Panel Discussion

Following the lecture and question-and-answer session, a panel discussion was held, featuring Charles Goodhart, former Chief Adviser at the Bank of England and external member of its Monetary Policy Committee and currently Professor Emeritus at the London School of Economics; Yaga Venugopal Reddy, former Governor of the Reserve Bank of India and former Chair of the BIS; and European Central Bank President Jean-Claude Trichet, who served as moderator for the discussion; along with the lecturer, Andrew Crockett, and the Foundation Chairman, Guillermo Ortiz.

JEAN-CLAUDE TRICHET: It's an immense privilege, Andrew, to listen to you and to this very rich lecture, I have to say. And it's a great privilege to have this panel to, I would say, discuss concepts that you have just elaborated. I have to say that I am always impressed, Andrew, by your depth of reflection, your creativity, and if I may, something which makes a French citizen extremely jealous. You have a clarity of exposition which is absolutely remarkable. And we follow you first, second, third, fourth. [Laughter] I have to say, I always admire this capacity to join, again, reflection, creativity, and clarity.

Now let me say, that listening to all that you said I was, myself, reflecting permanently, because you had touched so many very important issues. I have seen that you were touching uncertainty, Knightian uncertainty, uncertainty in terms of risk on top of the Knightian uncertainty.

I was thinking that we are in a world where uncertainty is also due to the fact that we do not understand too well a number of phenomena unfolding, including when we have this sequence of unexpected events that are characterizing a crisis. So that would be for academia to be called to enlighten the policymaker as much as possible on this phenomenon, including multiple equilibriums that you mentioned. And I have always heard you elaborating on multiple equilibriums in all our previous contact.

I was struck by your remark on systemic instability and procyclicality and all the uncertainties that are associated with systemic instability. All over the world, we have now new institutions that are devoted to analyzing systemic instability, systemic risk with the objective to prevent it. And I have to say, again, this is really, in short, a territory where we have to work a lot as, again, academia as well as policymakers.

And I would also say that when I was listening to what you said on public sector intervention, I was reflecting on this particular problematics of prevention. Whether we are in a Westphalia world or in a post-Westphalia world, we have something like a public sector, a taxpayer, whether it is a national taxpayer or perhaps a more complex set of national taxpayers. But in any case, decisions have to be taken; that supposes that there is in the decision-making process sufficient lucidity on what would happen if we would not prevent it.

And the counterfactual is always extremely difficult to present to the decision makers, which was true and is true on both sides of the Atlantic—how do you communicate without democracies? And with the taxpayers' decision sufficiently convincingly to mobilize decisions before the catastrophe, without waiting for, you know, this evidence that the situation calls precisely for such decisions?

So again, as you see, you triggered a lot of meditation in all of us. But let me say that we are here to discuss as profoundly as possible. We have the privilege of having yourself, Andrew, and Guillermo. But I will give the floor to Charles, first, if he wishes. Charles needs no presentation. But let me say that all of us here admire you, Charles, for your extraordinary contribution to academia and your truly global vision which is, I would say, remarkable. You have really not only the transatlantic, but the global, vision.

So, thank you so much. I appreciate always all that you say. You have the floor.

CHARLES GOODHART: Thank you very much, Jean-Claude.

It's been my great privilege to have Andrew as my friend and sometime colleague now for some 43 years. I first met Andrew when I went into the Bank of England in 1968, and he had already been there for a short time. But I was considerably older and had more academic training, so for a time I was actually Andrew's boss. It was a great experience, though very shortly thereafter his career leapfrogged mine. So it was a very temporary phase. But it was a very pleasant one, because Andrew showed then, as he has continued to show and as is very obvious from his lecture, his many

very great qualities: an acute but very clear mind, an appreciation of what is of central importance and what is not, a very balanced viewpoint, combined with great diplomacy, as you will have gathered from the way he answered the questions recently. [Laughter] Very diplomatic.

And as Jean-Claude was saying, the ability both to write and to present clearly, simply, and indeed beautifully. And I'm sure that his lecture will be appreciated, read carefully, and cited for years to come. And I could go on, but I won't because I've only got a short space of time and I want really to touch on three points and three points only.

And the first one is, to carry on really from where one of the questioners effectively tried to take you, which is, don't forget housing finance. It is a key element and it hasn't been properly treated yet by the authorities. There is a tendency for the conventional wisdom to think of banking, and intermediation more generally, as taking funds from households and lending them to corporates. And in fact, as Adair Turner has stated many times, that's actually now wrong. What banks and intermediaries generally do is take money from households and lend it to households, so that the housing and property markets are very much at the center of financial intermediation. And the housing and property markets have not been behaving well. The finances of housing and property markets have remained difficult.

In my own country, we have had three bubbles and busts: 1972/1976, 1989/1992, and recently, 2005/2008. And if it hadn't been for these bubbles and busts, conditions would have been vastly better. Indeed, if it hadn't been for the problems for housing around the world, the recent financial crisis would not have taken off nor would it have been so severe.

If we could reduce the virulence of the housing and property cycle, then the whole need for financial regulation would not be as acute as it, in fact, has turned out to be. And while all of you have been working so hard and with considerable success to repair the strength of the banking system and to improve regulatory matters and capitalization within the banking system, I think of things like the Troubled Assets Relief Program (TARP) and the stress tests in the United States. I think of the work being done in developing Basel III and the work that the Financial Stability Board (FSB) has been doing, that indeed we heard in the very first lecture this morning.

But nothing similar has actually been achieved on the housing front. The cycle of foreclosure, housing price declines, negative equity, foreclosure, and round and round, has not been stopped. It still continues.

We haven't done what we should have done, and we still very much need to do that.

There's been a whole discussion of CoCos [contingent convertible bonds] for banks. There should have been a similar discussion of CoCos for housing finance, debt-for-equity swaps in housing. Whereas the previous set of innovations in terms of securitization and subprime in housing turned out in the event to be remarkably procyclical. What we need to do—you need to do—is to think of innovations and regulations that will actually enhance and encourage countercyclical measures within housing and property markets. And that is an area where you have not yet really started to do what I think you should be doing.

Now, that brings me to my second particular area that I want to talk about, which is the need for applying countercyclical measures more generally. While the need for countercyclical measures has been accepted in principle, I continue to be very worried that in practice it will actually be applied tentatively and insufficiently.

The basic reason for that is that the asset price bubbles which countercyclical regulation should be there to mitigate are actually extraordinarily popular. When they're going on, they're really good fun and enjoyable. The politicians love them, the lenders love them, the borrowers love them, the commentators love them. And nobody actually knows for sure whether they're a bubble or they're unsustainable.

Under those circumstances, taking away the punch bowl just when the party is getting going—and the party is frequently, as I was saying, a housing and property party—is extraordinarily unpopular. It will lead the central bank governor who does it to face massive public attack and quite possibly a lot of political attack as well. It will be a very brave central banker who actually does that.

Now, that means that using these countercyclical measures is going to be very hard. And leaving it purely to the discretion of the central bank is likely, in my view, to mean that the default option is going to be inaction. And one of the arguments that I've been pushing and would want to continue to push is that leaving it to the discretion of the central bank needs to be supported by sets of presumptive indicators, possibly leverage growing faster than average and above its norm, and housing prices doing the same—those kind of presumptive indicators on which when they hit, the assumption should be that the central bank would take action or explain in public when it does not. In other words, change the whole incentive structure and the inducement for the regulator, so that the default option is not inaction but becomes actually action, because you're required to

take action or explain why not. And explaining why not and then facing a crisis would not be comfortable for a central bank governor who has just said, "We don't need to take this action because it's actually not a bubble and it's sustainable."

Now finally, Andrew's use of the English language has always been absolutely one of his strongest suits. But I do worry about his use of the word "fail." For example, in his comments on "too big to fail." There are lots of failures among energy companies, among transport companies, for example. But no one, when an energy company or a transport company, say, an airline company, fails actually says that the railway tracks or the power station or the planes should be broken up and sold for scrap. It's a silly idea. The provision of services goes on and continues. If necessary, the state takes over until a new private sector operator can be found.

Andrew's analogy of finance as being the nervous system of the economy is apt. But if a key part of our nervous system malfunctions, it is usually suboptimal to shut down the nerves. What I am getting at is that Andrew's three alternatives, which were sale, merger, or winding down, should not be a complete set. A much more common response to failure should be to take the failing financial institution into temporary public ownership. Kick out the old management, disenfranchise the shareholders, and perhaps impose a haircut on the creditor, though the takeover by the state under those circumstances should be early enough that no large loss is actually taken on.

Words carry a huge charge, as Andrew knows and I hope that you all know as well. And the negative connotation of the word "nationalization," even if it might be temporary, was quite largely instrumental in mostly preventing the first-best response to bank failures from being undertaken in the last crisis. And I think you've got to try harder to overcome the self-inflicted wound of not having governments take over failing bank institutions and financial institutions in any similar future financial crisis. Thank you.

JEAN-CLAUDE TRICHET: Thank you. Thank you very much indeed, Charles. I will turn to Dr. Reddy. Dr. Reddy, we had the great privilege to have you with us from when you were Governor of the Central Bank of India. We have appreciated enormously your wisdom and your experience. And I have to say that there is a very close link between the two panelists, which is the London School of Economics. You were a visiting fellow in the London School of Economics. You were an honorary fellow

of the London School of Economics and Charles is a luminary of the London School of Economics.

I would like very much to give you the floor and listen very carefully to what you have to say. Please.

YAGA VENUGOPAL REDDY: Mr. Chairman, copanelists, distinguished central bankers and friends, I am grateful to you for your very kind, generous introduction. And I am thankful to the BIS for giving me this opportunity.

Some generalists asked me after I left the job what I missed. Did I miss anything about being a governor? I said the only thing I miss is my trip to BIS. [Laughter] So this has been a great source of joy as well as knowledge, away from the immediate pressures of work. And I'm glad to be among friends again.

I met Andrew about 15 years ago in Basel. And for me, it was a case of friendship at first sight. His wit and wisdom are legendary, and his capacity to be friendly is infinite. The greatest contribution he has made to the BIS, and I told him so last evening, is in transforming the BIS into a truly global institution.

His lecture today is, in my view, a landmark speech on the subject. It is one of the most comprehensive and quite concise.

For my part, I just wanted to ask some questions, 10 of them in less than 10 minutes. And I can afford the luxury of not trying to find the answers, because I have no official position.

Question No. 1: Is there an optimal level of financialization of an economy? Because we see in economies where the crisis originated, or where the economy was most affected, the financial sector has grown rather fast, much faster than the real economy. So people call it excessive financialization—and my friend Andrew Shank has been collecting a lot of data to prove that they had excessive financialization.

At the same time, common sense tells us and experience in developing countries tells us that lack of adequate and efficient financial intermediation can hinder economic growth. So therefore, there must be something in between which is optimal. Is there, and should we look for it for each country?

Question No. 2: Is there an optimal composition of the financial sector appropriate to each country? Now, again, we see that in order to enhance savings and generalize them for investments to enable growth, public policy is looking towards an appropriate financial sector. Then we know, for instance, Asia has been having significant growth, a fairly high

level of savings, a reasonable increase in productivity, and they have a particular composition of the financial sector in favor of traditional banking systems, not too much of financial products. And maybe Canada and Australia. So we have got different examples of different compositions of the financial sector and different levels of efficiency and stability.

So could we look at this empirically—and is there, therefore, something like an appropriate composition of the financial sector? Should we look for that?

Question No. 3: Are there intermediate regimes to the rigor of financial sector regulation rather than the corners? In fact, in the INET [Institute for New Economic Thinking] conference in Bretton Woods, Larry Summers was asked whether there has not been enough regulation on the financial sector in the United States. And I was present there. So, Larry Summers said that if you don't have a deregulated financial sector, then ask India—they had to repress the financial sector until 1990. And at that time, the rate of growth was only 3 percent. So the impression is that there are only two: repressed financial sector and open financial sector. Is that true? Are there only corner solutions? And we have seen this, we have gone through the experience in exchange rate management. So what are the intermediate solutions between repression and openness?

Question No. 4: Should we fundamentally redesign governance structures in public and private sectors? If you recall, in the public sector we were very keen that conflict of interest would be avoided. There should be monetary policy, single instruments, single objectives, etc., etc. And now what we realized in the crisis is that coordination has suffered and new institutions are being brought in for instituting coordination.

And what happened in the private sector? In the private sector, we allowed large financial conglomerates in the interest of scale, scope, economies of scale. And then the conflict of interest was supposed to be handled through firewalls. But the conflict of interest there has created a problem. And actually, the crisis is a case of failure of governance in both public and private sectors.

So, is it necessary, therefore, that we revisit the governance structures with a different assumption that coordination and conflict of interest apply differently to public and private sectors by virtue of their own overall mandate?

Question No. 5: Is diversity in financial regulation globally a source of stability in finance? Something like biodiversity. Imagine—counterfactual is always difficult—but imagine five or seven years ago that we had a single model of financial sector regulation. And we can guess what it

would have been. So, if there was a single model of financial regulation applicable to India, China, Canada, Australia, or whatever it is, was it possible that there was a greater risk? Are we sure that the human mind and human institutions are capable of devising a globally best solution? If we err, then the whole global economy may be in trouble. So, is there merit in diversity? And how do we introduce that?

Question No. 6: How far—and this was referred to in the discussion—how far should we go in applying a nonlevel playing field? The nonlevel playing field is being applied for systemically important financial institutions where there's gradations. Now why do we not do it down below? There are non–systemically important institutions, and those non–systemically important institutions also can be graded. And you have local institutions where you don't do anything except take care of the depositor protection. Logically, I think we cannot.

For example, in India, actually, we allow for a three-track approach, and we announced it—internationally active, nationwide, and local—and we have different regulatory regimes. There will be overlap, but still the differentiation was useful.

Question No. 7: What are the areas of special concern to the developing countries? I would offer three. One, the whole regulatory philosophy now is looking at intervention of the state or regulator to ensure stability. If intervention of the state is required to ensure stability because the financial markets are not self-correcting or most efficient, then is it not necessary that they should be designed for development also? Is it that the financial sector will act—markets will dramatically ensure growth, but only for stability you have to somehow intervene? So, I don't know, but I think that's a question we have to ask in terms ofjustification for intervention.

Second, in developing countries the cyclical and structural factors are very difficult to distinguish. And then you find very often that credit doesn't go to the culture, but credit goes to speculative real estate. And in a way, the markets are not that flexible and that integrated. And therefore, you really end up having credit allocation—de facto selected credit controls. Should we rule that out?

The third issue is the regulatory regimes for countering volatility and capital flows, particularly through financial intermediaries—volatility is different from the aggregate—the net—the gross and the net.

Question No. 8: Who should assume the burden of proof that financial innovation is not toxic? On whom is the burden of proof: on the person who is innovating, or the person who is allowing or not allowing?

But more important is that the toxic nature also depends on the user: who is offering, who is buying, and the environment in which it happens.

So in India our approach was that our institutions or markets are not that developed. And, therefore, if you are not able to explain to the regulator that it is good enough, then the regulator is uncomfortable and will not allow that. So I think the markets in our country reflect the capacity of the regulators. So that's one approach.

Question No. 9: Should regulators also seek to increase good financial innovations or those that could add social value? One of the questioners has made reference to that. Financial innovation need not be the monopoly of the private sector. Some responsibility might be taken to encourage innovation or to do some innovation by the central banks themselves, particularly in developing countries.

Question No. 10: Generally we seem to assume that there is a state failure, a market failure, and the state will intervene to avoid market failure. And you must allow the market to function for efficiency. But it's quite possible that the crisis was a result of failure of both the state and market together.

Now, if a central bank is independent—independent from whom? Independent of the state, as represented by the government. So, in a way—I think there was a reference to the issue of being a brave central banker. So a brave central banker is somebody who is prepared to take on both the state and the market together in fairness to the people.

Thank you very much. [Applause]

JEAN-CLAUDE TRICHET: Thank you very, very much indeed, governor. It was very, very stimulating.

You told me, I asked the question, not the response. I was suspecting at the end of the panel you would say, "I have all the responses. If you invite me to deliver the lecture, I will give it." [Laughter]

And one thing is sure. If you are a central banker, you have to be brave. That is absolutely sure, I have to say. In whatever circumstances.

Perhaps we could ask if you wish, Guillermo, could you say a word as a panelist now? To, you know, permit—to give one minute more to Andrew to respond to the 10 questions? [Laughter]

GUILLERMO ORTIZ: Let me make a couple of brief comments. One of them refers to Question No. 9—[Laughter]—that was asked by Governor Reddy and has to do with financial innovation and the role that it plays in emerging markets.

Obviously there's been a lot of discussion of financial innovation. And I think that Andrew started with a basic question. What are the basic functions of the financial sector? And we all know them. I'm not going to repeat them. But it's basically improving, I would say, the efficiency of the economy and enhancing the welfare of society.

So, innovations that go in this direction somehow have to be connected with the real sector of the economy. And I think that is a useful distinction between what is useful innovation and what is wasteful innovation. And, for example, fiat money and fractional banking and so on and so forth, they have been generally regarded as very useful innovations. Although you may get excesses even on those. If you bring too much fiat money, you get inflation, and the response is central banks and so on.

But the kind of innovation that is totally detached from the real sector of the economy and that loses sight of the principal functions of the financial sector is clearly a social waste. And I can think, for example, of CDOs [collateralized debt obligations]. These instruments that—by the way, they amounted to about $5 billion in 1996 and to $560 billion in 2006—10 years later, they were multiplied by 100. Now they have practically disappeared. I think it's a pretty clear example.

And the implication, I think, for regulation is, well, of course, you don't want to suppress innovation. But you also want to make sure that you don't get the kind of bad innovation that is causing problems. And when you observe growth of 100 times of an asset class, no matter what it is, I think it's a signal.

The second and final brief comment I would make has to do with the cross-border issue again. I think that Andrew mentioned that we were living in a globally integrated market with national jurisdictions and so on. And he asked a question about subsidiarization. I think Andrew's answer was a partial one in the sense that it was referring to the responsibilities of the home bank with respect to the subsidiaries.

I think the crisis has proven otherwise. During the crisis, it's actually the subsidiaries that have been in much better shape than the home banks. And this has clear implications for the regulation that is being worked on today at the Financial Stability Board.

I think the bias has been to give the power and the ultimate decision-making abilities to the home country—for example, in terms of the integration of the colleges, and so on. But I think that it is very important to respect national jurisdictions and to be very mindful that it is precisely because of the rules and regulations in national jurisdictions in emerging markets where the subsidiaries are located that there was no dislocation

in the emerging market world in the financial sector as a consequence of the global crisis.

JEAN-CLAUDE TRICHET: Thank you. Thank you very, very much, Guillermo, indeed.

Can I ask you to reflect on what you heard again, Andrew, which is the demonstration of the extraordinary lecture you provided us with?

ANDREW CROCKETT: Well, let me be brief and touch only on a few general issues, so as to leave time for questions and comments from the floor.

I think everybody who spoke just now on the panel in one way or another thought government would have a role either in nationalizing financial institutions or preventing destructive innovation or promoting desirable innovation. And governments are, of course, ultimately responsible for everything, so they certainly should have a role.

I just want to put a cautionary note. I'm reading a book called *Reckless Endangerment* which is an interesting description of housing finance—Charles referred to housing finance—in the United States. And the financial innovation that the U.S. government decided to promote was the growth of subprime lending. Now, that didn't work out too well. [Laughter]

I think we do have to be careful, because governments have got multiple objectives. And those, in some sense, if I might be cynical, boil down to: We need to win the next election. And there are ways of doing that that will run counter to sensible financial regulation and sensible financial organization.

And when it comes to governments deciding even on matters that seem reasonable, as Y. V. Reddy was saying on good innovation versus bad innovation, even there, I think it often is whether governments should deal with market failures in order to let the market work better or whether they should counteract markets that are producing results that they don't like.

I would say there are many, many cases in which when you look at outcomes, you can say the outcome is being distorted by a market failure because maybe governments protect certain institutions from failure. I alluded to one or two in my remarks. There are market failures and there are also government failures. Tommaso talked about this last year. And I think we do have to be careful in saying that where the government substitutes decision making for markets, it's not thwarting outcomes rather than facilitating outcomes. It's just a cautionary note.

Another reflection was, Charles suggested—and it's probably true—that it's very difficult for a central banker to run against the tide of popular opinion. When everybody's getting rich, to tell them that we want to stop the party is not very popular. But as Jean-Claude said, I think the central bank and others, too—central bankers do have to be willing to be unpopular. And in a plug for the BIS as an organization, to counteract the blues of being unpopular at home, you can always come to the BIS and get sympathy from your peers. [Laughter]

JEAN-CLAUDE TRICHET: That is for sure. I have to say, I think like a lot of our colleagues, experience—that it was really demanding to be central banker. I have to say that we could exchange views here. And as you just said, including in your time, find a way to regain all the courage that was needed in the circumstances.

So, I think that we should open up the discussion to the audience.

QUESTIONER: *The* New Yorker *magazine recently had a cartoon where it had a picture of some senior investment bankers on Wall Street sitting around a board table saying, "These new financial regulations are going to fundamentally change the way that we get around them." [Laughter] Do you think that there is a risk that over the next 10 years, financial innovation will be focused around response to regulation rather than what you might hope in terms of broader added value?*

JEAN-CLAUDE TRICHET: Thank you. I don't know whether any of the panelists wants to comment?

ANDREW CROCKETT: I think the questioner raises a legitimate question. Now that I'm in a private financial institution, you can see—I mean, viewed from the point of view of the regulator, this is considered exploiting regulation. Viewed from the point of view of the investment bank, the question we're asked is, Where can I find a safe harbor? In other words, what can I do that is protected by the law? When you have new regulations, of course, they incentivate you to find ways that are protected under the law. And those may not always be in the spirit of the initial regulation, and I think regulators have to be very careful.

This is not malicious intent on the part of the private sector. It's a way of trying to find what the regulations are incentivating them to do. And you have to be very careful to make sure the regulations are thought

through to the point that they don't incentivate behavior that you don't really want to encourage.

JEAN-CLAUCE TRICHET: That's clear. But the issue of the unintended consequences, of course, is a very, very important issue.

But I was mentioning that as regards our own democracies looking at the situation and needing evidence that the situation is more or less grave. It is a little bit the same for most of the bankers, financial institutions. It's difficult to make the thought experiment to place yourself at the center of those who had to take the major decisions in the advanced economies and to realize that they were really doing something to prevent a Great Depression.

We had a Great Recession. We could have—and in my opinion, we were to have—a Great Depression that would have been much more dramatic. And I have to say, not only our democracies, but also the bankers—and particularly the bankers—that we are very wise and well-managed. I'm thinking not of any institution in particular, Andrew. [Laughter] But it's very difficult for them to realize that we were so close to a catastrophe. And that we avoided a catastrophe only because on both sides of the Atlantic in the advanced economies, we computed that 27 percent of the GDP, approximately, was put on the table as taxpayer risk to avoid precisely the depression.

Of course, very fortunately, this risk was not at all a transfer. Of course, money was made because we avoided the catastrophe. But nevertheless, it was a formidable mobilization of taxpayer risk. And the fact is that I don't think we could do that twice.

So, it is absolutely necessary to reinforce formidably the resilience of the financial system. And of course, what we are doing in the regulatory area is something which is fundamental, provided we reflect very carefully on the unintended consequences that you were just mentioning.

Other questions, other observations, or other comments?

QUESTIONER: *Thank you very much. I would very much like to extend my appreciation for the exceptional lecture and for the panel.*

My question is the following. We very frequently nowadays deal with issues of asset bubbles and preventing them, the need to deleverage. What is the real credit risk exposure? And is there enough capital adequacy always present?

How effective, really, is the loan-to-value as one of the measures which is very frequently also mentioned? And obviously, what is the real loss given default in the circumstances that we may face?

Now my question is, Is there room to regulate valuation of collateral globally? Thank you.

JEAN-CLAUDE TRICHET: Charles?

CHARLES GOODHART: Very good question. And we need to develop—or rather, you need to develop—more effective macroprudential tools, of which I think loan-to-value is one, but not the only one. And there is a need, obviously, to be careful about the collateral because the central bank is effectively taking on a risk and it's not the central bank. The risk is ultimately to the taxpayer.

A central bank can actually operate at negative capital, but sooner or later and sometime, the taxpayer has to pay it back. So there is a concern about ensuring that the assets of the commercial banks and the banks will provide you with collateral sufficiently good.

JEAN-CLAUDE TRICHET: Thank you very much, Charles. Guillermo?

GUILLERMO ORTIZ: Well, I think that Charles has already made the main point about the collateral, which is ultimately the obligation of taxpayers.

I'd like to comment, however, on the question of capital. It is not a matter of chance that the emerging markets did not suffer a domestic financial dislocation as one of the consequences of the crisis. I think one of the important points is that on average, Tier 1 capital in the emerging market world was more than double that of the developed countries. In Latin America, it was about 16 percent. So that shows you something in addition to the fact, of course, that they did not load up on toxic assets.

So, I think that despite my reservations toward having special regimes for systemically important financial institutions, despite the fact that I'm in the private sector now, until recently—I'm very much in favor of much tougher capital standards. And I think that this is something that you, the regulators, would have to revise carefully.

JEAN-CLAUDE TRICHET: Thank you very much indeed, Guillermo.

QUESTIONER: *I would like to enter the issue of the innovation by analogy to the car industry. There was a system in which there was a given quality of cars and engines, and associated with it there were roads and speed limits*

and enforcement rules, and everyone was living happily. And then suddenly, somebody—an engineer—invented a new engine that runs very, very quickly. And it passed all of the engineering tests. And you put it on the road, and then a lot of accidents took place. And the lesson was that before you give the certification to the engine based on the engineering tests, you should really adjust the width of the road, the speed limits, the penalty to violate those, the enforcement rules, and the like.

And the question that I have by analogy back to our business: As one introduces new innovations in the financial industry, what are the criteria that need to be implemented before we put the new cars on the road?

JEAN-CLAUDE TRICHET: Charles, you have the floor.

CHARLES GOODHART: I'd like to try and add into this discussion about innovation. And I think that the problem is that most of the innovations that we've seen in recent years—and I think of securitization, I think of CDS [credit-default swaps], and I think of ETFs, exchange traded funds, in their original form—as they were originally used were both beneficial and relatively harmless: they completed the market, and they were generally allowed diversification and so on and so on.

The problem in most cases came not with the original innovation, but with subsequent add-ons in the form of synthetic—and there's a recent paper by Ramaswamy of the BIS showing how the fact that you can have ETFs backed by synthetic assets has actually led to certain problems. And it was the fact that securitizations in part became securitized that you got CDOs squared, where nobody had thought in the first occasion.

The actual initial innovation is frequently harmless and good. It's sort of that as it gets developed, it gets used in different ways. And some of the ways in which it can be used then become bad. So, what is an innovation? If you had looked at any of those three that I mention—and they are the main ones or some of the main ones in recent years—the initial plan, I think, would have passed every single test you'd like to name. The problem becomes how it gets used afterwards. So the question that I think one has got to face is, When is an innovation an innovation?

And I would very strongly support Guillermo. I think that the crux—and this is where I think regulators have to be much more careful—is when something is growing really at an enormous rate. Then you really need to look very carefully at it. Somebody has found some kind of edge. There may be some kind of speculative tax advantage. And it's rate

of growth that you need to be concerned about as much as innovation. When it's growing too fast, there's probably something wrong with it.

JEAN-CLAUDE TRICHET: Thank you very much. Do you want to comment?

ANDREW CROCKETT: Just a couple of comments. One of the things that I think the growth of securitization and CDOs is actually an object lesson in is unintended consequences of regulation. Because when you impose capital requirements, you obviously incentivate banks to look at ways in which they can reduce risk-weighted assets, which is by securitizing them and selling them. So that's not an argument against either securitization or regulation, but it's just an argument for care in designing it.

And secondly, I think it's probably a mistake to talk in general about innovation, whether it's good, whether it's bad, how much you should control it. You have to think about the context in which it's being done. If Apple invents a new application that grows by 100 percent in the first year, that's fine. If a drug is put on the market or CDO squares, then it's something different. And the difference, of course, is that we identify risks and dangers associated with drugs and probably risks and dangers of a slightly different character, but nevertheless serious ones, associated with financial products.

And, therefore, innovation is something that probably needs to be thought of from the standpoint of where are the risks and dangers that are associated with it? And there will be within the financial sector innovations that you don't really want to control. Think of Paul Volcker's famous ATMs. Those caught on, that's fine. But there are certain ones that are not adequately understood. And one needs to think whether the best solution is transparency, so that they are better understood and the good ones can prosper and the bad ones can fade out, or whether it's up to the regulators themselves to say, "No, we need to step in because the market is not going to work even with information to stop bad innovation."

JEAN-CLAUDE TRICHET: Guillermo, one word.

GUILLERMO ORTIZ: Perhaps the real test is what the regulator actually understands, you know? [Laughter] The product in question, that should be a test, you know?

JEAN-CLAUDE TRICHET: Well, to say that here I understand that you just went to the private sector. [Laughter]

All three last questions that we will take as a batch.

QUESTIONER: *Yes, thank you, Chairman. I enjoyed very much not only the presentations by Andrew but also the discussions by other panelists.*

My question is a very simple one. We all know that we economists are very good at explaining what happened in the past, even though we are not that good at predicting what will happen in the future. And we say that even though we live in a global economy, there is no global jurisdiction. The global economy is not well governed. So this is a question related to governance structure.

After the crisis broke out, names like G-20, BIS, BCBS, FSB, and all those names appear because they are known as the ones that govern not only the current, but also the future, global economy.

But we know that even in correcting for the mistakes that we might have made in the past, it took not only one but two or three years to correct for that. And so this is basically the way to deal with the crisis resolution, to a certain extent crisis prevention, but mostly crisis resolution. And we don't know what kind of crisis will come in the future.

Then I would like to know what is your view as to the governance structure? And do you think that we move as quickly as you expected us to do or should we move a little faster? And if we don't move that fast, what do you think are the problems we have as regards the governance structure? Thank you.

JEAN-CLAUDE TRICHET: Thank you very, very much indeed for these very pertinent questions. We have a question here.

QUESTIONER: *Thank you very much. My question would probably be to Andrew, but I would like to introduce it by going back to the excellent list by Dr. Reddy, point number 6, level playing field. Because it seems to me, what you are doing in India in having three types of banking licenses makes very good sense and might maybe be copied at the global level and, in particular, at the European level. Because I come from a country that believed in a level playing field. People thought that size and location didn't matter and a bank in Europe should be able to operate all over the place.*

Now, I would like to link this to, then, what Andrew said about scope, size, and geographic rates. Now, if—do you think that this might be the way forward so that we should break up the European passport system and not have European passports for all banks, just only banks that fulfill certain criteria,

and whether we could do the same at the global level? Because a level playing field for all banks at the global level will never work.

JEAN-CLAUDE TRICHET: Thank you very much indeed. We have a last question over there.

QUESTIONER: *Very briefly, as a last question, to link up to the question of transparency. I think an excellent point of Andrew's lecture was the fact that the financial system is designed to produce information. Somewhat paradoxically, it is also a great producer of opacity. So there is not naturally the right level of transparency. It's not enough to say transparency is going to solve the problem. It's not necessarily produced by the market. And I'd like to have your reflection on that. What is the role of regulators in producing the right amount of transparency, knowing also that in some financial circumstances there can be situations where there is too much transparency?*

JEAN-CLAUDE TRICHET: Thank you very much indeed. I think it goes without saying that you must have the last word, Andrew. But I ask the other panelists whether they have any comment? [Pause] It's not the case.

Andrew, you have the floor.

ANDREW CROCKETT: Okay. Well, I'm standing between us and lunch, so I'll try and be relatively brief.

On governance of the global economy: we can't predict where the future crisis will come from, but it seems to me that the governance structure is intended to be sufficiently broad. You have the G-20 leaders that meet underneath the G-20 leaders, the ministers and the governors, and the Financial Stability Board with its broad-ranging responsibility to identify potential vulnerabilities in the economy. And then the specific institutions like the BIS and the IMF that are more in the implementing mode.

Breaking up banks in Europe, the question about the level playing field—one of the phrases in Adair Turner's report struck me as a response to this. He said that we either need more Europe or less Europe. In other words, I think he was addressing what I've called, and what Tommaso said before me, the post-Westphalia dilemma. If you're going to have state sovereignty as absolute, then you need less international spread of activities. If you're going to accept globalization, you need more in the area of giving up domestic sovereignty and having international decision making.

And finally, the question of transparency versus opacity. This, I think, is something that's often a subject of misunderstanding for those outside the financial system. Sometimes you need opacity in order to produce more information. If I'm doing research and I'm obliged to make it available to everybody, then I'm not going to be incentivated to do the research because I can't benefit from it.

So it is necessary for institutions that undertake proprietary research to get their views into the market by their market activities, buying and selling, not by publicizing the research. Because otherwise, it won't take place. This isn't a full answer to the question, but I just want to make the point that there is an optimum degree of transparency and an optimum degree of opacity that results in the optimal amount of information becoming available in the market.

JEAN-CLAUDE TRICHET: Thank you so much for your response, Andrew. When you were responding, I was thinking of Paul Volcker saying with his inimitable English-American accent, "They are calling global governance, financial architecture! Architecture, architecture—I would call that interior decoration!" [Laughter]

Andrew, we have to thank you very, very much indeed. You were absolutely striking in your lecture and, I have to say, in your response to questions, in which again you demonstrated pertinence. As you said, Charles, clarity and energy. And we are very, very impressed indeed by the privilege we had today, Andrew.

So, thank you very, very, very much. [Applause]

ANDREW CROCKETT: Well, a lot of people said a lot of very nice things about me. It was almost like being present at my funeral. [Laughter] And I'm tempted to jump in and say, it's much more than could possibly be deserved. But I remember what Golda Meir said to one of her cabinet ministers who was being self-deprecating. She said, "You're not that good. Don't waste your breath being humble." [Laughter] [Applause]

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