



The Longbrake Letter*

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Economic activity in the U.S. continues its uninspiring slow improvement. No gloom and doom, but no fireworks either. First quarter real GDP growth was revised upwards to a still negative -0.2 percent, but most analysts expect second quarter growth to exceed 3 percent. Stronger than expected April and May economic reports were followed by somewhat weaker than anticipated reports in June. Still optimism prevails about the potential for stronger growth in the second half of 2015 but troublesome international headlines coming out of Europe and China have dampened enthusiasm.

Debate continues about when, not if, the Federal Open Market Committee (FOMC) will raise interest rates. Most professional analysts expect liftoff to occur at the September FOMC meeting but the market forward yield curve pegs a December start date.

Much of the attention over the last month focused on the dispiriting and dysfunctional negotiations between Greece and its European Union (EU) creditors. Politics rather than reason drove events and the outcome was far worse than just about anyone had expected. Not only did the Greek economy worsen substantially in just a few days' time, policy differences between France and Germany, the two leading EU countries, were exposed. Though quickly brushed aside in a show of unity, these policy differences are significant and divergence is more likely to worsen in coming months than to be resolved.

China shocked and amused us with an old fashioned stock market mania and bust. In spite of worries that that these events might be indicative of instability lurking within the Chinese economy, it is more likely that the Chinese authorities have learned a few lessons and will make necessary adjustments. Chinese reform is proceeding, albeit at a slow pace. But the challenges of implementing essential reforms are truly significant and require deft political stewardship. So far President Xi Jinping appears to be making progress while keeping the lid on potential financial and political instability.

In this month's letter I examine Charles Gave's concern that a U.S. recession might be just around the corner. He believes that the FOMC's zero interest rate policy (ZIRP), now in place for almost seven years would be to blame for detorting decision making by keeping interest rates below the natural rate for so

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long that serious imbalances have built up in the U.S. economy. If Gave turns out to be right, then the U.S. is likely to have company because the U.K., the EU and Japan all have pursued ZIRP and quantitative easing monetary policies.

I. European Union and the Greek Crisis — Systemic and Existential Risk Increasing

In every sense events that have unfolded in Greece and the European Union over the last several weeks are a mind numbing and unmitigated tragedy that could have been avoided or at least tempered but was not. Much has been written and many opinions from multiple perspectives have been voiced. If there are common themes in the cascade of commentary, one is that the draconian depression already gripping Greece will get much worse and last for a long time, the other is that deep structural flaws in the design of the European Union have been exposed for all to see and the ability to forge political solutions does not exist.

Unyielding creditor demands driven by Germany's belief in the efficacy of austerity and the necessity to follow rules of behavior set out in the Maastricht Treaty ultimately forced Prime Minister Tsipras to capitulate. It was a no-win situation for the prime minister. If he did not accede to the demands, Greece would have quickly been forced out of the euro, its banks would have collapsed and the Greek economy would have ground to a halt in short order. But by accepting the creditors' conditions the future for Greece's economy is little better. The damage is now so great, the uncertainty so severe and financial assistance so limited that even the optimistic International Monetary Fund (IMF) expects Greece's economy to contract for the next two years and unemployment to remain at stratospheric levels for years to come. In short there is little hope for the Greek economy. Significant out migration for those who can and a sharply lower standard of living for those who remain seems certain.

So, is it all about Greece? Will all be well if Greece is pushed out as the Germans have suggested? The answer to both questions, unfortunately, is a resounding "No." The European Project and the monetary union may limp along for a considerable period of time but ultimately the divergent economic policies of its members, particularly Germany, an incomplete political union that elevates the sovereign rights of its individual members above the collective interests of all members of the union, an incomplete fiscal union and open antipathy to transfers of resources from rich to poor members, and open borders but without the lubrication of a common language and challenged by the flood of immigrants stemming from Middle East and African political chaos collectively pose such difficult challenges that they are far beyond the ability of true believers in the European Project to fix.

I have discussed the reasons for this pessimistic view in previous letters, beginning with the July 2010 Longbrake Letter in which I stated unequivocally that the first Greek bailout would fail. I have not changed my views over the last five years, but I have come to appreciate that oftentimes it takes a very long time for arrangements that are deeply flawed to fail when there is intense political and emotional commitment to maintaining the status quo.

In this month's letter I look at the crisis in Europe from four perspectives: as an economist, as a creditor and investor, as a governmental policy analyst and as a politician. When all four perspectives are

understood, it is easier to understand that solutions that exist in theory, which could make the European Union and the monetary union work, are not possible to implement.

But let me begin first with a recitation of draconian terms and humiliation that the creditors have imposed on Greece.

1. Terms of the Third Greek Bailout

First of all, the terms laid out by the creditors to Greece do not guarantee that a third bailout will ultimately be forthcoming. They simply lay out the conditions Greece must meet to qualify for initiating bailout negotiations with the European Stability Mechanism (ESM) and the IMF. The opening sentence of the Euro Summit Statement reads as follows: *“The Euro Summit stresses the crucial need to rebuild trust with the Greek authorities as a pre-requisite for a possible future agreement on a new ESM programme.”*

By July 15 the Greek parliament was required to enact legislation to:

- Streamline the VAT (value added tax) system and broaden the tax base to increase tax revenue;
- Reform the pension program to improve long-run sustainability (**that meant decreasing pension amounts and limiting eligibility**);
- Safeguard the legal independence of ELSTATE (**the Greek state statistical agency**);
- Implement relevant provisions of the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union (**among other provisions, the treaty mandates that members run a primary surplus until such time that its debt to GDP ratio is 60 percent or less**) and provide for automatic spending cuts in case the “ambitious” primary surplus targets are not met

The Euro Summit Statement elaborated further — *“the Greek offer of reform measures needs to be seriously strengthened to take into account the strongly deteriorated economic and fiscal position of the country during the last year.”*

- In carrying out pension reforms, fully compensate for the fiscal impact of the Constitutional Court ruling on the 2012 pension reform;
- Adopt more ambitious product market reforms with a clear timetable for implementation;
- Privatize the electricity transmission network;
- Reform labor practices including modernizing collective bargaining and align labor market policies with international and European best practices ... do not return to past policy settings which are not compatible with the goals of promoting sustainable and inclusive growth;
- Strengthen the financial sector including decisive actions on non-performing loans ... eliminate any possibility of political interference;

- Create a privatization of assets program to collateralize €50 billion to repay an ESM loan; €25 billion will be set aside to repay the ESM loan to recapitalize Greek banks; €12.5 billion will go to reduce Greece's debt to GDP ratio; and €12.5 will be used for investment projects (**there is skepticism in some quarters whether €50 billion worth of Greek state assets exist that can be sold**);
- Build capacity and de-politicize the Greek administration;
- The Greek government must consult with the Institutions (European Central Bank, European Commission and IMF) in drafting all required legislation; Greece is required to request technical assistance by July 20;
- *“With the exception of the humanitarian crisis bill, the Greek government will reexamine with a view to amending legislations that were introduced counter to the February 20 agreement by backtracking on previous programme commitments or identify clear compensatory equivalents for the vested rights that were subsequently created.”*

The Euro Summit Statement went on to say that these commitments are minimum requirements to start negotiations. So, what this means is that when actual negotiations on the ESM bailout commence, other requirements could be added. It should very clear that Greece is now a ward of the EU and has virtually no independent sovereignty.

Greece's parliament enacted the four mandatory requirements by a vote of 229 to 64 with 6 abstentions. 32 members of the prime minister's party, Syriza, voted “No.” Prime Minister Tsipras clearly stated that he did not agree with the creditors' requirements but felt Greece had no choice but to comply. The loss of 39 Syriza party members (no votes, abstentions and one absent legislator) may force Tsipras to constitute a minority government or call for new elections. His personal popularity is high but that could erode in coming weeks as the full extent of the pain and agony Greece will be forced to bear becomes apparent.

Next, EU member governments and in some cases parliaments must agree to authorize negotiations to draft a Memorandum of Understanding that would determine bailout requirements. This step was completed within a few days after the Greek parliament adopt the required legislation on July 15.

By July 22 the Greek parliament was required to enact legislation to:

- Adopt the Code of Civil Procedure to overhaul procedures and arrangements for the civil justice system to accelerate processes and reduce costs;
- Implement the Bank Resolution and Recovery Directive with support from the European Commission

The Euro Summit Statement references the IMF's indication that Greece will need €82 to €86 billion during the three-year bailout period. €7 billion of this will be needed by July 20 to pay off debts owed to the IMF and the Greek central bank and another €5 billion will be needed by mid-August. On July 17 the EU agreed to provide Greece a bridge loan of €7.16 billion from the European Financial Stability Mechanism to cover the payments owing to the IMF until a permanent bailout loan is negotiated with the ESM later this year.

Finally, in the last paragraphs of the Euro Summit Statement, there is the possibility of Greek debt re-profiling, if necessary. What this means is that debt would not be forgiven but maturities could be extended and interest rates reduced. Re-profiling is *“conditional upon full implementation of the measures to be agreed in a possible new programme and will be considered after the first positive completion of a review.”* Just to make sure there is no ambiguity about what this means the next sentence states that *[t]he Euro Summit stresses that nominal haircuts on the debt cannot be undertaken.”*

The IMF officially released a report on July 14, which had been provided to EU officials on July 10, stating that Greece needed €85 billion to meet obligations over the next three years, an estimate that had increased by about €25 billion since an early July IMF estimate that was made prior to the closure of Greek banks and the referendum rejecting austerity both of which contributed to a substantial deterioration in the Greek economy. The IMF also predicted that Greece’s debt to GDP ratio would exceed 200 percent within two years and added that it was not possible for Greece to sustain this amount of debt. Greece owes the IMF \$23.6 billion which equals 28 percent of total IMF loans outstanding. Under IMF rules it cannot extend credit if it is unlikely that the borrower cannot repay. In the report the IMF proposed that either Greece be provided substantial debt relief or be compelled to make no repayments for 30 years.

Thus, it is probable that the IMF will refuse to participate in a third Greek bailout unless debt relief is granted, but the Euro Summit Statement is emphatic that debt relief is not negotiable. German Finance Minister, Wolfgang Schauble, said that Greece’s best opportunity to obtain debt relief would occur only if it was willing to give up its membership in the monetary union. *“Nobody knows in the moment how it is supposed to happen without debt relief, but everyone knows that debt relief is not possible within the Eurozone.”* Schauble’s strict interpretation of EU rules is not shared by other Europeans or the IMF. It will be interesting to see how this disagreement is resolved — Germany say the IMF must be involved in the third bailout but debt relief can’t be granted, but the IMF says it can’t lend to a borrower who has no ability to repay.

On July 16 the ECB raised Greece’s Emergency Liquidity Assistance line by €900 million to €90 billion, but effective only for one week. Greece announced that it is reopening its banks on July 20 but withdrawals will be limited to €420 weekly. Bans on foreign transfers and new accounts will continue. Continuation of capital controls will make it very difficult for businesses to have access to sufficient liquidity to conduct normal business operations, so while the reopening of the banks is a favorable psychological development it might have limited economic benefit.

So far events have followed exactly the conditions laid out in the Euro Summit Statement. The next phase of negotiations began on July 17 with the ESM and it is expected that it will take several weeks to hammer out the details of the three-year bailout. And, the matter of whether the IMF is a participant will need to be resolved. Much uncertainty remains including the possibility that the Greek economy shrinks more than expected. In putting together its estimates of three-year bailout requirements the IMF assumed that the Greek economy contracts between 2 percent and 4 percent in 2015 and another 0.5 percent to 1.75 percent in 2016 before returning to moderate growth. While this seems pessimistic, it might prove to be optimistic.

2. Economist's View

Trained economists have repeatedly pointed out two sets of economic relationships from the very onset of the EU crisis in 2010 that are pertinent to the long-run economic wellbeing of member countries and the ability of individual countries to make fiscal adjustments.

Balance of Payments. If one member of the EU runs a substantial and consistent trade and current account surplus and another runs a consistent deficit, imbalances will accumulate over time. This is because the country which benefits from a surplus must lend money to the deficit country to enable the deficit country to pay for the net import balance. If each country has its own currency, the deficit country can devalue its currency relative to the surplus country thus reducing the cost of its exports and increasing the costs of its imports. The reverse will happen in the surplus country. In this way the balance of payments problem will moderate and could even be eliminated.

However, in a currency union, individual countries no longer are able to make exchange rate adjustments, so the customary means of resolving imbalances is unavailable.

This problem can be overcome and it has been a successful feature of the U.S. economy since adoption of the constitution. The solution involves adoption of a transfer union under which rich states pay more in taxes than they receive in spending benefits. However, a transfer union really only works if it is combined with a political union and a fiscal union, both of which exist in the U.S. This requires members to yield sovereignty over many matters to a federal government. While the EU has a parliament and the EC, located in Brussels, is the EU's administrative arm, the EU does not have a constitution. Rather relationships among its members are governed by treaty and sovereignty over most matters is retained by individual member states.

Germany proudly and intentionally has adopted economic policies that result in a large balance of payments surplus which has been growing rapidly. By definition this means that Germany is a large creditor and the debts owed to Germany by other EU countries are growing rapidly. Why would Germany engage in policies that create a cumulating problem for other members of the monetary union over time? Part of it is probably culture. But, a country that exports more than it imports is able to create jobs for its population. Of course, this, too, transfers jobs from deficit countries to surplus countries. Germany embarked on this policy course following reunification of East and West Germany in 1989 as a way of accelerating economic integration of the underperforming East German economy.

Germany's unemployment rate has fallen to very low levels and the German people are proud of their country's economic achievements. There is no understanding that the low unemployment Germany enjoys results in higher unemployment in other countries.

While the focus is on Greece because it has more debt than it can possibly service, the economic performance of many other European countries has been depressed as well. The magnitude of the impact is simply not as great. Indeed, France, the second largest economy in the EU, is a deficit country. Its growth has lagged Germany's and its unemployment rate is much higher. The gap between the two countries is growing steadily and this is troublesome in the long run because large differences in economic performance will exacerbate political relationships.

This potential political divergence was visible in the events that unfolded during the current Greek

crisis. President Hollande took Prime Minister Tsipras under his wing and guided the crafting of Greece's ESM application for bailout assistance. France then championed Greece's application. However, ultimately Germany's much more stringent conditions carried the day. Although public criticism of Germany's unyielding stance was muted anger was palpable in other member countries, particularly those in the EU periphery.

The unwillingness of Germany to reduce its balance of payments surplus will continue to drive a wedge between its economic performance and that of other member countries. Unless balance of payments imbalances are addressed seriously by all EU members, economic performance will continue to diverge. Underperforming countries will be beset by internal political unrest and eventually political change will result and the day of reckoning for the survival of the EU in its current governance form will come.

Austerity. The second set of economic relationships that most economists agree about is that it is often easier to resolve over indebtedness by growing revenues rather than by raising taxes and cutting spending. It seems to be embedded in human nature that those who overspend and accumulate too much debt should mend their ways and live a more frugal life. While this is good counsel for individuals it is not necessarily good economic policy for a country. That is because when a country's economy is operating at less than full employment fiscal multipliers typically are greater than one. What that means is that if taxes are raised by 1 percent, tax revenues will fall by more than 1 percent, so the net effect of the tax increase is negative.

When the IMF helped craft the first Greek bailout in 2010 it assumed that the fiscal multipliers would be less than one. But that assumption was dead wrong and the IMF owned up to this assumption error later on in the face of much worse economic growth in Greece than it had forecast. The existence of fiscal multipliers greater than one was also validated by IMF research studies.

That is why the IMF is now insisting on debt relief for Greece. Substantial debt relief would reduce the amount of the third bailout substantially because most of the assistance will be committed to debt service, both interest and principal payments. The size of the required primary surplus would also diminish if debt servicing requirements were substantially diminished. And, in so doing this would make more money available to help the economy recover.

Bankruptcy laws for individuals and companies are intentionally designed to restructure debts and provide debt relief because it is well understood that at some level of debt, the borrower's ability to service the debt from income simply becomes impossible. This is just as true for countries. Debt relief should have been provided to Greece long ago and should be provided now. But, debt relief is not on the negotiating table for political reasons.

So, the EU is trying to solve serious problems with bad policies that will only serve to make the problem worse. No organization can long survive practices that are progressively harmful to its members.

3. Creditor's View

The creditor's view is simpler and straight forward. A borrower should pay back what is owed and suffer any amount of pain that doing so causes. Also, if there are losses to be taken a creditor tries to find someone else to bear the burden. For example, Ireland socialized losses in its banking system by assuming

the banks' debts. This was done because policy makers feared that the economic consequences stemming from the bankruptcy and collapse of its banking system would cause more harm than simply assuming the banks' debts and keeping them open. This kind of governmental response is typical in major financial crises. The U.S. was not immune from making similar policy decision during the Great Recession.

In the current Greek episode, creditors were adamant throughout the spring that Greece should accept onerous creditor requirements. This view was driven primarily by the belief that the borrower needs to play by the rules and a companion belief that Greece was playing fast and loose. Creditors generally do not have the same appreciation or understanding of longer run economic consequences. Their perspective is short term and what they care about is the functioning of financial markets on a relatively immediate basis.

In the case of Greece, creditors clearly saw that in the event of default there would be immediate and severe consequences for the Greek banking system and thus for the health of the Greek economy. In a monetary union deposits can move anywhere within the EU to any financial institution at par and without notice. Because of this arrangement, if depositors for any reason fear that access to their deposits will be restricted or they might be forced to take a loss on the face value, the sensible thing to do is to move deposits to a bank in a totally safe country, such as Germany, at the first hint of trouble. Indeed a large amount of deposits has long since fled Greece which is why the ECB's emergency liquidity facility for Greek banks has risen to €90 billion.

However, not all depositors can leave easily. This is particularly true for businesses that have a high volume of daily cash transactions.

When Prime Minister Tsipras decided to miss the June 30 deadline and hold a referendum on the creditors' terms, the ECB under its rules had no choice but to freeze the amount of emergency liquidity assistance to Greek banks. But by calling for a referendum, Prime Minister Tsipras heightened economic uncertainty and deposit withdrawals would have escalated quickly well above Greek banks' ability to accommodate them. Insolvency and economic chaos would inevitably have followed. So Tsipras having made the choice to hold the referendum was forced to close Greek banks and impose capital controls on withdrawals. This in turn quickly crippled the functioning of the Greek economy.

Thus, the decision to hold a referendum dealt the Greek economy a severe blow which will not easily be reversed any time soon. Creditors could see that outcome very clearly ahead of time and were adamant that Greece should accept creditors' original terms and did not understand the stupidity of Greek politicians.

Even though the referendum vindicated his view, Prime Minister Tsipras realized immediately following the referendum the severe problems created for Greek businesses and the enormous damage that capital controls imposed on the Greek economy. He was also advised by the French that the results of the referendum were totally irrelevant so far as Greece's creditors were concerned. Thus, Tsipras caved into the lesser of evils by deciding to apply for ESM bailout assistance, but incalculable and irreversible damage had already been done.

Was Tsipras' decision irresponsible? Given the response of creditors the answer would appear to be "Yes." But, if creditors had fully understood the fundamental economic analysis described above and agreed to debt relief, Tsipras' negotiating ploy would have been a responsible one.

In any event, the outcome was that Greece ended up in a much worse condition and creditors, insisting that all debts must be repaid, escalated the severity of assistance terms to compensate for the deterioration in Greece's economy and fiscal position.

4. Governmental Policy Analyst's View

Governmental policy analysts view the Greek crisis not just in terms of what it means for Greece but what it means for the integrity of the EU and more broadly what the spillover effects might be on other geopolitical relationships.

Their view presumes that EU policy makers are fully aware that the imposition of harsh austerity terms on Greece would not enable any kind of meaningful economic recovery. But if policy makers agreed to provide debt relief, it would establish an unwelcome precedent that could be seized upon by other debtor members of the EU, notably Spain and Portugal ... perhaps Italy as well in the longer run, to argue for similar treatment. While these countries' economies seem to be moving in the right direction at the moment, that might not continue to be the case in another year, if the current positive momentum turns out to be transitory due to ECB quantitative easing, low oil prices and the significant decline in the value of the euro.

But, by taking an inflexible hard line to avoid establishing a troublesome precedent, EU creditor nations may have strengthened the appeal of euro-skeptic political movements in member countries. It remains to be seen what impact Greece's ultimate capitulation in the face of even more onerous conditions will have on political movements within other EU member countries. The now presumed impossibility of negotiating debt relief could re-enforce the acceptance of compliant centrist political parties. Alternatively, the prospect of never-ending economic depression could strengthen euro-skeptic parties. The Greek referendum outcome suggests that under extreme duress the public will choose the path that puts them back in control of events no matter how awful the consequences might be for a period of time.

Surely, had Greece chosen to exit the euro, rather than capitulating to creditor demands, the consequences would have been terrible but not necessarily on an indefinite basis. In other words, Greece's exit from the euro could, but might not, lead to Greece becoming a failed state.

Greece has alternatives, assuming it chose to default on its debt and leave the euro. One would be to look to Russia for stopgap financing to provide the time necessary to sort through the consequences of withdrawing from the euro and restarting the Greek economy. Such a move would have long-term implications for NATO and American and European political relationships with Russia. China might be another alternative. Though China does not yet seem ready to play the international role of spoiler, it does harbor ambitions to increase its international sway and China could decide that becoming Greece's rescuer might be worth the cost of international opprobrium that would come with China's intervention. A less likely, but theoretically feasible alternative, would be hedge funds providing funding to Greece. The risks would be great, of course, but a successful turnaround of the Greek economy could prove very profitable. The reason this alternative is unlikely is that feasibility would require a consortium of hedge funds and it is hard to imagine how a group of independent investors could collaborate effectively both to negotiate a deal and to oversee and enforce terms and conditions.

Consider, also, Germany's long-run objectives. It needs to sustain its export-based economic model and the free trade zone and the euro are essential components. Greece is of no consequence in this regard. But, agreeing to do what is necessary to preserve Greece's EU membership establishes dangerous precedents which could become troublesome if other EU members, whose EU membership is much more vital to the ongoing success of Germany's economic model, press Germany for debt relief. In this context, Germany's hard line that Greece must pay all its debts in full, but its temporary exit from the euro should be considered, makes total sense. Thus, it is not about preserving the EU for altruistic reasons; it is about preserving the free trade zone that is coterminous with the EU that is essential to Germany's economic prosperity.

Formation of the EU originally was conceived as a way of forging interdependence of French and German economic and political interests with the intent to ending a century of intense rivalry that led to three devastating wars. This worked so long as the economic power of France and Germany was relatively well balanced. But, this balance is disappearing as France's economy stagnates and Germany's barrels ahead. The growing tension between the two countries became more visible during the crisis when France attempted to promote Greece's case and Germany used its enhanced economic power to brush off France's approach and force an outcome that served German economic and political interests. Although Germany was able to control the outcome it looks to have come at the cost of undermining its relationships with other European countries — in particular, France, Italy, and Spain.

The Greek crisis is really indicative of systemic crisis for the EU. Stratfor summed up the substance of the crisis as follows:¹

The events in Greece have shown the extent to which a currency union without a fiscal union leads to conflict in Europe. The Greek government has presented the conflict as an attempt to weaken Greece's democracy, which is an incomplete explanation. The Eurozone is a club of 19 democracies with their own national interests, priorities and constraints. Each actor has to pursue its own goals, all the while fettered by domestic politics.

The Greek government promised to end austerity, remain in the Eurozone and achieve debt relief, which ultimately proved impossible. The German government needs to protect its export markets — and therefore the currency union — while making sure taxpayer money is not squandered. The French and Italian governments want to lead Mediterranean Europe while protecting their political ties with Germany. Bailout countries, such as Spain, Portugal and Ireland, are terrified that leniency with Greece would strengthen anti-austerity political forces at home. And small northern and Baltic nations, where the economic downturn was particularly severe during the early stages of the financial crisis, reject the idea of having to compromise their national wealth to help a country on the other side of the Continent.

Things would probably be easier if Europe were a federation, but history and geography make it impossible. What began as a technical debate about the fiscal situation of a peripheral country has escalated into a conflict that is stripping the structural weaknesses of the European Union.

Thus, from the perspective of governmental policy analysts no good solutions exist that assure the long-run survival of the EU. EU members will stumble along trying to fix problems as they occur for as

¹ Stratfor. "The Greek Crisis Deepens Europe's Fault Lines," July 12, 2015.

long as possible. But, a slow unraveling of the EU seems inevitable.

5. Politician's View

Politicians in a democracy are beholden to their constituents. While they care about doing the right thing for their countries, they also develop policy platforms that appeal to voters and help get them elected. Policy platforms sometimes are less than fully thought through and often play to the baser emotions and anxieties of voters. Whether policy platforms are sound or flawed, politicians frequently feel compelled to adhere to commitments they have made even in the face of developments that suggest that a pragmatic change of course is merited in the best interests of the country.

George Bush's "read my lips, no new taxes" comment followed later by a deal with congressional Democrats to raise taxes contributed to his one-term presidency. That outcome is repeated again and again to emphasize the perils of making bold statements and later pursuing a course of action inconsistent with the statement.

In the case of Prime Minister Tsipras, he and the Syriza party were elected on the platform to reverse the damaging austerity policies that creditors had imposed. Again, as the fundamental economic analysis indicates, this was a reasonable policy position and it certainly resonated with Greek voters. Having been elected on the basis of this commitment and believing firmly in its rationality Tsipras stuck to his guns in the face of unflinching creditor rejection. Ultimately Tsipras was unsuccessful and Greece is and will pay a heavy price for not acquiescing sooner to creditor demands. But notwithstanding the ugly outcome, Greek voters continue to admire Tsipras courage. That is certainly the manage that the landslide victory in the referendum conveyed and Tsipras popularity has held up in its aftermath. That may not continue to be the case in coming days.

But, inflexible creditor demands were also driven by political commitments. German politicians crafted a narrative of shiftless Greeks out to take advantage of German prudence by forcing Germans to pay for Greek laxity, corruption and inefficiency. This narrative played well in the disciplined German culture and favored politicians who took a hard stance on the virtues of frugality and the importance of always playing by the rules and meeting commitments. This narrative is now so deeply embedded in German culture that a plurality of voters agreed with Wolfgang Schauble's suggestion that Greece should temporarily exit the monetary union until such time as its house was in order and it could meet its obligations.

Thus, having crafted this narrative and having been successful in embedding it deeply among the German electorate, German politicians lost all flexibility to consider a compromise involving debt relief. And because of its economic power and first among equals position within the EU, Germany has been able to dictate its view and force other EU members to accept its terms for the third Greek bailout.

6. Summary

What has happened in Greece is an awful tragedy that could have been avoided. That it has happened, indeed that it is getting even worse, is a signal that the dream of European integration has begun to unravel. It will take a long time to reach the final stages of collapse. But the long run economic consequences of

balance of payments imbalances, which cannot be corrected easily in a monetary union, and that cause ever widening gaps in economic performance among members, governance flaws in the design of the EU, and entrenched political policies and dogma that are not amenable to pragmatic solutions of complex problems assure the eventual demise of the EU and its monetary union. What this means in the long run for European countries and for geopolitical relations more broadly remains to be seen. In the short run Germany is in the cat bird's seat. But, in the long run Germany will pay dearly for its myopia and intransigence. As one investor wisely put it, beware of being long German assets when the day arrives that borrowers default on their German debts. Or, as another commentator put it, the Germans apparently have learned nothing from the disastrous World War I Versailles Treaty that imposed unpayable reparations.

II. China's Stock Market Gyration

While Greece's economy has been unraveling and the European Union is wrestling with existential threat, China's Shanghai stock market has captured a lot of media attention, first with its spectacular rise of 151 percent over the last year, then its crash of 32 percent from the June 12 peak to July 8 followed by a 13 percent rebound by July 17. Needless to say, this is extreme volatility. Notwithstanding the volatility, the Shanghai composite index is still 93 percent above the level of one year ago and is now down only 23 percent from the June 12 peak. What does this all mean? More on the Shanghai stock market in a moment, but first some updates on what is going on in China.

1. China's Economic Growth

China has experienced phenomenal economic growth over the last 30 years which is typical of an emerging economy which boot straps its cheap labor through cheap labor and favorable currency exchange rates. In addition, China has benefited from aggressive state-financed infrastructure investment which has had a classic accelerator impact.

However, as an emerging economy matures, as has been China's case, this model of economic growth is not sustainable. Wages rise, external pressures mount to curtail the favorable management of currency exchange rates and, very importantly, continued emphasis on infrastructure investment leads to overcapacity and negligible or negative rates of return and can also foster financial instability because many investment projects do not generate sufficient cash flows to service the loans taken out to finance them. An investment driven economy also requires financial repression of consumers who are forced to save a large share of their incomes and receive below market rates of return.

Chinese policy makers were well aware that maintaining economic momentum and avoiding a potentially severe and regime threatening financial crisis required a significant transformation in the Chinese economy from over reliance on investment to one which increased the portion of economic activity devoted to consumption. With the ascension of President Xi Jinping to power a broad-sweeping program of reforms was announced with the intent of transforming the economy to one driven more by market forces and less by state direction. Implementation of reforms is proceeding but at a slow pace. Political resistance exists because shifting power from party officials to the market negatively impacts their ability to benefit financially. Thus, the program of reforms has also been accompanied by an aggressive anti-corruption

campaign which is intended to centralize and consolidate the power of President Xi while also eliminating political resistance to implementation of market-based reforms.

Investment spending, which had averaged a 15 percent annual rate of increase between 2002 and 2011, rose just 6.6 percent in 2014. It is expected that investment growth will slow a bit further in 2015.

One consequence of China's economic transformation, which actually is a necessary one, is that the real rate of GDP growth is falling as the unsustainable benefit of the investment accelerator on growth is intentionally diminished. As the economy matures it will be driven in the future more by labor force growth and productivity just as is the case in all mature economies. Because China is still in "catch up" mode, productivity gains will continue to be outsized, but should gradually diminish. This means that as the economy shifts toward consumption and increasingly becomes more like other developed-country economies, the rate of real GDP growth will gradually diminish.

Through the second quarter of 2015 real GDP in China is growing at a 7.0 percent annual rate. In my opinion this is probably actually a little higher than is optimal, which means that the shift from infrastructure focus to consumption focus is not progressing quite as rapidly as it should. In any event, real GDP growth should continue to slow, but in the interests of preserving Communist Party governance stability it seems probable that the decline will be gradual. A real rate of growth closer to 6 percent in the next couple of years seems likely and a continued decline to 4 percent within the next decade is plausible.

Chinese policy makers can achieve higher real GDP growth than is optimal but only through aggressive expansion of credit. The efficiency of a unit of credit in generating growth has diminished sharply in recent years and overuse of credit to maintain a higher growth rate will assure financial instability.

2. Market Reforms

Progress is occurring and is most visible in three areas — bureaucratic reforms, fiscal reforms, and financial market reforms. Bureaucratic reforms involve the elimination of redundant rules and streamlining approval processes. Fiscal reforms are focused on transforming the financing of local governments from a reliance on land sales to a liquid bond market. Financial liberalization has the long-run objective of transforming the renminbi into a global reserve currency. Steps being taken consistent with that objective involve liberalizing China's historic reliance on detailed capital controls.

Reform of state owned enterprises has lagged, slowing the realization of potential benefits from market-based competition. Apparently having state owned enterprises continue to serve government and Communist Party goals remains more important.

3. Housing

Housing has been a significant driver of infrastructure investment and growth in China in recent years. While sales and prices improved some this spring, unsold inventories remain high and consequently new construction activity is lethargic. Also, reform of local government finance has diminished the incentive for local governments to raise revenue through land sales, which should help moderate the tendency toward overbuilding that has prevailed in recent years.

In the longer run, there is still significant need for affordable housing to accommodate the migration of labor from rural to urban areas. However, while demand remains substantial the growth rate has flattened out and will not be the driver of outsized GDP growth as it has been in the past. For example, growth in demand for construction materials and machinery has slowed to near zero. This means that a large segment of manufacturing no longer has the need to invest in increasing capacity, so there is knock on impact on investment spending beyond the slowdown in direct housing construction spending.

4. Financing Local Governments

Chinese policy makers have launched a local government bond market this year with considerable success. Bonds have been issued by all 17 of China's provinces and are trading at respectable and uniform yields similar to those for central government bonds, apparently reflecting the expectation that the central government will back the creditworthiness of these bonds even though there is no explicit guarantee.

5. Liberalizing Capital Controls

China's desire to have the renminbi accepted as a global reserve currency requires that the currency be stable but for cross-border capital flows to relatively unrestricted. In the words of central bank governor Zhou Xiaochuan, "*The capital account convertibility China is seeking to achieve is not based on the traditional concept of being fully or freely convertible. Instead, drawing lessons from the global financial crisis, China will adopt a concept of managed convertibility.*" What this means is that as long as markets are well-behaved the renminbi will be fully and freely convertible but that the central bank reserves the right to intervene if stability is threatened. This policy requires that domestic capital markets will gradually be opened up to foreign investors. Preference is likely to be given to long-term investors — the newly developed long-term bond markets for local financing is an especially important opportunity. Additionally, existing restrictions on Chinese citizens moving money outside of China will probably be relaxed but coupled with close monitoring. The net upshot of these reforms will be to increase capital flowing to and from China but within careful monitored limits.

6. Foreign Policy and Investment in Neighboring Countries

As China's domestic economy continues to grow, its historical interest in investing in the economies of neighboring countries is rising. Also, China is increasingly committed to a proactive foreign policy that serves its long run economic and security interests. The expectation is that as other countries become more economically dependent upon China, its geopolitical and foreign policy leverage will rise.

With those objectives in mind, China has launched the "Belt and Road Initiative" which is intended to forge a "community of shared destiny" in which the prosperity of other countries is linked to that of China. The strategy is to develop a web of economic linkages facilitated by Chinese investment. Chinese policy makers are relying on State Owned Enterprises to implement the "Belt and Road Initiative."

7. China's Wild West Stock Market

While the recent volatility of the Chinese Shanghai stock market makes for sensational headlines and conveys a sense of instability, it should be clear from the discussion above that China is progressing on many fronts and, in spite of its many challenges, economic catastrophe and political stability are low level threats.

Even though the Shanghai stock market has gone through wild swings in prices in recent days it is clear from the central government's interventions that the market is an important part of its overall initiative to develop market-based economic incentives.

Informed opinion believes that the recent tempest will be short-lived, that the market will stabilize and then resume its upward trajectory. The recent tempest can be traced to underdeveloped infrastructure and controls and uncontrolled access to margin credit.

Policy makers want to develop a highly functional equity capital market as an alternative source of funds to land sales and wealth management products as ways of financing economic activity. It is also not lost on policy makers that rising stock prices and broad investor participation, as long as frothy bubbles are avoided, can create a beneficial wealth effect in terms of consumer spending.

A sustained bull market that does not generate bubble-like excesses is a policy objective because it would draw in millions of Chinese investors and increase considerably the amount of financing for a plethora of businesses. The potential is considerable. China currently has 89 million brokerage accounts, which equals only 7 percent of the population. But only about 50 million accounts are actually active. This equals 6.5 percent of the urban population. But because many investors probably have multiple accounts, the actual percentage of the urban population that trades stocks is lower, perhaps in a range of 1 percent to 5 percent. For comparative purposes about 50 percent of the U.S. population owns stocks directly or through mutual funds or retirement plans. So, the potential of the Shanghai stock market to become a huge source of funds is substantial, but it needs to operate in a way that does not scare the living daylights out of investors. In this regard the recent episode was very damaging.

However, the main takeaway is that Chinese policy makers want to craft a highly functioning stock market and that explains why they pulled out all the stops to stabilize the market. I expect lessons have been learned and greater effort will be made to control speculation and margin borrowing going forward.

III. Charles Gave's Musings About Possible Recession

Charles Gave periodically writes investment commentary for GavekalDragonomics. He is a disciple of Knut Wicksell, a 19th and early 20th century Norwegian economist, who wrote about capital investment theory and the natural rate of interest. The simplified characterization of Wicksell's theory is that when the market rate of interest exceeds the natural rate, this makes an increasing volume of investment activity unprofitable, chokes off growth and, if this relationship persists, leads to recession. When the opposite is true and the natural rate exceeds the market rate of interest, this market condition is typically accompanied by an abundance of liquidity that induces leveraged financing and speculation in the prices of existing assets to the detriment of investment in risky new productive investment projects.

Thus, mispricing of interest rates in general has economic consequences. High market rates lead quickly to recession, but the underpricing of credit relative to the natural rate, if it persists for a long period of time, has serious and insidious risks that do not lead necessarily to quick resolution and can cause enormous imbalances to build in the economy. The FOMC's ZIRP (zero interest-rate policy) unfortunately in Gave's opinion is just such a manipulation of interest rates and has disrupted normal market functioning with the consequence that capital has been consistently misallocated and has fostered the condition of secular stagnation which is characterized by underinvestment, low productivity, a decline in the potential rate of real GDP growth and increasing income inequality.

By keeping interest rates below the natural rate, the process of creative destruction, which weeds out inefficient companies, is impeded. In other words, because of cheap financing costs, inefficient firms can survive. This results in excess capacity which depresses profits of more efficient companies because excess supply depresses prices. This in turn discourages additional capital spending and contributes to the decline in productivity.

Of course, the conventional view held by most economists and certainly embedded in FOMC monetary policy is that interest rates need to be low to stimulate spending and investment and promote an increase in productive activity that absorbs economic slack.

Conventional monetary policy and Wicksellian theory appear to be at odds. If the FOMC permitted interest rates to rise to the natural rate, would this curtail the consequences of secular stagnation or, alternatively, would it lead to renewed recession and even greater economic slack? Economists have not worked through the complexity of this and thus there is no consensus about the consequences of current monetary policy or what a more appropriate alternative policy should be. I would offer that a better policy mix might be a monetary policy that involves higher interest rates sooner than later but that is accompanied by more aggressive federal deficit spending directed specifically toward investment activity until such time as the private sector has worked through the disruptive effects that higher interest rates will have in stimulating creative destruction. But, we know that the fiscal policy option is not politically viable. Thus, we are left only with flawed ZIRP monetary policy that appears to be slowly eliminating economic slack but is simultaneously embedding a condition of secular stagnation.

But, Charles Gave's concerns go further and now involve a rising threat of recession. His argument is that low interest rates bring forward in time spending. Most economists agree with this and view this as necessary to kick start an economy with considerable slack. But Gave's argument is that companies, knowing that future demand has been brought forward, will be less inclined to invest in additional capacity that might well be underutilized in the future when interest rates are higher and demand shrinks. Also, businesses will attempt to keep costs under control by being stingy with wage increases. In turn consumers, seeing the actions of businesses and fearing job losses in the future will increase saving. But, as the paradox of saving teaches, greater saving, and thus lower spending, will lead to slower economic and employment growth. Thus, Gave argues that low interest rates are distinctly deflationary in impact and not inflationary as many believe. In other words, low interest rates, when sustained for an extended period of time, depress economic activity.

Is recession around the corner? Charles Gave has constructed a diffusion index of 16 publicly available indicators. He has established rules for each indicator to determine whether to assign a value of +1, favorable to economic expansion, or -1, unfavorable to economic expansion. Index values can range from

+16 to -16. Historically, whenever the index has fallen into negative territory, the U.S. economy has entered into recession within a few months' time. Until the beginning of 2015 the index had been at a level of +10 for most of the past four years except during the summer of 2011 when it dipped to +2 temporarily during the U.S. treasury securities default scare. Today the index is "0". Whenever the index has reached zero in the past, with the exception of 1985, it has continued to fall and recession has followed.

From my vantage point, I have difficulty in pinpointing the exact nature of the imbalances that could tip the U.S. economy into recession. So, I must admit to skepticism about the reliability of Gave's quantitative analysis. Is it the canary in the coal mine or is it a statistical quirk that has been correlated with past economic cycles but is lacking in explanatory content about today's economic circumstances? As an aside, the index of leading economic indicators always fits the historical data well but has been less useful in foreshadowing the next recession. This certainly was true a couple of years ago for the Economic Cycle Research Institute's leading index of economic activity, which repeatedly forecast a recession that never occurred.

Rather than dismiss Gave's concerns because they don't fit the established belief system and are pessimistic, they deserve attention and monitoring. As is always the case, we'll know the real story later on when we can look back at what was going on in full knowledge of the actual realized consequences.

IV. U.S. Economic Outlook — Real GDP Growth

Annualized first quarter real GDP growth in the "Final Estimate," while somewhat better than in the "Preliminary Estimate," was still a very disappointing -0.2 percent (see **Table 1**). Annual GDP revisions, due in late July, may erase this negative number. However, the failure of real GDP to rebound in the face of improving employment and falling oil prices cannot be dismissed lightly.

Net exports had an outsized negative contribution, but even when their impact is eliminated in the alternative GDP measure of "Private GDP — Net Exports," the adjusted number is still paltry in comparison to the same measure for the previous several quarters. In response, the Federal Open Market Committee (FOMC) slashed its 2015 real GDP growth estimates, perhaps by more than will turn out to be truly warranted. However, this action does reflect a grudging acceptance that real GDP growth is likely to remain at a much lower level than previously anticipated. While not voiced directly, this capitulation can be assigned to barely discernible productivity gains.

1. 2015 Q1 GDP — Final Estimate

Personal consumption growth was better than the "Advance" and "Preliminary" estimates, but still relatively weak given the plunge in oil prices.

Totally missing was any spending benefit from the plunge in oil prices. This might simply be due to a response lag. Spending falls because of the decline in gas prices but the extra cash is saved rather than spent on other goods and services. This behavioral pattern has been observed in the past when tax rebates were not spent immediately upon receipt but eventually were spent over the next several months. **GS** conducted an analysis which indicates that consumer spending should have been 0.5 percent to 1.0 percent

Table 1
Composition of 2015 and 2014 Quarterly GDP Growth

	First Quarter 2015 Advance Estimate	First Quarter 2015 Preliminary Estimate	First Quarter 2015 Final Estimate	Fourth Quarter 2014 Final Estimate	Third Quarter 2014	Second Quarter 2014
Personal Consumption	1.31%	1.23%	1.43%	2.98%	2.21%	1.75%
Private Investment						
Nonresiden- tial	-.44%	-.37%	-.26%	.60%	1.10%	1.18%
Residential	.04%	.16%	.21%	.12%	.10%	.27%
Inventories	.74%	.33%	.45%	-.10%	-.03%	1.42%
Net Exports	-1.25%	-1.90%	-1.89%	-1.03%	.78%	-.34%
Government	-.15%	-.20%	-.11%	-.35%	.80%	.31%
Total	.25%	-.75%	-.17%	2.22%	4.96%	4.59%
Final Sales	-.49%	-1.08%	-.62%	2.32%	4.99%	3.17%
Private GDP	-.34%	-.88%	-.51%	2.67%	4.19%	2.86%
Private GDP — Net Exports	.91%	1.02%	1.38%	3.70%	3.41%	3.20%

higher in the first quarter.

My statistical analysis indicates that in July 2014 oil prices had no impact on the saving rate. However, by March 2015 the decline in oil prices had boosted the saving rate by 0.46 percent. Note, assuming that the rate of growth in disposable income is constant, an increase in the saving rate is consistent with a slowing in nominal consumption growth by the same percentage.

The boost in the saving rate is already beginning to subside and will reach zero by December and then will subtract approximately 25 basis points from the saving rate during the first half of 2016. This swing of 70 basis points in the saving rate translates into a difference of 0.5 percent in nominal GDP growth.

GS's analysis also indicates that only one-fourth to one-half of the benefit of lower gas prices should have occurred during the first quarter. Consequently, **GS** is very confident that consumer spending will accelerate in coming quarters. Second quarter monthly data releases so far are supportive of this expectation.

Net exports subtracted -1.89 percent from real GDP growth in the “Final” estimate — virtually the same as in the “Preliminary” estimate. This was primarily the result of the 19.0 percent increase in the value of the dollar over the last 12 months. The West Coast dock strike during the quarter also contributed to the out-size decline. However, notwithstanding these reasons, the large decline does not

seem fully reasonable and will either be revised downward over time or will be offset by a large increase in subsequent quarters.

Residential and nonresidential business investment improved a collective 0.15 percent in the “Final” estimated. However, nonresidential business investment still subtracted -0.26 percent from first quarter real GDP growth. This was not as bad as the -0.44 percent in the “Preliminary” estimate. This decline was caused mainly by a plunge in energy-related investment.

All in all, even though faulty seasonal adjustments probably overstated weakness in first quarter real GDP growth, the strong dollar, low oil prices and a decline in productivity contributed significantly to disappointing growth in the first quarter.

2. GDP Forecasts for Q2

Table 2 shows forecasts/projections for the second quarter of 2015 and for the full years 2015 through 2018.

Table 2
Real GDP Growth Forecasts — B of A, GS, Bill’s “Steady Growth”, Bill’s “Strong Growth” and FOMC High and Low Projections

	2015 Q2	2015 Q4/Q4	2015 Y/Y	2016 Y/Y	2017 Y/Y	2018 Y/Y
B of A	3.3	2.35	2.5	3.1	2.7	2.2
GS	3.2	2.25	2.4	2.7	2.25	2.1
Bill’s Steady Growth		1.8	2.3	2.3	1.9	1.8
Bill’s Strong Growth		2.1	2.4	2.5	2.1	2.0
FOMC — High#		2.0#		2.7#	2.5#	
FOMC — Low #		1.8#		2.4#	2.1#	

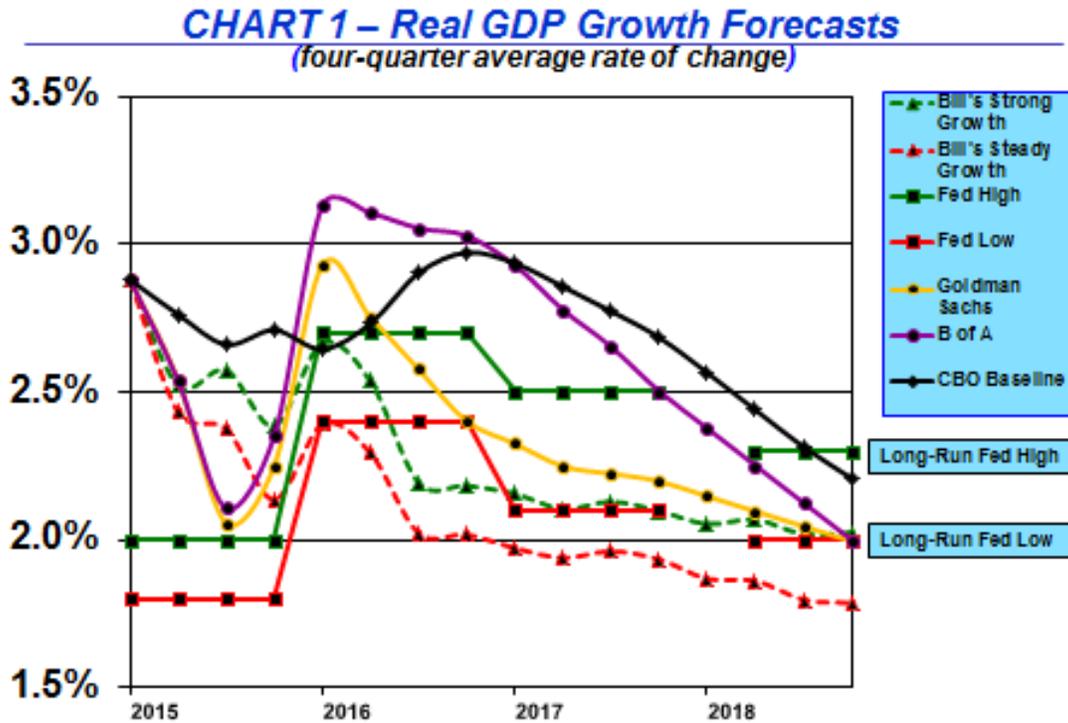
#Measured from Q4 to Q4

Both **B of A** expects real GDP growth to rebound to 3.3 percent in the second quarter and **GS** is close behind with a forecast of 3.2 percent.

Second quarter real GDP growth should benefit from a pickup in consumer spending, stronger housing construction and the flow through benefits on spending from last year’s strong employment gains. Offsets will probably include subdued business investment and weaker manufacturing activity due to the strong dollar and lower energy prices, both of which have negatively impacted the competitiveness of U.S. exports.

3. GDP Forecasts for 2015-2018

As **Table 2** and **Chart01** show, most forecasters expect GDP growth to be about 2.3 to 2.5 percent Y/Y in 2015 and then to be a little better in 2016. However, optimism is fading for strong performance in 2017 and beyond, with most estimates falling back to the low 2's.



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While my forecast for 2015 is similar to the consensus view, my forecasts for 2016 — 2017 are much lower. There are several reasons. First, I expect consumer spending to be weaker than the consensus for two reasons: slower employment growth and slower growth in nominal disposable income. Second, I do not expect business and residential investment to be as strong as the consensus. As I have explained in previous letters, low or negative real interest rates discourage investment. Monetary policy driven liquidity goes into debt-leveraged price speculation in existing assets rather than financing new investment. Most forecasters have ignored this economic principle and have assumed that investment growth rates would rise as the economy strengthened. While it would be better if other forecasters had been right and I had been wrong, my expectation of weak investment growth, and therefore weak real GDP growth, continues to be borne out. Third, sustained weak investment growth depresses productivity and that not only reduces real GDP growth but also slows increases in nominal disposable income and therefore in consumption. Though not much talked about, productivity is missing in action and shows little likelihood of getting better.

4. Consumer Spending.

Retail sales were weaker than expected early in the year, picked up in April and May, but then weakness returned in June. The 1.2 percent decline in retail sales in June was very disappointing. Nonetheless, strong employment growth over the last year and the decline in oil prices provide a degree of credibility to **B of A's** and **GS's** forecasts in **Table 3** of acceleration in consumer spending growth from 2.5 percent in 2014 to between 3.2 percent and 3.3 percent in 2015. I remain somewhat less optimistic and expect spending growth in 2015 between 2.7 percent and 2.8 percent.

Table 3
Consumer Spending Growth Rate Y/Y Forecasts — B of A, GS, Bill's "Steady Growth"
and Bill's "Strong Growth"

	2012	2013	2014	2015	2016	2017	2018
Actual	1.72	2.34	2.50				
B of A				3.21	3.18	2.65	2.20
GS				3.31	3.28	2.66	2.20
Bill's Steady Growth				2.70	1.83	1.86	1.53
Bill's Strong Growth				2.76	2.10	2.13	1.83

*May forecast

Forecast consumer spending growth remains between 3.2 percent and 3.3 percent in 2016 and then slows to between 2.65 percent in 2017 and 2.2 percent in 2018, reflecting an expected sharp decline in the rate of employment growth. My forecasts are low relative to others reflecting an earlier and more dramatic slowdown in employment growth as well as slower improvement in wages.

Both the University of Michigan Consumer Sentiment Index and the Conference Board Consumer Confidence Index measures improved in June. However, Evercore ISI's Company Surveys have edged down a bit since peaking in April. Collectively, these surveys support the expectation that consumer spending should be firmer in coming months.

Residential Investment. Forecasts for growth in residential investment are shown in **Table 4**. Residential investment growth in the first quarter was revised upward to a respectable 6.5 percent in the "Final" estimate. **GS** expects residential investment growth to be a robust 9 percent in 2015 and then accelerate to about 13 percent in 2016, 11 percent in 2017 and 9 percent in 2018. **B of A** has been less optimistic. Its 2015 forecast for residential investment growth is now 6.4 percent. **B of A** still expects residential investment growth to rise to about 9 percent in both 2016 and 2017 before subsiding to 4 percent in 2018.

As each quarter rolls by the much expected acceleration in housing investment has failed to materialize. This is a bit of a mystery because the overhang of excess supply has long since disappeared and household formation has begun to rise. For these reasons forecasters expect housing to emerge at any moment from the doldrums. So, they simply keep pushing forward strong housing investment acceleration. It is getting to the point, however, that some are pondering whether fundamental structural changes have occurred

Table 4
Real Private Business Investment (Residential and Nonresidential) Growth Rate Y/Y
Forecasts — B of A, GS, Bill’s “Steady Growth” and Bill’s “Strong Growth”

	2012	2013	2014	2015	2016	2017	2018	Ave. 1947-2014
REAL PRIVATE BUSINESS INVESTMENT								
Actual	8.30	4.68	5.39					3.80*
B of A				3.73	5.47	5.95	4.35	
GS				4.27	6.27	5.49	4.88	
Bill’s Steady Growth				3.15	2.58	2.55	2.47	
Bill’s Strong Growth				3.46	3.64	2.94	2.81	
REAL NONRESIDENTIAL INVESTMENT								
Actual	7.19	3.05	6.32					2.55*
B of A				3.10	4.56	5.27	4.44	
GS				3.16	4.64	4.12	3.74	
REAL RESIDENTIAL INVESTMENT								
Actual	13.51	11.90	1.59					-1.34*
B of A				6.40	9.22	8.62	3.98	
GS				9.00	12.84	10.61	8.93	

*Average 1999-2014; real private business investment = 1.55% for 1999-2014

in the housing market which will limit the extent to which housing investment rises as the economy improves. Stringent underwriting standards and changes in household formation and, thus, in housing demand, may not be as transitory as forecasters expect. In addition, there is growing realization that demographic changes are shifting housing demand from detached single family dwellings to much less investment-intensive multifamily units. This, too, should result in somewhat slower housing investment growth than in previous cyclical expansions.

Nonresidential Investment. Forecasts for growth in nonresidential investment are shown in **Table 4**. Based upon first quarter results, **GS** has reduced its 2015 forecast business investment growth from 4.0 percent to 3.2 percent. Similarly, **B of A** has reduced its 2015 forecast from 4.9 percent to 3.1 percent. Even these reductions may prove to be too optimistic based on the sharp decline in small business optimism in June as reported by the National Federation of Independent Businesses.

Both forecasters expect stronger investment growth in 2016, 2017, and 2018 in a range of about 4

percent to 5 percent. Over the last several quarters, measured nonresidential investment growth has consistently come in lower than forecasts. Thus, unless real interest rates move to a much higher positive value, forecasts for 2016-18 may also prove to be too optimistic.

- Durable goods orders and core capital goods shipments were weaker than expected in May.
- Measures of industrial production and capacity utilization have weakened a little in the last couple of months.
- The Institute of Supply Management's indices for manufacturing and services weakened at the beginning of 2015 but improved a little in June. Both are above 50 indicating moderate expansion.
- GS's Analyst Index of business conditions has been below 50 for three consecutive months.
- Evercore ISI's index of Capital Goods Companies remains at a depressed level and declined to 39.8 in mid-July (below 50 indicates that sales are contracting).

Collectively, these indicators paint a picture of a struggling business sector. If these trends continue, nonresidential investment is likely to continue to be disappointing. Such an outcome also would be consistent with the secular stagnation story discussed in last month's letter of how depressed real rates of return foster underinvestment and low productivity and depress real GDP growth.

Private Business Investment. Private business investment includes both residential and nonresidential investment. My forecast for 2015 is somewhat lower than other forecasts. My below consensus forecasts in 2016, 2017 and 2018 result from my more pessimistic outlook for nonresidential investment, which I believe will continue to be depressed by low real interest rates and slower real GDP growth.

Government Investment. Government investment spending is divided between federal and state/local investment spending. State and local government spending accounts for 61.2 percent of the total.

Table 5 shows actual total government investment growth for 2012, 2013, and 2014, and forecasts for 2015 through 2018. Relative to the 68-year average growth of 2.68 percent annually the actual results and forecasts are quite pessimistic. But the pessimism is warranted by the political constraints that have been imposed on government spending in recent years. Forecasts for 2015-2018, including my own, are consistent with the 1.14 percent rate of growth in government investment spending over the last 16 years. However, as is already turning out to be the case in 2015, even these low rates of growth may prove to be too optimistic.

Inflation-adjusted state and local spending is up 1.04 percent over the last year, but declined at an annual rate of -1.0 percent in the first quarter. **GS** cites three reasons to expect relatively weak state and local government spending growth in coming quarters. First, state revenue growth will be weak due both to slow economic growth and voter resistance to tax increases. Second, most states plan only modest budgetary increases, which is directly related to weak revenue growth and balanced budget requirements. Third, a growing proportion of state and local expenditures are allocated to health and other social benefits, which are not counted as spending in the national income accounts — they are transfer payments.

Trade. The 17.3 percent decline in the value of the trade-weighted dollar over the last 12 months eventually should lead to a larger trade deficit as growth in exports is depressed and cheaper prices lead

Table 5
Government Investment Growth Rate Y/Y Forecasts — B of A, GS, Bill’s “Steady Growth” and Bill’s “Strong Growth”

	2012	2013	2014	2015	2016	2017	2018	Ave. 1947-2014
Actual	-1.28	-2.01	-0.16					2.68*
B of A				0.68	1.07			
GS				0.55	1.23	1.25	1.26	
Bill’s Steady Growth				0.43	1.16	1.26	1.22	
Bill’s Strong Growth				0.59	1.30	1.34	1.40	

*1999-2014 average growth rate = 1.14%; federal = 2.12%; state & local = 0.54%

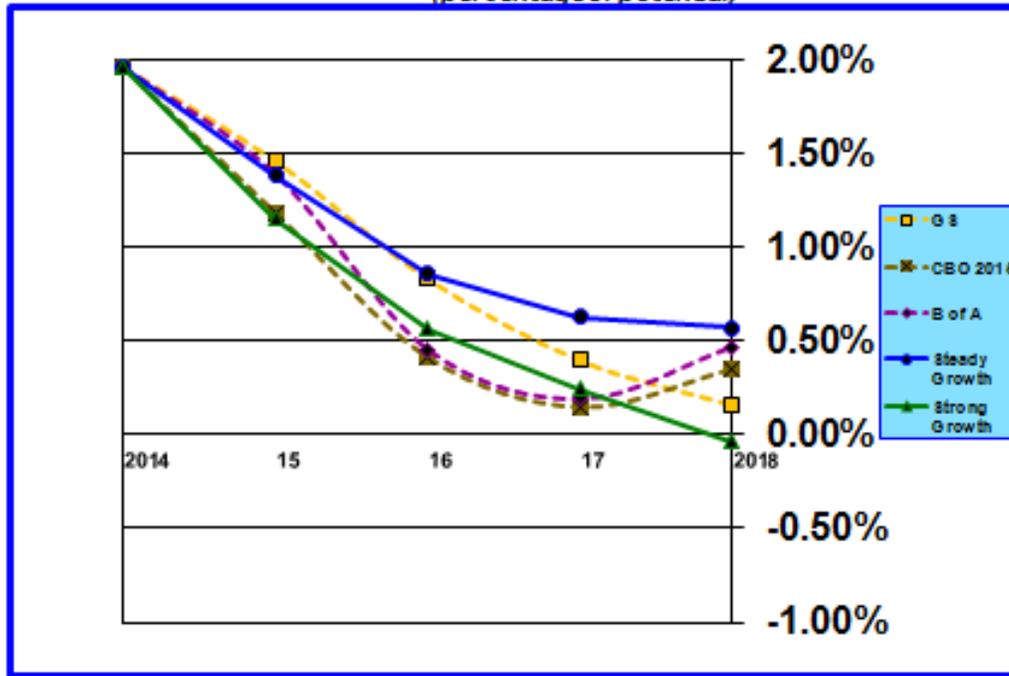
to a surge in imports. Indeed, exports of goods have fallen from 9.5 percent of nominal GDP a year ago to 9.0 percent in May. However, imports of goods have also fallen over the last year from 13.7 percent of nominal GDP to 13.3 percent, with the result that the trade deficit for goods remains unchanged. The total trade deficit, which includes financial flows, also is unchanged over the last year. Thus, the weaker dollar has not yet had the expected effect.

Oil Prices. A plausible reason is that both the quantity and dollar value of oil imports has declined sharply over the last year as domestic oil production has surged due to shale oil production. As long as the price of oil does not plunge from its recent level, U.S. oil production is likely to remain strong even in the face of much lower prices because the marginal cost of producing shale oil is falling rapidly. It appears that the downward adjustment in shale oil investment is over as we start the second half of 2015; however, a renewed surge in nonresidential investment from this source is not likely. But, the trade deficit might not deteriorate quite as rapidly as is presupposed by the decline in the value of the dollar. Oil prices bottomed in January and then rebounded 27 percent by June. However, prices are again falling in July and now are only 12 percent above the January low. With the end of the Iran economic sanctions, Iranian production will rise considerably over the next two years. This will help keep a lid on oil prices. Whether this increment in production will drive oil prices to new lows remains to be seen. However, if that occurs, then it will put upward pressure on the U.S. trade deficit. Much lower prices could also destabilize the more or less orderly consolidation of the U.S. energy sector that is currently underway.

5. GDP Output Gap

Generally, as can be seen in **Chart02**, forecasters expect the real GDP output gap, which was 2.0 percent at the end of the fourth quarter, to close rapidly during 2015 and 2016 to less than 1 percent and essentially fade away by 2017.

CHART 2 – Real GDP Output Gap
(percentage of potential)



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All output gap forecasts, including my own, are now tightly clustered and agree that the gap should largely disappear within the next two years. This is so even though my real GDP forecasts are lower. That is because my estimates of potential real GDP growth are also lower because of slowing employment growth and depressed productivity gains.

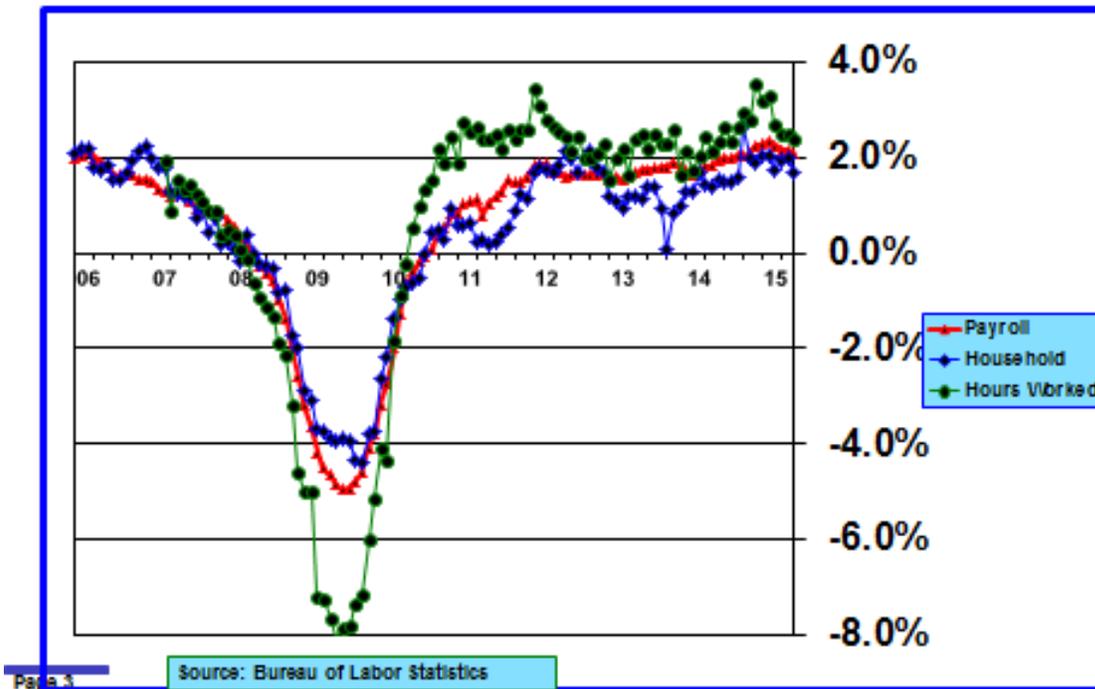
V. Employment

Employment growth has moderated slightly since the beginning of the year but remains relatively strong and the unemployment rate has fallen to a level slightly below the Congressional Budget Office’s (CBO) estimate of the “natural rate of unemployment.” However, as I will discuss below, weaknesses remain in the labor market.

1. The Good News

As can be seen in **Chart03**, employment growth was strong in 2014 but has moderated somewhat over the first six months of 2015. Payrolls grew 3,116,000 during 2014 — a 2.27 percent increase. Payroll employment grew a further 1,250,000 in the first six months of 2015 bringing the 12-month rate of growth down to 2.11 percent.

CHART 3 – Employment Growth
(annual rate of change)



Household employment grew 2,770,000 in 2014 — a 1.92 percent increase. Through June 2015, the 12-month rate of growth has edged down to 1.70 percent. The unemployment rate fell from 6.69 percent in December 2013 to 5.56 percent in December 2014 and was 5.28 percent in June. Notably, the current unemployment rate is slightly below CBO’s long-term noninflationary level of 5.38 percent.

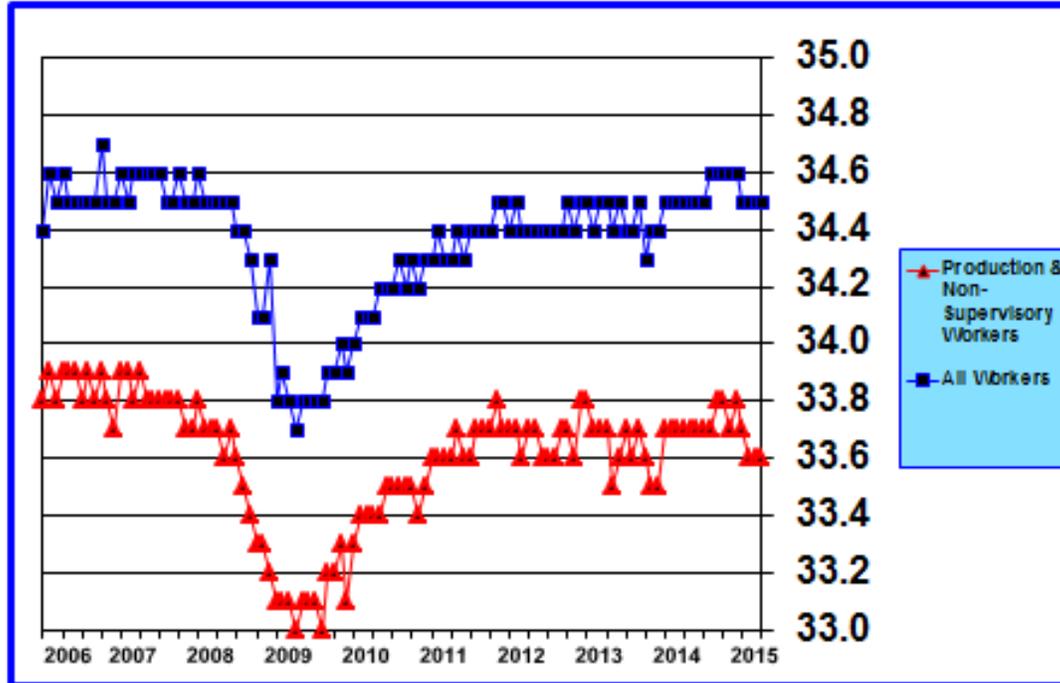
Hours worked by all employees grew 3.53 percent during 2014 as the average length of the workweek stretched from 34.3 to 34.6 hours. However, the 12-month rate of change in hours worked slowed to 2.38 percent in June and the length of the workweek edged down to 34.5 hours.

Chart04 shows that the length of the workweek rose for all workers and for production and nonsupervisory workers during 2014 but has edged down 0.1 hour for all workers and 0.2 hour for production and nonsupervisory workers so far in 2015. Total hours worked rose 3.47 percent for production and nonsupervisory workers and hours worked by all employees increased 3.53 percent during 2014, due primarily to a larger proportion of full time jobs but also due to increasing overtime work. Over the last 12 months through June 2015 the rate of increase in hours worked has slowed to 1.93 percent for production and nonsupervisory workers and 2.38 percent for all workers.

Thus, while growth in total hours worked remains strong, growth is slowing.

Strong growth in total hours worked is important because when the length of the workweek is expanding take-home pay grows more rapidly than implied by simply looking only at payroll and household employment growth. This is typical of periods of economic expansion, as **Chart04** indicates for the period

CHART 4 – Average Weekly Hours
(All Workers; Production and Non-Supervisory Workers)



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Source: Bureau of Labor Statistics

from 2010 to the present.

If analysts looked no further, it would be easy to conclude that the labor market is fast approaching full employment.

2. Disappointing News

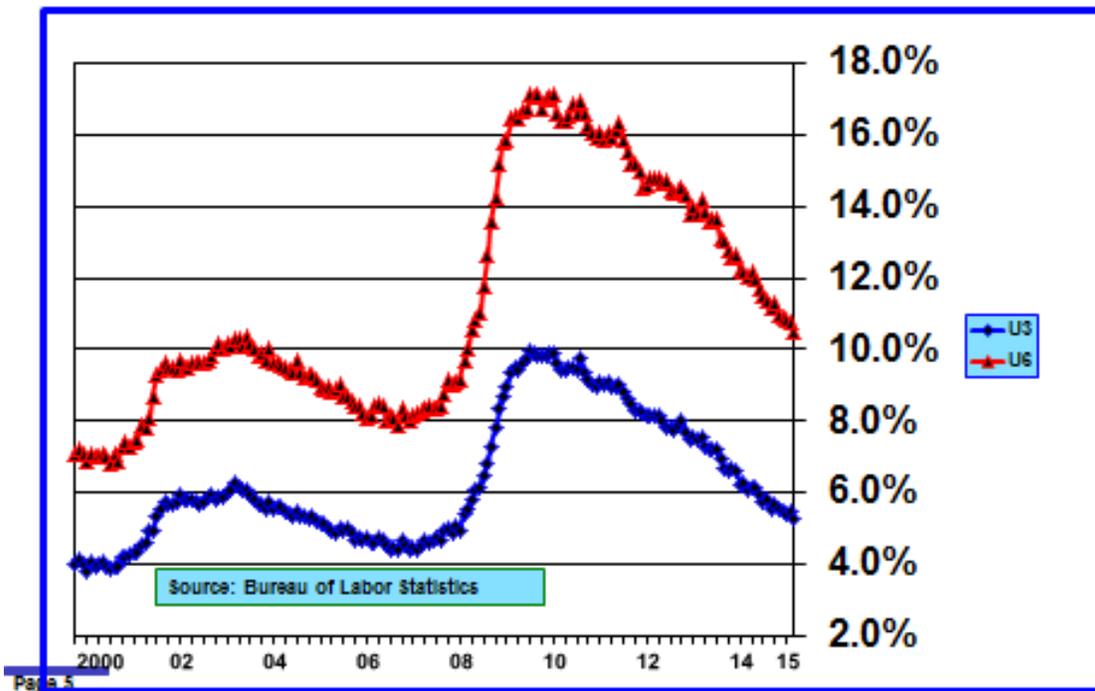
Although employment growth has been strong, the drop in the unemployment rate to 5.28 percent in April paints a rosy picture of the health of the labor market that is not fully corroborated by other labor market measures. For example, the June NFIB survey reported that small businesses added no workers in June, a net of 9 percent plan to create new jobs — the lowest level since December 2014; and job openings decreased. During the first half of 2015 the strength of the labor market was not corroborated by similar strength in output as measured by GDP. Sooner or later this dichotomy had to be resolved. The resolution may be underway but, unfortunately, in the direction of weaker labor market growth.

a. Unemployment Rates — U-3 and U-6

First of all, the conventional unemployment rate, which the Bureau of Labor Statistics (BLS) refers to as the “U-3” measure, is at the level that generally prevails when the economy is buoyant. But, the broader “U-6” measure of unemployment, which adds those who are working part-time for economic reasons and

those marginally attached to the labor force to the U-3 measure at 10.5 percent in June, is still above the 8 percent to 9 percent range that historically has prevailed when economic activity is strong (see **Chart05**). The U-6 unemployment rate fell from 13.06 percent in December 2013 to 10.52 percent in June 2015. It is heading in the right direction but has yet to return to a level consistent with full employment. Historically, during economic expansions improvement in the U6 unemployment rate has lagged improvement in the U3 unemployment rate. However, allowing for this lagged relationship, the U-6 unemployment rate should be 10.27 percent instead of 10.52 percent. So, the U6 rate is actually improving somewhat more slowly than would be expected based on the recent improvement in the U3 rate.

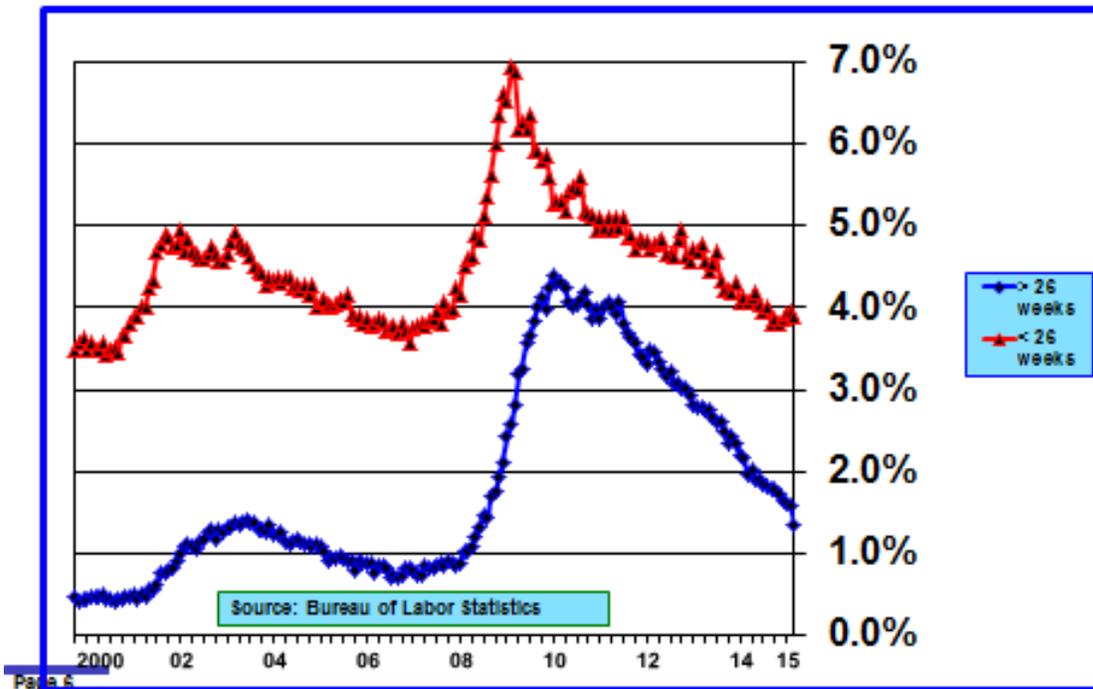
CHART 5 – U-3 and U-6 Unemployment Rates



b. Long-Term Unemployment

Another labor market indicator that is still registering weakness is the long-term unemployment rate, defined as the percentage of the labor force that has been unemployed for 26 weeks or longer. When the short-term unemployment rate (those unemployed less than 26 weeks) averaged 3.8 percent in 2006 and 2007 just prior to the onset of the Great Recession, the long-term unemployment rate averaged 0.8 percent. As can be seen in **Chart06**, in June 2015 the short-term unemployment rate was 3.9 percent, which was nearly identical to the pre-Great Recession average. However, the long term unemployment rate was 1.35 percent, which was above the full-employment level of 0.8 percent. However, over the last 12 months this measure has fallen from 1.98 percent to 1.35 percent, so good progress is occurring. Thus, this metric is improving rapidly but still has a ways to go to equal the pre-Great Recession average of 0.8 percent.

**CHART 6 – LT (>26 weeks) and ST (<26 weeks)
Unemployment Rates**

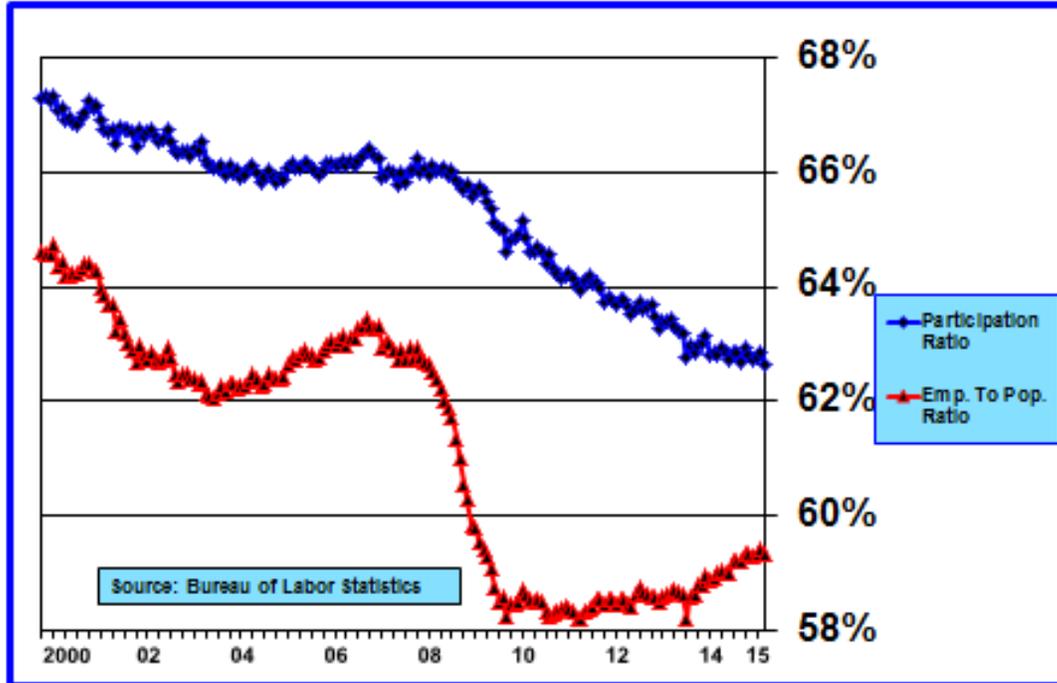


c. Employment-to-Population and Labor Force Participation Ratios (U-3 Definition of Unemployment)

The **labor-force-participation ratio** and the **employment-to-population ratio** are also important measures of the health of the labor market. The **employment-to-population ratio** measures the percentage of people eligible to work who have a job, while the **labor force participation rate** is the percentage of those in the labor force who are either working or would like to work but are counted as unemployed. The numerators of both of these measures are based on the U-3 measure of unemployment. The difference in the numerators of the two ratios is the number of unemployed workers — those who say they are looking for work — based upon the U3 definition of unemployment. Trends in both measures are shown in **Chart07**.

When the Great Recession hit, the employment-to-population ratio plummeted from 62.9 percent in December 2007 to 58.2 percent in December 2009. What is troubling is that the recovery in this ratio has been anemic. It was 59.3 percent in June 2015 compared to 58.6 in December 2013. What this means is that most of the 10.7 million jobs created since December 2009 have accommodated approximately 8.1 million new entrants into the labor force who are willing to work. The difference of approximately 2.6 million is unemployed workers who have become reemployed. But, the number of unemployed workers has fallen by 6.8 million over this same period. What accounts for this 4.2 million discrepancy? All of them have left the labor force, but the question is one of whether they have left permanently or are simply discouraged and will enter the labor market in the future as employment prospects improve. The discrepancy was also

CHART 7 – Labor-Force-Participation and Eligible-Employment-to-Population Ratios (U-3 Measure)



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4.2 million in December 2014. A substantial portion of the 4.2 million discrepancy can be traced to the changing demographic composition of the labor force; however, a smaller portion appears to be discouraged workers that might reenter the labor force in coming months as the labor market strengthens.

The **participation ratio** is measured by adding the number of unemployed workers to the numerator of the employment-to-population ratio. When the Great Recession hit, the participation ratio fell from 66.0 percent in December 2007 to 64.6 percent in December 2009. What is concerning is that the participation ratio continued to decline following the end of the Great Recession, although it has been stable since December 2013 falling only slightly from 62.8 percent to 62.7 percent in June 2015.

Over the longer term, the aging of the labor force should continue to put downward pressure on the participation ratio; however, this measure has declined more than can be explained by demographic shifts alone. The discrepancy involves workers who have become discouraged and have dropped out of the labor force. In gauging labor market weakness the question is to what extent discouraged workers might rejoin the labor force as the labor market tightens.

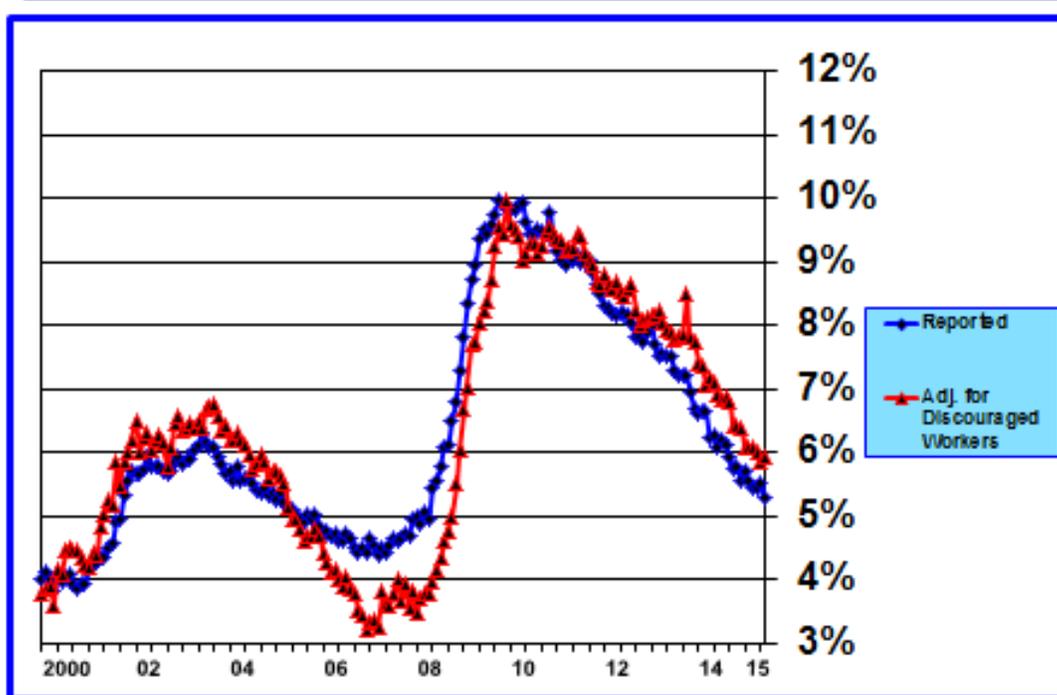
d. Discouraged Workers

While it is generally acknowledged that there is some number of uncounted discouraged workers, there is considerable disagreement about what that number is.

In recent months the unemployment rate has declined much more than expected, partially because employment growth has been stronger. But the question remains as to what extent the U-3 measure of unemployment might be artificially depressed by omission of discouraged workers, who may reenter the labor market in coming months.

Chart08 shows my alternative unemployment measure, which adjusts for discouraged workers. In April 2015, my alternative unemployment rate was 5.95 percent compared to BLS's reported rate of 5.28 percent for the U-3 unemployment rate. This difference of 0.67 percent amounts to approximately 1,044,000 discouraged workers or approximately one-quarter of the 4.2 million "missing" workers. To the extent that this is a reasonable estimate, it means that the other three-quarters have permanently left the labor force due to demographic shifts in the composition of the labor force, such as the increasing percentage of retirees.

CHART 8 – Reported Unemployment Rate & Adjusted for Discouraged Workers



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What is important from a policy standpoint is whether workers who have stopped looking for jobs, and thus are no longer counted as unemployed, will reenter the job market when jobs become more plentiful or whether their exit is permanent because there are no jobs that fit their skills and there won't be any in the future.

All of this implies that the U-3 measure of unemployment, which has fallen slightly below CBO's long-term full employment potential rate of unemployment of 5.38 percent, probably overstates the strength of the labor market.

e. Wage Rate Growth

Growth in wages is an important measure of labor market strength. An increasing rate of growth is evidence of a strengthening labor market in which labor, particularly in scarcer job categories, is gaining more bargaining power.

There are two primary broad-based measures of labor compensation that provide information about compensation trends. Both are compiled by BLS. One is released monthly as part of the monthly labor situation report and includes both hourly and weekly wage rates for all workers, but includes no information about benefits which comprise approximately 30 percent of total compensation. The other, the employment cost index (ECI), is released quarterly and consists of wage and salary, benefits, and total compensation indices.

Although both sets of measures are highly correlated over time, because compilation methodologies differ for each set of measures percentage changes over fixed time periods will not necessarily be in sync. This is the case currently. Hourly wages are rising 2.1 percent annually and that rate of growth has neither accelerated nor decelerated for several years. However, the wage and salary component of ECI, which had been relatively stable at a 1.5 percent annual rate of growth between 2009 and 2013 began edging up in 2014 and rose to 2.5 percent in the first quarter of 2015. Thus, on balance, there appears to be some upward pressure on labor wage and salary rates, but the monthly hourly wage data series has yet to corroborate this trend.

Hourly and Weekly Wage Trends. As can be seen in **Chart09**, the rate of growth in hourly wages for all workers has fluctuated in a narrow band in the vicinity of 2.0 percent for the last six years. In a way this is good news because the large output gap and high unemployment rate, which have persisted for several years, did not put further downward pressure on wage rate growth. But, it has become increasingly concerning that wage growth has not shown any sign of acceleration as the U-3 unemployment rate has dropped to close to CBO's long-term full employment level of 5.38 percent.

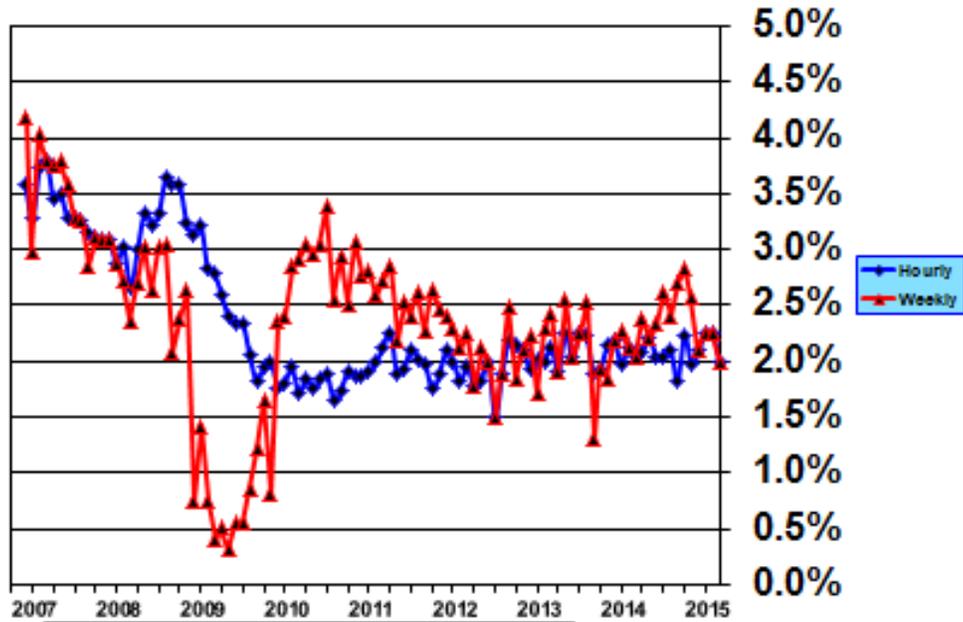
Hourly wages grew 2.0 percent over the last 12 months. This is not what market watchers had expected and offsets to some extent the optimistic picture painted by many other aspects of recent employment reports.

Weekly average wages for all employees has also grown 2.0 percent, reflecting no change in the length of the workweek over the last 12 months.

Chart10 smooths trends in hourly wages by calculating a 12-month moving average. Over the last year the trend growth rate in hourly wages has not budged. Hourly wages were growing 2.08 percent in June 2014 and 2.09 percent in June 2015. Thus, in spite of expectations and commentary that wage growth is showing preliminary signs of acceleration, there is no strong evidence that is actually occurring in the hourly wage data compiled by the BLS for all workers. Nonetheless, most expect that acceleration in wage growth will begin to show up during 2015.

Employment Cost Index. **Chart11** shows trends in wages and salaries, benefits, and total compensation. The acceleration in the growth rates of wages & salaries and total compensation over the last five quarters is apparent.

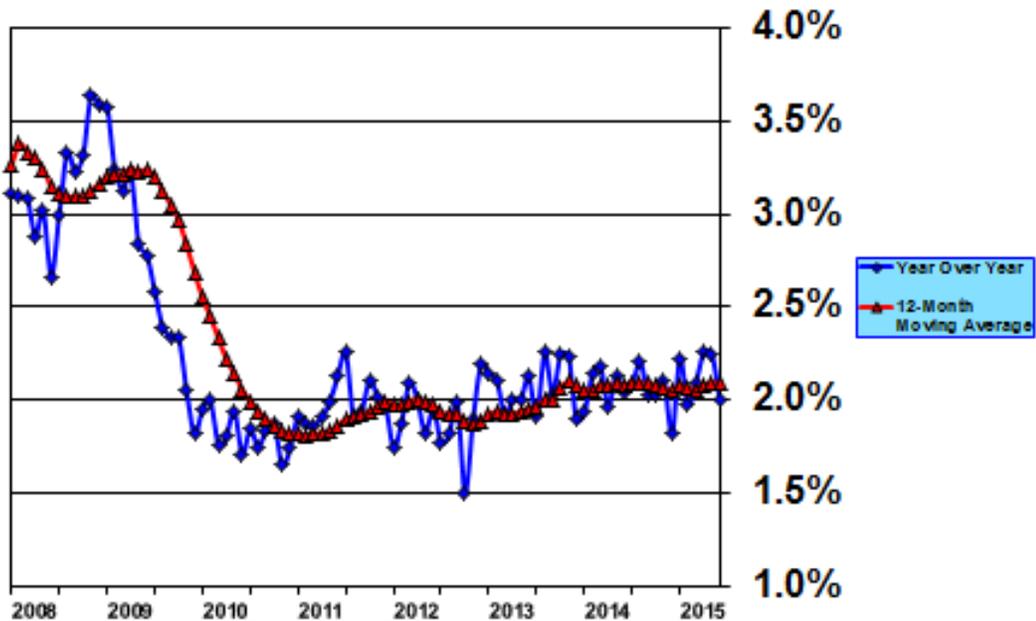
CHART 9 – Hourly and Weekly Wages – All Workers
(annual rate of change)



Source: Bureau of Labor Statistics

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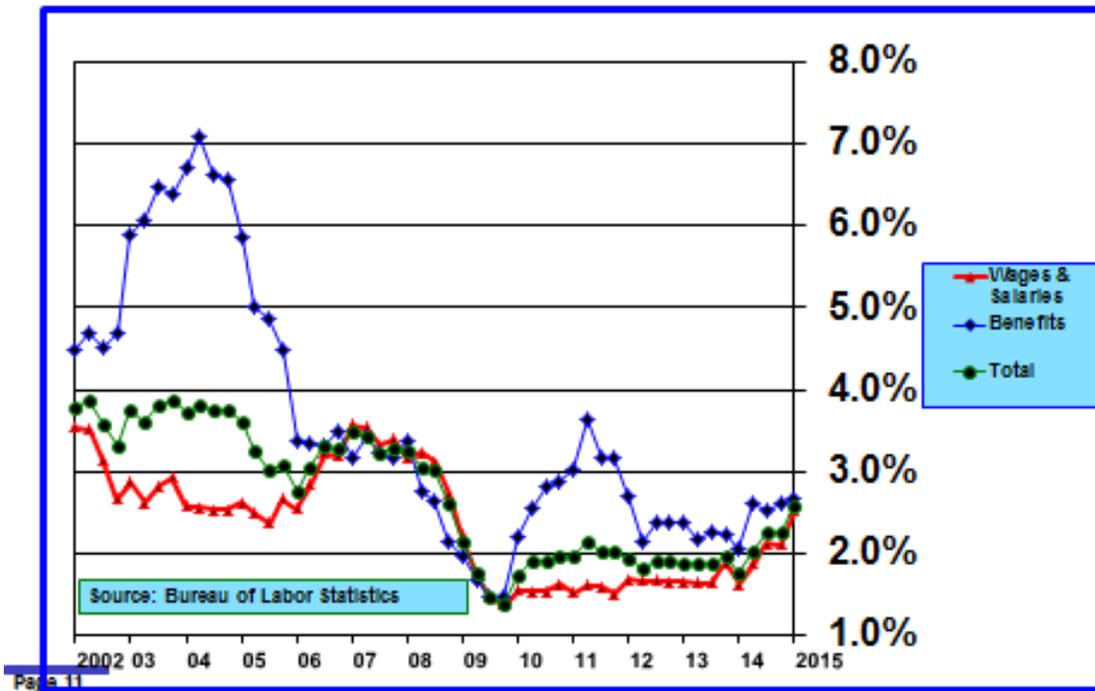
CHART 10 – Hourly Wage Rate Growth – All Workers
(annual year over year and 12-month moving average rates of change)



Source: Bureau of Labor Statistics

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CHART 11 – Employment Cost Index
(annual rate of change)



GS's Wage Tracker. GS's wage tracker is a statistical compilation of three measures — ECI (40 percent weight); average hourly earnings (AHE) of production & non-supervisory workers (35 percent weight); and compensation per hour from the national income accounts (25 percent weight). The wage tracker in the first quarter of 2015 indicated that wages were rising 2.2 percent annually, a level that was the same as a year earlier. While ECI has risen, as discussed above, the other two measures have been stable. Based on April and May data, **GS** expects the wage tracker to rise to 2.5 percent in the second quarter. **GS** expects the wage tracker to be between 2.75 percent and 3.0 percent by the end of 2015 and reach its full-employment level of 3.5 percent by the end of 2016.

While these estimates are based on **GS's** statistical analytics, intuitively they seem optimistic to me. There is an embedded assumption that U.S. labor force composition is stable. If, however, the composition is shifting toward lower wage categories and more part-time work, 3.5 percent could well be too high. In addition, the rise to 3.5 percent presumes that the historical relationship between labor market slack and wage rate growth is stable. This also does not appear to take into consideration that the current level of inflation has been low for an extended period of time and that might have the effect of slowing down acceleration in wage rate growth for a given amount of labor market slack. Then, there is also the matter of low productivity. If low productivity persists, which seems more likely than not, then this phenomenon will retard the rate of acceleration in wage rate growth.

3. Implications of Substantial Remaining Labor Market Slack

What do these remaining weaknesses in the labor market mean? First and foremost, the sharp decline in the employment-to-population ratio (total number employed to total number eligible to work) means that the U.S. economy is a lot smaller than it could be based on historical employment patterns. That means there is less income. Americans are not as well off collectively as they could be if a greater proportion of them were employed.

Second, the U.S. has no unemployment objectives other than “full employment”. We are not even sure how to measure what “full employment” is. We do not know how to determine whether someone is discouraged. We do not have any objective for what the employment-to-population ratio ought to be. Therefore, we have few specific policies aimed at creating jobs.

4. Outlook for the Unemployment Rate

One of the great unexpected surprises over the last two years has been how rapidly the U-3 measure of unemployment has fallen. It was 7.9 percent in December 2012, 6.7 percent in December 2013, and 5.6 percent in December 2014 and 5.3 percent in June 2015. The current U-3 unemployment rate is slightly below CBO’s long-term full employment potential unemployment rate of 5.38 percent.

But, as discussed in the sections above, labor market weaknesses remain, meaning that the signaling value of the U-3 unemployment rate is overstated, at least for the time being.

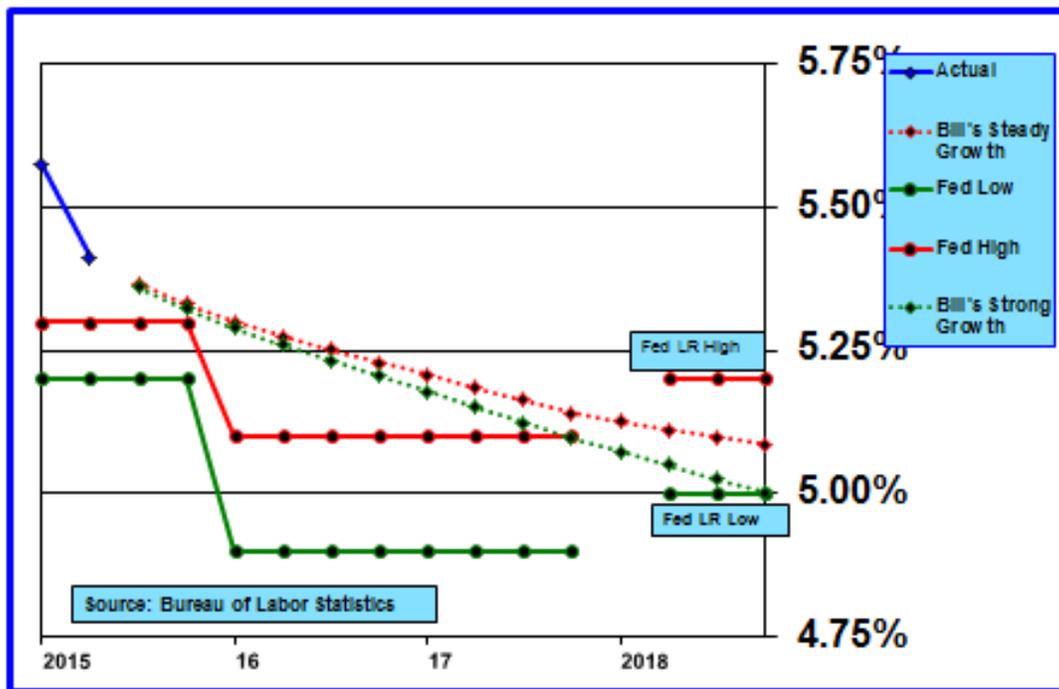
Chart12 shows the FOMC’s high (red line and circles) and low (green line and circles) unemployment rate projections for 2015, 2016 and 2017. The FOMC expects further declines in the unemployment rate through 2017 to a level below its long-term expected range. That means that the FOMC expects growth to be above long-term potential and as slack in the economy diminishes, a tighter monetary policy will be required. A tight labor market is expected to take hold in 2016 and 2017, but because monetary policy operates with a 12 to 18 month lag, the FOMC’s unemployment rate projections imply that it will begin raising the federal funds rate during 2015.

I have included in **Chart12** unemployment rate forecasts for both my “*Steady Growth*” (red dashed line and diamonds) and “*Strong Growth*” (green dashed line and diamonds) scenarios. Unemployment rate estimates in both scenarios are slightly above the FOMC’s projection range, but converge to the FOMC’s long-term full potential range of 5.0 percent to 5.2 percent in 2018.

5. The Structural Unemployment Rate

Several times I have referred to CBO’s “natural” unemployment rate, which currently has a value of 5.38 percent. Economists also refer to this value as the nonaccelerating inflation rate of unemployment (NAIRU). CBO expects NAIRU to fall to 5.17 percent by 2025. Also, the FOMC expects NAIRU in the longer run to be between 5.0 and 5.2 percent. The Fed staff’s supply side macroeconomic model pegs the natural rate of unemployment currently at 5.0 percent.

CHART 12 – Unemployment Rate
(quarterly average)



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NAIRU is important for the conduct of monetary policy. When the observed unemployment rate is above NAIRU, labor market slack exists and there is limited upward pressure on wages and inflation. The reverse occurs when the unemployment rate falls below NAIRU.

This implies that because monetary policy works with a lag of 12 to 18 months the FOMC should begin to tighten monetary policy soon.

However, the aging of the workforce may well push down NAIRU. Research conducted by Chicago Federal Reserve Bank economists indicates that the aging of the population has already driven NAIRU down to 4.9 percent and will result in a value for NAIRU of 4.5 percent by 2020.

In addition, as discussed above, there might be a large number of people who are not counted as unemployed who are might reenter the labor force as the economy improves and the labor market tightens.

In conclusion, it is likely that slack remains in the labor market and, although it is diminishing, it will persist for several more months. This means that inflation is likely to remain quiescent for a considerable period of time.

VI. Monetary Policy, Inflation and Interest Rates

As the U.S. economy slowly firms, policy makers are trying to determine when to begin raising the federal funds rate and how fast to raise it. The answers depend upon the strength of labor market and inflation prospects. Federal Open Market Committee (FOMC) policy statements and participant commentary have made it clear that “liftoff” will depend on incoming data, primarily for employment and inflation.

1. Employment

Employment has improved steadily over the last several months. Job growth has averaged above 200,000 monthly and the U-3 unemployment rate has fallen to 5.28 percent, which is slightly below CBO’s estimate of the “full employment” level of unemployment, sometime referred to as the non-accelerating inflation rate of unemployment (NAIRU) and also referred to as the “natural rate of unemployment.”

But weaknesses in some measures of the labor market as discussed above, in particular wage rate growth, still persist. In addition, slow growth in the labor force epitomized by an employment participation rate that refuses to rise, as it ordinarily does when the labor market tightens, and elevated levels of involuntary part-time employment and long-term unemployment reflect a labor market that has not yet returned to full health. Nonetheless, labor market improvements have been sufficient to warrant beginning to tighten monetary policy were it not for depressed inflation.

2. Prospects for PCE Inflation

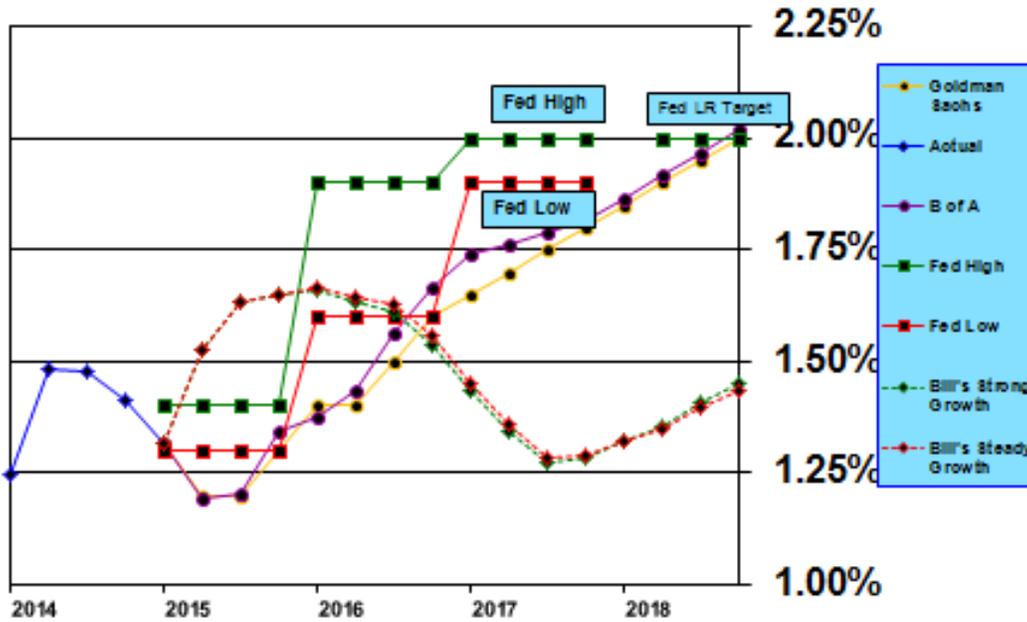
Core PCE inflation was 1.24 percent in May and total PCE inflation, which was depressed by last year’s plunge in oil prices, was 0.22 percent (see **Chart13**). Compared to core PCE inflation, total PCE inflation is much more volatile and has been negative for short periods of time in the past. For that reason the FOMC prefers to focus policy deliberations on the core PCE inflation measure.

Core PCE inflation is well below the FOMC’s target level of 2 percent and is not much above the lows near 1.0 percent experienced briefly in mid-2009 and late-2010 when the FOMC was concerned about the threat of deflation.

As can be seen in **Table 6** (**Chart13** shows historical core PCE price index data and data from **Table 6** in graphical form), forecasts of the core PCE inflation index indicate that inflation will change little during 2015. **B of A** and **GS** expect core PCE inflation to bottom out at 1.3 percent by the end of 2015 and then begin a very gradual rise, reaching 2.0 percent sometime during 2018. FOMC member projections also reflect a gradual rise. Notably, the bottom end of the FOMC central tendency range moved up 10 basis points in June for both the 2016 and 2017 projections.

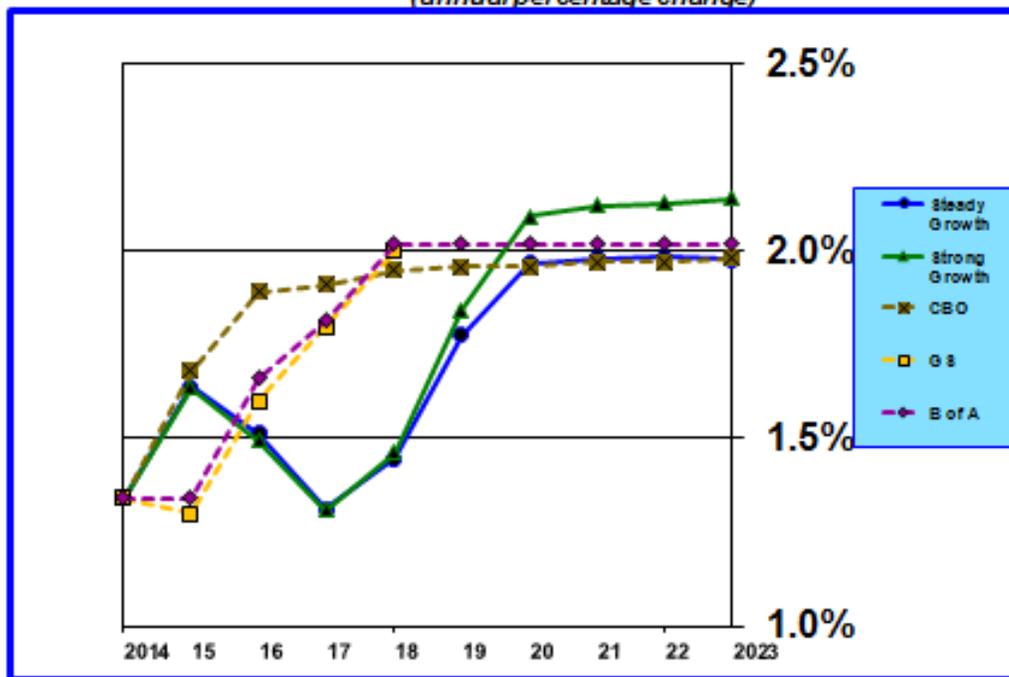
Chart14 shows longer run pathways for core PCE inflation for various economic scenarios. All scenarios converge to 2 percent in the long run. Either this is serendipity or there is confidence that the FOMC will be able eventually to hit and maintain the 2 percent core PCE inflation target. While my projections are slightly above consensus forecasts for 2015, in following years my projections do not converge to the long-run 2 percent target as rapidly as other forecasts.

CHART 13 – Core PCE Inflation Forecasts
(percentage change over previous 12 months)



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CHART 14 – Core PCE Inflation Rate
(annual percentage change)



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Table 6
Core PCE Inflation Forecasts — B of A, GS, Bill’s “Steady Growth”, Bill’s “Strong Growth” and FOMC High and Low

Core CPE	2013	2014	2015	2016	2017	2018
B of A	1.3	1.4	1.3	1.7	1.8	2.0
GS	1.3	1.4	1.3	1.6	1.8	2.0
Bill’s Steady Growth	1.3	1.4	1.6	1.6	1.3	1.4
Bill’s Strong Growth	1.3	1.4	1.6	1.6	1.3	1.4
FOMC — High			1.4	1.9	2.0	
FOMC — Low			1.3	1.6	1.9	

Risks to the inflation outlook are tilted toward the downside.

Import Prices. The recent further decline in commodity prices is indicative of both a slowing global economy and an economy in which excess supply is pervasive. Reflecting the decline in oil prices and the 17.3 percent increase in the value of the dollar over the last year, the U.S. import price index has declined 10.0 percent and is down 2.6 percent excluding oil import prices. This trend is reflected in declining prices for goods in the PCE and CPI indices. However, services inflation has been edging up, which will limit the extent of downside pressure on consumer price inflation.

Weak commodity prices and a strong U.S. dollar are likely to continue to depress import prices. In the wake of the surge in volatility in the Chinese stock market, worries have grown about the ability of China’s economy to continue to be a strong engine propelling global economic growth. While the impact of Greece’s financial crisis on European economic growth appears to be limited, Europe’s growth bounce, due in many respects to lower oil prices and a weaker euro, may prove to be temporary. Demographic trends, low productivity, Germany’s balance of payments problem, and the potential for tighter financial conditions all point to slower European growth ahead. European inflation, which already is close to zero, may not rise as expected or at least not as much as anticipated.

Wages. As the labor market tightens, wages are expected to rise and this could put upward pressure on inflation. To date, evidence about wage-rate increases is mixed. Moreover, recent research conducted by two Federal Reserve Board economists concluded that pass through of wage increases into inflation in recent years is only one-fourth as strong as it was in 1975 and, in fact, is statistically indistinguishable from zero.

In the June FOMC minutes, participants commented that wage increases appear to have begun to rise. However, Board chair, Janet Yellen, in her Humphrey-Hawkins testimony before Congress was a bit more cautious, stating that “there are tentative signs that wage growth has picked up.”

3. FOMC Projections

Table 7 presents the June 2015 FOMC projections for key economic variables. Changes to projections for 2015 generally reflect what has actually occurred so far in 2015. The most notable changes were to the projections for future federal funds rates, which were marked down and imply a slower pace of increases and a longer timeframe to reach the long-term neutral level.

Real GDP. Based on poor first quarter real GDP growth, FOMC participants slashed 2015 Q4/Q4 real GDP growth projections. This latest revision follows a systematic pattern of lower and lower projections over time. There is some reason to expect that the latest reduction will turn out to be too low, but that still would not change the historic pattern of excessive FOMC optimism.

Unemployment Rate. The FOMC has been just as inaccurate in its projections of the unemployment rate but in the opposite direction of being unduly pessimistic. In this regard the FOMC can be faulted in not foreseeing or understanding the significant demographic and cultural changes impacting the labor market. Although after the fact much research intensity has been expended in attempting to understand what has been happening in the labor market and what the implications are for monetary policy, it is somewhat disconcerting that the Federal Reserve, with its abundance of PhD economists, did not anticipate the significant changes that have occurred in the labor market.

Core PCE Inflation. FOMC forecasts have been closer to being on the mark but have generally overestimated the level of core PCE inflation and the timing of return to the long-run 2 percent target. FOMC participants have repeatedly blamed transitory factors for holding down inflation. While there is some merit to this line of argument it is a little like blaming the weather for forecast errors that are actually due to other forces. My sense is that the FOMC collectively does not give as much credence, as I do, to global deflationary forces of excess supply. Also, the failure of wage rate increases to respond much to a tightening labor market, as traditional economic theory and cyclical experience indicate should happen, may also be a factor in holding back increases in inflation. If, as some suggest, the composition of the labor market is evolving in ways that hold down wage increases in spite of falling unemployment, then past experience will not be a reliable guide to future inflation rates. Federal Reserve economists don't yet appear to be conducting research systematically to determine whether the traditional unemployment rate-wage increase rate relationship has changed materially. If it has, then FOMC core PCE inflation rate projections will continue to be a little too high and it will take longer to achieve the FOMC's 2 percent target. This possibility creates a downward bias to the reliability of the FOMC's federal funds rate projections.

Federal Funds Rate Projections (the Dots). While the long-run 3.65 percent projection of the neutral federal funds rate was virtually identical to the March projection, projections for the level of the actual federal funds rate over the next three years were slashed. So, while "lift-off" is near at hand, there is a growing consensus among FOMC members that increases will be spread out over a longer period of time, which means that the neutral rate is unlikely to be reached before 2018 or even 2019.

Table 7
Economic Projections of Federal Reserve Board Members and Federal Reserve Bank Presidents, June 2015

Variable		Central Tendency				
		2014	2015	2016	2017	Longer Run
Real GDP %	June		1.8 - 2.0	2.4 - 2.7	2.1 - 2.5	2.0 - 2.3
	Mar		2.3 - 2.7	2.3 - 2.7	2.0 - 2.4	2.0 - 2.3
	Dec	2.3 - 2.4	2.6 - 3.0	2.5 - 3.0	2.3 - 2.5	2.0 - 2.3
	Sep	2.0 - 2.2	2.6 - 3.0	2.6 - 2.9	2.3 - 2.5	2.0 - 2.3
	June	2.1 - 2.3	3.0 - 3.2	2.5 - 3.0		2.1 - 2.3
	Mar	2.8 - 3.0	3.0 - 3.2	2.5 - 3.0		2.2 - 2.3
	Dec	2.8 - 3.2	3.0 - 3.4	2.5 - 3.2		2.2 - 2.4
	Sep	2.9 - 3.1	3.0 - 3.5	2.5 - 3.3		2.2 - 2.5
	June	3.0 - 3.5	2.9 - 3.6			2.3 - 2.5
	Mar	2.9 - 3.4	2.9 - 3.7			2.3 - 2.5
	Dec	3.0 - 3.5	3.0 - 3.7			2.3 - 2.5
	Unemp. Rate %	June		5.2 - 5.3	4.9 - 5.1	4.9 - 5.1
	Mar		5.0 - 5.2	4.9 - 5.1	4.8 - 5.1	5.0 - 5.2
	Dec	5.8	5.2 - 5.3	5.0 - 5.2	4.9 - 5.3	5.2 - 5.5
	Sep	5.9 - 6.0	5.4 - 5.6	5.1 - 5.4	4.9 - 5.3	5.2 - 5.5
	June	6.0 - 6.1	5.4 - 5.7	5.1 - 5.5		5.2 - 5.5
	Mar	6.1 - 6.3	5.6 - 5.9	5.2 - 5.6		5.2 - 5.6
	Dec	6.3 - 6.6	5.8 - 6.1	5.3 - 5.8		5.2 - 5.8
	Sep	6.4 - 6.8	5.9 - 6.2	5.4 - 5.9		5.2 - 5.8
	June	6.5 - 6.8	5.8 - 6.2			5.2 - 6.0
	Mar	6.7 - 7.0	6.0 - 6.5			5.2 - 6.0
	Dec	6.8 - 7.3	6.0 - 6.6			5.2 - 6.0

Variable		Central Tendency					
		2014	2015	2016	2017	Longer Run	
PCE Inflation %	June		0.6 - 0.8	1.6 - 1.9	1.9 - 2.0	2.0	
	Mar		0.6 - 0.8	1.7 - 1.9	1.9 - 2.0	2.0	
	Dec	1.2 - 1.3	1.0 - 1.6	1.7 - 2.0	1.8 - 2.0	2.0	
	Sep	1.5 - 1.7	1.6 - 1.9	1.7 - 2.0	1.9 - 2.0	2.0	
	June	1.5 - 1.7	1.5 - 2.0	1.6 - 2.0		2.0	
	Mar	1.5 - 1.6	1.5 - 2.0	1.7 - 2.0		2.0	
	Dec	1.4 - 1.6	1.5 - 2.0	1.7 - 2.0		2.0	
	Sep	1.3 - 1.8	1.6 - 2.0	1.7 - 2.0		2.0	
	June	1.4 - 2.0	1.6 - 2.0			2.0	
	Mar	1.5 - 2.0	1.7 - 2.0			2.0	
	Dec	1.5 - 2.0	1.7 - 2.0			2.0	
	Core PCE %	June		1.3 - 1.4	1.6 - 1.9	1.9 - 2.0	
		Mar		1.3 - 1.4	1.5 - 1.9	1.8 - 2.0	
Dec		1.5 - 1.6	1.5 - 1.8	1.7 - 2.0	1.8 - 2.0		
Sep		1.5 - 1.6	1.6 - 1.9	1.8 - 2.0	1.9 - 2.0		
June		1.5 - 1.6	1.6 - 2.0	1.7 - 2.0			
Mar		1.4 - 1.6	1.7 - 2.0	1.8 - 2.0			
Dec		1.4 - 1.6	1.6 - 2.0	1.8 - 2.0			
Sep		1.5 - 1.7	1.7 - 2.0	1.9 - 2.0			
June		1.5 - 1.8	1.7 - 2.0				
Mar		1.6 - 2.0	1.8 - 2.1				
Dec		1.6 - 2.0	1.8 - 2.0				

Variable		Central Tendency				
		2014	2015	2016	2017	Longer Run
Federal Funds %	June		.57	1.75	3.00	3.65
	Mar		.77	2.03	3.18	3.66
	Dec	.25	1.13	2.54	3.50	3.78
	Sep	.29	1.40	2.81	3.67	3.78
	June	.30	1.20	2.53		3.78
	Mar	.30	1.13	2.42		3.88
	Dec	.34	1.06	2.18		3.88
	Sep	.40	1.25	2.26		3.93
	June	.43	1.34			4.01
	Mar	.55	1.30			4.01
	Dec	.61	1.47			4.04

4. FOMC Commentary

In the run up to the July FOMC meeting, which will occur on July 28 and 29, guidance about the timing of the first rate increase remains ambiguous.

Minutes of the June FOMC meeting affirmed that the economy and the labor market continue to improve but there is room for further progress. Since that meeting, the June employment report was disappointing and other measures, such as the National Federation of Independent Businesses index of economic conditions, declined or were weaker than expected. The FOMC continues to emphasize that determination of when to raise the federal funds rate is data dependent. FOMC concerns cited in the June minutes included lack of clear economic momentum, cautious consumer spending, uncertainty in Greece and China and low productivity. However, some participants commented that inflation was weaker than expected. But, overall confidence remains that downward pressures on inflation are transitory and inflation will gradually converge to the 2.0 percent target over the next two years.

Overall, the minutes supported the market view that the FOMC will raise rates either in September or December provided that inflation does not decline further from recent levels and the labor market continues its slow improvement.

Board chair, Janet Yellen, presented the semi-annual Humphrey-Hawkins monetary policy testimony before the House Financial Services Committee and the Senate Banking Committee in mid-July. While she was positive about the steady improvement in the U.S. economy, she was neutral about the timing of the first rate increase — so either September or December remain as possibilities. In her prepared statement, there was extensive discussion of labor market slack which concluded that “it seems likely that [alternative measures] do reflect additional slack not measured by the unemployment rate, which should also be considered when judging how far employment is from its maximum sustainable level.”

The June FOMC Beige Book summary of economic conditions in the twelve Federal Reserve districts was somewhat more upbeat, but inflation pressures were largely unchanged. The market did not react, but rate expectations softened a bit based on Yellen’s Humphrey-Hawkins testimony.

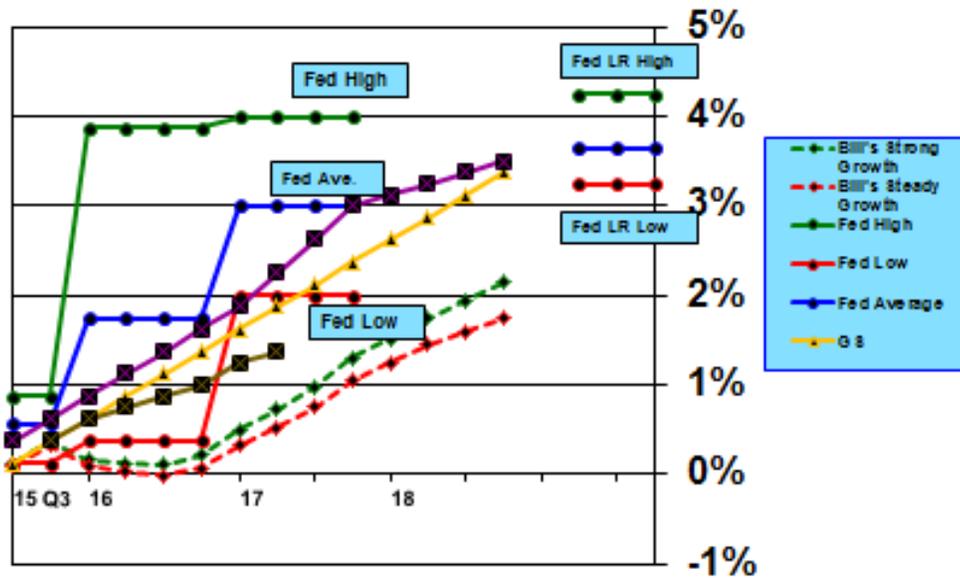
5. Federal Funds Rate

Most Fed watchers expect the FOMC to begin raising interest rates in September with a second 25 basis increase to follow in December. However, the market forward curve suggests that only one 25 basis point increase will occur in 2015 and that is more likely to occur toward the end of the year.

Chart15 shows the FOMC’s central tendency range for high and low projections for the federal funds rate for 2015, 2016, and 2017. The purple line (circles) is the average of projections for the 19 FOMC members (7 governors and 12 presidents — note that there are two vacancies on the Board of Governors currently which means the dots reflect only 17 participants). The projections imply that the first increase in the federal funds rate will take place sometime during 2015.

B of A expects the first federal funds rate increase will occur at the September 2015 meeting of the FOMC, but its conviction is not high. **GS** is bucking the consensus with a December or later liftoff call.

CHART 15 – Federal Funds Rate Forecast



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My “*Steady Growth*” and “*Strong Growth*” forecasts are shown by the red dashed line (diamonds) and green dashed line (diamonds). My “*Steady Growth*” forecast indicates that the federal funds rate could rise a bit in late 2015 but further rate increases could be delayed until 2017, which is inconsistent with FOMC guidance. In my “*Strong Growth*” forecast, the first increase in the federal funds rate occurs in late 2015 but there is little pressure to move it up rapidly.

Market expectations for increases in the federal funds rate fall between the **B of A** and **GS** forecasts and those of my scenarios. Notably, all of these forecasts fall well below the FOMC’s high and average projections. It is apparent from the dot plot that forecasters and the market forward curve are more in sync with the minority of FOMC participants who are pessimistic about the extent of increases in the federal funds rate.

6. Natural Rate of Interest and Long-Term Federal Funds Rate Projections

Most forecasters have concluded that real potential GDP growth will be subdued in coming years within a range of 2.0 to 2.3 percent. There are two implications of lower potential real GDP growth for monetary policy.

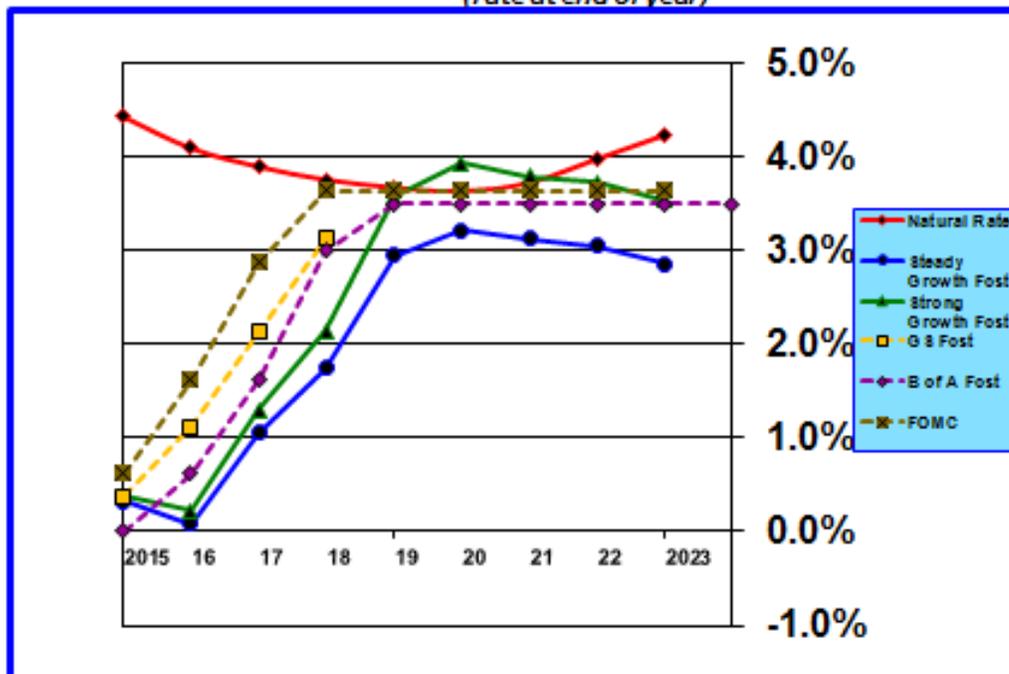
Smaller Output Gap. CBO has progressively over the past few years lowered its estimate of potential real GDP growth as it has revised down its estimates of labor force growth but particularly as it has decreased its expectations for productivity. This has had the immediate effect of reducing the measured

size of the output gap. This means that going forward it will take less growth in real GDP to close the gap. When the gap is closed risks escalate that aggregate demand will exceed supply and set off an inflationary spiral. Moving to tighten monetary policy too late will heighten inflationary risks. However, if the output gap is actually larger than CBO's measure, tightening monetary policy prematurely runs the risk of depressing economic activity before full employment is reached.

Lower Natural Rate of Interest. Declining productivity and persistently low inflation depresses the equilibrium or natural rate of interest. This means that the FOMC will not have to raise interest rates as much as it has in past cycles to reach the noninflationary full employment level of interest rates. The FOMC already recognizes this phenomenon in its long-term projection for the federal funds rate and, as indicated in **Chart 16**, my own estimate of the equilibrium natural rate of interest is very similar to the FOMC's.

CHART 16 – Natural Rate and Forecasts of Market Rates

(rate at end of year)



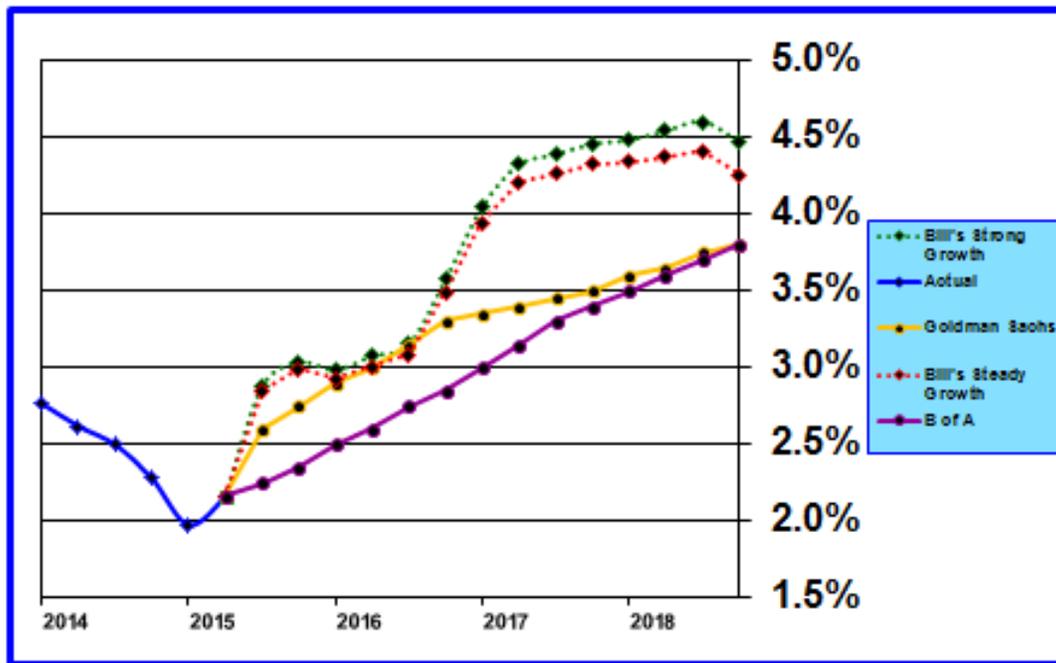
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Thus, with these considerations in mind, FOMC member commentary about increasing the federal funds rate gradually should be taken seriously as reasonable policy. Indeed, if other forecasters and the market are right, actual increases in the federal funds rate will occur even more gradually. The only caution is that this outcome is contingent on inflation remaining well behaved and not becoming unanchored. This appears to be a very reasonable presumption given a global economy in which aggregate supply greatly exceeds aggregate demand.

7. 10-Year Treasury Rate

Chart17 shows forecasts for the 10-year Treasury rate for my “*Steady Growth*” (red dashed line and diamonds) and “*Strong Growth*” (green dashed line and diamonds) scenarios. **GS**’s forecast (yellow line and circles) and **B of A**’s forecast (purple line and circles) are also shown.

CHART 17 – 10-Year Treasury Rate Forecasts



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As of July 13, the 10-year Treasury yield was 2.44 percent, up slightly from 2.17 percent at the beginning of 2015. Forecasts of the 10-year rate by the end of 2015 have been edging down and now range from 2.35 percent (**B of A**) to 2.75 percent (**GS**). The forecasts for my scenarios are slightly higher at 3.00 percent. The increased value of the dollar and very low long-term rates in Europe and Japan will continue in coming months to put a lid on long-term U.S. interest rates. All of these forecasts assume anchored inflation expectations. A step down in inflation expectations tends to have self-fulfilling behavioral consequences. Persistently low inflation, if that develops, would translate into lower inflation expectations eventually and that development would result in lower long-term interest rates than those forecast in **Chart17**.

Long-term interest rates have a theoretical equilibrium value which is a combination of several components: a real rate of return, the rate of expected inflation over the next several years, an inflation uncertainty premium, a liquidity premium, and a credit risk (default) premium. The risk-based premiums can be artificially reduced if the policymakers state directly or past practices indicate that bondholders will be protected from default risk. Had not Mario Draghi opined in the summer of 2012 that the ECB would “do whatever it takes to preserve the euro,” long-term rates on the sovereign bonds of countries like Greece, Spain, and Italy would not be nearly as low as they are today.

Long-term rates can also be depressed by an intentional quantitative easing bond buying policy by a central bank. Quantitative easing usually results in depressing the value of a country's currency. That has been an intentional part of Japan's Abenomics. It is also an intentional result of the ECB's aggressive quantitative easing bond buying program.

Because the U.S. ended quantitative easing in October last year, the U.S. is now on the receiving end which is evidenced in the rise in the value of the dollar. This has a relatively immediate effect of transmitting lower foreign long-term interest rates to the U.S. through purchases of U.S. treasury bonds. It also has a longer term effect of depressing U.S. exports and slowing the rate of real GDP growth. This is the phenomenon of currency wars in which each nation attempts to avoid the deflationary consequences of excess aggregate supply relative to aggregate demand by devaluing its currency. The overall result is that that country's deflation is simply exported to other countries. Where this evolving international policy mix takes us in a deflationary setting is uncertain, but the odds are that the consequences will not be nearly as benign as many expect.

Other factors also influence long-term rates, at least in the short run. There is the dollar safe-haven effect which lowers rates on U.S. Treasury securities. This effect ebbs and flows, depending on global political crises and periodic turmoil in financial markets.

If the real rate of interest is depressed below its "natural level" needed to stimulate investment, then this will depress investment, slow growth and add to disinflationary and deflationary pressures which, in turn, will drive nominal rates even lower. This is the condition of the world that we currently find ourselves in. The risks are high that outcomes over time will not be favorable.

Chart18 shows that the current 10-year rate is well below the neutral 10-year rate and this relationship will persist through 2016 into the first part of 2017, although the gap will narrow progressively. After 2017 the neutral rate is about 50 basis points below B of A's and forecast and also below my "**Strong Growth**" scenario. But, the neutral rate is generally consistent with my "**Steady Growth**" scenario. CBO's forecast is high and is likely to be reduced when CBO updates its forecasts in August.

As I discussed in the *June Longbrake Letter*, when the market rate of interest is below the neutral rate, capital expenditure spending is discouraged and liquidity is diverted into pushing up the prices of existing assets, both financial and real. A consequence is low productivity growth, which depresses potential real GDP growth. If the forecasts of a rising 10-year rate and a convergence of that rate with the neutral rate are borne out, investment spending, productivity and potential real GDP growth should edge up in two to three years' time from today's depressed levels.

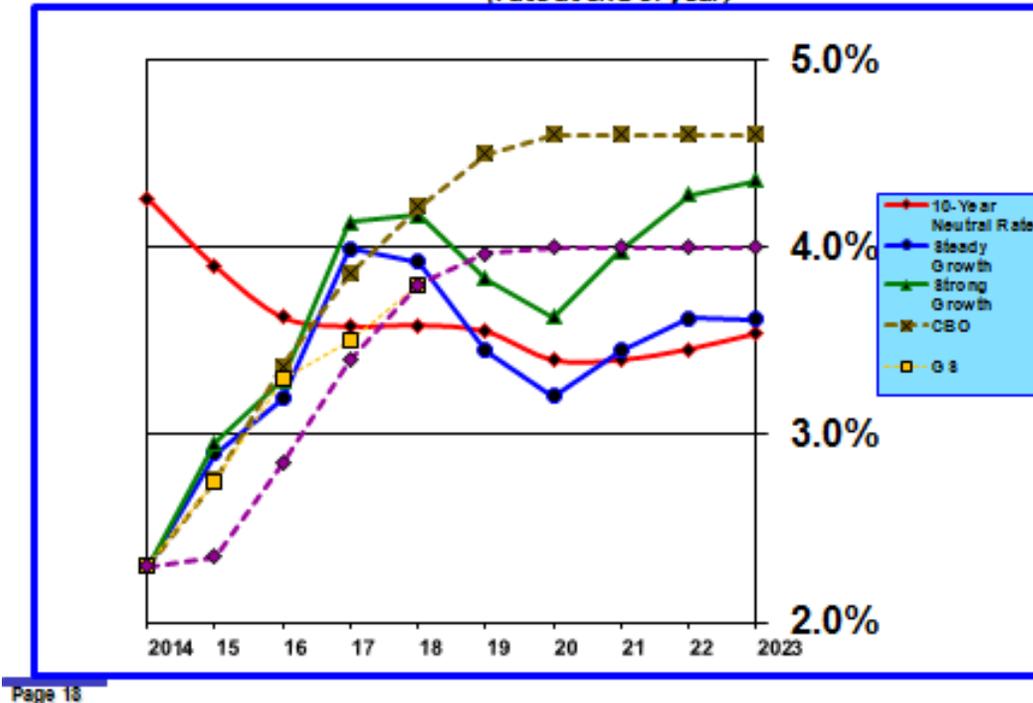
VII. Fiscal Policy

1. Deficit

Over the first nine months of the current fiscal year (October 2014 through June 2015) federal revenues are rising at an 8.3 percent annual rate, while expenditures are rising at only a 5.1 percent annual rate. This means that the deficit has been decreasing at a 14.3 percent rate. With three months remaining the deficit for the current fiscal year is likely to be about \$425 billion or 2.35 percent of nominal GDP compared to

CHART 18 – 10-Year Treasury Rate

(rate at end of year)



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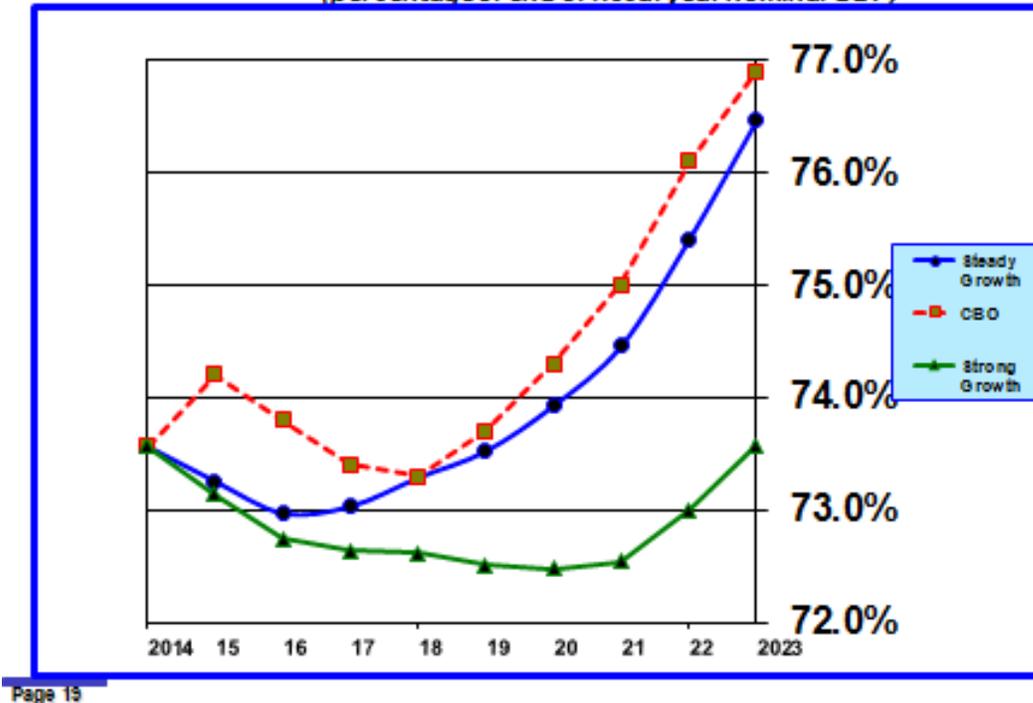
\$483 billion last year or 2.75 percent of nominal GDP. The decline in the federal deficit continues to exceed expectations, primarily because of stronger than anticipated growth in federal revenues.

This may be as good as it gets for the current cycle. The deficit, as a percentage of nominal GDP, should remain near the current level for the next two years and then begin to rise in 2018 as entitlement spending for social security and Medicare begin to rise more rapidly as the population ages. Unfortunately, as can be seen in **Chart 19**, this means that the ratio of public debt to nominal GDP will not decline much from the current level of approximately 73 percent and will begin to rise gradually after 2017. While the size of the deficit is not problematic at this juncture, particularly since interest rates are low and are likely to remain so, the deficit is more than twice the 32 percent level that existed in 2001. The concern is that when the next recession hits and drives down government revenues there will be less flexibility to engage in deficit spending to stimulate the economy without raising the public debt to nominal GDP ratio to a much higher level that could pose real risks to financial stability. While we don't know what the exact tipping point is for sure we do know from Greece's experience that there is one.

2. Increase in the Federal Debt Ceiling

Although seemingly forgotten, the federal debt ceiling limit kicked in and became binding on March 16, 2015. As has become the practice in recent years, the Department of the Treasury has been engaging in a variety of cash management practices to keep the government functioning even though it can't raise any net new debt. The steady decline in the size of the annual budget deficit has made it easier to extend the

CHART 19 – Total Federal Budget Deficit
 (percentage of end of fiscal year nominal GDP)



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timeframe in which these measures can defer the day of judgment. However, as long as there continues to be a deficit of just about any size, the day of judgment will eventually arrive. That is expected to occur sometime in late November or early December.

Based on recent congressional practice the likely solution will be to suspend the debt ceiling for a period of time, probably until after the 2016 presidential election. The timing of this action will probably occur just in the nick of time and may be accompanied by legislation to deal with a plethora of tax extenders which expired at the end of calendar year 2014. No one expects this matter to result in a threat to shut down government operations and that is supported by Congress’s bipartisan action earlier this year to fund the Office of Homeland Security for fiscal year 2015.

In effect, reinstating the debt ceiling at a higher level is no longer a contentious congressional issue.

3. CBO Deficit Forecast Revision

CBO updated its long-term fiscal outlook in June. It’s projections of annual deficits moderated, primarily because it reduced its forecast of long-term interest rates from 5.0 percent to 4.7 percent. Even if the FOMC is successful in achieving a 2.0 percent inflation rate, a long-term interest rate for Treasury securities of 4.7 percent is unrealistically high. As was shown in **Chart 18, B of A** expects interest rates to top out at 4.0 percent and my forecasts bracket that level with a range from 3.6 percent to 4.4 percent. The market’s 15-year forward rate for the 10-year Treasury security is 3.7 percent. Thus, unless Congress throws caution

to the wind and abandons the budget discipline of recent years, future deficits are likely to be lower than those forecast by CBO by as much as 1 percent of nominal GDP.

CBO's estimate of average annual deficits for the period 2016-2050 was reduced 0.5 percent to 4.9 percent. This results in the public-debt-to-GDP ratio rising from 73 percent to 117 percent. The ratio still rises if a more favorable interest rate is assumed. Thus, the U.S. still has a long-run fiscal challenge to contend with, which is embedded in entitlement spending. But for now the financial pressure to deal with this problem is minimal and the political will to address it is absent.

1. Trade Promotion Authority

While it took longer than expected and was accompanied by an extensive amount of legislative maneuvering, trade promotion eventually passed Congress and was signed into law by President Obama.

There were actually four different bills that comprised the trade promotion authority package. The principal bill was Trade Promotion Authority (TPA) which enables the president to negotiate trade agreements with foreign countries subject only to an up or down vote on the part of Congress. The other three bills were Trade Adjustment Assistance (TAA), which deals with workers displaced by trading activity, the African trade bill, and the customs/trade enforcement bill.

After House Democrats initially blocked passage of TAA, the House voted 266 to 138 on June 25 to pass it and the African trade bill. With Senate passage, these two bills were signed into law by President Obama. TPA was passed separately by both houses of Congress the previous week and signed into law by President Obama. Two versions of the fourth bill involving customs/trade enforcement went to a Senate-House conference to resolve minor differences. Enactment was expected by mid-July.

Passage of these four bills enables President Obama to conclude negotiation of the Pacific trade treaty (TPP). TPP is expected to be submitted to Congress for approval by the end of the third quarter and should be approved by the end of the year. Under the provisions of TPA, it would take a vote of two-thirds in each chamber of Congress to defeat TPP because President Obama could successfully veto a negative vote lacking a two-thirds majority. Thus, even though more noisy congressional debate is likely when TPP is presented to Congress for approval, the outcome is not in doubt.

4. Tax Reform and Transportation Funding

The contentiousness of Congress, so evident in a variety of fiscal policy matters in recent years, has disappeared in this year's congressional activity. That is because the Republican leadership of both houses of Congress and President Obama have combined efforts to resolve several difficult policy issues. This alliance, so to speak, has resulted in the formation of a centrist coalition of Republicans and Democrats in Congress sufficient in numbers to pass legislation. Tea Party Republicans have lost their ability to block legislation as has the left wing of the Democratic Party.

This coalition is now working on corporate tax reform and transportation funding, which could end up being linked in a comprehensive deal. While there is broad-based support for extending transportation funding authority which expires on July 31, the difficulty has been in finding revenue sources or spending cuts to fund extension. This is where tax reform comes into play because one of the major components of

tax reform would be repatriation of U.S. corporate foreign earnings, which would count as a funding source for transportation. In addition to reducing tax rates on foreign earnings to induce repatriation, tax reform would lower the corporate tax rate in return for elimination of many exemptions. With the exception of repatriation of foreign earnings the objective of corporate tax reform is to simplify the corporate tax code while maintaining overall tax neutrality. Corporate tax reform is ambitious and contentious. While most analysts believe Congress will eventually enact legislation most believe this issue will not be resolved in the current Congress. However, the linkage of highway funding and tax reform plus the current bipartisan alliance have raised the possibility that a deal could come together in the current Congress to address both sets of issues.

On July 15 the House passed by a vote of 312 to 119 a temporary extension of the Highway Trust Fund for five months to the end of 2015. Funding sources include an array of miscellaneous items such as a mortgage information reporting requirement for mortgage servicers. Senate consideration of the House bill will occur in the week of July 20. The outcome is uncertain because Senate Finance Committee Chairman Orin Hatch prefers an 18-month extension of the Highway Trust Fund, which would kick the issue to the next Congress and the next president. However, it is unclear what sources of funds could be cobbled together to make an 18-month extension possible. If funds can be found, then tax reform and repatriation of foreign earnings is probably off the table for the time being. But, if the Senate ultimately acquiesces to the House five-month Highway Trust Fund extension bill, then tax reform and repatriation will continue to be in play later in the year.

There is a separate Highway Trust Fund bill in the Senate called the “DRIVE Act,” which would extend highway funding for six years at a higher level. However, there is no identified funding source in the bill and those that have been proposed, including a change to federal retiree benefits and limiting the dividends the Federal Reserve can pay to members on their Federal Reserve Bank stock, are highly controversial. While it seems unlikely that Senate Republicans and Democrats will reach agreement on funding sources for the DRIVE Act, if they do, then tax reform and repatriation will longer provide leverage to deal with highway and transportation funding.

Needless to say, finding funding sources is enormously challenging. The outcome is fluid, but the most likely next step is enactment of the House’s five-month temporary extension of highway and transportation funding. Assuming that occurs before the end of July, international tax reform and repatriation will continue to be debated later this year.

5. Rechartering the Export-Import Bank

On June 30, 2015, the charter of the Export-Import Bank expired, although it continues to operate for now on the expectation that Congress will eventually renew its charter. However, until the charter is renewed it cannot extend new export credit loans and guarantees.

Policy analysts believe that the Export-Import Bank’s charter will be extended for 2 to 3 years in conjunction with temporary funding of the highway trust fund, which must be concluded before funding authority expires on July 31. While there is significant Republican opposition to rechartering in the House of Representatives, enough Republicans are expected to join with Democrats. Senate majority leader Mitch McConnell supports extension of the charter and analysts believe there are at least 65 votes in favor.

With the enactment of trade promotion authority, serious opposition to rechartering the Export-Import Bank has diminished. Thus, extension seems probable with little fanfare in conjunction with the passage of other legislation, probably short-term funding of the highway trust fund.

6. Tax Extenders

The Senate is scheduled to consider extending 52 tax extenders for two years through calendar year 2016 on July 21. Depending upon the outcome of broader-based tax reform, some of these extenders could end up becoming a permanent part of the tax code. In any event, congressional passage of extenders before the end of the year is almost certain.

VIII. APPENDIX: Outlook — 2015 and Beyond — Forecast Summary for the U.S. and the Rest of the World, Highlights of Key Issues, and Identification of Risks

Observations about the 2015 U.S. and global economic outlook and risks to the outlook were contained in the *December 2014 Longbrake Letter* and are included below without any changes. As events unfold during 2015, this will enable the reader to track my analytical prowess. Current assessments follow each item with the following identifiers: “+” tracking forecast; “-” not tracking forecast; “?” too soon to know. As events unfold during 2015, this will enable the reader to track my analytical prowess.

1. U.S.

- **2015 real GDP Y/Y** growth projections range from 2.7% to 3.5%. The FOMC’s central tendency Q4/Q4 projections range from 2.6% to 3.0%. (Q4/Q4 projections are highly dependent upon potential anomalies in Q4 data; therefore, Y/Y estimates, which average all four quarters, are more stable estimates.) Because the substantial decline in oil prices is likely to boost consumption growth more than it depresses investment growth, actual 2015 real GDP growth is likely to be at the high end of the forecast range.
 - *The Federal Reserve lowered its Q4/Q4 GDP forecast range in June to 1.8% to 2.0% compared to its beginning of the year range of 2.6% to 3.0%*
 - *Other Y/Y forecasts are now well below the lower end of the original forecast range: GS = 2.4% (Q4/Q4 = 2.25%); B of A = 2.5% (Q4/Q4 = 2.35%); Bill’s Steady scenario = 2.3% (Q4/Q4 = 1.8%); Bill’s Strong scenario = 2.4% (Q4/Q4 = 2.1%)*
- **Real GDP output gap** will remain high, but will close rapidly during 2015 from about 3.4% to 2.0%. (The exact size of the output gap will be revised by CBO, probably in February 2015).
 - + *CBO revised the output gap down by 1.1 percentage points in February; revised output gap should decline to between 1.4% and 1.2% by the end of 2015*
- **Potential structural rate of real GDP growth** has declined significantly in recent years. I expect potential growth to be about 2.0% in 2014. Long-term potential real GDP growth will edge up in coming years to between 2.0% and 2.3%.
 - + *CBO reduced 2015 potential growth from 1.8% to 1.7%*
 - *Potential growth for my scenarios for 2015 is 1.2%*
 - + *Long-run potential growth for my scenarios is between 1.9% and 2.2%; it is between 2.0% and 2.3% for the Federal Reserve; and it is 2.1% for CBO*
- **Productivity** should rise during 2015 as growth improves and investment increases, but should still fall well short of the historical 2.1% average.
 - + *Nonfarm productivity declined 2.7% in the first quarter of 2015, but the four-quarter change in productivity rose from -0.1% in 2014 to 0.4% in the first quarter of 2015*
- **Employment** growth should slow during 2015 as full employment approaches and grow about 185,000 per month.
 - ? *Payroll growth has averaged 208,000 monthly over the first six months of 2015*

- **Employment participation** will rise slightly during 2015 as the unemployment rate falls, labor market conditions tighten and discouraged workers find jobs. These cyclical factors will more than offset the downward pressure on the participation rate stemming from an aging population.
? The participation ratio has been relatively stable; it was 62.70% in December and 62.65% in June
- **Unemployment rate** should edge down to about 5.25%. A higher rate could occur if substantial numbers of discouraged workers re-enter the labor force.
+ The unemployment rate has fallen from 5.56% in December to 5.28% in June
- **Nominal consumer disposable income**, measured on a Y/Y basis will rise about 3.2% (roughly 1.2% increase in hours worked; 1.8% increase in CPI inflation and 0.2% increase in the hourly wage rate — *note: this relationship is mischaracterized because inflation does not factor directly into disposable income growth; disposable income growth is a composite of many sources of income, the largest of which is wage and salary income; growth in salary and wage income depends upon growth in total hours worked and growth in nominal hourly wages, which was 2.1% at the beginning of 2015 and forecast to rise to 2.3% by the end of 2015*).
- 12-month rate of change in disposable income is 3.7% through May; (total hours worked for all employees were growing at a 2.4% annual rate through June; growth in hourly nominal wages was unchanged through June at a 2.1% annual rate of increase); growth in hours worked is much stronger than forecast which has resulted in stronger than expected growth in nominal consumer disposable income
- **Nominal consumer spending growth** on the Y/Y basis will grow slightly faster at approximately 3.5%, but could grow slightly faster if low oil prices persist.
+ 12-month rate of change is 3.4% through May
- **Household personal saving rate** will decline slightly as growth in spending exceeds growth in disposable income.
- Saving rate averaged 5.4% over the first five months of 2015 compared to 4.9% in 2014; consumers are not yet spending the oil price decline windfall
- **Stock prices**, as measured by the S&P 500 average, should rise between 0% and 5%.
+ Through July 17, stock prices were up 3.3%
- **Manufacturing** growth will continue to be relatively strong and the PMI index will exceed 50.
+ The ISM manufacturing index has softened since the beginning of the year but was still at an expansionary level of 53.5 in June
- **Business investment** spending growth should remain relatively strong in a range of 4% to 6% as employment and consumer spending growth gathering momentum; however, low oil prices will depress energy investment.
- Business investment declined at an annual rate of -2.0% in Q1 as energy capital investment plunged; forecasts for 2015 have been lowered to 3%
- **Residential housing investment** should improve over 2014's disappointing level by 8% to 10%; residential housing starts should rise 15% to 20%.
? Residential investment grew at an annual rate of 6.5% in Q1; forecasts for 2015 have been lowered to a range of 6% to 9%

- Over the first five months of 2015 total housing starts were 2.6% above and single-family housing starts were 2.9% above the 2014 level

- **Residential housing prices** should rise about 2% to 4% in 2015, more slowly than 2014's projected 4.5% increase.

? According to the Federal Housing Finance Agency's home purchase price index, housing prices rose 5.01% in 2014 and 4.96% through the 12 months ending March 2015; prices are on track to rise 4.0% in 2015

- **Trade deficit** should be slightly higher in 2015 as economic growth improves growth in imports and the rising value of the dollar depresses growth in exports. The **dollar's value** on a trade-weighted basis should continue to rise.

? The trade deficit for goods has been stable; it was 2.87% in December and 2.85% in May

+ The trade weighted value of the dollar rose 6.5% from December through June and is 17.3% higher than June 2014

- **Monetary policy** — the Federal Reserve will raise the federal funds rate at its June, or possibly, September 2015 meeting. Because inflation is likely to continue to fall short of the Federal Reserve's expectations, the pace of increases in the federal funds rate is likely to be slow.

+ Expert opinion is divided as to whether the first increase in the Federal Funds rate will occur in September or December; FOMC members lowered projections in March and further in June for the level of the Federal Funds rate in the future

- **Total inflation** measures (CPI and CPE) will fall sharply during the first half of 2015, reflecting the significant decline in oil prices. **Core PCE inflation**

+ Total CPE was up 0.2% in May compared to May 2014 and is projected to bottom at 0.15% in June and rise 1.2% for all of 2015

+ The annual rate of change in core PCE was 1.24% in May and should dip to 1.2% in June before ending the year at 1.35%

- The **10-year Treasury rate** is likely to fluctuate in a range between 2.0% and 3.0% in 2015. Faster than expected real GDP employment growth will push the rate toward the top end of the range; greater than expected declines in inflation and/or heightened financial instability will push the rate toward the bottom end of the range.

+ The 10-year Treasury rate was 2.34% on July 17th; because of low rates globally and aggressive quantitative easing by the European Central Bank and the Bank of Japan; the 10-year Treasury rate is likely to remain near the lower end of the 2.0% to 3.0% range during 2015

- **Fiscal policy** will have limited impact on real GDP growth during both fiscal year and calendar year 2015. The deficit as a percentage of nominal GDP will probably decline from fiscal year 2014's level of 2.75% to 2.50%. The decline could be greater if economic growth and tax revenues exceed expectations or less if Congress increases spending without offsets as it did in approving the tax extenders bill for 2014.

+ The 2015 fiscal year deficit is on track to equal 2.35%; the 12-month deficit through June was 2.41%

- **State and Local investment** spending growth rises slightly from 0.5% in 2014 to 1.0% in 2015, which is still well below the long-term average of approximately 1.4%.

? State and local investment declined at an annual rate of -1.0% in Q1; forecast for all of 2015 has been revised to 1.1%

2. Rest of the World

- **Global growth** is likely to improve to 3.7% in 2015 from 3.2% in 2014. Risks are tilted to the upside because of the substantial decline in oil prices.
 - *Global growth forecasts have been lowered to 3.1% to 3.2%; improvement in Europe has been more than offset by slower growth in China, Japan, the U.S. and emerging markets; risks are tilted to the downside during the remainder of 2015*
- **European growth** will be positive but will likely fall short of the consensus 1.2%.
 - *Europe's growth forecast has been raised to 1.6%*
- **European inflation** will continue to decline and may even turn into outright deflation. Quantitative easing, assuming it occurs, may be too late and have too limited an impact to deflect emerging deflationary expectations. Europe may well be headed to the kind of deflationary trap Japan has been in for the last 20 years.
 - + *Consumer prices in Europe are expected to rise only 0.2% during 2015*
- **European financial markets** may face renewed turmoil. Markets expect the ECB to begin purchasing large amounts of securities, including sovereign debt, by March. This presumes that legal hurdles and German opposition will be overcome. Assuming that quantitative easing actually occurs, its impact is likely to disappoint.
 - + *The ECB's massive bond purchase initiative has provided a stable backdrop for financial markets; however, volatility has emerged from time to time (during the spring when speculative positions, which had driven interest down to nearly zero, were unwound; and more recently in conjunction with the crisis in Greece); credit conditions have eased*
- **European political dysfunction, populism and nationalism** will continue to worsen gradually. Countries to watch include the U.K., Greece, Spain, Italy and Portugal.
 - + *Centrists lost the Greek election; the National Front party is gaining ground in France; recent regional elections indicate that centrist parties may lose the Spanish elections scheduled for late 2015; the Conservative Party won an outright majority in the UK parliamentary elections but political fragmentation grew as the Scottish National Party won 56 seats*
- **U.K. growth** is expected to slow from 3.0% in 2014 to 2.6% in 2015; however, political turmoil, should the May parliamentary elections be inconclusive, could drive growth lower.
 - + *Expected 2015 real GDP growth has been revised down to 2.5%*
- **China's GDP growth** will slow below 7% and gradually moved toward 6% as economic reforms are implemented and the shift to a consumer-focused economy gathers momentum.
 - ? *Year over year growth in the second quarter of 2015 was 7.0%*
- **China's leadership** will focus on implementing **economic reforms** and will overcome resistance and maintain stability.
 - + *Chinese reform policies are being implemented slowly; the anti-corruption campaign continues and has had a chilling impact on speculation in commodities*

- **Japan's** economic policies may be successful in defeating deflation, but GDP growth will be hard pressed to achieve the expected 1.6% rate in 2015 if Abenomics' third arrow of economic reforms fails to raise the level of potential growth sufficiently to overcome the effect of negative population growth on labor force growth.
 - + *Japanese expected growth has been lowered to 1.1%; the Bank of Japan is likely to fall short of its goal to raise inflation to 2.0% - expected inflation currently is 0.8% for 2015 and 1.4% for 2016*
 - **India** should experience an improvement in real GDP growth to 6.3% in 2015.
 - ? *Too early to determine*
 - **Emerging market countries** that are energy consumers will experience greater growth, as long as the U.S. does better in 2015; energy producing countries and those heavily dependent upon commodities exports for growth will do less well.
 - + *Data indicate that slower growth in China, Japan and the U.S. is dragging down growth in emerging markets*
3. **Risks** — stated in the negative, but each risk could go in a positive direction.
- **U.S. potential real GDP growth** falls short of expectations
 - + *Q1 GDP and forecast revisions for all of 2015 indicate this risk will be realized*
 - **U.S. employment growth** is slower than expected; the **participation rate** is stable or declines rather than rising modestly
 - + *Participation rate has fallen slightly*
 - *Employment growth above expected level through the first six months of 2015*
 - **U.S. hourly wage rate growth for all employees** does not rise materially over its 2014 level of 2.1%
 - + *Through June this risk is being realized ? wage growth, measured as a 12-month year over year rate of change, remains unchanged at 2.1%; however, the six month annualized rate of change has risen from 2.0% in December 2014 to 2.3% in June 2015 and the employment cost index is rising, indicating modest emerging wage pressures*
 - **U.S. unemployment rate** falls less than expected
 - *Through June the unemployment rate remains within the expected range*
 - **U.S. productivity** remains low in the vicinity of 1%
 - + *Q1 productivity was -2.7% and is up only 0.4% over the last 12 months*
 - **Real U.S. consumer income and spending** increase less than expected
 - *Data for Q1 suggest that consumer disposable income and spending may rise more than expected*
 - **U.S. financial asset prices** rise more than expected posing increased bubble risks
 - *Bond prices are at the low end of the expected range*
 - *The increase in stock prices is within the expected range*
 - **Growth in U.S. residential housing investment and housing starts** is less than expected
 - + *Housing starts and residential investment are well below expectations*

- **U.S. residential housing price increases** slow more than expected
 - *First quarter data suggest that home prices may rise more than expected*
- **U.S. private business investment** does not improve as much as expected
 - + *Private business investment fell at an annual rate of -2.0% in Q1; forecasts for all of 2015 have been revised down*
- **Oil price declines** in the U.S. trigger bankruptcies and cause tight financial conditions with negative implications for economic activity and growth
 - + *Energy-related investment has reduced real GDP growth during the first half of 2015 by about 0.5%; consumer spending has not risen as expected to offset this drag*
 - *There is no evidence of significant financial market disruptions stemming from the fall in oil prices*
- **U.S. manufacturing growth** slows as the value of the dollar rises and global growth slows
 - + *ISM manufacturing index remains above 50 but has softened*
- **U.S. trade deficit** widens and the **value of the dollar** rises more than expected
 - + *The value of the dollar has risen more than expected at the beginning of the year*
 - *The trade deficit has been stable*
- **U.S. monetary policy** spawns financial market uncertainty and contributes to financial instability
 - *Volatility has increased somewhat and financial conditions have tightened slightly, but there is no indication of financial instability*
- **U.S. inflation** falls, rather than rising, and threatens deflation
 - + *Core PCE inflation has been slightly softer than expected and may not rebound as much as expected by year end*
- **U.S. interest rates** fall or rise more than expected
 - *Long-term interest rates are at the lower end of the expected range*
- **U.S. fiscal policy** is more restrictive than expected and the **budget deficit** falls more than expected
 - + *Tax receipts have been stronger than expected; with three months remaining in the fiscal year, the deficit is likely to be lower than originally expected*
- **U.S. state and local spending** does not rise as fast as expected
 - + *State and local spending fell at an annual rate of -1.0% in Q1; forecast growth has been revised lower for all of 2015*
- **Global GDP growth** does not rise as fast as expected
 - + *The global GDP growth forecast has been reduced from 3.7% to 3.2%*
- **Europe** slips back into recession
 - *Growth is improving in Europe because of the decline in the value of the euro, lower commodity prices, easier financial and credit conditions, and less fiscal drag; however, the Greek crisis has introduced uncertainty into the outlook*

- **ECB** does not engage in quantitative easing or the quantitative easing program it decides to pursue lacks market credibility
 - *This risk did not materialize because the ECB initiated a massive quantitative easing program which is expected to continue until September 2016*
- **Europe** — financial market turmoil reemerges
 - *Speculation drove interest rates on long-term bonds too low and was followed by a short but relatively violent correction; however, this turmoil was short-lived; modest volatility has accompanied the escalation of the Greek bailout crisis*
- **Europe** — political instability and social unrest rises more than expected threatening survival of the Eurozone and the European Union
 - + *Political fragmentation is building slowly but does not yet threaten the survival of the Eurozone and the European Union; however, the German suggestion that Greece temporarily exit the monetary union may prove in the longer run to be a turning point*
- **Acute political turmoil** engulfs the U.K.
 - *The Conservative Party won an outright parliamentary majority; however, political fragmentation is increasing slowly*
- **Chinese** leaders have difficulty implementing **economic reforms**
 - + *Implementation of reforms is proceeding slowly; at least one of the reforms involving opening up participation in the stock market led to a rapid escalation in prices followed by a crash in prices and extreme volatility*
- **China's growth** slows more than expected
 - *Year over year growth in the second quarter was 7.0%*
- **Japan** — markets lose faith in Abenomics
 - *This risk has not materialized; however, both real growth and inflation have been less than expected*
- Severe and, of course, unexpected **natural disasters** occur, which negatively impact global growth
 - *This risk has not materialized*

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