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## Economic Policy and the Economic Outlook: Help or Hindrance?

by Allen Sinai\*

### Introduction and Summary

Economic policy has played a quite large role in this last business cycle episode—both in the Downturn or Great Recession (2007-09), the Great Financial Crisis (2007-10), and in the Recovery (June 2009 to June 2011) and Expansion (2011:2 ff.).<sup>1</sup>

Both fiscal and monetary policies have been implemented in great size, initially to cushion and reverse the Downturn and then to accelerate the Upturn. In both the Downturn and Upturn, the business cycle has appeared as “aberrant,” particularly the anemic, subpar, unprecedented weak upturn—the weakest for the longest period in the postwar years.<sup>2</sup>

Repeated doses of fiscal stimulus over 2008-2012, principally increased federal government outlays but also lower taxes and then higher taxes (2013) on high income families, and a massively easy monetary policy from late-2007 to now, have been in size and scope the largest ever but with disappointing results for the economy and labor market.

Despite the economic policy stimulus, the U.S. economy, having recovered starting in June 2009 from the recession, has followed a kind of “L”-like path (with an uptilt at the bottom) for real GDP rather than the “V”-like path typically

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<sup>1</sup>National Bureau of Economic Research (NBER)-dated stages of the business cycle. The Recovery started in June 2009 and the Expansion, the time when previous peak real GDP is surpassed, began in 2011:2.

<sup>2</sup>A. Sinai, “Macroeconomic Policies in an ‘Aberrant’ Business Cycle,” presented at the IBEFA Session, “Economic Policies Facing the Nation,” ASSA Annual Meetings, San Diego, CA, January 3, 2013. Also DE Economic Studies Series #74, March 6, 2013.

seen in most Post-W.W. II recessions, especially when there has been substantial macroeconomic policy stimulus.<sup>3</sup>

Table A.1 (Appendix) and Chart A.1 show the performance of the U.S. economy in some of its major dimensions since 2006. Charts A.2 to A.4 indicate striking differences in the growth of jobs and the “sticky-high” unemployment rate for the current episode in a tendency that appears to have begun in the early 1990s.<sup>4</sup>

The performance of the economy in its various dimensions in the face of so much fiscal and monetary stimulus suggests a kind of futility for macroeconomic policy not seen in any other post-W.W. II business cycle.<sup>5</sup>

As a result, in looking at the U.S. and Global economic outlook and whether macroeconomic policy has helped or hindered, *this paper asks the following questions.*

*Has policy been a help or hindrance to the economy, and why? Where is the U.S. economy now in the business cycle and where is it going—the outlook for 2014 and beyond? What has been the role of macroeconomic policies and why so little economic upturn? In particular, what about Quantitative Easing (QE), the new approach to monetary policy implemented in recent years by the United States, Japan, Great Britain, and perhaps the Eurozone to-come? And, what are some perspectives that might be offered on this intransigent U.S. business cycle and the ability of macroeconomic policies to achieve their objectives?*

*Some conclusions and perspectives include:* 1) economic policies have been a help to the economy in terms of performance that might have been worse, but fiscal policies and where temporary, monetary policies, probably have *not* helped much and perhaps have hindered the economy’s upturn; 2) the U.S. economy *functionally* is actually in the early stages of the business and financial cycle upturn despite its over 54-month Recovery/Expansion and 58-month Equity Bull Market, suggesting a long expansion; 3) so little of an economic upturn is a consequence of excesses and legacies from the Great Recession and Great Financial Crises, including a long period of restoring reasonably solid private sector financial conditions; policy errors have had a big role, especially fiscal where policies have been temporary, and because of the components of the policy stimulus.

*One policy approach that has worked is QE, particularly in its latest form, “Open-Ended” QE, a permanent and stimulative policy that along with the long period of low short- and long-term interest rates since 2007 has helped produce significant increases in housing activity, consumption spending, and the restoration of healthier balance sheets in the private sector—precursors to increased spending. Monetary policy in its use of a new instrument, the Federal*

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<sup>3</sup>See R. E. Hall (April 2011), “The Long Slump.” Also A. Sinai, “What’s Wrong With the Economy—‘What You See Is What We Got’,” *Economic and Market Perspectives*, August 11, 2011.

<sup>4</sup>See A. Sinai (May 2010) who points to a structural change of joblessness in the labor market since the early 1990s; underscored here by Charts A.2 to A.4 and the performance of the labor market. Also A. Sinai, “Jobs, Joblessness, and the Mantra of Maximizing Shareholder Value,” remarks at the Economists for Peace and Security (EPS) Session, “Jobs, Investment and Rebuilding America: An Economic and National Security Agenda,” Hyatt Regency Capitol Hill, Washington, DC, November 12, 2013.

<sup>5</sup>Perhaps this is as should be expected; see Reinhart and Rogoff (RR) (2010). But in the case studies of RR, very few, if any, had as much macroeconomic policy stimulus after a Crisis as has been applied in the United States. Probably, U.S. policy stimulus was far greater than for the cases studied. This raises questions of help or hindrance for the policies that have been used and why so little effect.

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*Reserve's balance sheet, has definitely been a help.*

*For the future, of the choices available to lift a stubbornly slow-growing U.S. economy and, to some extent, the global economy as well, continuing use of the Federal Reserve's balance sheet in a sustained way is a principal economic policy recommendation, especially with tight fiscal policy continuing. Second would be gradually reducing the pace of federal government outlays, but selectively so taking account of societal needs such as increased spending on capacity-creating infrastructure, education, worker training, trade initiatives and others, and in the role of the federal government in business and society in its expenditure and transfer policies. Third would be revenue-neutral tax reform involving reductions in marginal tax rates for individuals and corporations with the ex-ante losses in revenues to the federal government offset by a careful phasing-in and closing of selected tax expenditures and so-called "loopholes."*

### **Economic Policy—Help or Hindrance?**

Appendix Table A.2 shows the fiscal stimulus programs passed in legislation and/or implemented between 2008 and the current time; Table A.3 the monetary policy programs.

Five major fiscal stimulus programs were legislated and implemented over the period—the Economic Stimulus Act of 2008 (\$167 billion, 1.1% of GDP); the Housing and Economic Recovery Act of 2008 (\$20 billion, 2008-09, 0.1% of GDP); the American Recovery and Reinvestment Act (ARRA) (February 2009) (\$715 billion over three years, average 1.7% of GDP); The Tax Relief, Unemployment Insurance, Reauthorization and Job Creation Act (TRUIRJC) of 2010 (\$797 billion over two years, 2011-12, 2-1/2% of GDP); and the Middle Class Tax Relief and Job Creation Act of 2012 (\$158 billion, 0.5% of GDP).

The largest of these were the ARRA and TRUIRJC. Both programs were "temporary"—ARRA, essentially two years with some measures extending into 2012 and TRUIRJC over two years.<sup>6</sup> Cumulatively, the total of all five programs was \$1.9 trillion, an average 1.6% of GDP, a massive amount of fiscal stimulus.

For monetary policy, the main stimuli included the late 2006 to early 2008 reductions in the federal funds rate from 5-1/2% to essentially zero, the so-called "Zero Lower Bound"; Quantitative Easing (QE1) between late 2008 and March 2010, \$1.7 trillion of planned additions of fixed income securities to the Federal Reserve balance sheet, which was about \$800 billion at the start; a second round of Quantitative Easing (QE2) beginning in November 2010 and lasting eight months, involving \$600 billion in purchases of fixed income securities; "Operation Twist," \$267 billion net purchases of Treasury securities from December 2011 through 2012; and the latest QE or "Open-Ended" QE3 that began in September 2012 with amounts unspecified (\$340 billion to-date, with a cumulative total \$3.9 trillion of assets on the Federal Reserve balance sheet), timing unspecified, and the length of the program to depend on economic conditions as relate to Fed objectives on the economy—Full Employment (currently 5.2% to 6%) and Price Stability (defined as 2% inflation in the Consumption Goods Price Deflator, PCE).

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<sup>6</sup>For a quantitative analysis of ARRA in the context of the policy choices available, see A. Sinai "Macroeconomic Policy Challenges and Choices in a Time of Crises," *Challenge*, Part II: "Fiscal Policy and Policies for 'Recovery,'" July-August 2009, pp. 53-93.

*The combination of these policies, fiscal and monetary, represents the greatest amount of macroeconomic policy stimulus ever. Yet, the U.S. economy still, at least to-date through 2013, shows nowhere near the performance that might be thought should have occurred.*

Some of the policies likely have helped and some hindered, or perhaps not been sustained long enough to have permanent effects on the economy, labor market, and price inflation.

Also, *there is a question of composition*, not just whether the stimulus was temporary or permanent; for example, in the case of fiscal policy, government outlay-centric or tax-centric. Macroeconomic research and analytical macroeconomics suggest different effects in different ways depending upon the composition of outlays as between spending, transfers, the type of transfer, and various types of taxes.<sup>7</sup>

Just looking at the magnitudes of the stimuli, as in Tables A.2 and A.3, can be argued as insufficient to understand whether policy has been a help or hindrance and why so little effect.

For example, in both comparative statics and comparative dynamics, *“temporary” changes in policies, if exogenous, should be expected to have only temporary effects*, raising real economic growth which then should fall later and, with lags, revert back to trend or baseline growth. Trend or baseline growth might itself be affected by the policies, even if relatively short in duration, but if the policies induce a shift, or trend growth changes for other reasons, a return to trend as a consequence of temporary stimulus could be to lower growth than existed before the implementation of the policy. *Permanent changes in macroeconomic policies should be expected to provide permanently different paths for economic behavior than temporary changes* and perhaps through those changes affect and cause trend growth to shift over time, up-or-down.

It should be noted that the fiscal policy stimulus programs of 2008, 2009, 2010 and 2011 *all* were temporary and thus should have had only temporary effects on growth, therefore might be regarded as a longer-run hindrance rather than a help.

For monetary policy, of the changes since 2006, Federal Reserve reductions of the key short-term interest rate to near zero and maintenance of it through policy and Federal Reserve forward guidance makes this policy shift *permanent*, rather than temporary, and should, in theory have produced permanently stimulative effects on the economy. This should work via asset prices in financial markets and then responses in balance sheets and spending as affect the economy. Delays, of course, always the case with respect to the implementation of easier monetary policy, must be taken into account and certainly would have operated here.

What is often called QE3, or more specifically “Open-Ended” QE, implemented in September 2012, conditional in length and additions to the Federal Reserve’s balance sheet on economic conditions and inflation, can be regarded as “permanent” rather than “temporary” because of its open-ended nature. \$85 billion in purchases of U.S. Treasury and mortgage-backed securities for the Federal Reserve’s balance sheet was the initial amount, but with a possibility of increases or decreases depending upon the economic conditions that the Federal Reserve is trying to affect.

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<sup>7</sup>A. Sinai, *Challenge*, July-August 2009, quantitatively assesses the different effects of various fiscal policy instruments in amount and timing.

*QE1, QE2 and QE “Operation Twist” are examples of temporary changes in monetary policy and should have had temporary effects—finite amounts of purchases and a fixed timeline for cessation.*

*The hindrance would be applying and implementing policies that by nature and design were temporary rather than permanent. The macroeconomic effects overall and within particular measures should be different as between them. The help would come from policies that were permanent.*

Yet another question having to do with help or hindrance on economic performance relates to the composition of the specific measures. Little attention has been paid to this, e.g., differential macroeconomic effects depending upon a particular measure used in “fiscal stimulus.”

In the case of the ARRA in 2009, about \$715 billion-or-so in total stimulus, nearly 70% was in federal government outlay-centric measures, more in federal government transfers and much less in government purchases. The mix was something like 70% federal government outlays and 30% tax reductions.

Besides the temporary nature of this program (ARRA), which by design was aimed at lifting the economy into a strong self-sustaining “V”-like upturn so that then the long-run deficit and debt problems of the U.S. could be addressed, its composition was very outlay-centric and perhaps politically rather than economically-driven, based on a view that standard fiscal multipliers would produce the kind of real economic growth that had been the case many times before. This did not happen.<sup>8</sup>

The effects of federal government outlays as between purchases, transfers, the types of transfers, and changes in taxes should be different.<sup>9</sup> Would a policy mix of 70% tax reductions and 30% government outlay reductions have been more stimulative and had lasting macroeconomic effects? If the tax reductions had been permanent rather than temporary, would that have helped to sustain higher growth?

These are issues that need examination in the face of the questions on help or hindrance to the economy from macroeconomic policies and the choice of policies as temporary or permanent, along with composition.

In the rush to stimulate the economy and lift it out of the Great Recession; to save the financial intermediation system, especially banking and credit; and to accelerate the languid recovery and expansion, very little attention was paid to the specific effects and nature of temporary versus permanent changes in fiscal policies and the ingredients and composition of them insofar as various dimensions of the economy might be affected.

Of course, at the same time that these stimulus programs were being implemented, there were other crosscurrents, or forces, in the U.S. and world economies that were impeding the efficacy of policy.

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<sup>8</sup>Examined by A. Sinai, “Macroeconomic Policies in an ‘Aberrant’ Business Cycle,” and by others.

<sup>9</sup>A. Sinai, *Challenge*, July-August 2009, pp. 53-93.

These included: 1) the recession and financial crises of the Eurozone and Europe (2011-13); 2) a major deceleration in growth of the Chinese economy between 2010 and 2012 from near 12% to about 7% currently; and 3) a Japanese economy, the third largest in the world, that hardly grew.

But, more than anything, the legacies and aftereffects of the Great Recession and Financial Crisis on the mechanisms and processes of the economy were the greatest impediment—including: 1) a necessary deleveraging and reliquefaction of household sector balance sheets; 2) a restructuring or reliquefaction of balance sheets for nonfinancial corporations; 3) the recapitalization and restructuring of the financial intermediary system and a new and evolving regulatory environment; 4) reductions in spending by states and localities necessitated by large and growing budget deficits; and 5) for U.S. federal fiscal policy, much less leeway to stimulate the economy given rising deficits and debt relative to GDP. Tight fiscal policy is now in-place at the federal level, fixed in-place and to be a drag, more-or-less, on the economy for many years.

As for monetary policy, the federal funds rate at its lower bound, near zero for a long time; “Forward Guidance” by the Fed; the use of the Federal Reserve’s balance sheet as a policy instrument, particularly “Open-Ended” QE, may be regarded as *permanent*.

Financial markets conditions, defined as interest rates, particularly long-term, the U.S. dollar and stock prices have permanently changed in response and their transmission to certain areas of the economy, e.g., housing, consumer durable goods spending particularly autos, household balance sheets, nonfinancial corporate balance sheets and cash flow have produced considerable improvement. This suggests that the zero short-term interest rate policy instrument and larger Federal Reserve balance sheet are working to affect economic performance. A similar result has shown up in Japan after its latest QE, an open-ended program tied to movement in price inflation toward a 2% inflation rate; thus “permanent” until the goal on price inflation has been achieved.

### **Where in the Business Cycle?**

November marked the 54<sup>th</sup> month of the current economic recovery and expansion. Appendix Table A.4 shows 11 Recovery/Expansions since W.W. II, including the current one—with median and average lengths indicated.

At 54 months, the current upturn is longer than the median length of the previous upturns since W.W. II. *Does this suggest that because of its chronological age, the business cycle upturn is “long-in-the-tooth.”*

*The answer is no!*

Business cycles end because of excesses and disequilibria that induce adjustments and downturns. The ends of business cycle upturns also come because of too high inflation and tighter monetary policy and its effects, a shift in growth, and accelerator-like effects that propel the economy downward. Negative shocks such as sharp rises in crude oil prices can provide the impetus for a shift in growth prospects, set up disappointments in expectations, and lead to behavior that brings about a recession. Policy errors are another source; sometimes structural changes. Sources of economic downturns are many but the economy is

more susceptible to them when *functionally* late in the business cycle as well as when financially fragile.

*Where are we now?*

*Although chronologically old, the upturn appears functionally young.*

The Appendix Table A.2 shows sluggish real economic growth since 2009:2, only 2.1% per annum. The ups and downs, on an annual basis, in real growth around this average (lower since 2006) can easily be seen in Chart A.2. The unemployment rate has been stubbornly high, averaging 8.7% for 2009:2-to-date and is still relatively high at 7% compared with a 10% peak in October 2009. And, price inflation actually has diminished recently, likely to average about 1.2% for 2013, down from a peak recovery increase of 2.4% in 2011. The average CPI-U rate of inflation since 2009:2 is a relatively low 1.4%.

Various measures of slack in the labor market, in the product markets, and in financial intermediation suggest that the expansion may have many more years to go. In addition, the Financial Cycle in the Business Cycle, coterminous and interactive with the real business cycle, is in its own early stages.

*The Financial Cycle in the Business Cycle must be noted.*

Financial Cycle stages are: 1) *Recession or Growth Recession* with rising, or high, unemployment and declining inflation; 2) aggressive *Monetary Policy Easing*, usually during and after the Recession; 3) *Asset Price Inflation*; 4) *Economic Activity and Sustained and Sustainable Expansion* as financial-real interactions stemming from asset price inflation, with lags, start to work; 5) *Declining Unemployment* and tightening labor markets; 6) *Rising Goods and Services Price Inflation*; 7) *Tighter and Tight Monetary Policy*; then 8) an *Upper Turning Point and Recession*. There is overlap in these stages; they are not exactly serial nor sequential, nor with a clearcut beginning or end.

From beginning-to-end, the stages described can take anywhere from several years to as long as 10 years (the '90s). Currently, the expectation is for another three-to-five years that will add to the already four-plus years of Recovery/Expansion.

*The economic expansion* has unfolded really in two phases—Deep Recession and its Aftermath then a Growth Recession and its Aftermath.

Functionally similar processes to those that come in a Recession and its Aftermath are occurring, except that this time what has occurred previously essentially was a Growth Recession. Sticky-high unemployment and diminishing inflation are very similar to what occurs in a recession. Aggressive easing to accelerate economic growth and in some countries, notably the U.S. and Japan, to raise inflation, suggests that *functionally* these two economies are still in the early stages of the Financial Cycle. The Eurozone is behind the U.S., as is probably the U.K., with these geographic areas still dealing with fiscal restraint, or Austerity, more-or-less, as a complication.

Central banks are in an aggressive easing stage consistent with policies applied in a Recession. The Fed began “Open-Ended” Quantitative Easing in September 2012. The Bank of Japan (BOJ) is in the early stages of its all-out war on deflation. The European Central Bank (ECB) is moving toward more monetary ease. Central bank easing occurs in the first

stage of a Financial Cycle, typically aggressively so in the first portions of a recession and sometimes even longer, but this time also aggressively so because the economy and inflation are still far away from central bank objectives.

*The upshot is an increased likelihood of a long business cycle expansion.* Key is that the economy and financial markets are in the Asset Price Inflation stage of the economic and financial upcycles. This stage typically is followed by increased economic growth then a stronger labor market. Afterward comes higher goods and services prices and higher price inflation. Then tighter money. The support at this time from accommodative central banks is substantial.

With the passage of time, the seeds of increased economic growth—previously lower interest rates, higher stock prices, a lower currency and lower inflation, in part from aggressively easy monetary policy—bring increased economic activity and a self-reinforcing lift up to a higher pace of real economic growth.

### **U.S. and Global Economic Outlook—Five Pillars of Support**

The prospect for the U.S. and global economies is better times ahead after growth recessions in a number of countries and global regions and a recession in Europe during the past two years.

There are five pillars to the outlook for improved economies over 2014-15: 1) a renewed pickup in the U.S. economy—one key to increased global expansion—with the U.S. as an engine of growth; 2) Japan “Back-in-the-Game”—much stronger growth as a consequence of aggressive monetary ease, fiscal stimulus, and reform that will also help Japan’s trading partners’ exports, the Asian economy in general, and the Global Economy; 3) China moving sideways to somewhat higher in growth and helping to lift Asian economies; 4) Europe moving from recession to recovery; and 5) easy and accommodative monetary policies in major economies and global regions—the U.S., Japan and Europe.

*Table A.5 provides some dimensions of the U.S. and global prospect.*

Most likely for the U.S. is relatively slow economic growth compared with much of history, but better and more “normal” economic performance going forward. In 2012 and 2013, the U.S. economy disappointed, growing only 2.8% and an estimated 1.8%, respectively, in real GDP. High unemployment persisted and growth in corporate revenues and earnings was weak. The Global Economy also had difficult years, increasing by only 2.6% and then an estimated 2.5% in 2013. The U.S. and Global economies should improve in 2014, and 2015 should be even better.

The “*Basic Prospect*”—a Baseline outlook elaborated by Decision Economics, Inc. (DE)—foresees renewed U.S. economic growth, the unemployment rate moving significantly lower, price inflation low but stable, and corporate profits picking up. The Federal Reserve’s easy monetary policy will keep providing support as the U.S. central bank continues to hold short-term interest rates near zero into 2015 and increases its balance sheet further on the “Open-Ended” Quantitative Easing (QE) that began in September 2012. This should keep long-term interest rates relatively low, albeit with yields moving modestly higher, and financial conditions conducive to increased growth. Tapering in Federal Reserve asset purchases is

expected in the fourth and first quarters of 2014, along with some other, probably offsetting, changes in the monetary policy mix, but no increases in short-term interest rates at least until 2015—all aimed at the Federal Reserve staying strongly accommodative to the economy.

Low short- and long-term interest rates and a larger central bank balance sheet help raise stock prices, increase household sector wealth, and improve household financial conditions. In turn, consumer sentiment and spending can respond positively.

All told, with this U.S. picture, stronger growth in Asia and, as a consequence, Europe's recovery being sustained, the Global Economy should grow faster than in 2013, in a range over 3%; then near 3-1/2%-or-more in 2015.

The Basic Prospect shown in Table A.5 does have some associated negative “macro risks” that could impede or somehow change the prospect and its probability. But, many risks have faded in importance. Some remain, such as the strength of the recovery in Europe, uncertainty surrounding the China prospect, whether the American consumer will spend more aggressively, how U.S. business profits and business spending go, and fiscal policy actions in Washington.

*On the positive side* is the reemergence of Japan, economically viable with the possibility of upside surprises in economic growth, business activity, and from the weight of Japanese investment monies in global financial markets. Financial deleveraging is well along in the U.S., for households particularly. Nonfinancial corporations are in the best financial shape ever. And, financial institutions, despite new and more stringent rules, more oversight and increased capital requirements, are set to lend more of the huge bank excess reserves on deposit at Federal Reserve regional banks.

For the U.S., the prospect is relatively bright, essentially a continuing and growing expansion for the next several years, in what now looks like an extended upturn, stronger and more broad-based than in recent years.

The evidence suggests that an entrenched private sector upturn is in-process, led by consumption and housing, that will be hard to dislodge. Business capital spending usually lags any upturn in consumption and is more likely to pick up significantly later in 2014 and 2015. Finance and entrepreneurship should become more active, but later rather than earlier. Financial intermediaries have been quite cautious but over the next year-and-a-half should begin to lend more, and more aggressively so.

The pace of U.S. growth will also depend on fiscal actions as well as economic growth in other countries and global regions. The U.S. government sector, particularly at the federal level, is set on a course of fiscal restraint, mainly from attempts to rein in outsized federal budget deficits and debt that accumulated and characterized previous years. Federal government purchases, after adjustment for inflation, are expected to decline, and permanently so, on federal budget restraint and fiscal consolidation. However, state and local government spending, declining since 2009, should turn positive over the next year, adding to the upturn for the first time in a long while.

*Tight fiscal policy*, i.e., reductions in the pace of growth of federal government purchases and in outlays, along with tax increases, *is now locked-in for many years*, the questions being how

much, the composition of reductions in the pace of expenditures and increases in revenues, whether or not there will be tax reform, and how federal government payments to support the health and retirement of an aging population will be rationalized.

The reduction to U.S. real economic growth from the declines expected in real federal government purchases should be about 0.25 to 0.50 percentage points per year, making it hard for *overall* U.S. real GDP growth to move well beyond 3%. But *ex-federal government purchases*, the private sector of the U.S. economy likely can expand smartly, perhaps rising by up to almost 4% per annum by 2015.

*In the United States, the fundamentals surrounding consumer spending and housing are much improved, although spending, while better, is nowhere near what used to be the case.* Growth in real consumption is expected at 2.4% in 2014, modestly better than the 1.9% of 2013. In 2015, when the consumer fundamentals of jobs and income, household wealth, consumer sentiment and household financial conditions provide more support, the expectation is a 2.8% gain. Real residential construction, in a strong upturn since 2011, led by much stronger home sales and housing starts, should rise by about 11% in 2014. These are the main private sector drivers of the renewed growth upturn that is expected for the United States.

Aggregate consumption spending in the U.S. has been far, far below historical trend for almost seven years now, including the time of the Great Recession, 2007-09. Large declines in the pace of consumption, compared with prior history, only 1.5% per annum between 2005 and 2013, have been the main source of the anemic and subdued U.S. growth that has occurred. Between 1955 and 2005, trend growth in consumption averaged 3-1/2% a year.

*Can consumption pick up out of its growth rut?*

*Very likely, the answer is yes.* This can also occur, in part, because of more private sector demands for loans and increased lending by financial institutions but very likely not to anything like the pre-Crisis historical trend.

In the U.S. labor market, a key to how goes the consumer and aggregate consumption, the unemployment rate has been moving gradually lower, currently at 7% compared with 8.1% in September 2012, expected to reach 6.3% and below by the end of 2014, and 6%-or-less by end-2015. Inflation is forecast to be low and relatively stable, ranging between 1% and 1-1/2%. For 2014, corporate profits, measured by S&P500 Operating Earnings, are projected at \$117.50, a near 9% increase over 2013. In 2015, an 8-1/2% gain is forecast. Historically high profit margins are expected to continue.

*The pickup in economic activity forecast for the U.S. should reverberate around the world.* Asia, if no further significant decline occurs in Chinese economic growth, should help generate renewed growth in sales and earnings for U.S. companies; in turn, helping to drive up business capital spending and hiring to extend and broaden the U.S. economic expansion.

Other sources of optimism include: 1) continuing reductions in business costs, particularly from subdued hiring, smart management, and new technology; 2) a rapid pace of innovations, especially Internet-related; 3) increased use of new info-tech equipment and software in production; 4) better revenues as product prices firm; and 5) a general pickup in the Global Economy.

*New, and repeated, stock market highs should occur, irregularly so, but on a continuing basis.* Rising stock and housing prices will help improve consumer balance sheets and increase household wealth; in turn, supporting a higher pace of consumption spending.

America's situation should help lift global economic growth to a 3% to 3-1/4% range in 2014. In 2015, the projection for growth in the Global Economy is near 3-1/2%, the best in many years. In 2013, the Global Economy is estimated to have risen by about 2-1/2%—not far from a growth recession (defined as real economic growth under 2%).

### **“Futility” of Macroeconomic Policy?**

With so much fiscal and monetary stimulus, the recent U.S. economic performance and U.S. and Global economic prospect, even though improved, suggests much less effect from policy than ever.

*Have macroeconomic policies lost potency? Why so weak a performance? Could it be that with enough passage of time the U.S. economy will produce higher growth and a much better path of performance? Why so little “output” from so much policy “input”?*

*First are structural impediments inside the economy and financial system, in part legacies from the economic downturn.*

These include *Household Finance and Consumption*, with household balance sheets at the end of the Recession the most deteriorated, fragile, and over-leveraged in postwar history, summarized by the DE Household Financial Conditions Index (Chart A.8).

High values of the Index represent deteriorated financial conditions; low values stronger conditions. It can be seen that the Index hit a record-high in the second quarter of 2009, the trough of the NBER-dated downturn. Restoration, or reliquefaction, of household balance sheets to previous “equilibrium” levels requires cutbacks in spending, increased saving in the household balance sheet, and reductions in debt and debt service. Given the initial position of household financial conditions back in 2007, the worsening of them during the downturn and the most deteriorated position ever in 2009:2, it should not be surprising that reliquefaction, or, in more modern terminology, “deleveraging,” has taken longer than ever before.<sup>10</sup> Achieving a healthy state of financial conditions for the household sector historically has been prior to enhanced and increased consumer outlays and increased use of credit for spending. The latest reading suggests more-than-adequate household financial conditions.

*A second structural impediment has been the state of Financial Intermediaries and Intermediation* and the collapse and contraction in the balance sheets of numerous financial intermediaries, i.e., banks and nonbanks. The largest declines in asset values since the 1930s in a highly leveraged financial system contracted credit, caused instability in capital markets, a lack of buyers, and the shutting down of some capital markets, unregulated and regulated. Bank and nonbank financial intermediaries' liabilities underwent a huge contraction as well. Adjustment has taken a long time despite massive infusions of funds into the financial system by the Federal Reserve, federal government agencies, enhanced deposit guarantees, and actions by the U.S. Treasury, such as TARP. *The resulting failure fallout and consolidation*

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<sup>10</sup>Reliquefaction is a term used to describe a stage in the “financial business cycle.” See Sinai (1992).

*and contraction of financial institutions has impeded financial intermediation and capital formation, reduced potential economic growth, and prevented the funding by financial intermediaries that usually supports spending and investment.*

*A third impediment in the class of structural impediments is the behavior of Nonfinancial Corporations in Restructuring Balance Sheets to take advantage of record low interest rates. This has produced “fortress” balance sheets and strong cash positions, but at the same time limited hiring and capital spending.<sup>11</sup> Here, for companies, the initial effects of easy monetary policy have been in restructuring balance sheets, e.g., increasing the ratio of financial assets to liabilities, reducing short- relative to long-term debt, and a major decline in debt service relative to cash flow.*

Business continues to restrain hiring in order to maximize shareholder value and because of considerable uncertainty surrounding final demands. Substitution of information technology capital for labor can clearly be seen in the data, motivated by high all-in costs of labor, including benefits, relative to the low costs and flexibility of information capital stock in a changing structure of production for the U.S. economy. Minimizing hiring and achieving low debt service through restructuring balance sheets is consistent with maximizing shareholder value. Chart A.9 shows a much improved financial position for nonfinancial corporations.

*A fourth impediment has been an unusual Overhang of Housing Supply, a consequence of the housing bust and collapse in housing prices. Foreclosures and forced liquidation of homes increased the supply of housing in the face of depressed demands. As one result, house prices kept falling. This, in turn, shifted down the demand for housing even as affordability improved. The excess supply and inability to refinance existing mortgages in situations of “underwater” loan-to-value ratios left the greatest excess supply of new and existing homes in post-W.W. II history. This excess supply has been an impediment to the easy monetary policy and fiscal stimulus that usually stimulate housing early in recovery.*

*Fifth, State and Local Governments suffered sharp declines in tax receipts in the downturn and large budget deficits. This forced reductions in state and local government purchases and cutbacks in employment. The weak economic recovery and expansion have kept the squeeze on this sector such that until very recently spending and hiring have continuously declined. State and local government purchases are over 9% of the real economy, larger than the share of federal government purchases.*

*A second main source of so few gains in the U.S. economy has been errors in macroeconomic policies—in timing, in composition, and in whether policy was “temporary” or “permanent.”*

Although once in-train aggressive, the Federal Reserve lagged in recognition of the recession and was late in easing. Every year from 2007 forward, the central bank failed to anticipate continuing economic weakness and the slack in the economy, easing monetary policy after the fact rather than before. Similarly, in the case of fiscal policy the downturn was in process long before the 2008 and early 2009 stimulus programs. And, fiscal stimulus was temporary.

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<sup>11</sup>See Jeremy Stein (2012) for an analysis of the impacts from Federal Reserve Large-Scale Asset Purchases (LSAPs) on corporate financial behavior, which has been essentially a restructuring of balance sheets. In past upturns, this has occurred prior to a strong pickup in business spending.

*Yet another principal source of the lack of impact from macroeconomic policy was some Negative External Shocks. These included:*

- 1) *Japan natural disasters* (early in 2010ff)—including an earthquake, tsunami, nuclear accidents and fallout, and a recession from which Japan only recently has recovered. This non-U.S.-centric shock reverberated through Asia and then indirectly back on U.S. exports.
- 2) *Eurozone and European Crises*—financial and economic crises in the Eurozone, and then Europe, brought another significant recession to this global region. Europe, in aggregate, represents a large portion of the world economy and has generated lessened demands for goods and services all over the world. Its recovery, so far, is quite weak.
- 3) *Decelerating economic growth in China*—a purposeful taking down of economic growth by China that had negative effects on Asia, Germany, Europe and overall global economic activity through trade, including indirectly the U.S.. The 4-to-5 percentage point deceleration of growth in China over 2010 to 2012 was a significant impediment to global economic growth.

*Finally, unsustainably high U.S. federal budget deficits and gross public debt relative-to-GDP have made further fiscal stimulus unlikely, if not impossible, instead requiring fiscal restraint to reign in deficits and debt. Tight fiscal policy is in-process which limits growth. Additional fiscal stimulus is no longer a realistic prospect.*

*Because of so many impediments to stimulative macroeconomic policies and policy errors, massively easier monetary policy and repeated fiscal stimuli have failed to produce the permanent economic pickup that was expected to occur. What appears to be extremely long lags between the implementation of stimulative fiscal and monetary policies and the economy have been generally unexpected and unpredicted.*

*The failure of macroeconomic policy stimulus to have greater and lasting effects may stem importantly from them being temporary, in part set this way because of the expectation of a V-like real GDP response. Had the view of policymakers been that the U.S. was in an aberrant episode, not expecting a “V”-like response, then temporary macroeconomic policies might not have been proposed nor implemented. Other policies might have been used. The diagnosis of an aberrant situation was never made—making it more probable that the macroeconomic policies used would miss the mark or prove ineffective.*

### **Quantitative Easing—A Possible Answer?**

Of the various macroeconomic policies implemented in this unusual business cycle, *monetary policy*, particularly two of the monetary policy programs indicated in Table A.3, *appears to have had potency.*

The first was a standard one—reductions of interest rates, the federal funds key policy rate, from 5-1/2% in late 2006 to near zero by early 2008. Long-term interest rates fell along with the short-term interest rate, a typical response.

Declining interest rates affect other asset prices, with some primary effects traditionally through borrowing costs, the cost of capital, reductions in debt service relative to income for households, and in debt service relative to cash flow for corporations. Depending upon other

factors, most particularly prospects for future earnings, lower interest rates can lift stock prices. In turn, rising equity prices have their own set of stimulative effects, greater than is typically thought. In such a situation, the currency of a country, in this case the U.S. dollar, generally will fall against other currencies.

*The asset price responses to standard monetary policy as short-term interest rates are reduced, with lags, sometimes very long, work through the financial system into the real economy to increase various categories of spending—housing, consumption, exports, and later on business capital spending. These are roughly the channels by which traditionally easier monetary policy impacts the economy. A strengthening economy leads to more hiring; more hiring leads to increased income and improved sentiment, then more household spending on housing and other categories of consumption, and increased business sales; rising business sales, especially if viewed as permanent, induce businesses to hire more people and to increase capital spending to keep pace with the necessary increases in output. Tax receipts rise from increased economic activity; in turn, helping to reduce deficits at the federal and state and local government levels. Spending at the state and local government level can increase, providing support for by then an economic upturn. Depending on non-U.S. economies and their cyclical status, U.S. exports should rise; particularly from the help a lower dollar can provide in terms of cost competitiveness.*

The effects of lower interest rates are supported by the increased availability of funds for lending, a quantity effect of the increased bank reserves pumped into the banking system by the Federal Reserve. Financial intermediaries then can lend out these funds, obtained at low cost, more-or-less, making both the cost and availability of funds to borrowers—consumers, businesses and other financial institutions—more attractive. Increased credit availability also supports and stimulates the economic upturn.

*The monetary policy easing of 2006 to 2008, sustained now since early 2008 at the zero lower bound for short-term interest rates, was a permanent change in macroeconomic policy that has stimulated the economy and cushioned the Downturn to less than what might have been otherwise.*

However, given the collapse in spending from the bursting of asset price bubbles in housing and equities, along with the collapse of credit demand and credit supply, failure fallout for financial institutions and in the economy and the deep contraction in financial intermediation and the availability of credit, this *standard method of monetary policy easing*, while certainly preventing a worse result than actually occurred, has not in and of itself been sufficient to produce the kind of economic upturn that normally occurs.

In order to carry out its Dual Mandate of Full Employment and Price Stability, the Federal Reserve responded with “non-standard” monetary policies, innovations and programs of special credit facilities and additional easing that were new. Chief among these was Quantitative Easing (QE), i.e., purchases of fixed income securities, mortgage-backed and U.S. Treasuries, directly in the open market to reduce interest rates further and to provide even more reserves for the banking and financial intermediary system.

With short-term interest rates at essentially zero, a lower bound for further reductions in interest rates, particularly longer-term, direct purchases of U.S. Treasury, Agency and

mortgage-backed securities and an expansion of the Federal Reserve's balance sheet provided the central bank with an additional "lever" or instrument of policy.

The first of these was QE1, a program (Table A.3) of purchases of \$1.2 trillion mortgage-backed securities, \$200 billion of Agency debt, and \$300 billion of U.S. Treasury security purchases set for November 2008 to March 2010. When by summer 2010 it appeared that the economy and labor market were still not responding sufficiently for more rapid progress in achieving the goals of full employment and price stability, another QE program was implemented, QE2, set for November 2010 to June 2011, of purchases of an additional \$600 billion of long-term U.S. Treasuries. Then in late 2011, again with disappointing progress for the U.S. economy and labor market, the Federal Reserve carried out for a year a program where short-term U.S. Treasury securities were sold and long-term U.S. Treasury fixed income securities were bought, called "Operation Twist," not to expand the balance sheet but hopefully flattening the yield curve and inducing more lending and spending.

Finally, after once again a disappointing U.S. economy and failure to make adequate progress in the labor market toward full employment, and with price inflation relatively low compared with the 2% inflation rate that defines Price Stability, the Federal Reserve instituted what has been called QE3, or "Open-Ended" QE, in September 2012.

The program increased the Federal Reserve's balance sheet by \$85 billion each month, \$40 billion in purchases of mortgage-backed securities and \$45 billion of U.S. Treasuries. *This version of QE was open-ended in that it was intended to continue until certain conditions were met in the economy, in the labor market, and on inflation consistent with progress toward the goals of Full Employment and Price Stability. The program was different from QE1 and QE2 in that no finite limits were set on the purchases of securities that could be added to the balance sheet nor any finite time horizon. Instead, changes in the pace of purchases and in the key Federal Reserve policy rate could be made tied to economic and inflation considerations.*

This is what makes QE3 Open-Ended and "permanent," in-place more-or-less until the Full Employment and Price Stability objectives of the Federal Reserve are well in-train.

After abandonment of a calendar-dating timeline for the first hike to-come in the federal funds rate, the addition of securities (QE) to the balance sheet and later what might be an increase in the Federal Reserve's policy rate, the Federal Reserve's policy instruments were tied to substantial progress in the labor market toward full employment, a stronger economy, and inflation moving toward the 2% definition of Price Stability. *In a sense, the Federal Reserve's reaction function became endogenous, and therefore "permanent," until its objectives are achieved. This is fundamentally different from QE1 and QE2, and implies, if stuck to, continuing effects in financial markets and the economy from policy actions aimed at achieving Federal Reserve objectives.*

Throughout the periods of the programs of quantitative easing was also the use of "Forward Guidance" where the Federal Reserve indicated its intention, and a timeline, for the length of

time zero short-term interest rates would be kept in-place.<sup>12</sup>

These two policy initiatives—the use of the central bank’s balance sheet as an instrument of monetary policy and Forward Guidance are what has been called “non-standard” monetary policies. These have been intended to supplement the “standard” policy of interest rate reductions, necessary because the standard policy had reached a limit, the so-called zero lower bound, at which the performance of the economy and of inflation was still inadequate relative to central bank objectives.

*Of these, the Balance Sheet as a policy instrument and Forward Guidance—of most interest and potential impact is the balance sheet.* Here, the Federal Reserve directly impacts interest rates through securities purchases in the fixed income market and the expectations of them.

The reductions of interest rates from whatever the amount of the purchases then can act on financial market asset prices and other related asset prices to alter their path, and permanently so, if QE is maintained, or expected to be, and derivatively the economy.

What the Federal Reserve has been calling “financial market conditions,” the asset prices affected directly or indirectly by Fed actions from changes in sectoral balance sheets in response, and with lags, possibly long, impacts on various categories of spending, the use of QE is much like changes in short-term interest rates and how asset prices are affected and then the economy through channels and transmission mechanisms.

#### **Evidence on QE and Its Effectiveness**

Appendix Charts A.5 to A.9 show how QE appears to have worked via financial market conditions and the interactions between the financial system and the real economy to affect housing activity, consumer spending on autos, the financial condition of the household sector and likely its spending, and the nonfinancial corporate sector.

What the Charts demonstrate is that with sustained low interest rates and the effects of QE on longer-term interest rates, the stock market and the U.S. dollar, the responses in home sales, vehicle sales and housing starts, anemic and slow in the early stage of the upturn, have picked up to a higher pace and now are showing up significantly in activity some 54 months into the Recovery/Expansion.

Precursors of additional future spending are shown in Charts A.8 and A.9, which represent the financial condition of households, a prior condition to increased consumer spending, and one measure for the state of the financial position of nonfinancial corporations, debt service as a percent of internal funds, now at the lowest level since 1987.

With lags, it is reasonable to expect consumer and business spending aggregates to respond to the changed financial conditions and better balance sheets.

Other effects—through household wealth, capital gains realizations, and the availability of large cash balances at nonfinancial corporations—should eventually find their way into real economic activity. Similarly so for the lending of banks where over \$2 trillion of excess reserves represent a tremendous amount of latent credit availability.

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<sup>12</sup>See Woodford (2012) for an important discussion of the role of Forward Guidance.

*QE seems to be effective.* Like the standard monetary policy of lower interest rates, however, the lags ineffectiveness can be long, depending upon impediments within the financial and economic system. Of these, there have been many.

### **Why is It Important to Sustain QE?**

If the analysis and empirical evidence that is gathering is on the right track, it becomes important to sustain QE, in one form or another, to maintain the upward thrust to the economy that has been started.

*“Tapering” the pace of additions to the balance sheet would certainly be appropriate at some point, given that the processes of stimuli initiated will likely continue and show up in stronger U.S. economic growth going forward.*

*But, ending QE totally and/or reducing the balance sheet and moving it toward its original level could be a policy mistake.*

The size of the Federal Reserve’s balance sheet is not too large when scaled by nominal GDP; it is something less than 25%.

Potential inflationary costs associated with using the balance sheet for monetary policy are not yet evident.

*No increase in price inflation has been seen; indeed inflation is now tending lower in the U.S. and globally. The latest reading since the various QEs were initiated, on the Consumption Price Deflator, the Federal Reserve’s key measure is 0.7% year-over-year. This is a long way from the 2% objective and movements in the opposite direction.*

*The balance sheet size issue is a question that should be researched. How large is too large? And, if the balance sheet ex-ante as an instrument of policy stimulus works, could not the rise in nominal GDP that comes ex-post more than offset the rise in the balance sheet with the result a lower balance sheet-to-GDP ratio than initially?*

*Exiting the use of the balance sheet as a policy instrument could well be a mistake.* Certainly, risks of tapering down the pace of purchases, with which so many feel so uncomfortable, do exist. And, there is an issue of “trickle-down,” since the effectiveness of the balance sheet as a policy instrument moves through financial market asset prices whose movements reward investors and initially not workers except as a lag to increased economic activity.

Also, there is the possibility of “bubbles” as over-exuberant investors take the stance of the Federal Reserve to be an invitation to bid asset prices way higher than fundamentals would support and asset price bubbles as a result, most likely in the equity market, portions of it, or in real estate.

And, the Exit from QE, itself, how it is communicated and executed, can be a source of “financial instability,” which the Federal Reserve has taken on to prevent.

All of these issues in using the central bank’s balance sheet as a monetary policy instrument need to be examined, in research and empirically.

*But, early and preliminary analyses suggest that its use should now be a permanent part of monetary policy.* Issues with regard to its quantitative impact, benefits and costs, size, and others need to be examined but not at the expense of stopping its use and implementation.

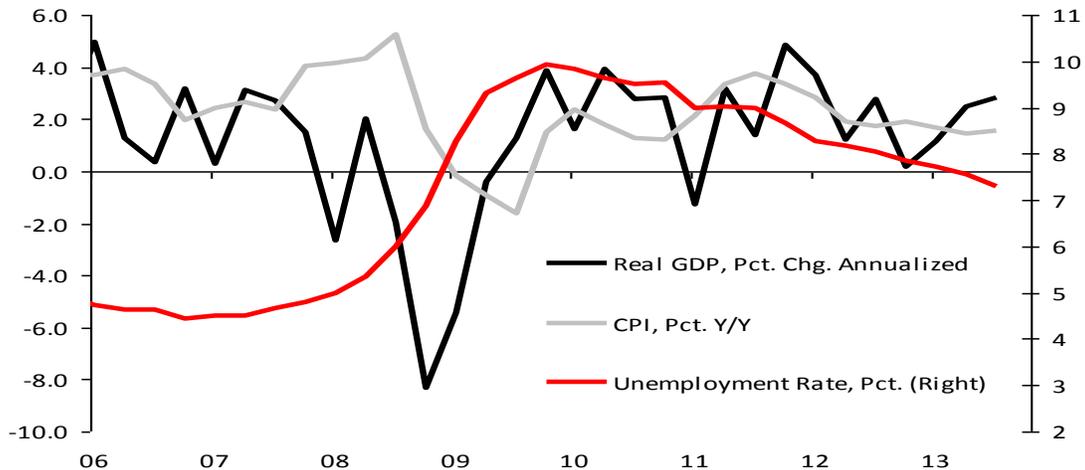
Appendix A

Table A.1  
Major Dimensions in the Performance of the U.S. Economy: 2006-2013  
(Annual)

	2006	2007	2008	2009	2010	2011	2012	2013F	Avg. Growth Per Annum		
									2006- to-Date	2007- to-Date	2009:2- to-Date
<b>Real GDP (% Chg.)</b>	2.7	1.8	-0.3	-2.8	2.5	1.8	2.8	1.6	1.3	1.1	2.1
<b>Inflation (% Chg.)</b>											
<b>CPI-U</b>	3.2	2.9	3.8	-0.3	1.6	3.1	2.1	1.5	2.2	2.1	1.4
<b>Consumption Deflator (PCE)</b>	2.7	2.5	3.1	-0.1	1.7	2.4	1.8	1.2	1.9	1.8	1.5
<b>Jobs, Employment and Unemployment</b>									<b>Avg. Per Annum and Avg. Growth Per Annum</b>		
<b>Nonfarm Payroll (Jobs, Mils.)</b>	136.130	137.642	136.849	130.859	129.911	131.500	133.737	135.920	134.068	133.774	132.385
<b>(% Chg.)</b>	1.8	1.1	-0.6	-4.4	-0.7	1.2	1.7	1.6	0.2	0.0	0.1
<b>Civilian Employment (Persons, Mils.)</b>	144.418	146.050	145.373	139.894	139.077	139.882	142.469	143.876	142.630	142.374	141.020
<b>(% Chg.)</b>	1.9	1.1	-0.5	-3.8	-0.6	0.6	1.8	1.0	0.2	0.0	0.1
<b>Unemployment Rate (% , Q4 Avg.)</b>	4.4	4.8	6.9	9.9	9.6	8.7	7.8	7.1	7.3	7.7	8.7
<b>Labor Force (Persons, Mils.)</b>	151.409	153.123	154.322	154.189	153.888	153.619	154.966	155.447	153.870	154.222	154.422
<b>(% Chg.)</b>	1.4	1.1	0.8	-0.1	-0.2	-0.2	0.9	0.3	0.5	0.4	0.0
<b>Federal Budget Deficits and Debt</b>									<b>Avg. Per Annum</b>		
<b>Fed. Budget. Def. (FY, \$ Bils.)</b>	-248	-162	-455	-1414	-1294	-1299	-1089	-679	-830	-913	-1076
<b>Deficit/GDP (%)</b>	-1.8	-1.1	-3.1	-9.8	-8.7	-8.4	-6.7	-4.1	-5.4	-6.0	-7.0
<b>Gross Public Debt/GDP (%)</b>	61.4	62.2	68.1	82.6	90.7	95.2	98.9	100.0	82.4	85.4	93.7

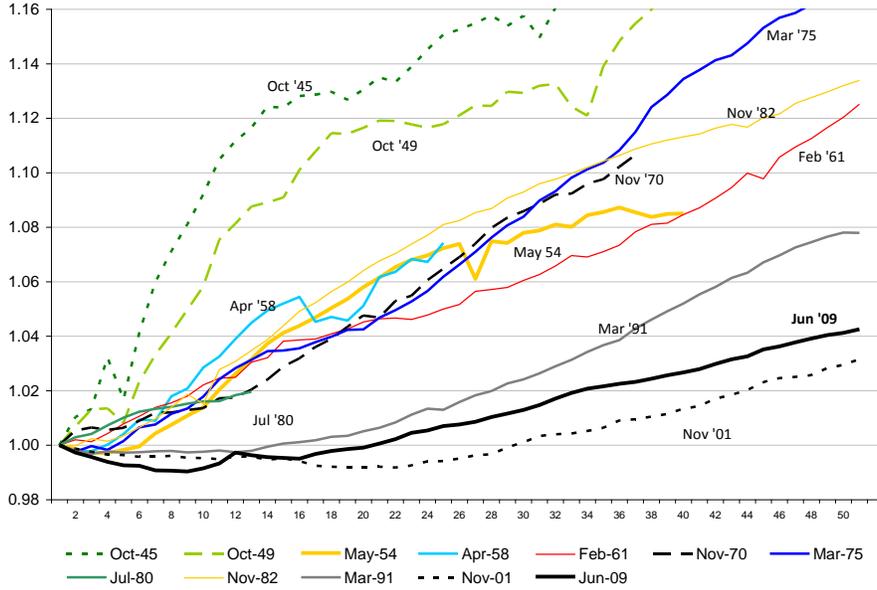
Sources: Bureau of Economic Analysis (BEA), Bureau of Labor Statistics (BLS), Decision Economics, Inc. (DE).  
F-Forecast

Chart A.1  
Economy, Inflation, and Unemployment—2006-13



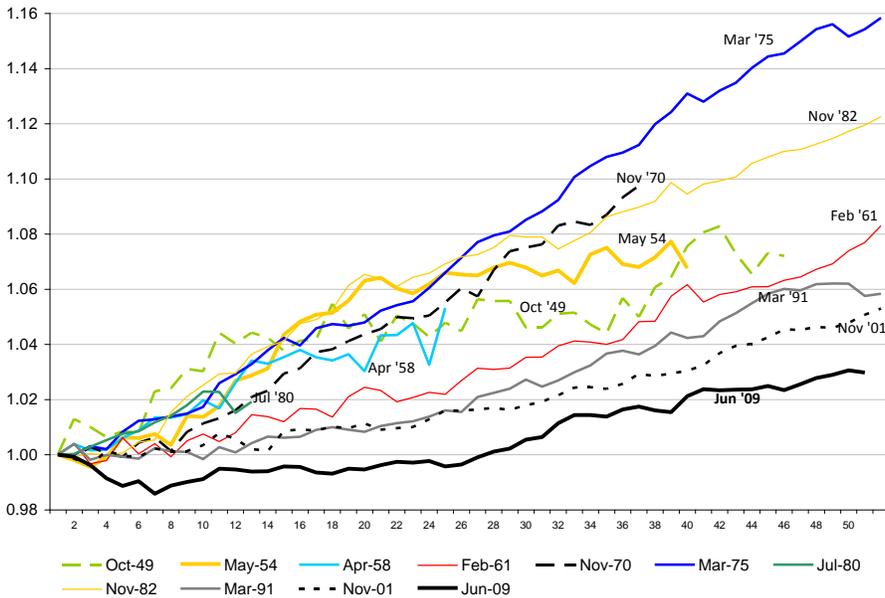
Sources: BEA, BLS, Decision Economics, Inc. (DE)

**Chart A.2**  
**Nonfarm Payroll Employment in Recovery and Expansion**  
**(Index = 1.00 in First Month of Recovery)**



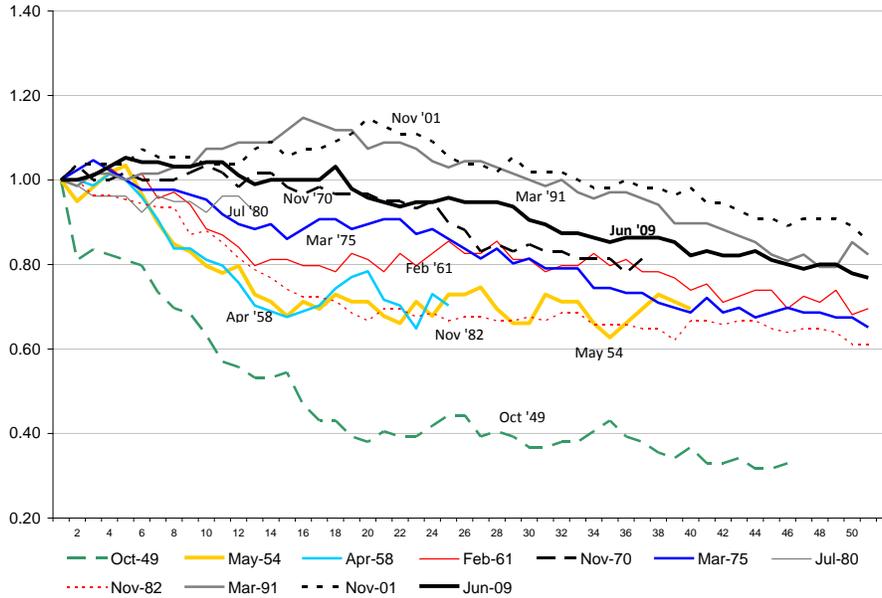
Sources: BLS, Decision Economics, Inc. (DE)

**Chart A.3**  
**Household Survey Employment in Recovery and Expansion**  
**(Index = 1.00 in First Month of Recovery)**



Sources: BLS, Decision Economics, Inc. (DE)

**Chart A.4**  
**Unemployment Rate in Recovery and Expansion**  
**(Index = 1.00 in First Month of Recovery)**



Sources: BLS, Decision Economics, Inc. (DE)

**Table A.2**  
**Fiscal Stimulus Packages (\$ Bils.) Since 2008**

	Stimulus	
	\$ Bils.	Pct. of GDP
<b>2008 Tax Rebate</b>	167	-1.1
<b>Housing and Economic Recovery Act of 2008 (2008-09)</b>	20	-0.1
<b>American Recovery and Reinvestment Act (2009-11)</b>	715	-1.7
<b>2010 Tax Relief Act (2010-11)</b>	797	-2.5
<b>2011/2012 Temporary Payroll Tax Cut, Job Creation Act (2013 ff.)</b>	158	-1.5
<b>Totals</b>	1.857	-1.6 (Avg.)

Sources: CBO, JCT, Congressional Committees and Decision Economics, Inc. (DE).

**Table A.3  
Some Major Monetary Stimulus Programs Since 2006**

<b>Date</b>	<b>Program</b>	<b>Nature, Amounts, Timeline</b>
<b>Jun-06 to Dec-08</b>	Federal funds interest rate reductions from 5-1/2% to near 0%	Typical key policy rate reductions as stimulus—"standard" monetary policy.
<b>Quantitative Easing (QE) and Forward Guidance</b>		"Nonstandard" monetary policies.
<b>Nov-08 to Mar-10</b>	QE1	Purchasing of \$1.2 trillion mortgage-backed securities, \$200 billion of Agency debt, and \$300 billion of U.S. Treasury securities to support credit market functioning and boost private sector liquidity.
<b>Nov-10 to Jun-11</b>	QE2	Purchases of \$600 billion long-term U.S. Treasuries to lower term premia.
<b>Dec-11 to Dec-12</b>	Operation Twist	Sale of short-term U.S. Treasury securities and purchases of long-term U.S. Treasuries, extending the average maturity of holdings. This Program expanded the Federal Reserve's balance sheet by \$267 billion in June 2012.
<b>Sep-12 to Current</b>	QE3	"Open-Ended" QE starting in September 2012, \$340 billion to-date, now \$3.9 trillion of assets on the Federal Reserve balance sheet. Length of the program and pace of purchases depend on economic conditions as relate to Fed objectives on the economy, labor market and inflation.

Sources: Federal Reserve Board, Decision Economics, Inc. (DE).

**Table A.4  
National Bureau of Economic Research (NBER) Dated Recoveries and Expansions**

<b>Recession Dates</b>	<b>Start of Recovery</b>	<b>Peak</b>	<b>Months</b>
<b>1948-1949</b>	Oct-49	Jul-53	45
<b>1953-1954</b>	May-54	Aug-57	39
<b>1957-1958</b>	Apr-58	Apr-60	24
<b>1960-1961</b>	Feb-61	Dec-69	106
<b>1969-1970</b>	Nov-70	Nov-73	36
<b>1973-1975</b>	Mar-75	Jan-80	58
<b>1980</b>	Jul-80	Jul-81	12
<b>1981-1982</b>	Nov-82	Jul-90	92
<b>1990-1991</b>	Mar-91	Mar-01	120
<b>2001</b>	Nov-01	Dec-07	73
<b>2007-09</b>	Jun-09	Nov-13	54
<b>Excluding 2009:</b>			
<b>Average</b>			60
<b>Median</b>			52
<b>Including 2009:</b>			
<b>Average</b>			60
<b>Median</b>			54

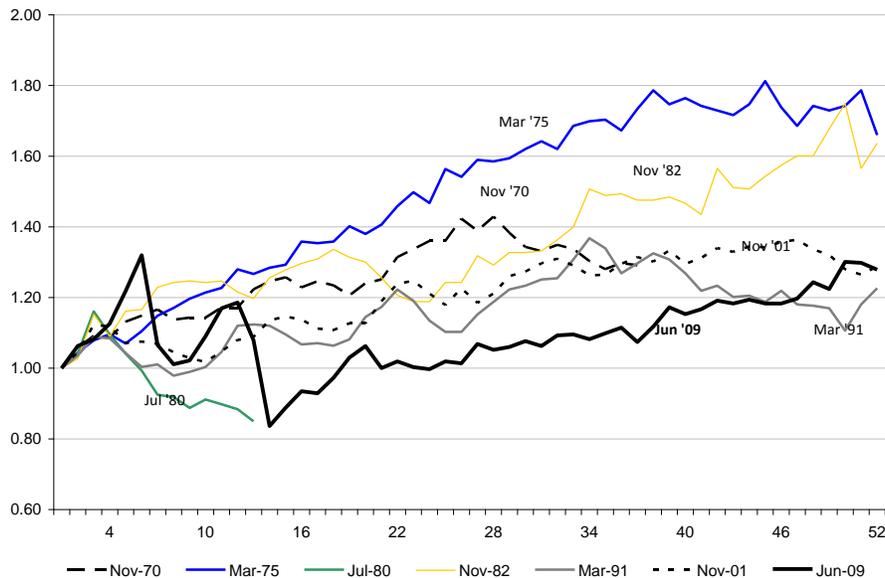
Sources: NBER and Decision Economics, Inc. (DE)

**Table A.5**  
**U.S. and Global Economic Outlook: 2013-15**

	2012A	2013F	2014F	2015F
<b>Economy</b>				
Real GDP (% Chg.)	2.8	1.8	2.8	3.1
<b>Inflation and Unemployment</b>				
CPI-U (% Chg.)	2.1	1.5	1.3	1.8
Unemployment Rate (%; Q4 Avg.)	7.8	7.1	6.3	6.1
<b>Interest Rates (%; Q4 Avg.)</b>				
3-mos. T-bill	0.08	0.09	0.15	0.38
10-yr. U.S. Treas.	1.69	2.66	3.49	3.93
<b>Profits</b>				
S&P500 Operating Earnings (\$s; Ann. Avg.)	103.61	107.81	117.41	127.38
(% Chg.; Ann. Avg.)	4.9	4.1	8.9	8.5
<b>Federal Budget Deficit</b>				
(\$ Bils., Unified, FY)	-1089.2	-678.9	-607.4	-654.1
Gross Public Debt/GDP (%)	98.9	100.0	102.0	90.7
<b>Eurozone (17 Countries)</b>				
Real GDP (% Chg.; Ann. Avg.)	-0.5	-0.3	1.2	1.6
<b>Europe (EU, 27 Countries)</b>				
Real GDP (% Chg.; Ann. Avg.)	-0.3	0.0	1.4	1.8
<b>Global Economy (47 Countries, 93% of World Output)</b>				
Real GDP (% Chg.; Ann. Avg.)	2.6	2.5	3.3	3.5

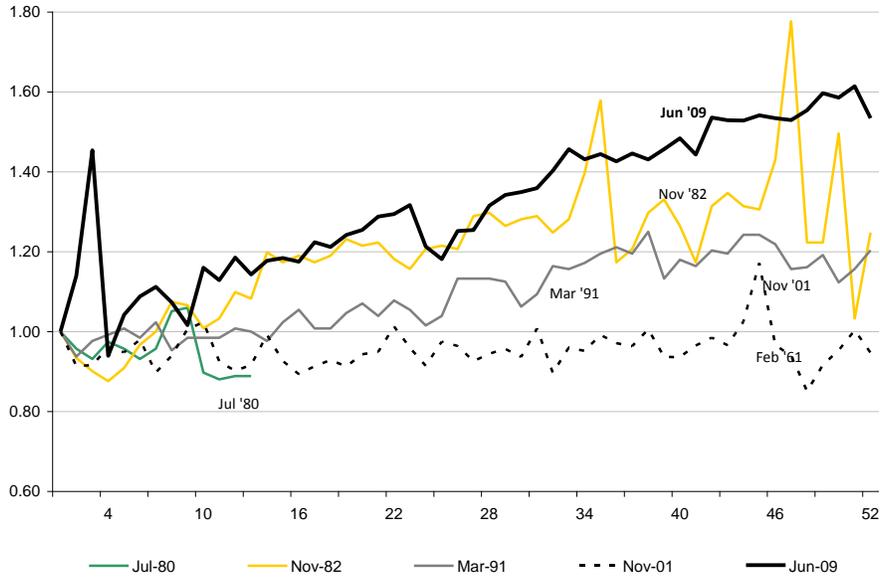
Source: Decision Economics, Inc. (DE).  
A-Actual  
F-Forecast

**Chart A.5**  
**Existing Home Sales in the Current Upturn Relative to History**  
**(Index = 1.00 in First Month of Recovery)**



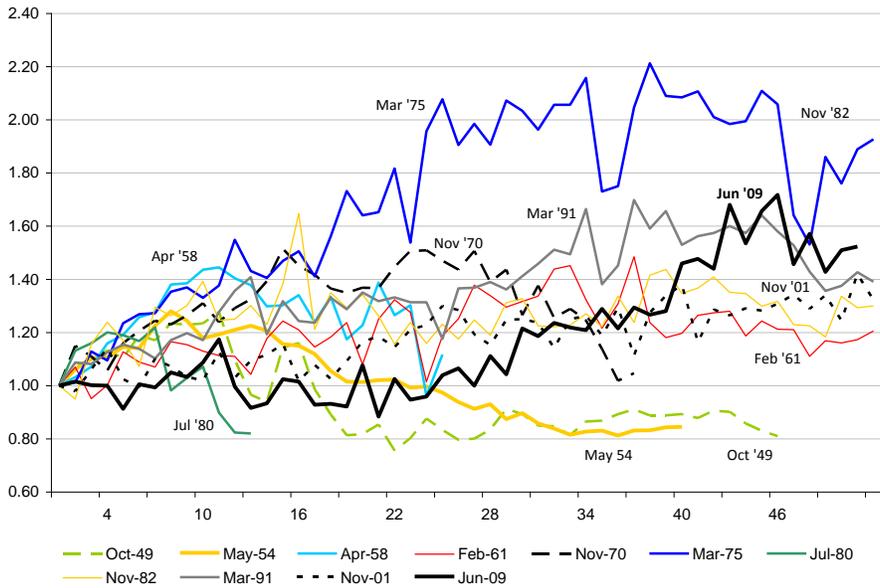
Sources: National Association of Realtors, Decision Economics, Inc. (DE).

**Chart A.6**  
**Light Vehicle Sales in the Current Upturn Relative to History**  
(Index = 1.00 in First Month of Recovery)



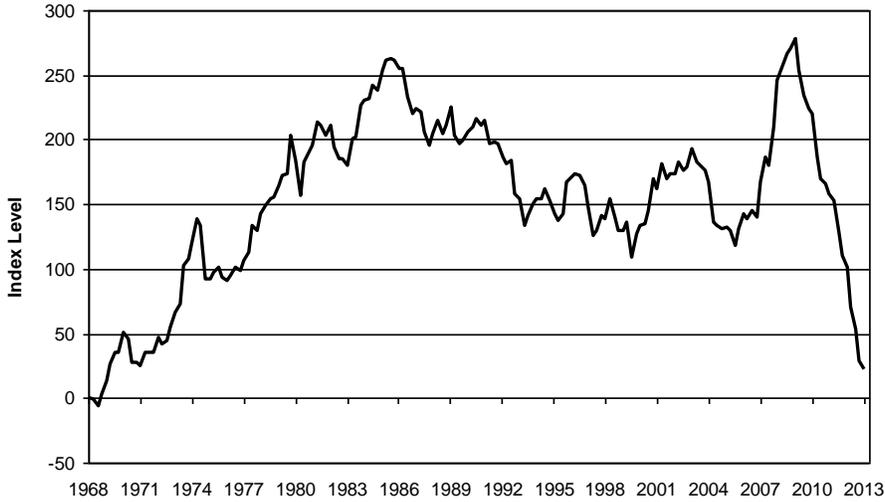
Sources: Bureau of Economic Analysis, Decision Economics, Inc. (DE)

**Chart A.7**  
**Housing Starts in the Current Upturn Relative to History**  
(Index = 1.00 in First Month of Recovery)



Sources: Census Bureau and Decision Economics, Inc. (DE).

**Chart A.8**  
**DE Consumer Financial Conditions Index: 1968 to 2013**



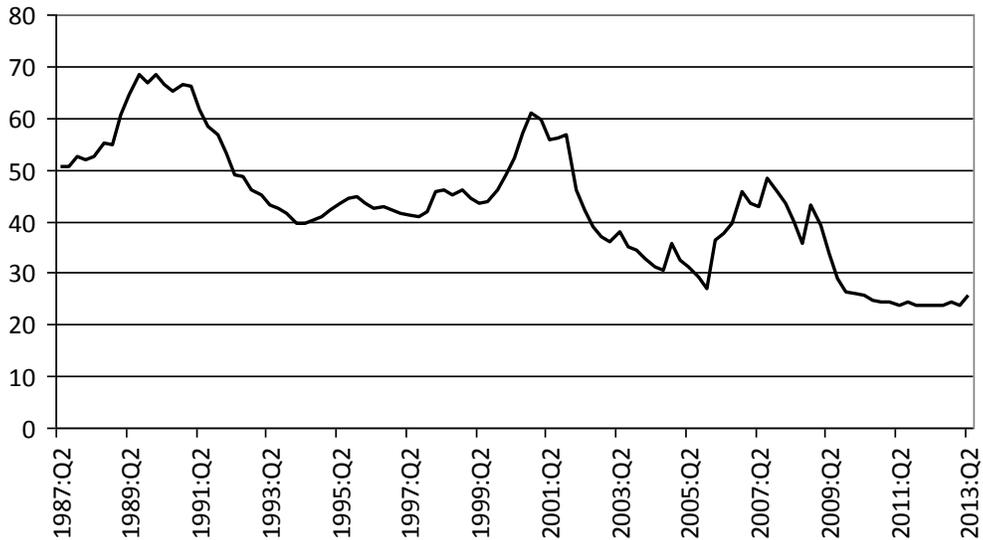
DE Consumer Financial Conditions Index = 0 in 1968Q3

Source: Decision Economics, Inc. (DE)

\*High Levels = Negative Conditions, Low Levels = Positive Conditions

\*Weighted average of ten categories that measure different aspects of household sector finances, real economic conditions, and the household sector balance sheet.

**Chart A.9**  
**Nonfinancial Corporate Debt Service: 1987:Q2 to 2013:Q2**  
**(Percent of Internal Funds\*)**



Sources: Federal Reserve, Decision Economics, Inc. (DE)

\*Interest charged on outstanding debt as percent of after-tax profits, minus dividends, plus capital consumption adjustment, plus depreciation.

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