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Raghuram Rajan
Governor, Reserve Bank of India

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Questioners: John Lipsky
Johns Hopkins School of Advanced International Studies
and former Managing Director, IMF

Robert Hormatz
Vice-Chair at Kissinger Associates
and former Under-Secretary of State

Introduction

Chairman William C. Dudley

Good afternoon everybody. Welcome to the 445th meeting of the Economic Club of New York. We are in our 108th year. The Economic Club of New York is the nation's leading nonpartisan forum for economic policy speeches. We have had more than 1,000 guest speakers which have established a strong tradition of excellence.

I would like to recognize and thank the 226 members of our Centennial Society. These members have made an extraordinary contribution to insure the financial stability of the club in its second century, and their names are listed in your program. I also would like to welcome the students from the Columbia School of Business and the School of International and Public Affairs, and students and faculty from the University of Bridgeport and Hunter College. Their attendance is made possible by our members.

So this afternoon, I am very pleased to introduce my bank colleague, Dr. Raghuram Rajan, Governor of the Reserve Bank of India. Dr. Rajan has been charged with Governor in September 2013. Prior to that he was the Eric J. Gleacher, Distinguished Service Professor of Finance at the University of Chicago Booth School and he has also been the chief economist at the IMF.

The Governor has already achieved much since taking charge at the Reserve Bank. This has been

broadly recognized with *Euro Money* giving him the best Central Bank Governor Award in 2014. The Governor has also had a very distinguished economic research record. His research spans a broad range of topics in banking, corporate finance, economic development, among his books are *Fault Lines: How Hidden Fractures Still Threaten the World Economy*, which won the *Financial Times* prize for best business book in 2010. He is also a good forecaster, anticipating in large part the financial crisis in his widely recognized remarks at the Kansas City Federal Reserves, Jackson Hole Conference in 2005. Dr. Rajan was elected President of the American Finance Association in 2011 and he is a member of the Group of 30. His numerous awards include the inaugural Fischer Black Prize for the best finance researcher under the age of 40 in 2003 and the Center for Financial Studies, Deutsche Bank prize for Financial Economics in 2013.

After Dr. Rajan speaks, as is our custom, we have selected two members, John Lipsky, and Bob Hormatz to question him, with a focus on what is going on in India and around the world. If you have questions you can send them to our President, Jan Hopkins, at questions@econclubny.org. Raghu the floor is yours. (Applause)

Raghuram Rajan

Governor, Reserve Bank of India

Thank you very much. Thanks to Bill for inviting me, and Bob Hormatz and my former boss,

John Lipsky for agreeing to discuss these themes and also I should mention, Montek Ahluwalia former Deputy Chairman of the India's Planning Commission who was instrumental in bringing me into the Indian government. So thanks for letting me speak here and given that I have 25 minutes and I was told I have to stick to the schedule very carefully, I will skip the jokes. (Laughter)

Let me start right off with the theme of the talk is really not about India specifically though India is part of this picture, but I will take questions on India after I speak. But I want to talk about is what used to be global imbalances, which are redirecting in a different way once again. I think I want to start first with the obvious statement that growth is yet to pick up in a strong and sustainable fashion across the world. And as the IMF suggests, global growth potential will be low for some time to come. And there are various reasons for this, which many of you know.

But at the same time, there is tremendous pressure building, both in industrial countries and emerging markets for growth, and I will talk about some of the reasons why this is the case. Therefore, there is a need to do something. Unfortunately, the traditional channels for generating growth are either clogged up or perhaps a little toxic, politically speaking. Which means then the actions shift elsewhere and I would argue that we are in danger of having actions shift towards policies that shift demand away from other countries, rather than to create new demand. Typically a variety of actions fall under this broad rubric. Direct exchange rate intervention has historically been a way for this to happen. But increasingly what comes under the rubric,

unconventional monetary policy, some of them, do have similar affects and I will talk about some of the consequences.

My fear is these generate gap and flows that create instability and have done so in the past. What we really need to think about is how we generate new rules of the game to govern what is acceptable policy. So that is where I am going.

Let me start first with the obvious premise that industrial country growth is slow and that there is a real question why. One answer which some of the people at the table have argued, is there is substantial debt overhang on governments, banks and households, and this debt tends to stifle demand, stifle lending and with very limited appetite or ability to write down debt, this is going to be a situation that lasts for some time; as Carmen Reinhart and Ken Rogoff have shown in their work.

There are others who say, yeah, well, debt overhang is a problem, but it can be dealt with, perhaps through additional stimulus. Now, we have tried monetary policy. We have extremely accounted to monetary policy, but we have hit this zero low abound in a number of countries here. What about fiscal policy. Well, a number of countries have very limited fiscal space left, and for those who have, there is a very real question of what do we spend it on. Now the standard answer is infrastructure. But, infrastructure is harder than it seems to affect, and I will talk about this a little later once again.

But when we think about grand infrastructure in developed countries, there is a lot of infrastructure already. It is all built out. So when you think about it, it comes to new stuff. High-speed rail, but high speed rail is a difficult project as we have seen in the United States, some of those that were proposed are yet to take off. It takes a long time to design, and sometimes it is designed for the wrong reasons and the wrong places. So doing infrastructure seems important, seems necessary, seems something that you should do when the cost of capital is so low, and there are unemployed resources, but I would argue, it is harder than it seems. Of course we all seem the potholes that we fall into or bump into every day. And we say, hah we could fix that. But fixing potholes is largely a decentralized activity, hard to coordinate from the center, and typically doesn't move the needle in terms of infrastructure. Moreover sending money down to the local authorities often means that it is spent in other ways than in creating infrastructure. The broader point I am trying to say is that yes, there is spending that we could all agree on, but it is much harder to affect than one might think.

Of course stimulus is supposed to be a bridge to the future. And if in fact we are in a period of low growth, we have to ask if this is because of temporary reasons or if the slowdown is much more structural. If it is much more structural, the bridge may end halfway which creates problems. So what if the slowdown is more structural. And this is where I think people like Larry Summers have started arguing that perhaps there is a deeper problem. One source of the problem could be inadequate demand. We have aging populations. We have income inequality with more

income going to those who have a lower margin of propensity to spend. But you could also argue the same facts could be explained by inadequate supply. We have slowing productivity growth; we have a variety of headwinds to production. The same tail winds which increase production post World War II such as the post war reconstruction, they increased participation of women in the labor force, they increased education levels that people attained, and the growing integration of the world economy through trade. These have all in some sense plateaued out and sometimes some of these are also being reversed, and in the meantime we have a very big headwind, which is aging.

Of course if you buy the argument by Tyler Cowen and Robert Gordon, there is also an additional element which is the total factor productivity growth, or innovation, which was happening in a big way in the 20s and 30s, has sort of come to an end. So we have replaced...it mentions like the motorcar with 140 character messages and that is what constitutes innovation today. I mean, this is over dramatizing the point that they are making, but they argue that the big innovations have all been done. Of course, most people would feel that no, that is not quite right, there is much more to come, but perhaps not in the near future.

So the proto point is that it is possible that the slowdown is more structural, it could be on demand side, it could be supply side. And one side can cause the other. If you have low final demand, it means low investment, which means low eventual supply. If you have low potential growth, because of factors like low productivity growth, it could imply weak career progression,

less impressive careers, which means higher savings today, which means low demand. So there are lots of stories you can tell for why it is hard to disentangle these two.

If in fact these structural factors are responsible for slow growth, we need to do something different than stimulus. And the answer is structural reforms of a variety of kinds. The problem of course is in these difficult political times with high unemployment and lots of anxiety, structural reforms have the wrong, political timing of pain and gain. You all heard Jean-Claude Juncker who said, "We all know what to do, we just don't know how to get re-elected after we have done it." (Laughter) The point is, the structure reforms have the gain up front and the gain down the line and the gain may come to entities who are not part of the political calculus today. They are not there to bargain for it, they are not there to accept those gains and to fight for them, and as a result what happens is too little structure reforms paid politically.

So given all of this, we are in a difficult situation but we don't quite know what to do and even if we knew, we can't really do it. So why then the urgency for growth. Why not just wait and see what happens. Why not accept lower growth. And for somebody coming from an emerging market, you would argue that industrial countries have pretty high levels of per capita income, why not tolerate moderate levels of growth for some time, until things sort of settle down, until the new innovations come, and growth can become rollicking once again.

And I would argue there are at least three or four important factors that make it really politically

important for countries to generate growth. One of course is government promises. There have been a huge number of promises right from the 60's when growth was very strong, entitlements that were set in place then, augmented since then by increasing promises to the public sector. I should know I have spent a lot of time in the state of Illinois and the promises that have been made are huge.

We also have a lot of debt across the world and those promises also will need to be kept. So if we don't get growth, the promises as a fraction of GDP become much more alarming and we need the growth to make good on those promises. A second factor is that whatever sort of goodies are there in the industrial economies, are unevenly distributed between insiders and outsiders. I was at the Yale convocation yesterday and a lot of young kids are still to get jobs. And clearly somebody coming out, in a period of relatively low growth, is going to find that they not only find it harder to get a job, but their careers are set back more permanently as studies show.

So youth unemployment across the world is a tragedy but it also shows the pain of the current situation is unevenly born and that is an important issue. There is an inter-generational issue here, between those in and those out and those out are typically young, but there is also within generation, a cross sector issue. The moderately skilled middle-class with the kind of jobs that they used to do, shrinking and vanishing. We need more growth to create the kind of jobs that they feel comfortable with. And therefore, even for the same level of growth that we had in the past, the middle-class would be less satisfied today, simply because the kind of jobs that they

need, are in a sense disappearing, and we need more such jobs, even while we increase the level of skills and education in such groups.

Finally, there is the issue of deflation. I think my colleagues in industrial countries around the world but also in a number of emerging markets, are experiencing some forms of deflation and the worry is that deflation could create a more permanent situation for one, it increases the level of debt, but it could also create other unpleasant phenomena.

Now, when people talk about deflation, they always point to Japan. And I would argue that maybe there are real costs of deflation, but Japan is perhaps not the best example of the cost of deflation. This is where my slides come into play. If you look at this, there is a concern about whether deflation caused slow Japanese growth. Now I am not trying to answer this very deep question with just one chart, but if you look at the numbers and this is something that Jean-Claude Trichet used to make much of. If you look at Japanese growth in real GDP per capita, it is not that different, averaged across time, from the growth of the other countries, except in the period of 1996 to 2000, which was when they failed to deal with their banking crisis. But once they dealt with their banking crisis, it is not clear that they are doing significantly worse than say the euro area over the period of substantial deflation.

So I think you can’t just from looking at the numbers. The truth is, Japanese GDP has not been growing so fast, but that is because it has an aging population and a shrinking labor force, which

other countries don't have. But when you correct for that, at least partially by looking at GDP per capita, it doesn't look so bad.

There is a question of whether deflation spiraled in Japan. And if you look at Japanese CPI inflation, it doesn't seem to be...you know, deep evidence of spiraling. Deflation has been steady, but never increasing in a deep and substantial way. Questions of when you have deflation, people say, oh I gotta save because it would be cheaper to buy next year. Whether we see that kind of phenomena, more deflation, and increasing savings, again a visual look at what is happening, suggests if anything, there is a negative correlation between savings, and deflation. Rather than a positive correlation. Another words, more deflation, people don't save more, but in fact, may even save less.

I am not in any way trying to establish conclusive evidence from this, but just saying the Japanese story needs to be examined in greater detail for all of the worries that we have about deflation.

The final argument that was made about deflation is, well it increases real wages, and if you have workers and long-term contracts who are hard to fire, it makes it really difficult to run enterprise, and therefore you get a weakening of enterprise. When Japan....somehow they managed, they still have 4.5% unemployment. They managed by moving a lot of people to flexible jobs. Now that is not the best thing in the world to happen, but it is one way of dealing with some of these

effects.

The broader point I want to make here is that there are, regardless of how much value there are in these arguments, it is a situation where there is a very strong incentive to look for growth, but politically and amongst policy makers, we can't just stop and say, well let's see where the chips fall over time. Let's hope there is some innovation, there is some fantastic new thing that comes. We have to do something, anything.

And in this situation of stronger than usual need for growth, one can always ask, maybe there is growth elsewhere in the world that we can capitalize on. Maybe there is exports to emerging markets. Of course emerging markets themselves are also desperate for growth. We have young poor populations, we need job growth in order to bring them into the labor force and not have them, create havoc on the streets. And we have much less comprehensive safety nets. So in case somebody becomes unemployed, it is much more devastating than in an industrial country.

So, the question is, can emerging markets provide the growth, funded by industrial country capital that will create the sort of global good for everyone. More growth there, but more demand for developed country goods and that is wonderful.

Well unfortunately, we have tried this before and it hasn't worked. And we are in the process of perhaps having tried it again and perhaps not having worked once again.

So let me talk about this, which John Lipsky will be familiar with, the global imbalances that we talked about a lot while we were at the IMF. What you see is just a plot of current account balances within emerging markets and in advanced countries, so positive means you are running a current account surplus. What you see here is the dotted line which is the emerging market current account balance. If you look across emerging markets, they ran a large deficit in the run up to the late 1990's. This is the Asian economy running deficits, and a variety of other economies running deficits. What they did was create crises. The Asian Crisis, the Latin American Crisis, the Argentina Crisis, perhaps the Russian Crisis. Then they said, never again, we are going to save, and we are going to reduce our investment, they cut back tremendously on investment, ran current account surpluses. That is where the dotted line goes up. That is where also the industrial countries, primarily the United States, but also Europe, started running current account deficits and that created crises in the industrial countries, the U.S. Spain, Portugal, Island, etc.

So the industrial countries said, never again, and started shrinking their current account deficits, while the emerging markets started shrinking their current account surpluses as the increase in investment, post-crisis, emerging markets, as a fraction of GDP have increased the investment, and we are now pretty, pretty close.

Of course the emerging markets have had substantial difficulty since 2011. Brazil is in some kind

of difficulty. China the jury is still out on what is happening and how bad it could get. India ran pretty large current account deficits and experienced the temper tantrum in 2013. So in some sense the question is, are we into a game of musical crisis, with crisis floating from one side to another. The question is, are we doing anything which is encouraging this process. And I would argue we are. That in fact, policies on both sides, the emerging market reserve buildup, exchange rate intervention, which Chairman Bernanke pointed to when he was the Governor, talked about the global savings glut. And I would argue today, it is unconventional monetary policies of certain kinds in industrial countries, which are having the same effect of the sustained one-sided exchange rate intervention that emerging markets engaged in.

So the real problem here is in a world with limited aggregate demand or potential supply, you can pick the one you prefer, what we have is everybody is fighting for the same pie. And often, as we learned in the 30's, the best way to do it, would be to have a competitive exchange rate. Competitive exchange rates can be obtained in different ways. But I would argue that if they don’t have an effect, whatever action you take that doesn’t have an action effect of increasing your own demand, but shifts demand away from other countries towards your own goods by depreciating your exchange rate, it is something that does create problems. Because often the channel through which this happens encompasses capital flows and creates difficulties for the rest of the world.

So let me just show you something which has happened since the crisis. If you look at real

effective exchange rates, what you see since the crisis and I told you the emerging markets are once again in difficulty, and partly it is that emerging markets have appreciated. Now some appreciation was necessary post-crisis because of large current account surpluses, but how much, how fast, while industrial country exchange rates have depreciated a little bit.

But this is not my main point. My main point really is a variety of policies are being undertaken today in this desperate search for growth. Many of them, under the rubric of monetary policy. And I would argue we need to look at these and figure out what is legitimate, what is not, what is shifting growth from other places, what is creating growth. So take for example the unconventional monetary policy which is often called QE1. I think it had a very important effect in the United States of restoring markets. It had the effect of essentially repairing markets that were broken and created the possibility of more growth down the line, even though you can see some possible exchange rate effects of that policy.

That kind of policy has the effect of creating demand, even while potentially I would say, shifting demand. But there are others which have much more of an effect only on shifting demand because the demand creating channels are clogged, either because of debt overhangs or for a variety of other reasons, because the banks are in trouble, banks can’t lend. In that case, one should legitimately ask are these policies valid, can these policies be followed, because I don’t see much difference, but in those kinds of policies which work primarily through the exchange rate and policies of direct exchange rate intervention which was frowned upon for many years

because they have the effect of shifting demand.

So the other problem with these kinds of policies is they have a similar effect to the effects that we had in the 30's of competition within countries to devalue more. Once you enter into this kind of competition it becomes very hard to come out, because as you are trying to exit you find your exchange rate appreciating because everybody is engaged in this, and as a result, you back off.

So that becomes problematic because we stay in these kinds of policies far too long. It is a prisoner's dilemma problem, and it is something that we need to think about. So question, can we do better and then I'll end. Yes, possibly but we have tried a lot so I don't want to pretend I have easy answers. But clearly we need to focus on investment. Investment has to be the way forward. I mean, if we take a cue, and this is not entirely facetious, from the post-war reconstruction, you essentially blew out a whole lot of assets, so it was very easy to know where to build.

I am not advocating that we blow up a country and start building once again, but green energy, new rules on emissions, those had the effect of rendering obsolete existing technologies creating space for new investments. And it is also something that we need that has large public goods effects, so this may be a good time, and some countries in Europe are doing that, for substantial green energy investments aided by government policy. Those would have effects in the right direction.

In emerging markets, clearly, in a number of our countries we need investment desperately. India needs investment infrastructure investment desperately. What we have to do is create the frameworks that people will feel comfortable coming in and investing, but I would argue that in addition to the framework, sometimes people argue the framework is all that is necessary, we also need patient capital because the lesson from the past crisis is do it with inpatient or short-term capital, too much of it and you will run into problems. So we need patient capital, at least taking some of the risk and that is why I would argue, let us not, at this point shrink the development banks. The development banks play an important role in both monitoring and creating this patient capital. In fact, let us recapitalize some of the development banks so that they can do more of this, something that markets cannot do fully.

And finally, as far as policies, monetary policies, exchange rate policies go, I would say we need rules of the game. I tried talking about cooperation, when and where, and I think cooperation is such a nebulous concept. What I think we need is much clearer rules of the game on what is allowed and what is not allowed.

And we can't get away with something by arguing it is monetary policy. There are some central banks which in fact create acronyms with monetary policy in it, no matter what they do, so that it is seen as legitimate. One has to be careful about this. Some is genuine monetary policy, some is not. And what we need is more of a consensus. Now, this is not to say that we should rule out

policies that have temporary negative spillovers, if they prime the pump of domestic growth. Some countries may be in such a funk that they need this pump priming and that pump priming may be a direct exchange rate intervention. But once the country gets out of trouble, it should act as a local model for the rest of the world. Pay back in some sense the growth that it has relied on from elsewhere. We need dynamic rules of the game, not static, not that this is prohibited. If this helps you get out, and you get out from a 20 year recession, but you can create growth for another 20 years, so be it. But when you get out, don't forget the people who helped you by allowing the currencies to appreciate, don't start talking about exchange rates, and problems elsewhere, people intervening, etc. etc.

So temporary policies like this should be acceptable. Sustained unconventional policies may have effects on risk taking, on financial risk buildup and I think in the past have talked about that elsewhere. I won't talk about it now. I worry about sustaining such policies. Temporary policies, great, sustained policies may be a problem.

And finally we may need collective effort to exit from these unconventional policies because leaving alone may be much more difficult than leaving collectively. It is something that we need to talk about. So let me end by saying, there are lots of demand for growth, both in industrial countries and emerging markets. We should all be focused on policies that add to global growth. Unfortunately, at times like this, those may be hard and sometimes policies to shift growth may be easier. I am not saying they should be ruled out, but we have to have rules of the game on

how to do them.

We have to improve collectively outcomes and how do we do that, how do we move away from this game of musical crisis that we are playing? I think we really need to think about how as a global collective we develop new rules of the game on what is permissible. Thank you. (Applause)

QUESTION AND ANSWER SESSION

CHAIRMAN WILLIAM C. DUDLEY: Thank you Governor Rajan for those remarks. John Lipsky of the Johns Hopkins School of Advanced International Studies and former Managing Director of the IMF. And Robert Hormatz, Vice-Chair at Kissinger Associates and former Under-Secretary of State will now question the governor. John you are first.

JOHN LIPSKY: Thanks. It is a pleasure to have you here today, Governor, if I can call you that, and it was a real privilege to have you as a colleague at the IMF. You made great contributions and it was excellent to hear your thoughtful remarks today, calling for new rules. One of the things you pointed out clearly today were the risks and limitations of reliance on unconventional monetary policy or QE as it is known around here. I would just like to remind the audience of a famous quote of a speech you gave in 2013 in Basal in which you said, “Never in the field of economic policy has so much been spent on so little evidence by so few” (laughter) What you

have told us today is that we need, there are no simple answers, but we have some good ideas of how to approach this collective problem as you have described it. And what you have told us is we need consistent and coherent policies that have the prospect for producing what economists would call, pareto superior outcomes, namely everybody is better off and no one worse off. If we ever fall short of an ideal policy. Now when we were at the IMF we tried an approach to approximate that kind of a collective consensus through the very little known multilateral consultations on global imbalances that played a very key role in developing. Under the post-crisis period the group of 20 through the framework for strong sustainable imbalance growth has mounted a new effort of which you are a participant. Do your remarks today suggest that…which I think was pretty clear, that we haven't succeeded in creating a working framework for developing coherent policies? Do we need a new organization to create new rules or do we need better leadership, more convinced leadership in the existing organizations?

GOVERNOR RAGHURAM RAJAN: Great question. I think the issue with the current situation is we have a variety of players all of whom have very clear domestic mandates. And those mandates basically spell out what those organizations are supposed to do. We also are in a period where those very same organizations are accused of having done too much in a variety of ways to rescue the financial system and therefore, it is very difficult for those organizations, i.e. central banks, to say, look, I am not going to do everything I can because some of the country is going to suffer, well, we do what we have to do, and the phrase is always, we will be transparent about it. But transparency doesn't change the fact that there are spillover effects. It just says, you know it

when it comes, you just have to adjust. So the problem is that there is no domestic mandate. There is no mandate for international responsibility at this point in central bank actions. It wasn't required in a world where we did conventional monetary policy. The IMF had very strong rules against sustained unidirectional exchange rate intervention, and therefore pushed countries that were doing that, don't do so much, precautionary reserves are okay, but don't go to the point where you are trying to generate a comparative exchange rate. And you know well, we worked a lot on those issues. But there is no prohibition on unconventional monetary policy which has the primary effect of depreciating the exchange rate. And therefore I think that it is time for new rules of the game. I don't think we need a new organization, I think the IMF is perfectly capable of doing these things, but it needs leadership. Because the central banks can't do it themselves. It needs the political leadership but of course central banks, are, I have to sympathize with my colleagues, we have a situation where there are political inroads onto central bank powers, and if central banks say it is time to reconsider, there could be a lot of change which is not required and not needed at this point either. So this is a difficult problem to tackle, but I think it needs leadership. We have the organization. It needs people to recognize that we are moving from crisis to crisis. Today as I said we have a number of emerging markets in difficulty because of their expansion of demand post financial crisis. They are not in crisis yet. But it is just a reflection of, one, two, one, two, I mean, how long are we going to do this. We need to figure out how to do it better.

ROBERT HORMATZ: First of all Governor, thank you very much for a very, very thought

provoking speech and for your service to the Government of India and also of course the period of time in the IMF where you made an enormous contribution. I would like to probe you on one particular point that I thought you had focused on here and also described in a recent interview and that is, that one of the worst things for a country is to experience a period of very rapid growth and then have that growth sort of fizzle out or plateau out. And yet, that seems to be the experience that many emerging economies are having today. And I would be interested in your thoughts on why that is occurring and what can be done to change it, and particularly if you could follow up on the infrastructure point because it seems to me one of the new developments in infrastructure is that we have not only the traditional development banks that you encouraged us to support, and I fully agree with that, but we now also have very innovative new institutions, largely proposed by the Chinese. The Silk Road Fund, the Asian Infrastructure Investment Bank, there is a BRICS Bank which one of your fellow countrymen is going to be heading. How do you see the broad problem of avoiding this period of very rapid growth and then a slowdown which many emerging economies are experiencing? And also how do you relate that to the opportunity of new institutions being created, particularly to deal with the infrastructure issue?

GOVERNOR RAGHURAM RAJAN: Very good question. I think there are two or three factors that create this growth and sudden stop. At least let me speak from India's perspective because I think I can say more there. During the period of growth from 2003 to 2010 or 2011, we grew at about 8% a year. The problem is that in a period of fairly strong growth, especially if you are a relatively poor country, the tremendous pressure to spend on reducing a variety of inequalities

and so on, and periods of strong growth are when you spend, just like the industrial world spent in the 60's, on entitlement programs, we too spend. And our form of entitlement programs and what was the agricultural sector, minimum wage supports, rural insurance, etc. So one of the concerns in an emerging market is that sometimes a balance shifts from more growth towards more distribution. And we don't have strong enough institutions to make sure that the shift is not dramatic. And that tends to back up on growth eventually. I'll give you an example. In the period of strong growth, land was acquired; obviously you need land to build roads, railways, etc. Mines. A lot of the mines in India are in the forested areas where we still have tribals. Some of the most deprived members of the Indian population. And what happened was, there was an increasing number of mines built on their sacred areas, upsetting their traditional livelihoods. There is no ownership but this was traditional. So we had to, during the period of strong growth, now we had to worry about distribution because growth was interfering with distribution. I am not saying all of the situations are like that but in this case it was interfering with distribution. So you had to strengthen tribal rights, forest rights, but then you have to have institutions which can deal with these quickly when somebody wants to set up a mine, go or no go, can you do it cleanly, can you do it effectively. And that is where weaker institutions in emerging markets come back to hit us. We couldn't do it in a reasonable time. And so investment slowed tremendously. That is an example of the kinds of effects that work when have strong growth. The other effects, more commonly in a number of other emerging markets, we have been more immune to this, is the credit flows. Credit comes in, and concerns about how much equity is backing this, etc., diminish, because the exchange rate is appreciating, the project looks

successful, things get less and less well capitalized, become more and more leveraged until some bad thing happens. Then you will find there is too much leverage and now you have to deal with a leverage problem. I don't want to name countries, but we all know countries that have experienced this kind of thing.

Now to the second part of your question about infrastructure banks. I would argue that these new institutions are well worth watching to see what kinds of new frameworks they develop. But they do reflect a need for patient capital. A need that to some extent we sort of missed by saying, okay, once you get the frameworks right, once you get the market signals right, there will be a lot of money wanted to invest, yes, but that investment tends to also have a finite time and tends to be influenced by sentiment. And what you need is at least at the back of it, some more patient long-term capital which can absorb some of the hits. I am not saying this should be not earned(?) capital, I am just saying it should be more patient, it should come in with full knowledge, ask for all of the protections. But we need a little bit of longer term capital which is less influenced by sentiment.

JOHN LIPSKY: My turn. The audience can now imagine what a luxury it was to have Raghu as a colleague and we could have these discussions every day. There are many more international issues we would like to discuss, but I suspect the audience would like to hear a bit more detail about India, since there has been so much interest in the reform under the new government and under the new monetary policy that you recently have introduced. The latest economic data in

India has been mixed. The April manufacturing data was weak, steel, cement, refinery, output all weak. And on the policy reform area, there has also been some difficulties, Parliament has been reluctant with regard to tax reform, the reform on land acquisition, and since the first bimonthly Monetary Policy Report oil prices have gone up, the rupee has depreciated, the stock market has weakened a little bit, how would you assess the prospects for the Indian economy and progress on policy reform supporting stronger growth?

GOVERNOR RAGHURAM RAJAN: Okay, great. Let me start with the rupee because the rupee has move from 63.2 at the beginning of the year to I think 63.11, something like that. It has basically stayed relatively flat. Because the dollar has....this is against the dollar, and because the dollar has strengthened it has actually appreciated against other countries. The Indian press is all about rupee depreciation. Because they see, bouts, we did in the last few weeks, touch 64, but if you look at rupees volatility relative to other currencies, you have to argue the rupee is one of the more stable currencies, at least against the dollar. It has been much stronger against other currencies. As far as the...I needed to say that...(laughter)...this government came in with tremendous expectations and I think the kind of expectations were probably unrealistic for any government because people were putting into what they thought the government would do, their own sense of what India needed. Sort of a measure for Mr. Modi as the Ronald Reagan on a white horse coming to slay all of the anti-market forces and so on. I think were probably not appropriate. What the government has done is taken steps to create the environment for investment. Which I think is important. Now, amongst the steps, certainly, some labor reform,

some reform of....actually the single biggest bottleneck were environmental policies which, as I mentioned, hadn't been fully worked out. Those had been speeded up, clearances have been speeded up. But also the whole license permit raj that prevails in India, it wants to take an axe to it, and it has started looking at all of the laws that businesses are subject to in an attempt to reduce them, and make them more...you know, just what is needed. That is on the broad business environment. A big part of business environment is taxes. Now, separated into two issues, one is legacy issues, two is going forward. The government has said that it will not do retrospective taxation again. Okay, it won't tax you retrospectively. However, tax once the tax authorities levy a demand on you, there is a quasi judicial nature of that proceeding and therefore it has to go through the courts before it is resolved. A government can't intervene in those. So the legacy issues are winding their way through the courts, including legacy issues based on laws that existed before they were changed. I am talking about things like MAT. But the government is sensitive to the concerns of investors and is looking at that. Could we have done a better job in India on these issues, perhaps? But going forward, the government says no more of this kind of stuff will we do, second, as far as corporate taxes are going, we are going to bring them down 1% every year, the corporate tax rate is going to come down 1% every year going forward. The number of other areas where the government has actually made more serious significant advances. One is, this whole issue of subsidies. Now, the petrol/diesel subsidies are gone. But going forward these subsidies will be transferred directly into bank accounts. Already the cooking gas subsidy is being transferred and that has allowed you to limit the amount of leakage that was happening in that system by some accounts 15% to 20%. So that is one example of the

kinds of things the government is doing. It is creating an ecosystem of bank accounts, unique ideas, mobile telephones, a framework for these kinds of transfers which would make, at least bring down, some of these...of course, not only will it allow the government to transfer subsidies directly, but it will allow the government to stop subsidizing the commodity directly, which means that you won't have the over consumption of those commodities that currently exist. One of the other things the government is doing, the goods and services tax we talked about. There is broad consensus for that tax. Now there was, I had hoped it would have been done in this Parliament, but my sense is, there is enough momentum that it will be done well in time for the rollout on March 31st, on April 1st next year, in fact, they are going ahead with the apparatus to ensure that it is actually done. The land acquisition bill is important from the perspective of certain public works. Now, others, some people have suggested alternate solutions, if you can't get this through Parliament and I think, one should not, at this point, say that cannot be done, it can still be done. But different states have their own land acquisition bills. And so another possibility that some commentators have suggested is let the states decide. And some, like the state of Gujarat, the state of Razdan have effective land acquisition, which then can proceed at pace. As far as plans go, there are tremendous plans for investment. The Mumbai-Delhi Industrial Corridor, the Eastern Freight Corridor, which were developed in the previous government, but may well be ruled out by this government in the very near future. Some are underway already. My sense is things are happening. Is there one big, two big laws you would talk about, I would say GST and the land acquisition as well as the subsidies removal. Subsidies removal, partway done, GST consensus bill, that is the goods and services tax, land acquisition

underway.

ROBERT HORMATZ: Governor, one of the points that you have talked about in the past relates to the question of the weakness of demand creating channels when unconventional monetary policy is utilized. You have spoken about this in India, that the bank will take action, the central bank will take action, the RBI, and then the banks don't move as quickly to follow up with lower interest rates. A particular problem that the *Financial Times* recently commented on with respect to India, relates to the fact that a lot of companies that could be making more investment have weak balance sheets and therefore are reluctant to do it. And banks with weak balance sheets are also reluctant to lend them the money to do it in these circumstances. So I am wondering if you could share your thoughts, one, on the transmission device and how to make unconventional monetary policy more, shall we say transmittable into actual real demand, and then, particularly the question of private sector in India, the banking sector in India, how do you get these leveraged institutions into a position where they are in a better set of circumstances to make the kind of investments that you have talked about. A lot of the policies of the Modi government are very positive, but until that private sector begins to click in, even if the government puts money into some of these infrastructure projects, as the Minister has indicated it would, it still needs that private sector to mobilize itself. If you could share your thoughts on that, it would be very helpful.

GOVERNOR RAGHURAM RAJAN: Well I should have started my response to John by saying;

one of the most important actions has been to stabilize the macroeconomic environment, which we need, as the global environment becomes more volatile, because our first line of defense is the most stable macro economy. If you look at the fiscal deficit, yes there was a slowdown in the consolidation this year, but if you look at the cuts in spending that have taken place, they have been significant and in fact, some commentators say spending is yet to pick up on the government side. So there has been some amount of fiscal consolidation over and above what the government is owning up to. In fact, last year was 4%, this year it hopes to get it down substantially more. But the point is, things are happening on that front. Inflation is down, 11, now to 4.87, last month. I remember those numbers exactly. But this is CPI inflation. We used to focus on wholesale price inflation. Wholesale price inflation is in deflation for the last six months. So in fact, inflation has come down tremendously in India. Current account deficit from north of 4% down to 1.5 approximately this year. So you know the big deficit numbers have come down. Now the issue is growth. And as far as growth goes, first we are not so much into unconventional. We are trying conventional policy right now, cutting interest rates, do they cut interest rates? Unfortunately they have been slower in cutting rates. Now absolutely you hit the nail on the head. The problem is, to some extent, weak balance sheets. Not so much, I think at least, it is not clear to me that we have a supply problem. The banks are willing to lend. The problem...of course these you can never tell which side, but I think it is more that investment intentions are picking up, investments are slowly picking up, but they haven’t increased at such a pace. Now, you talked about solutions, one of the solutions we are encouraging have been getting the corporations to sell out. If you have a project that is not working, and you don’t have

the money to put in, give it to somebody else who can. So we are trying to encourage some churn in the sector so that those who don't have the ability or the cash can actually exit and the banks can move forward with somebody new. And we have tried to facilitate that process. We are also telling the banks fess up to the problem. Don't extend and pretend. And we have done a number of things to make sure that they do acknowledge the problem, and move forward with it. Doing the real stuff that needs to be done rather than the financial engineering that keeps these projects going. But I think the banks themselves today are not constrained. They could lend if they wanted to. There are exposure limits which some of them are coming to, but going forward there will be more capital. And I think the best way to get them more capital is to improve perceptions about their governments. Now, I keep saying this, India doesn't face a financial crisis, because most of the problems with the infrastructure loans are with the public sector banks where it is clear who will pick up the bill. What we need to do is shrink the size of the bill that needs to be picked up so that the losses are moderated. And these banks can go forward. So one is clean up the balance sheet. We are pushing them very hard to clean up the balance sheet. But second is improve the governing structure of the bank. So that going forward they don't make these mistakes again. They have the capability to do the right thing. So elements of that, separate chairman and managing director positions, bring in new people as chairman, maybe from outside the system. Managing directors, look to the private sector also for managing directors. Then, in a sense isolate these people from constant monitoring from the government by putting in a board of professionals who will be that isolating, or that insulating layer. And then let them go out and make reasonable decisions. Give them more freedom in hiring people. Because there are a lot of

capabilities they need to build. So this is what the government is thinking, is in the process of doing. Some of these have already gone underway. My sense is, bring this all together with the fact that growth will pick up and I think some of the problems will sort of slowly dissipate.

CHAIRMAN WILLIAM C. DUDLEY: Thank you very much. (Applause) Thank you Raghu. You covered the big picture and the India picture very, very well. Thank you John and Bob for your questions. The next meeting of the Club will be June 9th where we will hear from Jack Ma, the Founder and Executive Chairman of Alibaba. So now please enjoy your lunch.