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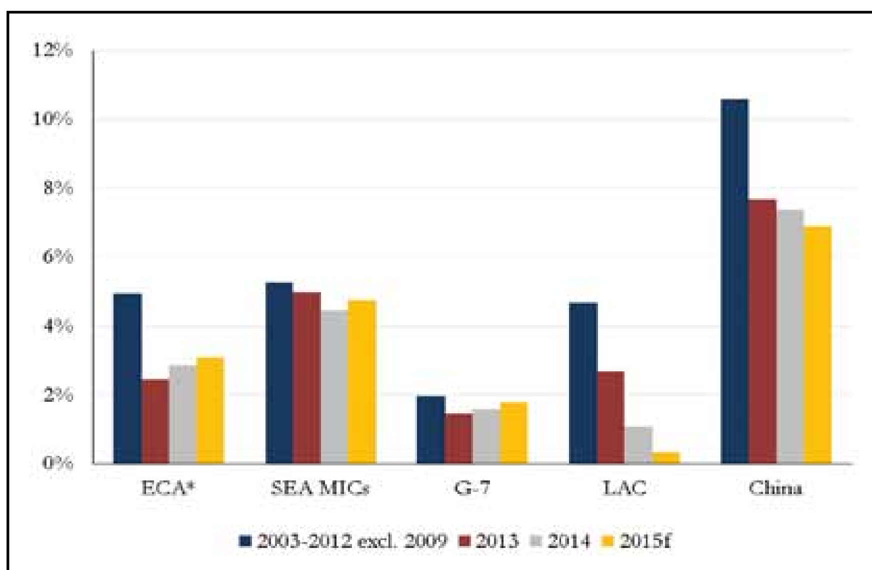
DISCUSSION PANEL[1]
SHORT-RUN FINANCIAL STABILITY RISK

AUGUSTO DE LA TORRE[2]

I am going to try and characterize what the main macroeconomic challenges in the region are in my opinion and the key point here I think is the nature of deceleration.

Graph 1. GDP growth and forecasts by region



1 Integrated by Augusto de la Torre (World Bank), John Geanakoplos (Yale University) and Guillermo Calvo (Columbia University) during 30th Jornadas Anuales de Economia organized by Banco Central del Uruguay, August 2015.

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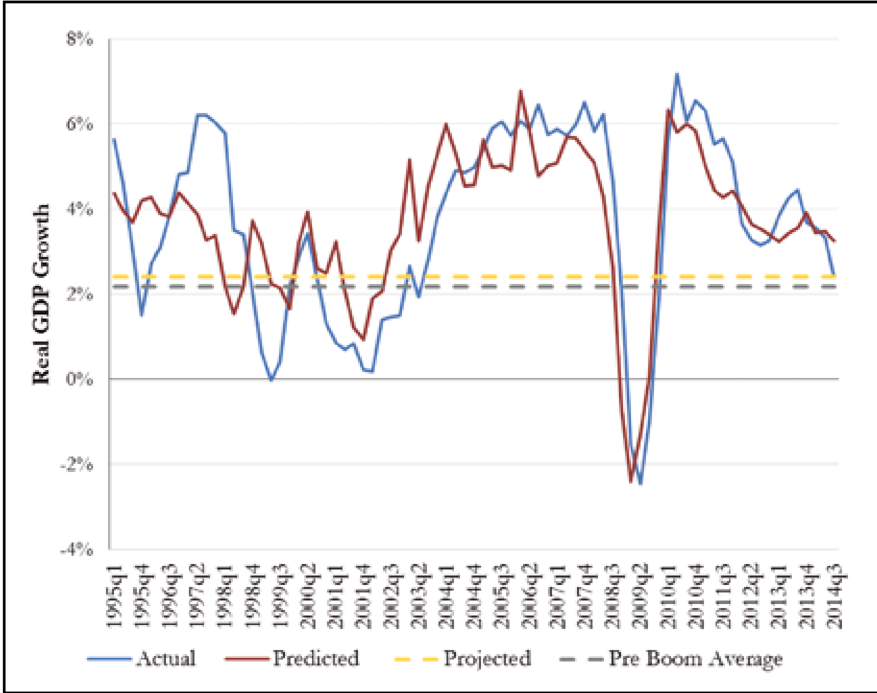
Latin America has experienced the deepest deceleration in the emerging world. If you look at Eastern Europe deceleration is significant, but not as much as in Latin America, and proportionally speaking, deceleration in Latin America is deeper than in China. And it calls our attention that Southeast Asian countries, the 2ndgroup of bars, although they are very much connected to China, they have been able to keep relatively good growth. The blue bar is the growth bar in good years and deceleration is the other bar, so we had deceleration for 5 years and the growth for the region as a whole will be 0. Uruguay looks very well, but that's not the case of the region, and so, the strong slope of deceleration has been quite a surprise.

Most past decelerations in Latin America can be explained by external factors: external demands and exports, terms of exchange of the price of commodities and international exchange rates. And this makes us think that growth in Latin America, in terms of fluctuations, is very much related to external factors. As the Argentinean song goes, "the pain belongs to men, desire or chaos comes from the outside".

Graph 2. LAC growth largely explained by external factors

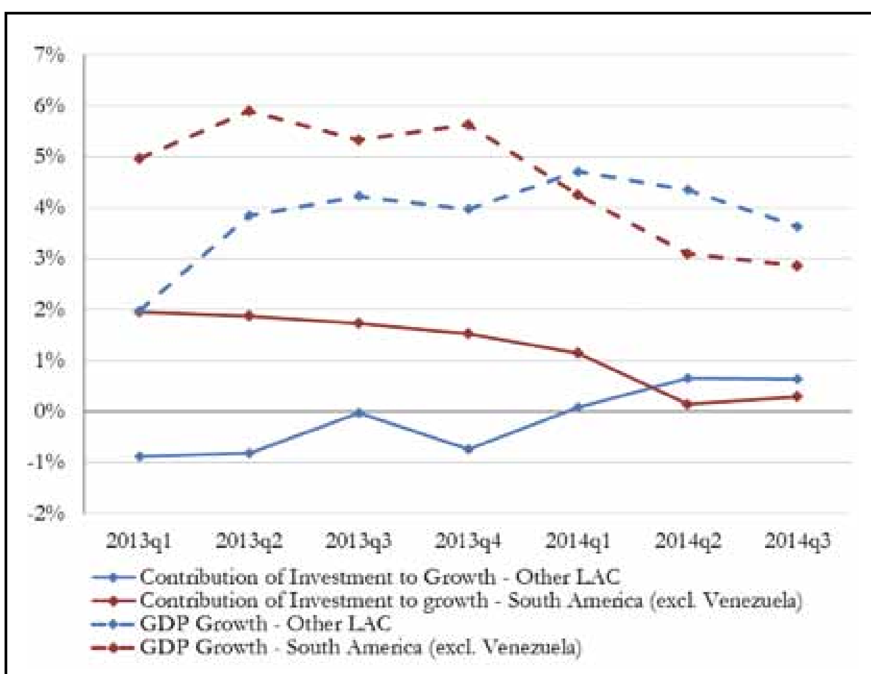


Now the average horizontal line is very low and the trend of growth in Latin America has been low, and in fact, we are the region par excellence where there is no convergence. Lack of convergence in the early 20th century, the per capita income in Latin America was 30% of the US per capita income, and right now in Latin America it is 13 % of the GDP. 30 years of lack of convergence. Nevertheless, those external factors explained growth fluctuations but not the mean.

Now, why has deceleration been amplified in this region in relation to external factors? What we are having in Latin America is a lower growth than the expected one, just by taking into account the change in external factors. Now, why is this so?

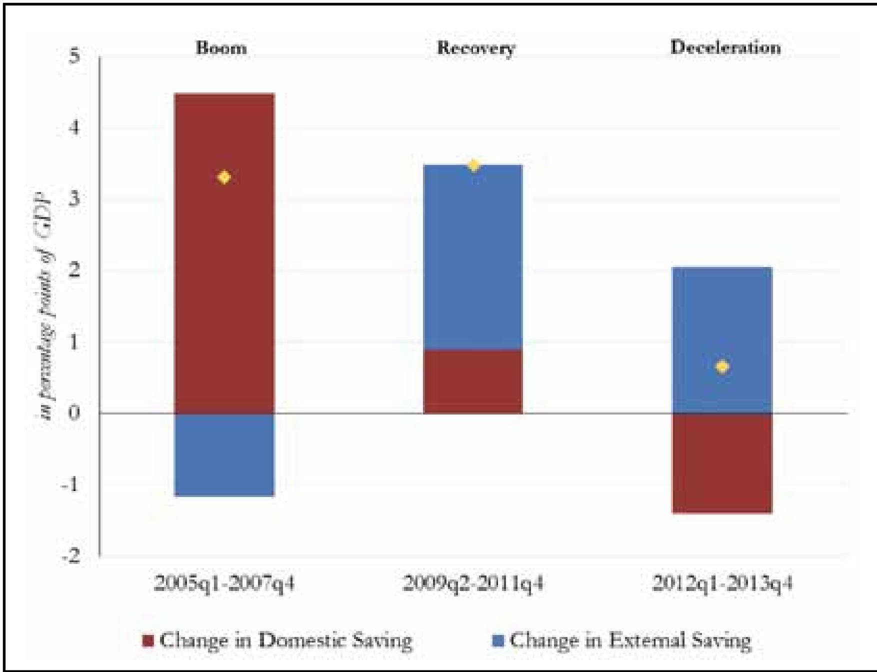
There are several factors and one of them is the amplifying factors of the soil of investments.

Graph 3. LAC: investment contribution to GDP growth



The solid red line is the contribution of investment growth in raw material exporters which are the majority in Latin America, and we can see the contribution to investment has decreased considerably since 2012, the elasticity of investment vis a vis the price of commodities has been brutal when we look at the price of commodities in late 2011. Then investments of extracting, mining industries, and agricultural industries fell.

Graph 4. LAC:
changes in investment and in domestic and external savings



Now, this affects countries that are rich in raw materials and are rich in minerals and this amplifies the deceleration effect. Now, if you want to look at the history of Latin America in three acts, then you have it in these 3 bars, we can see the changing investment during the bonanza period, and the second bar shows the recovery period: 2010-2011, the third bar shows the deceleration, 2012 up to the present.

So in the good old times the region increased its investment level to Asian levels, and it did so by funding it with domestic savings, that is the red part of the bar, and in fact we saved more than what we invested, and so,

we could export savings and it was some sort of miraculous coincidence. For some time we had a surplus in our current accounts, and as Guillermo (Calvo) showed you, after the large global crisis there were credit account deficits, and during the recovery 2010-11 the region started increasing its investment levels to the levels it had before the crisis, but this was done with external savings, that is the blue part.

During the deceleration period, there was a low investment level, it was not able to get to the pre-crisis levels of investment, and there were current account deficits, using external savings to keep high consumption levels.

So you can explain this history in 3 ways: during bonanza periods we were able to save more than what we needed to increase investment, perhaps because we didn't have the ability to spend and we didn't have enough time to do so, or perhaps because we did not think it would be a long lasting bonanza.

During the recovery period we used external savings to go back to increasing the investment level to the pre-crisis time and that is because we thought perhaps that recovery was going to be permanent. And during the deceleration period, the feeling we had, if we look at this graph, is that the region believed deceleration was going to be temporary, and therefore it used external savings to keep consumption patterns.

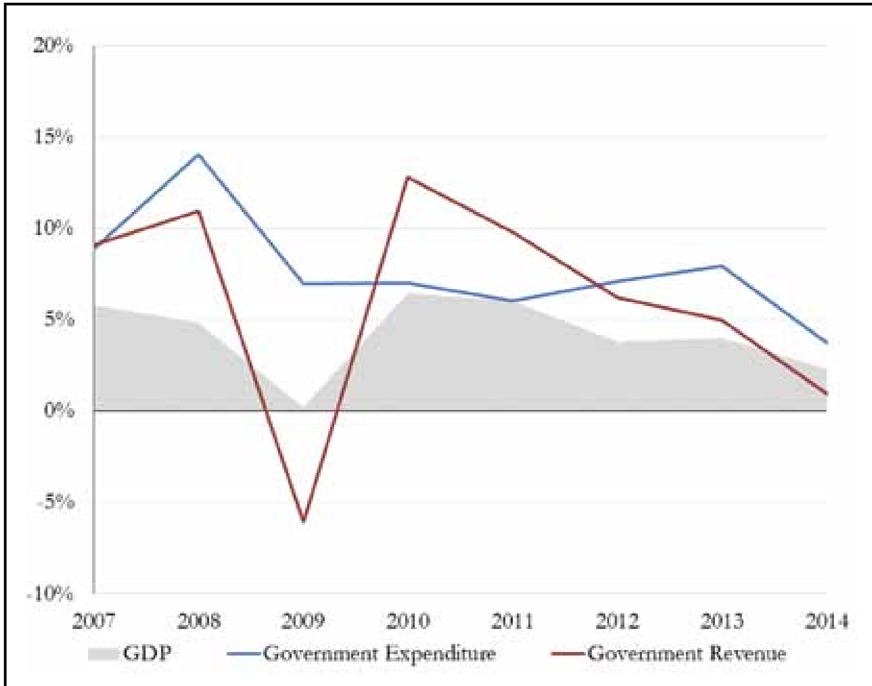
Now, in the last year, and I think this is where we are becoming aware of it, the external situation means a permanent change not a temporary one, and the macroeconomic challenge is not just a question of mitigating a cycle, but managing transition to a new trend and a new equilibrium.

So I'd like to add to the debate two key questions. The first question is: is Latin America once again experiencing the type of microeconomic and financial vulnerability it had in the 70s, and hence, if there are domestic structures and policies that can amplify an external shock, and generate a domestic systemic crisis. That is the key question, because if the answer to that is yes, that should be our main concern.

In my opinion, unless there is a systemic problem coming from abroad - the sudden stop that sometimes Guillermo fears-, or a large financial

instability, I do not think that Latin America will have the amplifiers it had in the past to magnify external shocks and turn them into large domestic crises.

Graph 5. LAC: Revenue, expenditure and GDP growth.



Anyway there are exceptions, there are countries that may amplify very strongly external shocks, that is what Venezuela is doing. Ecuador is a country that because it doesn't have fiscal cushions or exchange flexibility, and is highly dollarized, it may experience internal factors or domestic factors… that is not the problem.

Now, what are the macroeconomic problems for the region? In the first place, you have to understand the nature of the problem; so this is not a question of managing a countercyclical policy, but it is to manage adjustments towards a new equilibrium.

Now I can see four important problems when managing this transition. The first one, and this is the good news, we are using the flexible exchange rate during this transition, I think that is part of the solution to this problem;

however, depreciation of currencies has become systematic and strong, and so they start being passing through, you know, there is a pass through effect, and that is limiting the shock, absorbing effect of the exchange rate flexibility. Now the second problem is that there is not much maneuver room even where fiscal problems are not significant. In the third place, in spite of quite low debt levels in the public expenditure, the fiscal leeway has been reduced, because in 2012 we made our best efforts for stimuli. In the fourth place, I think we have potentially strong distributional problems.

Very briefly, I am going to start to defend my vision.

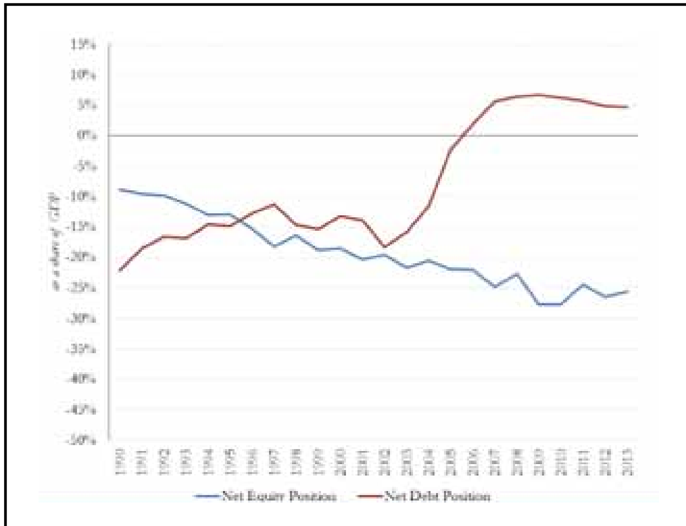
When we think about the vulnerability of this region, and the amplifying effects, because of the weaknesses, macroeconomic and financial vulnerabilities, people insist that these are going up; it is true for Brazil but for other countries that behave better, what we can see is that it has increased a lot but it is not very different from what Asian countries are experiencing. So both for them and for us they have gone up in a comparable manner. For the time being we cannot see in relative terms anything that seems vulnerable and I think one of the reasons for this and why I believe in what we call in medicine an immunological system, that is better now than in the past, I think that in the 90s there were 3 variables that instead of making the shock softer did not. One was the move or the change in currencies. Our currencies were not very much believed-in, lots of mismatches in the debtors balances, so the currency, when it moved, it produced quite a lot of damage.

The second amplifier was weak banking systems that were not well supervised, with insufficient cushions, and therefore the external shock was amplified through the banking system. In the third place there are fiscal processes, now it's true that we are Latins, it's true that we don't have perfect fiscal processes, it's true that when the holiday season comes we like to spend and so on, but in general, this has improved in Latin America; it is not very strongly countercyclical and the feasibility of fiscal prices will show you that fiscal prices in the region are feasible, they are more feasible than in the 90s, so these 3 factors, currency, banking and the fiscal policy instead of amplifying this are reducing it, and in certain degrees, there are some restrictions, but they are not amplifying factors.

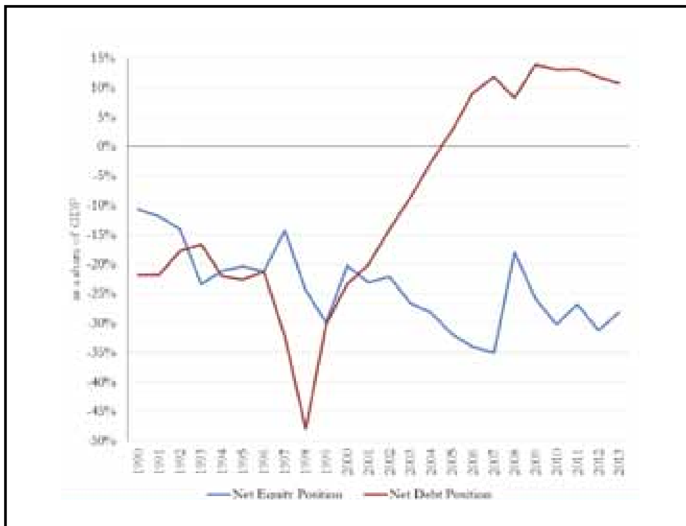
And this makes me think then that this region is in a position that is different from the position it had in the 90s and this is the graph 7, showing that our equilibrium situation is much better.

Graph 6. Net balance sheet position vis a vis the rest of the world

LAC 6 and Uruguay



SEA MIC'S



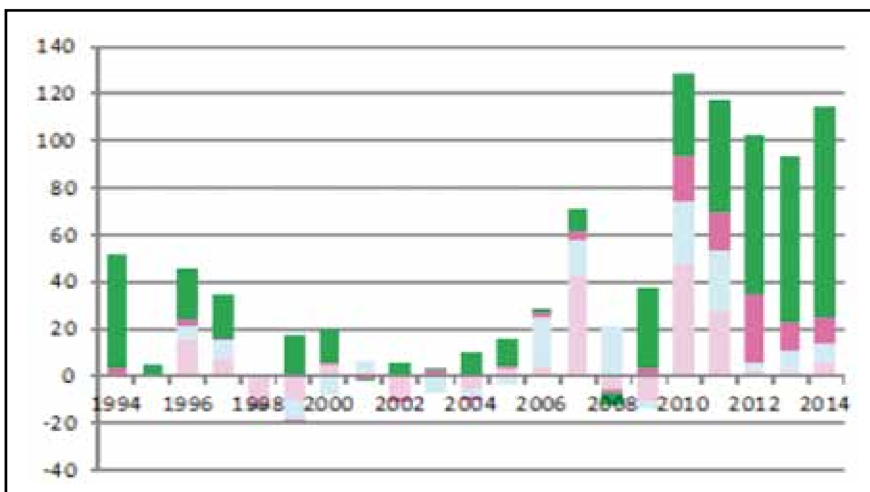
Notes: LAC-6 includes Argentina, Brazil, Chile, Colombia, Mexico, and Peru. SEA MICs includes Indonesia, Malaysia, Philippines, Thailand, and South Korea. Source: Calculations based on an updated and extended version of the dataset constructed by Lane and Milesi-Ferretti 2007.

On the left you have Latin America, the red line is the net position *vis* a *vis* the rest of the world in debt contracts. The blue line is the position of this region *vis* a *vis* the rest of the world in other types of contracts.

What happens in this region? This region looks much more like Asia on the right side that is not where China is, Southeast Asian countries.

In the 90s this region was a large net debtor in relation to the rest of the world, so we were very much subject to rollover, financing and debt flows. In 2000 by hooks and crooks, we have become net creditors vis a vis the rest of the world, mainly due to international reserves that the Central Banks keep, and that's much better, better than any turbulence periods, that capital flows can find us as net creditors and net debtors, and on the other hand we are great users of FPIs, and that is why the blue line has moved on.

Graph 7.



So that position of equilibrium in aggregate terms gives us a robustness that we didn't have in the 90s, and that is why I believe we are in a better position to absorb shocks within certain limits.

It is true, as Guillermo said, debt of the private sector in dollars accelerated in the past 4 years, and here we have a graph from a paper by Liliana Rojas showing that the debt of corporations in dollars has grown up considerably. Now the one million dollar question is whether that dollar

debt has created, generalized or mismatches, and that is exactly the case, and you have some studies of the Central Banks of the region.

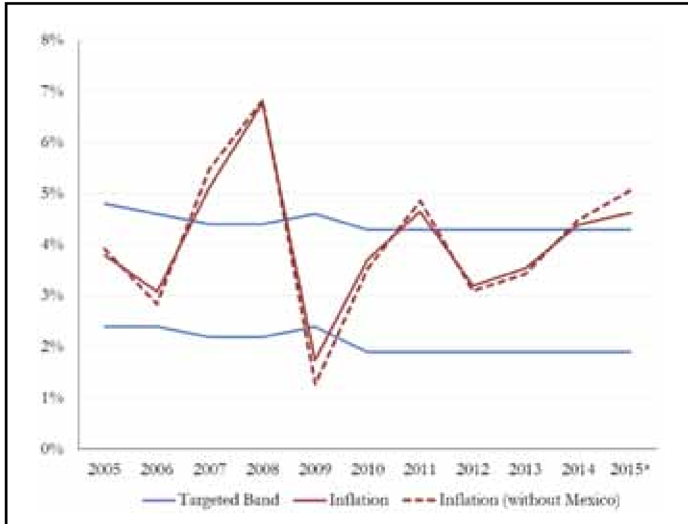
Central banks are quite cautious and worried about the debt and mismatches problems, and what we find in these papers, in these studies, is that in spite corporate debt in the private sector has grown in US dollars, however, the presence of generalized currency mismatches does not seem to be detected and I would say the strongest argument I have to support the fact that external corporate debts have not produced these mismatches is that the dog hasn't barked.

We have had two years of very strong depreciations, systematic depreciations, there were generalizing mismatch problems, we could have seen many failures, many corporate failures, and we haven't, so I think that gives us some leeway for currencies to be adjusted and generally positive effects.

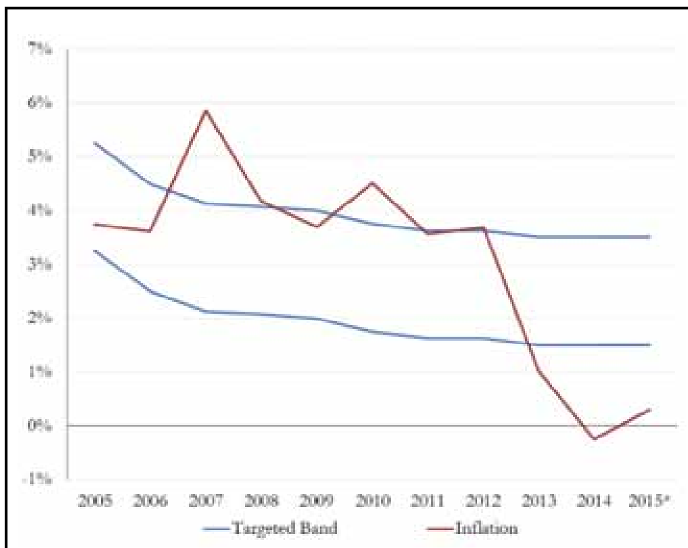
So, if I'm less worried than Guillermo about the question of a systemic crisis in Latin America, I'm truly worried about other things.

In the first place the room we have to use currency as a bumper. We have terms of exchange that are stronger here. However, the pass through has changed in the year 2000 from 2003 to 2011, the pass through has lowered, has practically disappeared, and the relatively better currency movements and baskets have disappeared. Now, pass-through makes us see that we have some presence of observed inflation above the targets of the Central Banks, the observed inflation is the red line of the five inflation targets, and it is above the targets of the Central Banks, in drastic contrast with Eastern Europe, where inflation is very much below than the target. So there is no clear evidence that inflation expectations will go on moving, and it is true that Central Banks in the region are faced with observe high-price levels, and this restricts their capacity to use monetary policy in such a way as to avoid the undershooting of the economic activity, and this is what we economists call the absence of the "divine coincidence".

Graph 8
LAC Inflation targeters
Simple averages



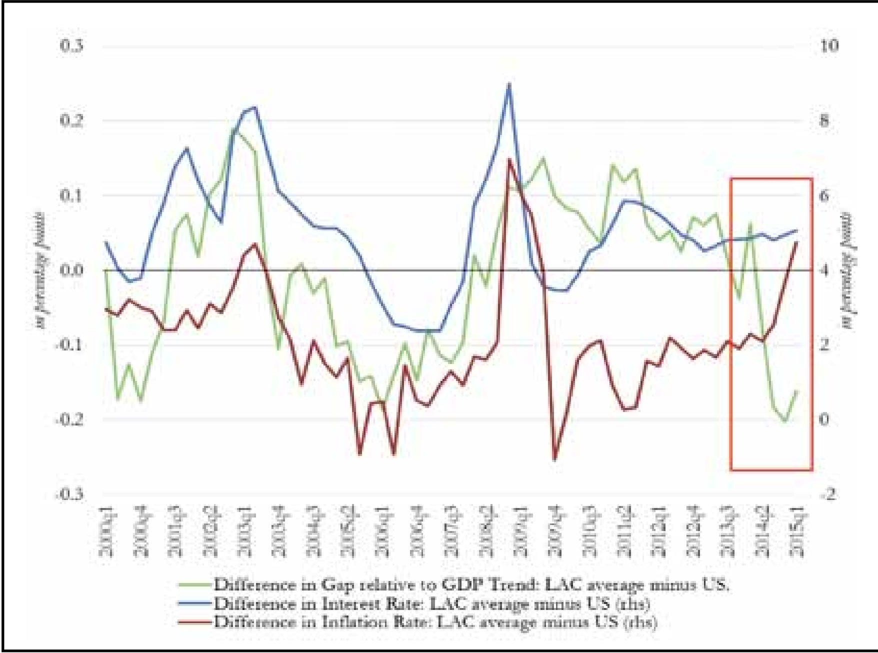
ECA Inflation targeters
Simple averages



In graph 10 there are three lines: the green line is what happens with economic activity in the region in relation to the US, and what we can see is that we are cooling down very quickly while the US is warming up, so this is going against us.

Inflation is the green line and it is going up in relation to the US. Since Central Banks in this region in the blue line have been forced to keep interest rate stable, they could not lower it in spite of the large economic deceleration, so the room for macro-policy management has been reduced much more than what we had expected.

Graph 9. Gap relative to GDP trend, inflation rate and interest rate: Differencials between LAC -5 and US



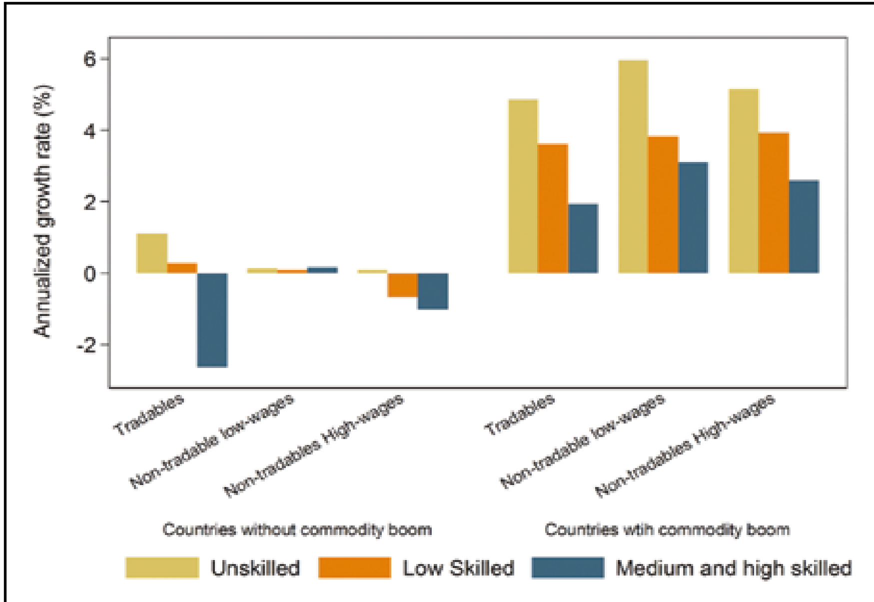
Now, on the fiscal side we can see that some countries in the region, perhaps Ecuador is the champion here, have increased the size of their expenditure during bonanza incredibly. Ecuador went from an average of 20% of the GDP for the public sector to 40%. Although there is no strong stop problem, because the public expenditure is not that high, there is an expenditure overhang, that didn't happen in all the region. On the right-hand side you can see that there are many countries in the region that in spite of the bonanza did not over-expand the size of the state. This isn't generalized, and that is good news, we are not in a fiscal situation that is desperately complicated.

It is true that any fiscal substantial indexes that you can calculate show that countries in the region have a shorter or a lower fiscal space than before the crisis, and we can see this in the increase of the deficit that is the black line. In most of the region, as you can see, the fiscal deficits have been expanded, and although what we need is to make an adjustment of spending patterns to the new and permanent income levels, the fiscal issue is not a drastic thing but it is something that must be managed.

And my last point, that I would like to highlight, is that I think that in this transition into the new equilibrium we are probably going to have very strong challenges for redistribution.

Graph 11 shows evidence of this and what we have here is what happens with salaries during the bonanza period. On the left hand side we have exporting-commodity countries. On the right, we have the Latin American ones, and this is the increase or the reduction of salaries in real terms in terms of purchasing power. So if you look at the graph on the right, what you can see is that in the countries where there were very strong improvements of terms of exchange in bonanza, all salaries went up. But no salary went higher up than the salary with the lowest skills and the non-tradable salary. In those sectors that had a bonanza in terms of exchange, they could spend more and aggravate expenditure, and went to the non-tradable sectors and produced a lot of jobs for unskilled workers and salaries spiraled strongly.

Graph 10. LAC: PPP-Adjusted wage growth across sectors by country groups



This is the main reason then why the inequality of income fell down, because for those with lower skills, their salaries went up. The countries that import commodities, on the left hand side of the graph, you can see that the distribution of income also fell, but because of different reasons. In the case of Mexico, the salaries of skilled workers in the tradable sector went down and the salaries of lower skilled workers in the tradable sector did not go up much. So the salary dynamics meant that of course the fall in the salary distribution was quite different. But for countries in South America, we had this incredible improvement of these improvement of unskilled workers, we are seeing a reverse situation, and the question is what is going to happen with the salaries of unskilled workers in the non tradable sector, and my feeling is, this is going to change, there is going to be an adjustment to the new equilibrium, there is going to be a strong redistribution tension because after four years of deceleration, this is hitting the labor market and salaries.

GUILLERMO CALVO

I quite agree with Augusto. Sometimes differences don't seem to be that big. There are external factors, I admit. It is something that has been studied for some time and confirmed in this region according to a paper that we did with Carmen Reinhart and Leo Leiderman in 1993, where we showed that interest rates in the United states were important factors in the economic cycle in Latin America and then, after that, the IADB has done quite a lot of work in this area. Izquierdo for instance, has confirmed this and I fully agree with all of this. My comments are going to go to the economic policy issues. And I think there is a whole issue there, there is a whole thing that we should think… let me start by the long sight, that's how Augusto started his presentation.

Let us be released from that trap, external factors don't seem to help, rates will go up in the US, deceleration in Europe, well, we cannot trust that, we can't trust China either, so there may be some growth in the US, but in the short term, growth in the US may make things even more difficult, it could even foster the exit of capitals because they have institutes that we haven't. To invest in the US is safer, so they are growing, they have possibilities to come out, so in the long term it will help us, but there is a gap there, if this is accompanied by an increase of interest rate, I can see that this is complicated.

I don't mean by this that there is going to be a sudden stop, but you know when the doors close, the best is to be prepared for the worst and to hope that the best thing will happen.

There is something that Augusto said is what I said "the dog hasn't barked yet", that doesn't mean that it isn't going to bark, and it may bark at the most unexpected moment.

And perhaps I'm interpreting all this wrongly, and please correct me, but this is saying that although there has been a devaluation, for instance, and the interest rates have gone up. If I take the position held by Ana (Fostel) and John (Geanakoplos), and perhaps I'm wrongly interpreting you, John, if there is no collateral problem yet, it may be that there is a deceleration, but while there is not a collateral problem the short term interest rate will be adjusted, and that is all right. If I have a 5-year project and interest

rates go a little bit up, well that's fine; a devaluation will make things more difficult, I will have to make adjustments, I'll lose a little bit, but that is how business is done, that kills no one.

That may make you angry; if you lose you are going to complain, you are going to go to the newspapers, but that doesn't kill the economy. What kills the economy is a sudden stop or anything similar to that; that suddenly, because of reasons not involving those variables but because the value of the collaterals fall.

Where can a sudden stop come from? Well it can come; and I think that we live in a world where there can be multiple balances and so I may have a situation right now where a current account of 5% negative is financed, and then because of some reasonable expectations, are not coordinated you cannot fund that 5%, and so the relative weight is changed from false tradables and non tradables, and the collateral price of tradables and non tradables changes. That has a lot of implications, so that's the problem, and that's why I'm saying that the fact that the dog hasn't barked doesn't give me any ease of mind.

However, I know that the structural balance sheet has changed so drastically, and I think this is interesting, and there is something that I would like to discuss with you. I think there is a certain disagreement between what you see and the indebtedness of the private sector, because when there is this change of structure, you don't include a factor that you too mention afterwards, and that is that the companies that have exported and taken debts.The message, I think, is about tradables, but in your graph you show equity and bonds, and you don't talk about the type of firm you are referring to.

This could change the situation. It is interesting to see the following and it goes along the lines of work Augusto said, and it isn't finished, at least at this round of discussions.

We see these strange cycles of higher spending, savings, de-savings later, and you say, well, you get the impression that there is something in the system that finally didn't come to conclusion. But what I do recommend is that you take out from the current account the fiscal surplus, and with this you get the private current account. When I analyze private current accounts in Latin America, we don't see any cycles, we see some ups and downs though, and now we see that current accounts are improving. But it's

the government that causes the misalignments and the lack of adjustments, I'm sorry to say so, but I think that this would happen. So this is a problem, it's supposed to be the governments that…well… have to help us now, but the governments do have an advantage, and it would be interesting to see what other experiences you can show us. I have not compared them, but if it is the government that has entered into this game and undertaken debts, then the government has access to credit lines that the private sector does not. So this, joined to what Augusto explained, could lead to a stronger image of the situation.

JOHN GEANAKOPLOS[3]

Let me explain for a couple minutes why I always tend to look at things through the same lens.

I'll tell you a little personal story. I was an economic theorist of mathematical economy, I didn't know anything, I still don't not know much about the world or much about Latin America, but I decided I'd go to Wall Street to see what the mathematics in Wall Street was.

This was 1989. After a year on sabbatical I was asked to run the Fixed Income Research Department of an investment bank called Kidder-Peabody. Kidder Peabody, during those five years when I ran the Research Department, it went from a negligible player in the mortgage market… this didn't have to do with me really, but to the dominant player in creating securities. And in 1994 suddenly out of nowhere I had to rush back from Yale to Kidder-Peabody because the firm was on the verge of closing. And in fact, after 135 years it did close. I invited all the people in my Department, 75 people into my office, and I said "You are fired" "You are fired" and after the 75th person left, I went next door and a guy said "You are fired".

And so all 6000 people got fired, and I began to think how could this sudden stop have happened out of the blue? I didn't even realize anything so bad was happening.

3 American economist and the current James Tobin professor of Economics at Yale University.He receeived his B.A. in Mathematics from Yale University and his M.A. in Mathematics and PhD in Economics from Harvard University. He is known for his contributions to incomplete markets in general equilibrium theory and to the study of the relationship between leverage and asset prices, the so-called "Leverage Cycle". He is a partner at Ellington Capital Management.

So 1994, you remember, was the year when the Fed raised interest rates 9 times, 8 times, and lots of people were taking long-term bonds and borrowing short term, they were leveraged, they lost their margin calls, lost all their money.

That is when all the crash started, but I didn't know what was going on at that time.

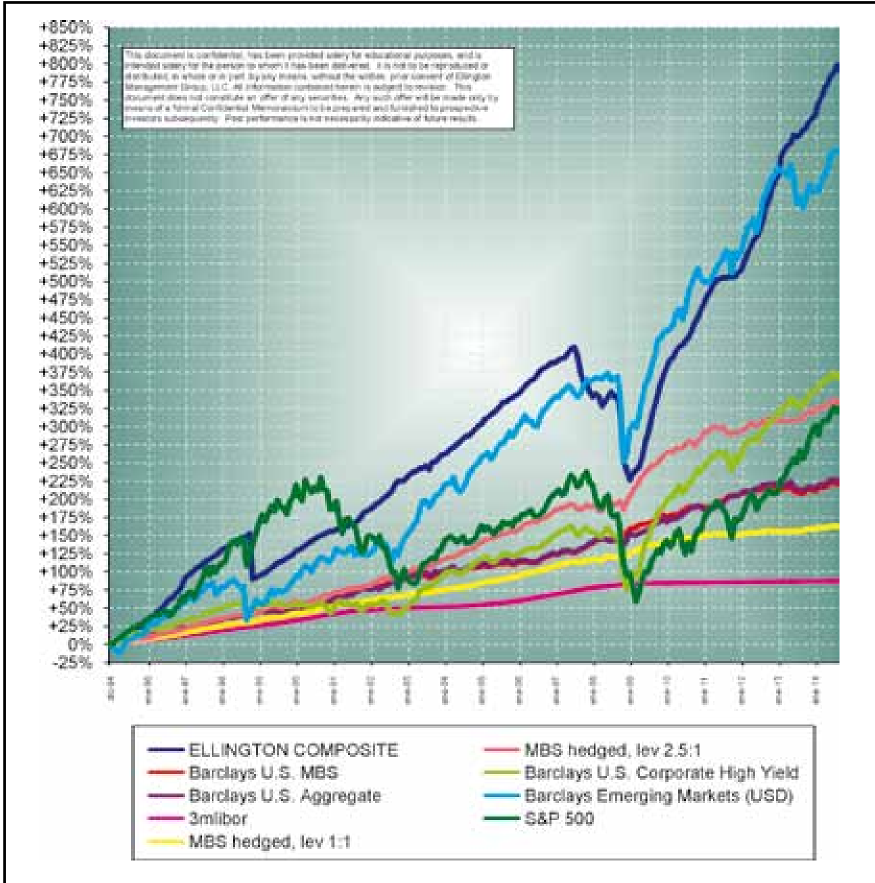
Then the person who ran the mortgage department decided to form a hedge fund and I joined the hedge fund, it's Ellington Capital Management. You'll see on the graph now, the returns of a bunch of different indices including Ellington in the dark blue, and emerging markets in the light blue.

This is what I'm getting to. We were doing great from 1994 till 1998, and then all of a sudden there was the Asian crisis, 97, 98 and Ellington went out of business. It was a complete disaster, there was a margin call again, and the only way we survived was by auctioning off our bonds over the Columbus day weekend, because when you get a margin call, they call at 9 o'clock and ask for money by four, and if you can't give them the money by four, they sell the bonds at a terrible price the next morning.

So that was on a Friday, and the markets didn't open until Tuesday, so over the weekend we auctioned all our bonds off and we tried to persuade various people like Warren Buffett to bid on them, and we asked him to buy our firm. To put up the margin we would give him half the firm at such a low price and he basically said "What's going to happen if I don't buy the firm?" And we said: "We'll be forced to sell the bonds off at terrible prices", and he said "I'll just wait to buy all the bonds at a terrible price".

So you see, in that graph there is a big drop in our returns in 1994. That's the first big drop. So then, that was 1998, the Asian market crisis. So things went smoothingly after that from 1998 to 2007, when again there was a huge crisis. So there is another big crash, and things then recovered and went very well. During all those ups and downs, you'll see our returns in the dark blue and a bunch of other indices, but the light blue is emerging markets, and you'll see they are almost exactly parallel. This is the index of emerging market bonds. They are almost identical the returns and the ups and downs, to the mortgage performance of a mortgage hedge fund.

ELLINGTON COMPOSITE
12/31/94 to 7/31/14



So how could that be? So that is what I began to wonder. Actually I didn't even notice this, till Ana Fostel writing her dissertation found a connection. Maybe some other people found it too, found a connection between high-yield bonds and emerging market bonds.

And so, we decided, her dissertation was actually an explanation for why should these two things be so connected. And the explanation was that the investors in risky emerging market bonds and in risky mortgage bonds tended to be very similar people. In fact, sometimes the same people, so when there was a quick change in margins, all these ups and downs were correlated to leverage, so every crash: the 1994 crash, the 1998 crash, the 2008 crash, they are all connected to sudden changes in leverage.

So there could be changes of leverage in the American market but very soon they would show up in emerging markets.

AAnd what was the reason that we gave when the paper was finally published jointly? (By the way, a lot of people have worked on this, but our explanation was slightly different from theirs). The explanation was that an investor selling mortgages who suddenly gets a margin call and loses a lot of money… a lot of people by the way have worked on this, but our explanation was slightly different from his.

So when someone gets a margin call, he looks everywhere else to get the money and might sell off the emerging market bonds, but more powerful than that, when there is a crash in one market there is an opportunity. So if you see an opportunity, you can't borrow to invest anymore, the prices have crashed, they are so low you take your money out of something else like emerging markets and put it back into mortgages.

So that is the reason for crossover investors. Crashes are opportunities to those kinds of investors, but they have less money because they have just lost it, so they grab money from everywhere else they can, and it makes all these unrelated markets suddenly very related.

So if I had to guess what kind of crisis might occur now, Augusto said things are going pretty well, less well than before. He gave three reasons why everything is so much safer… he is worried about the dog that didn't bark. So I'm also worried about the dog that didn't bark and, which dog is it that would cause the problem if it did finally bark? Because of my limited experience -I'm not going to use the same explanation for everything- it is going to be a sudden change in leverage.

Where would that happen? Well, there are two candidates, and here Guillermo gave a brilliant description of the Chinese market. They are at the peak, just past the peak, of an elaborate cycle. They allowed through margin borrowing and free credit this incredible run-up in all their prices in the housing market and in the stock market, and you could easily imagine a crash in China, so that would have a big effect in Latin America.

In fact, maybe it was Augusto who explained this to me, one way of betting on how well China is going to do is to bet on Latin America, because there is so much connection and trade between the two.

So I'd bet on China as a potential source of a crisis and then, a second source is that the US is about to raise the interest rate. This is exactly the situation in 1994, where for a long time the interest rates had gone down down, down, and at the beginning of 1994 the Central Bank of the US eight times raised interest rates.

And that caused all these people who were just counting on safety and nothing changing and borrowing short to get a higher yield on the long-term bonds, they were taken by surprise and it was a tremendous disruption.

So, if this would occur again in the US, then you can be sure that some of those crossover investors would move their money from emerging markets back into American bonds, you'd see the same kind of collapse that you saw 3 times in that picture. So those are the two places where I would look for problems.

MARIO BERGARA (MODERATOR)

I'm going to take up some of the points in order to try to provoke a second round of answers. I see that it's difficult to get you talking so I must keep you to talk only for 5 minutes each.

I think it could be a good motivation to continue exchanging points of view.

Firstly, I wonder why the economists talk so much about the countercyclical vision, why we are not making procyclical analysis, because in fact, 2 years ago we had a certain vision and the risk was complaints, and now it would seem that the world is tumbling down. Augusto is new in this situation, but is part of the calm we're seeing, and my question is what has changed? If something changed the world, then we have to change our analysis, but the things that are changing actually are things that could be predicted.

We've said it more than once: very low dollar interest rates, did anyone think that this was going to last forever?

No, at some point in time there was going to be a normalization of

global financial conditions and this process is ongoing and fortunately in a gradual manner.

In China, the deceleration three or four years ago, the IMF and other international organizations already predicted this deceleration and the Chinese financial system was put in doubt a few years ago, the shadow banking, the lack of information, the uncertainty about the behavior of the Chinese financial system, etc… So what I mean is, that apparently there was no storm that came suddenly.

These are changes that were anticipated to a great extent a few years ago. And there's something I would like to stress, something Augusto said, we have to determine whether this is a change of equilibrium or a different phase in the cycle, because the policy recommendations will vary. If it is not a question of cycles, we should not talk about countercyclical policies, but adapting to a new equilibrium, a new trend.

There will be cycles. And in our country these cycles are true cycles, because in developed countries the ECG almost doesn't vary, while in other countries it does change a lot.

From what Guillermo said, I would deduct that the key would be whether we are prepared for this new equilibrium, and hopefully there won't be a *sudden stop.*

I was more concerned about the sudden stop when we had mechanisms of exchange rate inflexibility, but now there has been absorption of the exchange rate fluctuations, we have had a 50% exchange rate fluctuation during these last years and in any other regime with fixed, the "Tablita" or the bands the range of the exchange rate could have been a catastrophe. However something shows that balance sheets adapted, and this huge depreciation has not had significant effects on the balance sheets of most of the government, the enterprises, and the households.

What I mean secondly, therefore, is that we have to get ready with a new platform and we have to be ready for new circumstances, but we cannot see Latin America as something homogeneous. There is a lot of heterogeneity in Latin America, determined by Brazil and Mexico, and the rest can be on one side or the other, in the middle, etcetera.

When we analyze the previous cycles also, and the concerns with regard to the current account and to fiscal aspects, and of course inflation from a macroeconomic point of view, we have to be concerned but also we have to enter into details in our analysis.

As you said, there was some graph that was missing from your presentation, but in some countries, these changes have been processed correctly. In 2015 the deficits of the current accounts were already adapting, especially in the private sector. In Uruguay we had a strong deficit last year but now the first data is 3.5, the adjustment was made essentially by the private sector, which is almost leveled.

But coming back to the current account, I think that the composition matters. The deficits in current accounts in the 90s were not explained by the accumulation of reserves or the other side of FDI, which explained in many cases the deficit in current accounts in many countries in Latin America, at least during the last six or seven years.

I think that the vulnerability caused by both situations cannot be compared. So these are just some ideas that maybe can be discussed later.

GUILLERMO CALVO

Well, I have a few graphs on current accounts and it's true that in Latin America the situation is very heterogeneous, Brazil, Colombia, Uruguay had negative figures in the current account, but in the graphs at the bottom we've also seen Paraguay, Mexico, and it is not the case there, we don't see any cycle.

So there is a lot of variety. From a consensual point of view, I think that it is very important to understand the following.

You said something very reasonable, for those of us who are trained in international macroeconomics, we saw all this coming, but in that case, why is it that when they come, they cause so much turmoil?

Are we being irrational in some way? Who is the player? Is it the government? The government is not performing properly and has to make adjustments afterwards? Does the private sector not see what is coming?

In traditional models, and in the tradition of the rational expectations that has been developed, we have killed the role of the financial market as a risk factor in itself. But this cannot be. We teach students that the shock comes from now to 5 years, so it has been taken into account, at the moment and things happen slowly, but for example, a shock in the present discounted value or the shock of the terms of exchange; well these things are not very significant except if they become permanent.

They are temporary, and it is very easy to have the figures if we have access to the capital market. The problem is that we lose access to the capital market and this is not in the model, and because it is not in the model, it is making us think that because they have been anticipated they are not going to be harmful because they were anticipated. This is where we misunderstand things, and although we don't have a theory of policy making we cannot say "well, because I don't have the theory I'm not going to think about it".

I think Mario,that the following could happen, it has happened in the past, as John has explained, with people who are in the business of investing, that they miss something. Maybe, they didn't miss anything in the past, but this time it happened, and in the nineteenth century there were already sudden stops, whether we like it or not these phenomena are already there. But we have to continue working on the theories.

Finally for lack of time, with regard to the flexible exchange rate, I'm very happy, that it is very crude, that is something that we showed with Carmen (Reinhart) in a paper called "Fear of Floating".

We call flexible anything that moves. What does this mean? Well, I don't know; conceptually it is very difficult to know what we have if flexibility means that the Central Bank lets the exchange rate float or not whenever they want, well, the government has less problems, but the problem is being passed on to the private sector.

So if I'm entering in a period in which there is an adjustment from time to time and I think it is all right, fine, but if it starts floating up and

down all of a sudden, maybe you will be faced with a problem, because it will interfere with trade, etc. So I'm happy that right now you've found a mechanism that seems to have helped. But for the record, in our work on sudden stop, we analyzed the probability of a sudden stop and the variable of exchange flexibility is not significant but I'm one of the authors, and maybe there are not many variables in the sample, alright? Maybe it would be very interesting to have a larger sample.

Well, flexibility of the interest rate is not that the Central Bank does whatever it wants; otherwise, it transfers the problem to the private sector and it creates more uncertainty, but if it announces criteria for intervention which are more or less credible, and also if it creates instruments to protect for the private sector to use to protect itself, the futures, forwards, etc., it becomes more credible.

JOHN GEANAKOPLOS

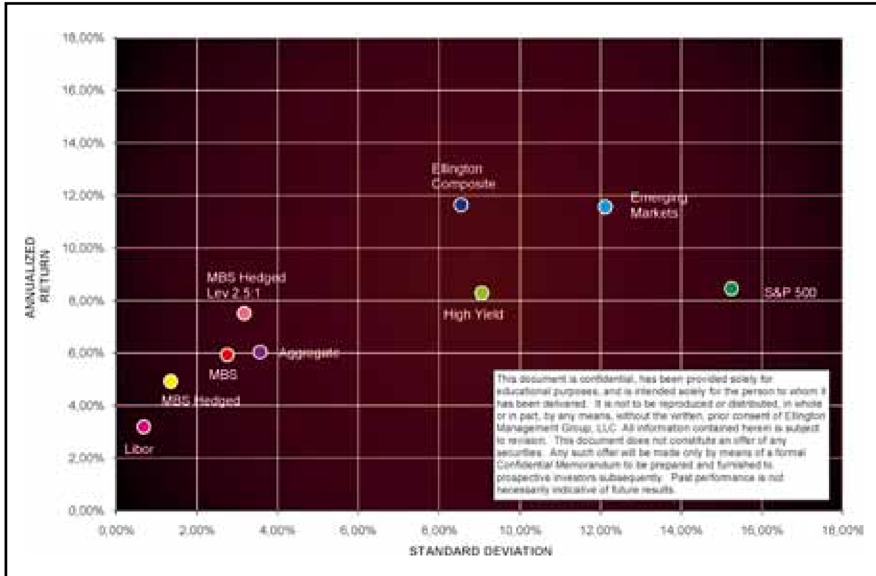
So I think that, I'm going to continue on my theme.

What I see as a potential problem is a sudden change in the flow of credit, so in the US, in fact, the whole world, this is sort of a big cycle. Things were booming and then going down for a while, you see that in Europe, you see that in America.

But it's a little subtler than that, because in America the flow of credit to corporations has gone rapidly up. It is very easy to borrow if you are a corporation in America, there are low interest rates, you can get high leverage, it is a paradise almost for a corporate borrower, but the homeowners and the consumers and the small business people have a terrible time still, borrowing in America.

I'll show you a slide showing that it was getting better than last year, but still the rates went from 20% to 15%: horrible borrowing.

ELLINGTON COMPOSITE
12/31/94 to 7/31/14



During 2003 to 2007, homeowners who already owned their homes borrowed a trillion dollars a year using their homes as collateral. Now there is negative borrowing, there is de-leveraging, so a trillion dollars a year was taken out of the economy and of course that is going to depress the economy. So I see that the potential for big effects on an economy comes when there is a sudden change in the availability of credit, which is often connected to collateral.

I think that in the US, things for the consumers are going to be getting a little better, but the crisis and the crash could come in the corporate sector where the leverage cycle was up pretty high again.

I think that Central Banks are better prepared to prevent the crisis but aren't really in better shape to help an economy out of the crisis than they used to be. Why is it that there is no growth practically in Europe, and there was no growth almost in America until this last year, even though the interest rate has been 0 for seven years?

The reason is that despite lower interest rates to the productive sector, small businesspeople and consumers cannot borrow money. So how are the Central Banks?

Suppose that happens in Latin America, that suddenly things turn around and unemployment starts to go up. What is the central bank going to do?

You can't lower the interest rates much more. The Central Banks don't really yet have a mechanism for pushing the economy up, except to lower interest rates. That is not enough.

I think that they are going to have to adopt ways of lending in different ways, not just lowering interest rates, not just changing the discount rate. I think that the Central Banks need stronger tools, like I was talking about in my talk earlier…

AUGUSTO DE LA TORRE

Well, perhaps then to approach the opinions here I little bit, I think that the differences that can help us with Guillermo here is that we understand where the epicenter of the sudden stop lies and my position is that in the past in Latin America part of the sudden stop was due to the weaknesses, not fully, of course there is an exogenous effect, but I think that sudden stops in my view were partly caused and amplified by weaknesses of domestic macroeconomic policy, they were more self-inflicted.

The proportion of a sudden stop is self-inflicting, but I think they were high and there are ways in which you can ruin things.

One would be an imprudent fiscal policy; the other one would be these maladies of the financial development that John mentioned, and usually they are followed by significant drops, in which collateral plays an important role.

So my argument is the following: I am very much concerned that there will be a sudden stop due to external factors, China, the US, because of the collateral and its influence, and the way I think this will send us into an equilibrium that would be even worse than the one we have now with a much more depreciated exchange rate.

My hope is that domestic factors will not contribute as much as in the past and will act as buffers. The question of *mismatches* is a question

to discuss, we have very important data that shows that there has been a lot of indebtedness in dollars, but I don't think it is linked 1 to 1 to increasing mismatches.

Many people have taken debts and loans in dollars and there are many Latin American enterprises that have bought international assets and have entered into international operations. So my impression is that an increase in dollar loans in the private sector has not been followed by mismatches as we saw in the 90s. Now, if we have a sudden stop from the outside and I fully agree with you and with John, that what we would have to do is quite unconventional, because at that time to try to move the interest rates and to make adjustments to the fiscal margin we would have to talk about quantitative matters and how to use these reserves, and the savings that we have, to reactivate the credit flow. So I agree with that, but that is where we are now and we won't be able to get more prepared than what we are now.

And so we are sort of expecting something very serious to come from the outside. Now insofar as nothing serious comes in, we already have enough problems, a complicated matter, which is to adjust microeconomics to a new level of income. Now if you look at that in that way, I am even more pessimistic than you are.

I already think that we have very serious problems at macro level, such as the financial issue. So the question of this balance that you were asking me about, this equilibrium, I think this has been one of the largest contributions of data from Milesi-Ferretti (IMF).

What you have there is the net balance position both for the private and public sector *vis a vis* the rest of the world in debt and equity contracts.

I think that is fundamental, all these things that John developed, is applied to debt contracts, because that's where you have a default, that is where you have a rollover rate, that is where you have these complicated risks.

Now, but for equity contracts, that's another animal. And I think that the current account deficit in the region is funded by equity contracts and that is why our position *vis a vis* the world has become a deficit situation in equity contracts and a surplus in equity contracts, so in the balance I don't think it's trivial to see how well prepared we are in case of a possible sudden stop.

GUILLERMO CALVO

Well I am going to try and disagree with my friend Augusto for your fun. So I would like to recall something here. Sudden stop is a cease of credit flows, that is, you can have a sudden stop even if you have to pay a debt and I have a current account of 5%, that is negative, and they don't lend me, and I don't have to repay my debt, I have to make an adjustment of 5% and that is going to be a terrible problem, that's going to be really madness.

When I look at the Tequila crisis, they had negative 8% in current account, they were planning 9% for 1995; in fact, the Tequila crisis was in 1994 when interest rate started going up, and then Carmen and I anticipated this Tequila with this paper and we said "when this goes up this will explode".

So, good for us because we predicted it well, but it's bad for the region because it did happen, and what happened was that they had a negative 8% of current account, and it went down to 0, and they didn't have to repay anything in principal.

Now, the question of the balance sheet is important, that is a vulnerability, because when you change relative prices, if I have a balance sheet that is unbalanced, then the relative price will bring about internal financial problems. I am not taking that into account, but anyhow, we have a big problem, particularly in this region, let aside Uruguay, but we were in Colombia, and they are very worried about the very negative current account that they have, and it is very much involved with, the large oil exporting countries and the fall is by 50%. So it's not an insignificant problem, as you can see, and the same thing happens in Brazil. So these are two large countries that may have these problems but they may have them, but they don't have to repay or pay back their debts. So I think that we all agree there with Augusto, because if it comes from the outside, and that is what John was also saying, that's our main concern. I don't know if this is going to happen, but if it does, and if it does come from the outside, the fact that you have a balance sheet that is more balanced is not enough for me in the first place.

In the second place, which is technical, but it is important to take into account, is that I may not have a currency mismatch, but have a time

mismatch, and many of the problems, you know, I can have everything in dollars but my debt, and that was a problem for shadow banking, there was a lot of debt, ABS were doing bad securities, you know, they were going to say it was going to be liquid all the time and they were going to use it to get real money and then they couldn't, and then the collateral value fell by 50% with a terrible haircut.

Although this is in the same currency, I'd like to know if the loans they received were in short term or they were fully accompanying all the projects.

Usually banks do not accompany the projects and if they do, then you have the problem of the collateral that Ana (Fostel) and John mentioned. So I think that if there is any sudden stop which you can call systemic what we have seen there, and let me say it, in 1998 it was clear, it hit everyone and then look and see what's happened, but first of all, they come out. Particularly this is so, and I agree with people who say that very low interest rates in the US have invited to look for liquidity given elsewhere, when you look for liquidities and you have someone looking in because they say he wants to pay back very quickly and you can discuss the rationality of that, but if you have that kind of funds, those funds, are going to leave straight away, because they have no interest and they don't know where they are, you know, those funds that's where John's and Ana's collateral thoughts are, they come to the emergent countries without knowing anything.

That's another point to take inot account: where do they go? And that is why they lend for consumption, because they do it through banks, because Mario…sorry…I'm sorry, because we've already learned those lessons well, but this question that Central Banks are always behind the banks and I agree, and there is a problem of moral hazard, so it's easier to get in by lending to a bank than if I go directly to a bank, because there is something safer there. So it is possible, and even there the collateral is something that we have been paying a lot of attention to in our countries, that entrance of capitals may be distorting.

My colleague Ricardo Rice in Columbia has a paper where he argues that the problem of the entrance of capital import that has gone wrong, is very much involved with collateral that made them make bad investments.

And in Europe you can see it clearly, there is evidence showing that capital, that model that we had, where capital moves and capital will look for the most productive places is not true, it may be so in the long term, but to that end I must have the tools, strong tools, because otherwise they are going to move to the places where they are more protected, so that capital is going to be distorting. And when you take it away it will bring about problems, that is my concern as well, but I am not anticipating, I wish it didn't happen. The empirical evidence we have is the better the fundamentals, the lower the probability to happen in that particular country.