Event Transcript

**Book Release: Managing the Euro Area Debt Crisis**

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Unedited transcript

Marcus Noland: Good afternoon. My name is Marcus Noland. I’m the Executive Vice President and Director of Studies here at the Peterson Institute and it is our great honor to come together this afternoon to launch a new book on the long-term sustainability of Euro area government debt by our colleague, Bill Cline.

Bill has been a senior fellow at the Peterson Institute since 1981. During a period of leave he was deputy managing director and chief economist of the Institute for International Finance here in Washington. Before joining the Peterson Institute, he was a senior fellow at Brookings, deputy director of development and trade research in the office of the assistant secretary for international affairs in the US Treasury Department and assistant professor at Princeton.

In the book, Managing the Euro Area Debt Crisis, he argues that the policy breakthrough to stabilize the region was the July 2012 decision by the European Central Bank to do whatever it takes to preserve the Euro through its program of outright monetary transactions or OMT to purchase government bonds as necessary, conditional on adjustment programs. The real methodological innovation of the study though is a technique that Bill has developed for assessing the probability distribution of future paths of sovereign debt burden in which he calculates the covariants across various scenarios of the key macroeconomic variables.

His model suggests that Ireland, Portugal, Italy and Spain may have achieved a sustainable position if they are able to muster the strong and persistent political will to sustain the sizable primary surpluses needed to ensure their future paths to sustain their solvency. Greece is the exception and whether the future debt relief is necessary is unclear.

Looking forward, Bill argues that it will be crucial to ensure that the OMT remains in place and makes a number of arguments about proposals that have been made to various sorts, which he will go into in his presentation. Now given the importance of the topic, we have not just one but two imminent discussants.

Willem Buiter is the Chief Economist of the Citigroup. Prior to his appointment at Citigroup, he was professor of European Political Economy at the European Institute of Lon-
don School of Economics and Political Science. He was a member of the monetary policy committee of the Bank of England, an extraordinarily eminent and important position, as we all know here, and Chief Economist and Special Advisor to the President at the European Bank for Reconstruction Development. He has held academic appointments at Princeton University as has Bill, the University of Bristol, Yale University and the University of Cambridge. Willem is originally from the Netherlands but he assures me that he has recovered from yesterday’s trauma.

Our second discussant is our colleague Ángel Ubide who is a senior fellow here and also co-director of Global Economics for D.E. Shaw, a global investment and technology development firm. Prior to this, he worked at Tudor Investment, the International Monetary Fund and for McKinsey.

Ángel is originally from Spain and honestly, I’m not sure if he has recovered from his recent trauma. Anyway, we look forward to these presentations. Afterwards we will have our question and answer. So, please, Bill Cline.

Bill Cline: Thank you very much Marc. First I want to say I’m grateful to Willem and to Ángel for contributing to today’s discussion. I also want to acknowledge the excellent research assistance given by Jared Nolan and [inaudible 00:04:19]. I’d also like to thank several of you who are here today who made comments on earlier drafts.

The title of the book is Managing the Euro Area Debt Crisis and it’s meant to convey the judgment that the sovereign debt crisis of the periphery countries has now reached a phase where it should be manageable going forward. The basic reason is the diagnosis these economies are solvent and do not need debt restructuring with haircuts.

Now although this is the mainstream view at the present, it was much more controversial in mid-2012 when I first published similar results in a working paper on Italy and Spain using the model that I’ve developed for the study. At the height of the crisis in 2011-12, the outlook was much more dangerous. This figure shows what I think of as the ‘favored’ chart of the crisis. The path of sovereign risk spreads above German ten-year Bonds for the periphery. The chart shows the contagion of the crisis from Greece to Ireland and Portugal and then even to the much larger economies of Italy and Spain.

However, it also clearly shows the important turning point at the middle of 2012 when the European Central Bank declared that it would do whatever it takes to preserve the Euro and announced the program of outright monetary transactions to purchase government bonds if necessary and conditional on adjustment programs.

Since then, the spreads on Italian and Spanish government bonds have declined from peaks of 500 and 600 basis points down to a range of 150 basis points, 160. Moreover, both Ireland and Portugal have successfully completed their rescue programs and both have had successful bond issues. It will be important, nonetheless, for the Euro area policymakers to maintain diligence and not become complacent because there is still a long road ahead that will require sustained fiscal discipline to consolidate the recent gains.

There have been intense policy debates on several key issues in the crisis. First and perhaps foremost is the debate on whether there has been too much fiscal austerity in response to the debt crisis with counterproductive results of reducing GDP. Now it does seem that the
so-called fiscal multipliers are higher than the International Monetary Fund had anticipated and therefore the growth contraction was greater than expected.

But the unavoidable reality is that for the debt stressed periphery, running larger fiscal deficits, borrowing still more money to accumulate still more debt was not a realistic option. Greece, Ireland, Portugal were cut off from the credit markets. European partners had already made large lending pledges and any collapse and country commitments to fiscal adjustment would have spooked the markets even more causing interest rates to surge still higher.

Now in cyclically adjusted terms the five periphery economies have made major fiscal progress already completing by 2012 about three-fourths of the needed reversal from primary or non-interest deficits to primary surpluses. So the needed pace of adjustment going forward is smaller. In an appendix to Chapter Two, I developed a model in which the welfare equivalent multiplier can actually turn negative under conditions of escalating default risk because the increase in the probability of a catastrophic default crisis, multiplied by its social cost, exceeds the gains from increased output when there is a widening of the fiscal deficit from an expansion.

In another appendix I show that even when the multiplier is temporarily high, the impact of a fiscal expansion will only temporarily reduce the debt ratio by boosting the GDP denominator but that over time, the consequence will be a path of higher debt relevant to GDP a result found in a similar study at the IMF.

Now a second major question that’s concerned the so-called doom loop between banks and sovereigns, the causation has run in both directions. In Greece, a sovereign collapse wiped out the capital of the banks. As shown in the figure, bank spreads rose in response to rising sovereign spreads. Now the rising sovereign spreads, more generally—and not just in Greece—also boosted risk spreads faced by the banks in other periphery economies and these banks passed along the higher cost, although only partly in terms of higher interest rates charged for their clients and the other part as theory would predict in the form of credit rationing contributing as a consequence to financial fragmentation. The main shock to the sovereign from the banks occurred in Ireland where the socialization of bank losses added 40% of GDP to public debt. The sovereigns spread and rose in response to rising bank spreads.

Now there’s been much concern that future bank losses in the periphery could add still further to public debt, most recently in Portugal. However, my calculations using an iMath based model relating prospective losses, bank losses to GDP growth and unemployment find that the large write-offs already taken, such as the one hundred billion Euros in Spain in 2012 mean that it’s unlikely that there are huge hidden losses that in the future could bankrupt the governments.

OECD and academic estimates of capital needs are also modest. About 2.5% of GDP capital needs in Italy and Spain for banks allowed 3.5% in Ireland and Portugal, according to these estimates. Now the private sector would cover most of these needs, especially under the tougher bail-in rules of the new banking union and what would be left in terms of additional government debt would be minor against the benchmarks of 100-120% of GDP already in the debt ratios.

A third question has been the link between the external imbalances and the sovereign debt crisis. There were large, very large, current account deficits in Greece, Ireland, Portugal and
Spain. And these made the economies vulnerable to as sudden stop liquidity squeeze. The left hand chart in this figure shows that the sovereign spreads in 2012 were closely related to the size of the current account deficit in 2007-2008.

The shock was, nonetheless, less severe than it would have been for emerging markets because there was no currency devaluation and therefore, there was no balance sheet shock raising the best currency evaluation of foreign obligations relative to the domestic currency revenue. Moreover, Central Bank re-financing operations, the so-called Target Two mechanism, provided liquidity to replace capital outflows.

Now there has been the core question of whether countries can carry out needed competitive gains with a single currency. Well it turns out, that the current account deficits have been eliminated. And except for Greece, at least half of the adjustment has occurred on the output stimulating the export side instead of on the import side and even some of the import adjustment would be import substitution instead of demand compression. The process of internal devaluation has helped, particularly in Ireland where there have been significant wage reductions.

Going forward, I do not see that there is a need for large further increases in trade balances. As you see in the right hand chart, there's no relationship between the spreads as of 2013 and the medium-term expected current account balances for 2012 to 2016.

Moreover, if you do regressions of spreads on the net international investment position, there's only a very small, very modest influence. Further, the magnitude of Euro areas combined current account adjustment has not been so far oppressive for the world economy because it turns out that the increase in the Euro area current account has more or less equaled the decrease in the surplus of China plus Japan.

A final aspect of the external balance argument is whether Germany has to reflate in order to have the periphery recovery. My calculations suggest instead that plausible ranges of increased German demand and inflation would not make a huge difference for the prospects of the periphery.

Perhaps the most important policy response of the Euro area has been the ECB’s outright monetary transactions. In the OMT, the ECB stands ready to purchase government bonds from a country that’s under market stress if the country is in an adjustment program. For a while it seemed that Euro bonds might be the answer. But without political union, mutualized debt remains unlikely, although in the book I do suggest a form of bond insurance.

Then there were firewalls set up in EFSF and the ESM. However, they’ve been held to modest sizes that would be too small to deal with major crises in Italy and Spain. In contrast, the OMT has been so powerful, a financial bazooka, that it’s not even been necessary to fire it in order to calm the markets. The OMT has provided the basis for the ECB to be the effective lender of last resort to stop self-fulfilling prophecies of insolvency from spiraling risk spreads. It will be crucial going forward for the OMT to remain in place. It will also be important that it not be undermined.

For example, by court interpretations that the ECB should not be treated on a pari passu basis with private investors. Without pari passu, private investors will fear that ECB seniority will mean larger haircuts for them undermining confidence. Another salient policy issue
is whether Greece is really a special case. Investors lost more than fifty cents on the Euro in the Greek debt restructuring.

In my view it should not be necessary to repeat that outcome, in any of the other periphery economies. For Greece itself, some additional official sector relief may be needed, but I'll come back to that. But the basic reason is that the debt ratio remains high and there presumably will be a reputational damage for market perceptions on the restructuring.

A related question is whether Euro area would benefit from a formal debt restructuring mechanism. My view is that such a mechanism would be counterproductive. It would set up expectations of future Greek-like restructurings contradicting the diagnosis that Greece was a special case. It would undermine the OMT by calling into question the key premise of pari passu status for the ECB and private creditors.

Finally, I very briefly examined a question of a need for monetary stimulus in the Euro area. I suggest the ECB was slow to reduce policy rates but I question the magnitude of potential gains from quantitative easing. The essence of QE is to reduce the term premium between long-term and short-term government obligations. But this premium is already relatively low in Germany and France and there's not as much remaining scope, in my view, for reducing it further as there was in the case of the United States.

So with these policy observations as background, let me turn to the core quantitative estimates of my study. The framework for these estimates is a debt sustainability model. Now the classic test for debt sustainability is that the ratio of public debt, the GDP, is not on a track that spirals ever upward and out of control.

If the debt ratio is along such a path, the country's insolvent. If instead the debt ratio can be kept from rising above its present level and the country has market access or especially if the trend is downward, the diagnosis is this country is solvent.

Now there's a well-known test for this question. The primary surplus needs to be large enough to cover most of the interest so that the proportionate rise in the debt, in the numerator, is no larger than the proportionate rise from growth and inflation on GDP in the denominator.

The formula for this threshold is that the primary surplus is a percent of GDP needs to at least equal the difference between the interest rate and the nominal growth rate. And this difference has to be multiplied by the existing debt ratio to GDP so that a high debt country needs a higher primary surplus than a low debt country.

As an example in this slide I show the averages for Italy in 2014-2020 baselines. It turns out that Italy's high primary surplus, averaging 4.5% of GDP over the next seven years, is indeed larger than the 2% needed to address the excess of the interest rate over the nominal growth rate, 4.2% for the interest rate, and 2.6% for the nominal growth rate. Even taking account of a high debt ratio, an average of 125% in this period. There's a cushion that leaves room for a gradual reduction of the debt ratio.

Now I do argue more generally that in the context of the Euro area periphery, the benchmark of a 120% of GDP that has become frequently cited in the policy circles does have a
meaningful grounding in the numbers. If you take what are plausible growth rates, plausible primary surplus rates, and plausible interest rates under more normal conditions, you’ll come up with sustainability of 120%.

Again, illustrating with Italy, I show here the key variables of the scenarios that are considered. My projections involve an accounting consistency framework which the debt rises by the amount of new borrowing minus the amortization. The net increase equals this year’s fiscal deficit plus any public cost of bank cleanups and other discovered debt minus any receipts from privatization.

I consider a baseline in an unfavorable and favorable scenario for each of five major variables with probabilities of 0.3 for the two flanking and 0.4 for the central. Sovereign risk spread, the variables of sovereign risk spread, the growth rate, the primary and surplus, discovered debt from bank recapitalization or lending to partners and privatization receipts.

The spreads in my baseline are around 200 basis points, 2014-15 and 175 basis points thereafter. I have an unfavorable scenario in which I increase the spreads by 150 basis points throughout and a favorable case in which I reduce them by 50 basis points.

As the table shows, baseline growth for Italy is modest, 1.2% annually. I do have 1.7% for the favorable case, based on the 60th percentile in the past 20 years. A high primary surplus is a distinctive feature of Italy’s case; discovered debt isn’t bank clean up in the case of Italy it’s lending to the other periphery economies.

There’s a big question about privatization. The IMF says there’s going to be no income from privatization. The Italian Ministry of Finance says that it will average 1% per year for the next five years. That’s in my baseline.

Now the method that I developed to come to a probabilistic projection takes explicit account of the likely correlation between favorable and unfavorable scenarios for each variable. And these are not just from past experience. These you have to think through the context of the situation. This is in a default risk situation. So the correlations can be different from business as usual.

For example, I say that the primary surplus has a minus one correlation coefficient with privatization. Well, why is that? Well it takes political effort to privatize. And if there’s a lower fiscal gap to close, you’re likely to have slippage on the privatization. What these correlations mean is not the algebraic direction of the variable but whether it’s the good case correlated with a good case which is a plus one or a good case correlated with a bad case which is a minus one.

In the case of the growth and the interest rate in the face of default risk, prior growth will tend to boost confidence and reduce the sovereign spread. So that causes the good case for growth to be positively correlated with the good case for the interest rate.

The appendix to Chapter Six of the book goes through the argumentation for each of these correlations. So if you have five key variables and three scenarios, there are 243 possible outcomes. You have 243 possible outcomes and you assign a probability to each of these after you take account of the scenario of correlations.
In the case of Italy, the 75th percentile, high end unfavorable range; even in that case the debt ratio declines. In the baseline it falls considerably further. In the 25th percentile case it falls even further but not by a whole lot. So, this particular case is one in which the baseline has more downside risk and unfavorable risk than favorable risk. And that's partly because in the favorable, privatization scenario I did not assume much additional privatization because the privatization assumption was already high and also because privatization is negatively correlated with the primary surplus.

Nonetheless, the bottom line, in my view, is that the projection suggests Italy is solvent. So there's a quantitative underpinning to the return of sovereign risk spreads from their extremes through 2011-12 back to the more comfortable levels at present. Even if they're not headed back to near zero levels that really marks the period before the Greek restructuring showed that industrial countries, too, can default.

The quantitative estimates of Chapter Six present the debt projections. This table summarizes the baseline assumptions which broadly track the most recent IMF report at each point. I would note that the assumed growth rates, not particularly ambitious especially for Spain. The primary surpluses are also modest except for Italy. Now the bottom line is that projections by 2020 have all four economies with debt ratios in the range of about 100-120% and that's why I think that they are consistent with solvency and considerably lower than the 2013 levels for all except Spain.

Now for Greece, my 2020 baseline projection puts the debt of 127% of GDP and that's a lot lower than the 180% or so in 2013 but still very high. The figure shows my projections are very close to the April WEO projections, the line in dashes. Now because most of the debt is owed to the official sector, the Euro area partners, the interest rates are below market rates. So despite this very high debt ratio, Greece's interest to GDP burden is not much different from some of the other periphery economies. And it's conceivable that the financial markets will focus on that ability to pay the interest and reinstate Greece to market access especially if it adheres to its fiscal targets.

But it's also possible that the official sector will need to grant additional relief to Greece to set the stage for renewed market access later in the decade. Figure also shows the case for Spain. Again, which is close to the recent IMF projections.

Spain is the only periphery economy converging upward from a low debt level rather than downward from a high level. But the key point is that its debt ratio should plateau at a safe level rather than spiral out of control. The baselines for Ireland, Italy, Portugal all show steady and significant improvement. My baseline for Italy is more favorable than that of the IMF because I include privatization.

For Portugal my baseline is slightly more pessimistic. For Ireland, I'm a bit more optimistic with about half of the difference attributable to my inclusion of some privatization. This summary figure shows the probability-weighted paths of debt to GDP for the four periphery economies, excluding Greece. It turns out that all four are converging to a range of about 100-120% of GDP, with Spain converging upward from lower levels, whereas Italy, Portugal and especially Ireland are converging downward.

So the raw diagnosis of solvency applies to all four of these periphery economies. Now Greece has virtually all of its borrowing needs already lined up through 2020 and given the
low interest on the debt as I say, it conceivably could begin to re-enter the market thereafter. And indeed, it already re-entered the market for five term paper--five-year paper, earlier this year. So, that's a question mark on Greece. But clearly Greece is the closest to insolvency.

Now I do do a final stress test. On Page 159 I show what happens if the primary surplus does not exceed 2.5% of GDP. That's not very ambitious. The main impact is on Italy with a debt ratio that plateaus at 130% of GDP rather than coming down to 115%.

So, even in a more politically constrained case, solvency would arguably be maintained because the debt ratio would not be spiraling ever upward but there would be more vulnerability to adverse shocks.

The broad conclusion then is that the Euro area has reached a point where the sovereign debt crisis has improved greatly and that the crisis should be manageable going forward. But political will, in my view, is crucial to sustaining the primary surpluses that will be needed. Thank you.

Willem Buiter: Okay, what do I do to get visual the lights? Okay. Let's all shout 'ohm' and hold hands. Yes, okay, very good. It's really a pleasure and an honor to be here and to be able to discuss this really interesting and excellent book by Bill.

What I like about it especially is that even where I disagree with his conclusions, we can pinpoint exactly why we agree, because all the parameters are there. The framework is a common framework. It just is basically a disagreement about interest rates, growth rates and political sustainable primary surpluses. So it's a discussion that people can make up their minds about using this same framework. Okay.

Before I get to that, let me just say briefly that the focus on the question whether the sovereign debt in the Euro area periphery is sustainable or whether there will be further debt restructuring it is, in my view, highly likely that there will be further, debt restructuring, and I also think it is desirable that there'll be more debt restructuring than seems likely. That's a separate issue.

Now since Germany, West Germany at the time, defaulted first on its domestic debt in '48 and then on its external debt in '53, there has not been a sovereign default in Western Europe until Greece defaulted twice in 2012. If we look at default in the sense of PSI, private sector involvement, then the only other periphery country to have defaulted is Cyprus. Right? Which had a small practical default on privately-held sovereign debt at one or two billion worth but it should be in there for completeness.

If we take a broader view of default and restructuring as including, OSI, official sector involvement, then, of course, Ireland and Portugal have already had sovereign debt restructuring because the terms on their officially held debt, the EFSF debt, the EFSM debt and whatever else by way of Algebra soup, they borrowed from, that debt has had its interest rate reduced, its perpetuities extended and so that was no PSI, no private sector involvement but definitely OSI. Ireland just got another one when the ECB and the European Commission allowed them to fudge some of their debt that they had incurred as a result of the rescue of Allied Irish and the Bank of Ireland.

Now, the deck equation, Bill [inaudible 00:34:16] same framework, is that the change in the debt to GDP ratio, little 'd' is basically the interest rate, real or nominal, I do the nomi-
nal bit in the bottom line; real in the top line minus the growth rate of real GDP. There’s a little fudge factor for discreet time, [inaudible 00:34:33] the growth rate which you can ignore trying to [inaudible 00:34:35] of debt minus the primary surplus. S as the share GDP plus whatever bank recapitalization cost the government incurs minus privatization. The normal interest rate minus nominal growth rate is the second expression. These are equivalent. So that’s what drives the debt.

And you get solvency expression out of that which you can actually write. If you’re willing to do a bit of hand waving and now, we work for a bank, I do a bit of hand waving interpreting all the symbols. Now it’s permanent or longer than average values in the future. So your permanent primary surplus is the shared GDP has to exceed the permanent real interest rate minus the permanent real growth rate plus whatever you have to cough out the permanent value in terms of permanent income equivalent of bank capitalization and privatization.

You’re insolvent and if you’re a primary surplus, on average in the future as a share of GDP is less than that. The question it politically becomes is the maximum primary surplus that we can on average sustain in the future large enough to beat the minimum primary surplus that is required to keep us solvent and I think in a number of countries in Europe, even now going forward the answer is likely to be no. There’s nothing uncertain. I think this [inaudible 00:36:14] analysis is absolutely right. So I never make statements like Country X will default, but I can simply say it’s highly likely that Country X will not make it and have a PSI.

Incidentally, in the case of Greece, of course, the public sector held claims on the Greek Government are in the process of being turned to zero coupon perpetuities. Steady maturity extension and coupon cuts basically promises to pay nothing forever. So full face value, zero net present value and that is, of course, what allowed Greece to issue debt again five years at just under 5% which is extraordinary and slightly that until you realize that it makes complete sense because de facto the newly issued private debt a few months ago and in fact, the stuff they’re doing right now has been made senior to the officially held claims of the Greek sovereign.

These officially held claims are not just junior to the new private debt but in fact they’re going to disappear. So [inaudible 00:37:38] able to get my hands on that Greek debt I probably would have done so. It’s better than what I get in the bank. Okay. Now, my point is the periphery sovereigns they’ll not spend much more rescuing their banks and other systemic support the financial institutions. I reached the same conclusion as Bill but for a different reason.

I think the losses, they’re likely to be uncovered by the comprehensive assessment where the EQR, [inaudible 00:38:08] stress test are going to be a lot of bad banks in Europe but they will be overwhelmingly met either by liquidation in the case of system, unimportant banks or by bail-ins of unsecured credit.

It’s basically the BRRD, the Banking Recovery Resolution Directive which is not meant to kick in 2016 has been brought forward to be ready in October of this year when the scorecard is held up. Germany, the cabinet has approved of this and the Parliament will, no doubt, follow.

The BRRD requires at least 8% of the balance sheet bail-in and that’s an average at any rate, sufficient for … [Inaudible 00:39:02] clearly in worse off of balance sheet in the MFI
sector in the Euro area. Eight percent should do it. My estimate of the likely losses, if there’s
EQR stress is honest, is somewhat larger than Bill’s incidentally, it’s about 3% of the bal-
ance sheet which would mean 9% of the GDP because the balance sheet is roughly three
times GDP, annual GDP that is.

Now, privatization will not yield any revenues. Historically unless you have natural re-
sources to sell. Or maybe Telco, you lose money on privatizations. The great example of this
is the [inaudible 00:39:43] which had eight and a half thousand [inaudible 0:39:44] enter-
prise in Germany in 1990-94. Massive real property as well, land. And it wound up with
cumulative losses of between 60 to 70 billion.

So don’t expect much of anything from privatizations because the Italian government
doesn’t have—and even where there are valuable assets like some of the state-owned [inau-
dible 00:40:11] managed state enterprises of course the net presence they’re unlikely to get
much more than the net percent value of the income the government gets it anyways. So
it’s a liquidity issue at most, rather than a sector issue.

Now, the other reason I get different results from Bill that I believe that current interest
rates on the sovereign debt of the periphery countries are insanely low and Bill, has re-
maind that way. It’s a combination of an extraordinary low—I think fundamentally war-
ranted probably—low safe rate, [inaudible 00:40:46] Bunds and a bubble driven decline in
spreads and both I think will normalize and therefore make the test harder to meet.

So, despite the presence of OMT, remember OMT is there to rescue the Euro and to pre-
vent disorderly sovereign defaults. It is not meant to prevent sovereign debt restructure of
insolvent governments. And they don’t have the resources to do that, at least not in an infla-
tionary way. Their net present value of future not inflationary revenue of the Euro system is
a mere three trillion which is not enough to deal with the European sovereign debt problem
in my view.

And I want to take this chart that Bill showed you about risk spreads in the Euro area but
take it back a few more to show you just for how long markets can be insanely irrational.
Bill started in 2008 or thereabouts where we see the big spike and then the return to abnor-
mal. But the ones to look at is what happened for Spain, Ireland, Italy and Portugal, never
mind Cyprus, between when they joined the Euro zone in ’99 and 2008 that is, to my
count nine years the spread never went, with Bunds, never went above 35 basis points.

And Greece, which joined in 2001, likewise for seven years the market thought--this was
basically goods. So markets can remain irrational for longer than they can remain solvent or
longer than we can remain—take positions against the irrationality because our risk officers
won’t let us.

And at the moment we are in a version of this wild irrationality where borderline insolvent
sovereigns are priced 150 basis points above Bunds. So I expect that we are—I believe we are
not in secular stagnation in the Euro area. We’re at risk of it but I expect enough will be done
to escape from it and that therefore return of the risk free real rates from negative levels cur-
rently to positive levels of 1% to 1.5% is likely over the next four or five years going forward.

And on top of that, an inflation target of 2% for Euro area and a neutral rate for the ECB
would be—for the refi rate would be about 3.5%. Add to that term premium and you get
Bunds for ten years of say 4\% to 4.5\%. And add to that the reasonable risk premium not
less than say 150 basis points for the periphery countries and you have something that gets
you to 5.5\% to 6\% and I think that the average cost of market borrowing for these coun-
tries they'll find themselves not below 5\% once the markets stop sniffing glue and start
pricing risk again.

It's not just for the Euro area sovereigns; it's for the Euro area banks that we have this prob-
lem and for American corporate credit. This is just a historical record here. No more GDP
growth as you can see even if you have currently very low effective nominal rates on these
debts. On average 2.5\% to 3\% for the Italfy of this world. Nominal GDP growth rates are,
of course, still well below that.

And unless the ECB wakes up and smells the roses and generates 2\% inflation for the Euro
area as a whole, no periphery sovereign is I think sustainable because less than 1\% Euro area
average means negative inflation, if you shall see, for most periphery countries. And my view,
the 3.5\% to 4\% nominal GDP growth rate on average is necessary for each of these coun-
tries to make it. To be sustainable [inaudible 00:45:37] interest rates. And maximum politi-
cally feasible [inaudible 00:45:41] surfaces which are definitely not in the 5\% range.

I think my range is 2\% to 4\% depending on the country and four is really challenging. So
these are the average nominal GDP growth rates for this whole period for these countries
and see that the average number is achieved by Ireland and Spain and Cyprus, indeed, but
even Italy doesn't get anywhere near it over the entire period, not just the last few years.

Real GDP growth rates, of course, abominable. My estimate, and the average over the
period here, I give for these countries, my estimate for instance of Italian potential output
growth—we have a cyclical recession possible is 0.3\%. So the estimate of Italian potential
output growth going forward, without radical reform is zero. My team are wild optimists.
Right they say it's a half percent. I give you a half. If I give you a half and 2\% inflation in
Italy, they're still borderline insolvent. So we need radical reform in Italy.

Now the good news is that—well I thought Italy was a hopeless case because I did not see the
political bill to the supply [inaudible 00:47:04] reforms necessary to get growth up to 1.5\%
even over the next 30 years or so. The European parliamentary elections were a disaster, mostly.
We have three neo-Nazi parties in the European parliament. This in [inaudible 00:47:21]
on these things. Really, worrying. But in Italy common sense broke out 42\% of the people
voted for reform minded, pro-Europe, pro-European. So it is possible again. But there has to
be a political victory. They have to have the political reforms, electoral reforms, that makes it
possible to have an election that produces a viable majority that is not dependent for its sur-
vival on anybody whose first name is [inaudible 00:47:50] or Silvio. And then they have to
legislate the reforms and then they have to pass it to implement them. It is a huge challenge.
It's possible I think now but it is still, I think, quite unlikely that they'll manage.

And the trend growth rate for Spain I think is the only area where I’m more optimistic than
Bill. I think Spain can grow faster than 0.8 especially since they are cyclical recovery. They'll
look like a secular expansion. Okay. Here we go. Here the GDP deflator, you can see nega-
tive inflation rates for almost the entire periphery, not for Italy actually this last year. In
making it virtually impossible to achieve solvency unless the ECB wakes up and smells the
roses. General graph of [Inaudible 00:48:40] I think will not turn for any of these countries
anytime soon except for Ireland which has real growth potential in the 2.5 range we there-
fore should put it with the ECB contributing on the inflation front and its real competitive adjustment have to be completed more or less we should put it in the sustainable camp.

So, Spain is a likely sustainable candidate in my view provided they do additional reforms and we don’t have [inaudible 00:49:14] which is, in turn, dependent on them not being Scottish [inaudible 00:49:19] from the UK on the 18th of September so keep your fingers crossed. Greece, I think, it’s hopeless, we know that. Portugal I think it would take a minor—well, not quite, here we have to--sorry. [Inaudible 00:49:39] Portugal it needs the ECB to do its job. No fiscal S&M very important. Go gradual. Very significant [inaudible 00:49:49] reform and a [inaudible 00:49:51] constitution of course. Possible, but not likely.

And then Italy ECB no fiscal S&M. Heroic structural reform and Cyprus, no further banking capitalization outlays and successful [inaudible 00:50:05] post-tax rate haven and [inaudible 00:50:07] the economy. It won’t be easy. And then Greece sovereign requires a miracle. Okay. Finally, well, I’ll leave it here. I’ve talked too much already.

Ángel Ubide: Thank you. While the lights are put up, let me say that we in Spain play football in a match more discrete, efficient and stylistic way than the Dutch these days. I’m going to entertain you less than Willem. I want to thank you Bill for having given me the opportunity to comment on this. I’ve been part of the study group. I’ve been part of the review process and I can tell all of you that you should read the book because there is much more in the book than what he showed in the slides and you can learn a lot of things about what happened in the Euro area in the last few years.

Let me go straight—you already know that we’re running a little bit late—let me go straight to that content. There are a few things where I agree with Bill’s assessment of the Euro area. The first one is that essentially this crisis was to a large extent self-inflicted. And I’m paraphrasing him. He doesn’t say this in the book. But essentially when you tell the world that you want some countries to default and you are trying to pull some countries out, then what you get is the market price in default and price in exit. It’s rational, right? When you then tell them, well “I was kidding”, then they say, “All right.” Then I’m no longer going into price [inaudible 00:51:53] and I’m no longer going into price default and that’s what happened when OMT was announced and when Germany finally declared in public that Greece was going to be allowed to stay in the Euro area.

Now, of course, it means that the Euro area is solvent. Now, solvency is in the eye of the beholder. It’s not a question of willingness to pay. It’s not a question of ability to pay. And so it all depends on the policy mix. It depends on whatever you want to do with your policies. Remember that there is no threshold on debt to GDP. Solvency depends on the funding situation and so it is a question of what kind of policies are you going to put in place.

I agree that Greece needs further debt relief but the previous speakers have said, we already know there is going to be [inaudible 00:52:37] so I don’t need to dwell on that. And let me just say that I agree with Bill that thinking about pre-emptive restructuring is a bad idea and this links, if you want into the current debate at the IMF.

But just imagine what would have happened to Portugal two or three years ago if the discussions that the IMF is having these days had already been policy and the fund had forced Portugal to reschedule as a condition for the program that was given to Portugal two or
three years ago. I can only imagine the kind of contagion that would have generated into serving a lot of countries in Europe and the kind of situation we would have had to deal with. So, these are the places where I agree.

Let me go to the disagreements. There are a few. I think Bill takes the ECB as given and I disagree with that. I don't think central banks should do conditionality; moral hazard is not in the mandate of a Central Bank. What the Central Bank has to do is to set policy so that financial conditions and monetary conditions are right for the country. A key reason why we ended up where we ended up is because from the very beginning, the European Central Bank decided to put conditionality at the heart of its monetary policy decisions. It's debatable and I think having seen what I have seen I disagree with them.

I also think that the policy mix that was put in place in the Euro area, the sequencing of the policy mix was wrong. When you are in a situation like this one you first do the easing then you do the fiscal tightening. We have seen that in the US. We have seen part of that in the UK. I will show you a slide like around that tells you what the difference of this is. There was a choice. There was a moment in which Merkel and Sarkozy had to decide whether the banking crisis was going to be mutualized or coordinated. They decided to coordinate the management of the banking crisis, not to mutualize the management of the banking crisis.

At that moment they generated the link between banks and sovereigns. That was a decision. 2008, 2009 they could have set up a European fund for the resolution of the banking crisis and we would have had a very different picture. But that was a choice. So let's remember, there were many choices that were made along the way that could have been different. I also disagree about the fact, and I think Willem also said this and I also disagree with him, that spreads have to increase. I don't think you can have a functioning monetary union without the risk free asset. And you don't have a risk free asset today in the Euro area and if we continue with this situation where different countries have different levels of spreads of the order of magnitude that we have today it's going to be very difficult to make the monetary union function.

So we need Euro bonds. And remember Euro bonds are not about transfers. Euro bonds are about financial stability. You need banks to be able to hold a risk free asset that doesn't link it directly to what the country is doing. You need a risk free asset that they ECB can buy. So it can freely do quantitative easing without worrying about which bond of which country is buying. And then you want to have a system where some fiscal policy can be counter cyclical otherwise the system simply doesn't work.

So, in case you have forgotten, this is what we have. This is the picture of the Euro area crisis. It's going to be a lost [inaudible 00:56:13] if we are lucky. And I'm saying if we are lucky because I have no idea when the next recession will be. So the next recession, whenever it happens, is probably going to hit with a level of GDP that is not going to be terribly different from 2006. That's what we have and, again, could have been different but this is the way it is.

Now, this explains everything. It's the same chart you have seen before but in real terms. Now I want you to focus on two things. One is the way the evolution of Spain that it breaks around 2010. Italy does the same thing. Portugal and Greece goes higher. Look at the thick light blue line. That's Germany. It follows the US, it follows the UK. If you didn't know you will think that Germany had quantitative easing based on that because of the
The evolution of ten-year real rates follow exactly the evolution of the US and the UK. Exactly the countries where quantitative easing was done.

So, for all practical purposes, the monetary policy stance that Germany had, and other countries, was similar to one of quantitative easing. And I think that’s very important in order to tell the narrative of what has happened in the Euro area and why some countries are doing better or worse than others. Now, [inaudible 00:57:33] growth put up a piece last week in VoxEU that does something similar to this. That is well, maybe that explains the difference between Spain and the UK in terms of the debt to GDP ratio profiling. And I guess through Germany there for comparison.

The line is when the spreads starts to go silly. The fiscal consolidation in terms of the reduction in the structure of deficit, it’s bigger than Spain than in the UK or in Germany. But look what happens to the debt to GDP ratio. It increases. It accelerates in Spain; it sort of is stable in UK and in Germany. So, some things are the way they are because of policy choices that were taken.

So let me just continue with a couple of charts which basically try to convey the message. It’s tough. Let’s just not make it impossible for the countries. So don’t set them up for failure. The first one, this is an old favorite of mine with apologies to the ECB representatives, but the policy stance is simply too tight. You need to generate growth in order to be able to do fiscal consolidation and in order to be able to put reforms in place. If you calculate any kind of policy rule, it tells you that the interest rate today should be very negative.

Now, of course, I know that interest rates cannot go negative and the policy rate but there are other things that can be done in order to have the right policy stands in place. Now let me look at the long run. And this links a little bit to the equations that Bill and Willem have put in there. So I was curious to know whether the markets are pricing the spreads for the long run. So I look at the forward curves. Let me walk you through the table for one second.

So the first row shows the five year and the ten-year rates for Germany and Spain and Italy. The columns show you the SPOT price or today’s price. The same yield two years forward, the same yield five years forward. So what you see is that the markets today are pricing ten year rates in Spain for example at around 2.8. Those are swap rates. But around 4.3% in five years at around 4.6% in five years. For Germany, 2.4.

So essentially what the market is telling you today is that the spread between Spain and Germany for the ten-year rate, in five years is going to be 1.9 and for Italia it’s going to be 2.2 with essentially no improvement whatsoever.

Now if you do it in real terms, I’ve taken the measures from inflational swaps at the five-year and the ten-year rate. We go down we can calculate the five-year real rate, the 10-year real rate forward. And that tells you that in five year time, markets are expecting Spain to have a 2% real, 10-year interest rate and for Italy around 2.3. Now what’s potential growth in these countries? I don’t know. But I took the real forecast for the 2019 and I assume that that was a very good approximation to potential growth. One point three for Germany, 1.3 for Spain, 0.9 for Italy.

Now, look at the [inaudible 01:00:54] that was critical in the [inaudible 1:00:55] equation that Bill and Willem were showing. It’s very beneficial for Germany, minus 1.2. It’s positive
for Spain. It's positive for Italy. Now, with 100% debt to GDP ratio, 0.7 for Spain means that the primary circles that establishes the debt ratio has to be 0.7 more. And for Italy because the debt is above a 100% it means it's 1.4 times a factor.

So this is what the markets are pricing today. The next time you think that interest rates in Spain and Italy are too low, think about this data and think about how complicated it is going to make it from a socially sustainable standpoint to hold the primary surplus that they need to haul and whether there is something that can be done about it. So let me conclude.

I don't think this will surprise most of you, I think that your audience is weaker today than it was before the crisis. Some things have been done but on net, the starting point is weaker than it was in the previous cycle. There is no question about solvency if the right policies are put in place. We need demand policies to prevent the deterioration of potential growth. This is a debate that is not really happening in Europe and it should.

It needs the right monetary policy stance and it needs Euro [inaudible 1:02:14]. Now notice I didn't put reforms because I have decided not to use the word reforms anymore. It's an empty word that means nothing in itself and is really thrown around in order not to talk about other things. So, of course, countries need to push potential growth. Everybody needs. The US, the UK, Malaysia, every country in the world.

But this is also negative and if we only talk about supply we are not going to do demand. And I haven't put a bullet point for banking unit because banking unit is secondary if we can get those things done. Because yes, we already have a Supervisor in Mechanics that is going to do probably supervision a little bit better than before. What matters is to have a fiscal backstop.

So let me conclude with a last point. How do we make all of these happen when what is good for the Euro area doesn't necessarily coincide with what's good for the political establishment in Germany. That's what leaders in the Euro area need to deal with and I think that's where Bill's book is going to be very useful and very influential. Thank you.

Marcus Noland: Well, we have a limited amount of time and we have three people who have a lot to say, so what I suggest we do is we gather a few questions and then we give the speakers a chance to respond and Bill a chance to respond any comments that Willem and Ángel made during their presentations before adjourning. So there is a roving microphone here in the front. There is a standing microphone in the back and so if you'd like to raise a question either go back to the back microphone or raise your hand. Yes, please. Please identify yourself and your affiliation just because everyone does not know everyone else.

Audience 1: I'm Mohan Kumar and I was with the IMF. It's a wonderful book. I really enjoyed reading it. The key issue, I mean all of you have actually sort of summarized, focused on the primary surplus and R minus G. One question though is to what extent the high level of indebtedness itself would affect G also?

You talked about R now we all know the controversy that you raised over the last three, four years on the relationship between debt and growth rate. So perhaps something on that and Ángel you mentioned that you don't want to talk about reform. It seems to me that that is actually a crucial element in terms of the story which Bill Cline is saying and I don't know Willem to what extent you're sort of discounting the ability of the government
to take the reform or perhaps they can undertake them but they will not yield the results which would be necessary to make that sustainable.

Marcus Noland: Any other questions? Yes, please.

Audience 2: Mike Basetti of the News Hour. My question's a brief follow up on that. There have been just a couple of references here to politics and the question is you mentioned that there's not very good outcome in the Euro parliamentary elections. This may be a little out of your bailiwick, but is there going to be enough political strength to keep on this path? I mean they're already—the pressure seems to be very much in the other direction.

Marcus Noland: Very good. Do we have any other questions? It's like an auction. I see Jacob raising his hand slightly but … Okay, well, we have a limited amount of time and those were actually very broad questions so why don't we do this? Why don't I turn to Bill and see if he would like to make responses to those questions and to the comments raised by Willem and Ángel and then Willem and Ángel may respond to the questions as well.

Bill Cline: Right. On the question of whether a high debt ratio itself causes a slower growth rate, I mean I think yes it's true that you've got the crowding out phenomenon. Often you've had crises associated with higher debt ratios but my sense is that the kinds of growth rates that are assumed and the projections I've made are really quite modest as Willem said; I've got a really low growth rate for Spain. That's just because that's what the fund has been using. So I don't think it materially undermines the projections and the conclusion.

And I think it's yes, it's right. I mean on the politics and on the reform, I have sort of a disclaimer in Chapter One which says that this book is not really about the politics of reform but clearly that reform is important to growth. And on the question of whether this is sustainable politically, I'm not the expert but my impression is that the whole experience has been radical enough that there has been a … I mean certainly in Greece there had been a radical shake-up of the old way of doing things and I had the impression same is true in Italy.

So I mean you can get structural changes after the trauma of a debt crisis that wouldn't have been politically possible before. I think we saw that in the Latin American crisis. But others probably have more informed views on the political sustainability. I agree that is a crucial question.

On some of the specific questions that Willem and Ángel raised, let me first say that Willem seems to say that unless the ECB gets 2% inflation, that the whole thing is going to come crashing down. I don't see the logic of that when you factor in the fact that if they don't get the 2% inflation, your Bund rate's going to be lower.

So with the same spread, risk spreads, you're not going to have the kind of real burden that would be implied if the nominal interest rate remained unchanged but the inflation rate were not as high as anticipated. I've got the Bund rate going to an average of 3.5% over this period for the whole period 14 to 20. If the ECB did not make its target than presumably would be lower. So that's an offsetting factor.

Willem questioned whether you can save anything for privatization. Well, I mean the Italian Ministry of Finance is noted for being pretty savvy and having very good analysts. And when they publish that they can make 1% of GDP for five years through privatization, I
think they would not make the error saying, “Oh, by the way, we’re leaving out the fact that we’re going to put thousands of people on the street and it’s going to cause this and that.” I think their privatization’s somewhat specific because it has to do with doing some sort of securitized ownership of stuff and public buildings that are currently being rented and so forth. I don’t know the details but my impression is that Willem’s generalization about the privatization may be too negative in terms of what Italy can do.

Coming back to the 2%, Willem at one point on his slides he says that Ireland is insolvent if the ECB doesn’t get 2%. Well I don’t see those numbers. I mean Ireland’s debt ratio’s going to come down to less than 100% and the probability weighted and let’s say that you’ve got even an extra point on that with no change in the interest rate over seven years, you’re going to boost it to 105. You’re not talking about boosting it to 150. So again, I’m skeptical about that.

The chart that Willem uses to illustrate market insanity which is that the spreads fell and then they revived—sorry I’m going on about this. To me the whole key is to re-establish, re-confirm the paradigm that existed in the post-war period which industrial countries do not default on their public debt. And the spreads that you observed before the Euro were all interest rate differentials associated with different inflation expectations and nothing to do with sovereign spread, very little due to sovereign spreads. So, I think that the international community should be engaged in trying to re-establish this central paradigm that industrial countries do not default. And in the normal state of events the sovereign spread is zero.

And Ángel, Euro bonds sure, they’d be great. I’m surprised that Ángel thinks that they are politically as feasible as he seems to think. I welcome that but I’d be surprised. On the 220 basis points, five years out, has a spread, if that’s what it is I don’t see that as much of a problem. Again, I could put my model 220 instead of 175 it would make very little difference. My declining spreads; my declining debt ratios. Thanks.

Willem Buiter: Just on the inflation point. The average maturity I think of the sovereign debt in the periphery is just over six years. So that’s quite a bit that you can do in terms of reducing or racing the real interest rate by varying the inflation rate. Sure, the newly issued debt you’d assume that Fisher lives. But you’d have certainly until 2020 a lot of pain. I do believe that it’s urgent that Europe, Euro area, establishes a sovereign debt restructuring mechanism. Not just to deal with the overhang but just the likely future recurrence of this cyclical unsustainability that contributes to this crisis.

I do not believe that the institutional mechanisms, two pack, six pack, [inaudible 01:13:57] has been put in place to prevent this. The fact that sovereigns in a vast [inaudible 01:14:08] countries do not default is the product of an extraordinary, unique historical configuration of post-World War II factors that is not going to be repeated.

Remember, we end this war with two most industrial countries with massive debt. Britain I think it was 46% of GDP and got it down to 29 I think by ’74. Now, what’s different then? Why can’t there be no debt default is credible. First, the legitimacy of the debt is rather different. It makes a difference for the debt to be incurred, as a result of an external conflict against a common enemy is the result of a massive internal screw-up. And the [inaudible 01:14:57] decades of post-World War II growth, especially in Europe were unprecedented. Not only they have a great demographics, their post reconstruction and recovery from the Great Depression and re-globalization after decades of [inaudible 01:15:10]. So it’s not going to come back.
But the great tolerance for inflation and there was willingness to use financial repression. I think financial repression, may make a comeback but the other factors aren’t really. So I think we have to be prepared for a world in which sovereigns will get themselves even sovereigns that are currently not in trouble in sustainable conditions and then orderly restructuring is necessary.

If Portugal had been told by the IMF to re-profile its debt it would have been contagion, well if it had been told to do so after the OMT was put in place, no. Contagion is counteracted by an effective lender’s last resort.

The only problem I have with the OMT is of course, that it could still be shot, but it’s unlikely politically by the German constitutional court. It has six of the eight members I’ve said we really hated. And especially they hate the fact that there’s no seniority for the ECB. They hate the fact that there’s selective rather than unbiased. We just hate it. Yes.

Now, the politics. I think that—I speak of as one here who has an impressive track record of getting the politics wrong. I predicted not long ago that Greece would walk out, wouldn’t be forced out; would walk out tragically out of the Euro area because I thought that no country—no government could survive a 25% decline in GDP and the increase in employment of 50%. There would be blood in the streets that would bring down the government, result in a general election that would start the referendum on austerity and referendum on the Euro. So that was—the first part didn’t happen. The government never fell. There was no blood in the street. At least not no significant amounts of blood. Why is that?

Well, partly because the safety valve of migration, revolutions are made by the young and the young, the best-educated young in Greece went to Germany and then the bank of mommy and daddy helped also. And the fact that the demographics were rather different from Egypt’s Mubarak. In other words, the majority of the population is old and the old don’t demonstrate. They watch lacrosse.

Now, so I do not believe that it is likely that you will see significant reform because if we had go to see any you would have seen some already. Greece has had massive austerity; unhealthy doses of austerity but very little, negligible in fact structural reform of the supply side. The labor markets opening the professions, service sector, de-regulation of utilities and all that.

The only country that has had significant structural reform is Spain and to a lesser extent Portugal. And even that is not enough in my view. Will we have more? I don’t think so. Greece has made it clear that they can play a long game with the creditors and they can procrastinate on reforms as long as it takes. So it is possible that Mr. will succeed. But it would take such a—in getting reforms that change the potential output growth rate significantly to 1.5%. Possible but I think unlikely because I’ve seen nothing yet in the willingness of the unions to countenance the end of permanent contracts and I’ve seen nothing even outside the periphery. Like France, which is really a periphery country and waiting that reform is likely. So I hope I’m wrong but since I have indeed very modest expectations of reform I think more than a cyclical recovery and a little bit of extra in countries that have shown itself capable of reform like Spain is the best I can hope for.
Ángel Ubide: So two quick points. Now when a country has a high level of debt, the way to think about it is that the neutral interest rate is lower. It essentially means that monetary policy [inaudible 01:20:17] variables has to be easier. And I think that’s what I was trying to say a little bit with my slides and I think that’s where this is going. Yes, the debt is high and the public and in the private sector and that’s going to mean that in order to generate some growth, monetary policies are going to have to be easier for longer. And we are seeing it probably now why if inflation is very close to zero, it’s because monetary policy was too tight. And if inflation now it’s not rebounding beyond 1% for the next several years, it’s because monetary policies seem to be too tight. And that’s what I disagree with a lot of people in that, you know, rights are in public territory or anything like that. Monetary policy is where it’s supposed to be.

On reforms, I didn’t mean to say you don’t do reforms. What I meant to say is that you cannot do only reforms. There are many different types of reforms and what you need is a package. You need a package where you boost demand, where you do the reforms, where you have the right set of policies and then things can work. We are seeing it in Japan. And I think it’s a very good example. Now, the problem with reform is that reforms don’t solve the business cycle. There is a key factor for a country to export more or less than another. There is the firm size. It’s not even the level of competitiveness. You cannot change the size of firms overnight. That’s a problem that Italy has. It’s a problem that Spain has to some extent and many others. There are many things that can be done. But will kick in in the next cycle, not in this one. And that’s what I’m trying to say with, you know, let stop using reforms as a wild card that you use when you don’t want to talk about something else. That’s it.

Marcus Noland: Thank you very much. Well, we’ve kept you a few minutes late and I’m going to keep you one more minute late. Unfortunately, I’m a bad marketeer. I was told that I’m supposed to say the title of the book three times and I’m supposed to hold the book up. Now I said the name of the book. I forgot to take it with me at the start. I did say the title however. I should have held it up and said the title, Managing the Euro Area Debt Crisis at the outset of this segment. I’m certainly going to hold it up and say, Managing the Euro Area Debt Crisis at the closure and thus fulfilling my obligation. I would like to invite you to join me in thanking our author Bill Cline and our discussants Willem Buiter and Ángel Ubide and I declare the meeting adjourned. Thank you.