THE BROOKINGS INSTITUTION

SAUL/ZILKHA ROOM

CHINA'S ECONOMIC BUBBLE:
GOVERNMENT GUARANTEES AND GROWING RISKS

Washington, D.C.

Monday, July 11, 2016

PARTICIPANTS:

Introduction:

CHENG LI
Director and Senior Fellow, John L. Thornton China Center
The Brookings Institution

Presentation:

NING ZHU
Deputy Dean and Professor of Finance
Shanghai Jiaotong University

Moderator:

DAVID DOLLAR
Senior Fellow, John L. Thornton China Center
The Brookings Institution

P R O C E E D I N G S

MR. LI: Good afternoon. I'm Cheng Li, senior fellow and director of the John L. Thornton China Center here at Brookings.

Thank you for joining us for this timely and important discussion on the economic situation in China, and the prospects for the future. Like many other topics related to economic and the political dynamics around the world, China's economic outlook has become increasingly paradoxical, incomprehensible and unpredictable. Of course, there are many other things.

And China's economic problems, such as the property bubble, corporate debts, local debts, shadow banking, overcapacity, deadlock in the reform SOEs, are all widely recognized. But the property prices are still rapidly rising.

I was in Suzhou last week and was told there are so many, thousands of the condos are priced for more than 10 million. These are not really very fancy, I mean, condos, but each of them cost 10 million Chinese yuan, and about $1.4, USD $1.5 million. Gigantic SOEs are becoming even bigger, and they have no worries about the financing, foreign firms and foreign investors are apparently leaving China for various reasons.

But still, very few policy measures are being considered by the Chinese Government to prevent potential large-scale capital outflow. Without the dollar China's economic bubble, if and when it bursts, will have a serious impact on global economy. It is also certain that the ramifications of the bubble will extend far beyond the domain of economics.

Today we are fortunate to have with us, Professor Zhu Ning, the author of the well-known new book, entitled “China's Guaranteed Bubble” (Speaking in Chinese).

By the way, Professor Zhu, you really have brilliant titles in both English and Chinese, and maybe that explains, the price of the book is also very high.

Well, he will help us understand the dangerous perception of the government guarantees that encourage risky behavior and then more importantly, though somehow, also paradoxically, why he believes that it's not too late to prevent devastating consequences.

Now born in Beijing, Professor Zhu received his bachelor's degree in economics from Beida, Peking University; his master's degree from Cornell, and his doctor degree in finance from Yale.

Before he returned to China, where he currently serves as a deputy dean at the Shanghai Advanced Institute of Finance at Jiaotong University; Professor Zhu was a tenured professor of finance at the UC, Davis.

I've just heard that he's now moving to Tsinghua University, Wudaokou , and now called the People's Bank of -- What's the name, People's Bank --

SPEAKER: PBOC.

MR. LI: PBOC School of Finance at Tsinghua University. And Professor Zhu first will deliver a 15-minute PowerPoint presentation, or 25-minute, sorry. Thank you.

Then my distinguished colleague in the China Center, David Dollar, David Dollar will moderate the Q&A. And by the way, David has his own book, and will have book launch this Wednesday, in the Falk Auditorium, on China's Engagement, Business Engagement Africa, is another very, very important topic.

The Q&A session will start with the conversation between the two of them, and then open the floor to the audience. So, please join me in welcoming Professor Zhu Ning. (Applause)

MR. ZHU: Thank you, everyone, for coming. And I would like to take this opportunity to thank Dr. Li and Brookings for the invitation. I really appreciate this privilege to share some of my thoughts about China's economy and the financial reform. I think I just want to follow up on what Dr. Li has said.

I was Seoul a month ago, and my host in Seoul was complaining to me how expensive Seoul has become in terms of housing prices. And I sat down over dinner table and did the math, and it turns out that I think Shanghai and Beijing are a third more expensive than Seoul these days. That is, despite the fact that South Korea's GDP per capita is more than two-and-a-half times as high as that of China.

So, going back to the main topic, I think I want to deliver a fairly simple message in this book, and in this presentation. I know you all have very busy schedules, just before you go, I just want to say what the main message I'm trying to deliver in this book is the following.

As I will show ion my presentation, I think China's government has been providing guarantees implicit or explicit to China's economy over the past three decades. Such guarantees have been really instrumental if not necessary in propelling China's economic spectacular growth in the past three decades. But it's reaching a point, I think, that guarantees are inducing Chinese investors, Chinese households, Chinese enterprises, and local governments to change their risk-taking and risk preference.

And if everyone in China is investing under the impression that they are being guaranteed, or they are being insured, now of course there will be increased leveraging, and increased speculation in the economy, which might eventually lead to the bubble and the unavoidable consequences of a burst.

So, that is what I'm trying to do in this book. It's a pretty thick book, so what I'm trying to do in the book is basically trying to use different aspects of China's financial market and the Chinese economy to provide different manifestations of how the guarantees influence or induce the investor's behavioral and the risk-taking activities in China's economy.

But before we go any further, I always ask the following questions from the audience. I want two answers from you for each of the following three scenarios.

The first scenario, you bought a shadow-banking product that promised to return you 20 percent per year for the next two or three years. But then three months after you bought the product, the company went bust; not only that, the intermediary company, the trust company or the bank, fell apart as well.

So, two questions: What do you think? What would you do?

The second scenario: This is quite rare these days, but a year ago, not too long ago, a year ago, you have this scenario happening quite widely in China. You bought an apartment that is promised to be delivered to you next year. But three months after you bought the apartment, the developer has decided to slash the price from USD $10,000 per square meter to USD $8,000 per square meter. By the way, this is no longer the top notch apartment in Beijing or Shanghai anymore.

Again, two questions. How would you feel? What would you do?

The last question: You bought the index futures of Chinese stock market when the index was trading at 5,000 points, and of course this is not fictional, that is where the market was standing at about a year ago. But then three months later the market dropped to 3,000 points, which meant that you lost 40 percent of your investment within a matter of three months. How would you feel? And what would you do?

So most people would say; I feel disappointed. I feel frustrated. I feel angered. But the real question, I guess, especially to audience outside China is: Would you do anything about it?

And so second question -- or answer to the second question that sets China apart from the rest of the world. And this is what the Chinese investors do if they bought something which they thought are highly returning, and safe, and turn out to be not as safe as they had thought. These were the angry investors of an Internet finance platform called *Yunan Fanya*. This is how the investors have learned the news of the company falling apart and they would not be able to recover their proceeds. They were standing in nothing but the headquarters of CSRC, Chinese SEC. And this is the close up.

And these are the banners posted outside a real estate developer in Hangzhou, China. And what is being said in the banner is: Well, we demand a price adjustment or a refund for the apartment that we bought which has been slashed in price.

If the real estate developer were now to give us refunds, we are going to collectively return our apartments, as if in the contract there is a stipulation that if someone can return the apartment back to the developer, if the price falls below than their purchase price.

And what if the real estate developer said no? Then the angry purchaser of your apartment would smash your sales office, turn it into the zoo, and in some more extreme cases, held your sales people, or managers hostage before their request or demands were satisfied.

And what if some investors lost money in China's stock market? This happened not after last year's stock market fiasco. This happened in the 2007, 2008 stock market rollercoaster rides. So what it says on the flag is, if the market were to fall on Friday, not a single person inside this building were to be let out. And of course, the building is nothing but, again, the headquarters of the CSRC, China's SEC.

So this is what I'm trying to do in this book, about the guaranteed bubble. So, if China's investors, households, and enterprises believe that they are being guaranteed, that they are being ensured that their investments are guaranteed to return certain levels without having to take risks. It is just natural and rational for every person to leverage up as much as they can, to speculate as aggressively as they can.

And this very rational decision at individual level, would aggregate into an irrational outcome at macroeconomic sides, and that is the common -- adding our problem in macro-economy, a rational decision on micro sides can turn into something that's disastrous on the macro side. And if everyone is doing that, I think we might, unfortunately, see a bubble forming, and nothing happens to a bubble except for two consequences, one is a bust, the other is a malaise situation like Japan.

So this is the message I'm trying to communicate in the book, and I think as Dr. Li properly pointed out, I'm not one of those people who are trying to say China's economy is going to have a hard landing, or it's going to collapse.

On the other hand, I think there's still a lot of vitality in Chinese economy, however, I do want to use this book as a wakeup call to remind people that if we are not going to engage in meaningful and decisive reforms in the near term, we might be missing the opportunities, and window of opportunity is closing before we can pop the bubble, or prevent the bubble from escalating in the first place.

So that's what I'm going to do. And the roadmap is pretty simple, especially given that I don't have too much time, I want to talk about what is guaranteed bubble, and then give you a couple of examples of what bubbles look like in Chinese economy and in Chinese financial markets. I will propose some ways to defuse or to resolve the bubble situation in Chinese economy.

Now I don't think I have too many economists in the room, so I will just quickly walk you through with what a classical bubble is. A bubble is sharp rise in price of an asset or range of assets in a continuous process, with the initial rise generating expectations of further rises, and attracting new buyers. The key here in any bubble is something that's called a self-fulfilling prophecy.

People buy properties because they believe the property prices will keep rising. In that thinking logic, they don't really care whether there is any fundamental value supporting the housing prices. The same thing has happened in the U.S. right before the 2007, 2008 global financial crisis. The same thing has happened in Japan through the 1980s, through 1990s, financial and a stock market crisis. The same thing has happened as early as back into the 17th century, during the "Tulip Mania," when a single bulb of tulip seed can fetch the price of 20 condos in Amsterdam, downtown Amsterdam.

That is what happens in bubble. During bubble periods nobody questions about the validity of finance or economics. They only care about one thing; that is the price will keep rising. As long as this chain of expectation forms, people are happy. But whenever, or eventually when the trend or the expectation did increase or the -- did change or reverse, you will see very catastrophic outcomes happen.

So, I just want quickly summarize, what are the necessary conditions for bubbles. The economists have been doing a lot of research trying to understand what cause bubbles. So, there are several elements. One is excessive liquidity. So, Milton Friedman once said, "Inflation is nothing but a monetary phenomenon," I think so is bubbles. You never have a bubble during an austerity period.

The second is, you always have something that ignites people's imagination, fantasy. You don't need to take risks, you need a new technology such as the steam engine and locomotives. You need a new economy such as Japan, and you need a new business model such as the internet. And then you need something that is quite specific to behavioral finance which is my primary research area, which inexperienced investors; investors who have only seen the good days, not the opportunity to see the bad days.

And they always have the support from the government, whenever you see innovation is being pushed forward without restrain, is pretty much because the government wants to see those innovations happening.

I just want to give you a very interesting example of what happened back in the Netherlands during the tulip mania. During the peak of the tulip mania, the government allowed the investor to come to the government and to pay down 3.5 percent of its transaction value to buy a certificate, a certificate that allows the investor to declare the contract that he has had with the counterparty, invalid.

So this sort of reminds me of something called the CDS, the credit default swap, right before the global financial crisis. So, if someone else is guaranteeing your investment returns, or your risks, of course everyone has incentive for increasing your speculation and your leverage.

And of course, if that happens, that's going to gradually form a bubble, and we have seen over time, time and time again, starting from the Netherlands in the 17th century, going to the U.K. in the 18th and 19th century, and then we go to the U.S. in the early 20th century, then Japan in the late 20th century. It seems that all major economy, or the largest power in the world would have to go through at least one of the bubbles.

To have this catharsis, to have this clean up, to resolve the overcapacity issues that they have had during their prime days. And the question is whether China is going to repeat the same experience. And China is so unique in the way -- I think you probably all know what a guarantee is, and so I will just quickly pass it.

China is so unique in the way that I think Chinese government is so resourceful, so powerful and so devoted, that it has done some miraculous things in the past three decades, and specifically, I think the guarantees which are causing today's trouble, were actually necessary and extremely instrumental in propounding China's economy.

So categorize them into three different baskets. The first is the guarantees in policies. Try to think of Mr. Deng Xiaoping's saying about, to develop to develop is of paramount importance. Or, I don't really care whether you are black cat or a white cat; you are a good cat as long as you can catch the mouse. So, it's a very pragmatic in propelling the economy, dragging Chinese society from a class struggle into economic development. So, that is a very basic guarantee.

The second is capital formation. So, capital formation has been attributed as one of the major impediments for emerging economies to grow their economy. But in China, starting from 1986 until nowadays, the total monetary base has increased to 236 times, starting from 2001 alone, the M2 monetary supply increased from a little bit over RMB 11 trillion to over RMB 150 trillion last year.

So, such a vast speed in monetary supply propelled the asset prices to go up, also provide the lubricant economic growth needs in China's fantastic growth.

And finally, and the last thing that I want to spend more time in the book at least, is the guarantees in specific investment returns. That is if some investor were to in something, the government will guarantee the investor will not lose money. Not only not lose money, but also obtain a guaranteed level of returns. So, I note that the shadow banking has been a huge problem in China a few years ago.

I have been a heavy buyer of shadow banking products ever since moving back to China. I admit it. And I only did it because my students came to me and pitched on so many products. And for all the sales pitch, I never bothered going into the details asking, what does this company really do? What does the cash flow look like? I only ask one simple question and one simple question only. In the case of losses is your company, or the banks affiliated with your company, taking responsibility for my principal, and for my returns?

And I sign off whenever I hear, a resounding, yes, to my question. And I believe a lot of investors who have far less financial expertise are doing exactly the same. They don't really care about the investment or its returns, or its risks, they just care about whether someone else is taking responsibilities for his or her own losses.

So, reduced down to a simple moral hazard or too-big-to-fail problem, the only difference is, I think in China, the government is too big to fail, so many people tend to think, well, maybe it is because it's in China that this problem will not explode eventually. But then, I guess the four most dangerous words in investment, according to John Templeton, one of the founding fathers of mutual fund industry in the U.S. is, "This time it's different."

Okay. Now let's turn into a few examples in Chinese economy and the financial markets. How am I doing time-wise?

SPEAKER: At least 15.

MR. ZHU: That's what I thought, perfect. The Chinese stock market: The stock market has attracted tremendous attention last year, in the global arena. And even after the market fell from 5,000 points to 3,000 points of where the market is standing right now, many people still believe China's stock market, the mainland Asia's market, is not cheap.

This can be manifested in a way that many Chinese companies which are listed in the U.S. at NASDAQ, are all trying to do one thing. They are trying very hard to delist from NASDAQ and then relist their shares back in China. So, I think they are voting with their feet about where the valuations are more attractive.

And for some of the companies which have dual listing, the shares are listed in both mainland China and Hong Kong, the premium of the A shares can be sometimes as big as 100 percent over the H shares which is traded in Hong Kong and available to be bought by foreign and international investors.

So, why is there such a discrepancy in the valuation? If you look at China's IPO process with a listing in requirements, it is really painful, uncertain, and difficult to go through the listing process to turn one private company into one listed company. That is why in China nowadays, any listed company, even though this company has been losing money for the past three years, has no growth in its revenues, no company is worth less than RMB 2 billion.

And that RMB 2 billion is pretty much what you have to pay to avoid yourself the pain, the uncertainty of going through the listing process. And on one hand you will have suppressed supply of listed companies, on the other hand, as I mentioned, the monetary supplies increasing at 15 and 16 percent per year, so there is so much capital being created inside a country, and then China until nowadays is still largely a closed economy, meaning the money being printed inside the country cannot float to other parts of the world.

So on one hand you have the restricted supply, on the other hand you have increased demand from household enterprise trying to invest in the stock market. So it's not a surprise we have much higher valuation in the Asia's market. And after last year's stock market fiasco, I think several things became very clear, one is a special company was created just to shore up the market, or prevent the market from further falling.

Another thing is, index futures, a very important energy narrated derivatives which are helpful in facilitating negative information into the market are being strictly constricted. So, I think those policy measures, made the investor believe the government is trying its best to keep the market not from falling or maybe make another comeback. So that is why there's a saying about the national boom market, and this word comes from this article last April, in People's Daily, which is the most authoritative official media in China.

In that newspaper there is one article saying, well, 4,000 points is just a start of another major bullish market. And it's under the influence of this article, many investors who have no idea of investment or finance, pour their lifesavings into the market. So, that’s the stock market.

In real estate, I think, I mean it really doesn’t need any further explanation about how expensive it has become when it comes down to the real estate sector. And the reason, I think, again, if you think of this in the framework of government guarantee, it's pretty much all of the failed attempts to rein in real estate prices in the past decades.

That is solidifying investors' confidence that the housing market is only allowed to go up, not to come down, by no one else but the government. So, every Chinese believes it is in the government's interest to see further increases in the housing sector.

So, for the central government, GDP growth depends heavily on real estate sector. The real estate and related sector are reported to have contributed to more than 0.25 percent, a quarter of China's GDP growth.

For the local government land sales revenue are the major contribution to lend to the revenues of local governments, so that's why we see, for everyone believe it's going to be going up, and what if everyone has such a belief, of course you will see people will go into the speculation without any restraint. Earlier this year we have some financial innovation called a down payment loan.

So if you cannot put up enough money for the down payment, the real estate agent can make you a personal or private loan, so that you can put down money for your down payment. This, of course reminds me, of the ninja mortgages in the U.S. right before the outburst of the global financial crisis.

Okay. So, I don't have the time to go into other shadow banking, Internet finance, but I want to spend another five minutes on this topic, which is, but this is not just limited to Chinese financial sector, this is actually becoming the major reason why we are seeing overcapacity in so many industries. Why we are seeing overleveraging in so many corporates, and why we are seeing such an increase in local government debt.

So, all of this because many of the enterprises and the governments, they don't really worry about the debt. They've done and they understand that central government will eventually come in and bail me out if I were to into any sort of trouble. I want to give you just a very anecdotal experience about the steel industry.

So, according to some unofficial statistics, it's not just a fact that China's steel capacity is more than one-half of the world's steel capacity, it is even more interesting that if you take out a single province in China, Hebei Province, this is the province right outside of Beijing, which has given Beijing all the pollutants -- not all, but most its pollutants, Hebei Province, not just Hebei Province, a single city named the Tangshan in the Hebei Province, it's steel capacity is larger than that of Japan, which is the second-largest in the rest of the world.

So how did we get here? We got here because a lot of the government policies encourage new, strategic industries to be built. Wind turbines, solar panels, aluminum, they were all once highly-demanded industry which has a large under-capacity, but within the matter of three to five years those industries started -- went into severe overcapacity, sometimes as big as 100 percent.

That's because the NDRC, the central planner, encourage people to develop in those industries, and each province is trying to catch up with Joneses, they are trying very hard to invest in their own area to facilitate or to grow those industries. So, again, a lack of coordination leads to a national overcapacity within a matter of three to five years.

Now of course private enterprises are also responsible as well, because many private enterprises they understand too big to fail. They understand if they are large enough, if they are the largest employers in the province, if they are the largest company in the city, if their company goes down, the local economy will be severely jeopardized. So, in consideration of their own career, local government officials will have the incentives of using government's resources to have their enterprises.

So, sort of have the guarantees from the private enterprises to the SOEs, to the local governments, but then eventually all falls back on to the central government's balance sheet. So I don't have time to go into that, but I think it is really an important area of question which is; the central government's fiscal sustainability. That is how I got first an interest into this topic and in writing this book.

And there's a lot of debate about how solid central government's fiscal situation is. I think it is definitely better than many of the other major economies to say the very least. However, if you pour into the details of some of the attempts to compile a national balance sheet for China, some of the assumptions are probably too aggressive or not able to stand up to the rigorous task, which I will spare you the details with. Eventually, I think it boils down to the fiscal sustainability of Chinese central governments.

So, okay, I will skip this. I'm just trying to say that this is not just a China problem, I think the entirely world economy is growing into the mode of mixing fiscal policies with monetary policies, and using more and more off the government's credit to propel or to ensure the private economies going forward.

What I want to spend another two to three minutes is, how do we reform? I guess to be settling into the three types of guarantees, the institutional guarantee which is just to grow the economy as fast as you can, or the capital guarantee which is to provide the monetary supply as much as you can, and then the investment guarantee, which is to ensure your investments are not going to lose money.

I think specifically we have to shift gears and try to balance between growth and overall development, between speed and sustainability, between investment and consumption, between public and private sector. So, try to just taper off the speed target a little bit, I think that will help a lot of things go a lot more smoothly. But the capital guarantees I think we need real interest rate liberation.

So the cap on savings rate has been removed last year, however, there is still wide practice of window guidance about what can or cannot be the maximum interest rates banks use. So, until we have a full interest rate liberation money or capital will still flow into SOEs which are not positively returning returns, and it will still make it hard for the small and the medium enterprises to survive or thrive.

And then we have the taper of the investment guarantees which is what investors will have to learn with their own money. They have to learn from their losses, and certain bad companies will have to let -- bankrupt or go just close their doors. Instead of doing that, I think we are seeing increasing the so-called zombie lending or the zombie companies as what Japan has been witnessing over the past two-and-a-half decades.

So, further fiscal and taxation reform, financial reform, and legal reforms are much needed, and as I mentioned earlier, I think the window of opportunity is closing, not opening, because of the very fast speed by which Chinese debt is increasing over the past five years.

So, I think I always want to end a presentation with some philosophical debate about -- the debate between Hayek and Keynes about how active the government should be involved in propelling the economy, and we are talking not just a short-term economic growth, but a medium to long-term sustainability. So that will be my presentation. I thank you so much for your patience. (Applause)

MR. DOLLAR: Since I'm already mic'd up, I can go ahead and start talking. So, thank you very much, Zhu Ning, that was a really remarkable about of material presented in a short period of time. And I do recommend the book, which I did -- have read carefully.

So you, you know, you emphasize the Chinese government taking a lot of debt, guaranteeing a lot of debt, and then you briefly touched on the issue of sustainability. So, the first question I want to ask you would be going a little bit more into detail about the fiscal sustainability.

The IMF estimates that if you take the central government debt and the local government debt you get an overall government debt figure in China of about something like 60 percent of GDP, which is not scary at all compared to the United States or most advanced economies.

But that parsing assumes that the government is not backing all of the state enterprise debt. The state enterprise debt has ballooned enormously in China, and so I guess is this -- My question is: Is this a realistic distinction? There have been some bond defaults --

MR. ZHU: Yeah.

MR. DOLLAR: -- and Chinese banks which are state-owned are trading at about a third discount to book value, that suggests the market expects that there are going to be losses.

MR. ZHU: Yes.

MR. DOLLAR: So, say a little bit more about fiscal sustainability, and will the government be able to avoid taking on all of this debt onto its balance sheet.

MR. ZHU: Well, I think probably a little bit broader question is, well, I think there has been a debate in China about what debts are good debts? So there's sort of disbelief that most of the debts that China has taken out right now, are good debts in a way that they are supposed to be useful infrastructure, or economic growth purpose. Whereas, I think some other countries are using the debts to either repay their older debts or for social welfare purposes.

But I'm not too sure about that. I think for a person trained as a financial economist, debt is debt. A good debt is when you take out the money and then you have enough cash flow to repay the debt. A bad one is you cannot repay the debt. So, I think -- I do agree with you, I think I actually talked to the delegates from IMF a month ago about this distinction between China's corporate debt versus China's government debt.

Because China's corporate debt is 160 percent of GDP which is quite high, if not the highest among all countries, all major economies. So, I think you are exactly on the money in a way that a large proportion of the corporate debts were actually taken out by the SOEs. And the SOEs are by no mistake, supported by Chinese Government's sovereign credit worthiness.

For some of you who are not familiar with China's situation, China's railway company, which has a leverage ratio of over 75 percent, received a higher credit rating than the U.S. Treasury, by several of Chinese rating agencies. And the reason is very simple, because the railway company received its backing from the central government of China. So I think this is one thing that the Chinese government has been doing very aggressively, the recent Debt-for-Equity Swap Program, the Debt Swap Program found by the local government financing vehicles.

I think they were all basic, pushing things into the central government's credit or its own shoulders. And then I think your real question is whether that is sustainable. I think that how I got myself into this whole investigation, after looking at what happened to the European countries during the European debt crisis, and a fiscal cliff in the U.S. here.

I think the question we have ask ourselves is not necessarily -- I think most people are looking at this as a national balance sheet problem, I think it's more than that. It's also cash flow problem. So I think it may be true that China still has a lot of net state assets. I think first off why I think I question that is because many of those estimates were done assuming the asset prices at the current level. I think that's a question mark.

The second is, well, for many of the debt crisis, not just a matter of net assets, it's also a matter of whether you have enough cash flow to repay the debt. And then you have a credit crunch as to what do we witness during the global financial crisis. So I think, yes, I think in the short term China's fiscal situation is still sound, or at least better than most other major economies. But with this trend going on, this trend meaning, having the debt increasing at double-digit speed, and the cost of financing at least until before the exchange program, the cost of refinancing has been increasing.

And on the other hand, those debt were put into two major areas, one is infrastructure which is not returning any positive cash flow any time soon, in all over the world. Or real estate, which I am concerned might be a bubble in a way that it is self-fulfilling. Investors are all only interested in buying a property if a price is rising, and if the trends were to switch they are not going to buy.

So I think it's really forcing, back to we are economists, what are the assumptions you make? But whatever the assumptions you make, I think if you keep this trend going on, I don't think you'll be -- I don't think the economy can sustain like this for another decade. Three years possibly, five tops, definitely not a decade.

MR. DOLLAR: Okay. Let's talk a little bit about the capital account and the exchange rate, because you know, the key factor behind a number of your sectoral analysis is the fact that Chinese households, companies really can't get their money out of China that easily, you know, and then that, it plays in the issues, bubbles and real estate and stock market, et cetera, but that seems to be changing. It seems to me capital account has become significantly more open or porous; a lot of capitals come out of this, there's been depreciation pressure on the currency.

So, talk a little bit about how you see the capital account developing, and the exchange rate, what do you see happening?

MR. ZHU: Well, I think things always seem very different when you look at it from inside of China, versus the one you are looking at that's from outside China. Because I feel, within China I think I got the impression that, yes, the capital flow has been facilitated to an extent that's far better than two years ago. But this year, I think the control over capital accounts is becoming much more stringent than it was a year ago.

I think a lot of companies have to come up with tricks or gimmicks of using, sort of forced invoicing to transfer that money to RMB out of the country. So I think it is really the three -- I mean the impossible trilogy, the free flow of capital, the independent exchange rate, and then the independent or autonomous monetary policy. You cannot have all three things at the same time.

And I think China has been trying a little bit different approach last year, trying say, we want to relax on the capital flow account a little bit. But that, I think, unfortunately the stock market fiasco, and the sort of unexpected movement in the exchange rate reform, set policymakers back a little it. So I think they were a little bit shocked by how negative I think the international community was receiving RMB as an international or free floating currency.

So, I think things have developed last year, but I think we probably have gone forward for two steps, but then stepped back for one big one. So, without the relaxation of the capital flow account, I think we are going to see a very distinctive asset price pattern within China compared to the rest of the country -- the rest of the world.

But then I think that is really paradoxical as Dr. Li mentioned. I think part of the reason why Chinese are so anxious to get their money out of the country is because their portfolios are so under-diversified. Almost the entire of their portfolio, including their housing are in RMB denominated assets.

So, I'm hoping there may be a window of opportunity that we could encourage more Chinese households to diversify their portfolio more into overseas portfolios, and hopefully that is reducing the pressure from capital outflow, outbound or flight.

MR. DOLLAR: I mean, they've obviously been allowing the exchange rate to depreciate, not just against the dollar, but against their basket over the last couple of months, that seems to be working out okay, it hasn't precipitated any large capital flight. Do you think that's going to continue? Do you think -- I mean there are certainly some investors who think China may lose control of the exchange rate, there could be a very large devaluation. Where do you come down on that?

MR. ZHU: Well, I think it's probably fair to say we are falling -- I don't want to make very short-term predictions over the exchange rate of RMB which I'm not too bullish about, but let's go back to the principle of international economics, and think about, well, what determines a currency exchange rate is pretty much its purchasing power around the world. And that is just my personal observation, when I came to the States, I carried two suitcases full of stuff, coming to the States.

These days when I travel to the States I carry two empty duffle bags which I use to buy stuff back to China. I think that's probably saying something about the purchasing power of the currency. That alone, the fact that the RMB might be supplies increased by 15, 16 percent per year.

So, following this logic, we could reach a point just the pure monetary supply coming out of China, will enable China to buy the rest of the world. And that is not a very logical outcome. I think at a certain point you would have the adjustments of the exchange rate to reflect the relative purchasing power of RMB, I think.

Sorry, I just want to add one more thing, that is, in the short term I think -- I think China is fortunate, and we should all feel very grateful. I think the Brexit and the negative interest by some European countries; is actually creating a more friendly environment for China to orderly and gradually devalue its currency. So I think this is maybe the reason why we are seeing the PBOC is taking this opportunity to gradually devalue the currency as the market should have done before.

MR. DOLLAR: Toward the end of your presentation and the book, you talked about a set of recommendations, you know, a lot of which are very are very sensible, a lot of which have been echoed by other experts. My own sense is this, Chinese leadership is not moving very quickly on the reform agenda, I think you hinted at that as well. So, you know, why aren't they moving faster? If you say the window is closing, the risks are building up, you know, why aren't they moving faster on reform? What's the issue?

MR. ZHU: There are probably several issues, and some of them are probably beyond my expertise and beyond the scope of the book. I think for every new leadership coming into the office, it always takes a while, sometimes the entire first term, to solidify his or her political power and you are making to make sure that his thoughts and ideas got implemented by whoever is responsible, so I think that may be one of the reason.

The second that is while they cited four years of vested interest group; that is, there are people who have been benefitting from what has happened in the old growth model, and they are not willing to give up whatever they had been gaining over the past decades.

And another thing which, unfortunately, I think I fear is going on, that is I think sort of wishful thinking. I do research on behavioral finance, and almost everyone has wishful thinking, the same thing with the really authoritative person, or the great leaders. I think there's still this experience of: China has successfully grown out of the trouble of the late 1990s, grown out of the trouble the global financial crisis, so maybe there is a chance that China can still outgrow the current trouble, just by returning back to a high growth period, and then once we expand the pie, all the problems that we are talking about or worrying about will go away.

But that, I think, things have changed in several very drastic ways, one is I think if you look at the SOE or the state assets, I think state-owned land reserve tend to be the biggest piece of the assets, and after the two decades of appreciation, it's really hard to imagine how much higher the land price can go. So I think that's one thing that's probably changing.

The second is I think the way China's economy becoming so big, it is really a given that China is now having far greater global impact than it used to. So it's not just about China's domestic policymaking, it's about what will China's policy will have impact on the rest of the world. So I think we have, again, going back to behavioral, human being has this tendency called representative bias, which is, we are trying to make linear projections. But unfortunately, as well, the risk is the mistake that people tend to make all the time.

MR. DOLLAR: Okay. One last question from me, so then I'll turn to your questions. Okay. So the last question from me, the window is closing so if they don't reform what -- I know you are not bear, but what does an economic crisis in China look like?

MR. ZHU: Right. So I think that that this almost always comes up as a question, so what is the end game for all of this.

MR. DOLLAR: I mean, what if it goes badly, which I don't think is most likely scenario, but what would a crisis look like?

MR. ZHU: I do not think the housing prices will crash in China, or I wish it does not; even though my training may tell me otherwise. Just for the record, I think for many parts of China, it is no longer a debate of whether there is a bubble; because many cities the prices have come down, 20, 30 percent already from their peak, so we are already talking about what happens if the bubble does not hold.

So this is -- I think this is sort of a understanding that many foreigners don't have about China. If you go in China, I went to a city called Changchun, in Jilin Province, and the housing price has already lost 40 percent from its peak. You know, Wenzhou, the famed city in Zhejiang Province; that has come down, a 30, 40 percent from its peak. I think it would happen; it's just a question of how wide, and for how long it will take.

Well, I think the best-case scenario, and I hate to say that, could be a protracted correction in which, I think the government will increase its domestic borrowing. And then probably through a prolonged or maybe a drastic inflation, walk away with the debt. So I think that's probably how the debt issue will be resolved. Because there's really, just largely, no other tangible way of getting away from your debt obligations without having to take the necessary consequences.

MR. DOLLAR: Okay. Questions from the audience. Do we have a microphone? So, let's start with this woman here. The microphone is coming to you.

SPEAKER: Hi. My name is Chi Fie from TT International. Thank you very much for your presentation. My question is about sustainability. Professor Zhu could you --

MR. ZHU: Debt?

SPEAKER: Debt sustainability.

MR. ZHU: Oh. Got it.

SPEAKER: Could you elaborate about the central government's debt sustainability in China and would it be likely to surpass the GDP growth rate, in the past few years and in the future years. Thank you.

MR. ZHU: I think the speed debt increase would definitely surpass that of the GDP growth or the fiscal revenue growth. I think that can be reflected by the fact that China's fiscal deficit has increased from less than 1.8 percent four years ago to more than 3 percent this year. So I think that is definitely going to happen. However, that is not to say that China is going to have a fiscal crisis any time soon, one thing is the local and the central government assets that I just quickly mentioned.

The second is, well, China still boasts one of the best economical growth, so as long as growth is standing at 6 to 6.5 percent of rates, I think the tax revenues are still going to help China, going through any trouble that it's going to encounter in the short term. The bigger question though is I guess, and going back to President Xi's China Dream, is how to reform or transition from the old economic and social model to the new economic and social model.

So I guess what I have in mind is Japan after two-and-a-half decades of recession. I think, every time I go to Japan I tend to think, well, people live a reasonably peaceful and enjoyable life and I think the big reason for that is, Japan has taken the opportunity to fund its social security, medical, and educational system well enough that there is already a safety net being built up for the entirety of the country's citizen.

I think China has a big task to fulfill in those areas. So, I think when China is spending more and more time trying to improve social welfare and medical care system, I think that’s becoming apparent that the fiscal gap will widen even further. So I think that it's that part that I feel less certain about, even though China's social security system has expanded tremendously over the past several years.

If you look carefully at the micro level, the minimum coverage for rural area, which is a majority of the plan, is far less, I'm talking a fraction, a single-digit fraction, of the coverage that urban residents are currently enjoying. So, if we were to bring everything up to the urban resident standards, there's a huge pile of fiscal resources we are talking about.

MR. DOLLAR: I'm going to do two more in the front and then we'll go to the back. Okay?

SPEAKER: Professor Zhu, thank you for a very good presentation. My question is going back to something that you say you specialize in, which is investment behavior. My question is, to what degree do you think there is a force in function that changes this risk speculative behavior from the investor? But then on the policy side, at what point do you think there is some sort of cataclysmic event, or force in function that gets in place policies that prevents these things from happening?

In 2008, you know, some would say we haven't done enough, but at least you had a capstone piece of legislation in Dodd-Frank, within that you had bank stress tests and other things that have tried to prevent the sort of thing that happened in 2008. Now we can debate whether or not that was enough, but are you hearing in your circles, similar sorts of things being discussed on the policy side, and at what point do you think investors have learned, or will learn? Or, what would it take for them to learn this sort of thing is not healthy in terms of the long-term implications for the overall economy and their individual household economies?

MR. ZHU: Thank you for your question. It's an excellent question. I think I got a very similar question from the Federal Reserve this morning. I think the -- Or, let me talk about the investments or household finance first, that’s I think following easily into my expertise.

I think there are probably two things we have to recognize, the first is Chinese, or for that matter, East Asian investors are different from, say, European or American investors. They are less sophisticated, they are more drawn to higher returns, and that is pretty much a given. And with that in mind, I think the policymakers should have done something which I keep talking to the leaders at the CSRC.

I think investor protection in my mind, is to protect investors from being duped by investment companies, or financial institutions. But in China I think people sort of mistaken that as the investor protection should be protecting the investments from not having to suffer from losses. So I think that mentality has to shift. I think going deeper into that mentality, where that’s coming from is largely beyond economic finance. That's more related to social stability.

I think that is probably a broader question that I can answer here, but going back to what you asked about, is there any catalyst, or is there any trigger that would change the way how people think of things. I think changes can take place in two directions, one is I think we can go full front or market oriented approach.

The other is we can take a step back and fall back to the more essential planning approach. So, unfortunately, I think what is happening right now, is we are seeing more of the latter. So we are seeing in the security markets, in the exchange rate reform, in the interest rate validation, I think the country actually taking a step back in the way that, well, financial reform is creating more trouble than I had thought would have happened.

So, I think if something is happening right now, unfortunately, I think it's happening backward, not forward. And if there is a thing that I could hope for is, I would hope for the next year's Central party leader meeting, and after that I hope things will get clearer and then people will have a clear mandate to say, okay, we all have a consensus about pushing the reform forward. Because before that, it's very rational for each and every company official’s not trying to take the risk on his own, because if it succeeds he may not take the credit. If it fails, he may be the scapegoat, and several government officials have already attested personally.

MR. DOLLAR: Okay. This gentleman here, and then we'll take a few from the back. Okay?

SPEAKER: Thank you, Professor Zhu for a very good presentation. You mentioned shadow banking in the People's Republic. Would you care to comment on the potential role of shadow banking, or on overall macro-economic performance?

MR. ZHU: Thank you. That is a very good question, and the short answer is, tremendous. I think the size and the scope of China's shadow banking is probably beyond whatever has been reported. Of course I have no scientific evidence to back up what I just said, but if we think about what has happened in the western countries during the global financial crisis that is what has happened in the West, in the legal framework where there is enough check and balance.

And I think there are several reasons. I have a slide in my presentation about shadow banking. I think that shadow banking was allowed to its current size and scope under explicit permission and encouragement from China's government and regulators. It's really a shadow of the formal banking itself, and the reason why we need the shadow banking is because the formal banking can no longer take the amount of debt that China's economy is going through.

If it's transforming from on-the-book formal banking fully disclosed, to off-the-book shadow banking non-disclosed, I mean I think it's fair to say we know whatever is not on the book is of poorer, if not far-poorer quality than what is already being recorded on the book. So that is my argument.

And I think it will have three impacts, the first is the shadow banking will come back and hurt the formal banking. I think it's probably not true for the largest four or five state-owned banks, but for many banks, the original banks or the original credit unions. I mean they have been enjoying their growth largely thankful to the shadow banking policy, and if that part is taken away and if interest rates were to be liberalized then they lose their bread and butter very quickly. And that is of course going to create a bank run problem, so that is one way of the mechanism.

The second way is, I think shadow banking might induce credit crunch, as what we have seen in, I think, 2013, there was a credit crunch, and there are several arguments about what might be responsible for that credit crunch, for those of you who are not familiar or if we do not remember what happened, the inter-banking lending rate shot to almost 30 percent annualized rate, that is banks lending money to banks, and they charge you 30 percent per year for that money.

The reason is because there's such scarcity of liquidity, and some believe that is because a lot of the wealth management products were to mature in June, and many of the banks need cash to service their debt in the wealth management -- WMP. There is another argument, and that is the development of something called the (inaudible) which is Internet of financing. Again, a form of shadow banking, that’s also competing for the fund, which is creating a shortage in the inter-banking market. So that’s a second channel how the shadow banking works.

The third channel is probably through the real economy because most of the companies which take out shadow banking products are real estate, low government financing vehicles, and small and medium enterprises which have no other source of financing. So, if shadow banking were to take a hit those several major sources of China's economy will be impacted negatively as well, and those are, unfortunately, the main drivers of China's economic growth these days, so if they are impacted we are going to see even further slowing down in the economy.

SPEAKER: Thank you very much.

MR. DOLLAR: It's harder for me to see way into the back. Is that Scott Kennedy, you have your hand up?

MR. KENNEDY: Yeah.

MR. DOLLAR: And people should be introducing themselves.

MR. KENNEDY: Hi. Scott Kennedy, CSIS. I wanted to ask you about moral hazard, because you are suggesting that there might be something different about the Chinese investor that the American investor. And I was thinking that if I had -- if I taught in China and I had students like yours I might make the same choices. And so I was wondering at a general level, what is it about moral hazard in China that may be different from elsewhere?

And relatedly, you know, the Chinese government has lately allowed corporate bonds -- a few corporate bonds to default, not many but some, but the idea, hoping that others get the message that there is risk in these. But in financial studies moral hazards seems to -- the response to actually fix it seems you need across-the-board changing of behavior with few exceptions, because once you start allowing exceptions the psychology of the investor is that they will not take the lesson that you want.

So is the strategy of limited, occasional defaults a strategy to gradually train Chinese investors to accept risk? Or is it actually reinforcing them that there is a few suckers that will lose, but otherwise everybody else will still continue to prosper?

MR. ZHU: You asked two questions, the first one is easier. So, how is China's situation different from other countries? I guess, again, it traces its roots back to the government. I think China's government is far more powerful and far more resourceful, and I think far more respected by Chinese households and investors. So I think that is a big difference.

So, some people say that the biggest loss in China's stock market fiasco last year, was the government's credibility. So, not until that moment, almost everything that the government had said it would achieve, it has achieved. So I think that is probably one key difference, and that is why I think the message of the guaranteed bubble is so unique and important to communicate.

Going back to what's going to happen. I think the government is trying and trying hard to diffuse the time bomb, so to speak. It is trying to let investors learn, and be it the corporate bonds, and be it the stock market last year, I think it is trying to let the market fall or the companies fall, and the investors lose so that they can learn their lessons, but I think China does not come from a history with a strong credit culture, so I think that is culturally very difficult.

The second is, I think what happened in those few incidents of corporate bond defaults is perversely, there were investors, especially retail investors, those could be vulture funds under the disguise of retail investors. Those funds jumped into the defaulted bonds right before the default. It's exactly because they know they will be eventually bailed out. So I think it's wider than any specific product or any specific company. I think it's really a social norm or a culturally environment thing, so that is why I think it's very challenging task that the government is tackling with.

I think they are trying to gradually push forward the volatility in the market, and also they are gradually trying to let certain companies in the over-capacity industries, such as steel and iron go bankrupt. But then you are absolutely right, but if you do this on a selective basis, then it's really hard to convince the investor that it is going to become a systematic shock.

But if you are doing this to all the companies then you might have a serious systematic shock to the economy. So I think that is a delicate situation that the policymaker is in, so I'm very sympathetic to the situation that they are in right now.

MR. DOLLAR: Okay; this gentleman here toward the middle.

SPEAKER: Hello. I'm Andrew from SAIS, a student at SAIS here. So, my question is that someone who studies behavioral finance, and these implicit and explicit guarantees that the government is providing, it seems to me like that as a similar idea, at least, could be perceived as similar, maybe for the average person in China, as what some people call performance legitimacy of the government.

And so if the government, if the Chinese government tries to take away these explicit and implicit guarantees, I guess, what's the line, particularly from Canada, the average household's perspective, does it look to the average household like the government is no longer performing for me? And then does that impact the legitimacy of the government?

MR. ZHU: Yes. I think that is a very touchy issue. I think what the government is trying to do is exactly doing what you were saying, that is to I think sort of changing the question from the previous gentleman, I think sort of changing the culture without incurring a one-shot repercussion from both the households and the enterprises.

So I think what they are trying to do is probably the following. They are trying to build up new market, for example, the corporate bond market, for example, the market for mortgage-backed securities, so they can gradually fund those -- some of the guaranteed assets or securities into the un-guaranteed area. And with that I think they will probably try to encourage more involvement from the institutional investors because it is believed that institutions can be allowed to fail or lose.

You don't want to dot that directly to the retail, to the mamas and papas, but if they lose money from mutual funds so far, I think the households have been handling that reasonably well. So I think this is probably one possibility the government could do, that is to create a intermediary, I think some of the PPP, the public-private partnership is probably trying to serve to kill multiple birds with one stone. That is to attract private capital but in collaboration with public capital, and then they can do some risk and property sharing together.

So, I don’t think there's a perfect solution, but I think Chinese government is thinking about those issues, and is going in the right direction but I guess, the only question is, as David pointed out, the progress may not be taking place as fast as some of us have wished for.

MR. DOLLAR: Okay, can you bring microphone over here, please?

MR. BOTTELIER: Thank you. Pieter Bottelier, I used to teach at Johns Hopkins SAIS. I'm retired now. Question: What is your interpretation of the interview in the People's Daily about six, seven weeks ago where a person of authority which cautions against further credit expansion? And, let me explain. I'm referring to a term that Cheng Li used in his introduction of you. He described the Chinese current economic situation not only as paradoxical and unpredictable, but also incomprehensible.

It's difficult for many of us who have been following this story for a long time, including me, to understand how we could have drifted to this very treacherous situation. You may be right -- No, you are right, Xi Jinping, this is in his first term, but many of his key advisors have been around for decades. They surely must know what you know that the current situation is potentially, totally unsustainable.

MR. ZHU: Well, I thank you for a question that is difficult one, especially for people who do not command political expertise as Dr. Li does. And given that this is a public event, I think don't want to speculate too treacherously, myself. But I think I want to probably say the following two things, and two observations which have already made by even the Western media.

I think one is, there is certainly considerable frictions in the policy implementation, and I think that article in People's Daily is probably another reflection of that. I guess the question, or the more precise question is: Where does that friction come from? Is that between the Cabinet and the party, that within the party leadership or are they within Cabinet itself, and I think I would rather not speculate any further, but I think that is definitely another piece of evidence there is considerable resistance or friction that the current leadership is facing.

And it seems that the consolidation of power or the certifying of power has not been yet completed. I think that is -- I think the very fact we are seeing a letter like that showing up on the People's Daily, is showing that probably the new leadership is facing greater resistance than we have otherwise have thought. I think that is one thing I want to say.

The second thing, which is probably more sensitive is, I think -- I mean, again, I'm not an expert on this topic; is how the party decision process has evolved. I think both the size and the nature of the Politburo have shifted considerably ever since President Xi took over the office. And also, how central government and local governments cooperate and share their tax revenue and their responsibilities are undergoing some drastic changes let alone the anticorruption campaign that has, on the micro level, shifted the behavior of government officials drastically.

So with all those things happening, I think it is not too surprising that we are seeing many surprising incidents. So I think if I had to offer an answer, I'm just saying that for us, I think it's probably a lot of noises adding together, some of them will cancel out teach other, whereas some of them will reinforce each other and create unprecedented events that we have not expected. So that's just my personal interpretation which is probably not answering your question, but that's my best shot.

MR. DOLLAR: Okay. We've come to the end of our time. And raised a lot of interesting questions, and got a lot of really good answers. So, let's give a nice round of applause for Zhu Ning. (Applause)

MR. ZHU: Thank you, David, very much, for moderating. Thank you. (Applause)

CERTIFICATE OF NOTARY PUBLIC

I, Carleton J. Anderson, III do hereby certify that the forgoing electronic file when originally transmitted was reduced to text at my direction; that said transcript is a true record of the proceedings therein referenced; that I am neither counsel for, related to, nor employed by any of the parties to the action in which these proceedings were taken; and, furthermore, that I am neither a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

Carleton J. Anderson, III

(Signature and Seal on File)

Notary Public in and for the Commonwealth of Virginia

Commission No. 351998

Expires: November 30, 2016