

# Budgeting and Macroeconomic Policy: A Primer



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## I. Introductory

John Ellwood invited me to come to his budgeting class to discuss the budget deficit in the economy at an introductory level.

This seemed a good opportunity to try to pull together my thoughts about how to successfully teach this vitally important topic at a generally accessible level. It also seemed a good opportunity to try to figure out whether Apple Computer knows what it is doing as it attempts to venture into enabling technologies for educational content delivery. Hence this mini e-book.

This is version 1.0. I hope to update this periodically over the next several years and keep this as the base document for whatever presentations I give on the budget deficit and the economy.

## II. What I Am Here to Do

John asked me to come here and talk about budgeting and macroeconomic policy. Therefore I will do so. Before I begin the body of the talk, however, I have to accomplish three tasks.

### Length of the Talk

First, I have to figure out how long I should talk for. I have given many talks on this subject. The longest talk I have ever given on it was four hours long. Thus I have demonstrated that I can talk about this until the cows come home.

**John Ellwood:** We go until 5:00,. Then they leave. You can keep talking, but they will be gone.

And as I talk I hope that you will interrupt me: the point of this exercise is for me to say things of interest to you—not for me to say things that are of interest to me.

### Demonstrate That I Am an Economist

Second, I feel that I need to establish my economist street-cred with you, because this talk will be short of Bellman equations and Lagrangians. Indeed, not so long ago I was horrified when I was introduced by a then Vice President of the Federal

Reserve Bank of Whoville not as “the economic historian” or “the macroeconomist” or “the sometime Deputy Assistant Secretary of the Treasury for Economic Policy”, but as “the blogger.”

Let me therefore attempt to undo some of what John Ellwood did in his introduction in trying to convince you that I am not a scarily quantitative economist. Let me say that I am. I am too a card-carrying neoliberal neoclassical economist.

So let me put up on the board what is currently equation (A.36) from J. Bradford DeLong and Lawrence H. Summers, “Fiscal Policy in a Depressed Economy”, in the spring 2012 volume of the *Brookings Papers on Economic Activity*. See?

$$(A.36) \quad \frac{\Delta P}{\Delta G} = \mu \left( 1 + \frac{\eta}{r^d - g} \right) + \frac{\mu \eta \xi \tau^*}{r^d - g} - \xi (1 - \mu \tau^*) \frac{(r - g)}{r^d - g}$$

I am a real economist. Only a real economist would ever write something like this, or assert that it is simplified, streamlined, and easily comprehensible.

Fear my equations!

The Four Targets and the Three "Runs"

The government’s budgetary policy—its deficit (or surplus)—affects the macroeconomy in three “runs”.

1. In the short run, a government deficit can serve as a valuable tool to rebalance the economy in a depression if interest rates are very very low.
2. In the medium run, a government surplus crowds in investment and boosts the rate of growth.
3. And in the long run a government that does not or cannot pay its bills gets into a world of hurt.

And the government's budgetary policy primarily affects societal well-being through its effects on four important macroeconomic quantities:

1. The unemployment rate.
2. The closely-related level of employment.
3. The rate of inflation.
4. The rate of economic growth

## III. The Issues

In order to understand the issues, you have to understand the things:

1. The fluctuations in employment, unemployment, and inflation that are the American business cycle.
2. The course of American economic growth.
3. The three “runs” in which budgetary policies affect the economy.

### The American Business Cycle

Consider first the business cycle of employment, unemployment, and inflation.

#### Employment and Unemployment

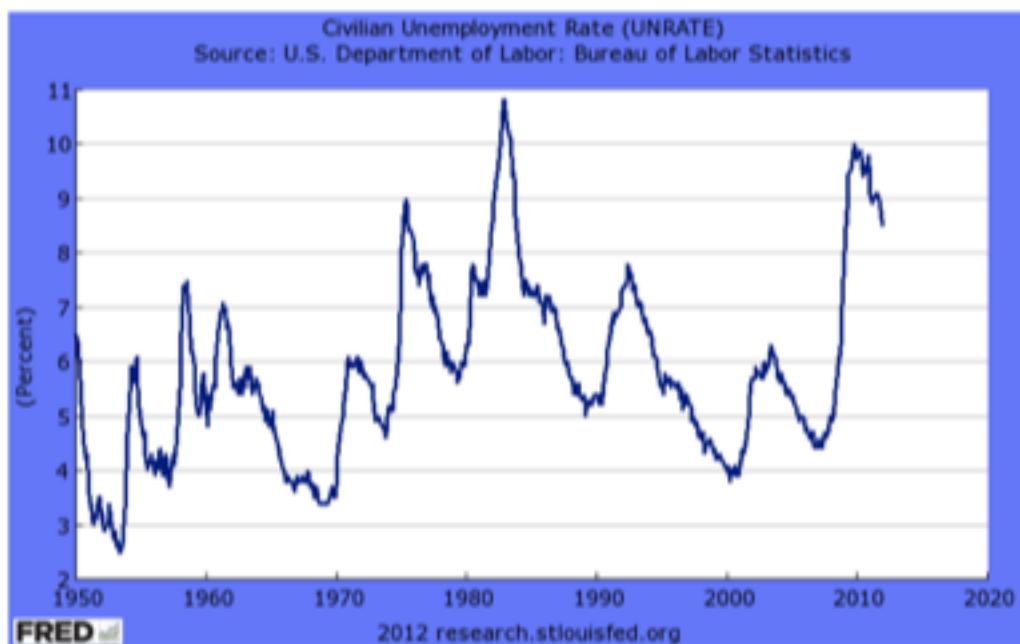
Consider the unemployment rate in the United States since World War II. It goes up and down between 2.8% and 10.8%. It does not go up and down nearly as much as it did back before World War II, when unemployment peaked at 23% in 1933 in the Great Depression. And if you focus on the non-farm economy—which nowadays is virtually the entire economy—fluctuations in the nonfarm economy were larger before the Great Depression than they have been since World War II.

As the unemployment rate goes up and down, it can go up very suddenly: by 4.87 percentage points in eight months. We Keynesian and monetarist economists feel that such a large rapid unemployment rate rise is a very bad thing, and something government ought to do something about.

#### Managing the Business Cycle

The government cannot do anything about hurricanes or earthquakes in advance, but the government can do something about sudden rapid rises in the unemployment rate.

## Unemployment



When the unemployment rate rises suddenly and steeply, it is not because something bad has happened to any or our abilities to work. What has happened, instead, is that our complicated economic division of labor has partially fallen apart. This happens at semi-periodic intervals. It has nothing to do with the natural world in which human society is embedded. It is a software glitch in our collective social economic relationships.

And a government that is managing these social-economic relationships ought to be able to do something about this—to largely if not completely shave off the peaks of the unemployment rate.

Indeed, for 20 years starting in the mid-1980s we thought that we had gotten it right.

We had neither a recession nor an outburst of inflation in the later 1980s. The recession that peaked in 1992 was one of the smallest on record: the

unemployment rate went up by only 2% rather than by 5%, 4% or 3%. And so economists began writing papers about the “great moderation” of the business cycle—about how the Federal Reserve had finally learned the tools to successfully manage the business cycle and keep it small.

### **Economists' Hubris and Economic History**

Those of us who were economic historians bided our time, for we noted that this was the third time in the twentieth century that economists had begun to write papers about a “great moderation” and about how, guided by economists, the business cycle was tamed and would be managed through proper government policy.

The third time started in the late 1980s. The second time had come about in the 1960s when then-Council of Economic Advisors Chair Walter Heller, from Madison, Wisconsin, chief economic advisor to President Lyndon Johnson, wrote his *New Dimensions of Political Economy* about how his school of Keynesian economists had finally gotten the problem of business cycle management right.

He was so convincing that in response to his book the Department of Commerce changed the name of its monthly Business Cycle Digest to BCD, and then announced that BCD stood for the Business Conditions Digest. The first time was in the 1920s, when Yale economist Irving Fisher announced that the combination of Prohibition—the successful war on some drugs—and the creation of the Federal Reserve had put America into a state of semi-permanent boom, in which stock prices had reached and would remain on a permanently high plateau.

Both of the previous declarations by economists of victory over the business cycle had been, to say the least, premature. That was why we economic historians bided our time and kept our powder dry.

We have talked about unemployment. But that is not the only short-term business-cycle problem. We also have inflation: an overall general rise in the price level, the average dollar prices of things. Inflation varies from year to year, and in post-World War II America it has varied by substantial amounts.

### **The 1970s Inflation and the Volcker Disinflation**

After bursts of inflation during World War II and the Korean War, inflation settled back at low levels starting in the mid-1950s. Inflation then accelerated from the mid-1960s until the end of the 1970s. Peak consumer price inflation rate of 14% came just at the end of Jimmy Carter’s term. That meant that Ronald Reagan was

able to take credit for the reduction of inflation—Reagan, actually, was very nice, and in his public speeches explicitly shared credit with the real architect of the inflation-control policy, then-Federal Reserve Chair Paul Volcker.

## Inflation



### The Relative Salience of Unemployment and Inflation

We left-of-center economists say that unemployment is a real problem, a huge problem, and a much bigger problem than inflation. When the unemployment rate is, say, 10% and when the U.S. economy can perfectly well operate sustainably at an unemployment rate of 5%—which it can—then more than 5% of the labor force who could have jobs do not have jobs, and more than 5% of the goods and services that we could be producing we are not producing.

Right now our excess output gap is running at \$100 billion a month: that is \$100 billion a month of nice things that we could have but do not have because we have failed to manage the business cycle. We all like to have nice things. We all deserve nice things. We all could have more nice things—if only we managed the business cycle to keep unemployment at its normal level.

By contrast, the costs of inflation are not so clear. On average wages and prices went up 14% in 1979. In 1980 everybody was spending 14% more in dollars on your average nice thing. But in 1980 the average wage was 14% higher than it would have been had inflation in 1979 been zero.

Now understand: average. Some people's incomes went up by more than 14%, some people's went up by less, the market baskets of commodities that some people bought went up by more than 14% in price, the market baskets of commodities that other people bought went up by less. If your wage goes up by more than 14% and the price of a market basket of things you buy goes up by less, you win from inflation. If your wage goes up by less than 14% and the price of a market basket of things you buy goes up by more, you lose from inflation. Inflation is a redistribution thing. In general, creditors and rentiers and pensioners and people on fixed incomes lose from inflation, while manufacturers and debtors gain.

When calculating the cost of inflation, you have to recognize that the gains to winners from the process to some extent offset the losses of the losers, and that the big net cost is probably simply the uncertainty and worry caused. When calculating the cost of unemployment, it is all loss: there are no winners, no offsets, there are just people without jobs and useful commodities not produced.

**John Maynard Keynes and the Relative Costs of Unemployment and Inflation**  
 This leftie tradition to worry more about unemployment than inflation goes back quite a long time, all the way back to 1924 and to John Maynard Keynes's *Tract on Monetary Reform*:

We see, therefore, that rising prices [inflation] and falling prices [deflation] each have their characteristic disadvantage. The Inflation which causes the former means Injustice to individuals and to classes--particularly to investors; and is therefore unfavorable to saving. The Deflation which causes falling prices means Impoverishment to labor and to enterprise by leading entrepreneurs to restrict production, in their endeavor to avoid loss to themselves; and is therefore disastrous to employment.... Thus Inflation is unjust and Deflation is inexpedient. Of the two, perhaps Deflation is, if we rule out exaggerated inflations such as that of Germany [in 1923-1924], the worse; because it is worse, in an impoverished world, to provoke unemployment than to disappoint the rentier. But it is not necessary that we should weight one evil against the other. It is easier to agree that both are evils to be shunned...

Inflation and unemployment—what Keynes termed then “deflation”—were, he said, both bad things.

Inflation meant injustice to individuals and to classes, particularly to investors who get it in the neck when they got their money paid back in depreciated dollar worth less. Deflation and unemployment meant impoverishment to labor and to enterprise. Keynes’s view is that deflation is the worst because the world is still poor and it is worse to provoke unemployment than to disappoint the rentier—think of Paris Hilton, or the Walton heirs, somebody who is living off of some previous act of enterprise but themselves doing nothing useful. But even Keynes said that it was easy to agree that both are evils to be shunned.

### **The Political Stakes in the Management of Inflation and Unemployment**

It has been the job of the government ever since FDR took it on himself one day in March 1933 to try to manage the economy to try to shun these two evils. The technocratic task of shunning them is difficult, for policies to reduce unemployment may trigger inflation, and policies to reduce inflation are highly likely to trigger unemployment.

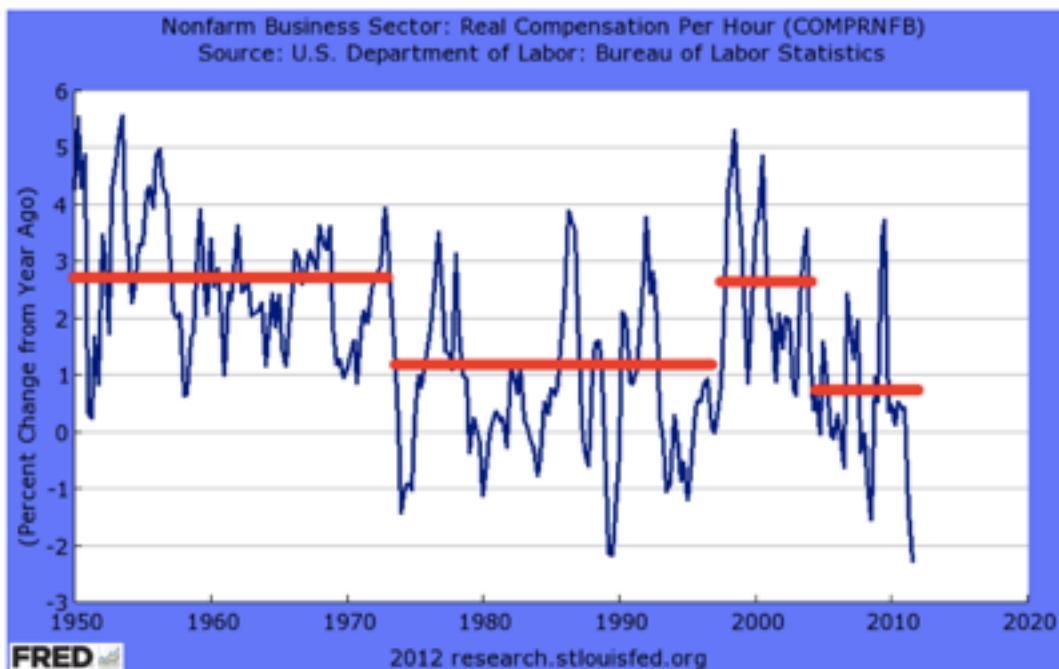
The political calculus of inflation and unemployment is different from the leftie economic calculus. Inflation is a thing that annoys people. They are annoyed by the pointless redistributions of wealth. They attribute their increasing wages measured in dollars to their desert and the increasing prices they must pay to the government’s inept mismanagement. They worry about the uncertainty caused. Inflation is not something that in and of itself directly destroys wealth. However, it does destroy the careers of politicians.

Thus in our political system both the presidential and congressional pieces worry equally about inflation and unemployment. And for complex reasons I do not understand the Federal Reserve worries 90% about inflation and only 10% about unemployment.

## **Economic Growth**

Controlling inflation and unemployment are not the only goals of government macroeconomic policy. There is also spurring and sustaining economic growth: managing the economy so that we grow richer over time. We would like to have a more rapid rate of economic growth—to the extent that it can be accomplished without imposing too-great sacrifices on the current generation.

# Growth



## Decade-Scale Fluctuations in Productivity Growth

When we economists look at the general trend of post-World War II growth, we divide the period into four eras. First comes the great golden age of the mixed economy, lasting until 1973 or so. During this era the average rate of real wage and salaries per hour in the United States—including benefits—grows at a rate of 2.8% per year. That means that inflation-adjusted real incomes double every generation: each generation lives, in a material well-being sense, twice as well as its predecessor.

Then in the mid 1970s the economy's growth rate falls off a cliff. The rate of growth of GDP per hour worked drops to 1.2% per year. This is called the productivity slowdown. It has produced enormous amounts of literature about why it happened. People line up along the political spectrum in the usual way: blaming the fecklessness of the poor and the breakdown of traditional [morality on one hand, blaming over-aggressive bosses who aren't interested in building up the capital of their workers and nasty private equity firms that want to screw down real wages even at the expense of productivity on the other. after 40 years there is still no accepted consensus, and everyone's favorite theory has effects about one fifth

the size of what it ought to be to do the job. The productivity slowdown remains a mystery. Maybe five theories are each 20% correct, and maybe we are missing something big: we do not know.

This slowdown in the rate of economic growth was worrisome. Truth to tell, the rich barely noticed—the incomes of those at the top of the income distribution continued to grow at their pre-1975 pace, or even faster. The coming of the productivity slowdown was also the start of rising income and wealth inequality.

But those of us who looked at the aggregate income statistics all breathed a sigh of relief in the late 1990s when the productivity slowdown appeared to go away. We attributed the speedup of economic growth to two causes, one major and one minor. The major cause was the rise of Silicon Valley: the coming of the information technology computer and communications booms that gave Americans something of extraordinarily high value to invest in. The minor cause was the restoration of fiscal sanity by President Clinton and the Democratic Congressional Caucus: no longer was the U.S. government running huge deficits that served as a drag on capital accumulation and growth. Productivity growth seemed back to normal, And we congratulated ourselves. And we looked forward to a bright future.

### **The Return of the Productivity Growth Slowdown**

That lasted for about eight years. Over the past seven years we have had to change our minds, and say that the productivity slowdown is back.

Now the productivity slowdown may, in truth, not be back. In 1987 the Encyclopedia Britannica Corporation asked me to write an article, offering to pay either \$2000 or an Encyclopedia Britannica. I took the encyclopedia, and thought myself well-compensated.

We gave it away to the library when we moved last year. Wikipedia is better.

Does that mean that everyone in the United States now has the equivalent of \$2000 more of wealth because they have access for pennies to something I was willing to pay \$2000 for? No. I am a high-value demander of encyclopedias. Nevertheless, previous generations would have been willing to pay—their rich did pay—fortunes for things we get essentially for free, whether it is access to Wikipedia or the ability to watch Hamlet in our living rooms whenever we please.

You can argue that that is a big deal, that—properly measured, counting the things we get for free, there has been no productivity slowdown. That is an open research topic.

So we have inflation, we have unemployment, we have growth, we have a government that accepted in 1933 the job of trying to manage all three. How does it try to do so? How should it try to do so?

## IV. The Three Runs of Budget Policy

Now I am going to do a standard economist thing.

Now I am going to say that my question has not one answer but three answers, that the three answers are different, and what the answer is depends on the “run” over which we are looking. I am going to say that there is a short run, a medium run, and a long run. I am going to say that which run it is appropriate to think about depends on the urgency of the problems faced and the time scales over which action is contemplated.

### The Short Run

First we are going to consider the short run. The short run is a period of time in which the productive capabilities of the economy do not change significantly, and in which prices in the economy do not completely adjust to clear markets and maintain full employment. Thus the big deal in the short run is for the government to manipulate the economy to try to boost or curb demand in order to match demand—total economy-wide spending—to the supply that is the economy’s productive potential. If total spending exceeds potential output, you get accelerating inflation. If total spending falls short of potential output, you get high unemployment and lost production.

### The Medium Run

Then there is the medium run. In the medium run we assume that prices adjust so that we don’t have to worry about any gap between aggregate demand—total spending—and aggregate supply—productive potential. Then the principal task in the medium run is not to match demand to potential so you get close to full employment: the market system has already done that for you. The principal tasks

in the medium run are (i) to keep inflation low (both because it is unjust and because it makes voters very unhappy with your incumbent political masters) and (ii) to do whatever you can to make economic growth high.

## The Long Run

Third and last, there is the long run. In the long run you are no longer focused on inflation or growth or unemployment, but instead on the big political questions of the financing of the social insurance state. How big is it going to be? Who is going to pay for it? How is it going to work. This is a question that must be solved. For the long run comes when the people who ordinarily lend money to the government to cover a gap between taxes and spending decide that they are not interested in lending money to a country without a plan for financing its social insurance state. And if a country has not balanced its long-run budget when the long-run arrives, then the market balances its budget for it—and does so in a way that nobody in the country likes. Think Argentina. Think Greece...

Argentina is the greatest example of a country that has never been managed to get its public finances in order in the long run. This means Argentina has gone from being twice as rich as Sweden in 1900 to about a quarter as rich as Sweden today. This means, among other things, that Buenos Aires which was seventh in the world in telephone density per capita on the eve of WWI is the most beautiful Belle Epoque city in the world today—definitely worth going to visit, especially if you like to eat lots and lots of meat. But it does mean that something like seven-eighths of the prosperity that an economy located in temperate-zone America typically achieves has been stolen. And has been stolen largely because of failures of long run budgeting. So: be scared of in the long run.

## The Length of the "Runs"

What is the time frame appropriate for each run? How do we stitch the conclusions reached by analyzing different runs together?

Those are very good questions.

Economists do not have very good answers to them.

The time of frame appropriate for the short run seems to vary between one year and 20 years, depending. The time appropriate for the long run seems to vary between three years and 200 years, depending.

Right now in Greece the long run has arrived.

In Argentina in 2001 the long run arrived in 72 hours, even though only three months before the IMF had been writing learned treatises about how the fundamentals of the Argentinean economy were indeed sound. And then the long run woke up and came walking in, and the Argentinean economy collapsed.

Because we do not have good answers, arguing about runs with a professional economist is a lot like playing the game of Calvinball—the exciting game without any rules that can never be played the same way twice.

Usually the professional economists in the room will agree on what the rules are, and about when it is time to shift from a long to a short to a medium run analysis. But not always.

And I have not found any way to explain to outsiders how we reach the decisions about runs that we economists do—at least not without turning them into full-fledged economists themselves.

## **V. The Short Run: Fiscal and Monetary Policy**

Now let us focus on the short run, the run in which sticky prices can keep demand below supply and in which the government should shoulder its Rooseveltian responsibility of matching total spending to productive potential, of making Say's Law that supply creates its own demand true or true enough in practice even though it is false in theory.

### **The Keynesian Revolution and the Monetarist Counterrevolution**

John Maynard Keynes wrote open letters and private letters to Franklin Delano Roosevelt in the 1930s telling Roosevelt what he, Keynes, thought that the government ought to do.

#### **Keynesian Doctrine**

The government, he said, should use its spending programs as a balance wheel to keep the economy in a stable semi-boom. The government should have a long list

of potentially useful infrastructure and social betterment projects. Whenever unemployment got too high, the government should pull one of these out of its back pocket and set people to work doing it. Conversely, whenever the economy was booming and rising inflation threatened the government should step back and greatly restrict its expenditure on infrastructure and social betterment.

### **The Monetarist Counterrevolution**

From 1940 to 1990, Milton Friedman and his Chicago School acolytes waged a 50-year war against Keynes.

They won a complete and total intellectual victory, or at least we neoclassical and neoliberal economists think they won a complete and total intellectual victory, or at least we surrendered to them.

It was not that Friedman thought that the laissez faire economy left to its own or on some automatic gold standard would avoid the business cycle. Friedman feared the business cycle. Friedman feared instability arising from a laissez-faire unregulated monetary system. Friedman feared the gold standard. Where Friedman differed from Keynes was that, where Keynes thought the government would need to spend directly, Friedman thought that all that needed to happen to curb the business cycle was for the Federal Reserve to keep the economy-wide stock of money growing at a stable, constant rate—that if it did so, private spending would grow at a stable, constant rate and business cycles would be small.

Friedman's dispute with Keynes was that where Keynes thought that fiscal policy was needed for successful stabilization policy, Friedman believed that monetary policy alone could do the job—and should do the job, as more insulated from destructive rent-seeking politics.

### **Reasons for Monetarist Victory**

Over in Barrows here at Berkeley we have a sociologist, Marion Fourcade-Gourinchas, who studies economists—regards us like experimental animals, capable of interesting behavior but not creatures to whom one should ascribe any substantial degree of rationality or even agency, for we are really the bearers and puppets of sociological forces we do not understand. She will talk about how Friedman's victory was not an intellectual one but rather the result of widening income inequality and the funding of think tanks and of higher education, of the rise of business schools, and by the desire of professors to teach students who at least aspire to join the upper class what they want to hear.

Whether you think Friedman had evidence or merely sociological forces on his side, by 1995 it was difficult to find an article in the American Economic Review or the Journal of Political Economy or the Quarterly Journal of Economics saying that Milton Freedman was broadly wrong and that fiscal policy had any significant role to play in stabilizing aggregate demand.

### **Monetarist Doctrine**

Friedman's argument started with the quantity theory of money. We say that total spending, the level of production  $Y$  times the average prices at which things are sold  $P$ , is equal to the amount of money in the economy  $M$  times the velocity of money  $V$ :

$$P Y = M V$$

The Federal Reserve could control the money supply  $M$ . In normal times, people want to spend the money in their pockets and bank accounts at a fairly constant rate— $V$  does not vary very much. So if you want to boost  $P Y$ , have the Federal Reserve buy bonds and print cash to pay for them and so boost  $M$ , so production and employment will jump up and inflation will accelerate. And if you want to shrink  $P Y$ , have the Federal Reserve sell some of its bonds and so take cash out of the economy, and production, spending, and inflation will fall and the unemployment rate will rise.

Moreover, Friedman said, suppose that the government does something to disturb this relationship—takes steps that have the effect of in some way altering  $V$ . Then the Federal Reserve can counteract those steps. If the rest of the government has raised  $V$ , the Federal Reserve can lower  $M$ .

### **Federal Reserve Chair Alan Greenspan and the Clinton Surpluses**

Indeed, back when I was working for the U.S. Treasury there were substantial worries within the administration about Clinton's plans to try to reduce the deficit. Wouldn't the cut in government spending raise unemployment? And Alan Greenspan, then at the head of the Federal Reserve, promised that he would not let that happen. Greenspan was an advocate of balancing the budget. And if adopting the right fiscal policy threatened to raise unemployment, Greenspan all but promised, he would raise the money stock to make sure that any such effect was neutralized.

And, in 1993-1995, he did so.

So as of 1995 there was a rough consensus that the budgeting decisions of the federal government should be made on what we economists call classical principles, benefit-cost principles. Does this expenditure make sense? Is this tax worth raising? The Federal Reserve could and would undo and neutralize whatever effect the federal government's spending and taxing decisions had on the total level of spending. This rough consensus held that the government's budgetary decisions in normal times should take no account of any influence of spending and taxing decisions on the overall level of economic activity, inflation, and unemployment. Those issues should be left to the technocrats of the Federal Reserve.

### **Our Times Aren't Normal Right Now**

But right now we have a problem: these times aren't normal, are they?

Normally, holding your wealth in money rather than in bonds is expensive: you are losing interest.

Bonds pay interest. Money does not. This fact that money doesn't pay interest and bonds do is what pins down the velocity of money  $V$  in the economy. If you hold money you are either going to try to spend it on goods and services or find a business issuing a new bond because it wants to spend money adding to its capital stock. Either way, the transmission belt from the money stock to the spending level is working.

But what if, in the aftermath of a financial crisis, the short-term interest rate on bonds goes to 0? What if it is no longer the case that money pays no interest and bonds do? Well, then you would rather hold money than bonds: money is safer, because your bonds will lose value if interest rates go up.

In the aftermath of a financial crisis, boosting the economy's money supply no longer reliably induces people to ramp up their spending. The transmission belt slips, if it does not snap altogether, and the Federal Reserve loses its ability to use its standard monetary policy tools of altering the money stock to govern the economy-wide level of spending.

What should you do then?

### **The Housing Bubble and the Lesser Depression**

Confidence in the Federal Reserve's ability to carry out the monetarist promise and successfully stabilize the macroeconomy at a high level of employment and a low level of inflation encountered reality in October 2008.

### **The Unconvincing Argument That the Federal Reserve Misstepped**

Some economists, of whom the most prominent is Stanford's John Taylor, claim that in the mid-2000s all was fine in the Garden of Eden of deregulated finance—until the serpent of the Federal Reserve brought the apple in the form of extraordinarily low interest rates in 2003.

I have never been able to make sense of Taylor's argument.

Taylor says the Federal Reserve kept interest rates two percentage points too low for three years. If you are buying a long-duration asset like housing, such an interest rate break leaves you willing to pay 6% more than you would otherwise have been willing to pay. Are we really supposed to build a 50% nationwide housing bubble on top of the 6% impetus? Only a market already fully infected with the bubble disease could see such a small impetus have such a large impact. And then the primary blame seems to me to lie with the deregulatory gasoline and gunpowder poured onto the floor, rather than with the match and the spark. In such a market anything could have set off the bubble and the crisis. And to argue that it was the Federal Reserve rather than China or the collapse of risk standards in mortgage lending seems to me to make a foundationless political argument rather than an economic argument: to make claims that you have no evidence are true, but that it would be politically convenient if they were true.

That, at least, is my view of how the financial crisis that led to the collapse of interest rates and the collapse of monetary velocity came about.

### **The Cost of Holding Cash and the Velocity of Money**

The reason that in normal time the Federal Reserve can rely on the fact that people want to spend the money on their pockets, and so can rely on increases in the money supply to increase the flow of spending, is that in normal times it is costly to keep your money in your pockets without spending it. Back in 1979, when I went to college and when the inflation rate was then 12%, you lost 1% of the purchasing power of the cash in your pocket for every month that you kept it there.

That cost is not enough to be decisive in any one person's decisions. But as a marginal factor that affects the decisions of large numbers of people—150 million workers in the U.S. economy—it has an impact. At the aggregate level in normal times you get a nice relationship between how fast people are spending the money in their pockets and what the interest rate is. The law of large numbers tells.

But what if, in the aftermath of a financial crisis like right now, the short term interest rates on bond goes to zero? What happens when everyone is petrified of investing in equities or mortgages or anything else—because God knows what might happen—people become so scared of any kind of risk that they drive the price of safe government bonds so high that the interest rate on them is zero?

It is easy to understand why people might develop such an appetite for safe Treasury bonds. Consider MF Global, a Wall Street firm run by former head of Goldman Sachs, former governor of New Jersey, former senator from New Jersey John Corzine that stole \$1.5 billion from its customers to place a double-or-nothing bet on its gamble for resurrection to avoid bankruptcy. It lost. Everybody knows where the money went. But the people who have the stolen money do not want to give it back and have the law on their side. MF Global is bankrupt so that there is nothing to sue. And it turns out that MF Global's principals and employees will in all likelihood escape criminal penalties by blaming it on accounting systems that allowed individuals to remain ignorant of what was going on as the firm stole the customers' money.

### **The Federal Reserve Loses Traction When Short Safe Nominal Interest Rates Hit Zero**

When the interest rate on safe government bonds is zero, you do not care whether you have \$20 or \$50 or \$100 or \$250 in cash in your pocket. And so the Federal Reserve loses its ability to control the flow of spending .

We have been in this situation three times since the Starmaker began Her work: at the nadir of the Great Depression, in Japan in the aftermath of the collapse of its property bubble at the start of the 1990s.

And today.

So our times aren't normal.

And when the times aren't normal the normal rules do not apply.

How do you boost demand to match supply when the Federal Reserve's normal transmission belt slips or snaps? One thing you can do is have the Federal Reserve try all kinds of weirdo experiments in the hope that some of them will have traction — “quantitative easing” and other forms of “non-standard monetary policy”.

Another thing you can do is eliminate the middleman. Normally the Federal Reserve boosts the money supply and so induces people to spend more. But the government can simply spend more—and in generating demand for commodities to firms will hire the unemployed, the government's money is as good as anybody else's.

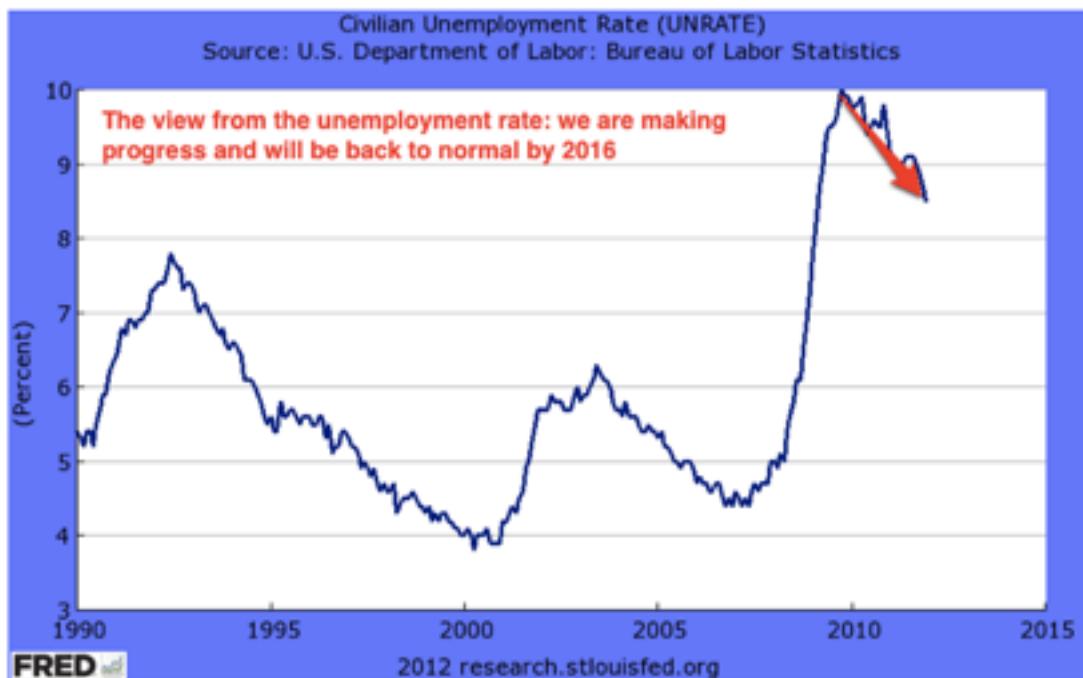
## The Utility of Fiscal Policy in a Depressed Economy at the Zero Lower Bound

This is the situation I think we are in now.

### Right Now the Government Should Spend More, Tax Less, and Run Bigger Deficits

And, in the unusual and exceptional situation that we are in right now, the Federal Government's budget deficit is an extraordinarily useful and appropriate stabilization policy too for boosting aggregate demand and so eliminating excess cyclical unemployment.

## The Short Run: How Long Will It Last?



As long as the unemployment rate is substantially elevated above its normal levels, the government should spend more and tax less—although the “tax less” link is not as strong as the “spend more” link in boosting production and reducing unemployment. The “tax less” link works by making people feel richer and make them spend more. But that link is not nearly as certain as government spends more link.

That is what to be done in the short run.

### **How Long Will This Exceptional Short Run Last?**

How long is this short run going to last?

If you take the view from the unemployment rate, the unemployment rate hit 10% in late 2009. Since then, for two years, the unemployment rate has been coming down. It has been falling at a rate of about three quarters of a percent per year.

If the current pace continues—and there is no big reason why it should not, but then there is no big reason why it should—then the view from the unemployment rate is that we are making definite progress in fixing our current Lesser Depression. We will be back to the normal range of the unemployment rate by 2016.

At that point the short run will end. We should then turn our attention to our medium-run and long-run problems, at least until the next short-run problem comes along.

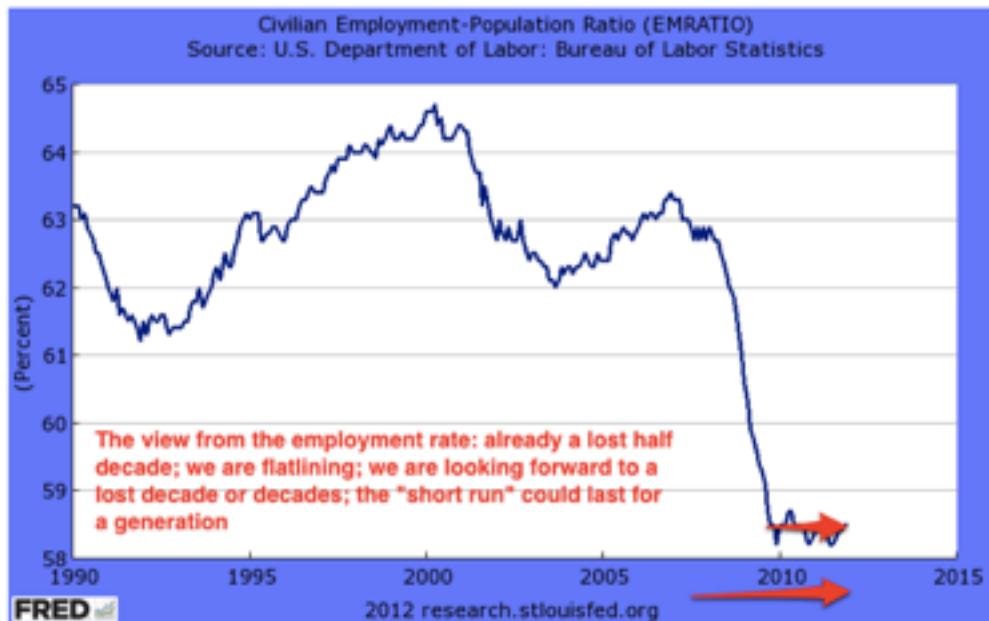
### **The Bridge from the Short to the Medium Run**

If the current pace continues—and there is no big reason why it should not, but then there is no big reason why it should—then the view from the unemployment rate is that we are making definite progress in fixing our current Lesser Depression. We will be back to the normal range of the unemployment rate by 2016. At that point the short run will end. We should then turn our attention to our medium-run and long-run problems, at least until the next short-run problem comes along.

### **The Transformation of Cyclical into Structural Unemployment**

But if you take a look not at the unemployment rate but at the employment rate, right things look very different.

## The Short Run: How Long Will It Last?



The employment rate, the share of American adults who have jobs, fell to a level in 2009 that it had not seen since before the days of modern feminism. Since 2009 it has flatlined.

If you focus on the employment rate, the short run is not coming to an end. It could last for decades—as it has lasted for decades in Japan.

There is a very depressing potential reconciliation of the conflicting unemployment and employment views. The reconciliation is that what is happening is what happened to a bunch of Western Europe in the 1980s: we are seeing the transformation of short-run cyclical into long-run structural unemployment.

If back at late 2009 we had had a much more aggressive and much stimulative short-run fiscal policy, we could have quickly taken our 5% excess unemployed and put them back to work. They had only recently lost their jobs. They still were connected to the labor force. They still thought that they would, kind of they had a future in employment.

But by now a quarter of those who were cyclically unemployed at the end of 2009 have dropped out of the labor force. We do not know when they are going to come back or if they are going to come back or what would pull them back into the labor force.

### **Hysteresis**

Odds based on the experience of Europe in the 1980s are that something like two-thirds of these people will never come back into sustained stable employment. In that case we will no longer be able to get the unemployment rate down below 5% before inflation starts to accelerate, but only 6% or, if a strong recovery is further delayed, perhaps 7%.

Perhaps half a percentage point of what has happened to labor force participation since 2007 may be a continuation of demographic trends leading to lower long-term labor force participation. But we would have expected that to have been offset by an increase in labor force participation coming from the collapse of the wealth of those near retirement as their home equity and 401(k)s declined.

Thus the fear is that by 2016 we will be in a situation in which we have a huge structural unemployment problem of the ex-employed—who will then be clinically depressed, with atrophied skills, having lost their potential attachments to people who might help them find jobs. Inaction at fixing the Lesser Depression will have turned the United States into one gigantic Fresno. And God know what we will have done to Fresno by then.

If that happens, then 2016 will be a disaster. But 2016 will be a disaster that using budget deficits to goose the economy and boost aggregate demand cannot help, for the big problems then will not be on the demand but rather on the supply side.

Thus if that happens, then in 2016 it will still be time to turn our attention away from short-run stabilization policy as far as the government is concerned to the medium run. And to deal with our then-structural unemployment problem it will then be time to resort to other tools—tools that are the property of labor economists, sociologist and psychologists to try to figure out how to get labor force participation and employment back to where we really would like it to be.

### **The Astonishing Cost of Our Lesser Depression**

Even though you are not allowed to say this at the University of Chicago, it is not the case that the four and a half percent of the adult population who had jobs back in 2007 and do not have jobs now are having a wild party and enjoying their

leisure as they mooch off of the government. And its not the case that they made a rational decision to substitute leisure for labor, and even though they have lower market incomes they are actually on a higher utility surface now than they were back in 2007.

Instead, our cyclically unemployed right now are mostly living in their sister in-law's basement, fighting with their spouse because there is no money. They really do not like living in their sister in-law's basement at all.

One calculation I have been doing suggests that each month our Lesser Depression continues with the strong recovery delayed costs us \$100 billion in jobs not performed and commodities not produced, and costs us \$267 billion in the present value of lower future production because of the transformation of cyclical into structural unemployment.

## VI. The Medium Run

Now let us leave our depressing world of today and go to a much more pleasant future fantasy world: Hillary Rodham Clinton's first term, Mitt Romney's second term, Ron Paul's third term, whatever. Let us think of a future in which we are no longer worrying about having to take the federal government's budget and use it to try to boost spending in the economy to match spending to the economy's productive potential and thus eliminate cyclical unemployment. Let us look forward to a future when we can turn responsibility for curbing the business cycle to the Federal Reserve.

### **Medium-Run Costs of Growing the Debt**

In that world we can and should worry, instead, about the medium run consequences of running a federal deficit.

#### **Investment and the Deficit at Full Employment**

Here I have would like to put two more equations up on the screen. The first equation says that our short-run problems are solved: that the Federal Reserve System has recovered its traction and has successfully set the economy's level of aggregate demand  $Y$  to the economy's supply-side level of sustainable potential output  $Y^*$ :

$$Y = Y^*$$

The second equation is the national-income identity: the statement that production is either consumed by households C, invested by businesses boosting their capacity I, or purchased by the government G (and there are net exports NX, which I am going to ignore).

$$Y = C(Y-T) + I + G + NX$$

This medium run equation tells us is that if we boost government spending G, we should also take steps to reduce consumption spending by raising taxes T. We should accompany our policy to boost government purchases by making consumers feel poorer and so inducing them to spend less on household consumption C. Why? Because in the medium run the level of output Y is set at the economy's productive potential  $Y^*$ . And in the medium run if we boost G but do not reduce C then the arithmetic necessity of the case requires that business investment I decline.

And if business investment I declines, economic growth slows: businesses are no longer building factories and adding machines.

### **The Tragedy of Further Reducing Economic Growth**

We do not want economic growth to decline further—over the past decade we have not had as much economic growth as we would like, we have no economic growth to spare.

With the rise in income inequality, it looks as though our trend rate of real wage growth right now is only 0.7% per year—including benefits, which means that take-home real-wage growth is zero because healthcare eats up all of that increase. You really don't want to be putting downward pressure on the economic growth rate right now.

And this was why people like Paul Krugman and me were yelping and screeching in 2004 and 2005 and 2006 about the fact that the Bush administration was running budget deficits.

Right now we are yelling because we think Obama is not running large enough budget deficits.

Where is the consistency? What is the rationale? Are we just playing for Team Democrat?

No.

We would say that there are short-runs and medium-runs. If you are in the medium-run—if you have no more-urgent short-run problems—you want your government to be running a surplus to crowd-in investment and speed economic growth. If you are in the short-run—if your big problem is cyclical unemployment, idle factories, depressed demand—you want to be running a deficit to help put America back to work and put off dealing with the medium run until you have solved your more urgent short-run problems. Back in 2004-2007 we had no big short-run problems—our biggest problem was the medium-run problem of the structural deficit. Since 2008 our biggest problem has been the short-run problem of the Lesser Depression.

There is no inconsistency between what we were saying back then and what we are saying now. We are not political hacks. We are simply able to distinguish between situations in which it is short-run problems that need to claim our attention and those in which it is medium-run problems that need to do so.

### **From Economist-Speak to Politician-Speak**

There is a big problem with the medium-run advice that we economic advisors always give politicians. The problem is how it translates into politician-speak.

The economist says that program X would be wonderful—the Medicare drug benefit, Medicare Part D; tax cuts for the rich; the Affordable Care Act, Larry Summers's infrastructure bank, etc. The programs sound wonderful. In Lyndon Johnson's day it was our need to fight the Vietnam War to save South Vietnam from the global communist conspiracy. (Consider how much happier the people of Vietnam would have been from 1975-2000 if their government had been like the government of Thailand or Malaysia or the Philippines or Taiwan.)

Then comes the economist, who says: that program is fine, but we also want to maintain the rate of economic growth, so you have to accompany your program with other policies that curb consumption. You have to do something to make Americans feel poor so they stop buying as many things for their households.

If there is one thing that an incumbent office-holder does not want to hear, it is an advisor telling him or her that they need to take steps to make Americans feel poor just as the reelection campaign gears up.

So we economists give our medium-run advice. And politicians—not all politicians: Bill Clinton was a notable exception, and Barack Obama would be an exception if he could find a Republican willing to negotiate with him—say: “that’s very interesting”, and they go off and find other economic advisors who will give them other and very different non-technocratic advice.

## **The Duty of an Economist in Government Is to Get Fired**

And sometimes the economists short-circuit the process, and censor themselves. I have not heard stories that any of George W. Bush’s Chairs of his Council of Economic Advisors—neither Glenn Hubbard nor Greg Mankiw nor Ed Lazear—made themselves annoying to the president by pushing for technocratic fiscal policies in the same way that Austan Goolsbee, Christina Romer, Janet Yellen, Laura Tyson, and company made themselves annoying to Clinton and Obama.

This is a perennial problem of American government.

This is why whenever Congress has a temporary 96-hour fit of sanity it will do things like try to impose PAYGO provisions on itself to restrict the ability of future congresses to enact popular programs without having to fund them and so neutralize their effect on medium-run investment and thus on economic growth. The fit soon passes, however, and then Congress turns all its attention to figuring out how it can circumvent the PAYGO rules it has just imposed on itself.

## **The Congressional Budget Office Under Pressure**

I would note that from a budgeting perspective these attempts of Congress to bind itself to medium-run technocratic rationality place enormous pressure on agencies like the Congressional Budget Office that are responsible for keeping score.

### Demanding a Lot from the CBO

I remember back in 1993 people were telling me this was putting much too much pressure on the CBO as an institution: that it could not possibly survive as a provider of relatively impartial and technocratic information. Well it’s 19 years later. Doug Elmendorf is hanging in there as head of the CBO. He is tough. I know if I were him I would get up in the morning, stumble downstairs in my bathrobe to get my coffee—and then turn around and go back to bed rather than going to the office. He soldiers on.

Here, fresh off the presses from yesterday morning, we have the CBO's brand-new Budget and Economic Outlook, with its two projections.

### The Current Baseline Budget Projection

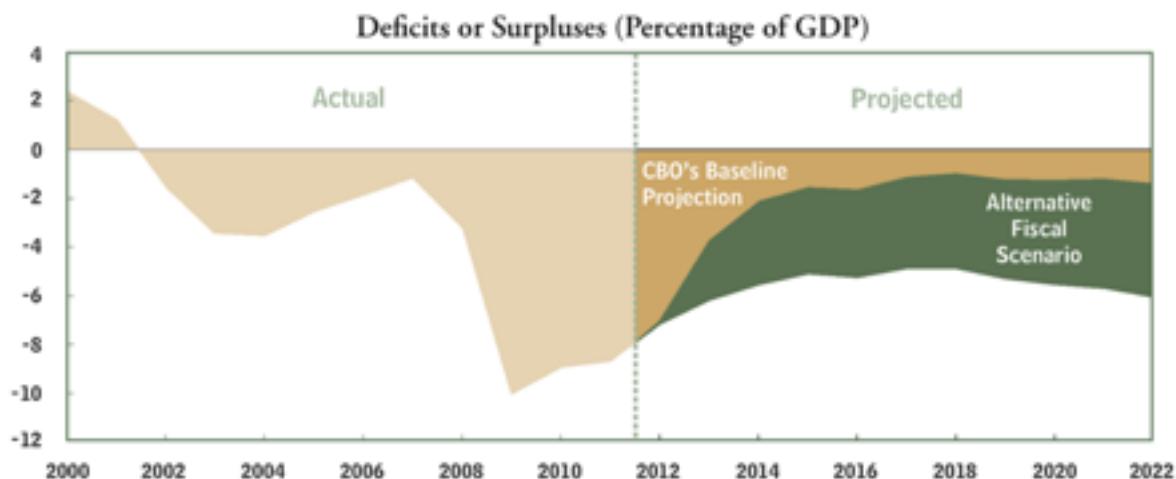
The first is the CBO's baseline projection—what happens if congress obeys PAYGO restrictions: if every time there is a 40 point of order in the senate about a violation of the Budget Enforcement Act as amended and as reintroduced and so forth, 42 senators stand up and say: “nope, we are not going to do this”.

The Congressional Budget Office's current-law “baseline” scenario forecasts what will happen if current laws are unchanged—or, rather, if PAYGO survives and if Congress raises taxes to cover additional spending and cuts spending to cover additional tax cuts.

### The Alternative Fiscal Scenario Budget Projection

The Alternative Fiscal Scenario forecasts what will happen if future congresses make the same carve-outs to PAYGO as past congresses have.

## The Long Run: Baseline and Alternative Fiscal Scenario Deficits



The baseline projection scares me a little. I would like to see continued fiscal stimulus out to the 2016 that I think the short run is going to last. Suddenly cutting the budget deficit back by this much this quickly seems to me a bad idea from the short-run perspective. But the baseline projection is almost surely not going to happen, because it assumes that the Alternative Minimum Tax is not going to be “patched” and the Medicare SGR is going to be imposed.. And we all know that Boxer and Feinstein and Gillibrand and Schumer would give everything valuable they have to their colleagues to get the AMT patched.

## PAYGO

There is the hope that over the decades PAYGO will commit congress to budgetary responsibility: be an implementation of what Milton Freedman called for in 1947 in his Program for Fiscal —Congress should be flatly prohibited from considering anything that didn’t have its own endogenous revenue component attached. But there are ways to game the system. One way is to make every program or every tax preference “temporary” so that it is, right now, cheap to pay for.

## Baseline and Alternative Fiscal Scenario Debts Held by the Public

**Federal Debt Held by the Public Projected in CBO's Baseline and Under an Alternative Fiscal Scenario**

(Percentage of gross domestic product)



Source: Congressional Budget Office.

Note: The alternative fiscal scenario incorporates the assumptions that all expiring tax provisions (other than the payroll tax reduction), including those that expired at the end of December 2011, are instead extended; that the alternative minimum tax is indexed for inflation after 2011 (starting at the 2011 exemption amount); that Medicare's payment rates for physicians' services are held constant at their current level; and that the automatic enforcement procedures specified by the Budget Control Act of 2011 do not take effect. The budgetary effects under the alternative fiscal scenario also include the incremental interest costs associated with projected additional borrowing.

And then at some point the members realize that making programs and preferences temporary so that they are always about to expire is a marvelous fundraising tool to raise money from people who benefit from those programs. The Medicare SGR for the doctors, the AMT patch for the upper middle classes of California and New York, the R&E tax credit for Silicon Valley.

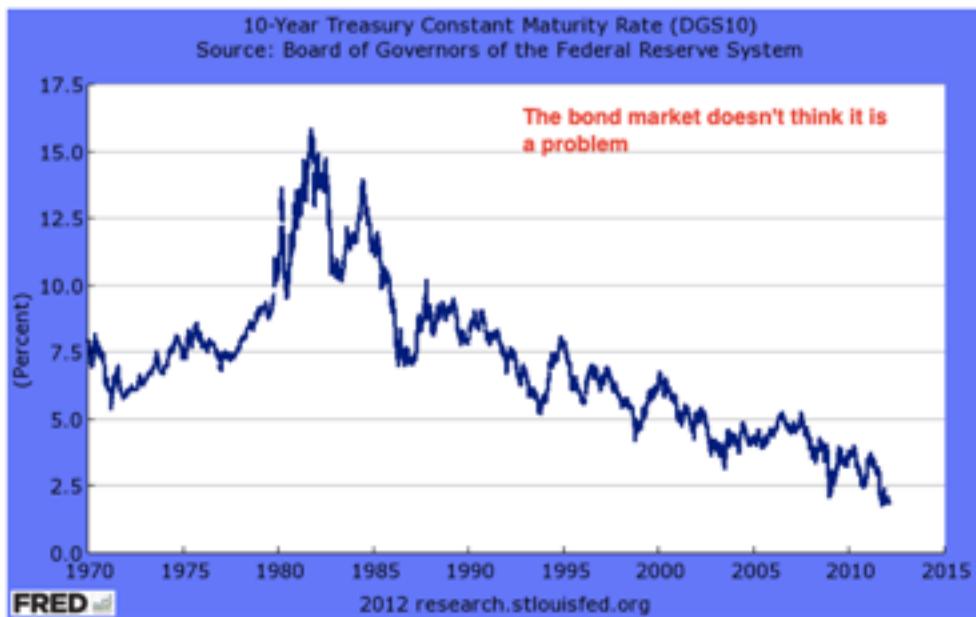
The ability of the US government to actually do its medium-run job of balancing the medium-run budget is breaking down. On the other hand, it has been breaking down since before John Ellwood first went to Washington back in the early 1970s. The permanent fiscal crisis of the U.S. government is out there someplace. But it is not here. And it is not now.

Yet.

## How Much Ruin Is There in This Nation?

As Adam Smith liked to say when people told him that if such a policy was enacted Great Britain would be ruined, “there is a lot of ruin in a nation”.

## Is Running the Debt-to-GDP Ratio Up to 92% Over the Next Decade a



Nevertheless, after 2016, when we hope to be in a medium run world, having the three or four percent of everything produced kind of diverted away from productive investment to funding the governments is not a great thing to do. Economic growth is going to take a hit—maybe a third of a percent per year, maybe a half, that we would rather avoid. And if you believe not in the CLB but in the AFS the hit is bigger: a full percent of GDP off of the economic growth rate in the late 2010s after we have recovered from the current Lesser Depression and are back to full employment.

The CBL scenario shows the U.S. debt-to-GDP ratio falling somewhat over the next decade. The AFS shows the U.S. debt-to-GDP rising over the next decade. The latter would be unwelcome (if we do recover from the Lesser Depression over the next several years) as it implies lots of crowding out and slow growth in the late 2010s. The AFS is a scenario in which we fail to accomplish our medium-run mission.

And while that would be a shame, a failure to solve our budget deficit problems over the next decade would not be a catastrophe. At least, the bond market does not think it would be a catastrophe: the bond market, even knowing all that it knows about U.S. politics, is very happy to lend the U.S. government money right now at very low interest rates.

## VII. The Long Run

Now let us shift from the medium run, in which it is nice to have a balanced budget so as not to crowd out investment and slow economic growth, to the long run.

In the long run the bond market will no longer happy lending money to a government that has no coherent plan to pay it back.

### **The "Logic" of Lending to Somebody Who Runs the Courts**

Suppose you lend money to General Electric. You can drive around the country and see that there are General Electric factories. You can drive to Long Beach and you can see containers being landed containing goods in which embody General Electric's intellectual property. You are confident that there is going to be value

there to pay you back when you lend money to General Electric. You can be confident there is going to be value there to pay you back when you lend to General Electric.

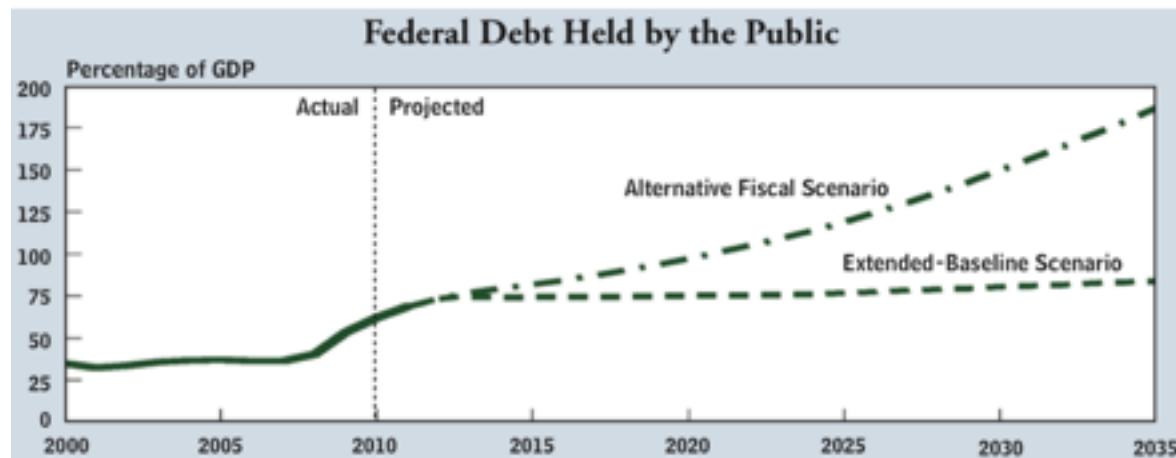
How about when you lend to the government?

Here in the Anglo-Saxon world—never mind how few of us in it have any substantial proportion of our ancestors coming ashore with Hengest, Horsa, Esc, Ella, Cymen, Wlenking, and Cissa to loot, pillage, rape, and burn—we have not seen any government default since the “stop of the exchequer” of Charles II Stuart, when he simply got sick of paying his bills and decided to balance his budget by defaulting on his debt and then accepting bribes from Louis XIV of France, who was desperately anxious that Britain not help the Dutch resist his invasion.

### Might This Logic Apply to the U.S.?

But the U.S. in the future may be different.

## The Long Run: Beyond 2020



What the CBO has done starting under Reischauer, continuing under O'Neill, under what's his name, under Holtz-Eakin, under Orszag, and now under

Elmendorf has been to start putting forward this thing called the “Alternative Fiscal Scenario”, the AFS. The CBO’s legislative mandate is to tell congress what spending and taxes are likely to be in the future if no laws are passed to change entitlement and mandatory spending, and if discretionary appropriated spending evolves according to simple and clearly laid down rules. But the CBO is uncomfortable with that because it believes that certain changes in the law are so likely to pass that they should be included in the baseline. The AFS is the CBO director’s view of what Congress is actually likely to do without much of a fight. In the ALS the deficit never gets down to much less than 5% of GDP even in 2018.

Thereafter it starts rising again.

The Medicare SGR postponement, the AMT patch, and most of all continued extension of the Bush tax rate reductions not just for the top 1% but for the top 30% who regard themselves as deserving of lower taxes bust the budget in the context of rising health-care costs.

### **What Is the Bond Market Expecting?**

Now up to 2022 we are not in uncharted territory. We have seen debt to GDP ratio levels that high before. The American economy can sustain that level of debt. It is certainly not the case that bond markets think that there is going to be a problem with the US paying back its national debt over the next 10 years or 30 year horizon. Right now people are asking 1.8% for holding a 10 year US government bond—if you think there is 2% inflation people are actually willing to hold a 10 years government bond even though they expect to lose purchasing power thereby. That is very different from the early 1980s when people were genuinely scared, or even 1992 when I went into the Treasury when the interest rate on 10-year debt was 7.8%.

The current configuration of asset prices is simply not what you would expect to see in a country that’s on the point of view of a fiscal catastrophe. If there is a chance, you would be expecting somebody right now would be dumping their Treasury bonds—and we would see a much higher interest rates. The problems, therefore, come not in the next generation but beyond that: beyond 2035, say.

By 2035 the AFS has our debt at 180% of GDP. The AFS assumes that the Affordable Care Act is not implemented—except for the parts of it that cost money. The tax on “Cadillac” health plans is not implemented, the Bush tax cuts are extended forever, the Independent Payment Authorization Board fails to take a hammer to Medicare reimbursement rates for specialists. The lesson I draw is that

either by 2035 we will either have changed our political economy enough that the AFS will be irrelevant or we will be on our way to Argentina-land.

### **An Easy Solution: Stop Electing Reagan- and GW Bush Republicans**

Parenthetically, my last thirty years of experience make me think that there is a very easy way to resolve our long-run fiscal problems. Simply eliminate from office the Republican Party we have had since 1980. If we do, we are fine. If we do not, we have a big problem after 2035 or so.

But 2035 is far off. The people who will be taking this course in 2035 are now in utero. Does that mean that we can ignore the long run for a decade, and worry just about the short run and medium run for a while? About five days a week I think we can ignore the long run for another decade. And others—Paul Krugman—for example, think seven days a week that we have at least a decade before we have to start seriously worrying about the long run.

### **The Invisible Bond Market Vigilantes?**

Are the Invisible Bond Market Vigilantes really there?

**And at Some Point the Bond Market  
Vigilantes Will Show Up, and Force Us**



The fact that we think most of the time, or all the time, that the long run is far off is what leads us, when we post to our weblogs, to post pictures like the one below.

## How Far Off Is the Long Run?

The long run looks to be far off.

So here we are making fun of the Bowles-Simpson Commission and of other people who say that immediate fiscal retrenchment is necessary because “the bond market vigilantes” are coming. We post pictures of Monument Valley on the Navajo Reservation. We ask people to spot the bond market vigilantes, cresting the horizon, coming to kill us all because our fiscal policy is unsustainable. And five days a week I am happy to ignore the long run. But today is Thursday. And on Thursdays I think differently.

## Greece

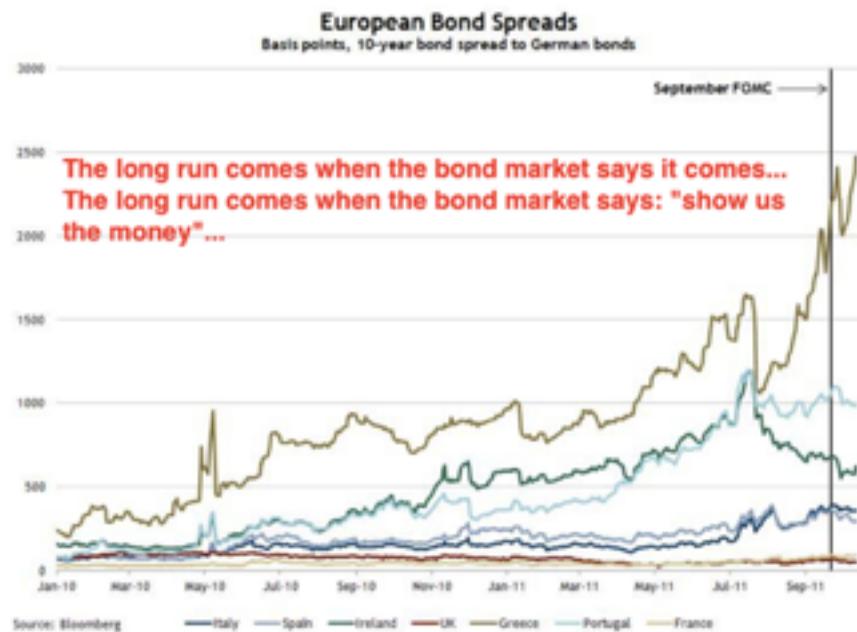
I look back at January 2010, and observe that back January of 2010 nobody was worried about the fact that Greece was spending money and did not seem to have any plans for taxes. People were happy holding Greek government debt back then even though it paid you only 2% a year interest more than German government debt paid.

What a change between January 2010 and October 2011.

By October 2011 Greek government debt was paying you 25% a year more than German government debt was paying. And last week it had 50%. The long run came to Greece, and the long run came to Greece in less than 2 years, starting from a situation that looked perfectly normal. The long run is here in Portugal. The long run may be coming soon to Italy and Spain. European political economy is right now in an uproar as they try to figure out how much debt of countries regarded at risk of default gets guaranteed, who guarantees it, and what systems are put into effect to try to keep this from happening again.

So because this is Thursday I say that simply because the fundamental fiscal crisis of the U.S. social insurance state is not scheduled to come before 2030 does not mean that the long run can be ignored for decades. The long run might not arrive until 2030 or 2040. But the long run might come very soon indeed. The long run comes as soon as bond traders lose confidence that fiscal problems will be solved before the long run comes.

## But We Don't Have to Worry Until the 2020s or 2030s, Right? Right?



Today I think there is a 10% chance that at some point in the next decade we Americans will be saying that the long run is here, and we will suddenly need to deal very quickly with the fact that we have promised a very extensive social insurance state—especially as involves health care for the elderly and the poor—and we have been unwilling to make any plans to tax in order to actually fund that.

And let me stop there.

## Appendix: Three Notes

But before I leave you, I want to add three notes:

1. A note on the role of China in all this.
2. A note on the gold standard.
3. A note on “uncertainty”

## A Note on the Role of China

Right now China is trying to move three million people a year from subsistence farming in the countryside to industrial and service employment in the cities.

The best way they can think of to generate jobs for those three million people per year is to buy up U.S. government bonds so that the people who sell them the US government bonds then have the renminbi they then turn around and use to buy exports from China.

This is not quite a free-market transaction. China's State Council is not acting as a profit-maximizing economic agent. But it is acting as it is for completely plausible and realistic reasons. China's State Council wants, more than anything else, to maintain full employment in Shanghai. Otherwise their heads are likely to end up on pikes.

They are not going to make a rapid transition to relying on domestic demand rather than exports to maintain full employment in Shanghai. But they are also not going to suddenly stop purchasing U.S. government bonds. A sudden stop would be much more damaging to the Chinese economy and to the futures of the members of China's State Council than it would be to the US economy.

## A Note on the Gold Standard

Should we eliminate the Federal Reserve and return to the gold standard because the Federal Reserve caused, or allowed, a bunch of inflation in the 1970s?

The Federal Reserve did indeed create a lot of inflation in the 1970s.

They say they are very sorry and won't do that again.

Note that it is entirely possible that under a gold standard we might well see similar amounts of inflation: there is nothing that guarantees price stability under the gold standard. Whether you have inflation or deflation under the gold standard is very much very much on what was happening in gold mining, on whether or not silver is a monetary metal alongside gold, on how much precious metals the institutions of the banking system require, and so on.

If what you want is price stability, the gold standard is not the way to get there.

If what you want is small fluctuations in unemployment, the gold standard is really not the way to get there.

Lots of people after the First World War thought it was important to get back to the gold standard for credibility, consistency, and anti-inflation reasons. Then the world fell into the Great Depression for many reasons, but one of the biggest was because of the way the post-WWI gold standard operated—as my colleague Barry Eichengreen will tell you not at four hour length but at 40 hours length *ex tempore*. Ever since very few people have still thought that a gold standard is a good idea. The fact that some of these people may come in first or second in Republican presidential primaries is very worrisome. But it does not mean that the position that we should restore the gold standard has heavy intellectual weight.

Almost everyone who was in favor of the gold standard in the 1920s dropped their belief in the 1930s. And I have seen no evidence to make me think that that dropping it was a mistake.

## A Note on “Uncertainty”

If uncertainty about future government policy was a big deal, we would expect to see it in bond prices and in the stock market. Entrepreneurs unwilling to invest because they fear future taxes and regulations are also entrepreneurs willing to sell their current stock positions for a song and shift their money to the Cayman Islands. Thus you expect the stock market now to be low when uncertainty about future government policy is disturbing enterprise. You expect interest rates on government bonds to be rather high as well, for one way uncertainties about future policies get resolved is through inflation. And right now they are not.

If you actually ask people, you learn that there is considerable economically-damaging uncertainty—but the uncertainty is all about how much spending there will be next year or the year after. The markers that would indicate that enterprise was being hobbled by uncertainty about government policy per se—those markers just are not there. This seems to me to be a side issue—anther argument that is based on political wishes rather than on economic evidence.