

The Longbrake Letter*
Bill Longbrake
June, 2010

I. Summary

1. Topics in June's Commentary

June's commentary is divided into three parts. The first part summarizes the three principal structural forces that are reshaping the functioning of the global economy — *globalization*, *technical progress* and *debt leverage*. These forces are not only reshaping the global economy over time, they have also contributed to growing imbalances both within individual economies and across economies. Escalating global economic imbalances have caused and will continue to cause increased economic volatility and have reduced the resiliency of global economies to absorb and contain shocks. While, on the whole, the global population is benefiting from a higher rate of growth and increased standard of living, this is not true in countries in which imbalances have reached extreme and unsustainable levels. The primary problems in such countries are extreme levels of debt leverage and lack of productive competitiveness in global markets.

U.S. cyclical economic developments are summarized in the second part. The mood is considerably more downbeat than it was just a month ago. Of course, the proximate cause of the mood shift is the decline in stock prices by nearly 14% since they peaked on April 23, 2010. But, a variety of recent data reports, including notably the May employment report released on June 4, 2010, has been disappointing and has cast doubt on the optimistic view that prevailed up until a month ago that the U.S. economy was in the early stage of a vigorous economic recovery. This update touches on gross domestic product (GDP), employment, consumer spending and inflation.

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

In the third part of this month's commentary I take a deep dive into studying the impact of *U.S. federal fiscal policy* in the near term, but I also explore the potential longer-term impacts and consequences of growth in the stock of federal debt held by the public and the large contingent spending obligations embedded in income security and health care federal social welfare programs.

2. Components of Economic Analysis

As a reminder for previous readers of these commentaries and as a suggestion to new readers, you can get a comprehensive sense of how I develop an economic commentary by reading *Components of Economic Analysis*. In short, I integrate three types of analysis — fundamental, statistical/econometric, and behavioral — each of which is summarized briefly below.

Fundamental analysis is the most important component because when done well it provides an understanding of how the economy works and how economic variables interact and influence each other over time. Fundamental analysis encompasses long-term trends and short-term cyclical oscillations.

Statistical/econometric analysis is a tool for gaining deeper insight into the workings of the economy and helps corroborate or refine fundamental analysis. However, it is not a substitute for rigorous fundamental analysis.

While economic theory, which underpins fundamental analysis, customarily presumes that humans act in rational ways, experience unequivocally shows that *human behavior* frequently is not rational. Humans are motivated at times by greed and at other times by fear. They are motivated by the need for self-importance and social acceptance. The psychology of the crowd often enters into play and this influences outcomes in ways that deviate from what fundamental analysis suggests are likely. And, it seems that the impact of human behavior may be becoming greater in today's information society and news entertainment media culture.

II. Long-Term Trends and Structural Changes

As noted in the summary above, *globalization*, *technical progress* and *debt leverage* are the three fundamental forces reshaping the global economy. The first two have combined to create an enormous and rapid increase in global productive capacity which has outstripped growth in demand. This phenomenon is not transitory — it will continue for at least several more years. This has imparted a deflationary bias to global economies and has prompted many countries to pursue demand stimulation policies. While such policies do boost demand and mitigate the potential for deflation, the cost is an ever increasing use of debt leverage relative to the aggregate productive capability of individual country economies.

While increasing use of credit and debt to stimulate demand has short-term beneficial effects on growth, the ability to service debt, as it grows as a proportion of aggregate productive capacity (*debt ratio*), diminishes. As the debt ratio rises in a country, a country's economy and financial system become increasingly vulnerable to traumatic and painful cyclical downturns of ever increasing magnitude. The cyclical downturns are characterized by debt deleveraging and an impaired financial system. A healthy economy, which is capable of delivering steady and positive economic growth, depends upon a sound financial system that is well capitalized and not over leveraged.

Unfortunately, the debt ratio has risen in recent years to levels in many countries that are unsustainable. When the underlying fundamental driver of the global economy is excess capacity — aggregate supply exceeds aggregate demand — with the deflationary impulses such a condition prompts, financial debt deleveraging can and usually does have catastrophic consequences. In a deflationary environment the value of real collateral declines, but debts are denominated in nominal terms. What this means is that the burden of debt increases, even as participants in an economy attempt to pay down the debt. This results in a severely negative, even deadly, outcome for financial institutions. Credit defaults rise because of the downturn in economic activity. But, simultaneously, collateral values fall, which elevates the magnitude of the negative impact of credit defaults on loss reserves and capital.

This is the situation that now confronts the global economy — dealing with the consequences of excessive debt leverage within an overall deflation-

ary context. Not all countries are equally affected, of course, as some, like China and India, are clear beneficiaries of globalization and some others have not permitted debt ratios to climb to dangerously high levels. The greatest risk of debt deleveraging is concentrated in developed countries which have used fiscal policy aggressively as an instrument of economic stabilization and demand management and which also have the most developed and generous income sustainability and health care social welfare programs. And, in a few, again mostly the developed economies (although there are some exceptions, such as Russia), declining populations are an added negative factor.

A review of recent events makes clearer why this cycle is not a normal one and why it will not follow a normal recovery path.

1. Events Leading Up to Financial Panic of 2008

Key developments:

- Emerging economies — China, India, Asian Tigers, former Soviet Republics and many Latin American countries — entered or became a more significant participant in the global market system during the 1990s, resulting in a substantial increase in global capacity and supply relative to demand.
- China pursued aggressive domestic growth by emphasizing infrastructure investment and manufacturing and used currency pegging to promote exports. This resulted in huge trade and current account surpluses, which were offset by deficits in other countries, particularly in the United States.
- Global excess supply and Chinese trade and current account surpluses resulted in a global glut in savings that was recycled into financial instruments issued by deficit countries. This helped keep interest rates low.
- Low interest rates fueled inflation in asset values, notably in real estate markets.
- Inflation in asset values lead to speculative activity, which caused over-investment, especially in residential and commercial structures, in developed economies.

- Limited government regulation and innovations in financial instruments, such as complex asset backed securities, collateralized debt obligations and credit default swaps, re-enforced speculative momentum.
- Monetary policies in most countries were passive thus permitting creation of liquidity necessary to absorb the global glut of savings and contributed to keeping interest rates low.
- Debt levels relative to income (debt ratio) rose. For example, from 1994 to 2009 debt to GDP ratios in the U.S. rose as follows: consumers — 62% to 94%; businesses — 53% to 76%; state and local governments — 15% to 16%; federal government 48% to 54%; and total debt — 179% to 240%.
- By 2007 prices of homes in the U.S. began to decline due to a massive excess in the supply of new homes relative to demand. Prices also fell in response to rising mortgage delinquencies initially due to substantial payment increases on some mortgages, particularly on adjustable-rate, sub-prime mortgages, and later in response to rising unemployment.
- As collateral values fell and credit losses began to mount, the fragility of many debt obligations became apparent and the panic of 2007-09 got underway in the August 2007 as market participants attempted to pass the flawed financial instruments on to others.
- Massive debt deleveraging in the private sectors of the economy (financial panic) spread across the globe quickly and climaxed in September/October of 2008 with the failure of Lehman Brothers.
- Global trade crashed, consumer spending collapsed and unemployment soared.

2. U.S. and Global Policy Responses

Governments across the globe responded aggressively to the crisis in a number of ways:

- Central banks poured liquidity into financial institutions in an attempt to unfreeze financial markets.

- Governments made direct capital investments (TARP in the U.S.) and purchased financial assets (TARP in the U.S. but more so the quantitative easing program of the Fed in purchasing U.S. Treasury securities and mortgage backed securities).
- Governments increased direct spending and reduced taxes with the intent to stimulate demand and spending by the private sectors.
- China's spending actions deserve special comment. As soon as global trade crashed in October 2008, within a month China responded with a massive government spending program that focused on infrastructure investment. This is important because it quickly became a catalytic policy for stimulating demand for commodities and manufacturing exports from other countries. This helped revive global trade more quickly than might otherwise have occurred.
- Government intervention was financed by borrowing. For example, in the U.S. debt to income ratios from Q2 2007 (the quarter before deleveraging commenced) to Q1 2010 changed as follows: consumers — 96% to 94% (peaked at 97% in Q1 2009); businesses — 71% to 76% (peaked at 79% in Q1 2009); state and local government — 15% to 16%; federal government — 35% to 57%; and total debt — 217% to 243%.

Collectively, these policies, by providing liquidity, supporting demand and rebuilding trust in financial markets through debt guarantees, prevented the global economy from falling into depression.

3. Prospects

In the face of such massive intervention it can hardly come as a surprise that economic activity began to recover in mid-2009. The recovery in international trade and the reversal of the inventory cycle's overshoot both contributed to a "V-like" recovery initially and fostered optimism that global economies were well on their way to sustained economic growth.

This optimism overlooked a significant fact. The problem of debt leverage got worse — not better. The debt over-leverage problem was shifted from the private sector to the government

sector. But, as the data from the U.S. illustrate, debt deleveraging progress was anemic among consumers and businesses. The price of avoiding a painful correction in the private sectors of the economy was an explosion of debt in public sector. We have not just “kicked the can down the road” we have increased the magnitude of the problem and shifted it in the direction of government solvency.

The Greek sovereign debt crisis, which was evident long before it became a focal point for financial markets, has helped dispel the unrealistic sense of optimism that drove financial markets between March 2009 and April 2010.

Now, the favorable effects of the inventory bounce have about run their course. The stimulative effects of government fiscal policy will diminish in coming quarters and the growing political realization of the potential consequences of further increases in the government debt to income ratio will probably limit further government stimulus initiatives.

We can hope that the private sectors have benefited enough from government pump priming that they can take the lead going forward in promoting economic growth. But in light of on-going financial system weaknesses and unresolved problems of overinvestment in housing and consumer overindebtedness, it is difficult to see how the virtuous circle of household employment and income gains and consumer spending can muster much momentum in the near term.

And, increasingly it looks like China’s massive stimulus program is running out of gas. It has resulted in substantial overinvestment in real estate and an unsustainable price bubble. At the very least, going forward China is unlikely to be the engine of global growth to as great an extent as it has been. And, it could be worse if the imbalances that have built up in China cannot be managed in a controlled fashion.

All of this suggests that economic growth will probably continue but at a low enough rate that is insufficient to absorb quickly excess capacity. What that means in the U.S. is that unemployment will remain stubbornly high for a long time. It also means that inflation and interest rates will remain low for a sustained period of time.

Too much debt remains a significant problem. While time has run out in Greece, Latvia, Hungary and Ireland and nearly has run out in Portugal,

Spain, Italy and some other countries, the day of reckoning is still in the future for many other countries. *But, here is my caution — delay in addressing the global debt problem will only contribute to making it worse over time. Addressing the problem today will be painful but delaying addressing it and then being forced to address it later, when it has become much bigger, will be even more painful. Contrary to the belief of many that there must be a set of policies that we can devise that will restore economic balance without painful adjustments, there simply is no easy way out of the global imbalances that have built up.*

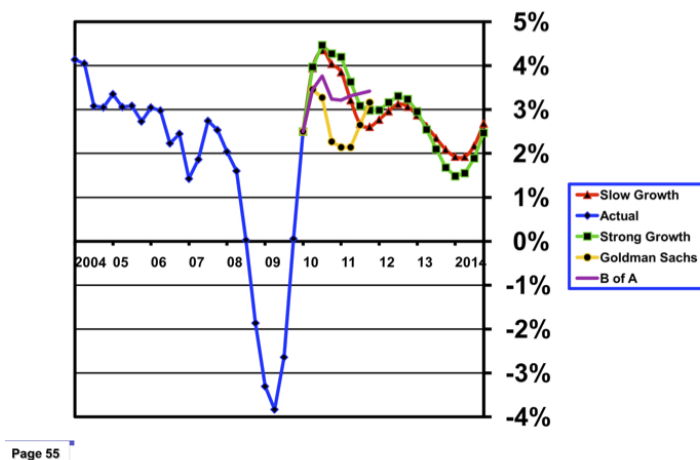
III. U.S. Macro Economic Outlook — GDP, Employment, Consumer Spending and Inflation

1. GDP

Second quarter GDP growth was revised down to 3.0% from 3.2%. Real final sales growth, a better measure of underlying GDP growth because it adjusts out the impact of inventory adjustments, declined from 1.6% to 1.4%. Without the estimated benefit of a 2.2% boost to growth from federal fiscal stimulus, real GDP, net of inventories, would have declined -0.8% in the first quarter. Fiscal stimulus should be near 2.0% of GDP in the second quarter and should contribute to about 3.0% real GDP growth. However, fiscal stimulus will decline sharply in the third quarter and is expected to become negative by the fourth quarter. Consequently, without an increase in private final demand, reported real GDP growth is headed toward 1.0% to 1.5% in the second half of 2010.

The Economic Research Cycle Institute (ECRI) index of leading indicators has declined steadily over the last two months and is back to its year ago level. This measure has had a relatively good predictive record in the past. If that record holds up, the recent decline in the ECRI index suggests that real GDP growth will slow to 1.0% to 1.5% in the second half of 2010. This is considerably less than the consensus forecast which exceeds 3.0%, but is consistent with Goldman Sachs' outlook. Thus, I believe the Goldman Sachs forecast shown in **Chart 1** is more likely to be right than the Bank of America Merrill Lynch forecast or the forecasts derived from my

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



Page 55

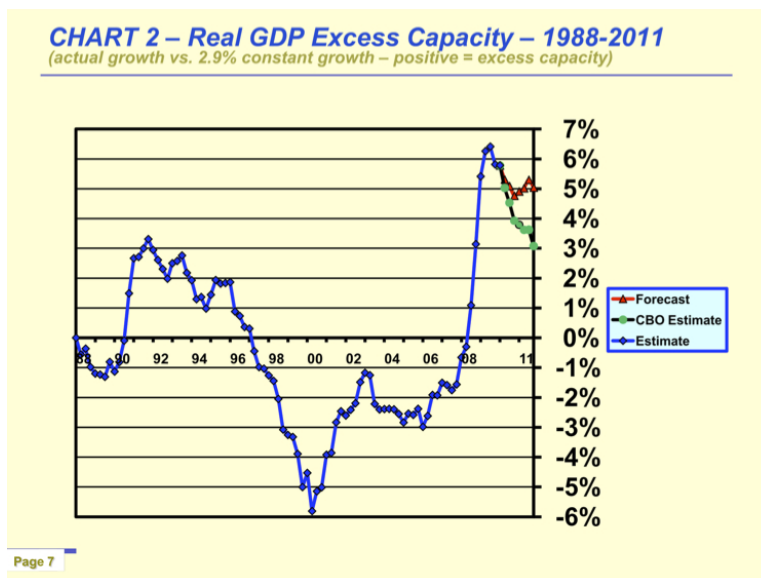
econometric model.

In the *May 2010 Longbrake Letter* I discussed how population growth and productivity combine to determine the noninflationary rate of growth in real GDP and how the gap between potential and actual GDP can be measured. A positive output gap imparts deflationary pressures while a negative output gap fuels inflation.

Chart 2 shows how the GDP output gap has fluctuated since 1988 and includes a two-year forward forecast. Measurement is difficult so you should not attribute precision to the data in the chart. However, the oscillations in the output gap over time tell an important story.

I assume that the potential growth rate in real GDP currently is about 2.9% annually. This figure is somewhat, but not much higher, than estimates of most others. It is derived by combining the contributions of labor force growth and labor productivity.

The story that **Chart 2** tells is that there is substantial excess capacity in the economy and it is much greater than what occurred after the recession of the early 1990's. I calculate the level of excess capacity in the first quarter of 2010 as 5.8% which compares to the Congressional Budget Office's probable



estimate of 5.7%. The real story, however, is that it will take a long time to reduce excess capacity. My forecast indicates that little significant headway is likely to occur over the next two years. That is because I forecast real GDP growth over this period to be about the same as the potential real growth rate. Simple arithmetic dictates that it would take six years to eliminate excess capacity if the actual real growth averages 1% above potential and three years if it averages 2% above potential. This is important because what it means is that disinflationary, even deflationary, pressures will hold sway over the next several years.

The Congressional Budget Office (CBO) estimates that growth potential will be about 1.7% annually in 2010 and 2011, which is much less than the 2.9% assumed in **Chart 2**. The rationale is that growth potential falls temporarily during recessions because it takes time to reallocate resources from non-productive parts of the economy that cease to be viable during a recession to emerging growth areas. Using CBO's estimate reduces the output gap from 5.1% to 3.1% by the end of 2011.

Some economists believe that the GDP output gap will decline even more quickly. First, some believe productivity will decline because of constraints on new investment. They argue that in the near term tight credit conditions will limit investment in new initiatives and in the longer-term higher inter-

est rates due to the crowding out effect of high federal budget deficits will limit new investment. The combined consequence will be less investment and lower productivity growth. This is a purely macro argument and does not recognize the substantial amounts of investable funds already parked in venture capital funds or the momentum in technology-based communications solutions to streamline operations and reduce substantially operating expenses. I expect that the on-going quest to reduce operating expenses and the enormous opportunity that remains to apply data communications and internet technology to basic business processes will continue to be drivers of substantial productivity gains. Also, there is substantial anecdotal evidence that significant numbers of unemployed professionals have become nascent entrepreneurs and are attempting to establish new businesses.

Another line of argument that the output gap may actually be much smaller than current measures suggest involves an increase in the inflation neutral rate of unemployment (NAIRU). The thrust of this argument is that certain unemployed workers are likely never to re-enter the employed labor force because their skills are no longer needed and because it is unlikely they can be retrained for other jobs. A related argument is that labor mobility has decreased, which would mean, if true, that workers may be less willing to move to find employment. Thus, although such workers are counted as unemployed, they are really not available for employment and thus potential wage pressures would commence at much higher unemployment rates.

NAIRU has oscillated in the past, but usually in response to demographic changes in the labor force, such as the entry of an above normal number of young people during the 1970s as the baby boom generation reached working age. At that time NAIRU rose for several years. Demographics are moving in the other direction now as baby boomers approach retirement age. It seems more likely that workers without requisite skills will drop out of the labor force eventually rather than hanging on in the hope of retraining programs and re-employment. The labor mobility argument seems to be more a result of depressed housing prices and limited access to mortgage credit. While these problems are likely to persist for a while, they will eventually cure themselves and labor mobility should then return. Thus, I find it hard to accept this line of argument as substantively reducing the output gap.

2. Employment

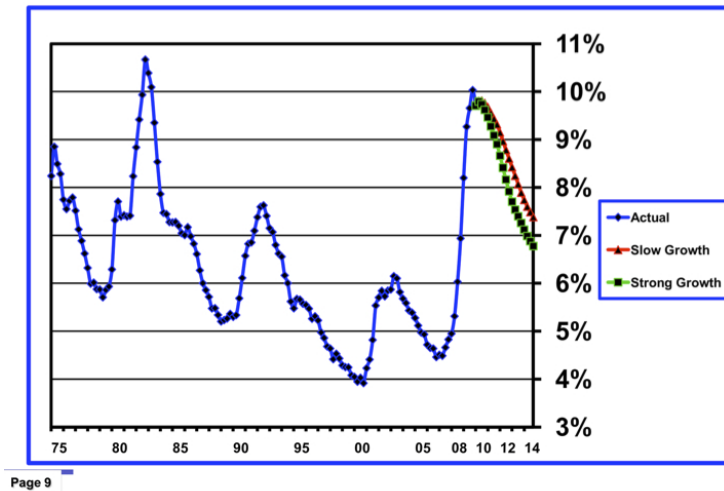
The May employment report released on June 4, 2010, was a huge disappointment. In response stocks declined over the next two trading days to their lowest level since November 4, 2010. On the surface it seemed like a great report with 431,000 new jobs created, but 411,000 of those jobs were temporary Census Bureau hires which will disappear later this year. Private payrolls rose only 41,000 after gains of 158,000 in March and 218,000 in April that the market apparently incorrectly interpreted as the beginnings of a significant expansion in employment. Labor force participation declined, the household measure of employment actually fell 35,000 and the diffusion index, which measures the percentage of industries with rising employment, shrank from 66.7% in April to 54.1% in May.

Nonetheless, there were some positives. The unemployment rate fell from 9.86% to 9.70%. But this reflected in part a large decline in the labor force, which may either be one-month statistical noise or an indication that potential workers remain discouraged and some dropped out of the labor force during May. Hours worked increased and are now 0.5% higher than a year ago compared to a -0.4% decline in payroll employment and a decline of -0.7% in household employment. Also, the hourly wage rate edged up from a 1.76% annual rate of increase in April to 1.94% in May and annual growth in weekly average wages rose from 2.36% to 2.84%. This means that income is improving slowly which is something that must happen, as federal government transfer payments phase out, for the economic recovery to gain forward momentum.

When all the data is processed, however, the May employment report re-enforces the expectation that the labor market will heal very gradually. And, because it seems likely that discouraged workers will gradually reenter the labor force as the economy recovers, it is likely that the unemployment rate will fall very gradually as shown in **Chart 3**.

3. Consumer Spending

Consumer spending depends on earned income, investment income, government transfer payments, pensions and an ability to monetize wealth. At an economy wide level, aggregate consumer spending also depends upon the

CHART 3 – Unemployment Rate

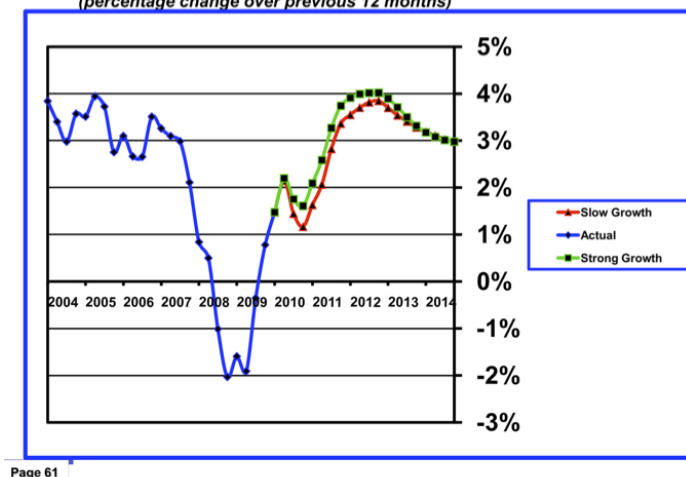
number of employed workers.

In normal times growth in real consumer spending is fairly stable, averaging about 3.5% annually. This is a result of about a 1.0% annual rate of increase in the labor force, a 2.0% gain in real incomes due to productivity growth, and the remainder due to other factors such as growth in government transfer payments and monetization of wealth.

Chart 4 shows a sharp deceleration in real consumer spending growth during the Great Recession. Over the three months from February through April, growth in consumer spending was 1.9% higher than the comparable period in 2009. Growth in real consumer disposable income was 1.3% over the same time period. The difference was made up by a decline in the saving rate.

Eventually real consumer spending growth should move back toward the historic level of 3% to 4%. But, there is a bit of retrenchment forecast in the second half of 2010 which can be traced directly to the phasing down of government stimulus and transfer payments. Already there is evidence that spending is slowing. For example, retail chain store sales came in below expectations in May. In addition, if the recent stock market decline does not reverse soon, it will have a negative wealth impact on consumer spending.

CHART 4 – Real Consumer Spending Growth Forecasts
(percentage change over previous 12 months)



Page 61

And, this could be further exacerbated if housing price declines resume, as some expect, now that the federal government's housing tax credit program has ended.

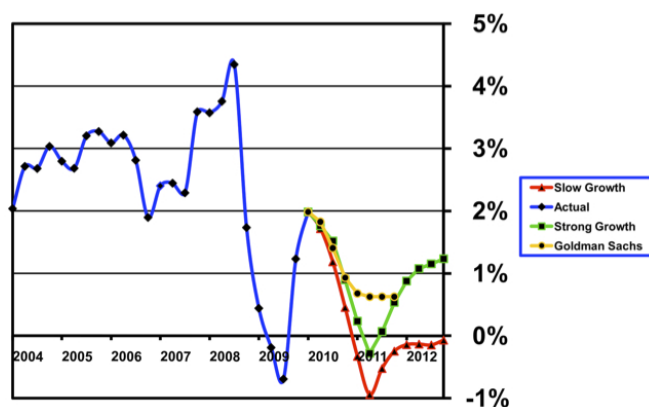
Over the longer run aggregate consumer spending will depend on the level of unemployment and that will depend in turn on the overall health of the economy. Since employment growth is likely to occur slowly and wage growth will remain under pressure the odds strongly imply that consumer spending growth will be relatively weak as consumers continue to reduce reliance on debt, which is another way of saying that they will focus on increasing savings.

4. Inflation

It stands to reason that the enormous output gap that currently exists will continue to put downward pressure on inflation for some time to come. Inflation is a lagging economic variable, which means that it will still continue to decline for a while after the economy has reversed course and is improving. That can be seen in **Chart 5**, total PCE inflation, and **Chart 6**, core PCE inflation.

The forecasts shown in these charts are ones that I derive from my own statistical analysis. For those of you who follow the forecasts of others closely, you will note that over the next 18 months inflation declines more in my forecast than in the forecasts of most others. That is not to say that my statistical analytics are any better than anyone else's. Mine could be worse in the sense that actual inflation could be sticky to the downside, which would mean that I am overforecasting the extent of a decline in inflation. I don't think the amount that inflation declines in the next few months is as important as the fact that it will decline, and of that I am absolutely certain.

CHART 5 – PCE Inflation Forecasts
(percentage change over previous 12 months)

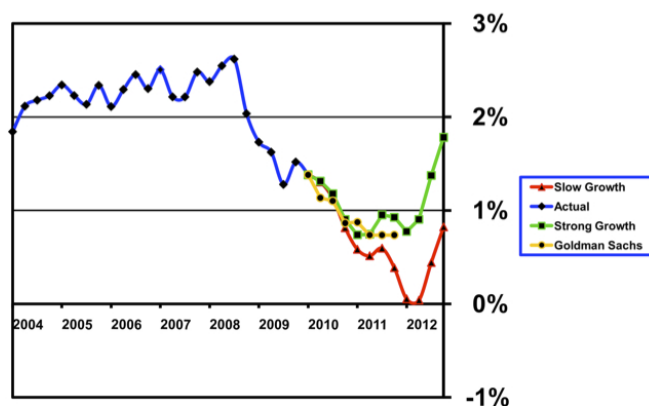


Page 70

The charts also show the difference in inflation's trajectory depending upon whether the economic recovery that is underway gathers momentum, the "strong growth" scenario, or stumbles along, the "weak growth" scenario. In the strong growth scenario PCE core inflation bottoms out at about 0.7% during 2011, which is about the same level that Goldman Sachs is forecasting. The rise thereafter is much less certain and has a great deal to do with two assumptions — the speed with which the output gap shrinks and how rapidly the federal government budget deficit shrinks.

If, however, economic growth is weak, there is a chance that core PCE inflation could fall to near zero for a while about 18 to 24 months from now.

CHART 6 – Core PCE Inflation Forecasts
(percentage change over previous 12 months)



Page 71

This is not an outcome I expect but it is a possibility I cannot rule out.

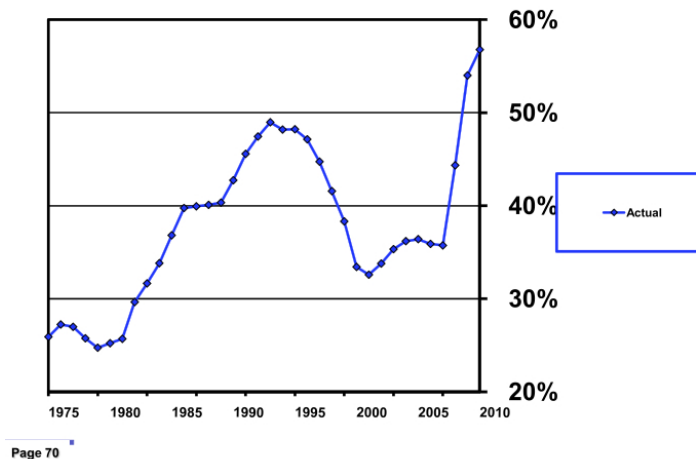
IV. Impact of the U.S. Federal Budget Deficit and Level of Debt

Since the Great Depression of the 1930s and pursuant to the analysis of John Maynard Keynes, it has been government policy to fight the negative consequences of a decline in aggregate demand during a recession by increasing spending and cutting taxes. This policy results in huge increases in budgetary deficits. Economic theory posits that cyclically-neutral stabilization fiscal policy requires offsetting budgetary surpluses during the expansion part of the economic cycle. Whether policy is cyclically neutral can be observed by tracking the ratio of the stock of federal debt to nominal GDP (debt ratio) over time. If policy is cyclically neutral, the value of the debt ratio will fluctuate around a constant value, rising above that value during recessions and falling below during expansions.

Chart 7 shows the progression of the federal debt ratio since 1975. Prior to the Reagan presidency the debt ratio fluctuated around 25%. During

the Reagan administration “supply-side” fiscal policy lead to huge deficits and the debt ratio rose to a peak of 49% in 1993. During the Clinton administration, a time of steady economic growth, the debt ratio fell to 33% in 2001. In the aftermath of the 2001 recession the debt ratio rose moderately, but did not fall back much when the economy began to grow again due to the Bush administration’s tax reduction policy. Since the onset of the Great Recession, the debt ratio has soared and is likely to move much higher, given the extremely high current budget deficit to GDP ratio.

CHART 7 – Total Federal Public Debt to GDP
(percentage of nominal GDP)



The rapid increase in the debt ratio and the prospect of further increases has prompted concern about the ability of the government to service this increasing stock of debt in the future without inducing a rapid rise in inflation or depressing the standard of living.

1. Concepts and Definitions

Before exploring these concerns, let me begin with defining what constitutes the stock of federal government debt held by the public and how the debt ratio is affected over time by the annual federal budget deficit.

Total Federal Public Debt

In April 2010 the total stock of federal debt was \$12.95 trillion or 87.8% of GDP. However, \$4.51 trillion was intragovernmental debt, which includes \$2.36 trillion for the social security trust fund, \$.56 trillion for the disability and the hospital and medical insurance trust funds, \$1.11 trillion for federal employee pensions and health care, and \$.48 trillion for other miscellaneous purposes. The actual amount of debt held by the public was \$8.43 trillion or 57.2% of GDP. It is this latter figure that best reflects the current effect of the government debt ratio on the economy. It is this measure that is shown in **Chart 7** and it is this measure that is used in the analysis that follows. This is because intragovernmental debt does not involve actual borrowing in financial markets. Intragovernmental debt is an accounting statement of future obligations that eventually will need to be financed through taxes or borrowing from the public.

Contingent Unfunded Obligations

The federal government's accounting entries for the various trust funds constituting the bulk of intragovernmental debt reflect accumulated past taxes net of disbursements for benefits under the programs. Importantly, these amounts understate the present value of future benefit obligations under the terms of the various programs.

In a recent analysis (April 22, 2010), Goldman Sachs estimated the present value of these off balance sheet contingent obligations. Total unfunded obligations amount to 187.5% of current nominal GDP. The largest amount is 129.4% for unfunded entitlement payments for income security and health benefits. The remaining 58.1% include unfunded federal government pension liabilities (26.1%), intragovernmental net debt (30.0%), and government sponsored enterprises net liabilities (2.1%).

While contingent obligations have no current direct impact on financial markets, they will have future impacts as benefit payments eventually will have to be made and financed through tax increases or borrowing. It is important to understand that the term "unfunded obligations" means that the present value of future taxes mandated by current statutes have already been netted out.

Unfunded entitlement obligations from the social security, Medicaid and Medicare programs are driven by demographic and definable actuarial factors. Thus, the timing and amount of these future obligations can be estimated with a reasonably high degree of precision. It is no secret that as the baby boom generation ages and moves into retirement funding these obligations will either require enormous increases in tax rates or extraordinary expansion of borrowing. The latter would result in an explosive increase in the public debt ratio in the future. There is a third alternative and that is to revise existing programs to scale back the amount of benefits that will have to be paid out. That would be the most prudent course of action, but it is a difficult alternative to pursue from a political standpoint.

State and Local Governments

State and local governments are required to balance their budgets through tax revenues. Borrowing is only permissible for capital infrastructure expenditures or in anticipation of defined and certain future tax receipts.

Total state and local government debt has edged up very slowly over time from 13% of nominal GDP in 1975 to 16% currently. In this respect state and local governments are not part of the incipient debt explosion problem. However, where state finances probably are on shaky footing involves public employee pension and health care benefits. Unlike the federal government, states actually fund these obligations. Goldman Sachs estimates the present value of gross pension and health care liabilities as 25.4% of GDP. Net of the present value of actual funding, future contributions and future investment returns, this shrinks to an unfunded obligation of 6.9% of GDP, which implies that states and local governments have funded approximately 73% of the present value of future obligations. There is some question as to whether future investment returns, which typically are based on an assumed 8.0% to 8.5% nominal annual rate of return, are overstated. If that turns out to be the case, then the unfunded obligation would be higher than 6.9% of GDP.

Primary Deficit

The total annual budget deficit includes interest on the outstanding stock of publicly-held debt and the net difference between annual tax revenues and

expenditures. The primary deficit omits interest payments on the outstanding stock of debt, so that it is measured as the difference between annual tax revenues and expenditures.

Generally speaking, the public debt ratio will be constant when the primary deficit is zero, increasing when it is positive and decreasing when it is negative. This relationship exists because the average interest rate on public debt tracks the level of nominal GDP growth closely over time. If the interest rate on the debt exceeds the nominal growth rate in GDP, then the debt ratio will increase and, of course, the opposite occurs when the interest rate on the debt is less than the growth rate in nominal GDP.

As long as market participants believe that the government will be able to fund its debt, interest rates will remain low and closely track the nominal growth rate in GDP. However, as the stock of debt outstanding relative to GDP, the debt ratio, rises solvency concerns will emerge and will rise in proportion to increases in the debt ratio. This risk can now be tracked for various countries through the pricing for country-specific credit default swaps.

In the case of Greece, its debt ratio is nearing 120% compared to 57% in the U.S. and its current budget deficit, prior to recent austerity measures, was about 14% of GDP compared to 10% in the U.S. Once the debt ratio reaches a certain level, the interest costs tend to accelerate the rate of growth in the debt ratio and solvency concerns act as an accelerant because interest rates rise along with solvency concerns.

Kenneth Rogoff and Carmen Reinhart, based on their historical study of credit collapses and sovereign debt crises, suggest that the tipping point is in the vicinity of a 90% debt ratio. There is some uncertainty about the definitional basis of the 90% trigger. If it pertains to debt held by the public in the U.S., then the current 57% debt ratio is not yet at a worrisome level; but if it is based on the total debt ratio, the U.S. total debt ratio of 88% is definitely troublesome. In any event, the primary deficit exceeds \$1.1 trillion currently and federal debt held by the public is growing at about 20% annually compared to a 4% growth rate in nominal GDP. This means that the debt ratio will continue to rise to much higher levels in coming months.

Public Debt Ratio

CHART 8 – Total Federal Public Debt to GDP
(percentage of nominal GDP)

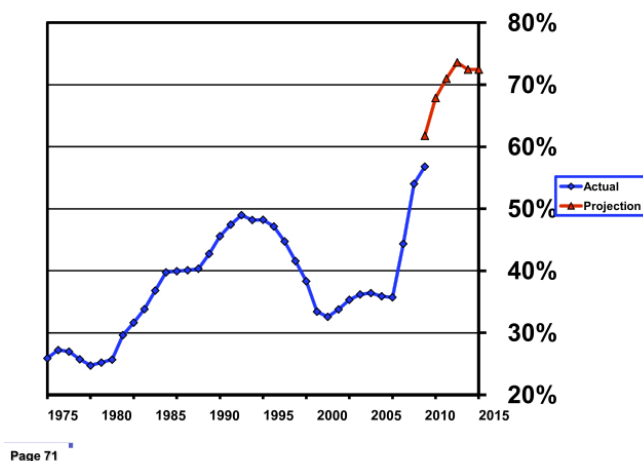


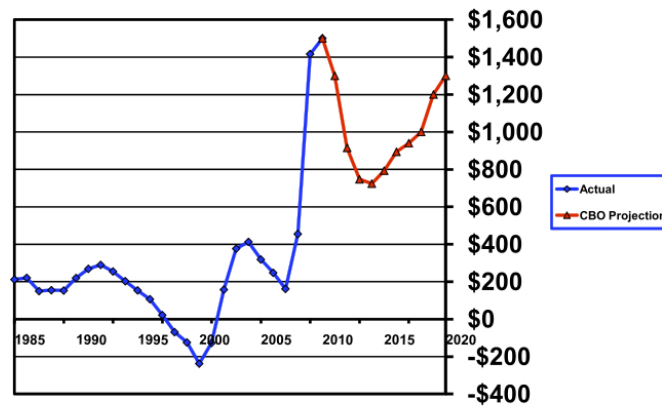
Chart 8 shows the trajectory the U.S. debt ratio will take, given assumptions about nominal GDP growth embedded in my econometric model and CBO assumptions about annual budget deficits. The debt ratio rises to 74% by the end of 2013 before stabilizing and beginning a very gradual descent. According to the CBO this descent will be very short-lived and the ratio will resume its upward climb as demographics bring about an acceleration in entitlement payments.

Congressional Budget Office Deficit Projections

There is considerable risk that CBO deficit projections may be optimistic since they are based on the expiration of the Bush tax cuts, the continuation of the alternative minimum tax, which is unlikely, and reasonably strong assumptions about GDP growth.

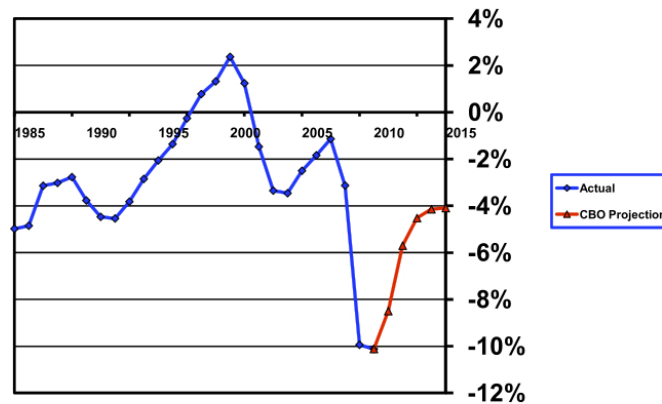
Chart 9 shows actual budget deficits since 1985 and the CBO projections from 2010 through 2015. **Chart 10** converts the deficits into a percentage of nominal GDP. The deficit falls to 4% of GDP by 2013-15. But without tax increases or reductions in entitlement benefits the deficit as a percentage of GDP begins to rise after 2015.

CHART 9 – Annual Federal Budget Deficit
(billions of dollars)



Page 72

CHART 10 – Annual Federal Budget Deficit
(percentage of nominal GDP)



Page 73

2. Effect of Deficit Spending on Economic Activity

Deficit spending can boost GDP growth temporarily but if the primary deficit is positive, the boost in nominal GDP growth will eventually be offset by higher inflation so that real GDP growth is unaffected by deficit spending in the long run. However, there are long time lags involved in this process. In addition, there is some evidence that the GDP real growth benefit diminishes as deficits grow as a percentage of GDP and as the debt ratio rises.

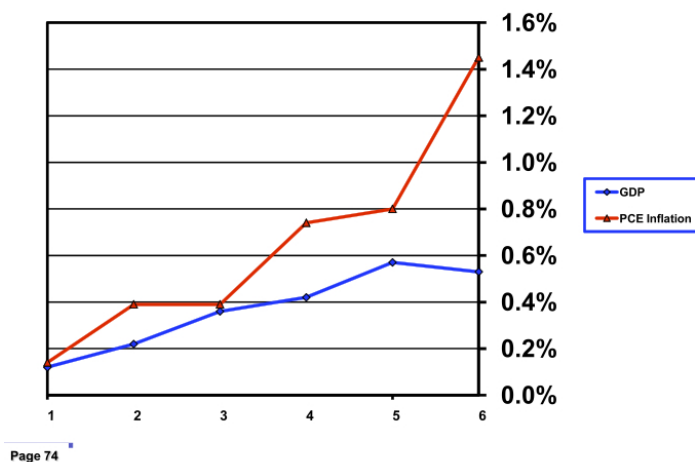
Real GDP

Based upon my econometric model, a sustained 1% increase in the federal budget deficit adds 0.36% to real GDP growth over the next 3 years. The benefit hits a maximum after 5 years equal to 0.57% and then begins to fade as inflation builds. See **Chart 11**.

Inflation

A sustained 1% increase in the federal budget deficit adds .39% to the inflation rate over the next three years and .80% over five years. However, after that the impact on inflation accelerates so that the effect is 1.46% by the end of six years. See **Chart 11**.

CHART 11 – Impact of Sustained 1% Increase in Federal Budget Deficit on Real GDP & Total PCE Inflation (years 1 – 6)



3. Long-Term Effects of CBO Deficit Projections and Intentional Deficit Reduction (Fiscal Consolidation) on Economic Activity

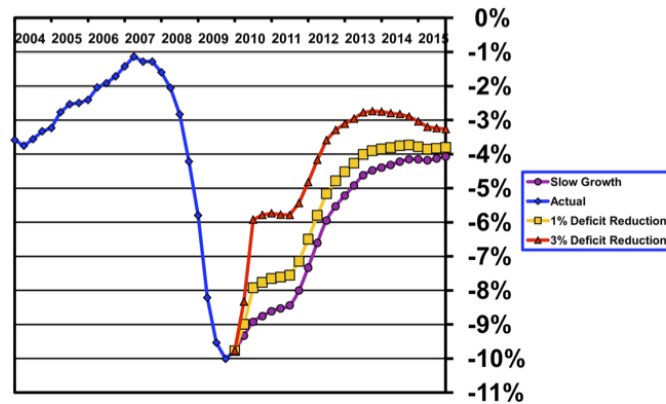
I have constructed three forecast scenarios:

- ***Scenario 1: Base*** — My macro economic assumptions for “Slow Growth” combined with the Congressional Budget Office’s federal budget assumptions.
- ***Scenario 2: Instantaneous 1% reduction in the federal budget deficit*** through a combination of tax increases and spending reductions.
- ***Scenario 3: Instantaneous 3% reduction in the federal budget deficit.***

The charts that follow show the following:

Chart 12 — Federal Budget Deficit: About 70% of the initial decline in the annual federal budget deficit is offset by increased expenditures due to automatic stabilizers and transfer payments.

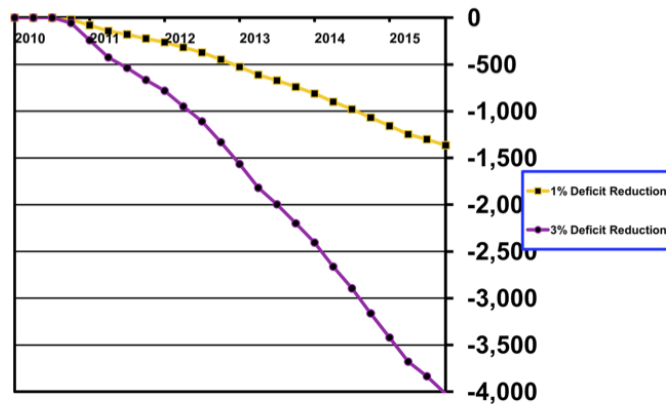
CHART 12 – Federal Budget Deficit
(percentage of nominal GDP)



Page 68

Chart 13 — Employment: Employment declines 1.36 million in the 1% deficit reduction scenario and 4.02 million in the 3% deficit reduction scenario. Employment declines would be considerably worse, if the effects of the automatic stabilizers were eliminated.

CHART 13 – Change in Employment
(thousands)



Page 70

Chart 14 — Unemployment: By 2015 the unemployment rate declines from 9.7% currently to 7.0% in the base case; to 7.6% in the 1% deficit reduction case and to 8.8% in the 3% deficit reduction case.

CHART 14 – Unemployment Rate

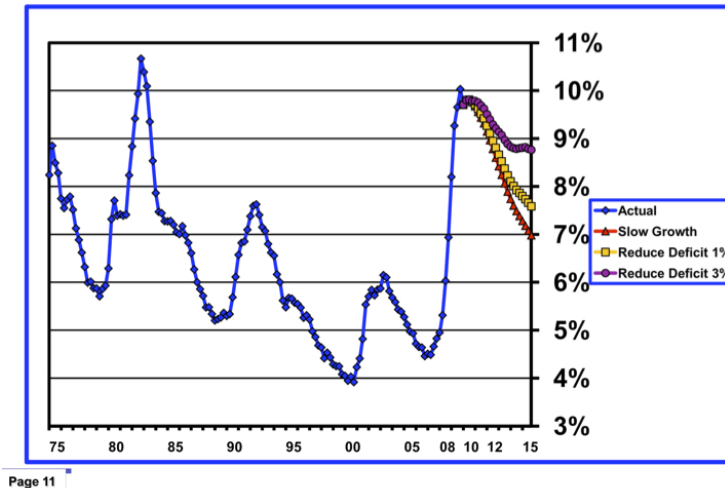


Chart 15 — Real GDP Growth: Real GDP growth in the base case is approximately 3.2% in 2015, which is at or slightly above the long-run potential growth rate. Real GDP growth is reduced about 40 basis points in the 1% deficit reduction scenario and 120 basis points in the 3% deficit reduction scenario.

CHART 15 – Real GDP Growth
(percentage change over previous 12 months)

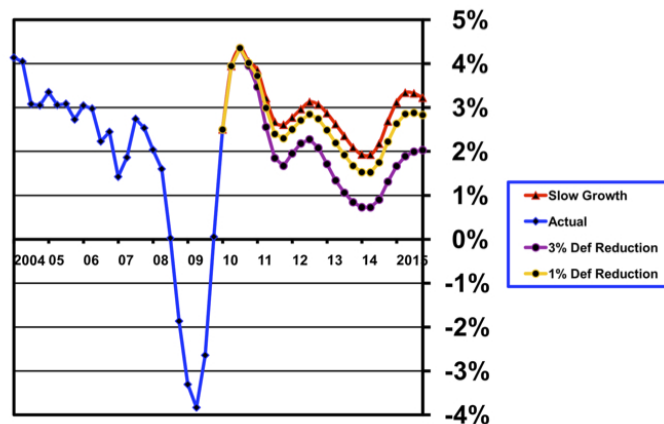


Chart 16 — Core PCE Total Inflation: In the base case core PCE inflation accelerates sharply in early 2014 before peaking over 7% in mid-2015. It then begins to decline gradually. As one would expect inflation increases to a much lesser extent in the two deficit reduction scenarios. But, importantly, the model suggests that it may be too late to avoid at least some inflation about 3 to 5 years from now. However, even though inflation is a serious future threat, in the short run deflation is still the predominant risk. This can be seen in **Chart 16** by comparing the difference between the base case and 3% deficit reduction scenarios.

CHART 16 – Core PCE Inflation
(percentage change over previous 12 months)

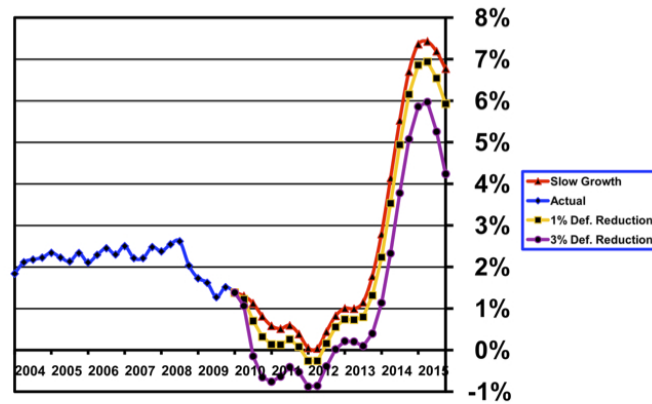
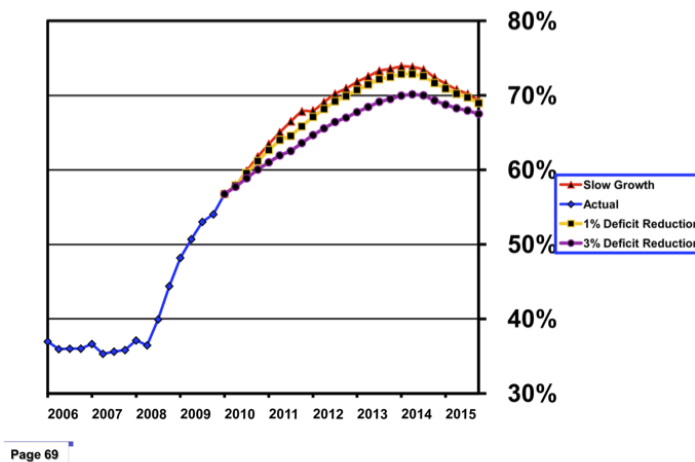


Chart 17 — Debt Ratio (Total Federal Debt Held by the Public as a Percentage of GDP): The debt ratio peaks in the base case at 74% in early 2014 and then begins to decline gradually. Intentional deficit reduction helps somewhat but slower economic growth and increased government transfer payments eliminate a substantial portion of the benefit. This chart demonstrates just how hard it will be to bring the debt ratio down quickly in an economy that is very fragile and in a weakened condition. The debt ratio came down considerably during the Clinton administration without visible negative economic consequences because the economy was strong and got stronger as time passed. What this suggests is that starting conditions matter a great deal. When the private sector is robust, intentional shrinkage of the public sector can easily be absorbed and may even have a favorable impact on growth. However, when the economy is fragile and weak, as it is now, withdrawal of government stimulus will have negative consequences.

CHART 17 – Total Federal Public Debt to GDP
(percentage of nominal GDP)



4. Long-Term Options for Resolving the Problem of Too Much Debt

Austerity (Fiscal Consolidation) Option

As **Charts 12–17** show, cutting the federal deficit through either spending cuts or tax increases — the ***austerity or fiscal consolidation option*** — will extend economic weakness for a considerable period of time. Austerity and deflation go hand in hand. This is the option that Greece has been forced to implement. However, in the case of Greece the medicine is a reduction of a 14% deficit to about 3% over the next three years and no offsetting automatic stabilizers will be permitted. One can imagine the dramatic and violent negative effect that austerity will have in coming months in Greece. Suffice it to say that the impact will be much more severe, if Greece holds true to the requirements of the European Union bailout program, than official forecasts. The consequences of the austerity option are high unemployment, numerous bankruptcies and significant credit defaults and losses. It will be difficult for the Greek banking system to remain solvent. The prospects for social unrest and political turmoil in Greece are extremely high.

In the case of the U.S. it will be difficult to persuade Congress that even a moderate austerity program should be implemented. The potential consequences of doing nothing are not all that obvious. Besides hope springs eternal that something good will happen that will make taking painful actions now unnecessary. In addition to the potential consequences shown in the charts, bankruptcies and credit defaults would remain high in the U.S. and would slow healing of an already weakened banking and financial system. Yet, the cost of delaying action will be an escalating debt ratio and eventually an acceleration in inflation.

Since the U.S. problem has not yet reached the point of no return as has occurred in Greece and other countries, there are steps that can and should be taken and the sooner the better. An example would be not to extend federal subsidy of state Medicaid payments for an additional six months. The House of Representatives passed a stimulus bill just before the recent recess which extends jobless benefits but intentionally dropped the Medicaid extension. This reportedly will adversely affect at least 30 states and force further austerity in state budgets. If the Senate, which has not yet acted

on this bill, accepts the House's decision, this will constitute an initial and small step, yet one involving considerable pain for states, toward beginning the process of fiscal consolidation. Much more will be required and much of what needs to be done will have to focus on significant restructuring and resizing of various entitlement programs.

Inflation Option

An alternative to austerity and fiscal consolidation is the *inflation option*. This option involves, either intentionally or by default through inaction, letting inflation escalate to very high levels. Inflation results in shrinking the real value of debt relative to the nominal value of GDP, provided that the primary deficit is kept to zero or is negative. But, the consequences of inflating out of the debt problem are also severe. The value of all financial assets, not just debt, is debased and the standard of living of those dependent upon fixed incomes will decline, perhaps dramatically.

Default Option

A final, last resort, option is to default on debt. The *default option* is unthinkable for the United States because of the global reserve currency status of the dollar. However, this option is not unthinkable for other countries. Indeed, many believe that it is only a matter of time before Greece will be forced into the default option. The default option involves either repudiating sovereign debt obligations altogether or renegotiating a significantly reduced amount. The consequences of this option are that countries that default find access to global credit markets restricted for an extended period of time and this impairs their ability to finance economic activity and trade.

5. President Obama's Fiscal Commission

Earlier this year after Congress failed in an attempt to create a fiscal commission, President Obama created a Fiscal Commission by executive order. The Commission consists of 18 members, including 6 Democratic and 6 Republican members of Congress, and 4 Democrats and 2 Republicans chosen

by the President. The Commission is required to report its recommendations to Congress by December 1, 2010. Each recommendation must have the support of a minimum of 14 of the 18 members. There is a general understanding that Congress would vote on the Commission's recommendations in December during the lame duck session. That is what the House and Senate Democratic leadership has pledged to do.

There is much pessimism about whether the Commission will be able to reach the 14 supermajority consensus because the political divide is great. Politically, many Republicans believe that taxes must be reduced as a means of starving the government of funds so that the size of government is forced to shrink. Tea Party activists are singularly focused on making sure the primacy of this policy objective is maintained. Many Democrats, on the other hand, are deeply concerned about the pain that many unemployed persons are experiencing and do not want important government support programs gutted.

The ideal outcome would be a collection of recommendations that cut spending, raise taxes and restructure and downsize future entitlement program benefits. Because this is a pragmatic solution that would make everyone unhappy with at least some part, it remains to be seen whether a political consensus can be achieved when there is political advantage potentially yet to be gained by posturing and blamesmanship.

V. Addendum

The global sovereign debt crisis has a long way to run yet and there are more painful chapters ahead. In an upcoming commentary I will focus attention on the European situation. While a semblance of calm seems to have returned in Europe, the "canary in the coal mine", namely credit spreads, suggests that not all is well. In fact interest rates in certain European countries, such as Spain, have continued to rise relative to those in Germany. It is hard to see how the European monetary union can be held together. This is something Milton Friedman warned would happen at the time that the Euro was established.

Even though my commentary has been quite downbeat about the situation in the U.S., I want to emphasize that there is still time to steer

the U.S. toward a path that will eventually lead to sustainable and robust economic growth. For this outcome to be possible, the Fiscal Commission must make bold and far-reaching recommendations. And, assuming that the Commission's recommendations go a long ways towards tackling the entrenched fiscal issues that threaten our future, Congress needs to be equally bold in acting upon those recommendations!

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