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DYNAMIC SCORING: NOW WHAT?

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What is Dynamic Scoring?:

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Macro Analysis at JCT and the Mechanics of Its Implementation:

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P R O C E E D I N G S

MR. WESSEL: Good morning. I'm David Wessel. I'm director of the Hutchins Center on Fiscal and Monetary Policy here at Brookings and I'm very pleased to welcome you to this event, which we're sponsoring jointly with the Tax Policy Center, which is, itself, a joint venture of the Urban Institute and the Brookings Institution on dynamic scoring.

Now, for those of us who have been in Washington for a while, kind of coming to an event on dynamic scoring feels a little bit like this person will say this and then this person will say the predictable thing and Marty Sullivan will say this and Bob McIntyre will say that and Jane Gravelle will say this -- so, we'll probably have a little of that today, but our goal today was to move a little bit beyond the conversation about whether dynamic scoring is either the best thing to ever happen to Washington or the worst thing to ever happen to Washington, and to instead focus a little more on what does it actually mean and how do you do it.

And this is, of course, newly relevant because of the House rule, which I printed out and forgot to bring down, but which requires the Joint Tax Committee, which does taxes, and the Congressional Budget Office, which despite what some people think, does not score taxes, to take into account the macroeconomic effects of policies and their feedback effects on revenues and spending.

And this is hard. There are a lot of people who think it's long overdue; there are some people who think that it will lead to bad fiscal policy over time and what we're going to focus on today is exactly how it would be done, what assumptions you'd have to make, what are the challenges that the JCT and the CBO staff face in doing it, how can it be best presented so that members of Congress and the rest of us have a clue

as to what the analysis does.

So, this is a bit of an experiment, and moving beyond the basic pissing contest in Washington, to looking at a little bit of facts and information.

Let me just tell you briefly how we're going to do this today. We're going to start -- I'm going to moderate a conversation between Len Burman and Doug Holtz-Eakin about the big picture. Len, of course, is now the director of the Tax Policy Center and he also was the Deputy Assistant Secretary for Tax Analysis in the Treasury in the late Clinton years and has also worked at CBO.

Doug Holtz-Eakin, who is now the head of the American Action Forum, was the director of CBO from February 2003 to December 2005, so both of them have grappled with these issues firsthand.

Following that, we're going to turn to something we're very pleased to have a presentation by the staff of the Joint Tax Committee on how they actually look at how they do this and the mechanics, followed by a discussion that my colleague, Bill Gale, who is the co-director of the Tax Policy Center, will moderate. And then following that -- and you can't leave before the last event -- I'm going to talk with Donald Marron, Jared Bernstein, and Steve McMillin about the application of dynamic scoring to bills other than tax bills, which is also required in certain circumstances by the new House rule.

So, with that, let me invite Len and Doug to come up and we'll get started.

I should mention that if we can keep this on time, we're going to have questions after each of the three panels and in case you didn't notice, there's TV cameras in the back, one is four our webcast, so there's people watching this live and it will be archived on our website and the other is CSPAN, and we also have on our

website a little annotated bibliography that my colleague Brandon Marchurrek made that has references to the official documents of the JCT and CBO on this as well as things that have been written by each of the people who we have as panelists today.

So, Doug and Len, let me get started with you. Thank you for being here. And Doug, I want to start with you and I wonder if you could describe to us a little what was going through your mind when you were at CBO and you decided that it was appropriate to do a dynamic score, that is, to factor in the macroeconomic effects of the President's budget and what did you learn from the exercise?

MR. HOLTZ-EAKIN: So, it started actually prior to my arrival at CBO. It became pretty clear during the selection process that this was something that was important to the members, both sides of the aisle, and both sides of the Congress, and so, you know, I went into CBO basically with the belief that it was a good thing to sort of look at a policy change and find out all its effects. It didn't make any sense to me to exclude the growth effects and do everything else and so as a matter of principles, you want to look at before and after and everything in between, then the question became, when do you do it.

It seemed to me that the President's budget was the ideal place to do it because it's the most fully specified single set of policy initiatives, you don't have to worry about missing pieces very much. There are still some things you have to worry about. And so that seemed like the right thing to do. It also gave you the right comparison, because every president's budget is dynamically scored. If you read them, you know, for this President, Bush, Clinton, it always says, these numbers are contingent on full implementation of the President's plan. So, that's a dynamic score. I promise you the staff never proposes stuff that won't make the economy grow. Never. It's unbelievable.

And so, that was the right apples to apples comparison, in my view, and

then the question being, how do you do it, and that was something that was, you know, pretty uncharted. There were lots of different formal economic models that one could use for guidance and I don't think you should think of those as anything other than guidance. This isn't a mechanical exercise. You have to use the models for some help, but you never have everything in the model that Congress or a President proposes. I mean, those guys are incredibly clever, so there's always things being proposed that aren't in the models. So, you use them for some guidance.

And then the last issue, which came up again and again, was the presentation, right, sort of how do you present the results and how do you communicate them. And there I think we got sort of a really good solid F because, you know, at that time, substantively there were the 2003 tax cuts, which had some sort of fairly straightforward pro-growth supply side effects, and then there was the Medicare prescription drug bill, which is not exactly a pro-growth policy, and when we put out the results, we basically had a modest net effect, I thought the Congress would conclude that, gee, it's not a good idea to offset this growth policy with this big new spending program, instead they concluded we did it wrong. That was it.

MR. WESSEL: Len, so, it seems obvious that Congress should consider the macroeconomic effects when it's considering a major piece of tax legislation or spending legislation. So, I think the question is, what are the pros and cons of actually folding that into the score, that is, the official score that's used to decide whether a particular piece of legislation will comply with a reconciliation or some other target?

MR. BURMAN: Well, the pros of including a dynamic score are that, I mean, basically it removes the constraint on estimators. If they actually knew what the macroeconomic effect was, they could improve their estimates by including it.

The con is that there are so many cases when they actually have no

idea, and a lot of cases don't even know the sign of the effect. There's -- you know, the models themselves are these kind of stylized, general equilibrium models or reduced floor models, which means basically they're trying to account in a very kind of aggregate way how, say, capital and labor affect the economy and how taxes on capital and labor affect investment and work effort. Those were always based on the estimates that are themselves very uncertain and they aggregate just so much information and the models -- you know, unlike -- one of the issues -- well, there's an uncertainty in every estimate, right? The President proposed last week that we should tax capital gains at death. Well, we've never taxed capital gains at death. We don't know what capital gains at death are.

But in that case, we have lots of data -- we have data compiled by the Federal Reserve board Survey of Consumer Finances on how much assets -- how much capital gains people have in their portfolios we can make an estimate of probability of death, we can have some idea of what capital -- unrealized capital gains are at the time of death, and then we know what the tax rate is, we can calculate roughly what the revenue would be. Might have a big variance on it, but first of all, we know that it would raise revenue at least before - actually, in that case I think you could say it would raise revenue -- it would raise revenue certainly before including any kind of macroeconomic effects.

And then if you were to apply dynamic scoring to that issue, in the models, it would say, well, we're cutting the tax rate on -- we're raising the tax rate on capital. There would be less saving, less investment, which would hurt economic growth.

In the real world what they're doing is we're raising the tax rate on capital, but we're also removing the single biggest loophole in the individual income tax, which results in a huge amount of unproductive tax sheltering, and we don't have a good idea of how important that is. We know that there's a whole giant industry that's devoted

to taking advantage of the zero tax rate on capital gains if you hold them until death and different -- you know, depending on the assumptions you could conclude that that was good for growth or that was bad for growth, I actually don't know what the answer is.

But the problem is that, you know, in this case, there are going to be people who believe really, really fervently that there's one answer or the other answer, there's going to be enormous -- there would be enormous pressure on estimators in that case, and there are lots of examples like that.

You know, they did an analysis of the Tax Reform Act of 1986 after it was done, I think it was Alan Auerbach did this, and that was a policy which all of us working on tax reform were convinced that it was good for growth. Larry Summers, after the fact, said, no, it's bad for growth because it raised the overall tax rate on capital. Well, it also leveled the playing field, removed a lot of distortions among different kinds of assets.

The net effect was probably zero, but it's really hard to tell.

MR. WESSEL: All right, but wait a minute, so first of all, the rule says to the extent practicable, CBO and JCT should do this. So, presumably that gives JCT the right, and actually the responsibility, to say, if something really exceeds the capacity of human knowledge to just say we don't know. I mean, I'm sure that's difficult and I'm sure that won't make a lot of proponents of bills happy, but if we have to wait until we have perfect knowledge before we use these things, that seems like an unreasonable standard.

So, are you afraid that they'll be pushed into saying more than they know or that they just don't know enough to ever do dynamic scoring? What's the --

MR. BURMAN: I just looked down at my notes -- my notes on that specific issue, they say, absent political constraints, this is a good thing. It's removing a

constraint on the estimators. My concern is exactly what you're talking about, that they'll actually be pushed, that the Congress will be mad if most of the time they say, we don't know, but actually I think that's the right answer.

The other thing is that, you know, we actually do want Congress to pay attention to the macroeconomic effects of policies and, you know, I'm very sympathetic to the people pushing for dynamic scoring because we know that numbers actually carry more weight than just saying this is good for growth or this is bad for growth. The problem is that there are so many cases where the answer should be no, we don't know.

MR. WESSEL: Do we know enough to do this?

MR. HOLTZ-EAKIN: Yeah. We know just as little about this as everything else we score, and so --

MR. WESSEL: No, I think the argument is we know a little less about this.

MR. HOLTZ-EAKIN: I'm not sure that's true, honestly. I mean, so, we know that the precise answer zero is exactly wrong. There's no virtue to being exactly wrong, like, by knowing that there might be an impact and saying, we'll ignore it. So, I think sort of doing this makes sense.

Remember, this bill would probably not get dynamically scored; it's not big enough, the one that you're worried about. This is only done in the House rule and should only be done for major pieces of legislation that have large, predictable impacts, you know, that are budgetarily important. So, that's sort of one observation.

MR. WESSEL: Let's just define that. So, the rule says --

MR. HOLTZ-EAKIN: So the rule says it's going to be .25 percent of GDP in any fiscal year to merit consideration.

MR. WESSEL: Does it change spending or taxes by $40 billion --

MR. HOLTZ-EAKIN: That's like $40 billion.

MR. WESSEL: So, most pieces of legislation, it's not going to apply to.

MR. HOLTZ-EAKIN: So, in the last Congress it would have been three.

MR. WESSEL: Right.

MR. HOLTZ-EAKIN: This is a sideshow for most of the things, right, most of what Congress does is rename post offices, and that's not going to turn out to be a big deal. So, it's not going to happen very often.

You know, you do want to look at it. It is always a scoring issue to look in the research literature and sort of see what the consensus tells you, and in many cases you don't know much, and I have a long list of things in conventional scoring that are comparably uncertain to what we're facing here or worse, quite frankly, and in those circumstances, there's a lot of zeroes that get put in there. I mean, if you think back to the ACA --

MR. WESSEL: The Affordable Care Act.

MR. HOLTZ-EAKIN: -- the Affordable Care Act, advocates desperately wanted to be able to score the preventive measures as saving money and they didn't and they were mad about it and in my time, Congress was mad about decisions we made and I don't think there's anything that changes political pressure here. I mean, it's the case that scoring matters and that there will be disappointed advocates on all sides of scores. I mean, so I don't think that's different.

I think that the important thing to recognize is that the staffs are not slaves to these models. It's not like they have to say the model did this and that's the number. Scoring is a judgment science and a judgment art at the same time, and we should hire high quality people at the JCT and at the CBO, and we do, and we should respect their judgment and they should describe the way they arrived at the bottom line.

This is not some slavish, you know, policy in/number out exercise. That's not the way it works.

MR. BURMAN: I guess I disagree with the idea that this is just like doing other scores. The vast majority of (inaudible), certainly on the tax side, that Congress scores basically involve -- well, first of all, there are data --

MR. WESSEL: Because we've done these things before.

MR. BURMAN: Like, say, take the case --

MR. HOLTZ-EAKIN: Can I say something about that? CBO and JTC are most important where there's the least data. When we did the Medicare Modernization Act at CBO, there was no financial product in nature that gave seniors financial protection against the cost of their outpatient prescription drugs. Zero. So, you --

MR. BURMAN: You actually did update on how much they spent on prescription drugs.

MR. HOLTZ-EAKIN: Sure, but, I mean, the point is, when it matters the most, you were, in the end, making some judgments because you're don't -- it's like you're changing something you've done a thousand times before, so it's important, in those circumstances, to recognize you're always going to have a lot of uncertainty. That's all there is to it.

MR. BURMAN: But when you're doing those kinds of estimates you do have data typically that involves a calculation based on at least some data and maybe an assumption of elasticity. In the case of macroeconomic scoring, you've got a variety of different models you could use to produce wildly different estimates and in a lot of cases you don't even know -- you don't have any good basis for the parameter estimates in those models.

I'm not saying that we shouldn't try to do this. I'm just saying it's a lot harder than most of the estimates that Congress --

MR. WESSEL: Let me turn to -- so, they're going to do it, and they're going to do it for big bills, and we've learned a little bit. We saw CBO did basically a dynamic score, the ingredients of the dynamic score on the immigration bill, they could talk about labor supply. That was one that was measurable, but as Len points out, some of these things are going to be a little tricky.

I can't imagine that with all the things they had to estimate in the Affordable Care Act, if they had to have dynamically scored that, that would have just made it harder what the labor supply effects are.

So, Doug, you said that you thought you communicated the dynamic score that you did in 2003/2004 poorly. What advice do you give to JCT and CBO today as they enter this brave new world?

MR. HOLTZ-EAKIN: I think there's a big advantage to actually putting it into the formal score. When it's advisory and we had this range of estimates coming out of a range of models, you're basically out there trying to give a sort of master's level graduate course in macroeconomics in three minutes in front of committees and that's just not feasible.

If you put it in the score, you do have to come up with a number, right, and they may or may not like that number, but you do have to come up with a number, but it now matters, and it doesn't matter when it's an advisory, it matters when it's the number, and now they're going to want to know about the number and everyone out there in the research literature is going to want to say something about that number, they might not like it, that generates additional research on the issues you care about. It forces the staffs to come to terms up there with the number and the economics

underneath that number. That's all beneficial. It might not be perfect the first time, but putting it into the process actually kicks off a dynamic that I think, no pun intended, is actually beneficial.

We learn more about the public policies because the numbers matter. When they're advisory, it's -- it's not the same.

MR. BURMAN: So, in terms of the presentation, I think that's really important and I know that JCT and CBO have thought a lot about this. I mean, one thing is I think you should show the static as well as the dynamic estimates so that there's an idea about how much the macroeconomic effects are changing the results.

The second thing is, it's really important to be transparent about the channels through which the growth effects are likely to occur -- are believed to occur in the model. I know that -- you know, I mean, it's -- JCT and Treasury and CBO get a lot of pressure for the assumptions they make and they try -- they often don't want to talk too much about what's in their models when they're uncertain about them and this is a case where, you know, you really are telling a story and there are alternate stories that are consistent with it and it's important to be transparent.

I would follow the model of the Capital Weather Gang. I was actually checking this morning to see whether we were going to be snowed out and they put out a forecast and their forecast includes, in their discussion, the level of confidence, low to medium, medium to high -- I mean, there are some things on which like everyone would agree that these would be good for growth. Maybe we're not sure about the -- well, we won't be sure about the magnitude, but at least we're sure that there's something going on.

There are other cases where it's really, really ambiguous and I think it's important -- it would be important to do that.

One advantage of doing this is that I think it would -- might be a chance for the scorers to tell Congress that deficits, particularly in the context of the -- an economy that's close to full employment, that deficits have a cost and that surpluses might be a good thing to think about, and you might be able to build in from these models some kind of a deficit penalty or a surplus bonus and that would be another level of hand waving, but I think it would kind of come out of some models.

The other thing, you know, Doug talked about researchers out there, it would be really nice if Congress would actually try to put some money into research to try to measure these things better. One problem we have in macroeconomics is that the macroeconomics related to real world policy has very little attraction for academics because it's really, really hard. You have to do a lot of hand waving. So, they focus a lot on these --

MR. WESSEL: Something academics never do.

MR. BURMAN: No, they never do it. But the problem is, you know, you can't just lay out a little model, estimate a regression, and, you know, find the estimate for how to -- you know, taxing capital gains at death affect the economy.

And finding a way to encourage academics to try to answer macroeconomic -- real world macro-economic questions as opposed to the kind that lead to Nobel Prizes would be really helpful.

MR. WESSEL: I'm not sure -- this is a different conversation but I'm not sure that we're in a great place if it's going to take Congress to encourage academics -- to research --

MR. BURMAN: I was just talking about money.

MR. WESSEL: Let me just ask you one thing before we turn to questions. So, if I propose a tax cut on investment that's huge, you and I would probably

agree that would be good for growth, but people would say, well, it kind of depends. Are you going to pay for this? Is it going to be financed or not? If I get the bill on my desk and I'm at JCT, do I have to decide, are they going to pay for this somehow or do I have to assume that there's some negative effects in ten years when we blow a hole in the deficit?

MR. HOLTZ-EAKIN: So, again, the key in scoring is to just recognize it's not forecast.

MR. WESSEL: But don't you have to make a forecast about what the deficit's impact is before you make a macroeconomic --

MR. HOLTZ-EAKIN: Well, you wouldn't -- no good forecaster would take the March baseline and use it for a forecast in November, but in scoring you do that because you want to treat all bills the same. So, it's not forecasting. It's scoring, and that means treat all bills the same so you can rank them correctly and that means that if you're going to -- and this is a big part of what goes on in static scoring, both budget committees, OMB, the staffs at CBO, Joint Committee, everyone sits down and figures out, what rules will we use for consistency in scoring to make sure we give equal treatment to bills?

MR. WESSEL: So, in other words, they have to decide if they're going to decide in the out years whether we're going to have a deficit of --

MR. HOLTZ-EAKIN: Yeah, I mean, and then use the same procedures for all pieces of legislation.

MR. WESSEL: Raise your hand if you have a question so a mic can find you.

MR. BURMAN: So, I mean, what happens with the deficits out of policies is really important. I mean, if you think the consequences of the 2003 tax cuts,

which you said were pro growth, was that President Obama would be elected and we'd have high income surtaxes, basically, as a way to reduce the deficit pressure, the net effect, even in these macro models presumably would be negative. So, how you close the deficits --

MR. HOLTZ-EAKIN: Over what horizon?

MR. BURMAN: Well, say, over a horizon of 20 years.

MR. HOLTZ-EAKIN: The score is over ten. I mean, and that's -- no, but I mean, that's --

MR. BURMAN: But you're saying this is good for growth, but if it actually makes the economy worse off in the long run, isn't that relevant.

MR. HOLTZ-EAKIN: Yes, it is relevant and policy makers should -- have been told a million times by CBO that this is something they should care about, but the job is to provide budget numbers for the window that they have elected and you can't cure all problems -- and a great mistake is for the staff to get this idea that we can somehow trick them into doing the right thing if we just showed them the right numbers. That is a terrible place for staff to go. That's not their job.

MR. WESSEL: Henry Aaron.

MR. AARON: An observation and a question. The observation, Doug, is I think you've given the wrong answer just now. If there is a tax cut, eventually -- or a spending increase -- eventually there has to be payment for it, either through something on the other side of the ledger or through interest payments, the present value of which is identical to the shift.

If you are using a ten-year window, you have run afoul of what you countered at the beginning, you don't want to be exactly wrong because that is exactly wrong, even if it is the legal window.

MR. HOLTZ-EAKIN: Let me be clear.

MR. AARON: Let me -- to come to the question --

MR. HOLTZ-EAKIN: We actually did this, so the way you do it is outside the window you have an offsetting policy and you always use the same one.

MR. AARON: But it has to be incorporated into the estimated effect of the policy.

MR. HOLTZ-EAKIN: No question about that.

MR. AARON: Okay, well, then the ten-year window is irrelevant. So, the question I have is I'd like to suggest a practical policy, which I think passes the threshold test. Let's put together a combination of constructive realization at death, the President's proposal, and a restoration of the estate tax as it existed before the 2001 legislation, so, a much lower exemption and a higher rate, I think in combination that revenue would be sufficient to pass the threshold, all of which is used to cut corporate tax rates. Do you have any inkling as to what the sign of the effect of that would be on economic growth?

MR. HOLTZ-EAKIN: I'm not sure I understand the policy. I don't want to try to make one up off the top of my head.

MR. AARON: Well, the policy is quite clear. It's an increase in taxation at the time people die of capital gains, as the President has proposed, and a reduction in the estate tax exemption and an increase in the estate tax rate. Quite large so that arguably if there are effects on behavior, these changes would be large enough to effect behavior.

I'm not sure what the sign of that effect -- policy would be all by itself, but I wanted to combine it with using all the revenue to cut corporate tax rates so that it has a zero impact on the budget. Can you suggest that there would be -- what the sign of the effect might be of that change?

MR. WESSEL: Let me simplify the question. So, you --

MR. HOLTZ-EAKIN: How big is it? I mean, I don't even --

MR. WESSEL: Let's say there's a huge increase in the estate tax and a huge cut in corporate tax rates. And Henry's suggesting it's hard to tell the effect on growth.

MR. HOLTZ-EAKIN: My instinct is that's going to be positive for growth and I'd be happy to work through the numbers, but, you know, you need -- that's what the staff would have to go through.

MR. AARON: (Off mic)

MR. HOLTZ-EAKIN: Well, it would have to. I'm saying, the magnitudes matter.

SPEAKER: If the deficit -- I'm not sure how the rule works. We can bring this up later. Is it net or gross?

SPEAKER: Gross.

MR. WESSEL: So, if you raised $100 billion of taxes and you cut $100 billion of taxes, the net effect on the deficit is zero, but it's big enough to trigger the rule.

SPEAKER: (Off mic)

MR. WESSEL: No, it would. It would. You shift around enough money, it's not the net, it's the gross.

SPEAKER: (Off mic)

MR. WESSEL: No, the total. You add up all the plusses and add up all the minuses and if the plusses or the minuses add up to a big enough swing. We'll get this later.

SPEAKER: (Off mic)

MR. WESSEL: Wait, first of all, hold those questions because the

people at JCT will be able to answer more precisely how the rule works.

Short, briefly, wait for the mic, Henry, and be brief.

MR. AARON: Very brief. The answer has to take into account open economy consequences, exchange rate effects, you may think there's uncertainty about domestic macro models. The uncertainty with respect to open economy models is vast and depends sensitively on the response of other countries, so I think what is on very shaky ground.

MR. WESSEL: Static revenue estimate on corporate taxes as well. You have to -- if you don't think about what the rest of the world is going to do -- so, your point is it's even more complicated if you have to -- I think we have time for another question if there is one, if not -- there's a woman right here and then we'll go and we'll have time for questions at the end. SO, you still have a shot. You are?

MS. BLESSING: Sure, Laura Blessing. I have a very basic question and then I have a question for Mr. Holtz-Eakin. The basic question may be reiterating yours from earlier, you know, given that since the mid '90s the Republicans have been trying to get dynamic scoring in after they won the '94 elections and it's always been an option to have it in addition to the projections that are already provided by the CBO, right?

So, are we going to use dynamic scoring for literally every bill instead of the magnitude we've discussed, instead of the regular scoring, or are there going to be cases where we're still going to also use the regular scoring as well? This gets to your point about when we just literally can't tell.

I don't know if it's always an add-on or always a substitution or what.

MR. WESSEL: And the other --

MS. BLESSING: And the basic question -- and I legitimately hope this doesn't sound like a gotcha question, because it isn't, but Mr. Holtz-Eakin, I've read

previous remarks of yours that have been critical about the use of dynamic scoring or the efficacy of it, particularly talking about the difficulties with using it particularly in debt -- when the deficit is going up or in debt situations, and I was hoping you could provide whatever nuance I'm missing, because I've been following dynamic scoring but not your specific remarks on dynamic scoring.

MR. WESSEL: So, I think on the basic question, I'll say what I know and then we can ask the JCT people later, but basically the rule says if the bill is large enough, JCT and CBO should dynamically score it in the official score to the extent practicable, and I don't think anybody knows exactly how that's going to work in practice, but it's required for those big bills in the House.

MR. HOLTZ-EAKIN: And I would supplement that with, I think, the suggestion that you provide both the dynamic score, which is the official score, but also the information on what the static one looked like, it's perfectly sensible, so you'll know. I think that's right.

On the issue of debt, this is the issue of what do you do with offsets to deficit increase in policies, big spending increases or tax cuts that don't balance over the long-term, and, you know, it does have to balance over the long-term and we're proving as a country that we have no interest in balancing over the long-term, so I'm interested in at least doing it in the models.

That's a matter of -- I mean, that's not "easy". The point is, there are lots of things that are going to have to be decided on, operational things, like what do you do with the Fed, well, put a tailor rule in and have them always use the same tailor rule no matter what. What do you do without year deficits? Have an off set policy somewhere out there at year 20 that you always trigger. Do it the same for every piece of legislation.

These are things that I think are genuinely real and have to be dealt with,

but they're not insurmountable and don't disqualify dynamic scoring from providing some information that Congress could use.

MR. WESSEL: Do you have a quick response before we turn it over to the next panel?

MR. BURMAN: I would agree with Doug except I would do the deficit offset in year five.

MR. WESSEL: Okay. Bill and -- Bill Gale is going to introduce the next panel and we're going to hear from JCT. So, thank you very much, guys.

(Applause)

MR. GALE: All right. Thank you. We are delighted to have members of the JCT staff here as well as the director of the JCT, Tom Barthold, but in any case, we're going to hear from Pam Moomau and Nick Bull on how -- what is that Tom Hank's movie? How you do that thing you do, or something. Anyway, I'm not sure who's speaking first, but Pam and Nick are going to set up -- Pam's speaking first for 15 minutes and then Nick will speak for 15 minutes.

So, without further ado, let me introduce Pam.

MS. MOOMAU: Okay, well, thank you all for coming out in this awful weather. I was a little worried -- or it just occurred to me at the last minute that I didn't have a joke to start with, but then Len put me in mind of an oldie but goodie. What would happen if all the economists and all the weather forecasters switched places? Nothing.

So, I think that's why we're kind of -- the philosophy that appears to be underlying a lot of the questions that are going on here today.

What Nick and I are going to do, and this goes to David's introduction, is we're not going to talk about the same things that we usually talk about because we've all heard it a million times.

I'm going to be providing some history to remind people of where we are in terms of modeling and modeling research and then Nick is going to provide a lot of information about the detail that goes into characterizing policies. And we are going to talk about those tools and what the differences are between them, so with respect to the discussion that just happened, that will happen at the end when Nick talks about it.

So, just a reminder, a model is a very simplified view of the world and that's where a lot of the concern comes from, the modeler has to make choices about what aspects of the economy they need to make sure to model carefully and what aspects they can simplify away from because no model can solve if you're going to try to include everything about the economy.

So, JCT started working on deciding about modeling -- on deciding what type of models to use with this symposium, and there are people in the room, people on the panel, that were part of the symposium, in 1996 and you can find that pamphlet on our website to get -- I still think it kind of sets the table for all the discussion that came later, so if you want to get really in the weeds, read the pamphlet.

What that symposium did was it invited nine groups of modelers to analyze the same sets of proposals, and to the extent possible, analyze the same sets of proposals assuming the same things about the current law economy. We had three overlapping generation models, three infinitely live agent models, and three macro econometric models.

And the policies that we asked them to analyze, this was driven by what was the interest in tax reform at the time, consumption-based reform. So, we had a unified income tax, some people think of it as corporate integration, and we had a VAT tax, and then we had variations on them with various transition relief.

And these are just things from the pamphlet, I don't expect you to absorb

them completely, but we had a whole big range of results. We also tried to summarize parameters that went into the different models and the take-away we had from these was there was a huge difference between the results of the models, even though they were, in theory, analyzing the same proposal and, in theory, starting with the same starting assumption about the economy.

So, in the short-run, in the VAT, it was predicted that GDP would decrease by 4.2 percent all the way up to increasing by 16.4 percent. A lot of the models were more geared to longer-run analysis, so in the ones that could produce long-run kind of settled down to a narrower range of 1.7 to 7.5 percent.

So, kind of going back to thinking about the concern about camp macro, which results ranged between .6 and 1.5, we've come kind of a long way.

And not all the models, as I said, could model the short run. Also not all the models could model the long run. And the thing about the other slide on the parameters, there was less variation in parameters between models than there was in the GDP results.

So, what did we take from that going forward for developing our models? Well, modeling framework, meaning, is it an overlapping generations model, is it an econometric model matters. The choice of parameters, the choice of how sensitive you assume labor and capital and various other things are to the tax matters. Some models model monetary policy, that matters. It was a big deal in the consumption tax. And this was more of a surprise, I think, academicians knew all those other things.

Characterization of present law matters. We discovered -- this symposium met for like three or four meetings before their final results and the results were more broadly skewed in the early meetings than they were in the end and part of that was because of everybody not even having the same understanding of what present

law is.

And the details of the proposal matter. Some modelers were very surprised to find that when they put transition relief in the results changed a lot.

So, after that initial bit of learning that we did, the JTC staff went out and selected a couple models to work with and then we started working with them and presenting analyses that we did with them to a lot of different groups.

The criteria that we ended up with for our models was that they should reflect, first of all, to the extent possible, the state of the art of macro modeling and the academic literature. However, we had to take into account several practical considerations. First, there are time constraints for producing estimates. So, the real state of the art in the economic literature then, and even today, is very fancy, computable generation -- computable general equilibrium models and the fancier they are, particularly if they have some kind of stochastic or chance element, the longer they take to solve.

So, the models that like the technical wizards have out there today and earlier ones had back then would take two weeks to run through one simulation.

Obviously, when -- you know, and then, if you get weird results then you have to go back and start over for another two weeks before you even get your first result. So, we can't quite be at the cutting edge because we don't have that kind of time.

We also wanted to be able to produce a range of results, because there is this divergence in the literature, so we had several models. And, most importantly, given where we are, we need to be able to make sure we have the tax sector characterized correctly. So, I emphasize that again, models should have as much tax detail as possible. Academic models don't tend to.

So, let's talk about the House rule that we've been operating under since 2003. It's required that we provide a macroeconomic analysis of the effects of the

proposal on GDP, labor, capital, and revenues, basically, of any bill that comes up that is reported by the Ways and Means Committee to the House floor.

And so, we've done that. Now, as it turns out, the vast majority of bills that get reported out of the Ways and Means Committee to the House floor are very small. They're so small that showing GDP effects within reasonable rounding you get zero. So, for those bills we have a statement that says, results are too small to report.

Now, there have been other proposals that we suspect would have a measurable effect, but our models haven't been configured to take them into account. For example, there have been some models that had a lot of attempts to reform international tax flows. In those cases, we write a qualitative analysis, informed to the best we can with our models -- since our models, we don't think -- or we don't think the academic literature has enough research to tell us quantities -- we don't try to give quantities.

And then, finally, we have full-scale bills.

So, currently the models that we use for a macro analysis are something we call structural macroeconomic equilibrium growth model, which we refer to as MEG, an overlapping generations model, we refer to as OLG, and we've been working on and off with a dynamic stochastic general equilibrium model, GSGE. And you can see descriptions of these models on our website. We have a tab or a link to macroeconomic documents.

The models that we use to analyze Representative Camps' Tax Reform Act of 2014 were the MEG model and the OLG model, so I'm going to tell you a little more about them. They both have basic neoclassical foundations with the mainstream -- that comes from the mainstream of economic literature. Consumption follows a lifecycle pattern, labor supply responds to marginal and average changes and after tax wages.

Saving and consumption respond to after tax return savings and after tax income.

Business investment responds to the expected return on investment and to something called the after tax cost of capital, which is taking taxation of capital into account. And that, in part, depends on the availability of savings. Both models do have cross border capital flows so that net exports affect the domestic economy; there are exchange rate equations in them.

So, let's talk about the difference between the two models. In the MEG model we do have, in the long run, equilibrium demand adjust to hit supply, but in the short run, we can allow for unemployment, and that turned out to be very important because we've had to analyze bills that were short run, demand stimulus bills.

Our behavioral equations are structural, meaning; we use elasticities that come from empirical measurements. We divide our labor supply into four categories, high and low primary earners, high and low secondary earners. The purpose of this is they tend to have different amounts of responsiveness to tax changes and often-different proposals affect them differently. And one of the things we discovered with all of our experimentations is when you separate that out you can get a very different answer relative to if you just use one tax rate.

The other key thing about the MEG model is that people are myopic, meaning, they know what the economy looks like today when they're making their decisions, they don't know what it's going to look like ten years from now.

Now, what this does is it enables us to model policy changes that have a growing deficit. So, the discussion we had before about, well, what do you do about assuming the debt, fortunately, in this model we don't have to assume it. One thing it can tell us, because it does solve out to the future, is where the economy blows off, and that's a piece of information as well.

In contrast, our OLG model is more kind of coming directly from what's going on in academic departments, so it's constructed on microeconomic foundations, it uses deep parameters, supply always has to equal demand, it models instead of income groups, age cohorts, and the people in the model have perfect foresight, so they can look today and see a huge deficit in the future and this is what you're always hearing about these models.

There's no rational thing for them to do, so they don't and the model doesn't solve. And that's why there is a lot of discussion about needing some kind of fiscal closing assumption.

So, recently we've also added a specific multinational corporation sector in the OLG model. Actually, we lease this from someone who's been working with that and the good thing about that is it gives us a better handle on those proposals that are designed to affect that.

Ongoing model development, we work all the time to keep up with the literature, do the best we can to reflect changes. Right now, we're double checking some of the parameters in the OLG multinational sector, we're doing our own econometric work to see what we think of that.

And we're still building in-house, our own in-house OLG model and a DSGE model.

So, the rest of the presentation is going to tell you why the development of your macro model is only half the story, because getting both present law tax and the tax policy right is a lot more complicated than anyone who hasn't tried to do it in the detail that we have to do it at JCT for our conventional estimates can understand and we're going to use the Camp reform package.

So, I'm showing you here a couple of pages from our revenue table. It

goes on for 15 pages. Every one of those items, we have to decide how to add together to put into our model. There are all these items because there are a lot of different deductions and credits and we have to decide how to treat each one, and that is what Nick is going to talk about.

(Applause)

MR. BULL: I thought we were already on the right page.

Okay, so many people talk about dynamic analysis as though it's something that's impossible to do. Note, I'm talking about dynamic analysis, not dynamic scoring, so dynamic analysis is what we've been doing for a decade, and you can argue about whether you like the results that we have or not, but we think that what we've been doing is fairly reasonable, although we don't think we're perfect and we welcome comments and discussion.

Many others talk about dynamic analysis as though it's a magical thing, you just press a button, you could use this as a real time advice about somebody's proposed amendments. Well, it doesn't work that way, but one speculative guess as to why people think it does is because of -- it's an example of Clarke's law, Clarke is Arthur C. Clarke of "2001: A Space Odyssey", and his law says, "Any sufficiently advanced technology is indistinguishable from magic."

Well, what we're hoping is that after a few minutes of looking inside the hat you'll realize there is no magic button, its hard work and that's what we do.

So, Pam's talked a little bit about, you know, initializing models to choosing models, initializing them to parameter values consistent with the economic literature, et cetera. We had a paper almost a decade ago where we looked at what is the impact of putting in really simple tax assumptions, like one average tax rate for the whole economy or just an average and just a marginal, or breaking it into components

that address different aspects of income. And we found that it's really important to get it right for multiple sources of income.

So, in particular, for individuals, we compute average or marginal tax rate for wage and salaries in total and for the labor supply groups that Pam mentioned, high and low, primary and secondary, we compute average and marginal for interest, dividends, capital gains, business income on individual returns, so that's Schedules C, E, and F, and then "other".

For corporations we compute average or marginal tax rates. If you ask our corporate estimator what's the average rate or the marginal rate, you spend two or three hours in a discussion about what that is.

Then we combine the individual (inaudible) rates and the corporate rate to get a weighted average business rate that gets fed into the macro models. And finally, both the main models that we work with, OLG and MEG, handle depreciation separately, so we talk with the conventional estimator about present value effects, liability effects, and then you have to back out of those what's the implied change in capital consumption allowance as consistent with the way that the bottle's set up.

Okay, so Pam showed you a little bit of the 15 pages of the Camp table. This is just picking one provision, almost, at random, it's the domestic production deduction. And the columns are ITM, IM, BM. So, ITM is if this provision is on the individual tax model, then you'd have an indicator there. Individual marginal, IM, domestic production deduction obviously has an individual effect through pass-through income that's reported on individual returns. Similarly, it has a corporate effect. So, that one's sort of obvious.

For each provision, you know, there are four macro estimators and 15 or so conventional estimators, so we can't know the details of every possible provision, so

what I or somebody else ends up doing is walking around the floor and talking with the estimators about any provisions that are significant enough in terms of their score that you really want to find out how does this provision work and what's it doing.

For a lot of provisions, it's obvious whether it has just average effects or some marginal effect, but for other provisions, like last and first out method of inventory, it gets more complicated. That has large average effects, but also it has marginal effects and you can sort of take a look at the slide and think about it a little bit more later.

So, at this stage we have a good idea about the details of the proposal, ideally, and then the question is, can the existing models handle those details or do we need to figure out how we can modify the model so that it will handle it correctly? So, for instance, the first time that we modeled repeal of the home mortgage interest deduction in MEG, we had to go and tweak the cost of capital equations a little bit to make sure we were modeling that correctly.

Now, some provisions you might just decide you can't model it in any reasonable way and then you're sort of stuck, but you can't have -- you can't make models that can handle every possible strange thing that people come up with.

Okay, so for provisions that are modeled using the individual tax model, we need to compute the effect ton average and marginal rates by source of income, and so we have an ATR/MTR calculator, it's about 3,000 lines of code, and that modifies the existing roughly 52,000 lines that represent the individual model, which is a model that you can put in a proposal and find out how that changes liability.

For marginal tax rates by income source, you have roughly 40 iterations for each year because you've got nine sources of income and you need to figure out the marginal rate in the present law, that's a couple iterations, you need to figure it out in proposed law, that's another couple iterations.

And then for each iteration you have to make sure that you're not leaving accidentally effects -- you know, when you're incrementing income, you haven't left that increment embedded in the data, so you have to back that out again.

It's important for proposals that include base broadening that the average and effective marginal rates are calculated with respect to a broad base rather than something that's narrow so that we can represent both the present law and the proposal.

Seemingly simple changes can be unexpectedly difficult to de-bug, so in particular something that bedeviled us for a while was the switch from current law where capital gains are taxed at a separate rate, so the proposal to exclude a portion of capital gains but tax all of what remains at an ordinary rate, that's in Camp. It seems like it should be easy, but it takes a while to get that right.

Even having got all of this right some people would argue -- Jane, I think, will bring up a point in a few minutes -- that we haven't quite got it right. We have done a little bit of experimentation to check to see quantitatively is Jane's critique really significant or something that for the purpose of trying to get things done we can ignore as a rounding error.

And in, at least, the sort of preliminary experiments, and maybe we haven't fully grasped what you're saying, what we've looked at sort of suggests it's down into the rounding error.

So, now we've got the individual tax model, ATR and MTR effects, we have to look at the rest of the provision. So, I think we've taken care of maybe one or one and a half pages out of the 15 with provisions that are on the ITM, the rest are not on the ITM and you have to figure out the average or marginal rate effects.

So, assuming that you've got all that, the next step is to run macro

models, so pick a macro model, you're going to compute the current law macro-economic baseline, you need to read in a proposed law change, and then a step that I think many people sort of don't think about and are not aware that -- of its importance, is checking to see, does the liability change that you're getting at this stage, before -- we're not even talking about running the macro effects of the policy, just calculating something that roughly corresponds to a conventional score and then checking to see, did the macro models produce the same conventional score that the 15 pages of table show.

And if it doesn't, then you've got to do some de-bugging. Typically, that means iterating back and forth between the individual tax model, spreadsheet inputs and the macro model until you've got the conventional estimate matching.

So, now if you're convinced that the conventional estimate is being correctly computed, you start working on running alternate macro runs, and the first question that we ask ourselves when we look at those is, does the macro effect on the revenue estimate correspond roughly with the macro effect on big aggregates like GDP, consumption, labor supply? Does it make sense in that context?

And then we look at the changes in the macro aggregates for the different models and we think about whether those are behaving in a way that's consistent with what we and most people understand about how those models work.

Ultimately, sometimes we find there are aspects where we don't understand and so we'll go back and perform de-bugging runs. So, often that consists of doing stacking series, so you look at just the effects of the individual tax model, average and marginal rate changes, just the effects of the off-model pieces, just the effect of depreciation, and then you start putting them together and you try to understand, have you modeled this correctly or is there a step at which you've got some error in your inputs.

And then typically we do sensitivity runs, so we look at the effects of different monetary policy assumptions for models that can handle that. We look at the effects of different labor supply elasticities, different marginal propensity to consume, et cetera.

So, meanwhile, while one person has implemented this in one of the models, somebody else has been implementing it in the other models and you're going to consolidate results into a spreadsheet. I don't mean you're going to add together the results or take a weighted average, you're just looking at the results all in one place so you can compare them between the models.

And you're trying to figure out whether what you're looking at makes sense in the context of what you know about these models.

Meanwhile, by this time, someone's typically written the shell of a report, so they've provided background on the proposal, described it in detail, talked about its effect on tax rates, sometimes those get put in earlier on and you discover errors, so you have to go back and fix them, but as macro results become available, then you're putting those into the report and that gives another stage at which people can think deeply about what these -- whether these results are consistent with the models and whether they're consistent with a proposal.

So, we have lots of these reports already posted on the website. And this just sort of lists the most recent five or six.

Moving forward, there's the new House rule, so the new House rule, as discussed before, has a sort of trigger for when you have to score something, but also something that wasn't sort of pointed out that there's a need for it but wasn't mentioned that it's already in the rule, the rule requires a qualitative analysis for the 20 years after the budget window though if you have a proposal that is running -- you know, causing

huge deficits, then the -- what happens outside the budget window is going to obviously not be the same as something that's a revenue-neutral proposal that's not only revenue-neutral inside the horizon, but after.

And what we are going to say in the qualitative analysis is still not certain.

So, moving forward, you know, we've done dynamic analysis for a long time, dynamic scoring is not something that we've done so far, so that's going to be a new challenge.

I think there was one other thing I was going to say, but I can't remember what it is, so I'm going to finish up there. I think that we're planning, at this stage, to move right on to the five minutes from several people on the panel, so that's Jane Gravelle, and then questions that you have can come along afterwards.

(Applause)

MR. GALE: All right, thanks. I want to mention again our thanks to JCT staff for coming here and presenting the details of the models. I have many reactions, one of which is, thank goodness I don't have to do this, but we will talk about all of that and more. We have three discussants -- Jane Gravelle from the Congressional Research Service, Alan Viard from AEI and Chye-Ching Huang from the Center on Budget and Policy Priority. So each of them will speak for five minutes, and then we'll all come up here and have a joint talk. Thanks.

DR. GRAVELLE: Thank you very much. I'm Jane Gravelle from the Congressional Research Service. And I want to say the views that I present here are not the views of the Congressional Research Service, although there may be some similarity to papers that I've written for the Congressional Research Service. So, and I also want to say to our JCT folks here, I have great admiration for the work you do. I know you are all

dedicated public services, so I think if -- I hope you take any questions I would raise about your analysis in the context of helping to improve it.

So, and this is really, I think there are a lot of lessons we could learn from the dynamic analysis of the Camp Proposal, which is a very complicated proposal and has a lot of moving parts. First is, there is a big difference between individual rate cuts across the board and individual tax reform. You know, the effects are very different. So for a tax cut, a really important issue is the short run stimulus effect and the MEG model and the JCT's and the House model. It's not allowed in the OLG model. And there are a lot of reasons I think, for excluding this effect, including the offsetting actions of the Fed, but also the lack of dynamic scoring for appropriations. Now for a revenue neutral tax reform, stimulus effects may be less important, but it is important to incorporate base changes that are marginal in nature. And this is the question Nick referred to earlier. I don't think that was done in some circumstances for example, the deduction for state and local taxes and I think it's important to find out if that is important.

So I want to then talk about the reasons for the differences in the results in the Camp simulation. So the top three lines of this graph show the MEG -- that's their in house econometric model with high and low labor substitution elasticity in the OLG. These are without stimulus effects and you see this enormous range of effects between the two models. You can also see the stimulus and the MEG is actually a little bigger than the supply side effects at the top. Why did that happen? Well I think there are two major reasons. One is the labor supply effect in the OLG model is a lot bigger than in the MEG model. A little bit of it is because of the imbedded deep parameters I mentioned, you can turn into a labor substitution elasticity. This is only about 20 percent higher, while the labor supply change, changes 160 percent higher. There's a little bit of difference possibly from changes at Capitol that can't be imported. So I'm really not sure

what happened there. What I suspect is that the fiscal adjustments that need to be made in the OLG to make it solve have probably washed out income effects from the labor response. So that's my guess, but I don't really know for sure. I just know they're different, okay?

The other reason is intangibles. If you can sort of do a back of the envelope calculation of the results and see that the labor and capital -- changes in labor and capital don't account for the total increase in output. About .6 percent are about half of the difference between the two models, as seems to be due to the shift in intellectual property and treating it as an input to the production function, sort of like physical capital. Now this has been done in a model by a couple very respectable European economists, so it's not completely new, but it is kind of novel. And I think this is not an appropriate thing to include, because intellectual capital is not located physically. Once it exists it can be used everywhere. When a firm discovers Lipitor for example, that knowledge can be used, quite possibly can lead to production everywhere. So the fact that the patent moves to the United States instead of abroad doesn't change output, because that effect is already there in output. So I think that probably should be reconsidered in this modeling.

So I just want to sum up quickly what I think the main points of what I'm saying here and the things I suggest that JCT think about in the future. First there is a need for more transparency. Now JCT already provides a lot of information but not enough in this case for me to understand and I've studied these models for a long time, why the results are the way they are, so I just have to speculate and it's better not to have to do that. And I have to answer a lot of questions from my clients on this.

So, second, it is important to account for changes in the shares of income that are taxed in measuring marginal effective tax weights. We believe those

were significant. We have a CRS report that looked at itemized deductions. Third, should stimulus effects be included? I think there's a very strong case for excluding them. And finally, the OLG model is problematic, not just for the things that I've already mentioned, not only because of element shear, but in general, it depicts individual workers as perfectly informed and with perfect foresight. It can't measure our economy, so the question is, should it be continued to be used and contributing to a (inaudible). Thank you.

MR. VIARD: Thanks. I'm Alan Viard of the American Enterprise Institute and first of all I want to thank Brookings and the Tax Policy Center for organizing this really excellent conference. I especially want to thank Nick and Pam for the amazingly informative exposition on what JCT has done and is doing, which I found extremely insightful. I only have five minutes so I'm going to just mainly comment about two features of the estimate of the Camp Bill and I think each of them probably has some implications for evaluating the Camp Bill, but they also have implications for thinking about what dynamic analysis and what dynamic scoring can and should do and of course, that will be my focus.

So the first feature of the JCT estimate of the Camp Bill I think is, that the business tax reforms made in that bill do not increase the capital sought or do so to a very slight extent. But again, there is that variation in estimates, but the majority of the estimates are actually negative that the bill would have reduced the capital sought. I think that's informative from the stand point of economic policy. The economic intuition behind it, I think is relatively clear and it pertains to the nature of rate reduction offset by base broadening in the business tax context, that the rate reduction benefits existing capital as well as new capital, while the brunt of the base broadening almost exclusively falls on new capital, and so that mixture tends to put -- increase the burdens on new

investment, it gives a windfall to the existing capital that we already got it, so there's no incentive effects on that score, and therefore, we would expect that there are probably -- there is a reduction in capital and the estimates do show that. Marty Sullivan in Tax Notes, Brian Feeler in Politico has written about this feature of the estimates. I think it has some policy implications or whether you want to do that type of reform, although there's many other factors to consider, but I think what I want to just emphasize her for a moment is the implications for what we're going to get as we do more dynamic analysis or as we start to do dynamic scoring, which is that it's not -- we're going to see that different kinds of tax measures, different kinds of tax cuts, different kinds of tax increases, actually do have different effects. And I think that's one of the important contributions that dynamic analysis can make. It's not to make all tax cuts look good or all tax increases look bad, but really it's most valuable function is to sort out which types of tax cuts have the biggest effects on growth, which types of tax increases, and so things like taxes that apply to old capital and taxes that apply to new investment, you know, distinguishes those is really important.

So then the other feature of the Camp estimate that drew my attention also pertains to the effects of rate reduction offset by base broadening, and that's the labor supply effect. Now Jane has already talked about this some, but some of the estimates that JCT found in some of the models, do show what I view as a very large labor supply effect -- a 1.3 to 1.5 percent increase in the OLG model. Of course, as we know, JCT did provide quite a lot of information about this estimate, but I think I would have to echo Jane's comment that in this case it's maybe not quite as much as is ultimately needed. The explanation the JCT put out says, this proposal reduces effective marginal tax rates on labor. And I guess as a first cut I wouldn't expect that to be the case, because this is revenue neutral, distributionally neutral rate cut, base broadening

combination. And with standard economic assumptions, you expect that to leave the effective marginal tax rate of labor roughly unchanged. Just a simple example, if you had an economy with a 40 percent statutory tax rate, people spend half their wages on apples and half on oranges, and apples were exempt and oranges were taxes, you could do a revenue neutral tax reform, lower the rate to 20 percent and tax both apple and oranges and see of course an obvious dramatic cut in statutory tax rate, but of course, the effective tax rate on the effective trade off at the margin between leisure and consumption would still be 20 percent, and so you would effect, expect a zero labor supply effect. Now many reasons why the effect would not be exactly zero. There is what economists called unseverabilities, there are transition effects. So the fact that the effect isn't exactly zero is not necessarily an indication that anything is wrong.

But effect this large I think really does cry out for an explanation and so I guess the implication I draw here for dynamic scoring and dynamic analysis is the need for greater transparency, to really break down what was the change in the effective marginal tax rate, and I realize it would have to be done for different types of households and different income levels, and showing the effect of the statutory rate change, and then how the base broadening marginal affects, how much of that was taken back from that channel.

So those are the two main features of the Camp estimate. Let me just close with a few seconds mentioning something that Nick actually touched on. I do thing that section 8(c)(1) of the new rule is really important where it calls for qualitative analysis going out an extra 20 years. I do think it's a mistake if we start obsessing too much about trying to nail down these macroeconomic effects within the 10 year window and ignore what is really important about the long wrong. And I know that the long run is harder to estimate and that's why the rule says go out only 20 years beyond the 10 and why it says

to do it in qualitative terms instead of quantitative terms. But I think that's actually an overlooked part of the rule that actually maybe is ultimately as important as the rest of the rule. Thank you.

MS. HUANG: Hi I'm Chye-Ching from the Center of Budget. So we're getting these dynamic scores in the House and I think the question is going to be, how do we avoid misinterpreting them? And I think that if a dynamic score of a policy looks better than a traditional score in some way, that the temptation is going to be to say simply that that means the policy must be good for the economy. But the heroic assumptions, uncertainty in large gaps in the model, I think means that we have to treat the dynamic scores with much more caution than that when we interpret them. And the Camp plan has some lessons on that.

So if you were to go by Chairman Camp's media releases, his tax plan had a really big growth impact that would have led to 700 billion in extra revenues over a decade. But of course that was just the high end of JCT's range of estimates and the low end of the range was a much more modest 50 billion. And the 700 billion came from one run of this OLG model that's being mentioned. And to get that 700 billion, JCT had to pretend that there would be large tax increases and transfer cuts baked into the baseline. So those are things that are in addition to the Camp plan itself. And it's because as you heard, OLG simply doesn't work and you don't assume that lawmakers enact additional deficit reduction to stabilize as a share of GDP over the long run.

So that much touted 700 billion number didn't really tell us much about the growth effects of the Camp plan in any world that we really know or might even predict. So when we get a single dynamic score, it's going to be incredibly important to understand whether and how the OLG model for example, contributes to that score, and the predictions about future Congressional lawmaking that are driving that result.

Now the House rule required as a single point estimate and to make any sense of that score at all, it's going to be really critical to know the outputs from the different models and the assumptions that went into those models to produce that single score. And in addition, I think just echoing what some of my other panelists have said, that's going to be crucial for JCT to show us results from a range of models and assumptions in additional to the score, so that we can understand how that score is sensitive to different assumptions and models. So for example, if OLG doesn't end up being used, it's going to be really important to understand what would happen if you make different assumptions about how future law makers deal with deficits and when they deal with deficits.

Another pitfall that the Camp analysis highlights in interpreting dynamic estimates is that we need to know not just how tax reform affects the budget and the economy, we also need to understand how it affects people at different parts of the income distribution. JCT's distributional analysis of the plan showed that there were -- showed effective tax rates faced by people at different parts of the income scale, both before and after the plan. And Camp relied on those tables to support his claim that the plan was distributionally neutral. But unlike the 700 billion in revenues from the growth estimates that he cited, those distributional tables didn't bake in future deficit reduction from future Congresses. So if you had put that deficit reduction into those distribution tables, they would have looked very different. So when we get a dynamic score and a distributional estimate, it's going to be pretty important to understand whether or not they show the very same post reform set of policies.

I think a final potential pitfall in interpreting these scores is, you know, the current estimate, the current models have some pretty big gaps and JCT can do some things off model to try and deal with them but for example, there's no explicit modeling of

human capital. If you had a plan that really boosted incentives to invest in skills and training, the higher productivity from an increased human capital accumulation wouldn't necessarily show up in the score from the base models. So that's despite the evidence that doing such investment is associated with productivity, growth and increased investment.

Likewise, there's a bunch of sectors that aren't currently explicitly modeled but we might want to talk about that a little bit more on the panel, and again, JCT is doing the very best with the very best models that it has available, but we have to watch out for that particularly if reform affects particular sectors.

So while lawmakers -- some lawmakers, will simply want to treat a dynamic score as proof that something is good or bad for the economy and the people in it, I think we have to keep in mind the uncertainty, the flaw, the heroic assumptions that go into these models and those things may mean that that conclusion is simply not sound.

MR. GALE: Okay, while we're getting set up, let me thank the speakers and to say that you all normally or frequently, the moderators start the discussion among the panelists, but you all have been very patient, and I know there are a lot of questions out there, so we're going to turn directly to questions. I will exercise my moderator prerogatives as we move along. So -- questions.

SPEAKER: And I too want to commend Brookings Tax Policy Center for having this excellent conference on this timely topic, and I want to thank JCT for coming out and being so open about what's inside the black box, giving us a view under the hood. I want to reiterate a point that Jane brought up because perhaps not as much as Jane, I have been studying these results and I cannot figure out what is going on, so I'm going to take advantage of this opportunity to ask JCT about the multinational sector. If I

have it correct, and their analysis of the Camp proposal, intellectual property migrates because we lower the tax on the United States on intellectual property and raise the tax on the foreign side; intellectual property migrates back to the United States. And as I understand it in the model, this increases productivity and economic growth in the United States. Is that right Pam? Okay.

MR. GALE: Let's have Pam or Nick address it. I just want to put, you can just, in the mike. Okay, go ahead. Just put this in the context of the issues that we've been discussing and the elasticity that we really don't have great evidence on but that nonetheless is critical to the growth effects.

SPEAKER: Let me just put it into terms I think everybody can understand. If you have a multinational which has domestic production, a domestic factory and a foreign factory, I think what the model is saying is, because of the tax changes in the Camp plan, some of the know-how, for example, one type of intellectual property is know how or expertise, that expertise is going to move from the foreign location and reduce output there, and then come into the United States and then increase output here just because of a legal recharacterization of where this property is located. And I find this totally unrealistic, but I could be missing something, so I just want to ask for some clarification.

MS. MOOMAU: So I think one thing that could have been improved in our report was describing what we meant by IP a little better, because it isn't just intellectual property. It's really the intangible property. And the multinational corporation sector with that shifting is based on the paper that was cited earlier and yes, it does have that effect. We are, as we mentioned, always trying to look for whether or not models need to be altered, and we are researching right now what we think should be done about that.

MR. GALE: Yes.

MR. SHELLEY: Just to keep the tax analysts streak going, I'm Luke Yuton Shelley. I am a Capitol reporter for Tax Notes. This is also for Nick and Pam, and I'm not sure if this question is too big, too complicated or something you already covered, but how do you think about the issue of crowding out, because obviously the way that a tax cut is financed can affect its economic impact and I think I've found so far, being in the tax world that that's a big factor that people kind of dance around or don't fully acknowledge when they're talking about how they view the economic effects of tax cuts.

MR. BULL: Okay, so particularly in the MEG model where we don't have to make any kind of closing assumption, whatever crowding out is happening because of the proposal, is going to have the normal sort of effects that crowding out has. It drives up interest rates and is therefore going to depress capital formation as you move out down the horizon. For OLG, we try to make the -- there are two things. First of all, the closing assumption, because we are trying to model tax policy, we try not to use a counterfactual change to tax policy to make the closing assumption. Second of all, so what we have been doing is looking at transfers, but another possibility is to change government spending, and so we'll -- that's something that can be reviewed, as to exactly how to split that up.

But the second thing that we do is, the closing assumptions, we try to make those happen after the end of the budget horizon. Now that means that crowding out can happen inside the horizon and have its normal crowding out effects. But because OLG is forward looking, people do anticipate for instance, either that there is a change in transfers after the end of their horizon, or a change in spending, whichever one you are using. And that can have inside the horizon effects because of anticipation.

SPEAKER: So this is a question to either the panelists or the two of you

from JCT. Kind of a bottom line question, which is, so given what we've learned over the last 30 minutes, which has been very helpful and very, as Murray said, under the hood, in ways that I think most of us are nearly as ensconced as maybe we might be, do you think that the accuracy of the budget process is legitimately enhanced, improved by a rule that forces estimators, and I would argue nudged by partisans, to make one choice -- to choose one. In other words, dynamic analysis, yeah, that's different than dynamic scoring, and I guess just my sense sitting here is I'd like to hear your views on whether this force -- whether the fact that we're talking about choosing one score, given what we've just heard, would actually improve the accuracy of our process.

MR. GALE: Let's have our panel address that.

DR. GRAVELLE: I am actually on the record as saying that I don't think we're ready for dynamic scoring when I testified before the Budget Committee, because of the variation that we have seen here and all of the moving parts, for I think it's certainly possible that the Camp proposal had a zero effect on growth, or possibly a negative effect, depending on how these sort of things that I find questionable. If you've got an estimate for one estimate that's 16 times the other, or 15 times the other, I mean, I don't know what kind of answer you have there. And I think when you go back for many things, going back to what Doug was saying; I think for many things, the static scoring is very clear. If you're going to do rate cuts, you have very a very clear set of data for doing a lot of these things. But until we can get some kind of consensus about macro effects, you know, we're kind of forcing these guys to do -- or Pam -- and Nick is a guy -- to -- sorry -- if I was still in the south, I'd say y'all, but I'm trying to get over saying that. You know, you're kind of forcing them to do something that's almost impossible to do. I mean, so that's how I see it.

MR. GALE: Alan?

MR. VIARD: So it is an excellent question. I think it is a judgment call because we've certainly seen how difficult and how uncertain this process is and I think this has certainly increased our respect for the people who do this -- who have been doing the dynamic analysis. I realize we're putting another layer on if we go with the dynamic scoring. But I do think it's important to keep in mind, just how absolutely modest this rule change is. And I just have to think at this stage in the process, after all the years of doing dynamic analysis, that it should be useful to be doing one or two dynamic scores a year for the next Congress, the next two years, and see how that process plays out and improve that. We ultimately do want to get to a point where we are taking these affects into account and this seems like a very modest step towards doing that. Maybe what's worth stressing is just that there really is a consensus here on a lot of things. I think we all agreed, we want to take these affects into account if we can. We all agree that it's difficult to do it right, but we also agree that the overwhelming majority of bills that we should not yet try to do this for, and so the only issue of dispute is, should we be trying to do this for one or two a year. And although I think it is possible for people of good will certainly to disagree on this, in my view is yeah, let's give that a try. Let's start trying to ring those effects in for one or two big bills a year.

MS. HUANG: So the problem I think with that response is that the House rule allows the chairman of the committees to essentially designate any bill a bill to which a dynamic score must be produced. So this .25 percent rule that we've been focusing on a lot so far, can just be blown away by the chairs of the budget committees. Alternatively, if they don't want something to be dynamically scored, they think it might not get a favorable result, just split up the bills, not rep it out of committee. So I think I agree with Jane on the substance and I think I disagree on the fact that the process is going to protect JCT in the sense that there's only going to be two or three bills a year.

This is essentially at the discretion of the chairs of the committees.

MR. VIARD: Yeah, I just want to add, I think the process issue, the political economy issue is really important. But I think it's also important to note that when we do a quote, "static score", unquote, we are really doing a static analysis. We're averaging the effects of a bunch of static scores.

MR. BULL: So without opining at all on the substance of what everyone has just said, just a little sort of clarifying comment is that we anticipate that for something like Camp, you'd still have exactly the same 15 pages that were already published, but now there will be an extra line at the bottom that just has a dynamic score.

MR. GALE: While you've got the mike, can you clarify whether it's net or gross?

MR. BULL: And I should say, I'm not speaking on behalf of Joint Committee. It's just my comment.

MR. GALE: Can you clarify whether it's net or gross? In the first discussion we thought it was a gross tax of 25 --

MR. BULL: We understand it should be gross so --

MR. GALE: The net.

MR. BULL: The slide did say net, but yeah, the tax as available says gross. That's not the --

MR. GALE: Gross.

MR. BULL: (inaudible) budgetary effects of means, but the bill does say gross.

MR. GALE: All right, so we know what it says, but we don't know what it means. (laughter)

MR. BULL: At least I don't know what it means exactly.

MR. GALE: Adele.

MS. MORRIS: Hi, I'm Adele Morris. I'm the Policy Director for Climate and Energy Economics Project here at Brookings. My question is about the scoring of a bill that's got a lot of complicated elements and that are not simply just fiscal policy or tax policy. So for example, let's suppose we had a bill that imposed an excise tax on carbon content and fossil fuels for example, and some of that revenue, buys down business tax rates for example, so you've got that question of how you're going to dynamically score a tax swap, maybe with additional elements in there. But then what if also there's a regulatory reform in there that says we're going to suspend clean air act regulations on stationary sources. How do you, or do you deal with that, and also in that context, would there be a change in how CBO would score an excise tax, because they have that standard 25 percent hair cut on the gross revenues of excise taxes? Would the dynamic score change that?

MR. GALE: All right, let's get an answer to that. Does anyone want to --

DR. GRAVELLE: I would hate to be confronted with that issue, but excise taxes do have allocational effects on labor. I mean, an excise tax is like a labor tax, so I would treat it as a labor tax and also, changing the allocation. I'd be clueless. I mean I would be sorry for whoever had to do that but I'm not sure they'd have to do that.

MR. GALE: That's essentially a change in the baseline. Eric.

MR. TOTER: Thank you, I'm Eric Toter. I had a question about how these results get presented. I just heard Nick say that to close the model on the Camp proposal, they cut transfer payments, and so what we had in the dynamic score was not an estimate of the Camp proposal. We had an estimate of the Camp proposal plus a cut say, in Social Security benefits. And that would play out very differently in the public mind if that were the way it was presented. I mean, I'm not questioning the accuracy of

the estimate in this comment. So I guess my question is, should people, since models require some closing assumption, should members, in order to get a dynamic score, be required to specify the closing assumption they would like used?

MR. GALE: A simple yes, no question, thank you.

MS. MOOMAU: Can I correct the record for just a second? So there's a -- that's a kind of common misconception on the Camp proposal in particular. It is true we have to have a standard closing assumption for the so called present law baseline in order to get a present law baseline from Camp. And what is in there, and I will concede, we probably need to reexamine how important we think that might have been to the estimate, but what is in there is you know, some of all of the above approach, where the economy, present law economy is kept on track, where debt does not grow faster than GDP by a combination of increased taxes and reduced transfer payments. Now that is separate from how did we analyze the proposed Camp reform. So one thing you want to remember about the proposed Camp reform -- it was explicitly designed to be budget neutral, that after all of the base broadening and all of the tax rate changes were accounted for, there would be close to -- there would be zero effect on the deficit and in fact if you look at our 15 page conventional revenue table, it's really close.

MR. GALE: All right, so, so -- one could imagine --

MS. MOOMAU: So let me finish.

MR. GALE: One could imagine a different proposal that's not revenue neutral, so Eric's question --

MS. MOOMAU: Well, can I just -- can I just finish this part.

MR. GALE: Yes.

MS. MOOMAU: So there -- but if it's under conventional analysis, deficit neutral and there's something that causes growth, then you might have the reverse

situation where you would have surpluses growing faster than GDP, which is also not fiscally stable, and so you would have to make an assumption that pull downs that. Now for the Camp proposal and this is all in our analysis, so this tells me people are looking at the tables and not reading the verbiage, because the verbiage explained what the closing assumption was, and the baseline, and it also explained what the closing assumption was in the proposal. We had to assume a slight increase in transfer payments in the future to make up for the growth that was being generated.

MR. GALE: All right thank you.

MS. MOOMAU: Okay.

MR. GALE: This question is not about the Camp proposal. I think the question is, should, if someone proposes something that's not revenue neutral or budget neutral, should they have to propose a closing mechanism -- a way to raise the revenue. That's how I interpreted Eric's question. So yes, no --

DR. GRAVELLE: Yes. Or either give up the OLG model because if you do -- if you have a tax cut and you do the correction with transfers, that's going to be a very different outcome of a correction for government spending and sort of an even bigger effect of a tax cut as if you assume taxes are going to rise in the future, then you have a huge inter temporal labor supply response. I think they chose a fairly benign change, although if it had been me, I would have changed government spending.

MR. GALE: Okay, again, let's make this a general answer, not a Camp --

MR. VIARD: Yeah, I think that if the member specifies it, if it's actually written into the bill, then of course, that's what should be done. I think if it's not in the bill, and then as Doug said earlier, there should be a standard assumption. It should be in all of the above, thinking that's the right approach exactly, and that should apply to

everything, and I think it also -- that effect should be incorporated as well, considering the distributional effects of the bill.

MR. GALE: All right, the problem with that though is that you are then assuming things that policy makers will do things that they have not said that they will do.

MR. VIARD: But they'll have to do something.

MR. GALE: If you're a CEO, you'll avoid that assumption, at all costs.

MR. VIARD: But you can't just avoid it because budgetary reality requires that they do something they haven't said they're going to do. You know, they haven't said --

MR. GALE: Right.

MR. VIARD: That they're going to fix the fiscal situation but they're going to have to.

MR. GALE: But then the Congressman says, well my proposal would raise growth, and someone says, well that's because you're cutting, you know, food stamps, and the Congressman said, oh, I never proposed food stamp cuts, I just proposed tax cuts. So it allows Congressmen, representatives, to talk out of both sides of their mouth. (laughter)

MR. VIARD: Well I think what you need to do --

DR. GRAVELLE: That's new.

MR. VIARD: I think you need to make it very prominent what the standard assumption involves and that could be part of the analysis. And if the member says that's not what I want, then the response should be, why didn't you put in the bill, what it is you do want.

MR. GALE: I do want to highlight, the standard assumption can flip the sign of the growth effects, as Len was saying earlier. If you have a tax cut and you

finance it by future tax rate increases, you'll get a negative impact on long term growth. If you finance it with the future welfare spending cuts, you'll get maybe a positive impact on that kind of growth.

DR. GRAVELLE: Just one more thing about this and then I won't say anything else. I think the most benign assumption for a tax change is a change in government spending, because at least that allows the income and substitution affects for labor to sort of play out in full. So you could just say, let's try to choose what's going to least disturb our analysis directly.

MS. HUANG: I think going back to what I was saying earlier -- whatever goes into the single point estimate, however you choose it, if you make the Congress person say what it's going to be or you leave it up to JCT -- whatever it is, I'd really love to see the sensitivity analysis of if you chose different assumptions in the baseline and the opposite in policy, what would happen.

MR. GALE: Okay, one last question in the back.

SPEAKER: Hi, my name's Ricky. I'm the fiscal policy intern at the American Action Forum under Doug and also a current student at the University of Georgia, so it's awesome to see Dr. Gravelle up there. My question is, that a lot of this seems to be all or nothing, either it's dynamic scoring or it's nothing. And would it make the panel more comfortable if we kept dynamic scoring and also had the static scoring in there so you could use it and see almost where the margin of error or the difference is, since dynamic scoring is going to provide a larger estimate?

MR. GALE: Very short answers.

DR. GRAVELLE: Yes, but I think Pam said that's their plan.

MR. VIARD: Yeah, the conventional score clearly should be disclosed. I mean, I assume it will be. Again, it's not really all or nothing, because we are talking

about it on a small number of bills. I mean it is my hope that the budget chairmen do not abuse the discretion of the rule, and mistakenly in my view, gives them.

MR. GALE: All right. Thank you. I want to thank all the panelists. I want to thank in particular Nick and Pam.

MR. WESSEL: So I think we've established here that, I'm not sure about Len Burman's suggestion that we need to provide an incentive for academics to make public policy better, but I think we are establishing the case and I'm serious about this, that if Congress if going to proceed with this, resources at JCT to explain what they're doing, are needed. And I think that communications challenge of this think is evident from the panel this morning, in addition to the idea that giving members of Congress incentive to do things that would increase the rate of growth, doesn't seem like the worst idea we've ever come up with. But one of the very interesting parts of the House rule is that it also applies to certain spending bills, that is, mandatory spending or entitlements that would increase spending, or decrease spending by about 40 billion dollars a year, so it would have applied for instance to the Affordable Care Act. It would have applied to the presumably to the Fiscal Stimulus Bill. It does not apply however to ordinary appropriations and there's some debate about that. So we wanted to avoid focusing only on taxes because spending matters too, and we have three people here of different viewpoints to help us do that. First is Donald Marron, who is -- what's your title at the Urban Institute? Director of Economic Policy Initiatives?

MR. MARRON: Very good.

MR. WESSEL: Yeah, okay. And Don did a stint at both of the CEA and was Acting Director of CBO in 2006 and we'll talk about where this came up then. Steve McMillin is now with Policy Analytics, which is -- he worked with Phil Graham. He was Deputy Director of OMB in the Bush administration and Jared Bernstein is at the Center

on Budget and Policy Priorities, is a Senior Fellow there and did a stint as Chief Economist in Joe Biden's office. And I want to start with you Don, Donald, because when you were the Acting Director of CBO, you were confronted with an immigration bill and you were involved in trying to figure out what the macroeconomic affects would be and how to dynamically analyze it. I don't know if you dynamically scored it, the difference being of course, for people who aren't into the lingo here, dynamic analysis means you tell them what the macroeconomic effects are. Dynamic scoring means you actually figure that into the official price tag. So talk to us a little bit about the immigration decision you had to make.

MR. MARRON: Sure, well thanks, but first, I want to emphasize, I think actually the dynamic scoring debate has so much focus on tax, that I think the spending and regulatory policy angle of it has not gotten enough attention and is actually at a place where these issues are going to be very important. So in 2006, much as then later happened in 2013, Congress was considering a major immigration bill that would have the effect of changing the size of the U.S. population and changing the size of the U.S. labor force by several million people. And at the time, the joint decision of JCT and CBO was that you couldn't ignore that in doing the score, that if you tried to follow the convention of holding macroeconomic aggregates constant, GDP total employment compensation, you would end up with results that were just completely nonsensical, right, so you'd be letting, you know, six million new people join the labor force and you would be assuming that they're all unemployed. Right? That would just literally be insane. And so for large immigration bills, the conventional, now exception from the convention, is to in fact take account of how those immigrants would affect the macro-economy, but try to do it in a way that's respectful to the traditional distinction between kind of conventional scoring and macro dynamic. So there are actually now three categories of scoring that

happens. Some folks today have used the phrase static, which I avoid, because conventional scores by JCT and CBO are not static. They recognize that people respond, so if you change taxes, if you change spending, people will respond to that. If you pay doctors more, they might work more, or they might work less. There's actually sometimes a signed debate about that. If you tax cigarettes, right, people will smoke less. So those are accounted for in conventional scores. For major immigration bills, what's taken account of are kind of the first order direct effects that happen to the macro economy. So you have a bigger labor force, you're going to have more people in the work force. There's going to be more wages overall. That's going to result in more tax revenue, and then obviously you'll have more people around and so you'll have more spending on various spending programs and that you're going to want to track through the net of that. But what the CBO and JCT scores of immigration do today is they don't then take the next step and track through every indirect macroeconomic effect that would follow. And so for example, they only account for some of the increased investment that would occur in response to enhanced immigration. They don't account for changes potentially in overall national productivity and what they do, do though is they then analyze those in a separate report, so you have kind of a score that includes some change in the macro economic situation and then you have an advisory report much as we now have for tax bills that tracks through the additional things that would be incorporated if you wanted to go fully macro dynamic.

MR. WESSEL: And in under the new rule, would that change?

MR. MARRON: So under the new rule, you would go through all of the things and try to incorporate all of them, assuming it triggered whatever you know, the 2.25 percent of the GDP (inaudible).

MR. WESSEL: Jared, much is often made of the inadequacy of

American investment in infrastructure, public investment in infrastructure. As I understand the rule, it would be a little hard to -- because they exempt appropriation bills, but in general, do you think if we're going to dynamically score tax cuts, we ought to dynamically score infrastructure and wouldn't that make the case for infrastructure spending even more attractive?

MR. BERNSTEIN: Well, on the surface, it sounds like it would. But I think in practice, I fear that it wouldn't. And I fear that it is even harder to do that sort of thing than the tax kinds of scores that we've been discussing so far. Appropriations, and this has a lot to do with budget process and the way CBO scores such measures, but appropriations are too uncertain generally for scores beyond a year. That is, the CBO can't sit there and say, here are the scores -- here are the appropriations that we see in year 10. They can't even say here are the appropriations that we're going to build in in year two. And so if the dynamic score showed positive effects for appropriations, it wouldn't show up beyond CBO's estimate of when those appropriations would be in place. A good example is the Highway Trust Fund. How could you possibly, if you're CBO, sit there and figure out what's going to happen with the Highway Trust Fund when it's going to go, allegedly go bust in May, which is just a few months from now? Now we can all assume a patch and probably a patch will be in place, but I think it's a lot to ask CBO to do that.

MR. WESSEL: Wait a minute. If I say I want to raise the gas tax -- if I propose a bill -- I want to raise the gas tax fifty cents a gallon and I want to use all that money for infrastructure, couldn't that be dynamically scored?

MR. BERNSTEIN: That could be dynamically scored and depending on the extent to which CBO believes that that would persist in future years, that might work, but there's another bias here which is a low, kind of a low productivity bias, so the CBO

writes in a recent paper for analysis of changes in federal investment, CBO's central estimate is that additional federal investment yields half the typical return on investment completed by the private sector with an average delay of five years. So CBO assumes for this kind of investment, crowding out of private investment, and so that too would be a bias against the spending impacts of appropriations. And in fact, just speaking a touch more broadly, I tried to think about the positives and the negatives of dynamic scoring on the spending side, and all I could come up with were negatives, the idea that there are biases against spending scores being positive throughout the process. The most important one, just let me get it out on the table, is basically -- and this is from work that Richard Cogan did -- I didn't know about this. It's a bias that would lead any dynamic spending scores to simply provide more room for tax cuts, not for more spending. So the budget act enforces allocations on the revenue side, on the revenue target and on the allocation target, and House and Senate rules disallow taxes to go below the revenue floor, or appropriations to go above committees' allocations. Under the rule that we're talking about, the House Dynamic Scoring Rule, if we were to move towards scoring discretionary spending, CBO would estimate that any positive growth affects would be scored almost entirely as extra revenues, just by dint of the rule itself, not as something that would give you room on the spending side. You would only have the ability to cut taxes more, not to increase spending, based on what would pop out of the model.

MR. WESSEL: Steve, we know that when Congress does things, whether it's the Affordable Care Act, or immigration or other things, that they have some effect on the economy. Do you -- what -- tell us what you think about dynamically scoring those. Is it, A, a good idea? And B, is it possible?

MR. MCMILLIN: In order, yes, absolutely a good idea, possible in degrees. What we found I think from listening to the JCT folks on the tax side is if the

new house rule had been implemented ten years ago, the quality of what you would get would be at one level, but they've been working diligently all these years, to improve that quality. There's been some level of analysis to make that happen on some types of spending programs, and when that type of analysis becomes more relevant to the policy making process, I think you'll see investment and improvements in that. Now it maybe that in some areas, as we heard on the tax side, we just can't figure it out, it's too uncertain. The answer for purposes of this exercise is zero. And I think that's going to happen quite a bit, to the extent this become more common on spending bills. I just want to comment on one thing Jared said. It's important to distinguish between the analyses itself and then what it's used for, so a good analysis on a large increase on infrastructure spending will inform the debate and tell policy makers how they ought to vote, or what the results of their vote would be. But that doesn't always flow into the rules for consideration of legislation. Now it is true that the feedback, if one assumes there's a growth effect from infrastructure would be primarily on the revenue side. But if you pass a budget resolution in the Congress that assumes an increase in infrastructure investment, and you dynamically score that, that flows through all of the aggregates and you'll find that the revenue aggregate takes into account those higher revenues from your investment in infrastructure. So it only creates the bias in the policy to the extent that a budget resolution leads to that result.

MR. BERNSTEIN: So I think that that may well be right, but I think you're assuming that somehow dynamic scoring, this rule, is going to lead Congress to increase its spending caps or to throw away sequestration or something like that and I certainly don't make that assumption.

MR. MCMILLIN: Well, and again, what does the same set of facts lead different policy makers to conclude is the right type of policy to pursue. In this particular

case, I think when you're looking at a Republican Congress or a Republican Senate; it's not likely that that analysis is going to cause them to increase the spending caps. Every six years or however often we do highway bills these days, out comes a rather simple model that Department of Transportation put back a while ago saying, every billion dollars on highways is 17,000 jobs or 42,000 jobs or 27,000 jobs, you know, depending on what year you did the estimate or when the last time the model was updated. And people use that on both sides of the aisle to advocate more infrastructure spending. Sometimes that argument is successful. Sometimes it's not.

MR. BERNSTEIN: Yeah, no, I think those are fair points and I think we should definitely do more infrastructure spending and CBO and everybody else should so dynamic analysis around it. I have the concerns that I'm trying to express here is that's one corner of a set of changes to this whole dynamic scoring debate that look to me like it would really lead to a bias in approving more tax cuts than I believe we can afford.

MR. WESSEL: Donald, a lot of the bills that would clearly trigger the rule involve health. If it had been in place for the Affordable Care Act, if it had been in place for the Medicare Drug Prescription Bill, if we ever do some big wholesale change to Medicare. Put yourself in the position of the Congressional Budget Office. Is it -- how challenging is it going to be to them to come up with some judgment about what affect big changes to health policy have on the economy.

MR. MARRON: Oh, so obviously it's a big challenge, right, you know -- new area to look at. I think it's useful when you think about dynamically scoring any major bill. It's useful to put it kind of the three bins, the effects are worried about. So as Jane mentioned earlier, there's some short runs, stimulus affects, either positive or negative, depending on what changes you're making that you may want to think about. In the longer run, there are the supply side effects. Are you doing something to increase

the labor force, increase capital, for example, does something on the health side improve the quality of the American work force? And then you have the crowding out effect, right, such to the extent that this is something that changes the budget balance over the ten year window into the future. Is it something that's crowding out or overcrowding private investment? And so in principle, CBO would want to go down all those channels, right? Is there any short run effect that's either boosting or harming the economy? Are we, if it's a reform that would increase the deficit, is that a reform? What are the effects of that that's going to be on investments? And then to try to track through how any of the changes might affect labor supply, we know from the discussion of CBO's analysis of the ACA, for example, that there are some interesting questions about how the implementation of the ACA may have affected the number of people that choose to be in the labor force over time. And so if there is a proposal that comes along to make changes to help reform, they're going to want to take those into account.

MR. MCMILLIN: Well can I make a comment about that? I agree with Don's comments and I think that the ACA labor supply example is a very good one of the kinds of biases that I worry about, in this case, one that I've labeled a marginal utility bias or a social welfare function bias, which I actually think is non-trivial, and it's one that Elmendorf himself spoke of. So the ACA comes out -- the CBO comes out with the ACA score and it does have this kind of -- it does have this labor supply effect, part of which is by dint of allowing people to move from full time to part time work if that's what they want to do, because they can now afford to get health care, sometimes subsidized in the exchanges. You're releasing job lock, and I'm not making this up. This is something CBO said was part of the mix. Well, that, in the hurley-burley of the debate where GDP is kind of elevated above everything and labor supply above everything, that's a big negative. So that came out to be, there was a big dust up. This is not Don's fault. This

is not CBO's fault. This is what happens when metrics like labor supply and GDP are elevated above all others. The social welfare of the nation was enhanced by unlocking job lock. And so a diminished labor supply is not an obviously bad thing unless you're fetish is stick about labor supply and GDP. I like labor supply and GDP a lot, but I also think an increase in voluntary part time work via unlocking of job lock is a very good thing, but I think it's outside the scope of dynamic scoring in a way that is problematic.

MR. MARRON: But that's just saying that Congress should not make all its decisions based on the scores, that they could decide that this will cost something but it's worth it because it has goals. That's putting an awful lot -- that's true of any of the scores. I mean, Doug Elmendorf has said I think in public and Bob Reishauer did when he did the evaluation of the Clinton healthcare thing, that this should not be your only criteria.

MR. MCMILLIN: Yeah, I mean, if a group of wise men and women were assessing precisely those kinds of considerations, I would feel a lot better. My concern --

MR. WESSEL: This suggests that Congress doesn't meet that description -- (laughter)

MR. MARRON: So this is a pressure that you feel a lot at CBO which is, so it's, right, the B in CBO is Budget and the goal, the primary goal is to provide scores that guide the budget process, and a dynamic scoring discussion should really be about making those scores as good as possible. CBO provides important supplementary information, for example, in Health Reform, what would happen to coverage, right, which is influential although not an official part of the process. But you do constantly run into these issues about people getting mad, that the budget process tends to elevate the budget numbers over other things that you might worry about from a social welfare point of view, and but, CBO is not the Congressional cost benefit office. It is not the

Congressional social welfare function office. It would sometimes be fun if it were and so you do -- you --

SPEAKER: (off mic)

MR. MARRON: But this is a very important challenge to think through, particularly if we expand what gets scored, which is that the budge number has to be treated appropriately in the overall policy discussion, weighed against other things.

MR. WESSEL: Steve, let's say that it's 2009. We're in a deep recession. The President proposes a major fiscal stimulus, the AARA. The chairman of the budget committees tell CBO, we want to know the dynamics for this. Would that have been a good thing to do?

MR. MCMILLIN: Absolutely and certainly we saw some numbers from the CEA projecting what they thought the outcome of the implementation of the President's policies would be. And there is now a record to compare that to. But in terms of the relevance of what that dynamic score would have been, on the legislative process, on the enactment of those policies, the question of whether you were deliberately increasing the deficit by 750 billion or 850 billion or 600 billion or a trillion, was not something that was really going to affect the outcome of that particular debate. There was a deliberate policy choice that we need to expand the deficit here over the next couple years to try to get some beneficial effect in the economy. So if the feedback effect of that was baked into the official score, then people would have to go into their talking points and you know, scratch out one number and put a different number.

MR. WESSEL: But it would have looked like a smaller price tag and that might have paved the way to a bigger fiscal stimulus.

MR. MCMILLIN: Perhaps but unless you're up against, you know, some arbitrary threshold like the T work, as opposed to 990 billion, the political forces, the

political balance, I don't see as fundamentally changed. I think back to TARP.

MR. WESSEL: That was my next question.

MR. MCMILLIN: And you know, some internal conversations about A, how much money do we need, B, how much money do we think we can get away asking for, and 500 billion, well maybe, maybe not. But if you're asking for 500, you might as well ask for 700 hundred. Just don't ask for a trillion. And the people who thought TARP was terrible policy or were shocked by the price tag, I think would have been every bit as shocked at 500 billion as they were with the bill that actually went up.

MR. BERNSTEIN: Well, I think that I'm not sure that you would really get the help that you need, that I'm a huge advocate, as you know, if you know my work, a huge advocate of temporary fiscal intervention in a Keynesian spirit, at times like we faced in the heart of the great depression. And I think the global results of austerity, which is fiscal contraction in the face of that, are Exhibit A in what good fiscal policy looks like and what bad fiscal policy does, including political implications of that, which are on your front page of your paper today. But the thing is, again, because of some of the biases built into -- well, I don't know if they're biases -- to me they're biases -- the rules in which these things are scored -- I'm not even sure how much help you would get, because through a more dynamic score of these Keynesian stimulus, because CBO correctly, I would say, they view this as pulling demand forward. So you get some demand in the quarters where the policies are in place, but then you pay for it later, typically within the ten year window. Here's where I would say, and this is not at all calling out CBO because they're just following on basic rules of economics. I think many of the crowd out and crowd in estimates about interest rates and their impact on growth are wrong and becoming more incorrect over time. And the reason I think that is because of changes in the dynamics of global capital, of loanable funds throughout the

world, of capital markets and so I think that the extent to which CBO diminishes growth in later years, relative to stimulus impacts in earlier years, are too large. For example, I don't think that CBO does a very good job of estimating the amplified impact of fiscal stimulus when the Federal Reserve is at the zero lower bound. It's a very big deal. The multipliers go up by a factor of two or three based on some of the research on this. So those dynamics make it look like fiscal policy isn't as effective as it is -- a simulative fiscal policy.

MR. MARRON: What I'm hearing is CBO should improve the quality of its best judgment, not that we should ignore their best judgment.

MR. BERNSTEIN: I guess that's definitely a fair interpretation of what I'm saying. They definitely should. My point is that of the earlier panel, which I think what I was kind of getting at this fundamental question. Do we have enough knowledge to do that in a method that improves our score? No. Yes in terms of analysis, so I would answer your question, yeah, we should absolutely do that and everything else. We're not there yet in terms of choosing a score.

MR. WESSEL: I want to turn to the audience and I want to ask -- we'll have time for a few questions at the end about tax. I'd like to start with people who have a question about the non-tax bills. Gentleman right here. Mike's coming to you. Tell us who you are please?

MR. MILLER: Vic Miller, independent fiscal economist. I've worked both the O&B as a fiscal economist and a couple years with Fred Muskie on the Senate Budget Committee. And one of the things we knew was we wanted to get the assumptions out of the way so we could argue policy with the House. So here we have a rule that's a House Rule, and Rich Cogan has pointed out will have impacts on not only the spending side but also on the revenue side, and Steve has said this will be taken care

of in the budget resolution. Are you assuming that the Senate will implicitly assume this rule for its purposes in putting together the budget resolution?

MR. BERNSTEIN: I don't have knowledge of that. What I mean to say is to the extent the official scoring process incorporates macroeconomic feedback, then any bias that is introduced in terms of spending versus revenue, that if in fact, beneficial spending produces a revenue surge in later years, the strict rules of the budget right now do not allow you to mix and match spending and revenues, but a budget resolution, if that is a preferred policy, does allow that. That was the only point I was making.

MR. WESSEL: Anybody else on spending? Or do we want to -- nobody? Anybody?

MR. MARRON: It's really important, really.

MR. WESSEL: Do you guys want to wait? Gentleman there in the back, by the door, by the fire alarm.

MR. SCARLISS: I'm Basil Scarliss. I just have a question why, what was the rationale behind the House ignoring spending in its rule? I just think it should be made explicit.

MR. MCMILLIN: I think it's quite right to say they ignored spending. What they said was, it would apply to mandatory spending or entitlements but not to appropriations.

MR. MARRON: And I had no hand in creating that rule but my own guess as to why they went that way, first of all, as a practical matter, annual increases of at least 40 billion dollars in any appropriated program are extremely rare, and so it's unlikely that would be triggered at any point. Secondly, as Jared pointed out, appropriations are one year at a time things, and so the budget rules don't take into account future effects of appropriations as it stands right now. So you might produce an

analysis that is interesting about appropriations but the way the budget rules are structured, it would have no impact on the enforcement of budget limitations for that (inaudible)

MR. BERNSTEIN: Exactly right, and if you think about the bias that creates, so imagine someone has -- somebody, I think it was Chye-Ching was talking about education spending that boosts productivity, certainly, arguably in later years. Well, since it's allocated year by year, CBO couldn't score it. And that would create a negative bias in terms of a way in which spending would have a positive growth effect.

MR. MCMILLIN: And again, this is a distinction between what is inadequate in the current system. To have information about what happens to our economy when you spend more on education, to the extent we can get that information, is very interesting. The fact that we have budget rules that count a dollar in the tenth year the same as the dollar in the first year, and completely ignore a dollar in the eleventh year, yeah, that's a process that is in need of improvement but having analysis that does show us what happens in those years still helps people figure out how to vote when (inaudible).

MR. WESSEL: Okay, questions on anything. Eric.

SPEAKER: Very small technical question. In looking at the Affordable Care Act, and Jared mentioned job lock and I'm sure that labor supply issues are taken into account, but since the purpose of the Act was to improve the access to health insurance and the health of the population, is there any way that gets factored into estimates of productivity, or can be factored in?

MR. WESSEL: Donald.

MR. MARRON: I think the answer is aspirationally, but I don't know what the evidentiary base for that is.

MR. WESSEL: Bill.

SPEAKER: Thanks. This is a question I didn't get to ask my panel, so I'll ask this panel. There is great discussion of how private sector agents will respond, on individuals, businesses et cetera. There's a little discussion, although it's not framed this way, about how the federal government will respond, the whole financing issue. It's a question of if you have a non-revenue neutral proposal, then what does the federal government do to make up the budget shortfall. But I want to ask about both state and local governments and foreign governments. Suppose we did something like limit the deductibility of state and local taxes, you would expect that to have an impact on state and local governments. They would have to respond somehow. If we cut the federal corporate tax rate, you would expect other countries to respond and to offset some of that impact. The question I guess is how comfortable are you with how far we go in estimating policy maker responses other than the federal government.

MR. WESSEL: Pam, do you want to respond to that?

MS. MOOMAU: Well I think, no, I guess not. (laughter)

MR. WESSEL: Okay, so Don, do you want to respond? Donald.

MR. MARRON: So I'll take a crack at it, that's so -- when I was at CBO, I sat in meetings where we tried to predict the behavior of other parts of government. So we had meetings where we tried to predict whether the Supreme Court would judge a particular provision to be constitutional or not. We had lots of meetings where many laws are written where they delegate to the administrator of a program the opportunity to make a choice about how to run the program several years in the future. And so it's not -- you can't -- you just, you can't go to the economic literature and find an estimate of how you're going to respond. You have to collect evidence, sometimes see what they've said in public, assuming they're already in office, and you do a best judgment of how is this

person going to behave. If you go down the macro route, you've got to put it in your thinking a model of how the Federal Reserve will respond, because it just isn't appropriate to assume the Fed is just going to maintain a constant course. I think you have to do a similar thing with overseas governments. You already do it with state and local governments. You know, a big issue in many health things for example, is how will state governments respond to changes in health policy and there are lots of estimates that CBO does where you know, somewhere behind the scenes, someone is deciding, these 25 states are going to do X and these 25 states are going to do Y. And you have varying levels of evidentiary base for doing that. But it's essential in order to have a plausible estimate. And so the goal, the aspiration of the goal really is to do that in all the cases where it matters and if there's someone whose response out there you want to incorporate it with the sole exception of future legislation, because since your goal is to score the legislation in front of you, you do not want to be in the position of predicting what future legislation will follow that.

MR. WESSEL: Right, so, what A, that suggests, which I think has been a theme of this thing is that, there's a limit to what you can do with models. There's going to be judgment in these estimates.

MR. MARRON: Absolutely.

MR. WESSEL: As there is in static instruments. But do you think that asking the JCT and the CBO to dynamically score the thing adds an excessive layer of uncertainty and judgment that will make the estimates less useful, or not?

MR. MARRON: Well, I think in general -- it's hard to have an in general. I think there are going to be some cases where it's yes, and some cases it's no, and I will note that the CBO has been quite strong historically, with some effects it will basically give a zero or a very small effect where there just isn't a strong evidentiary base one way

or the other. Health IT used to be a classic example of that, preventative measures in health are another. Tort reform and there's just like a whole bunch of issues where people on either side feel very very strongly about it but if there isn't a strong base of evidence to conclude one way or the other, the institutional goal or not goal, but the institutional prior is to go with the smaller zero effect, and I think what we'll see with dynamic scoring is something similar, which if there isn't a strong reason to go one way or the other, they're not going to give a big cherry picked effect one way or the other.

MR. MCMILLIN: Just a quick point. I thought Don's initial answer to the question was very good and very comprehensive and I agree with it, but I think at the end of your first comment, not the one you just made, you gave a pretty compelling reason why we shouldn't accept models that close the fiscal model, because they defacto assume legislation -- legislation that either that either raises, cuts transfers, raises taxes. I'm saying when you're in that situation where you have to close the fiscal model in order to get it to converge; you have to make assumptions about how debt to GDP -- debt doesn't explode relative to GDP. That's a legislative assumption. That's assuming that a later Congress will do.

MR. WESSEL: But does that apply in the ten year window? If you make analogy assumption, does that apply in the ten year window? Pam?

MS. MOOMAU: It can apply in the ten year window, but more importantly, since the decision makers in the model have perfect foresight, they can observe what you're doing outside the ten year window and they will have a behavioral response to that. So if that's the way the bottle works. So it's hard to find something that will have no effect.

MR. WESSEL: Pam and Nick, do you want to add anything to respond to anything? I want to make sure you don't get slighted. No? Okay. I think we're out of

time. I want to A, remind you all that we have a couple of -- Tax Policy Center has an event on January 30th, which is in L.A. on international tax, but will be webcast. And we here at the Hutchins Center have an event which is going to touch on a lot of these issues, to marking the 40th anniversary of the Congressional Budget Office, what do they do well, what don't they do well, what challenges do they face. You're invited to all those. Secondly, if you look at your feet and there's a piece of paper or a coffee cup, pick it up and put it in the recycling can at the back. Makes me very popular with our conference people. And third, join me in thanking all the participants but particularly the people from CBO who came -- I mean from JCT (laughter). I tried to get CBO, but they plead that because their forecast is coming up this afternoon they couldn't do it. I really do want to thank the people from JCT. It's not easy to stand up and answer these questions and not know what Tom Porhole's going to say when you get back to the office. (laughter) I think they did an excellent job, so thank you all. (applause)

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