

# **Transcript of IMF Seminar by Nouriel Roubini: The Risk of a U.S. Hard Landing and Implications for the Global Economy and Financial Markets**

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## **Featured Speaker:**

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(<http://www.imf.org/external/np/exr/seminars/2007/091307Roubini.htm>)

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## **Introduction**

MR. COLLYNS: Welcome. As you know, the IMF has two flagship reports, the Global Financial Stability Report (or GFSR) and the World Economic Outlook (or WEO), which give our assessment of the global outlook and financial markets. As are other analysts, we are trying to keep up with the rapidly changing world economy. The GFSR itself will come out on September 24, and our World Economic Outlook will be released next month.

But today I am glad to welcome Nouriel Roubini back here to the Fund. Nouriel as I'm sure you all know is a professor of Economics and International Business at the Stern School of Business at New York University, and also former adviser at the U.S. Treasury. He is probably best known to many in the audience from his very popular website and blog, as well as his very provocative and well-attended lecture here at the Fund last fall. Nouriel is of course one of the best-known contrarians in the business.

As a prologue I thought I would just briefly recall what he said at this time last year, at least my memory of what he said this time last year which may a little bit biased, and compare it to what has actually happened. Let me recall three predictions. First, Nouriel said that the U.S. housing correction would not go away quietly, but would go from bad to worse, and I think in this he has certainly been right on the nose. Second, he said that weakness in the U.S. subprime mortgage market would cause broader problems in the financial system, and here again Nouriel was certainly right, although for once perhaps not quite gloomy enough.

(Laughter.)

I think like most of the rest of us, I am not sure that Nouriel fully anticipated the extent of the damage that would be caused. Third, he put a high probability on the risk of a recession in the United States and a global hard landing. This has not happened yet. In fact, the U.S. economy continued to grow at a moderate pace over the past year at around 2 percent, and the global economy has accelerated. But the game ain't over yet, and we are again at a time when there is a lot of concern about recession risk. So this is a very opportune moment to welcome Nouriel back, and like the rest of us, I am very interested to hear what Nouriel has to say. Nouriel, thanks.

## TALK BY PROFESSOR ROUBINI



MR. ROUBINI: First of all, thanks very much for the very kind introduction, and thanks also to Prakash for inviting me again to speak here. I have been coming over the years to the Fund as a visitor and researcher and there are many friends and colleagues here in this institution that I really admire a lot for the work they do analytically, on policy, and otherwise. So it is always a pleasure being here and having a chance also to present some of my views.

What I want to talk about today is the main questions that people are addressing now:

- first of all, whether or not the U.S. is going to achieve a soft landing rather than experience in the next few quarters a hard landing—will be it a recession or a growth recession.
- the second one on everybody's mind is whether this turmoil and volatility in financial markets is going to persist over time and become worse and lead to more significant effects; whether there is a credit crunch, how severe it is and what are the implications of it for the real economy.
- the third question: at this point we know the Fed is going to cut rates, but how much and whether the Fed and other central banks are going to be able to avoid a hard landing and also resolve some of the liquidity and credit problems that are now clogging the financial system.
- the final question of course is the question of whether the rest of the world is going to decouple from the U.S. slowdown and/or hard landing. Within the rest of the world, whether emerging market economies [can do so] is an important question since this institution works a lot with emerging markets.

More broadly, I think the Fund also plays a role in terms of thinking and writing as they do with the Global Financial Stability Report and other broad questions about financial stability, systemic risk and so on. So the kind of work that the Fund does here is certainly important given that the turmoil that is happening in the markets is going to lead to a lot of rethinking about policies and regulatory questions.

Let's start with the first question, the question of a soft landing or hard landing. Of course, we are in a period of uncertainty. Last year I was very bearish. I expected the U.S. economy would end up in a recession this year. It is still the case that given what has happened in the last few months that that might occur. And I think that is the key question because many of the other questions about the rest of the world's financial markets are somehow related to this question.

On this one I will try to make the bearish argument of why we might have a recession. It is a question of probabilities, I might be right, I might be wrong. I think this institution most likely still thinks that we are going to have a soft landing even if now there are downside risks to growth. We will see what the WEO and the other work that is done here is going to think and predict. But I want for the sake of argument just to put on the table what are the downside risks—why we might have this recession and then we can discuss how likely it is. I will start with housing and the real side of the economy, and then I will talk about financial markets.

Last year I said this is going to be the worst housing recession in the last few decades and there will be a significant fall in home prices. Last fall the Fed and others said the recession in housing

is bottoming out. Now we know it has not been bottoming out and it is not just a real recession, but there are also the financial market consequences from it.

Essentially what happened in the U.S. was that for lots of reasons, and I do not want to spend too much time on too many details, there was one of the biggest housing bubbles in U.S. history. If you read the second edition of Bob Shiller's "Irrational Exuberance," he has a nice chart on real home prices in the U.S. for the last 120 years. For 100 years they were practically flat, zigzags, with small kinds of booms and busts 10 to 20 percent. And then starting in 1997, real home prices start shooting up and they go up in real terms by about 93 percent. You can explain part of it by fundamentals—demographics, real income, lower real interest rates, but it is one of those cases in which I do not think that anybody can explain why real home prices would go up by that much [unless] there was a bubble. Loose credits and easy money led to a credit bubble in home prices and home demand, and then it started going bust last summer. So we know by now that home prices now are falling for the first time since the Great Depression and they are going to fall much more, and I will discuss how much.

The problem right now is that the supply of new homes has fallen, housing starts have fallen sharply, but the demand for homes is falling even more. Therefore, the excess inventory of unsold homes, both new and used, is becoming larger rather than smaller, and unprecedentedly high in both absolute terms and as a share of sales. That means that the retrenchment in home prices is going to continue for a while. Last year I said at least a 15 to 20 percent decline, recently at Jackson Hole Bob Shiller said given how much home prices have diverged relative to rents, actually the adjustment could be as high as 50 percent. That would be something that would be much more dramatic in terms of economic impact than just a recession if it were to happen, but as I said, even a 15 to 20 decline is going to be quite severe.

If you look ahead to the next few months, I think that the decline in home prices action downward will be worse because there are several channels through which essentially excess supply is continuing.

- The first one is that, as I said, paradoxically, new construction has not fallen but it has not fallen enough relative to demand. In a typical U.S. recession, from peak to bottom, housing starts fall by 50 percent, and since this was actually a bigger bubble [housing starts] should fall even more. Instead they are falling by a little more than 30 percent, so there is much downward [room] to go, and if anything, actually there is too much construction activity. If you go to downtown Miami right now there are twenty-plus construction sites with 20,000 more units being built. You would think that it would stop given that the prices have fallen, but once you start the building, it is worth nothing until you finish it so there is this lag effect. So actually there is a huge amount of correction still to occur, there are too many homes produced, and prices are going to fall much more.
- Secondly, there is this effect that a bunch of people are going to essentially lose their homes. They are going to default, delinquencies are going to lead to foreclosure, and the banks will repossess in spite of some forbearance—there will be massive amounts, some estimates are 2.2 million. Then the banks have the homes and that puts downward pressure on home prices.
- And three, because of the credit crunch in subprime and other mortgages now the demand for new homes this year and in the next year is going to be lower than otherwise—Goldman Sachs estimates this year alone by about 200,000 units. Again, that reduction in demand increases excess supply, sending prices downward.
- Additionally, you have about \$800 billion to \$1 trillion in ARMs coming to maturity in the next year or so at much higher interest rates. Some people will be able to refinance, some people will be able to afford the higher 200 or 300 basis points, some people will not. If they do not, they will have to sell at distressed prices, and that pushes down prices.
- And finally, you had a significant amount of demand for things that were called the condo flippers, those who were buying homes just for the expectation of increase in the value of their homes with little equity. Now that prices are falling, what is the rational thing to do? If you

already have little equity, the last thing you want to do is to maximize or cover the loss, the best thing you can do is just to sell it as fast as you can, and that adds to the amount of existing homes and puts downward pressure on prices.

How much are house prices going to fall? Case-Shiller already says that they will fall about 3.9, annualized 9 percent, Goldman Sachs estimates 15, I said at least 15 to 20, Shiller says it could be as high as 50 percent. The thing is that we do not know, but even a 15 to 20 percent decline, as I will discuss, in terms of the wealth effect and other things is going to have a significant effect, as people like Marty Feldstein and others have estimated. Even if your estimate of the impact on consumption from housing is moderate, you get a significant effect from a 20 percent decline or \$4 trillion loss in home values. But of course as long as housing is now 5 percent of GDP, residential investment cannot tip the economy into recession. You need to have transmission to other parts of the economy. Again I think the Fed underestimated how much this recession will continue in housing, they kept on saying we are bottoming out, they said spread to other sectors of the economy will be limited, and that the subprime problem will be a contained problem. Right now in other sectors of economy we have seen spillovers. Auto sales have fallen sharply, so has consumption of consumer durables—things related to housing like appliances, furniture, and so on; that makes sense—and there's a slowdown in manufacturing.

But of course the key thing in the U.S. that can trigger a recession is private consumption since it is about 72 percent of GDP. So unless there is retrenchment of the U.S. consumer, that is not going to happen. We know the U.S. consumer has borrowed a lot in the last few years and has negative savings, and as long as home prices were going up it made rational sense to use your home as your ATM machine and just borrow against the rising home wealth and spend more than your income, so that is exactly what happened. Now that the reverse is happening, there is already a meaningful slowdown in consumption growth. Consumption growth was around 4 percent for several years, and now in 2007:Q2—even before this most recent turmoil—private consumption growth slowed down already to 1.3 percent, and given the shocks I would argue it is going to get worse than that.

So what is happening right now, and again this point is becoming probably conventional, is that the U.S. consumer is buffeted by a variety of headwinds and negative shocks. First of all, falling home prices have a direct wealth effect. With even conservative estimates there is a significant effect on consumption. You have a sharp fall in home equity withdrawal from \$700 billion to less than \$200 billion now. And again if you use conservative estimates, Greenspan and Kennedy say 50 percent of all debt was going to consumption or even if you estimated only 25 percent of it going to consumption, consumption might fall by 1.6 percent of disposable income which is a significant effect. There is a debate on how much both effects are at work at the same time, home equity withdrawal and the wealth effect and whether one is a complement or substitute for the other one.

You have a credit crunch in the housing markets that now is spilling over to not just subprime but other parts of mortgage markets and also consumer credit, so that and everything else is going to increase debt servicing costs for households and that has a negative effect on consumption. Then you have high and still rising oil prices. Oil today is close to \$80 per barrel.

Until now headwinds were there, people recognized them and they said as long as there is job creation and as long as there is income generation, all these other things do not matter. Yes, there will be a slowdown in consumption but we will have a soft landing because in order to have a hard landing you need a fall in income generation. To me the data on employment are still mixed, a month does not make a trend. But certainly the August number on employment was bad and July and June numbers were revised downward; household surveys already for 7 months were showing, relative to establishment surveys, a fall in employment; the fact that labor force participation has fallen; and the unemployment rate has not gone up only because about 500,000 people got out of the labor force in August alone. And since employment is a lagging indicator of the business cycle, that is a signal that probably the business cycle has already turned a few months ago. So if employment is already falling now, then we must be really, really in trouble. Essentially, the main leg that, in my view, was sustaining the argument

about a soft landing was that there is essentially income and job generation. Right now there are signals that this is falling, so if that continues as I expect it is going to continue as jobs are lost from housing to mortgage-related activities, then those are the key elements of how you get a retrenchment of housing. If consumption falls below 1 percent given the fall in residential, and if there is going to be a contraction in capex spending [capital expenditures] as I will argue next, then you add it up and you are close to zero if not negative—so the [call for recession] is based on that.

Of course, people say the corporate sector is lean and mean, high profitability and this and that, so they can recover and you will have booming capex spending. But as we know, for the last few years there has been this puzzle of this investment strike of the corporate sector and even the Fed recognized that, given profitability, capex spending has been very weak. Until 2007:Q1, it was at the borderline between negative for a few quarters or modest growth, Q2 was slightly better but still mediocre, only 4 percent, and the Q2 numbers and the previous ones were before this credit crunch occurred. So suppose you are a big corporation today asking how much capex spending I should be doing, you see several things. You see first the widening of credit spreads, junk bonds have gone up 200 basis points, so things are getting tighter with the cost of capital. You get uncertainty about the future and about markets and so on and that makes you nervous. And now you see a situation in which consumption is retrenching and therefore you might have a further buildup of inventory or unsold goods. To me the rational response given that is to slow down your investment growth closer to zero if not negative. And once that happens, you have the slowdown in product, in investment, in employment, and the usual multipliers that anyone is familiar with. So that is the real side of it.

Let's talk a little bit about the financial side of things. On top of all these things now we have seen significantly, across a broad range of financial markets, a crunch in terms of liquidity and credit and tightening of financial conditions. Everything else equal of course if there is this tightening, this repricing, everybody would agree part of it is going to be permanent because the spreads were too low. So even if junk bonds stay at 450 rather than 250 and so on and all those credit spreads are wider, it means a higher cost of borrowing for firms, for homeowners, for consumers, and for anybody else, so for everything else that is tightening. And even easing from the Fed unless it is really significant and reduces those spreads, and I do not think it will, it will lead to tighter monetary conditions.

Another observation that I think is important here is that I was saying all along that this is not just a subprime problem because the same kinds of reckless lending practices that were occurring with subprime—things like zero down payment, no verification of income and assets, interest rate only, negative amortization, teaser rates, all those kinds of things that now everybody is saying was junk and crazy—are occurring in ARM primes, in piggyback loans, in home equity. People have looked at these numbers now and recognize that 50 to 60 percent of all mortgage origination in the last couple of years, especially in 2005-2006, has reckless characteristics. We have seen a bunch of institutions that have gone belly-up that were doing mostly alt-A loans. Countrywide said they were suffering also on their prime operation, and spreads on jumbo loans have spiked significantly and you have meaningful tightening based on the Fed's survey of mortgage markets across the board. So it is not just subprime. I would say we are going to see also spillovers to other parts of consumer credit tightening. You don't have just subprime mortgages in the U.S., you have thousands and millions of subprime auto loans or subprime credit cards and those are going to start going belly-up as well.

But the interesting thing that is happening right now is that this kind of crunch that started in the mortgage market now has led to a meaningful and significant seizure of liquidity in a wider range of credit markets. We have seen it in the interbank market, we have seen it in the money markets, we have seen it in MBSs and CDOs, we have seen it in the CLOs, we have seen it in now these things that nobody knew about like the conduits and of course there is this roll-off of now asset-backed commercial paper. We could spend a long time discussing why and why not and maybe some of the questions are going to come up [in the Q&A session], but for the sake of time essentially, I am not going to cover all the details of it.

But the question of course everybody is asking is: is this going to be just a sudden panic or seizure of liquidity, and whether, even with some repricing of risk, things are going to go back to normal. My view is they are not going to go back to normal. I think that actually this crunch is going to persist over time, and I usually say if I have to compare this crisis to LTCM in 1998, I think it is going to be more severe and more persistent. The main argument is as follows. In 1998 the economy was growing at 4 percent, you had high productivity growth, you had the economy, you had the Internet boom and we were still in the up cycle, so everything was fine, and then Russia goes belly-up and because of leverage and transmission you got seizure of LTCM and therefore there is panic and liquidity crunch. But there was no severe kind of credit problem in the U.S. economy, you had a credit problem in Russia, but not in the U.S. Essentially the Fed eased and they coordinated a rescue and resolved the collective-action problem—and you could do it because you had 20 banks you could put in a room, but it took quite a while even then to do it right. Today is different. We have hundreds of institutions involved in asset-based commercial paper so the coordination problem is going to be much more messy. But [during the LTCM crisis] once you resolved that liquidity problem, things kind of returned [to normal], actually growth started picking up, again accelerating.

The point is that in addition to this liquidity crunch right now we are facing a situation in the U.S. where there is a big difference [from LTCM] in that there are meaningful solvency issues. The distinction between liquidity and solvency is totally familiar to all of you given that there was a debate in each one of the emerging market crises of the last decade: is the country insolvent or illiquid. Of course we know it is a gray area, [you may have] conditional liquidity, you might even have insolvency from things that started as illiquidity. So I am not saying that it is black and white, but we can think in those terms as being a dimension of how you should be thinking about it.

And what does that mean? In the U.S. economy there has been a significant releveraging of the economy in the last few years in the household sector initially but also financial institutions, mortgage lenders and what not—some people refer to this as being the up cycle of a Minsky credit cycle. And then given the shocks and the bust of housing we reach this Minsky moment and now the deleveraging is starting. But the point here that is today you have meaningful solvency issues. You have about hundreds of thousands of U.S. households that are going to go to foreclosure, some estimates saying as many as 2.2 million could, and that is maybe an upper [bound] estimate. You have already 50 to 70 subprime mortgage lenders that have gone belly-up and at this point some of the non-subprime mortgage lenders also have gone belly-up or borderline belly-up and that is a solvency problem. You have significant financial distress among home builders with many of the small ones going bankrupt, and some of the big ones have nasty losses and some of them might go belly-up. We have had already a variety of financial institutions, hedge funds or other ones, that have gotten in trouble and gone belly-up and not just in the U.S. As we know and we will discuss it because of securitization and globalization, the problem pops up one day in Australia, next in Germany, France, in Asia, and so on. There is an issue of solvency.

And even for the corporate sector everybody says is in much better shape, my colleague at Stern, Ed Altman, is the leading academic expert on corporate distress and says in a normal year in the U.S., 3 percent of all corporations go belly-up. Given better fundamentals, last year he predicted that there should be 2.5 percent of them going into distress, meaning Chapter 7 or 11. And instead corporate defaults last year were only 0.6 percent, one-fifth of what the model predicts. Some people say it is a whole brave new world and things have changed and the model is wrong. The reality is he says we live in a world in which there was tons of liquidity, easy credit, and credit spreads were so low that even corporations that would have otherwise gone into bankruptcy would essentially restructure and finance out of court with private equity money, hedge funds and others. Now credit spreads are widening significantly and the tightening of conditions means that increasingly a number of these corporations are going to get into trouble. So most of the corporate system is fine, but you have that part of it, that 5 to 10 percent, that is in trouble. With some of those the corporate distress and default is going to rise and when it rises, then you are going to see rising credit spreads, and I tell you, people who are

worried about mortgage-related CDOs maybe in 6 months are going to start thinking about those corporate bond CDOs and how much of it was junk once you get repricing of the risk and many of these corporations may get into trouble. The point here is that there is a meaningful issue of solvency and not just liquidity and that is why I think the problems are more severe.

This is also the reason why I believe that actually while of course the Fed can ease and they are going to ease significantly, I am not sure that the Fed easing is going to resolve the problem the way they did in 1998 because there is an element of insolvency rather than illiquidity. I do not think what the Fed is going to do is going to be enough because it is going to be probably 'too little, too late': too little because now they are worried still about inflation being on the upper limit of their comfort zone and because they are worried, rightly, about moral hazard issues. Therefore they are not going to aggressively ease the way they did in 2001. And even in 2001 the aggressive tightening essentially put a bottom to the slowdown but we did not avoid a hard landing. As you remember, we have two quarters of consecutive negative growth. Why? At time you had a lot of tech capital goods and the demand for these kinds of things becomes insensitive to interest rates when you have a glut; therefore it takes time to work it out. Today instead of a glut of tech capital goods, we have a glut of housing, a glut of autos, a glut of consumer durables. So the idea that the Fed easing is going to resolve that glut quickly I do not think is the case, it is going to take a lot of time to work it out. So I think that is part of the problem.

And the other part of the problem is that, yes, the easing of money conditions can maybe ease conditions of tightness for the institutions that are regulated--the banks. But part of the problem we are facing right now is that the credit crunch is not just in the banking system, but also in other nonregulated institutions, the hedge funds or the investment banks and other ones. You have essentially money not flowing even through the open market operations that the Fed has done to parts of the credit system where the crunch is more severe. It is not happening because the banks themselves have kinds of liquidity issues right now given all the SIVs and conduits they had. Now you have essentially to hoard money to make sure that in case you have enough to bring back on the balance sheets all these SIVs being rolled off. So the situation we are facing right now that even in the interbank market people are saying: what's going on, why are spreads so wide. They are so wide because even Citigroup does not trust Bank of America, and vice versa, because you might need that money given what you have to do, let alone transferring it where the other parts of the financial system. So the easing of liquidity, in my view, might not be really unclogging the credit markets and solving the problem of illiquidity in parts of the system where the problem is. It will do something, but I think there is going to be a fundamental problem that we will have to face.

The other point I think relevant here is my view that the Fed is not going to avoid a hard landing in the same way it did not avoid a hard landing in 2001. Right now we have the first potential kind of crisis of this new world of financial globalization and of securitization. I think that some of the problems we are facing [require thinking] about this question and thinking about the policy solutions and regulatory ones. I think there is actually important work, in which the IMF has a crucial role, in terms thinking [through] these debates about the regulation system and risk. But I think part of the problem that we are facing is the distinction that economists make between risk and uncertainty. With risk you have a distribution of events, you can assign probability and price it. Uncertainty as you we know is the situation which is immeasurable risk. You cannot really measure exactly what the problem is and you cannot price it and then you get in a situation of panic and excessive amounts of risk aversion. The two elements of uncertainty that I am going to discuss are related to the fact that this world of financial globalization and securitization has paradoxically reduced the amount of transparency in the financial system rather than increase it, so there is more opacity. And if there is one thing we know about the financial markets is that having an appropriate amount of information is crucial for pricing things and assessing risk and if you do not have information then you get into uncertainty--this phenomenon of walking on a minefield and you do not know where the mines are and then you get nervous about it.

So what are the two aspects of it that I think are important that lead to policy questions? One is what are the sizes of the losses? \$50 billion, \$100 billion, or \$150 billion on subprime alone, let alone if near-prime and prime go into trouble. And of course if you have a recession, the losses in the banking system are going to be bigger because then the housing recession is going to become bigger. So there is uncertainty about the sizes of the losses that depends in part of course on how much home prices are going to fall. That is an element of uncertainty.

We have an element of uncertainty because now we have a whole bunch of assets that are really hard to value, and they are hard to value for a variety of reasons. One of course is that in the situation of illiquidity it is hard to sell them, there is no market, and there is this problem of how you can price things that are illiquid. But there is also the element that these are all new instruments, they were complex, exotic, and they were not widely traded and they were always marked to model rather than marked to market. Therefore there is an underlying fundamental question: unless you change the world to make these instruments more traded, and unless you make markets for these things more simple or more liquid, you will have a problem that in even in normal times they are going to be hard to price, let alone in times in which they are illiquid. And finally, part of the informational problem is that these mis-ratings are happening because of various types of biases in credit rating agencies [arising from their] having most of their income and revenues coming from rating structural finance products.

So we have created essentially in part a little bit of a monster. Of course we all know the benefits of financial globalization and securitization and all those things, I am not saying that I am against them. But you've created a financial system in which if you take out mortgages, the mortgage originator does not care: he or she maximizes volume and [gets higher] income. Then the bank originates the stuff and packages it in MBSs and then they get the fee and they shove it to the investment banks. And the investment banks tranch it in all the different tranches of CDO and then shove it to their final investors and the rating agencies give their blessings. You would think that the final investor is the one who has to provide the market discipline but after four stages you do not even know what it is, and after CDOs you have CDOs of CDOs, and CDOs of CDOs of CDOs  
(Laughter.)

and then how you price this stuff. Of course there is an element of greed. At some point people were searching for yields or they should have known better, so I cannot just blame the rating agencies. But you have a whole system in which essentially people were making income not from bearing the credit risk but essentially transferring it somewhere else and getting the fees, and in most of the financial system that is how it gets its profit these days, so there is a fundamental kind of problem. On top of that the regulators [were] asleep at the wheel and let this stuff occur without any kind of constraint.

So there is this element of what are the sizes of the losses and all the rest. Then there is the other element that creates this uncertainty of who has the losses is what Bill Gross referred to as 'Where's Waldo' problem, or, as I refer to it, as where the next skeleton is going to pop out or walking on a minefield and so on. We have lack of information about this stuff, about who is holding it. There is, as I said, more opacity and less transparency in financial markets. In this situation then once the trouble occurs and things are risky, then you have a situation in which you have lack of trust and confidence, you do not trust other financial institutions, you do not know who is holding the toxic waste, and you have also the significant increase in at least perceived counterparty risk and even large institutions kind of worry about each other.

So essentially the question that is a policy question is, again, we are not going to reverse the world, securitization is going to occur, there are definitely benefits, and we go through cycles in which new instruments are created and then trouble occurs. It happened with junk bonds in the 1980s, Milken and Drexel, and then we created the market and priced them. So I am sure that 5 or 10 years from now things will look different: simpler securitization, pricing, there are markets for them. But it is a significant problem and [judging] the systemic risk aspect of it is an open question. The old argument was: we take off this risk from the balance sheet of the banks so you do not get any more the systemic banking problems; you transfer them to nonbanking

institutions, and then you transfer them to the rest of the world; [thus] you spread the stuff and therefore the risk of something systemic is smaller rather than otherwise. But the problem you create is that in a world in which especially you do not know the size of the losses and you do not know who is holding what, then spreading the risk has not created less systemic risk. Instead you have created a problem in which the stuff that should have been a subprime problem for the U.S. actually leads to a bigger seizure of liquidity in the European capital markets than [in] the U.S. In the beginning [of] it all, the ECB-eased faster and more than the Fed. So you have this problem of transmission in these shocks that are international and uncertainty being spread more widely and you think everybody is a Waldo because you do not know who is the good guy or who is the bad guy. So those are the complex questions.

The final thing I want to just briefly just speak about is this question of will the world decouple from the U.S. or not. Certainly there has not been financial decoupling; there has been meaningful transmission, [so] the question is about the real decoupling. My answer to this question, and I thought the piece that was written [on this topic] for the April WEO was an excellent one, is that of course the answer to this question is conditional on whether you believe there is going to be a soft landing or a hard landing. If there is a soft landing in the U.S. economy, then in spite of all that we [just] said, I think that all in all, growth conditions in China, among the BRICs, among emerging markets, in Europe and the rest of the world, are sustained enough then there may be a little bit of a slowdown but not a meaningful effect. But conditional on my recession call being correct, and I might be incorrect, then the idea that the rest of the world is going to decouple from the U.S. hard landing is more far-fetched. So I am not expecting a global recession, but I think that you will have a significant amount of economic slowdown—the trade channels and the financial channels and the exchange rate channels all will lead to a kind of transmission. We could discuss each one of those channels in detail. I think that actually, paradoxically, probably the first victim of a U.S. hard landing could be [the one] counted as most decoupled from the U.S. - China. If you think of China, the U.S. has slowed down, Chinese growth has accelerated, you have had turmoil in financial markets all over the world, Chinese markets are still booming with P/E ratios of 50 or things of that sort, and so you think that China has decoupled. But I think if you have a U.S. recession it is going to be a consumer-led recession rather than just housing; and since China essentially produces and exports consumer goods for the United States, that is a channel of transmission. And of course, if China gets a meaningful slowdown of growth, then East Asia gets hurt, because increasingly it produces imports for China to assemble. Cyclically East Asia relies on U.S. growth as much as it did 5 to 10 years ago because of this change in the structure of trade within Asia. And of course at some point the fall in demand for commodities hurts commodities exporters in Asia, in Latin America, in Africa, and so on. So there are all the traditional channels of transmission, there are the financial channels of transmission, the credit crunch and squeeze transmitted to other countries, there is the weakness of the dollar that will occur that hurts then the floater countries. In Europe, which actually has now a cyclical recovery, there is a question mark: a slowdown of growth in Q2 and at some point you have to ask [when] too strong a euro—and the euro is moving toward 140—is going to start hurting European competitiveness. Certainly the Club Med countries are already signaling a loss of competitiveness, so the stronger is the euro the more that effect is going to be painful. And in the case of Japan, the other most important G-7 country, Q2 growth was estimated now as being negative even before this mess. We know that Japan has had this yo-yo of bordering between inflation and deflation and [between] growth and recovery, but then being not resilient. We know that most of the Japanese growth has been driven by net exports rather than domestic demand, which is weak and lukewarm because real incomes and real wages are not growing very fast and therefore consumption is soft and weak. Therefore with the yen now closer to 110 than 120 and having this global turmoil, I think that the elements of a recovery of Japan again is put under question.

Finally, for emerging markets I will make the following observation. We all recognize that after the financial crisis over the last decades have done major macro financial and other reforms. Now there are small budget deficits, fiscal surpluses, they have independent central banks, low inflation, they moved to floating exchange rates sort of, current account surpluses rather than deficits, therefore less risk of a sudden stop, this war chest of reserves of \$5 trillion, cleaning up

banks, corporations and the financial systems, fewer balance sheet vulnerabilities in terms of currency maturity and capital structural mismatches, you have to give them credit, they have done all the things that the Fund and others told them they should be doing and therefore their vulnerability to crises is much less and that is why in the last 4 years we have not seen any major EM country going belly-up.

However, it is also true, and this is the caveat, that one of the reasons why these EMs have done well for the last few years in addition to good and sound policies has been also partly good luck. We have had a world in which there has been the highest global economic growth in a generation, we have had high and rising commodity prices to help all those commodity exporters, we had very easy monetary conditions until a couple of years ago with the G-7 policy rates very low and now they are being raised, we had essentially credit spreads very, very low and therefore people were searching for yields, and we had the situation of very low risk aversion of international investors. Now suppose that my scenario comes true: then of course it means lower U.S. growth, lower global growth, lower commodity prices, widening of credit spreads, and greater risk aversion. So that is a world that becomes a more dangerous world for emerging market economies and I do not expect any big ones getting into the kind of crises they did because of their much better financial market fundamentals, but you have a situation in which then financial pressures and things of that sort may recur.

So that is more or less the kinds of things that I wanted to cover essentially. Again to repeat, I expect still a U.S. hard landing and a recession, I expect that this financial turmoil is going to persist and it will be a vicious circle where the real economy gets worse and the financial markets get tighter and vice versa, the tightening of financial conditions leads to a slower economy. I do not believe that the Fed is going to be able to avoid a hard landing. If the condition for a hard landing materializes then what the Fed can do is just to put a bottom of how deep that hard landing is going to be, rather than prevent it for the same reason they were not able to prevent it in 2001 recession. And finally, conditional again on the U.S. hard landing, the rest of the world is not going to decouple. Again, I am not expecting a global recession, but a more significant slowdown of global growth than the one that people are currently pricing. I should stop here and leave some time for some questions. Thanks for your attention.

### **Question and Answer Session**

MR. COLLYNS: Thanks very much, Nouriel. We have around 15 to 20 minutes for questions, so I would like to open it up to the floor.

MS. SANTOS: That was quite a disturbing lecture. I am Barbara Santos, retired from the World Bank. Let me ask you, professor, if you were in Mr. Greenspan's shoes a year ago or 18 months ago, what measures would you have taken to avoid this terrible scenario?

MR. ROUBINI: That is an interesting and important question. Part of the answer lies in the debate on whether the Fed created the tech bubble of the 1990s, by Greenspan worrying in 1996 about irrational exuberance but then doing nothing about it; and when it burst, then easing too much and for too long and then creating another bubble. So [essentially the debate is] whether U.S. monetary policy was too easy [for] too long.

To me it is not just a question of monetary policy because sometimes monetary policy is not the right tool to deal with asset bubbles. The other aspect of it is prudential supervision and regulation of the financial system. In that context I would say capital markets and the private sector is based on greed—without any moral judgment about that—and we know that private markets work best when there is some regulatory supervision because that greed has to be constrained either by fear of being punished because you are not going to rescue them, or by some constraint on your behavior. I think there was a meaningful ideology of regulatory laissez-faire for the last few years, much more than before, that said this is a brave new world of financial globalization, we have now securitization and [this] gives access to home ownership to lots of new people. We also have this mess in the U.S. of five or six federal regulators and 50 more at the state levels and they were all kind of ignoring [it] and we let this kind of bubble fester without realizing what it was—there was a race to the bottom in some sense. It was the

Fed—because Greenspan—supported these things, it was the FDIC, it was also the other regulators. So essentially you have the element that private markets want to make money, they are greedy, and you have to have good, sound public policy and there were failures of the credit ratings of the financial institutions and the regulators. So that was an element of the problem.

The other element of the problem is right now: I think there is going to be a renewed debate about this issue of how you deal with asset bubbles. The philosophy of Greenspan is actually identical to Don Kohn and Ben Bernanke—they have all written essentially the same arguments—is that when you are in an asset bubble, on the way up you do nothing about it, but then when it bursts you essentially ease as a way to avoid the collateral damage to the real economy of the bursting of the asset bubble. And the arguments for why you do not do anything on the way up are: one, you do not know even know whether it is a bubble, two, you do not know what are the real effects of the bubble, and three, trying to deal with the bubble with monetary policy is—like they say—performing brain surgery with a sledge hammer; [that is], you can tighten so much that you kill the patient and cause a recession. So those have been the traditional arguments. There has been a meaningful debate among central bank regulators—the BIS, the Bank of England, the ECB, and even within the Fed there is more than one view—[take] somebody like Tim Geithner.

Right now we are in a situation in which if the Fed does not ease, we could have a nasty recession and therefore that easing is going to rescue part of the reckless lenders and investors but you are not have a situation in which [you can] to punish those guys [by causing] a nasty recession where a million people are going to lose jobs. So by default you are in a situation in which you need to ease on the way down. Therefore the only way then to avoid the moral hazard, the Greenspan or Bernanke 'put'—is then on the way up, whether it is through monetary policy or good regulation and supervision of the banks and the financial system, or a combination of the two. You cannot just say I am going to ignore asset bubbles on the way up because I cannot estimate it and I do not know what they mean. I think that is a mistaken approach to this issue of how you deal with the question of the excesses and the boom/bust in the financial system, but this is not yet where the view of the Fed is. I think that is an important thing. If you want to avoid a situation like the current one, if we want to ease and provide the lender of last resort support in a situation of financial distress, then we have to make sure that there is enough regulation that some of the excesses within the financial system that will always occur, these manias, panics, and crashes have occurred for 300 years, are managed. And managing them right means the appropriate monetary and financial policies that limit the bubbles on the way up. I think that that is one of the overall lessons.

**QUESTION:** Do you think that large global financial imbalances have affected your forecasts of the global economy and the financial markets?

**MR. ROUBINI:** The issue of the global current account imbalances is a significant one. A few years ago I was worried about the fact of a U.S. hard landing being triggered by a disorderly unraveling of those imbalances because of the reduced willingness of foreign investors to finance the U.S. So you could have thought of a hard landing starting from the problems in the current account and then transmitted to the real economy through a collapse of the dollar and spiking in interest rates. Instead, right now I think the risk is from the U.S. hard landing triggered by housing, and then consumption and lower growth; so that the unsustainability is triggered by domestic problems rather than the willingness of the rest of the world to do it.

I always thought this 'Bretton Woods 2' regime would unravel sooner rather than later, but I think what I got wrong was that, [while] the willingness of the private-sector investors to finance the U.S. current account deficit has been shrinking, for some reason the willingness of the central bank to do it has not shrunk, actually it has increased. China was accumulating reserves at the tune of \$20 billion, \$250 billion annualized last year, now it is to the tune of \$40 billion per month, it has doubled. Why? At this point as we know, it is not China; Brazil is doing as much of it, Russia and India, and a whole bunch of other countries. So all of them have tried to prevent or manage the degree of appreciation of their currencies and they have continued, that's why that unraveling of something unsustainable has not occurred so far. I am not even

sure whether a U.S. hard landing would lead them then to pull the plug on the U.S. Because if the U.S. has a hard landing, [it] suffers in terms of jobs and therefore U.S. pressure on China to move its currency becomes higher; that is the point at which China says, 'sorry, we are also suffering due to the slowdown in growth' and therefore they slow down the rate of appreciation of the renminbi even more than they have done so far. So therefore what is now a kind of currency war becomes a trade war because then the risk that Congress does something nasty and ugly in terms of protectionism becomes serious. So that is the risk that actually more than unraveling of the current imbalances, that a currency problem right now becomes a trade problem and if that were to happen then lots of other ugly stuff could occur.

QUESTION: I'm an independent consultant. What is your view of the quantitative scenario in the Mishkin paper at Jackson Hole?

MR. ROUBINI: It was not just his paper at Jackson Hole, but I think he also gave a speech on this just the other day. I think that he has been actually one of the people within the Fed that has more strongly than others expressed concern that actually the real economic effects of this housing and credit crunch could become severe. The fact that people like distinguished people like Ed Leamer or Marty Feldstein or Bob Shiller are worrying about this thing is one thing, but I think that within the Fed probably Mishkin has been the one that more than others. If I read between the lines about what he is saying, he is saying this housing problem is becoming severe, the credit crunch elements of it could be severe, it could cramp economic activity, and so on. So I think that probably within [the Fed he is], if I have to make an assessment, certainly going to be one of those who is going to push more for 50 [basis points cut] on Tuesday rather than 25 [basis points]—that will be my kind of guess, as opposed to others who have suggested probably 25 might be enough. Being an academic and having written a lot about financial instability in the past and being an expert on these things, I think he [Mishkin] is aware of all the kind of financial accelerator effects and all the wealth effects. Normally when we think about in our macro models of the channels of transmission, one of the big question marks is: once you have a credit or a meaningful seizure in the financial markets, do things become a little more nondiscrete? Normally we increase interest rate a little bit, credit spreads widen a little bit, and that slows down consumption a little bit. I think we have to understand how much of this crunch is going to lead to more severe economic effects than we estimated. We saw it in the case of emerging market economies where the financial crashes then led to significant credit crashes that led to falls in output of 8 to 10 percent in a year, and of 20 percent plus in Argentina and Indonesia. Of course nobody expects something like this for the U.S., but those models that Mishkin and Bernanke, and other work on financial accelerators, implied that the existence of a credit crunch has real economic effects that are more significant than otherwise perceived. So that is the way I read what he is saying.

QUESTION: One issue I would like to hear your opinion on is: could a hard landing or the deterioration of economic conditions weaken political resistance to a surge in inflation? Now the memory of the high inflation rates in the 1970s is fading, so maybe political forces could be less reluctant to an increase inflation and pushing more for loosening of monetary policy. Maybe we see already signs of it in Europe. I don't see signs of it in the U.S., but could this be a development to pay attention to?

MR. ROUBINI: It is an interesting question. Of course, in the very short run, if I am right about the hard landing, the slack in demand and slack in the labor market is going to lead to a significant slowdown in inflation, and then the international consequences of falling commodity prices would also push down inflation down. Of course there is the risk of a disorderly fall of the dollar that could lead to imported inflation, that is one caveat. You saw that in 2001. In 2001 until the Fed started cutting there was tightening due to worries about inflation. Then in 2002 the big question mark was deflation and not inflation, and how we avoid deflation. So if you had really a severe U.S. downturn that is also global, then I think the question of deflation might come back. A country like China that invests 50 percent of GDP, and they are producing goods for export with that extra capacity, as long as the U.S. economic growth and the global economy is humming along, that is fine. If you have the U.S. and a global hard landing then I think

deflation might become the question that you have to worry about in spite of supply constraints and for commodities and things of that sort.

[But] I think that you have a valid point in saying that if monetary policy becomes so easy then that then you stoke inflationary pressure—that is something you could worry about, and central banks are independent but sensitive to politicians. I think that all of the central banks right now want to maintain their policy credibility. Bernanke, given that he is the new Fed chairman and given that he had this—I think unfair—image of Bernanke the dove, [has to] establish his credibility [that] he is serious about inflation. I think because of that in part, and in part the moral hazard [considerations], I don't see them essentially caving in.

Actually one of the paradoxes is that in a world in which inflationary forces until now have been kept low for goods and services because of the rise of 'Chindia'—China giving us all the cheap goods and India all the cheap services—easy money has led not to goods inflation or service inflation, but has led in the last few years to asset inflation. Those are themes that actually people have started to think about: how much the manifestation of easy credit and easy money is in an asset bubble that creates other types of problems rather than goods inflation. So far I do not see inflation being the crucial problem. [I think] central banks realize once you lose your credibility on inflation, that is the worst thing that can happen to you. So I cannot see either the ECB or the Fed doing that so far.

MR. COLLYNS: I think we have time for one more question.

QUESTION: I was wondering given what has happened to regulatory oversight for the past 4 or 5 years how much faith do you have in current tightening would prevent the next housing crisis?

MR. ROUBINI: It could be the next housing crisis or maybe the next bubble. Some people say the Fed created first the tech bubble and then the housing bubble, and if they now ease they are going to create another bubble, even if we are running out of asset markets in to create bubbles.

(Laughter.)

For a while people thought it was private equity; now that has reached its peak and so on. But we can find other things.

I think there is an interesting question of how much we have learned the lessons. You can be optimistic and say: it happened with junk bonds and other things, you make mistakes, the world gets globalized, after all all these innovations are beneficial over time in terms of getting less systemic risk, more financial innovation, more opportunities for diversifying portfolios and what not, so greater financial globalization is not a bad idea if it is done with the right regulatory supervision and there will be some changes done. Just today the U.S. Treasury was announcing the FSF is going to take over and study on all the usual suspects: what went wrong in terms of the credit rating agencies, what went wrong with valuing this new complex instrument, what went wrong with banks putting off-balance sheet and conduits; so there is a whole series of things. There will be changes. After LTCM I remember—in 1998 I was in the U.S. Treasury and the White House—there were lots of proposals and then when calm came back and nothing was done, and 10 years later we are still discussing whether we should regulate hedge funds or not, directly or indirectly, and I am not saying that we should. But changes in financial regulation, even when there are big crises, occur only slowly, incrementally at the margin.

Hopefully we are in the world in which globalization of finance is going to stay with us. Credit derivatives 10 years ago were zero, today they are a notional value of \$26 trillion. And this old black box of systemic risk—whether through globalization we are reducing and spreading risk rather than concentrating it—is an interesting question. As I said, part of it is better regulation and part of it is information, and lots of things have to be thought through. So one could be hopeful that some lessons will be learned and things will go in the right direction. I certainly would encourage these institutions where there is a vast amount of expertise on these global financial issues to do thinking and research about what went wrong, what were the issues, and what will be the appropriate regulatory solution. I do not see a total backlash against financial

globalization coming out of these things. I do not think that is going to happen unless you have really just a global real economic meltdown, but I think that is unlikely. Even in my bad scenario, you have a recession in the U.S. for a few quarters, you have a global slowdown and then there will be a recovery. It will be painful, but I certainly do not expect a Great Depression or anything of that sort.

MR. COLLYNS: Thanks very much, Nouriel. That was an excellent presentation. You certainly have given us lots to worry about, but that is food and drink to us Fund economists. It is always a pleasure to have you here and we hope you will come back soon and continue to feed us with lots of good material. Thank you very much, Nouriel.