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THE LONG RUN OUTLOOK FOR THE FEDERAL BUDGET:
DO WE KNOW ENOUGH TO WORRY?

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Welcome:

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Featured Paper: Fiscal Uncertainty and How to Deal With It:

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Featured Paper: In Good Times and Bad: Designing Legislation That Responds to Fiscal Uncertainty:

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P R O C E E D I N G S

MS. SHEINER: Good morning and welcome. My name is Louise Sheiner, and I'm the policy director at the Hutchins Center on Fiscal and Monetary Policy here at Brookings. Our goals at Hutchins are to both improve public understanding of fiscal and monetary policies and to be a place that gathers people from academia, government and business to try to improve those policies. The Hutchins Center was made possible by the generosity of Glenn Hutchins a bit later today. We're also pleased to welcome several members of our advisory council including Steve Cecchetti, Marty Feldstein, Bob Reischauer and Alan Murray.

Our topic this morning is fiscal uncertainty. We all know that projections for federal government deficits over the long run show that we are on an unsustainable path. But it is also true that those projections have very wide confidence bands around them. The question of how that uncertainty should influence policy is quite controversial. Some argue that because we have little ability to predict future deficits, we should instead focus on the here and now. And while others argue that the fact that the future could turn out worse than we expect means that we should pay even greater attention to issues to long run uncertainty.

It's also possible to take steps now that can reduce the uncertainty of a fiscal outlook, but these steps may have drawbacks as well as benefits. The question of fiscal uncertainty is a hugely important but woefully underemphasized topic, and we're lucky to have some of the world's leading experts on these issues here today to discuss and debate it.

Our morning will proceed as follows: Our first paper is on the big question of whether uncertainty means we should pay more or less attention to projected fiscal imbalances and it is by Alan Auerbach, the Robert Burch Professor of Economics and Law at the University of California at Berkeley. The paper will be discussed first by Professor Charles Manski of Northwestern University, and then by Nobel Laureate and MIT professor, Peter Diamond.

We then feature a paper on policies that can insulate the federal budget from uncertainty by NYU law professor and former Obama administration official, David Kamin. That paper will be discussed by a panel of experts with much practical experience formulating policy, consisting of Bill Hoagland, senior vice president of the Bipartisan Policy Center, Gene Sperling, former director of the National Economic Council for both the Obama and Clinton administrations, and Tennessee Congressman Jim Cooper.

Finally, we will hear from two people who actually have the responsibility of explaining uncertainty to policy makers, CBO director, Doug Elmendorf and Robert Choate, chairman of the Office of Budget Responsibility in the U.K. Both papers presented today, as well as the slide shows you will see, will be available on our web site. So, let's get started with the first paper.

I'm particularly pleased to have Alan Auerbach here to kick off our first purely fiscal event at Hutchins. Alan taught me most of what I know about public finance, first as my professor in graduate school, and that at the Joint Committee on Taxation where we again, overlapped. I still tote around my notebook from Alan's public finance class at Harvard and have referred to it many times over the years, so I know what he has to say is worth paying carefully attention to and remembering. So without further ado, please welcome Alan Auerbach. (Applause)

MR. AUERBACH: Thank you very much, Louise. This is the title of my paper, and it's a very certain title, that there's more uncertainty in the paper as well as in the subject. So to start, as Louise said, long-term projections for the path of federal revenues and spending show a significant imbalance under current policy. Now of course, that in itself is a question that one has to deal with; that is, what is current policy? And there are disagreements about the best way to think about that.

Nevertheless, I think under a reasonable analysis of -- and assumptions about what current policy is, there is a significant imbalance between expenditures and revenues that leads to a very large fiscal gap, something that CBO measures periodically. Bill Gale and I have been doing it for a number of years. Several percent of GDP on an annual basis, much larger than the kinds of fiscal adjustments we're accustomed to making, even in what we view as large policy changes.

But on the other hand, projections are also very uncertain, and about that, there's little disagreement. And the uncertainty goes up with the horizon over which one is forecasting. And just as a very modest illustration of this, here is one figure from the paper taken from a CBO document in 2008 showing confidence intervals, that is, statistical predictions of the likely outcomes, as of mid-fiscal year 2008 looking through the end of fiscal year 2013, of course, starting in fiscal year 2007, when the deficit as the share of GDP was known.

And the wider -- you see what's sometimes called a confidence cone or a band. As you get up to the highest and lowest series are the 5 percent and 95 percent confidence interval, and there's also 25 and 75 percent. The solid line is what the forecast was; that is, the listed forecast was for the fiscal years. And then, the dotted red line is what actually happened.

Now, I have to adjust what actually happened, because the predictions were made under current policy, and since policy changed, I took out the estimates of the effects of policy. So, the red line isn't what the deficits actually were, but what by CBO's estimates, after the fact, the deficits would have been without changes in policy. And you could see that even in the second year being predicted, fiscal year 2009, the prediction was actually -- the actual value was outside the 90 percent confidence band.

Now of course, 2009 wasn't just your typically year, and that's an illustration. And so it's reasonable. It may very well be that these confidence bands were accurate, and we just had a really unusual draw in 2009, as we know we did. But the fact that the confidence band widens over time is customary from predictions like this, and it comes from the fact that some things that we are predict -- for some things that we are predicting that are important in forecasting revenues and expenditures, the errors compound over time. For example, the level of productivity.

The productivity growth each year is uncertain, and so if you're looking at the level of productivity several years in advance, that's going to be the result of a combination of annual errors that compound. And so, the revenues from that level of GDP will be more and more uncertain. Similar things apply on the expenditure side, so that even five years out, you've got something a little way from a deficit of 5 percent of GDP, and a surplus of 5 ½ percent of GDP. That's about half the size of the federal budget in terms of the range of uncertainty. And that's just five years out. So, presumably, for a very long-term forecast, the problem is even worse.

What should we do about this uncertainty? Well, just to emphasize, my paper is not about what to do about the predicted fiscal gaps themselves. And of course, there's dispute about that. It's rather about how our responses should differ as a result of there being a lot of uncertainty about these projections. And you may find it hard to separate these two conceptually, but I think it's important to do that, because the arguments about one tend to spill over into the arguments about the other.

Now, there are a couple of common responses I want to discard as not useful in thinking about this issue. And one of them is Stein's Law, which is, as many people know it, is from Herb Stein, that anything that can't go on, won't. And many people say, well, if you look at these projections of Medicare and Social Security occupying such a huge fraction of the budget, we know that’s not going to happen. And some people take comfort in that. I don't understand why, because knowing that something is going to change doesn’t really give you any information about how it’s going to change, when it’s going to change and when the consequences of these changes are going to be, or the delays in making changes. And what one would really like to know is if we just sort of don't pay any attention and wait for things to fall apart, how will the outcome when things fall apart compare to what we could do if we were actually designing policy?

A second common response is projections behind, and you can fill in your favorite number here, years are so uncertain we should just ignore them. Twenty -- ten years, 25 years, five years, one year. You can choose it, and one hears arguments for different numbers, depending on who’s making them and about what particular set of projections. Well, I don't actually understand what that means.

So, does it mean that if we have projections showing that things are getting worse and worse over time, say, 25 years out with increasing uncertainty about the fact that that point estimate, that it’s getting worse and worse over time -- does ignoring things after that time mean we just say, oh, the problem went away after 25 years? That this thing that looks bad but uncertain, suddenly, 25 years out, no problem. If not that, then what? I don't understand what this viewpoint really represents.

So, what my paper does discuss is -- and suggest, is supported by the economics, is that if the future is uncertain, there is a case for saving, as a form of self-insurance, if you will. And that’s an argument that really comes from the way individuals should behave with their own uncertain prospects. And although it’s more complicated and sort of an argument that one can make for the government, as well.

We'd like to -- uncertainty is bad. If we could, we would avoid it, but there's not really any way you can ensure against aggregate uncertainty. There's no insurance company that can provide insurance for that. And so, as a measure that's not as good as making the uncertainty go away, putting resources aside so that when -- if really bad outcomes occur, you're somewhat more protected than you otherwise would be.

Now of course, there are many complications, particularly when you're thinking about the government doing this, rather than individuals. And I go through several of these in the paper. I won't have time to discuss all of them, but let me just deal with a few of them here. One is, well, it's not that we're uncertain about the future, it's really that we have no idea. We just don't know.

Well, this is really unfortunate (Laughter) that we don't know. And obviously, we wish otherwise. But that's life. We are very uncertain about the future. It's something that we might feel bad about and something we may not be sure how to deal with, but it's not something we should ignore. It's hard to come up with a coherent argument for why we should ignore things about which we're very uncertain.

Another common argument one hears is that people will be better off in the future, so they can absorb greater fiscal burdens than those being imposed on people today. Well, the first thing to say about this is, this is really an argument about how to deal with projected fiscal imbalances, again, noting this distinction. That is, if we knew for sure that taxes would have to go up or benefits would have to go down for people in the future, that would be an argument one might support, based on the greater well-being of people in the future. It's not really an argument about how to deal separately with, or in addition to the uncertainty.

And indeed, there are arguments suggesting that the uncertainty exacerbates the problem of leaving fiscal burdens for the future, in particular, if we get a series of negative events that mean that taxes don't just have to go up as we expect them to go up, but have to go up a lot more. We could have very serious economic damage as a result, or some sort of fiscal crisis if we find ourselves unable to collect the tax revenue we need to. So, I think that actually pushes us more toward dealing with the problem now than simply projecting imbalances would.

Second, we should wait until we have a better idea about the future. Well, this may be consistent with a view of the world in which there's sort of a certain amount of uncertainty out there, and you know, we'll resolve it as time goes by. Well, the first thing to say about this is there's always more uncertainty coming. That is, we may resolve some issues, but other new ones about which we're uncertain will arise. And you know, if we wait, we're not really going to make uncertainty go away, but we will restrict our options for dealing with it.

Second, there may be cases in which we do expect a resolution of information of uncertainty about certain things. We may discover whether the provisions of the Affordable Care Act mean to control costs will actually do so. We may learn other things about life expectancy or costs of other government expenditures, and it may make it easier for us to deal with things. But I view this as an argument more about the type of response that we should undertake today, rather than whether we should respond today.

For example, it might cause us to delay making any further major changes in our healthcare delivery system, because we want to learn more about the most efficient way of delivering healthcare. But it doesn't mean that we should put resources aside to make it easier to deal with the fiscal uncertainty that we face.

Another argument is, well, look, there's uncertainty. We're getting new information all the time as we resolve the temporal uncertainty. We can't be continually jumping around changing policy every time new information becomes available. I think that's right. I think there are a couple of implications. First, that when we do act, we should act more forcefully. That is, if information is coming, we're learning that the future is worse than we thought a couple of years ago or better, and that leads us to want to act, there are certainly costs to changing policy every year, leaving aside the political costs of trying to make it happen. There are costs to the economy. And so, we might want to act more gradually or wait to act until we really feel we need to. But on the other hand, when we do act, we should act more forcefully, knowing that we're not going to have an opportunity to do it again the near future.

And finally, and this is something that David Kamin talks about in his paper, we could put in place some automatic responses, if we can be fairly confident about what those responses should be as events unfold. An example of this might be -- and I'm not advocating this, but just as an illustration, indexing Social Security -- age of normal retirement under Social Security to life expectancy. That's been proposed by many people. It's not something we have. It would certainly make it easier to keep the Social Security system solvent.

On the other hand, that might not be a good response if there's increasing heterogeneity in life expectancy, because then, some people would be much more adversely affected by that increase in the retirement age than others, and that they would want a different response. The key is that the automatic policy responses that we build in ought to be things where can say, if an adverse event occurs, we have an idea of what that event is going to look like, and this is the kind of response we're going to want.

With greater uncertainty, projections are more susceptible to political influence. I guess the story is, if the person doing the -- or the agency doing the forecasting doesn't have a strong argument about what might happen, then political influences might be more able to change what the forecast is. It's hard to defend against this influence.

That may well be true. I'm not an expert on this, but to me, it provides an argument for institutional protections and transparency. I think ignoring information is a very bad second choice. Unfortunately, it may be the one we're forced to make, but it certainly is one that we should make only as a last resort.

So, to summarize my comments and my paper, which as I said, goes into more detail in many of these points that I've made, uncertainty means that our policy choices will always turn out to be wrong in some sense. That is, it's going to make life more difficult for us because we're going to have to make adjustments, and we're not going to get it right. We know we're not going to get it right except (Inaudible).

But that doesn't mean that ignoring uncertainty is the right thing to do. We can't make it go away by ignoring it. It's still there. And it's better to formulate a more active response, which can lessen the negative consequences of uncertainty than simply to ignore it and let things happen. Thank you. (Applause)

MR. MANSKI: Thank you. I'm very happy that the Hutchins Center has organized this event. Marimax are going to follow on Alan's and the most broad principles that we should be facing up to uncertainty, rather than ignoring it. I've been trying to get that message across for quite a while in my own work. I didn't write a paper specifically for this event, but here's a couple of sources at the bottom, if you're interested, a book, "Public Policy in an Uncertain World" published a year ago, and then an article that I'll talk about a little bit today in communicating uncertainty in official economic statistics that will be out in the *Journal of Economic Literature* I think, next September. And that's on my web page, if anyone wants to take a look at that.

Let me take a moment on the general themes of my work. They are foremost, that society should face up to the uncertainty that attend policy formation. And I've been quite critical of various practices in policy analysis that hide uncertainty rather than facing up to it. My background is in kind of attrition rather than public economics, so I'm trying to be very careful about how we make empirical inferences. And often, the way we make empirical inferences is by taking whatever data is available and adding whatever assumptions are needed to draw strong conclusions. And that may not seem a red button for most people, but for me, that's what really gets me riled up.

And so what I've been arguing is that credible policy analysis would explicitly express the limits to knowledge. I try to show how that might be done in my technical work. And on the broad notion is to study how policy makers can reasonably -- and I won't say optimally, because that's going too far -- I think that's pushing things, but reasonably is as far as I would go, make decisions in an uncertain world. And I think that's what Alan's paper you know, is focused on.

Now, if we're going to face up to uncertainty, Alan was focusing on projections to the future. But we have to face up to uncertainty even about the things that we think we know about the economy today. So, I want to talk a little bit about communicating uncertainty in official statistics. So, we have all kinds of statistics that summarize the state of the economy that are reported as point estimates. So, these could be unemployment rates, you know, growth in employment, GDP growth, household income statistics and so on that the federal statistical agencies report.

And if you look at the news releases that come out monthly or quarterly, you find out that there's very little mention of error in any of these statistics. If you dig down into the technical publications, and I've done this from the Census Bureau, the BLS and other agencies, you'll find verbal acknowledgement regularly that estimates are subject to sampling and non-sampling error. You'll find a little bit of trying to measure actual sampling error by confidence intervals and standard errors. But most of the error is really non-sampling error, and you won't find any quantification of the non-sampling error.

So, reporting official statistics as point estimates manifest a tendency of what I've called for policy analysis, to project incredible certitude. You make as if things are certain, but there's really not much credibility behind it. And agencies do not justify the way that they produce point estimates.

Let me give just three examples that I think are important. One, if you look at GDP estimates to come out quarterly, those of you who know, the Bureau of Economic Analysis first will report an advance estimate, then a second estimate, a third estimate, and then at the end of the year and then even after five years, there's a continuous process of revision of the estimates. And the revisions matter a lot. I mean, you can think from the estimate the GDP's gone up by 1 percent. A month later you say, oops, it went down by 1 ½ percent. But the estimates that come out are not accompanied by any error measures. The way the BEA does it is by doing trend extrapolations when the data is incomplete and replacing the trend extrapolations with real data as they come in. And that's a process that takes a lot of time. The Bank of England actually in the British context, actually puts in its -- does a fan shock that puts error bounds around current GDP estimates, and I think that that's something that we could do here.

A second source is in sample surveys. For anyone who uses sample surveys, you know there's missing data. People are interviewed or they refuse to answer questions. In the current population survey, the basis for our household income statistics is a huge amount of missing data on household incomes, you know, upwards of 40 percent.

And you'd never see that from looking at the press releases that are put out, because the Census Bureau imputes everything, and you've got to dig down and you've got to teach econometrics to know that these imputations may not have you know, much value. So, there's big potential problems there. A third -- I could go on a great length about any of these issues.

But a third that drives not just me crazy, but macro economists regularly crazy, is the use of seasonal adjustment. If you find out that the unemployment rate went down last month relative to two months ago, did it really go down, or is that because of the seasonal adjustment formula, the X12 or X13 from the Census Bureau through it's auto regressive moving average process made it look like it went down one or more. Now, in this building, I don't have to say much more about this. Jonathan Wright from Hopkins wrote a very nice paper on this; came out as a Brookings paper just a year ago.

So, we have all of these issues. Agencies could use established principles to report sampling error in statistics. It's more challenging to measure non-sampling error, but I think that good faith efforts would be more informative than reporting official statistics as if they are truths. Even if it's hard to report non-sampling error, it's better not -- to do it than not to ignore it.

Why is it important to communicate uncertainty? Governments in private entities, of course, use official statistics when making decisions. The quality of decision making may suffer if decision makers incorrectly believe the statistics to be accurate, or if they think they're sophisticated, then they have to guess at what the error margin should be, but they don't really know what the magnitudes of the errors are. I think it would be better if the agencies -- the statistical agencies would communicate the uncertainty and then we would have a better understanding of what information is actually available about the economy.

Now let me, in the rest of my time, let me move forward and talk about projections. I've written about this before. I warned Doug Elmendorf (Laughter) that I would raise this question again about CBO scoring practices. So, the Conventional Budget Act that established the CBO has been interpreted as mandating the CBO to provide point predictions or scores of the budgetary impact of legislation.

The scores, of course, are conveyed to leaders of Congress and they're not accompanied by measures of uncertainty. There are various things that CBO does that does express uncertainty, but not the scores. One notable example that I've used in a case study in my book was the scoring of the Affordable Care Act, and here's a quote in the letter that Doug sent to Speaker Pelosi back in 2010. The CBO and JCT estimating that both pieces of legislation -- people in this room will remember there were two pieces of legislation -- would produce a net reduction of $138 billion in the debt.

So the question is, what does that $138 billion reduction really mean? Plus or minus five billion? Plus or minus 50 or whatever? Doug will remember -- that's Douglas Holtz. He wrote in the *New York Times* that the real number was going to add to the deficit by 562 billion, so his estimate and the CBO estimate were off by $700 billion.

So, what I've argued is that the CBO should express uncertainty in scoring. And I have to say -- and this is controversial. Okay? I gave a talk at the CBO a couple of years ago about this. The CBO has established an admirable reputation for impartiality. Maybe it's best to leave it alone and just continue things as they are. I've worried though, and maybe this is just in my being an academic from the outside who doesn't understand Washington, but I've argued that this currently -- there's been a social contract to accept CBO estimates.

And I worry that social contract is going to break down at some point; that someone will dig in -- someone, whether in Congress or the media will dig in and find some estimate from the CBO they don't like; ask how the sausage was put together, and then say, well you know, who knows. And then, the CBO's reputation will go. I would rather the CBO face up to this and provide uncertainty in its scoring measures. A very simple way to do this might be to provide interval forecasts in upper and lower bound. It could be a probability of distribution. We don't have to get into those details.

Now, the question is this. It's the right question to end in this room. Can Congress cope with uncertainty? Because when I've talked about this to academic audiences, everyone says to me, well of course, the CBO should be transparent about the uncertainty in its scores. When I talk to people around Washington, they tend to be skeptical.

There are two reactions that I've received. Some people assert that members of Congress are psychologically or cognitively unable to deal with uncertainty (Laughter). I've heard that many times. I won't ascribe it to any particular individual, but I've heard it many times. Some give a game theory argument that Congressional discussion making is a non-cooperative game, and expressing uncertainty will make things worse. There was one Brookings economist with whom I had a fairly uncomfortable email exchange about that a few years ago.

I'll end up with three questions, because I can't answer whether Congress can cope with uncertainty. So, I just want to end up with these three questions. First, how the users of official statistics and CBO scores actually interpret them right now? Second, how would transparent communication of uncertainty affect policy making? And then third, and this is what this latter half of Alan's paper was about, is what would constitute in normatively reasonable fiscal policy in an uncertain world? Thank you. (Applause)

MR. DIAMOND: Alan has given us, first of all, a clear picture of uncertainty out there, and it is large. I want to do a few things around it. First, I want to -- no coordination here -- quote Chuck Manski, that there is an important political question of how different ways of conveying uncertainty would impact in those matters, before I knew what Chuck -- before I even paid attention to who else was on the panel. (Laughter) I thought, this really belongs.

And what's important to keep in mind here is that what we really want around policies are full blown benefit costs, so we can think about why we like it and why we don't like it. But first of all, there's no way that can be done by a neutral agency, because if nothing else, it's going to involve way too put on different concerns, way too put on different parts of the income distribution.

So, the issue is, what can be done by an agency like CBO, which will help with the process? And I think we need to answer the questions that Chuck just posed for getting on with that. And conveying uncertainty should always be there, but the question is how and how that fits in. So, I want to focus on Social Security for the odd reason that I know a little bit more about it than the overall budget.

So, the Office to the Actuary does three projections, and that's conveying uncertainty. It's often criticized, because there's no easy way to hang probabilities on those two outsiders that meant to be unlikely, but no easy way of doing it. And there's also a scholastic projection, which I think has the unfortunate effect, again, Chuck mentioned it -- this is leaving outside uncertainty about the model you're using. It's leaving out uncertainty about the non-stationarity of the time series you're using to set up the Monte Carlo.

I think it's really important to have both, just because they're going to communicate and what we can hope to do is communicate. So, let me go to the three issues that are -- everybody is talking about -- I didn’t invent these -- around the uncertain projections. Automatic adjustments, legislation for future implementation, and additional savings of what I’ll call Alan’s theorem in response to increased uncertainty.

I want to say love automatic adjustments. I think it’s important to have legislation for future implementation, and I think we need a lot more theory work done before we accept Alan’s theorem. This is not to say I think it’s wrong, but to say we need some serious studies. And let me just run through some of this. Automatic adjustments, Social Security has some of them, adjustments for prices, adjustments for wages. That’s it.

You look abroad -- Sweden has adjustments for mortality rates, for life expectancy, both for initial benefits and the increase in benefits for delayed claiming. Germany has a benefit adjustments for the old age dependency rate, and Sweden has an adjustment which they made an absolute mess of, if the projection of solvency gets out of line.

Jumping ahead, having read the abstract of Kamin’s presentation, I think trying to deal with solvency projections automatically would be hard and not a good idea. Doing something for mortality, as Peter Orszag and I proposed in our 2005 book, I think would be a good idea, but again, Alan’s example indicated the importance of being careful for that.

And let me just throw out the point that CBO in its projections assumes all the benefits will be paid, and there will be no increase in revenues for covering that. Perfectly sensible central projection. It’s also the projection in the alternative fiscal scenario. I think the probability I would hang on that outcome is very close to zero. It’s hard to imagine it’s debt financed, full payment of benefits with no change in revenues, since our real -- two real histories of it in ’77 and ’83 show benefit cuts to be part of the story, and revenue increases to be part of the story.

So, just to move on then to current legislation for future things; some of them have no credibility and don't affect private behavior, and turn out often not to happen. In Social Security, the history is rather different. From the beginning of Social Security up till 1990, there was always a future tax rate increase that had been legislated. None of them were ever repealed. Some of them were delayed. Some of them were accelerated. It clearly had an impact on the ability of Congress to deal with that.

And the increase in the age for full benefits, which was voted in ’83, has had no serious headwinds. So, trying to figure out when you can do this in a way that leads to better policy, seems to me to be an extremely important point. And now, let me move on to Alan’s theorem. That’s the theorem. You’ve seen it from him, and he draws on a model of individual behavior for it, which makes the point that there are conditions you need for that. And secondly, he makes the point that with uncertain rates of return, it becomes more complicated.

And here’s -- I hope I'm not being unfair, a hundred percent of the logic behind -- you go from the individual to government. I think there’s more in Alan’s head than was in the paper, particularly what was in the draft I went to. So, let me talk about what missing theory there is. And first I draw on a paper by, of all people, Alan and Kevin Hassett which made the assumption that when you had legislation, that triggered a delay until the next legislation.

I presume, I didn’t actually read the whole paper (Laughter), that Congress was acting in an optimal consistent way around that one political constraint. But I think the point to recognize here, unlike the models of individual behavior, is we don't expect continuous adjustment, but periodic adjustment.

The second element is, what kind of adjustment do we get? I don't think we want to be modeling Congress as always being consistently optimizing overall in a way we approve of. And I looked around -- were there any things on individual behavior one might draw on, and this paper has behavioral misbehavior when you're making the decision an uncertainty about what will happen if you try to do it again of time and analyzes how to set the budget constraint for yourself to trade these off. I think that's an interesting mindset for going forward.

And now, I want to turn to deadweight burdens of taxation, which are part of Alan's presentation. And my hobby horse is, if you ever say the word deadweight burden, you need to say something about the income distribution changes that are accompanying the particular level of deadweight burden from the particular tax policy you're looking at. Obviously, if we had lump sum taxes, we could have no deadweight burdens, but we can't for asymmetric information.

If we had a small enough budget and a good enough population so we could have a uniform head tax to cover all of the budget, then we could have no deadweight burdens. But we might not like that. We might choose to have deadweight burdens in order to have a different tax structure for better income distribution.

In that case, the presence of deadweight burdens is a sign that the policy is better, not worse. And Emmanuel Sayez in his thesis asks the question, if you can't finance the government with a poll tax and you don't want to pay attention to income distribution, what do you do? And it turns out, you get a particular Mirrlees optimal tax model, and he goes ahead and solves it. And my thinking is, we need on the policy adjustment rather than the whole budget argument, an analysis of the minimum deadweight burden. That counts as deadweight burden, and if the actual policy is anything different from that, that's making the policy better, not worse.

And I just want to remind you of two standard welfare theorems in the contact of public finance. The absence of distorting taxes when you have income distribution concerns and some other conditions is a sign that you're not optimizing. And even if it's just individual uncertainty that you're dealing with, with asymmetric information, again, the absence of distorting taxes is evidence that you don't have a social welfare optimum. Thank you. (Applause)

MR. WESSEL: Well, thank you very much for that. I score you high on two counts. One is clarity and the second is brevity, because we know they don't always coincide at Brookings, so I appreciate that. Alan, I want to ask you about something that Peter raised, and it basically goes -- as I understand your argument, you're saying that we should do enough today to put the federal government on a sustainable fiscal course that involves probably some changes to taxes and benefits.

So, whatever you think we ought to be aiming for, we should do that. And then, we should tighten our belts more to account for the fact that there's a lot of uncertainty about whether we can reach our target.

MR. AUERBACH: Yes, that's basically it.

MR. WESSEL: And that sounds like we have to go through a lot of pain that may not prove to be necessary. And the reason we should do that is?

MR. AUERBACH: The reason we should do that is that -- first of all, I'll say, you know, life is more complicated than that. But starting from that, you know, which is basically what I'm saying -- if there's a lot of uncertainty and we have a series of adverse events which cause things to be within the predicted range, but a lot worse than the baseline estimate, then if we haven't taken forceful action, we're going to have a disaster -- economic disaster -- not just a -- you know, some people paying higher taxes, but a real economic disaster.

MR. WESSEL: And it's not enough to build in indexing or triggers. It's, we have to save more now in your --

MR. AUERBACH: Well, you could build in indexing or triggers. The problem is that that overcomes the policy problem. That is, you won't have to -- you know, you've enacted it. You won't have to enact it. But for example, suppose the trigger is marginal income tax rates go up when there's a bigger revenue shortfall. Well, if it only happens after the shortfall, or when there's an incipient shortfall, that's still going to give you the same path of taxes that you would have done if you were simply responding, and that could still give you, you know, very, very high marginal tax rates in the future, or very, very low social insurance benefits.

So, it overcomes the political problem and it perhaps, avoids a fiscal crisis from an inability to act. But it doesn't change the economic costs or the adverse distributional effects.

MR. WESSEL: Peter, do you think he's right or wrong?

MR. DIAMOND: Both. How's that (Laughter)?

MR. WESSEL: Right.

MR. DIAMOND: The point here is that he was describing a particular way of responding to triggers that are there. And first of all, there are other ways to construct triggers that are forward looking. And secondly, one of the problems we have with some of these things is Congress will have powerful incentives to undo them rather do more of them.

But we also have the ability to do (inaudible)so, I think until we get a more useable, useful picture of the interaction of position in political action, it's hard to jump to either side of that. I don't think they're saving more now is necessarily part of the optimum. It may be. But in Alan's sense of saving in terms of --

MR. WESSEL: Chuck, do you want to weigh in on this?

MR. MANSKI: I think I will only add to what Peter was saying. I think actually, it's uncertain (Laughter), which goes with this morning. Alan began with -- Alan's presentation was verbal. People like Peter and myself, and also, Alan, never really feel comfortable unless we see a well worked out model. And of course, that wasn't in this paper, but as Peter alluded to, it really -- I don't think it's there in the literature, even in Alan's earlier work from 2007.

When I was in graduate school and I learned the precautionary savings arguments, the effect of uncertainty on them depend on the third derivative of the utility function, then my view was oh, this is really subtle and we shouldn't be drawing strong conclusions (Laughter). Now, whether that argument even applies to government savings, I don't know. But even if it did, this is subtle. And even if one was to leave aside the political economy questions about Congress, would we have that Peter was raising and just view this as a traditional economic social planning program, I'm not sure what would be sensible government policy.

So, I take what Alan's done today as he's doing us a service by sticking his neck out and making a strong proposal, which I hope would lead to the research that would really get underneath this.

MR. WESSEL: Alan, you haven't spent all your life in academia. You spent some time on the Joint Tax Committee. Do you really think that members of Congress, even if we say the median and above -- members of Congress can actually distinguish between what's a projection and what's the uncertainty around that projection? Are we being a little bit naïve here if we think that that's even possible?

MR. AUERBACH: No, I don't think we're being naïve. I think that obviously, that some members are more expert than others. There are members of the budget committee who are likely to understand it better than people who aren't. And I also think that while they might not understand it in terms of understanding statistics the way we do, you know, the characterization of what the problem is posed by uncertainty, I think can be done in a way that should be comprehensible to educated people like who are -- and experienced people who are like members of Congress.

I do -- Peter mentioned the issue of the political problem. I think -- I mean, I do see a political problem in, for example, trying to put aside resources for the future. This isn't a problem that just comes up with us. It comes up when countries have temporary inflows from natural resources that are not going to disappear in the future, and understand that they really need to put these resources aside, and have difficulty doing so. So, I understand there's a political problem whenever our theory says you should be putting resources aside, but yet, the resources are there and it's tempting to spend them.

MR. WESSEL: Let's turn to the audience. We have some time for that. There's a microphone going around. If you have a question, it would be helpful if you A, tell us who you are. And B, follow the panel's example of brevity.

SPEAKER: My name is Luca (Inaudible). I'm a reporter with Tax Notes on the Hill. This is for Alan. And I hope this isn't missing the report, because I just read the one page here. But you said the three main sources of the uncertainty over the next 25 years or a longer time horizon past business cycles, I guess, is productivity growth, interest rates on the debt and healthcare costs growth.

So again, not to miss the point, but did you give any thought to just suggesting, well, if those are the sources of uncertainty, maybe we just try to push them in a positive direction? So, reforming the education system, for example.

MR. AUERBACH: I don't understand what you mean by push them in a positive direction.

Oh. Well, first of all, it's kind of hard to come up with anything that has a substantial effect on any of these factors in terms of policy. And second, I'm writing -- really talking here about uncertainty, not about the trends in these factors. So again, I want to separate what we should do about projected imbalances from what we should do about uncertainty about those projected imbalances.

I mean, even if we were to improve excess -- the projected trajectory of excess health cost growth, that would mean we have a smaller job ahead of us, but it still doesn't tell us how we should be responding to uncertainty.

MR. WESSEL: In the back? Right there.

SPEAKER: James (Inaudible). Question for Alan, also. When you use the word savings, there's always an interesting relationship between savings and investment in models. If the savings were all people just sitting on the model, would that actually reduce the uncertainty, or is there an assumption that the savings would turn into investments? In which case, then, the question is, why can't the government make the investments?

MR. AUERBACH: Well, when I talk about the savings in the paper, I'm thinking about government retiring debts -- for the simplest thing I'm thinking about. So, I'm not sure this issue comes up.

MR. WESSEL: Marty Feldstein?

MR. FELDSTEIN: Thanks. I agree with Alan's basic conclusion, that we should be doing things in advance. The question of why save -- well, one reason why we should be thinking about saving is that we've seen the size of the national debt double relative to GDP in the last decade or so. So, from that point of view alone, given the risks associated with a large debt, paying some of it down, reducing the future interest costs and the deadweight losses associated with raising taxes to service that debt, all seems to be a good thing.

Another thing that -- particularly thinking about Social Security and Medicare, yes, there’s uncertainty about the future, and we could adjust when the time came, but you can't adjust the benefits of future retirees quickly. Both as a political matter and as a matter of fairness to the individuals, you have to give them time to adjust. So, I think maybe we gave too much time in the Social Security reforms of 1983, which we're still phasing in 30 plus years later, but you can't do it overnight. And so, that’s another reason to respond to uncertainty by looking ahead and making those adjustments.

I like Alan’s suggestion about indexing to life expectancy, and he both made the case for it and also, raised the concern that not everybody is going to enjoy the same increases in life expectancy. And I think we know the statistical evidence is that lower income people have not enjoyed the same increase in life expectancy over the last several decades that higher income people did. But that’s remediable, not individual by individual, but income group by income group, because with Social Security, we have the records of lifetime earnings, so we make the age of full benefit depend upon the average income during the individual’s working life.

MR. WESSEL: Don Cohen?

MR. COHEN: Don Cohen, Brookings. Two questions, really. You talked about uncertainty, but there is often a useful distinction between uncertainty, which is stuff you can't price, and risk, this Nidean thing that has probabilities on it. So, I wondered whether it would be useful to make that kind of distinction in thinking about the sorts of things you're thinking about.

My second question is for monetary policy, there’s Brainerd uncertainty, and that said you should move slowly and then see what the effects are when you're uncertain about the effects. Is there an analogy here? Or the political -- I understand that the political stuff would be very, very hard. But I wonder whether there's any analogy here.

MR. AUERBACH: On the first one, I do talk briefly in the paper about the distinction between risk and uncertainty, suggesting that perhaps that is what underlies people's arguments about not -- just ignoring uncertainty. That is, if it's the (Inaudible) uncertainty where people don't have probability distributions, it's hard to know how to react to it.

While I sympathize with that perspective, I looked in the literature to see whether there's -- and there actually is a very small literature on precautionary saving in response to ambiguity versions (Inaudible) uncertainty. And there really isn't an argument for -- nowhere in that literature is there an argument for ignoring uncertainty. In fact, it tends to be kind of analogous. But again, it's a fairly thin literature.

And the second point, I guess I would -- I hadn't been thinking about the Brainerd paper, but I think my comments about healthcare reform have that flavor.

That is, if we're really not sure what measures we should be taking, we ought to take precaution there. But that doesn't mean that they're -- so, maybe our responses should be more of the budgetary variety and less of the structural variety, if we really don't know what the right way to do things is.

SPEAKER: Budgetary meeting -- turn the screw a little bit to (Inaudible).

MR. AUERBACH: Well for example, if you say, well, we don't know how -- we have a Medicare projected deficit. We don't know how big it's going to be, and we don't know how various health reform measures will change it. And so we have to be careful in undertaking those measures. That doesn't mean we can't say, raise Medicare premiums or do something else to improve the funding of the system.

MR. WESSEL: Peter?

MR. DIAMOND: Let me just criticize the citation of the Brainerd paper. I've written that. It was turned down, and I never followed up on it (Laughter). What he assumes is there's something you know perfectly, and there's a parameter of changes from that where you have uncertainty. And so, you go toward what you know perfectly. The problem that Alan has posed for us is there is nothing that we know certainly. And so, I don't think the Brainerd analysis holds for monetary policy, and (Inaudible) for fiscal policy, either.

MR. MANSKI: I could add on both of those. On Brainerd, just take that as another example that, as Peter was saying, that precisely what is uncertain matters a lot. And you can get very different results. So, you really need to have the model. On the bigger issue about Nidean uncertainty or ambiguity, one of the things we haven't talked about at all is what the view of the nation should be regarding uncertainty.

Once you move away from the standard expected utility framework, or even within that, we have to ask, should the government be risk averse or risk neutral? Even within the standard framework. Once you move into areas where there is ambiguity, and this shows up in climate change policy quite a lot and other areas, as well, then you have to take a stance. Does the government want -- I mean, my technical work is on kind of maximum, mini-max regret analysis of social policy. You have to take a stance. So what the right answer to Alan's question would be might depend on what decision criterion the government uses. So, that's -- so it's (Inaudible) subtleties.

MR. WESSEL: Let me make sure I understand that point. So, there may be circumstances where the government thinks it's in the national interest to respond to uncertainty by taking action now, but there may be other circumstances where we come to a different conclusion?

MR. MANSKI: Yeah. Well, I have a paper that came out just this past year in the *Economic Journal* on the effect of infrastructure spending. The big uncertainty was, what's the effect of government spending, the productivity of government spending, and what implications should that have for tax policy? And then I crank out -- you know, because I'm a technical economist, I crank out solutions to that problem for the government, and I found out I could support higher infrastructure spending or lower infrastructure spending, just based on what decision criterion the government is going to use.

MR. WESSEL: That would be helpful in Washington, definitely (Laughter). Bill Gale?

MR. GALE: Thank you. Bill Gale at Brookings. We're talking about all of this in the context of CBO forecasts and how they use uncertainty and all, and that's all well and good. I want to make an observation, and the observation may be wrong, but it seems to me that the private sector, the Goldman Sachs' of the world, when they put out their economic forecast, they don't treat -- they treat uncertainty much more like CBO does and much less like I think the ideal economic viewpoint would be.

And so, this is just a question for all of you. Given that the private sector is not asking or producing these estimates of uncertainty that we would like in our economic models with all of the bells and whistles, does that mean there's actually no demand for it? Or does that mean that people just don't know enough to be demanding this, even in the private sector, rather than just looking at the government forecast.

SPEAKER: This would be the private sector that's famous for its long run horizons.

MR. GALE: Yes, where uncertainty matters a lot.

SPEAKER: I guess I would say if uncertainty was being ignored on Wall

Street, it's hard to see why there would be a market for options. (Laughter)

SPEAKER: But I think they're delivered in the same spirit that CBOs are. That is, it's understood that there's uncertainty about them.

SPEAKER: Right, and I think when Goldman Sachs predicts what the fed is going to do, their clientele may be as interested in certainty as members of Congress, even though there is a great deal of uncertainty about what the long run equilibrium interest rate.

MR. CHECKOUT: Thank you very much. Larry Checkout. What impact on uncertainty would have -- if we focused on the inequality, the wealth inequality, and if we closed that gap considerably, what impact would that have on uncertainty for the future, especially as it relates to Social Security, Medicare, Medicaid? Thank you.

SPEAKER: You know, if we made inequality disappear, other things being equal (Laughter)?

SPEAKER: It's not going to disappear, but it seems to be going in the wrong direction.

SPEAKER: Well I mean, getting back to Peter's point about distortionary taxes, when you have greater inequality, you're likely to want to use more distortionary taxes. That is, you know, the equity is -- marginal improvements in equity are going to be more valuable, and so you're willing to spend more to get it. But that also means if you -- so if you have an economy where you can lower marginal tax rates because you don't need to affect policies of redistribution, that gives you a little bit more flexibility in terms of your long run planning, because it does mean, for example, that if revenue needs go up unexpectedly, you have more scope for increasing marginal tax rates than you would if you were already using a lot of high, high marginal tax rates to do redistribution.

So, it would make life -- obviously, it make life simpler, but I'm -- among the unlikely things to happen in the next several years, I think that's probably among most unlikely.

MR. WESSEL: Last question. That guy in the blue shirt. Bob Shiller has a proposal that we have a tax increase on rich people that's triggered if uncertainty -- if inequality gets worse, since we're not certain about how (Inaudible).

MS. GOSS: Yeah, Steve Goss from the Social Security Administration. I have a question for sort of the panel, and it relates to what you were saying, David, about the prospect of elected officials inflicting pain that may not ultimately be necessary. And I think others on the panel have mentioned this.

Alan's contention is yes, understanding insurance and worrying about risk for the future, we would like to save more than may ultimately be necessary, or we may expect to be necessary to have a cushion. But I would ask you all to sort of look back and observe on what you have seen, and I think we have a lot of theoreticians in the room, all of us, not so many elected officials.

What is your experience, what is your observation of all elected officials representing the people actually have functioned, and when they're presented with a range of possibilities, do they tend to look, as I think you're suggesting, Alan, at the outlier situation where things could be bad and we should save extra? Or, do they tend to be, perhaps, more hopeful and say, given a range, well, it could well turn out to be better than the best expectation, so we can defer action as a result? Therefore, given a range of possibilities, does it really take us in the direction in our economy and in our politics that you would like?

MR. AUERBACH: Well, I'm not sure I'm an expert on the behavior of politicians (Laughter). There are others here who are much better able to comment on that. I think an interesting question is, what if any institutional changes could be made to make it more likely to succeed in putting resources aside? I think it's an interesting question. There are various potential answers, but I don't really know.

MR. DIAMOND: Two things. First of all, I'll go a step further than Alan. I am not an expert on how politicians behave, but the inflicting future pain is politically much easier than inflicting current pain. And again, Social Security is the obvious example here.

But secondly, worldwide, we're seeing serious attempts to build up rainy day funds. Norway is the prime example. I'm just back from Peru, and they're studying how they can make it work given commodity issues. Chile wrestles with this. So, I think this is a great topic (inaudible) rule it out as impossible.

MR. MANSKI: I'm even less an expert than Peter is on this, but --

MR. WESSEL: We actually have some experts coming later (Laughter). Before we get too humble here. (Laughter)

MR. MANSKI: But the one point that I might put is that the behavior of policy makers and politicians is not necessarily fixed. I hate for an economist to use the word cultural norms, but I think there is a cultural norm in this country to ignore uncertainty, and that is changeable. Even if now, and going back to Bill Gale --

Bill Gale is the guy for whom I had a sort of testy email exchange several years ago about this (Laughter), and he's true to form today. (Laughter) He said that Wall Street doesn't -- you know, they make these earnings forecasts without uncertainty either, and therefore, you know, that shows the market's always right, and so therefore, we don't need to worry about uncertainty.

Well, it could be the private earnings forecasters are wrong to ignore uncertainty, and the government is wrong to ignore uncertainty, and that these things are changeable. And I would say -- and I don't know what Robert Chote may have to say about this when he comes on, but I spent a lot of time in London, and I find somewhat more recitivity to its expression of uncertainty in the U.K. than I do in this country. So, I think this is changeable.

MR. WESSEL: Okay. With that, I'm going to dismiss the panel and invite David Kamin up. David Kamin is an assistant professor of law at NYU; a veteran of the Obama administration, both the Office of Management and Budget and the National Economic Council. And we asked him to think about if you know that you're uncertain, how can you, instead of ignoring that -- take Chuck Manski's advice and don't ignore it -- how can you build into government policy and to legislation ways to anticipate and adjust to it?

And after David speaks, I'll be joined by Bill Hoagland, Gene Sperling, and Representative Cooper, who will not say that they are not experts on what Washington does.

MR. KAMIN: So, first, thanks to the Hutchins Center for organizing this conference, and I very much look forward to the discussion with Representative Cooper, Bill, and Gene, and want to thank them in advance.

I also want to specifically thank Gene. So part of my interest in these topics and trying to build these kinds of mechanisms actually came from the many hours and, frankly, very late nights I spent trying to dream up various trigger mechanisms while working for Gene. So I want to thank Gene for some inspiration, even if it came sometimes at the expense of sleep.

So, first, I wanted to distinguish this discussion from the discussion that came before. Alan's paper and the discussion we just had addresses the very important issue of how much we should be saving for the future given the uncertainty we face. The issue that I'm talking about is somewhat different. Irrespective of whether we choose to save more or less because of uncertainty, we do make decisions today that will affect our future. We have little choice in that matter. So when major legislation is enacted today or on some future date, it will have effects going forward.

The legislation will continue as time goes on and even as the world changes and potentially in ways that were not expected at the time the legislation was designed. So unless the legislation adapts in some way to the new circumstances, we will have a situation of what I call policy drift: as we drift off course that was intended, but where there is no correction potentially from the legislation itself or from policymakers.

This can produce suboptimal policy in areas ranging from countercyclical policy to Social Security. So my discussion today focuses on the legislative mechanisms that can be used to address this problem and build in flexibility into legislation, so that it can update in ways to -- that it can update to circumstances even if we end up in a situation where the world is different than what we had expected.

I emphasize automatic adjustment mechanisms as a tool for doing this, something that was emphasized, obviously, by the previous panel. I think that is probably among the most attractive ways of doing it, but I don't think it will be appropriate to all circumstances, and I will also discuss other tools that we have at our disposal for trying to address this.

First, let me lay out the basic problem. The process of legislation is often characterized by inertia, but not always. So there will be moments where large legislation gets done and where grand bargains get struck, even as that is followed by periods where little legislation is actually done. So the figure I have up here displays this visually in terms of the type of process we may be looking at and it really is quite a simple figure. The idea is that policy gets set at an earlier point, circumstances changes in some way so that we begin to drift off of the path that was intended and policy may not be performing as it was intended to, but there may be thresholds below which Congress simply will not correct the drift. It may only correct if you drift off sufficiently from the originally intended path.

There are a number of ways to explain why this pattern may develop. It includes the fact that Congress can only focus on so many issues at once. It also may include the difficulty of negotiating across two houses and the President, as quite evidence today, especially in an increasingly partisan environment.

Irrespective of the exact explanation, Congress does tend to move in fits and starts and doesn't always respond to new information. This has very real effects on policy and the country, and I want to illustrate that now using two different policy areas: one coming from the recent recession and the other from Social Security policy, which obviously has been discussed already.

So first the Great Recession. The Great Recession may be remembered, in fact, for its very large legislation in response to the economy's tailspin. So it may seem an odd choice for illustrating what I'm calling policy drift because Congress seemed, in fact, to respond. But its major legislation adjusting fiscal policy, the Recovery Act, was designed at a time of great uncertainty about the state of the economy. And while the economy was expected to suffer a severe recession, the severity had not become fully apparent.

As of January 2009, for instance, the Congressional Budget Office expected the unemployment rate to be about 3 percentage points above the full employment rate in 2009 and 2010. However, as it turns out, the actual rate was something like 4 to 6 percentage points higher than the full employment rate in those years, assuming policy remained the same as at the beginning of 2009. And I should be clear the fact that the initial projections were incorrect and were too optimistic became very quickly evident. The unemployment rate quickly shot up to higher levels than had been expected.

So what was the congressional response to this new information? Well, 2009 saw basically no additional fiscal support beyond what was earlier enacted and 2010 saw some, but largely as a result of Congress extending measures with cliff-like expirations in the earlier stimulus. And this becomes a lesson on which I later focus. One way, probably not the best way, but one way of getting Congress to focus and update areas for new information is to build in dramatic expirations. The point here is that circumstances had changed and policy had drifted away from the apparently intended course, to the extent there is such a thing, without much response from Congress.

So now taking the example of Social Security, which obviously has already gotten some significant discussion. As our prior panel discussed, the problem of uncertainty is not just about the short-term economic trends, but also about the long-term and we certainly face uncertainty there, as well. So when it comes to Social Security we seem, at least, to have a general commitment by policymakers for a self-sustaining Social Security system. So they agree on that, generally.

And in 1983, and in the face of an immediate solvency problem, there famously was a deal to maintain solvency in the system for at least 75 years, but the deal was made in the face of uncertainty. And as it has turned out, and shown in this figure, various factors have combined to actually produce a system that will not be as solvent as long as they had originally expected. So instead of being solvent through around 2060, the current projection now puts solvency -- end of solvency point or insolvency point at around 2033 in the central estimate, though, as was shown with an optimistic scenario that the trust fund never becomes insolvent and a pessimistic scenario that it occurs as early as 2028.

In sum, we have drifted off the course that was set in 1983, but there has been no response certainly in the form of any significant Social Security legislation since that date.

So now the question becomes what do we do in the face of a combination of uncertainty and the sometimes inability of Congress to actually respond to new information? Part of the answer should be to make legislation more robust to different circumstances so that legislation can adapt and without Congress necessarily having to take action. I call this automatic adjustment triggers. A form of it is indexing. So this is a trigger that is set to go off under certain conditions and updates legislation appropriately for those conditions.

So first let's turn to countercyclical policy. In the fact of uncertainty our fiscal system could be made to more automatically respond to changes in economic conditions in order to support demand when needed and withdraw that support when not. The idea of strengthening what are often called the automatic stabilizers is an old one. But while the idea is old, it is certainly worth revisiting and expanding in at least two ways.

First, when the government does do significant discretionary fiscal stimulus with Congress stepping in during a period of economic weakness to actually adjust demand, it can potentially build additional automatic adjustments into that legislation. Congress should recognize that there may only be one bite of the apple and it is sensible to plan as if that were the case. So in the Recovery Act, many of the largest provisions could have been made contingent on economic circumstances.

Second, on a permanent basis there are many opportunities for improving our automatic stabilizers. For instance, right now only unemployment insurance is triggered off when the unemployment rate crosses a certain thresholds. And yet the unemployment rate does a good job of indicating when we, in fact, are entering recession, as this slide shows. So the gray period here shows periods of recession and the line shows six-month changes in the unemployment rate. A spike in that consistently indicates the beginning of a recession soon after it has begun, so you can imagine then having either based on this unemployment rate or on other indices we could come up with, we could automatically adjust additional infrastructure spending, potentially on a state-by-state basis, we could adjust tax credits, and so on, and we would have better economic performance.

Now returning to Social Security, in Social Security we could index both taxes and benefits either to the long-term Social Security projection or to individual indices that we think are relevant when it comes to Social Security solvency. The idea here is that there's been a common agreed-upon goal of a self-financing Social Security system and, assuming that remains the goal, the system could automatically update itself to be consistent with that.

Now, one point that Peter Diamond made was that we should do it based on indices other than long-term Social Security solvency. I would note here, I think that there is the potential that we could do it based on long-term solvency. I agree we might have to build in different protections, for instance, of the actuary doing those projections. But I would note that when it comes to looking at actual Social Security plans, when people actually do them, they do them based on the actuary 75-year projection, including the Diamond-Orszag Saving Social Security Plan. So this would suggest that people do target the 75-year solvency. And if we're targeting it when we're actually legislating, the question would be, why don't we target it when we're actually doing automatic adjustments?

With that said, I think that steps in this direction would be an improvement however we did it. So if we did it through indexing when it came to individual parameters, that would make sense, as well. One thing I would note is that we should be sure to index both the benefit side and the revenue side, as, in fact, Peter Diamond suggests.

Now, to be clear, the goal of such an automatic mechanism would not simply be solvency. Our current system will probably be made solvent. Congress will just get around to it later and focus changes on later generations. So the idea here is to spread the adjustment appropriately and especially to share risk across generations.

I also don't mean to suggest that this is the way that we will get to solvency from where we are today. Right now Congress and the President do need to agree eventually on a compromise. The point is that we can build in these kinds of mechanisms into compromised legislation so as to preserve the deal that is made and spread risks across generations rather than waiting for adjustments and concentrating them only on certain generations.

Medicare, of course, is also an area of major uncertainty. Our health cost growth trajectory is very uncertain. And so then the question is, how do we react to that?

Let me start off by saying how automatic adjustment mechanisms could be used here, too. Specifically, they can be used to adjust financing either up or down. One could set a baseline, whatever is your expected or even desired trajectory for healthcare costs, and then adjust financing to at least partially offset changes relative to that trajectory. We already do this when it comes to Medicare premiums. So irrespective of how fast healthcare costs grow, premiums will still offset about 10 percent of Medicare spending.

The same is not currently true of payroll taxes or general revenues, including income taxes, which also finance Medicare. So as this graph shows, if healthcare cost growth simply followed income growth, payroll taxes would finance about one-quarter of Medicare looking out 75 years. If they grow 1 percentage point faster than income annually, consistent with the CBO baseline, they'd fall to just over 10 percent of Medicare costs. So payroll taxes and income taxes could be indexed partially to automatically adjust, depending on the trajectory.

For the payment side of Medicare it is much harder to figure out how to do these kinds of automatic adjustments that would be in any way constructive, and it shows the limits of them. And that's because we have less information about appropriate policy responses to different cost trajectories. We don't have great information now about how to reduce costs in effective ways 20 or 30 years from now. And whatever the policy responses are, they can't be readily triggered via formula.

But there are other tools for addressing policy drift beyond the automatic ones. For instance, an alternative to triggers like the ones I've been discussing is delegation and it has been historically used in this way. Congress could delegate authority to an agency with better ability to adapt policy. And in Medicare this is, in fact, part of the logic around some of the reforms in the Affordable Care Act; that includes the Medicare Independent Payment Advisory Board with powers to adjust payment policies under certain circumstances.

Now, it is unclear if the IPAB, as it's often called, will ever get off the ground given congressional opposition and certain aspects of its own structure. But this kind of delegation makes sense for helping to address uncertainty on the spending side of the equation in Medicare.

In my paper I discuss other tools, as well, in addition to delegation, that can be used to address policy drift, whether in Medicare or in other areas. This includes alarm-bell triggers and expirations. These are mechanisms that try to force Congress to address an area, even as circumstances change. So instead of having the policy adapt, the idea is to force Congress' hand to actually focus on an area and compromise if circumstances change to a certain degree.

Now, each of these mechanisms come with tradeoffs. In my talk here I've focused largely on adaptability to new economic circumstances, and along these lines automatic adjustments seem clearly to be superior where they can be developed. And so that is the first place I turn, but others may give greater weight to some of the other factors identified as being relevant.

Before I conclude, I want to offer a few words of caution to policymakers. First with regard to alarm-bell triggers and expirations. These are mechanisms meant to force Congress' hand to adapt policy under certain circumstances, often by creating a set of circumstances that are so distasteful that Congress just has to act, or at least that's the theory. (Laughter) A colleague of mine calls these the shot-in-the-foot mechanisms, the current sequester being a leading example. But they come with a severe risk, namely they may actually go off and Congress may fail to respond. In that case, policy drift may become even worse than it was and so they can end up being counterproductive along these lines.

Second, the goal of reducing policy drift should not be confused with reducing year-to-year volatility in the budget. The country faces uncertainty along a number of dimensions. In the fact of that, it may be tempting to simply make the budget unresponsive to changing circumstances and thus, say, reduce year-to-year changes in the fiscal balance. That could be done through block grants or targets like a Balanced Budget Amendment. In my view, this goes in the wrong direction, at least in terms of policy drift. We could end up with policy that is even less responsive to changing circumstances than we have today.

Still, the benefits of using such mechanisms appropriate in legislation are real and significant. To put it concretely, they could be used to reduce unemployment in a recession, they can diversify risk across generations through Social Security, and they can help adjust healthcare policy if growth exceeds certain levels while also adapting receipts.

I should also say that I at least am somewhat optimistic as compared to the prior panel about the ability of policymakers to potentially consider these issues given the fact a number of these tools have been used historically. I think they can be expanded in their use, but we have seen policymakers thinking to some degree in terms of uncertainty. And I think if we can focus on it more, we can actually accomplish some very important policy goals. (Applause)

MR. WESSEL: Thank you very much for that. I want to note what I should have said before, which is that all of the papers that we're discussing here, you really only get a taste of them from the discussion. They're all on our website. And in addition to the papers we discuss today, our colleague, Henry Aaron, has written a paper which we've posted, which expresses a bit of skepticism about the usefulness of long-term projections, so I call your attention to that, as well.

I'm very pleased to be joined here by three people who actually have practiced this art and science. Bill Hoagland, who is now at the Bipartisan Policy Center, but spent 33 years in the federal government, 25 of them in the U.S. Senate; most of that time on budget issues. And he did a little stint in the private sector at Cigna, but we don't hold that against him.

Gene Sperling has been a fixture in Washington since the original Bill Clinton campaign. He's been director of the National Economic Council not once, but twice. He actually, in one of his few periods out of government, was director of the Center on Universal Education, which is a Brookings-Council on Foreign Relations joint venture. But more importantly, if you don't like triggers, you can blame Gene because he had something to do with almost every one that I can remember in the time that he's been in Washington.

And finally, we have Jim Cooper, who's a Democratic congressman from Tennessee, something he's done for all but 8 of the past 32 years. He's made a name for himself as somebody who is focused on budget issues and not afraid to say what he thinks, even if it's not popular with the leadership of his party.

And I want you all to respond a little bit to David's paper, but, first, I feel like there's a question hanging from the first panel, and, Jim Cooper, maybe I can start with you. Somebody suggested that maybe members of Congress were psychologically or cognitively incapable of thinking about uncertainty, and I wondered whether you think that's true or not.

CONGRESSMAN COOPER: Oh, you're getting me in further trouble with my colleagues, but it is the profession of C students and that's on a good day. (Laughter) And then you throw in the fact that economics is the dismal profession, you know, we survive on happy talk.

But I am strongly in favor of Alan's bias towards precautionary savings, but that is very unpopular speech material. But I think it's almost a hallmark of civilized people to be able to delay gratification. We seem incapable of doing that today. It's what have you done for me lately in politics? So I'm very appreciative of Alan's paper and his work, even navigating the uncertainty.

MR. WESSEL: Bill?

MR. HOAGLAND: Before we comment on David's paper, I have an observation that's from a practitioner's point of view. I started my career at the Congressional Budget Office and I was in charge of making estimates for the federal Food Stamp Program; we now call it the SNAP program. And I had developed this wonderful little model that was projecting it and I had the estimates going forward, and I was called over to one of the chairmen's offices to explain to him my estimate.

And I went in and I wanted to impress him with my econometrics, and I said I have the standard early estimate and this is my point estimate, here's the standard early estimate, and here's what it looks like in the future. And he looked at me and he said, young man, we don't appropriate in ranges. (Laughter) And that always led me to the conclusion that as much as I like to talk about ranges, at the end of the day it's a number that's most important for the congressmen.

MR. WESSEL: Gene, you've talked about uncertainly, I'm sure. Is there a ready audience or are politicians cognitively incapable of dealing with it?

MR. SPERLING: Well, the one thing I wanted to raise because Alan's paper and that discussion, before getting to David's, you know, I think we really have to all think very seriously about it, not just in our normal thinking about long-term fiscal policy that we've had for the last 25, 30 years, but in terms of what's happened in fiscal and monetary policy in the last 7 or 8 years.

And so, on one hand, I think much of the premise of what we did in the '90s was precautionary savings. You can see that you have to project not only that you might have a downturn, but that you might need a stimulative effort and what that does.

The other side of that, though, is that to look at the other extreme, Germany, where a bias towards this has been one of the most harmful things in the global (inaudible) and where -- and I just think that -- and, in fact, I believe that we have some great central bankers here, that we are seeing heroic efforts by Ben Bernanke, Kohn, any others? Draghi. But they are efforts that are exceptional things that monetary policy has to do because physical policy has completely failed in Europe, is trying not to fail in Japan. And while we're the least ugly kid on the block, we still underperform. And so I do think that we have to really take a fresh look at this and how it relates to our responding.

And then the second issue I'd made on that is that I do think that one has to take a little more seriously the Do No Unnecessary Harm mandate. Now, one place you see that in our policy is the discretionary sequester has been a terrible thing that was implemented, back to David's paper. Now, there's always a part of this sequester that hits the entitlement side, where they do protect the low-income programs.

And the reason I say this a bit is if you're looking in the early '90s, et cetera, as much as you might have disagreed with Newt Gingrich, et cetera, you perhaps feared that perhaps one might have to do more reductions across the board. That could hurt people you wouldn't want to, that it was possible that you could get to that point. And yet it was quite a lesson to see four or five years later what a terrible thing, even more terrible thing. it would have been in the first half of the '90s to have so cut food stamps, Medicaid, and found out only a few years later that you did not -- that there was not even a case that you needed to do that to have surpluses.

And think of the harm that would have been inflicted on so many low-income people that was not only the wrong distributional choice, but from a fiscal policy was completely unnecessary. So I do think you have to caution against the cautionary savings. The idea that you do not want to put shared sacrifice on people who are not particularly well-off, you know, unless you absolutely, absolutely, absolutely have to. And I think that has to be built in very much to these discussions.

MR. WESSEL: Let me turn to David's paper. Jim Cooper, when do these legislative mechanisms -- triggers, expiration dates, alarm bells -- work best and when are they just useless, do you think?

CONGRESSMAN COOPER: Well, I appreciate David's efforts to help us design legislation to save Congress from itself, but that is a big job. (Laughter)

I would suggest that David's excellent paper is just the first part of a trilogy because Congress is marvelously responsive and prompt to the private sector. It's only public goods, like countercyclical policies, Social Security, and Medicare, where we're somewhat slow. But you can divide those because many private firms benefit from those magnificent public programs. And it turns out we're even responsible to Medicare providers and others that benefit handsomely from legislation. So it's really only the public good that's shortchanged.

I've been on this thing for a few years now. You know, the taxpayer is the only person in America who's not allowed to pay Congress for performance. Special interests all up and down Washington pay us for performance every day through PAC contributions, speaking opportunities, and other things. So why is the taxpayer handicapped?

Well, partly, it's Constitutional. The latest amendment to the Constitution prevents anyone from cutting our pay. But also, we're just stuck with the idea that everybody makes the same, even House members make what senators make, which is kind of nice. But it's really, I think a handicap because in our materialistic culture you get what you pay for. And we are very able at figuring out what private interests want.

I wished, also, that he had put in his paper more behavioral economics because, to me, it's that Type 1, Daniel Kahneman, lizard brain that determines so much of our activities. It's not this Type 2, cerebral, statistical analysis. And I'm not implying that my colleagues are reptiles. (Laughter) But we do have to speak to our audience and people want a certain number appropriated. People want a quick fix. We can always be out-politicked by those who'll say, oh, one more drink at the bar and we'll feel better. So, to me, we have to go with the Alan bias toward precautionary savings just to overcome the inherent political trends toward demagoguery.

MR. WESSEL: What about using indexing as a way to essentially tie your hands and those of future Congresses?

CONGRESSMAN COOPER: My greatest worry is we've already given up governance, you know, Gene Steuerle's book, *Ruled by Nobody*. Almost two-thirds, three-quarters of what we do in Congress is already predetermined, so we don't even have to show up for work. In fact, the trend is such that the most popular way to run for Congress right now is to promise you will never visit Washington because that way you won't be tainted by what goes on here.

It's not just the entitlement autopilots, but the tax expenditures, things like that, and, of course, we automatically extend all those. And, you know, in a cerebral world we should do some of these triggers. We have some already; maybe we can do more. That's fine-tuning, though, a terribly broken institution when it comes to public goods.

So I'm more interested in getting us as responsive as we are to the private sector because we are a well-oiled machine, even in this latest "cromnibus," when it comes to meeting the needs of the lobbyists. So why don't we get our game on there and let the taxpayer or the Social Security beneficiary, the Medicare beneficiary benefit as well as the folks here on K Street?

MR. WESSEL: Gene, what's your sense of where David's got the recipe right and where he's got it wrong? When do triggers -- what are the conditions on whether triggers and indexing actually are in the public interest and when do they just become like the sequester, a shot in the foot and maybe other body parts?

MR. SPERLING: Let me raise a little question about the whole uncertainty framework and then I want to throw one more thing on the table that wasn't discussed, which I think goes to what may be more current and topical.

First of all, I think that, as David said, we have binders of triggers that never saw the light of day. But the question is really, is it fundamentally about actually economic uncertainty or is this more intelligent people understanding that we love democracy, but the limits of our democratic system to act quickly and with speed to certain economic situations generally, and building in ways that we can respond without having to force ourselves to go so repeatedly through the political system that we have trouble responding with the speed necessary? That's slightly different than just the uncertainty. It's a little bit more intelligent people, A students in Congress, recognizing -- you know, like a boss might recognize that they travel a lot and if they make their whole team wait to get their permission, that might be a bottleneck that would keep their company from doing well. Here that bottleneck is just the political difficulties of people coming together doing something.

In that context, I still think the strongest case in David's is on the cyclical issues. And I think that -- and the reason I say that is, look, what David said, David just gave the unemployment. I mean, you could do the GDP side. We were looking at 3 percent negative growth. We now know it was 8.2 percent and (inaudible) and over 5 percent in the first quarter, so about 7 percent.

I don't know when exactly that was adjusted. So the question is, though, was that the reason people didn't do more? That's not my memory. My memory is you just couldn't get a dollar more and get 60 votes in the United States Senate, so it was much more the political constraint than that the economic team was like, oh, we'd prefer

800, that's a magic number. I think people would have taken more if they thought they could get it. And then what you saw after that was enormous fatigue.

So I think that there are areas that we already have a different share of Medicare -- Medicaid that goes based on poverty. Having that Medicaid share go automatically increasing in difficult times isn't --

MR. WESSEL: You mean the federal share of Medicaid spending.

MR. SPERLING: The federal share being increased is an automatic adjustment that can be made. Having the extensions for prolonged unemployment, these are things people have to do, they're difficult. Most people know they need to be done. If they're done automatically, that would -- those kinds of triggers, I think, would be absolutely good policy and I think they'd be more acceptable across the political board for two reasons.

One, they both go on and off. So if you're on the conservative side, it's also a way of turning off without having to pass something, if it goes off.

Secondly, there's not a moral hazard issue here. In other words, you're getting more based on the economy being weak, not that you're having fiscal problems at the state level. So I think that's where the triggers are the most promising, most solid.

Where I disagree is, I guess, on the entitlement side. I think they play an important role, but I think it is much more in the prompting action and overcoming constraints probably than the uncertainty.

I don't agree -- I'm with Marty, I think, on the Social Security. To design a Social Security trigger with the percentages of revenue cuts, the distribution, seems to me as difficult as actually passing Social Security reform. And if what you're trying to do is overcome the constraints, then I don't know that that really adds much to it.

On Medicare, I think that the delegation issues are often more about expertise than uncertainty. It's just a little crazy sometimes for any of us to have to get to the level of detail on, you know, the different market baskets, et cetera. And there would be a responsible delegation of expertise there regardless of the uncertainty.

So the last thing -- but I still think these play an important role. I think the one lesson we may have learned, and this is interesting, is that what we used to say, David, was -- we called the sequester, we called that MAD, mutually assured destruction. You would try to prompt action by doing something so offensive to both sides they wouldn't let that happen. Now -- or, you know, nobody would be stupid enough to let that happen and we underestimated ourselves. (Laughter)

But it's interesting that we were actually trying for most of the time to have a different type of trigger which now probably has a greater case made, and that's what I call the kind of crude but acceptable trigger. You're going to raise this much revenue, you're going to do this many cuts, they're not going to be done in a particularly pretty way, but they're livable. And you kind of -- in other words, I think after what's happened in the sequester people may be more prone to say if this doesn't force everybody back to the table will it be more livable?

And my last point, which I think is perhaps the most interesting and more topical right now, I think, in fiscal discussions is we have failed to be as expansionary as possible during a global recession and coming back from a global crisis. Those of us who argue that the sweet spot on fiscal policy is to have a single piece of legislation that both expands demand in the short run, but gives confidence on long-term fiscal policy, and the response you get from intelligent legislators, policymakers is we don't trust that the second half will ever happen. And so I think part of us having a stronger round of fiscal policy and economic policy is having a sense of the triggers or mechanism that gives people confidence that they can perhaps, you know, put their foot on the accelerator or not make difficult cuts at the moment, but that they will happen eventually.

And the place this is most relevant, and then I'll shut up, is healthcare, I think, right now. I think as a policymaker when you see how -- when you read Doug's -- you know, whether you read Jason Furman's charts or Doug Elmendorf's charts, the slowdown in healthcare is dramatic. Now, that's got to make life pretty tough, even tougher, for members of Congress because now you're doing difficult policies on healthcare entitlements that you're not 100 percent sure how much you need to do.

So, now you could say then don't do anything, but then that goes completely against Alan's paper, or you could say let's take the bet. Let's see if healthcare costs get down. Let's even encourage people to get healthcare costs down, to work on more payment reform because you know in 2025, if you don't, something's going to happen. That, to me, is, I think, the most promising area right now for helping us deal with policy is encouraging the right behavior, less on the uncertainty and more on encouraging appropriate policy behavior, but yet giving people certainty that the tough choices will be made if you don't figure things out earlier.

MR. WESSEL: Bill, when are these things credible and when are they just excuses for not acting?

MR. HOAGLAND: Well, in terms of David's paper, I think the four things he had -- delegation, auto triggers, sunsets, indexing -- I hate to sound like a Scrooge here in the holiday season, but, quite frankly, the only there, David, that I kind of come around to believing has some potential is the auto triggers, building upon them. We have a lot of them today. They are out there. I find that the other kinds of approaches, whether it's the triggers that you call, such a Gramm-Rudman-Hollings, they're excuses clearly, but there was a reason for having them. There was a thought that maybe they would force Congress to act. They did act, and maybe not the way you wanted them to act, but they did act on it. They let the triggers go into effect there.

I just want to say that in terms of some of the things that Gene said, number one, I think the best approach, one of the better approaches here, for Social Security is what's already been mentioned and that's indexing for longevity. I think that's something we can do. I would also note, though, in David's paper you never said in your paper, David, that the triggers that you were talking about were going solve the insolvency. You first said solve the insolvency, then put it into effect. Well, let's first solve insolvency before we move forward on that.

And the other thing I want to say about David's paper is he also mentioned, I think, the area of what Gene's referring to is a lot in countercyclical, that that was the real issue, that you're really focusing on the stimulus bill. If I read your paper correctly, basically what you and Gene would like to see -- and sitting to the left of Gene here I'm supposed to be the conservative, I guess -- the question was whether or not we should have had some automatic discretionary spending triggered in. I just have to raise a red flag here, at least a cautionary flag, that I think one of the worst possible outcomes for the long-term fiscal stability in this country is to have some sort of an automatic increase in discretionary spending. I'm not there.

So some of these issues that you've raised are --

MR. WESSEL: Why? I mean, so --

MR. HOAGLAND: Because once they're put into effect, once those discretionary spending goes up, it's very -- I know you say we'll just turn them off. I've heard that before.

And second of all, when I look at your charts, you said that when unemployment started up, well, I saw a lot of peaks in unemployment that didn't lead to a recession in your chart that you put there, too. I just think there's so much uncertainty out there that I'd rather -- let me put it this way: I'd rather you had focused on two other kinds of triggers.

To Congressman Cooper's position on behavioral, I wish we'd had a trigger that said no budget, no pay. And I would say, also, if you don't pass appropriations by the beginning of the fiscal year, you have an automatic continuing resolution at last year's level, period. We wouldn't be in the mess that we've been in the last week. Those are the kinds of triggers that I think have an impact on congressional decisions.

MR. SPERLING: The only thing I just want to mention is the ones I mentioned were on the mandatory side and they do go on and off. If unemployment comes down --

MR. HOAGLAND: I like those.

MR. SPERLING: -- and if -- you know, Medicaid and unemployment, those are areas where, as I said, they would go up automatically, go down automatically. You wouldn't put Congress through having to get it exactly right.

MR. WESSEL: You mean, Gene, so we have an automatic stabilizer on unemployment compensation already, but we require Congress to vote to extend it more weeks when things are bad, and they usually do. That could be automatic and when the unemployment rate came down, that would come off. That's what you mean?

MR. SPERLING: Yes, that and I think Medicaid --

MR. WESSEL: Medicaid.

MR. SPERLING: -- are the two places that we have in place, we already do it to a degree. Expanding it further, making it automatic, I think would make a lot of sense. And I think it's quite -- I think you could make the case because it turns off and that it doesn't have a moral hazard component. It's just being triggered really by the health of your economy that you -- I could see that being a more plausible reform that could actually happen.

MR. WESSEL: David, let you respond and then we'll have time for a couple of questions before the break.

MR. KAMIN: Sure. So on a few issues, first, when it comes to the question of triggers and stimulus and trying to stabilize demand, so actually I think that the -- so one risk you identify is that you trigger things on and then they don't turn back off. First I would note that we actually -- in terms of the jumps in unemployment, you can actually, with relative accuracy, predict when you're entering a recession. A large jump in unemployment tends to be highly associated with recession. If you draw a line at, say, a .5 percentage point increase in the unemployment rate over a 6-month period, that has -- in all of the post World War II recessions that has occurred and it has only occurred in two points in time when we weren't entering a recession. So you can actually -- rather you're using that index or another index, there are ways of actually targeting periods of recession.

Second, you know, looking, I think, historically, while I agree that there have been some provisions that have stuck in law when you put them in place when it comes to a stimulus policy, at least on the spending side it seems like we tend to have the opposite problem, certainly in the last recession. So we had, you know, the turn off of state fiscal relief; while extended once, it was not further extended. When it came to infrastructure spending, which had a slow spend-out to not have any kind of dramatic cliff, but, again, was not further extended. So it's actually not clear to me that if we had the types of triggers which did increase, for instance, infrastructure spending automatically during periods of economic recession, that that would necessarily be overridden. And I think there's actually a real chance that they could actually better improve economic performance without Congress not allowing them to go back down.

So on a few other points, when it comes to the entitlements, I completely agree with Gene that when it comes to trying to build these kinds of triggers into Social Security it looks a lot like negotiating a final Social Security deal. And, in fact, I completely agree. I think that this would only be built into an actual Social Security deal where there is agreement on the parameters of that deal and then they say we want to stick to that deal, so we will then build in the trigger to stick to that deal. So it potentially could have happen in '83, it could happen if you reach that point again, but it is not a way of solving the Social Security problem.

The only other point I want to make is when it comes to delegation and comes to the entitlement programs, you're right that part of it is expertise, but I think part of it is, in fact, knowledge. So when it comes to, you know, delegating -- for instance, in Medicare, some of the experimentations they have going on at the centers for Medicare and Medicaid services, we actually didn't know what worked. So they empowered them to do the experimentation and then to potentially ramp up the experiments and implement them broadly if it turns out they worked. I think that's an example where we have uncertainty as to what works, Congress will not have to revisit the issue, and we delegate to the agency the ability to actually fully ramp up reforms if it actually does work.

MR. WESSEL: Okay. We can take two or three questions and then we'll answer them and then we have to break. In the middle there and then in the back.

MR. MILLER: Hi. I'm Vic Miller. I've spent about half my career in the government, in fiscal institutions, and also working with states. One correction to Gene Sperling. The Medicaid match rate has a 4-1/2 year lag between the data that are used for it and the year it's used in. It's often procyclical, so that's not something that I would recommend as a countercyclical event.

But I'd like to get you to measure the difference between the big bang theory of stimulus and the --

MR. SPERLING: Hey, I was saying the same thing you were. I was trying to build in it having a share based on what's happening in the economy at that moment --

MR. MILLER: Okay.

MR. SPERLING: -- not on the poverty data.

MR. MILLER: Okay.

MR. SPERLING: So we're actually in vigorous agreement.

MR. MILLER: But the difference between the big bang and a trigger response. The ARRA gave most of the state assistance through Medicaid. It said states may not change their eligibility, which they didn't, which meant that states cut back on everything else, including education big time, which now has become the baseline for education for the future. And this is what happens to productivity, isn't it? Is this a good thing?

MR. WESSEL: Okay, one in the back, a couple rows back. Emily? And then there's one on the left side and then we're going to --

MR. WARSHAWSKY: I'm Mark Warshawsky. Sort of really a comment, and that is there really is, when you talk about the entitlement programs, particularly Social Security, there's very little uncertainty about the cause of the problem. In fact, there hasn't been uncertainty since the 1970s when the birth rate dropped or the '60s, so we've known about it for a while. It's sort of a decades-long certainty and actually it goes forward. In fact, the '83 reforms probably would have benefited from even a longer horizon because we know what was going to happen and there's really very little uncertainty about that. And that applies, to a certain extent, about Medicare and the other demographic-dependent programs.

So I'm not quite sure I understand why the, you know, sort of triggers and automatic items really are relevant for those programs.

MR. WESSEL: And there's one over here. And I believe Marty's got his hand up and then we'll respond.

SPEAKER: Thanks. I just wanted to make a cautionary point about fiscal policy. This last downturn was very different from previous recessions. Previous recessions from peak to trough lasted 10 months on average. And because of that, I think fiscal policy rightly got discredited as a short-run stabilization mechanism. And indeed, in previous recessions monetary policy was more effective because you didn't have the collapse of the financial sector. So this time was different and it paid to do fiscal policy. It was clear it was going to deeper and longer and that monetary policy wouldn't work. But the idea of using fiscal policy in general when the unemployment rate spikes or the GDP number is negative runs the risk that the lags are such that by the time you've actually hit the stimulus, the economy no longer needs it and you're destabilizing rather than stabilizing.

MR. WESSEL: Great. We got to get back on schedule, so very brief responses, then we'll take a short break.

MR. KAMIN: All right, so starting off. So first, when it comes to Social Security and uncertainty you're right that certainly part of the challenge facing the Social Security system and our fiscal situation more generally is well-known and that we actually have the Baby Boomers and they're working their way through the system.

With that said, there's considerable uncertainty as to exactly what the picture's going to look like going forward. So even, for instance, as I mentioned, the optimistic scenario that the trustees put out, and they put out three different scenarios, as was said, shows the system actually remaining solvent on a continuing basis. That's one possible scenario. There are other scenarios, as well. The intermediate projection shows insolvency. So the point is while we do know some parts of the challenge, there remains considerable uncertainty about productivity growth, the rate of immigration, et cetera, factors that all go into affecting Social Security balance. And you can imagine the system automatically adjusting to some of those factors.

When it comes to stimulus, so Marty's point is, of course, a good one, I think that main fact, recommend when it comes to fiscal policy, that more things be automatic and not actually have a significant lag, so I think that -- so one could say that to the extent one could take it out of the hands of Congress so that the thing is actually better timed, you might actually end up with better policy. And then in those situations where you do need a significant discretionary fiscal stimulus, such as the Great Recession, you may want to then -- and those things also build in additional types of triggers.

MR. WESSEL: Great. We have a time constraint. Doug Elmendorf has to leave, so we're going to take literally a five-minute break and I'm going to start in six minutes, so if you want to hear the good stuff that follows, you got to be back here in six minutes.

Thank you all.

(Recess)

MR. WESSEL: One of the things that we've tried to do in this Panel, and which we intend to do in the future, is to use the opportunity to get views from other countries, to see what we could learn from what they do, and to be sure so we can continue to tell them how they ought to run their place, much more like we run ours, even though that we seem to have lost a little bit of moral authority on that lately.

And the other thing is that we've tried to bridge the academic and the practical here. This is not the National Bureau of Economic Research, we are not afraid to say what ought to happen, but we also think that it's important that policymakers hear the best ideas of academics, but also that academics learn something about what it's really like to practice policy here in Washington.

So for the final part of our event today, we've invited two people who are really more qualified than almost anybody else, to talk about the question of uncertainty, and how policymakers react to uncertainty.

I'm going to start with Robert Chote, who became the first Director of the British Office of Budget Responsibility in October 2010. He was previously with the Institute for Fiscal Studies in the International Monetary Fund, but most importantly, he spent a decade as a Journalist with the London Independent and the FTE before finding more productive ways to use his time.

After he speaks, he'll be joined by Doug Elmendorf who is, at least for a few more weeks, Director of the Congressional Budget Office; a post he has held for eight years. And of course among his previous activities was serving as a Senior Fellow here at Brookings.

So, Robert is going to speak for about 10 minutes. Then Doug is going to speak for about 10 minutes; then they'll join me on the stage and we'll invite both previous panelists and the audience to ask questions or make contributions. So, Robert?

MR. CHOTE: Thank you very much, indeed, David. Good morning, everybody. It's great -- it's a pleasure to be here and to see further reminders that there is, indeed, a productive life after journalism.

What I'm going to do today is to give you a little background to how the relatively newly created OBR is trying to address some of these issues and recognizing uncertainty in the goals we've been given and how that's reflected through that into policy. Let me start though just with a brief bit of institutional introduction for you. We are an independent institution created in 2010.

We are accountable simultaneously to the executive and to parliament in the U.K. We've been given four main tasks to fulfill, the first of which is to produce five-year-ahead forecasts twice a year for the economy and for the public finances. And secondly, to use those forecasts to judge progress towards the explicit fiscal rules that the government has set itself; that's one rule in terms of a particular measure of the structural budget deficit five years ahead, and another rule for the trajectory of debt to GDP. So our discussion of uncertainty should be couched in terms of what that's telling you about the government's progress towards explicit fiscal rules.

The third thing we do is to scrutinize the scoring of tax and in particular, welfare and social security spending measures, and then we also assess the long-term outlook for the public finance as much as CBO does, looking over a 50-year horizon; and also what we can learn from the measures of the public sector's balance sheet.

Putting that in the U.S. context, and if you think about the key differences from this structure to the CBO, OMB structure here; I guess, one point to note is that all our analysis covers the entire public sector, not just the equivalent of the Federal Government level. We are, by parliament, confined only to producing projections on the basis of the current policy of the current government. We are not -- we are forbidden from looking at policy options.

And the third is the executive, the administration in the U.K. does not publish its own fiscal projections, so we are the provider of the official fiscal projections, and it is for the government to comment on what we say, not for us to comment on the figures that they produce. In that context, thinking about how uncertainty comes into our work, I think it's -- in the background, it's important to bear in mind that in budget-setting in the U.K., the Executive is very powerful relative to Parliament, compared to the relationship to any administration in Congress here, and the Treasury Department in the U.K. in its quasi OMB role, is powerful relative to Cabinet departments.

So, the rationale for creating this was very much to try to remove politically-motivated wishful thinking from official forecasts, rather than to help parliament consider particular options and as CBO. And when we set out on this task the key objectives we did set ourselves which is to increase transparency and to emphasize uncertainty. Given our need to produce a highly disaggregated fiscal forecast transparency necessarily means a lot of detail and a lot of point estimates.

So why emphasize uncertainty? First, the point that we heard in the earlier sessions that policy should reflect uncertainty rather than ignoring it; it's important because of the detail that we produce, that talking about uncertainty allows you to avoid the spurious sense of precision that comes with publishing lots of detail. We can offer richer assessment of progress towards the targets, and finally, perhaps, as the first person to run this organization permanently and having had many years mocking other people's economic and fiscal forecasts as a journalist, I didn’t want to tie the success of the Institution to the accuracy of our central forecasts. So some self interest in there as well.

We address uncertainty in the way that we that we do our work and our outputs both in narrative, qualitative sense, and also quantitatively. In the narrative that means being as explicit as we can in the forecast presentations and publications we do, as to what the conditioning assumptions are underlying the forecast, and therefore what are the implicit risks if those assumptions turn out to be untrue.

So the idea, for example, that monetary policy will evolve in line with market expectations, and the things like equity prices, oil prices, the exchange rate, are assumed to move consistent with financial market expectations. We also take care to identify what we see as being specific economic risks that may affect the fiscal forecast in any particular presentation we do, so what happens if Euro area instability reasserts itself.

What happens if the taper tantrums in terms of the global outlook for the unloosening of monetary policy, and the big uncertainties of what is the path for productivity and real wage growth. In the U.K., even more than here, one of the key puzzles has been why productivity growth has been so weak recently by historical experience, and whether that's going to reverse itself, and how.

We then, in addition, try to identify specific fiscal risks conditioned on the economic forecast, a key one recently is to look at what's driving the effective tax rates, so the actual tax rate or the amount of revenue you are raising per -- a pound in our case, of the particular tax base you are talking about. One of the reasons for our recent forecasting errors, is not simply that we overestimated the aggregate size of wages and salaries, of labor income but also the average tax rate on that has been less than expected, partly because of the distribution of pretax wages.

Other things we look at; will central and local governments stick within the budgets for discretionary spending, public service is spending that it has set itself. And then perhaps, finally, presently to CBO's work, what uncertain we -- uncertainty we see around the scoring of particular policies? And we provide -- went don't provide what Chuck would like, a confidence in the -- explicit confidence interval around the estimates from particular scorings.

What we do do is to provide a subjective uncertainty ranking from each policy, that costing that we sign off based on the quality of the data that underpins this, the nature of the modeling that you have to do to get to an estimate, and the nature and uncertainty surrounding the behavioral response. So this is a subjective exercise, but I think merely listing all those sources of uncertainty underlines quite how difficult it would be in many case to actually put a confidence interval around the particular estimate.

In addition, we try to illustrate uncertainty quantitatively. We quantify the uncertainty around our central forecast, and with particular reference to the chances of hitting the targets that the government has set itself. And I guess one thing, the combination of having an independent forecast and explicit fiscal rules set up by the government, is that in a sense we smoke out policymakers receive preference of how much margin for error they want to put in, in achieving their targets against the central forecast. Which will be one of saying, how much do you want to overachieve in order to address that uncertainty?

We use three main techniques to illustrate uncertainty; probability bands around the central estimates implied by past forecasts errors, sensitivity to key economic determinants and scenario analysis. The key thing is not just say, these projections are uncertain, but how long does the forecast have to be; I mean, what sort of ways does it have to be wrong for the targets to be imperiled.

Just to put a few pictures on those, this simply shows you a fan chart of probabilities around the central forecasts for a particular measure of the budget deficit based on the size and distribution of past forecasting errors. We do mechanical sensitivity analysis, so you take your central forecast for the targeted fiscal variables, and say what difference would it make if there was more or less spare capacity in the economy, fast or slower GDP growth, but in essential forecast, what if government borrowing cost, the interest rates and government debt are higher or lower.

I think in that context if you were looking for one major source of uncertainty, both around the achievement and the targets, and around our fiscal projections more generally, it's the uncertainty as to what is the level of potential GDP? What is the path of real and nominal GDP to which you would expect the economy to tend if the Central Bank is doing its job of hitting the inflation targets?

And as you can see here, we all -- almost everybody looking at the U.K. economy assumes that potential output is a lot lower than the path we anticipated it was on prior to the crisis, but there's a lot of uncertainty around how far below precisely. The scenario analysis we use in addition, to highlight some particular key debates or critiques of our forecasts that may be put forward at any given time, and to illustrate some areas of political sensitivity that public that the public may misinterpret.

So, what difference would it make if a productivity growth in the economy was higher lower? What happens if monetary policy tightens more rapidly than you anticipate, or the market is anticipating? The fiscal consequences depend very much on whether that's because the economy is doing better than you expected, or whether it's being driven by risk premiums, or something like that.

We can add some additional information on uncertainty and risks from measures of the balance sheet. The U.K. has all of government accounts prepared on the commercial accounting basis. That includes a list of contingent liabilities, and that's liabilities that are assumed not in an essential forecast to crystallize, but where there's a non-negligible chance. Things like clinical negligence, costs in the public health care system, challenges to decisions on tax collection.

There's also a list of, unfortunately, unquantifiable contingent liabilities, which we note but there's not much more you can do with that. My favorite, I think, amongst these is apparently the government has a requirement to return the land for the challenge tunnel to a suitable condition if it ceases to operate. So quite what you're supposed to do, fill it in, plant flowers, or we (inaudible) around the entrance, or quite what, I don't know. But it's in there anyway.

In terms of the long-term projections, most of this has so far has been on the medium term. I think the story here is very similar to the projections that CBO produces. It of course allows you to take on board the demographic change. We calculate debt trajectories and fiscal gaps. We have sensitivity analysis base, for example, on different population paths, different relationship between interest rates and growth. And we can look at specific issues on the tax revenue side. For example, where there are long-term trends in the average tax rate.

Finally, let me now that, I think we see as the flip side of emphasizing uncertainty, ex ante, is that that creates a responsibility on us to learn from our forecasting errors after the event, so we have a specific publication we produce each year, separately from the forecasts in which we look back and decompose the forecasting errors, and so say, well, how much of this is because policy changed after the forecast. Classification changes, how much of it was because of the economic determinants were different, and how much was because the fiscal forecasting, specific fiscal forecasting error is different.

It's not reassuring in the sense that you still end up having been wrong, it's quite interesting to see that this year we were wrong three years ago from completely different reasons for the reasons we thought we were wrong last year. So, let me leave it there, and happy to take some questions. Thank you. (Applause)

MR. ELMENDORF: Here we are. Okay. Great, thank you. Thank you, all -- Thank you, I will start. One quick correction for David; I've been CBO Director for six years, and not eight.

MR. WESSEL: It feels light eight.

MR. ELMENDORF: It may feel like eight to you, and it feels eight to me, but it's been only six. My colleagues and I at CBO are acutely aware of the uncertainty of the budgetary and economic estimates that we provide to the Congress. We view our estimates as representing the middle of the distribution of possible outcomes. We frequently explain the estimates that way to Members of Congress and their staffs. And we often discuss risks to our estimates.

So I take Chuck's concerns seriously, but in my experience the Members of Congress are quite aware of the uncertainty of our estimates. In fact, it's not too uncommon for them to think that we've got the sign of the estimated effect wrong, in addition to the specific magnitude. So I think the issue at hand, is not whether we should communicate the existence of uncertainty, but whether our attempts to discuss and to quantity that uncertainty provides particular additional help to the Congress in the choices that it makes.

And we have worked hard in the past few years to quantity the uncertainty of more of our analyses. But there are important limitations currently on our ability to do that quantification and to help legislators make effective use of such quantifications. So let me begin by discussing the things that we do, and then talk about the limitations we see on doing more.

So we quantify the uncertainty of our estimates in a number of contexts, and I'll give four examples. Our first, when we estimate the macroeconomic effects of changes in fiscal policies, we now regularly provide both essential estimate, and a range. The ranges allow for uncertainty about the responsive labor supply to changes in tax rates, the effects of changes in budget deficits and national saving and international capital flows, and other factors.

And these ranges are intended to cover roughly two-thirds of the distribution of possible outcomes. One example of such analyses is our estimates of the short-term, and shown here long-term economic effects of alternative paths for federal debt.

The second example is in our long-term budget outlook -- I'm sorry the heading didn't work out here -- we regularly include projections for alternative scenarios. So in July we showed what would happen to the budget with four key underlying factors. The rate of decline in mortality, the growth of productivity, interest rates, and the growth of health care costs, differed from the values that are used in most of the reports.

The chapter also discusses other sources of uncertainty that we did not quantify. Similarly, we publish additional information on our long-term projections for Social Security, that regularly include a range of possible outcomes for the Social Security Trust Funds, based on the historical year-to-year variation and key demographic and economic factors. This sort of analysis suffers from some of the weaknesses that Peter identified for similar projections from the Social Security actuaries.

A third form of our quantification of uncertainty occurs in some analyses of specific Federal policies. This example here is our estimates of the effects of unemployment, of raising minimum wage. We also provided similar ranges for estimates of the effects on the Federal budget of adopting a more competitive system for Medicare.

And a fourth and slightly different way in which we quantify uncertainty, is to analyze how actual outcomes differed from our estimates as it's announced, and something that Robert just discussed. We do a recurring evaluation of our economic forecasting errors, which I've shown here, we have evaluation of our revenue forecasts coming out shortly. And we also publish as the OBR does, rules of thumb for how much budget outcomes vary for a given variation in economic variables.

Still, the vast majority of CBO's estimates are provided as point values without ranges. I think there are three principle reasons for that. A first, they congressional budget process requires point estimates of the budgetary effects of proposed legislation. And Bill Hoagland put this in a more pithy way than I will, but budget resolutions provide committees with allocation of funds expressed as point values.

The House and Senate budget committees, track, estimated budgetary effect to approved legislation using point values, the statutory pay-as-you-go law enacted in 2010, and various parliamentary rules of the House and Senate, all are enforced using point values.

A range that encompasses some values that comply with budgetary rules, others that did not, would not be useful in following those procedures or enforcing those rules. So we do need to provide point estimates. And one might argue that the Congress should change its approach to explicitly reflect uncertainty, but developing comprehensible procedures and rules that use range of figures rather than point values, that seems quite daunting.

A second reason that CBO usually does not provide ranges for its estimates, is that we often lack a strong, analytic basis for constructing such ranges, and one obstacle is that most of the models and estimating techniques that we use do not readily yield estimates of uncertainty, they are not formal probability models.

Another obstacle, is the underlying research on which we draw, generally provides only limited information about uncertainty. For example, our analysis to the effects of raising minimum wage drew on dozens of studies, so we could form an educated sense of uncertainty related to the time, the place, the modeling approach used, as well the sampling uncertainty.

Our analysis in other areas, for example, the effects of prescription drug use and other medical spending was based on just a handful of studies that have done in that area. So forming a sense of uncertainty would have been quite difficult. A further related challenge is the lack of time, we are often rushing to finish analyses, and especially the cost estimates that Chuck focuses on, before congressional action on an issue that’s expected to occur.

And doing the additional modeling or gather the additional information needed to quantify uncertainty can take considerable time that would delay the release of particular estimates and would also delay our turning to other analyses or estimates or other proposals.

And the third main reason that we do not use the provided ranges of estimates is that we are still developing ways to help the legislators make effective use of our quantification of uncertainty. Part of the challenge is that providing ranges for estimates sometimes muddies rather than enhances general understanding of our analysis. For example, when we report ranges, people who like numbers to be big tend to pick the top end of the range. And people who like that number to be small tend to pick the bottom end of the range. That can make the public discussion of our analysis quite confusing, and we have a limited ability to clear up that confusion.

Another part of the challenge is that it's often unclear how legislators might respond to the quantification of uncertainty, and we in the analytic community, more generally, have developed only limited guidance in this area. Surely it is useful for legislators to be aware of the uncertainty of budgetary and economic estimates, but as I said, we think they are. The harder question is what else might they do with a particular quantification of uncertainty that we could provide?

So I'm some cases, legislators might want to adopt only policies that are very likely to increase or decrease that variable of interest, or to hit a particular target.

And this was the example that Robert gave, in the U.K. if you are trying to hit a particular target for the budget deficit, you might not want to pick policies that have a certain probability of actually hitting that target.

We did analysis, for example, of whether a certain change in health care benefits that had been implemented was resulting in savings for the Department of Defense, and we concluded that it probably had. A similar analysis, and conducted when a policy was being considered, could be helpful, but in particularly in those specific cases, where the congress was trying to hit a particular target, with a particular probability.

As another example, in some situations lawmakers might want to adopt policies with a smaller variance of budgetary defects in order to reduce risks to the Federal budget. For example, understanding the extent of uncertainty about future federal spending that arises from uncertainty about life spans, might affect whether policymakers would want to index eligibility ages for certain programs, two life spans.

Another situation that legislators might want to adopt policies with a larger variance of future budgetary outcomes as a means of experimenting to identify the best policies; I think the analyst can help to sort out those different situations, but it's a complicated problem. The final example, legislators might want to respond to greater uncertainty about long-term budget projections by taking larger deficit-reducing actions in order to reduce the unfavorable table of distribution, as Alan argued.

On the other hand, legislators might want to respond to greater uncertainty by focusing less on projected long-term outcomes at some horizon. I think that more research, like Alan's paper and other papers being presented here, and being written elsewhere, can help to guide policymakers in that issue as well. But the profession is still, in our judgment, in the early days of this sort of analysis, as a result, policymakers' direct use of our estimates of uncertainty, is limited at this point. And that, in turn, leaves us to devote only a limited portion of our time, to producing such estimates.

I'd like to conclude by emphasizing that we are working hard to quantity the uncertainty in more of our work, but there are also important limitations on our current ability to do that, and help legislators make effective use of that information. Thank you. (Applause)

MR. WESSEL: Thank you very much for both very clear and interesting presentations. I'm only going to have a few questions then we can, maybe, encourage the people who were on earlier panels to join in the conversation.

Robert, tell me if I got this right, but do you have to express an opinion about whether the government has a greater than 50 percent probability of meeting its fiscal target?

MR. CHOTE: Yes. We do. And that therefore requires us to produce a point estimate median forecast in order to say whether they fall on the right side of that. So, yes, we do. I mean it's interesting that the formal fiscal targets are obviously not the only thing that the politicians are interested in aiming at. We have two formal fiscal targets at the moment, and one of them isn't achievable and the other one isn't binding.

So, actually the government is focused on other things, like the particular date on which it expects to balance the overall budget, what the path of the deficit is on a year-by-year basis. So you are absolutely right, that’s the formal role. It's not necessarily the thing that policymakers are most worried about most of the time.

MR. WESSEL: I see. And there's been -- Doug talked some, a little bit more than you did about what this is like from the policymakers' side. Do you find -- Chuck Manski suggested maybe the British are just different, that they are actually interested in this uncertainty? Or does this just make you more popular with the Manski crowd?

MR. CHOTE: I think they are. I mean, partly, as I say, it is this combination of the fact that you have a clearly-defined target, and independent forecasting, because essentially you are requiring the policymakers, even if only by revealed preference to say by how much do they want to overachieve the particular targets on essential estimate, which is essentially asking them to say, how much account do you want to take of uncertainty in the future.

I think in terms of the impact on policy changes, we have adopted an indexation of the State pension age. For example, to life expectancy, the government has set out a general principle of people expecting to spend a third of adult life in retirement, but there will be a committee every five years to translate this into a precise set of ages which allows you to take into account the fact that that may not be exactly what you want to be aiming, at that sort of time.

But I think there is a general willingness to embrace this sort of thing. I mean, obviously, the Bank of England has been doing this for quite a long time, and the fan charts that it's presented for monetary policy. I mean, there, the issue about -- I think it's important that the emphasis on uncertainty doesn't give you an excuse to dodge the responsibility to come up with your best judgment.

The Bank of England used to be -- or Mervyn King, when he was Governor, used to be so resistant to producing point estimates, that he would just provide the fan charts. The consequence was that members of our former profession rushed home to the office, photocopied the inflation report, blew it up as large as they could, and tried to back out the point estimates from the middle of the probability distribution. But I think there is a general acceptance but, you know, real politics has not been suspended in the face of it.

MR. WESSEL: It seems to me that -- a couple of things. One is -- so the reason is -- To me, one reason to talk about uncertainty is that when you are wrong, which you are bound to be a lot, you can say to the members of congress, I told you so even if you weren't listening, and you can cite the day in which you testified before the Budget Committee (inaudible).

But I think the deeper question and one that came up in the first Panel this morning, and one that Henry Aaron raise is, by giving long-run forecasts are you conveying something to policymakers that we don't really know, that might, in the different state of the world that we have now, lead them to do something that's harmful?

MR. ELMENDORF: We've wrestled with how much weight to give to forecasts of ours of different horizons, and in fact, although our long-term projections go out 75 years, essentially all of the report that we issue talks about the next 25 years. And 50 years beyond that, we have greatly reduced the emphasis on recognizing that we have less and less knowledge about what will happen at that horizon.

But I think it is important for us to continue to do work that -- work as hard as we can, take it as seriously as we can, the projection over the next 25 years; because the challenges that the country faces are not just short-term challenges, and the policy responses that are being weighed are not just short-term responses. They are gradual responses in general, in some cases responses that wouldn't have much or even most of -- much of all their effect, until we move beyond the 10-year window that we focus on.

I think it's very important for us to look out over that -- over a longer period than that standard 10-year budget window, but we are very transparent in the greater uncertainty as we go out. And in this last long-term budget out with this year, this range that we show, that I had this picture of, has a debt to GDP ratios in 25 years, that varied by a factor of 2 to 1.

I think we conveyed very clearly there's a lot of uncertainty, but it turns that essentially all of that range that we show, has debt which is as large or a larger role to the GDP than it is today, which is unusual high level by the standards of the entire history of country. I think there is important information in that.

MR. WESSEL: And finally, do you ever find yourself thinking; I wish Members of Congress wouldn't pay so much attention to the score in deciding whether something is a good policy rule?

MR. ELMENDORF: Yes. I think it is a standard view on my colleagues that too much a weight is given in some cases, to hitting a particular number that we recognize as uncertain, and that the legislators recognize as uncertain. I think that's a byproduct of ongoing legitimate concern about the trajectory for the Federal debt. But we often think in particular circumstances that our estimates are given too much weight relative to other considerations.

MR. WESSEL: All right. Let me ask if any of the authors or respondents, the earlier Panelists want to weight in. Gene? Can you just wait for a mic?

MR. SPERLING: I'm so quiet, you probably didn't hear me.

MR. WESSEL: We want to make sure we get every word down, so we can hold it against you in your Confirming Hearing.

MR. SPERLING: It won't be you holding it against me, I guess. No just, I want to follow up on Doug's question there, which is -- and maybe it's for both -- which is, there probably are a lot of policies that you do think are good policies, but part of the problem may be that when the Congressional Budget Office says, no savings; it's not reflected as, we are not certain enough about it to do savings, but that it would produce no savings, and so it undercuts.

And I think my question is more on kind of health care reform where my guess is, there may be areas where you could say, here are a number of things that probably move in the direction, might do good. We don't have the certainty. And I guess the one question is, is there a way of expressing without a score on opinion or certainty that these things could have a positive effect, because you may have things that are just -- become almost delegitimized by their lack of their score, even though I don't know -- think that would necessarily be the intention?

MR. ELMENDORF: You raise an important point, Gene, and I'm not sure what we can do about it. When we analyze, for example, the Independent Payment Advisory Board, as part of the Affordable Care Act Legislation, we wrote a long discussion about how this as a group would have certain avenues open to it, and it might look for things it could do, and it wasn't clear what it would -- what the group would look to. It wasn't clear how successful they would be.

So our estimates of its budgetary effects were very explicitly a probabilistic sort of estimate. There are other proposals or specific changes, we analyze, for example, a few years ago, the effects of raising the cigarette tax on the federal budget, has direct revenue consequences; it would also make the population healthier. And many people expect that would improve budget outcomes, with an elaborate analysis that showed that it might not improve budget outcomes, there are factors going both directions.

But I think it -- Again, I think it came through very clearly in our work that some things that seem good, at first blush, might turn out to be good, or might turn out not to be good. I think that comes through what we are doing. I don't know else we can do, and I think particularly in cases where it's hard to understand what the right point estimate of flexible legislation would be to actually quantified the uncertainty would be much harder, in fact.

And what Robert talked about which I found interesting, was their qualitative characterization of the uncertainty -- of proposals. And that's not something that we do, and I personally, at least, haven't thought about it; or maybe other people have, and I see Bob Reischauer, or others in the audience, who may have thought about this. I'm not sure if that would help or not, I'm not sure what our capability of doing that would be.

I mean, it's worth remembering although we are a large organization, and much larger than the OBR, we published 500 written cost estimates this year; we probably did 10 times as many informal estimates. So things that are -- I don't want to sound like I'm just -- just focused on running the trains, but I am focused on running the trains, and we need to find mechanisms that are feasible in very short -- very short timetables, for a wide range of legislation.

MR. WESSEL: What about that qualitative -- that was the one where you show the error, (inaudible) tabs or something, and you had marked in yellow. Was that something that you were asked to do? Or, is that your invention in order to avoid the problem that Doug finds found himself accused of?

MR. CHOTE: Well, I'm ashamed to say, I stole this from the Australian Parliament Budget Office, who tried this and it was --

MR. WESSEL: We'll have that next year.

MR. CHOTE: And we've developed it beyond that. And I think what we've previously done, is we have a slightly odd system in the U.K. that the government republished the forecasts. The government publishes its own scorings, which we have scrutinized before they announced them. And they know whether we'll say, we don't agree with this or not, and now their having introduced this thing, what we'll say about the uncertainty around it.

But previously all we had done was to say, here is the list of 80 measures announced in this particular package. We think the following three are particularly uncertain, and you put a little bit of language around that. I think we felt that it would be much more useful to have a more systematic and transparent way of doing this. People are also, of course, quite interested if a particular package consists of a lot of well-identified giveaways to the general public that are highly certain, paid for by a large number of highly uncertain takeaways, and anti-tax avoidance measures. So it will draw interesting conclusions from that.

MR. WESSEL: They'd never do -- They will never do that here. Peter Diamond?

MR. DIAMOND: Any scoring rule is open to some kind of gaming. And with presentation of all the details the gaming is very evident. So people who dig in, know about it, yet the scoring plays a big role, and so a lot of four concerns has been, as it were over too much; I wish you had included somebody today, who did the reverse.

What was life like before the CBO? What was it like without scoring, when everybody was making up their own numbers? I certainly remember back -- the issue, again, Social Security before we got into asking for inflation. So the issue was how much shall we raise benefits this year, and what of the political pressures; and what kind of limits can we set on it? So if scoring set the limit but it was all made-up scoring because the system had no automatics and the scoring was made up. Here's the formula, here's the number; so Congress could hide behind the number when beneficiaries wanted bigger things. I think scoring really matters, even as imperfect as it is.

MR. WESSEL: Can you pass the mic back to Representative Cooper.

MR. COOPER: I love the British way of the whole of government accounting, and also on a commercial basis, which I take to being accrual accounting. Because here our austerity is really caused by state and local government that laid off countless employees as the government, the Federal Government was trying to do the right thing. And also, so if a few of our colleagues have any idea of what a fiscal gap is, that's how large it is.

MR. WESSEL: Any other Panelists? Steve Goss -- No. No. Go, please?

MR. GOSS: Thank you. First of all, just to the point of scoring before there was CBO, at least on the side of security there was, and Peter we'll have to have a longer discussion about what happened prior to the automatics, because there was serious consideration to that. But my question is really for Robert.

Robert, you kind of took my breath away with one of your graphs, where it looked as though from your 2008 projection, has state, say, forecast through 2014 projections you had a lowering of your estimation of potential GDP for 2020, of approximately 15 percent with no apparent trajectory in the more recent projection to be closing that gap back. So it looks like you've taken a 15 percent bite off of potential GDP. At least through 2020; is that your presumption going forward? And, doesn't that sound like an awful lot of uncertainty? And the question on that is; do you really think your 2008 was that bad, that now you really had a need for that much correction?

MR. CHOTE: Shall I pick that one up specifically? I mean, the first point to make obviously is that 2008 projection was before we existed, so that was the published projection when the forecast was still in political hands. Although that said, I might (laughter) -- that said, I would not say that if it wasn't in political hands that you'd have been very much closer to where we are now. But I think, certainly, this has been true since the crisis hit in the U.K., and I think it's more so here than it was to start with.

But the whole notion of how big is the whole that your fiscal consolidation program has to fill in, is entirely wrapped up in this judgment of how much potential GDP has moved down from the expected path. Basically for the U.K., you multiply that loss by 0.7, and that tells you roughly what your increase in the structural budget deficit is, as a share of GDP.

Now, as you rightly point out, and as I hope the chart shows, there's a lot of uncertainty amongst other people who are looking at this, as to how big this decline is, and because for the large part it's very difficult to explain quite why it should have been that large. But basically in response to the fact that, you know, we've had a weak economic recovery, the business indicators are saying there's not very much spare capacity. You've got a very weak productivity performance.

All of that suggest there's been a big supply hit. On the other hand, that view is challenged by the fact that we really still don't have any wage growth to speak of. So can that output gap really be that narrow? But I think it's something; that it's important for us to be upfront about, you know, we are in the middle of a 10-year fiscal consolidation program based on filling a gap between one number you can't estimate, or indeed observe directly, and another one.

MR. WESSEL: How about potential here, what have you done on that?

MR. ELMENDORF: We've revised down our estimate of potential for 2017 by 18 percent or so relative to our projections in 2007. We think that some of that is due to the recession, weak recoveries specifically, we think some is due to developments up through 2007, they just weren't apparent to people at CBO in 2007.

Of course as the period since the last cyclical peak goes on, as the recession weak recovery occupy more and more of the time we are looking at, it's harder and harder to disentangle what part of the revision is due to developments in the -- in this business cycle, or just a stake in assessment by us before the business cycle. But the down revision is substantial and I think that does provide appropriate caution about taking a particular -- a particular pint estimate at face value.

MR. WESSEL: Ted (Inaudible)?

SPEAKER: I'm a journalist so I don't know how productive this will be but --

MR. WESSEL: Don’t start (laughter) right before you ask (inaudible).

SPEAKER: So this is for -- this is for Mr. Elmendorf. I'm much more familiar with JCT's estimating methodology, but a big debate in that world and the tax world has been over whether or not to account for macroeconomic factors or tend to project them. Right now they are mostly just basing it off of your agencies baseline. And I was wondering what your thoughts were on whether doing the -- or kind of, if these factors would reduce uncertainty, or increase it?

MR. ELMENDORF: Let me just quickly clear up some confusion about this question of dynamic scoring, the first as you understand, but not all the recent commentators do. Our scope for incorporating macroeconomic effects into change and legislation, I was limited by the fact that estimates of changes in tax provisions are the responsibility of the Staff, the Joint Committee on taxation. Not of CBO.

A second thing just to emphasize is that our estimates and JCT's estimates incorporate lots of kind of behavioral responses. They are not static, but they don’t generally incorporate macroeconomic effects. Another thing to emphasize, though, is that when legislation is being discussed, or proposals are being weighed, that would plausibly have large macroeconomic effects then -- and if time allows, then we, or JCT do estimates of those macroeconomic effects.

So we do this every year in our analysis of the President's budget. We did it this year for our analysis of Chairman Ryan's budget plans. We do it now every year in our long-term budget outlook. We did it last year for the Senate's Comprehensive Immigration Legislation. JCT did it this year for their analysis of Chairman Camp's Tax Reform Proposal.

So, the sort of work is not new to us. We've actually spent a lot of time ourselves in the last few years improving our models to the effects of fiscal policy on the economy, and in writing reports that spell out how we do that sort of modeling. So doing those kinds of analyses, again, for legislation, that would plausibly have noticeable macroeconomic effects; and when there is time in the congressional process for us to do it, that's fine, we are doing that now.

I think the question for the Members of Congress is how they want to use that information. And that's really up to them, to decide what role they want to give these estimated macroeconomic effects and their feedback to the budget when they consider legislation, but that is appropriately up to the Members of Congress to decide.

MR. WESSEL: Another question? Yes. Henry Aaron?

MR. AARON: This is a question for you, Doug, with respect to the alternative fiscal scenario projection, which in many quarters is regarded as perhaps more realistic than the extended baseline. Actually, one of my questions refers to both projections.

During the first session when commenting on the projections of Social Security and Medicare hospital insurance, Peter Diamond observed that the probability that scheduled benefits would be paid in both programs and current revenues would be corrected in both programs, was the probability of those joint events was about zero.

Yet, both the extended baseline and the alternative fiscal scenario assume that that zero probability event will occur and is fed into the projections. So with respect to that particular assumption, my question is, what do you think about that? And are you bound by instructions or statute to estimate in that way? Or was this a decision of CBO?

The other question relates to the alternative fiscal scenario only, which is the assumption that revenues will continue beyond the 10-year budget window, at 18 percent of GDP, which is based on historical analysis, but historical analysis of a time radically different in character from the one you are projecting. One in which, in the future, were we to remain at 18 percent of GDP, Congress would have to continually cut tax rates in the face of projected widening deficits, which, even given Congressman Cooper's evaluation of his colleagues, strikes me as verging on calumny; something that they would not do. So I would appreciate if you'd comment on both of those elements of the projections.

MR. ELMENDORF: So, it is common, as you say, Hank, for people to refer to alternative fiscal scenario as the more realistic scenario, but I don’t refer to it that way. We, at CBO, don’t refer to it that way, because many indications we've done this, the alternative scenario has shown debt just skyrocketing ultimately. That’s not a realistic projection. For our purposes, the baseline, and then the extended baseline scenario are meant to correspond roughly to current law.

And we think about an alterative -- the alternative fiscal scenario as corresponding real closely to current policies, one might say, and the difference was particularly stark when the 2001, 2003 tax cuts were scheduled to expire, because members of our baseline and the extended baseline followed current law in incorporating those explorations. But many, many, Members of Congress were, in their minds, starting from a benchmark in which the existing tax rates were continued.

And then one, to understand the effects of policies relative to that sort of benchmark, and put that continuation of the current -- the then current tax rates, into the alternative scenario. So I don't think it's meant to be realistic. So Peter's concerns that this don't worry me, because I think the alternative scenario is meant to be, what would happen if we continued with the current Social Security benefits, and other sorts of benefits as they are currently being paid out; and we continued with current tax policy.

Now, we are required by law to follow certain rules in constructing our 10-year baseline projections, and much of this was written into law in 1985 in the Gramm-Rudman legislation, with some modifications since then. So there are rules that we follow, and when there are ambiguities we consult with the budget committees on how to handle those.

The extended -- but that applies really to the 10-year projections, the fiscal baseline. The extended baseline projections, we try to follow that spirit of current law, as you go further out. It's not literally current law providing technology reasons. So, for example, the country -- the Federal Government currently has a debt ceiling. We don't assume in our projections the debt ceiling is not raised, so that even the baseline rules, although they are supposed to be about current law, make certain sorts of accommodations, and for social security, where benefits are legally paid, I understand only if there's money in the trust fund.

The baseline rule say we will project the benefits as if they were being paid, as if there's enough money to pay them. So that's the baseline. And I say we follow that same principle for the extended baseline.

The alternative scenario is really up to our judgment about what alternative benchmark, what representation of current polices we think would be most useful to the Congress in its deliberations. But the goal is not realism; the goal is to capture what many Members of Congress think of as the current sorts of things that are going on in the budget. But there was obviously ambiguity in that, and we use our best judgments in trying to be specific, and then as you know, we lay out the assumptions that we have made very explicitly.

MR. WESSEL: But in the baseline you are required to assume that Social Security benefits are paid even if there is not money in the trust fund; on the tax question, by 18 percent of GDP?

MR. ELMENDORF: Oh. So on the tax question, what we are trying to capture there, is what people might think of as current tax policies in a broad sense. So what's happening -- what's happened over time is the Federal Government, as you know, has collected revenue, equal to about 18 percent of GDP on average, with variation up or down of a few percentage points, but no evident trend. So we think that we are trying to show the Congress what would happen if they continued with the benefit policies that are in place, and the sorts of tax policies we've had in the past and have now; what will happen in the future.

And the fact that those lines of spending revenues diverge that is the fiscal challenge. That is exactly the point; that with the sorts of tax policy we've had before, Federal Government will not collect enough money to support the sorts of benefits that we have now given the age in the population and the rising cost for health care. The fact those lines diverge is our effort to demonstrate to the Congress, why important changes in fiscal policy will probably be needed.

And so we -- it's not our job to line those up, it's the job of the Congress to decide what policy changes, over time, might align those lines on that.

MR. WESSEL: First, please join me in thanking these two guys for such a great -- (Applause). I also want to -- I want to remind everybody that all this and more is on our website. As you know, these events don’t happen automatically. I want to thank Kerry Grannis, Paris Ostry, Brenda Marcharac, Emily Parker; and my colleague, Lee Shaner, for helping us make this such a success.

And I'm no more certain about what the right answers are, but I'm a lot more sophisticated about my understanding of uncertainty, and I hope that’s all the same -- true for you.

Finally, people who are on the Hutchins Advisory Committee, Marty Feldstein, Alan Murray, Bob Reischauer; Glen would like to take a picture, so if you'd come up I'd appreciate it. And for the rest of you, thank you very much. (Applause)

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I, Carleton J. Anderson, III do hereby certify that the forgoing electronic file when originally transmitted was reduced to text at my direction; that said transcript is a true record of the proceedings therein referenced; that I am neither counsel for, related to, nor employed by any of the parties to the action in which these proceedings were taken; and, furthermore, that I am neither a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

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