freddie Mac mortgages). There are several other housing price series including those provided by Lender Processing Services, CoreLogic and

Zillow.

Chart 14 shows the FHFA data for changes in prices over time for sales



of the same units. The pattern of price changes over time mirrors that for changes in median prices for existing homes as reported by the National Association of Realtors. However, the FHFA data series is less volatile, with increases peaking at 10% compared to a 15% peak in the median house price series. Similarly, the maximum rate of housing price declines in the FHFA data series was 10% compared to 15% in the National Association of Realtor data series.

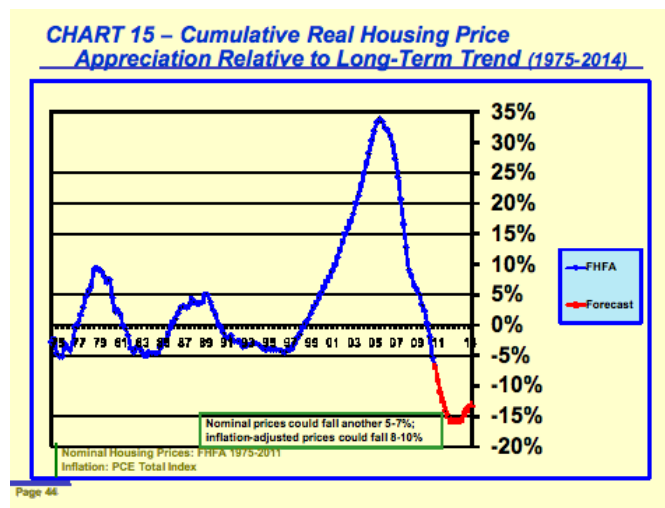
9. Current Market Housing Price Compared to Base Price

What I have established thus far is that there are excess vacancies for most types of housing structures. Such a situation implies that when the base price is relatively stable, as my analysis suggests, there should be downward pressure on market prices. The extent of such downward pressure depends upon the size of the excess vacancies relative to the total number of housing units and the size of the gap between the current market price and the base price. It stands to reason that downward price pressure will increase with the percentage of vacancies and will increase as the gap between the market and base price rises. If the current market price is less than the base price

as I believe it is, this factor would place upward pressure on prices, but that effect is likely to be swamped by the current high vacancy rate.

Vacancy Rate. According to Census Bureau data, the total vacancy rate peaked at 14.6% in the first quarter of 2009 and has declined only marginally to 14.3% by the second quarter of 2011. Excess vacancies range from my low estimate of 1.33 million units to as high as 3.5 million units. So, while vacancies are moving in the right direction, they remain extraordinarily high and will continue to exert substantial downward pressure on home prices.

Gap Between Market and Base Price. An estimate of the **price gap** depends on the value of the base price and choice of market price data series. As I mentioned, I have not attempted to estimate a base price using a bottom up analytical approach. An indirect method for estimating the size of the **price gap** is shown in **Chart 15**. Over the period from 1975 through



2001, a period of 27 years, based on the FHFA housing price data, owner-occupied housing prices rose 1.14% annually on an inflation-adjusted basis. The cumulative deviations from this long-term 1.14% real rate of return are shown in **Chart 15**. The chart shows three housing price cycles with peaks in the late 1970s, late 1980s and 2006. The amplitude of the up and down cycles tends toward symmetry, although the down cycle cumulative deviation from trend is less in the 1970s cycle than the cumulative deviation in the preceding up part of the cycle.

As of the second quarter of 2011 the implied market-base price gap, using this particular methodology, was -6.8%, which is slightly worse than the two previous housing cycle lows. The forecast indicates that inflation-adjusted price gap could widen to almost -16% over the next two years before it begins to improve. This forecast implies about a 5% decline in nominal prices and an 8% decline in real prices, assuming inflation averages 1.5% over the next two years. This forecast, while it might seem pessimistic, is not as bad as B of A's forecast for a 6.8% decline in nominal and a 9.5% decline in real home prices over the next 18 months.

There is one important aspect of home price determination that needs to be understood that buttresses the plausibility of these home price decline forecasts. Unlike the stock and bond markets in which prices are established on an auction basis instantaneously based on supply of securities for sale and demand to purchase securities, the process of adjusting home prices is very sticky. Starting prices for current home sales are anchored by appraisals of value and broker price opinions based on recent actual sales prices. The starting price is then adjusted upwards or downwards slightly to reflect the balance between buyers and sellers. When there are more sellers than buyers, which is the case when there are excess vacancies, the adjustment to price is negative. Thus, it can take several months before market prices arrive at a level where supply and demand at that price are in balance.

10. Conclusion

While most of the decline in home prices has already occurred, the process is not yet completed. Further declines in nominal prices, which are more important than inflation-adjusted prices when considering the potential for additional losses to investors, could range between 5% and 7%. Unfortunately, expectations of falling home prices reinforces conservative lending underwriting practices, boosts risk-based financing costs, and depresses buying enthusiasm. All of these factors combine to place even greater downward pressure on prices in the near term.

What this means is that potential losses to originators of mortgage securities and investors in mortgage securities are likely to grow larger over the next two years. Dysfunction in mortgage servicing practices, and particularly in the management of the foreclosure process, has contributed and probably will continue to contribute to downward momentum in housing

prices. There is already a significant amount of probable loss that has not yet been recognized on an accounting basis. And, probably only a small amount of additional potential losses that could result from further home price declines are covered in loss reserving methodologies. These risks account for the poor relative performance in the equity prices of many financial services firms so far in 2011.

This is one of those times when I hope that my analysis of the situation is flawed and unduly pessimistic. If it is not, there is more trouble ahead in the housing market and many financial market participants will be challenged financially — and some significantly.

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