MICHAEL GREENSTONE: Welcome. Our next panel's China's economic outlook issues and policies. My task is to introduce Bob Rubin. You could probably take a good hour to do that. I'll skip over some of the many highlights.

Bob began his career in finance at Goldman Sachs in New York City in 1966. He held a variety of positions there, including serving as co senior partner and co-chairman from 1990 to 1992. He has also had an extraordinarily extensive career in public affairs. In 1993, he was the first director of the National Economic Accounts, the Economic Council, in January 1995. That was for President Clinton. He was appointed as a United States 70th Secretary of the Treasury, serving for four and a half years. Involved in many critical policy issues and financial crises in that period. From 1999 to 2009, Bob served as a member of the board of directors at Citigroup and as a senior adviser to the company.

Now, in this period, Bob's career also took a little bit of a sideways turn. He started the Hamilton Project, which is an economics research group that offers a strategic vision and produces innovative policy proposals on how to create a growing economy that benefits more Americans. It's a fabulous organization that Bob helped start. The left turn was, at some point in that period, he hired me as the executive director, and it was really a terrific highlight to be able to do that job. I learned so much about economics, economic policy, politics, and management, and learned that as soon as Bob says, well, you know, I'm just a retread lawyer, you know he's about to say something you should listen hard to.

There are several things I learned from Bob in that period. One of the favorite ones that really stuck and that I've tried to apply in many facets of my life, even including with our children--sometimes somewhat unsuccessfully--is that Bob has a theory that you should treat people like they're the client. So, in general, I try to do that. Again, with our children, it can be a little complicated to do that.

In addition to all that, he's a chairman emeritus of the Council of Foreign Relations. He's a member of the Board of Trustees at the Mount Sinai Health System and chairman of the board of the Local Initiatives Support Corporation that does very innovative local economic development policy, and he's been a member of the Harvard Corporation and is now a member of its Finance Committee. He has many degrees from Harvard and Yale and several honorary degrees.
So I’m about to turn it over, but I just want to make one last point. You know, this incredible career that Bob has had reflects his brilliance but also reflects very wise and excellent judgment on many things. However, I think it would be a mistake not to highlight one area where Bob's judgment continually fails him. Annually, Bob and I engage in a bet between the New York Knicks and the Chicago Bulls. He likes the New York Knicks. Judgment fails in there. And every spring, it's wonderful. I send him an email, and he sends me a $100 check. And this year, I think, in an effort to try and make up for several years of losing, we have $200 on the line. So with that, I will turn it over to Bob.

ROBERT RUBIN: Thank you, Michael. I told Michael that it seemed to me there was a question of character here with respect to Michael, because we do have a bet on how many games the Knicks will win this year. And two days after that bet was made, one of their key players got badly injured. So I expected Michael to call me and say, well, we obviously have to revise the terms of the bet, given what happened. He has yet to call.

On the other hand, he pointed out to me that when I was at Goldman Sachs-- I was there for a long, long time-- we never revised anybody's contracts if conditions went against them. So that was probably a fair comment. OK.

This is a really complex time with respect to the future of China. I had the opportunity to be the luncheon speaker at the China Development Forum about-- I've forgotten-- six, seven weeks ago, whenever it was. And, certainly, one impression I came back with is that the outlook with China, Chinese policies, the issues facing China, just enormously complex and vastly important to Americans, American businesses, American investors, American citizens, American policymakers.

So, in that context, we are fortunate to have three extraordinarily well qualified individuals to help us think our way through this. We have Yiping Huang, professor of economics, the National School of Development and China's Center for Economic Research, Peking University. I'm not going to do more than identify the various people, because the resumes are in your material. I won’t read from them. But I will say, with respect to Yiping, that I am enormously grateful to him for having flown from Beijing just for this, and he’s going back to Beijing tomorrow. And I've known him for a long, long time, and he's an enormously thoughtful analyst and commentator on affairs in China.

We have Brad Setser, who was described-- at the Council of Foreign Relations-- who was
described in the *New York Times* the other day as a leading authority-- or a leading authority, or the leading authority? I don't remember which, but in any event, one or the other-- on Chinese financial flows.

And we have your own Anil Kashyab, who is professor of economics and finance at the Booth School and I saw described recently somewhere as the leading authority, I think-- but that also may have been leading authority, I'm not sure-- on the Japanese financial system and financial systems more generally.

**ROBERT RUBIN:** OK. We have a very limited period of time in which to go through a lot of issues. What we'll do is we'll try to focus on a few key issues with respect to trying to better understand what the outlook is for China, both in the short term and long term.

Let me start with a broad question, and maybe, Yiping, it would appropriate for you to at least provide the first answer to this, which is, the United States is a market based economy with a government to perform various functions that the markets won't, and there's always this debate, what role should markets have? But, anyway, that's the kind of system we have. How would you describe the structure of the Chinese economic system in that context?

**YIPING HUANG:** Relative to the free market system in the US?

**ROBERT RUBIN:** Yeah, in contrast.

**YIPING HUANG:** Well, I think the easiest way to look at it is it's a transitioning economy. At the same time, it's also a developing country. We just had that debate. I'm not going to get into that. But it's a transitioning economy, moving from a centrally planned system to a market system.

The difference, I think, for China compared to many other transitioning economies, China adopted a very gradual transition approach. So it was not like a big bang approach and then you move to a free market system overnight.

There could be a debate to which approach worked better. My own sense is that the gradual reform approach probably did better, partly because it helps to maintain some economic or social stability when the transition started, so you don't overnight privatize all the SOEs and get rid off for the central planning system and hope that tomorrow the free market system would work. And that doesn't work in the real world. That's why the Chinese approach looks bad. For 40 years, the growth rate was, on average, about 9%, and I think that that's an important
But there is a drawback. The gradual reform approach also means a lot of leftovers from the older system will continue to exist, and they don't go away that easily. I think that, compared to the US system, in terms of economic policy, economic structure, two things stand out. Number one, the government probably intervenes a bit more than other market economic activities. And number two, the state sector probably plays a greater role in the overall economy.

But I think that we should think of these issues from two perspectives. Number one, as I said, this is stewarding the economy in the transition. I think that the overall direction is that we probably are moving toward much, much more market oriented system going forward.

The second point, I think, when we look at the China, we probably can also think of some other economies that we're familiar with before. For instance, we're talking about the SOEs, the state owned companies, and it looks like they're very strange animals. But you think about France-- they also have a lot of SOEs-- Singapore, and so on.

And government intervention-- yes, China, the government intervenes in activities probably a bit more than many other market economies. But think about Japan and Korea in the early stage of development.

So the point I want you to make is it's a transition economy. There are some unique features, but partly because it's the transition process, but also, partly, I think it's not that unique when we think of some other economies, like France or Japan, I mentioned earlier.

**ROBERT RUBIN:** Yiping, let me ask you one more question. Let me see if Brad and Anil would like to chip in. What you say is that it's, in some sense, moving toward a more market based economy, albeit gradually. But I had an impression, which may be wrong, that, more recently-- say, the last couple of years, two, three years-- there's been a constraint of credit to the private sector and expansion of credit to the SOEs. 2020 25-- although we will get into that later, I guess-- doesn't sound like it's a market oriented program and so forth.

**YIPING HUANG:** Well, I mean, I would say, at the moment, I can't argue that private sector and the state sector are exactly equal. So I think that we're still in the process of creating a level playing field on the way. So some kind of policy discrimination against the private sector still exists in many ways.

But the reason why the private sector felt, like, seriously hurt or hit by the policies, to some extent, I think it was kind of accidental. You look at the reason the policies, in three areas, the
government has been implementing. Number one, reducing pollution and a clean up in the environment. Number two, reduce excess capacity in some industries, like steel, aluminum, and so on. And number three, deleveraging. Dealing with the system of financial risk and so on.

These are the policies, as economists, that we have been recommending the government to do for quite a number of years, because we think that these are the necessary policies to improve the quality of Chinese growth and to make it a much more sustainable. But think of the policies in all these three areas-- just very unfortunately or accidentally-- they hit the private sector SMEs much more than the state sector.

So I think-- I don't want to say there's a no discrimination policy, discrimination against the private sector in the Chinese economy. But the reason to pessimism was in part because of the [INAUDIBLE] these probably good policies, but they just disproportionately hit the SMEs in the private sector. Mostly importantly, the style of the government implementing the policies, the so-called ghost stop policy fashion. Either they don't do it, or if the public doesn't become serious, they all do, not just 100%, sometimes 200%. That's why we are really seeing almost like damages to the private sector. I think that that's something we need to put into perspective.

And one final point I want to make. After the global financial crisis started, there was also a debate about a state advancing and the private sector retreating, because government stimulus policy mostly went to the state sector, and the private sector actually deleveraged. So people became very pessimistic.

But you look at the data, macro data, for the last 10 years, you would actually find that the private sectors are shared in economic output, in total profit, in credit, in employment, and in innovation. During all those 10 years, it still was on the way up.

ROBERT RUBIN: And you think five or 10 years from now, Yiping, that there may be little fluctuations, but that, basically, that's the trajectory you're on.

YIPING HUANG: I think people realize the economy now faces the bigger challenge of how to continue the growth, and we discuss the so-called middle income trap question, which really means whether or not we can continue growth depends on our capability to innovate. Guess what? Innovations are mostly done by the private sector, and the policy makers realize that point.
BRAD SETSER: Brad, 2025, which I think you focused on some, is that consistent with the perspective that Yiping has just set out? Let me be more specific. You've got what seemed to be, at least, substantial protective measures for certain industries-- basically, AI and the like.

I mean, I think China 2025 is a vision that, at its heart, is based on state led industrial upgrading, and I would put a lot of emphasis on the state led part. It is based on large subsidies, both direct and through the banking system, to facilitate the development of Chinese companies in cutting edge sectors.

AI gets a lot of attention, but you can think of China's desire to become a player in commercial aviation, which is very state led. There are enormous funds made available at almost every level of China's government to develop an indigenous Chinese semiconductor industry. There is a strong desire that medical equipment now be made in China, including the top, cutting edge medical equipment.

In each of these quests to raise China to the frontier, the state is, I think, paying the central role, and the state is playing the central role in creating the companies, in many cases-- the aviation industry-- but the state is also, in many ways, seeking to guarantee a market, because China is China. Who buys aeroplanes? Well, I think almost all the major airlines are owned by China's government, and so it is quite easy for informal preferences to be given. Who is typically the biggest buyer of medical equipment? Hospitals, which are reimbursed, to some degree, by the state.

So I think China is playing both a role in-- the state is playing a role in creating these industries and leading the development of these technologies, but also in assuring a market for Chinese innovation, Chinese technology, in a way that feels like it tilts the playing field.

ROBERT RUBIN: It feels like it, yeah. And I gather that's associated with by China mandates.

BRAD SETSER: Informal but effective.

ROBERT RUBIN: Informal but effective. Right. You know, there's an interesting question, Brad. I was up at Harvard last week, and I moderated a panel on this trade issue. And one of the questions that was raised was, is this approach-- which is basically exactly as you described it, a state directed approach with all the dimensions you said-- is that a better approach economically than our more market based approach? If it is, should we move away from being the market based economy we are and adopt these kinds of practices for these purposes? It was just a
question. Or if it’s not better, then is China making a mistake going in this direction? And is there some kind of a strange variant of externality buried here then we’re not identifying?

**BRAD SETSER:** I think it’s a separate question about whether it works for China and whether it would work for the United States. You know, the unique-- that’s a dodge, I realize. You know, the unique feature about China is that it has such a large domestic savings base. It generates such a large flow of new funds for investment that China, in some sense, can afford to make a lot of bad investments in a way that I don’t think the US can.

**YIPING HUANG:** I think-- I very much agree with his assessment about government’s investment might not actually lead to very successful results. Government directed investment could lead to some result. Even during the central planned period, our government has spent lots of money on sending the satellites to the space.

But that was very non-commercial, and you just, like, mobilized that the whole country is a resource to do one thing. You did it, but you would not be able to have any economic meaning.

The same, I think, debate is happening inside China. What kind of industrial policies should we apply? And, in fact, one of my colleagues, a professor, Justin Lin, former chief economist at the World Bank, has been leading this debate, and there’s lots of discussion about this.

My sense is that, well, number one, maybe China 2025 so far is more like a vision than a very well designed policy. A lot of detailed elements is still yet to be worked out. And that’s why we’re having a lot of debate. But I would not be surprised if the government put together a massive program and spent lots of money to promote some industries.

Problem is this. Two colleagues of mine at our school just completed a study looking at the effectiveness of government subsidy to innovation, corporate innovation. And, certainly, they found that a majority of the government subsidy went to the SOEs, state owned companies.

But as I said already, like, majority of the innovation is done by the private sector. If we just look at, for instance, domestically granted patents, 70% of the patents were created by private enterprises. 25% were by foreign enterprises. Only 5% were created by SOEs.

So my point is, well, number one, I don’t think, if the government repeated what they did before in terms of supporting industry, that would be very successful anyway, because--
ROBERT RUBIN: You think it would be or wouldn't be?

YIPING HUANG: I don't think they'll be successful. For that same reason, I would've recommended the government, if they want to do it-- I mean, I think that industrial policy is useful and important, but you probably should spend more money supporting the basic research-- you can also promote industrial upgrading, but without limiting competition.

So, for instance, in Shenzhen, a southern city in China, they're doing much more wisely. They're putting together some funds or promoting some investment in research and development, but they have kind of an open bidding system, and whoever want to do the project can come forward and gets the money, while, traditionally, the Chinese government is sometimes just identify the companies and give them the money. I think of that already as a big problem many times that did not work.

ROBERT RUBIN: We'll get to the financial system in a moment. I know Anil and Brad both, I'm sure-- Yiping, as well-- have a lot of comments on that. That's gotten a lot of attention. I actually have a little trouble understanding what the issue is there, although we've talked a lot about it in various panels and one thing or another. We'll get to that in a moment.

But let me ask you this. Stepping back and just looking at everything that one can think of about China, what do you think the long term trend rate of growth-- and let's call that 10 year rate of growth-- do anything you want, but let's just take 10 year-- long term trend rate growth is for China, and what is or are, whatever, the risk that would most trouble you about investing in China, Anil?

ANIL KASHYAP: Well, OK. So one challenge is to reconcile personal freedom with economic freedom. So if they're going to move towards a more market oriented economy, there's a question as to how far you can get if you're going to maintain control at the center. And I think that's the fundamental challenge that China faces. If you think that the government wakes up every day and has a first thought, will I be in power tomorrow? If the answer is yes, then I go on promoting the market and everything else. But if there is any doubt about sustainability, all bets are off. That's my model of what I think how they operate.

That creates limits. So growth can disguise lots of weaknesses when you're growing 9% a year. There's all kinds of things that can be covered up, and China can still grow pretty fast, but just off of demographics, we know it's going to slow to some extent, and the difference between slowing to 5% versus 3.5% is just massive. And so that's why the stakes are big now,
I think. And whether or not they're going to make choices that are going to be more friendly to
the 5% or 3.5% is going to be a big challenge.

ROBERT RUBIN: And in a word, Anil, using the framework we just heard articulated, what kinds of choices would lend themselves more to 5% and what more to 3.5%?

ANIL KASHYAP: The big risk will be, how much do you let the private sector do what it wants? If every time there's a slowdown, you're going to turn around and just prop it up with the way you know how to do it, that cumulates an allocation of resources in the wrong places. And when growing at 9%, it doesn't matter so much. When you're growing at 7%, it's not so easy to see. When you're growing at 5%, that's the kind of difference that can push you down. And I think we haven't seen that test yet, but it's coming.

ROBERT RUBIN: Brad?

BRAD SETSER: And I guess, you know, to state the obvious, I think there's a consensus that China's labor force has basically peaked in size, which implies some slowdown in the rate of growth. But China is still a developing country, although it embodies within it centers or port regions that are much closer to the income level of advanced economies. But there's clearly scope to catch up. That scope won't be exhausted in 10 years. So I think, you know, a realistic expectation would be growth in the 4% to 5%, which would be fast for an advanced economy, but it's slow relative to China.

The big risk-- I have a slightly different risk. I don't want to-- I mean, I completely agree that the balance between the market and state could disrupt everything, but I think there is also a challenge in creating a more sustainable macroeconomic equilibrium. What's striking to me is that China still saves, according to the IMF, 45% of its GDP. That's down from 50%, but a sustainable level-- a high level of savings is something more like 35% of GDP. And if, you know, it is just a fundamentally difficult challenge to sustain consumption growth with that level of savings.

ANIL KASHYAP: I think, you know, that's not disconnected from what I was saying. I mean, part of it is, if the state wants to mandate growth, the way to do it is to push it through investment. Then you need the savings. And if people are worried about whether the social safety net's going to be there and all that, you can reconcile these things. But I agree the rotation towards consumption led growth requires these changes, and it requires potentially taking risks to give up control.
ROBERT RUBIN: I remember when we were meeting with [INAUDIBLE] a long time ago-- this is when I was still Treasury-- and he said, what we need to do is become more of a consumption led economy. My impression-- I could be wrong-- but my impression is not much progress is made in that. And what kinds of policies might the government be thinking of adopting that would get them further along the track?

YIPING HUANG: Well, consumption, actually, now is the key driver of Chinese economic growth. You look at-- I mean, before 2008, we had an economy, like, which was growing, on average, close to 10% every year. But imbalance problems were very serious. Too much investment, too much exports. Consumption was relatively weak. One of the reasons why consumption was weak was because household income was growing relatively slower than GDP or national income. So consumption cannot grow faster than GDP. That's why consumption share-- aggregate consumption rate share of GDP dropped from 62% in year 2000 to 47% in 2010. 10 years dropped by 15%.

There are some other reasons that people are talking about-- income inequality, so rich people have too much money, and their propensity to consume is relatively low. But poor people do not have enough. And the second reason is the so-called very poor social security system. So if you have income, you save a lot, because you're not sure about the future.

But after 2008, almost all these directions start to change, because, number one, wage rates increased declined quite dramatically. In my hometown, which is not far away from Shanghai, a migrant worker would earn something like a 1,000 yuan 15 years ago, and now they earn 6,000 yuan a month. I mean, you can see, within 15 years, from 1,000 to 6,000, that kind of increasing labor costs, number one, means export competitiveness was seriously hurt. Investment and return was squashed. But household income increased, and income distribution improved, because poor people rely on wage income, and the rich people depend on investment returns.

So, in fact, if we look at the changes after 2008, two things. You saw quite a contrast. Before 2008, growth was very strong, but economic structure was so imbalanced. In fact, our former premier Wen Jiabao once said, this structure, this growth model, is so uncoordinated, imbalanced, inefficient, and not sustainable.

Look at what happened after 2008 to now. Growth is coming down. In fact, we still don't know
where the bottom is. Economists and officials often would say, every two quarters, growth would bottom next quarter. But after bottoming, growth could still go down. And at the moment, it's still weakening.

But the second change is the economy is also rebalanced. So, for instance, the current account surplus, which was, like, 12% of GDP in 2007, last year was only 1.4%. And the first half of this year, it’s probably almost zero. So consumption is much more stronger now, partly because household income is growing faster, and partly because income distribution is improving. And, finally, I think social security is probably better. Not too good, but it's much, much better.

ROBERT RUBIN: Yes, Brad?

BRAD SETSER: Can I jump in here with some data points that I like to highlight? I just checked the IMF Article IV to make sure I was right. I think China collects in personal income tax about 1.5% of its GDP, which is a very small number. As a result, the central government doesn't have the resources to play some of the roles that the state plays in the United States. It provides very limited transfers to low wage workers, unlike the US, where we have an earned income tax credit that raises incomes above the market level.

And then it just doesn’t have enough money to spend enough on public health. Public health spending as a share of GDP is around 3%, which is just too low. So there’s-- I mean, I guess the optimistic way of phrasing it--

ROBERT RUBIN: Ours is too high.

BRAD SETSER: Is that there is a lot of scope for China to take policy measures that would make a real difference. The personal savings rate is about a third of all income, and even the poorest cohorts in China have a very substantial savings rate.

The other point I would make-- and it may lead to something that Anil wants to discuss-- is that I do think that while China has made progress with external rebalancing, it did so at a cost. It raised investment, at least initially after the global crisis, above the already high levels of the pre crisis period. And depending on how you want to do the accounting, could be accept the IMF's notion of the broadest possible measure of the fiscal deficit, and the Chinese government uses a much narrower measure, the fiscal deficit that is supporting a lot of this investment is 10% of GDP.
So there's a sense in which the rebalancing that reduced the external surplus hinged on creating some of the internal imbalances, the excess investment, an unsustainable debt path, that are worrying. And so, therefore, there is a sense that China still needs to do more in order to really put its economy on a stable footing.

ROBERT RUBIN: Well. That leads us to something that we were going to get to anyway. We'll do it now. When you talk to people in-- I was in an investment committee meeting earlier this week of a very well-known organization and institution, and they were doing what they should do in terms of allocating to China, and we were discussing all kinds of issues we are now. And financial instability came up.

And here's something I don't-- well, let me break my question to two parts. One, which parts of the financial system are people most worried about, the wealth management products, the off balance sheet, the instruments that are being used by local governments-- I forgot what they're called, but that's what they are, off balance sheet instruments-- is it the provincial banks that are being aggressive? Is it the Main Street banks? I mean, yes, the state owned or state controlled, at least, banks.

But the question I don't really understand the answer to-- although Brad explained it to me the other day. I still don't understand it-- say the debt is 3% of GDP in China, give or take-- total debt, including the financial sector. If you start to have default-- and say that a lot of-- much more of it than here has been used for projects that may not be sound-- I don't know if that premise is right, but let's assume that's right-- why does it really matter? Because, in a state directed economy, the state-- if there are substantial defaults-- can prevent a default by bailing out. Then you have a moral hazard problem, but then, since the state has great power in China, they can simply say, going forward, people who lend or borrow irresponsibly will be subject to civic and maybe even criminal penalties, in which case you might solve your moral hazard problem. Anil?

ANIL KASHYAP: OK, so I have home court advantage. I have a picture, if you can put the slide up, to try to get at this. So I should say I'm speaking on my own personal capacity, so this is not an official view of the Bank of England, where I have a part time job. This chart has been used by people there, as well.

So this shows you the credit boom in China in perspective to several ones that ended badly. And you can see that China has, you know, been taking on debt at a pretty furious rate, a big
acceleration post the financial crisis and the surge in debt. It only goes to 200 because this is private, non-financial debt, so it takes out the corporate side.

If you go to the next slide, you can see why people worry.

ROBERT RUBIN: I'm sorry. It takes out the corporate side or the banking side?

ANIL KASHYAP: That was just to corporate, their private, non-financial debt. So there was no within financial sector debt. So the reason why people worry about this--

ROBERT RUBIN: And does that have the-- I apologize, but does that have the local municipal debt in there?

ANIL KASHYAP: So it would be all debt that's issued by the private sector. So if there were local guarantees behind a private thing, it'll be in there. And that's how most of it ends up working, I think.

But the point is-- so here's growth, and you look at China has been growing like a rocket forever. You could see 6% a year for the last five years. So that's all post crisis.

Look at their trajectory relative to all those other countries that, when they hit the same debt level, kind of collapsed. So everybody else that got, you know, to kind of 200% debt to GDP-- of course, samples selected. There are a few cases where people have gotten that high and not tipped over. But by and large, they're into unprecedented territory. So this is the GDP path, and you see stagnation in all these cases.

China is now reaching the level of indebtedness that the others do. I share your view that they can prop it up if they need to, if things turn out bad. But the difference between having to prop it up and just pouring debt in probably brings a growth slowdown. And whether or not you could have political stability if growth stalls-- and that's what they're doing-- is, I think, the big risk. I mean, they'll be able to paper it over. It's just a question of if people now suddenly say, wait, we're growing at 3.5%? My income is going to double in 25 years. My kid's outlook is completely different. That changes the conversation.

ROBERT RUBIN: OK, but at the risk of sounding dumb, let me ask you this. Why would it necessarily result-- and I suppose Yiping was agreeing with you by nodding his head-- but why would it necessarily lower growth? You worry about allocation of capital?

BRAD SETSER: Yeah. I think you basically--

ROBERT RUBIN: Then what about my point that abuot allocation of capital, you can simply say moral hazard.
Going forward, anybody who makes a bad loan-- whoever does unwise lending or borrowing is going to go to jail.

**BRAD SETSER:** They can try it, but they’re the ones that are giving out the bad loan. I mean, they’re not going to jail themselves. You know, I think part of it is the way you keep people employed and the way you keep harmony is you keep putting money into where you can put it in, and Yiping probably can say better about all the different ways that you can push credit in to prop things up.

**YIPING HUANG:** I actually agree with Anil on this particular point. I also agree with you. I think probably, at the moment, that the very high leverage ratio is the key concern now for China. And the reason is because it’s just too high.

The number I look at is the so-called I quote, incremental capital output ratio, that measures, for producing one additional unit of GDP, how many additional unit of a capital input do you require? And that number was 3.5 in 2007. Last year, it became 6.3. So which means over time the capital efficiency has been declining very steadily.

I agree with you. The high leverage ratio in China doesn’t necessarily mean that we’re going to see an imminent so-called Minsky moment, the collapse of confidence and a collapse of the debt market. I think you’re exactly right. The government-- in fact, what you find is the most heavily borrowed entities are, number one, state owned enterprises and, number two, local government entities. So these are the state owned entities, one way or the other. And the money are mainly from state owned commercial banks.

So I think that that can go on for a while. The worry is that money goes to the SOEs, but the efficiencies have being declining. So, yeah, you can stay on for a very long time. But if that I quote number continues to rise, it means that, sooner or later, there will be stagnation, no growth. That’s why I think we really need to push ahead with the reform now.

But what people worried after the global financial crisis, and probably also now, is, like, leveraging up by the state sector by deleveraging by the private sector. It’s bad progress, in my view, because of what I call bad leverage is rising and good leverage is declining.

But in a way, there is also a bright side of this pessimistic story. First, as I said, we’re not going to see imminent collapse of confidence in business structure, and it can continue for a while. But, second, if we can get the reallocation right, in fact, there could be a huge potential for
rapid growth out of the Chinese economy.

If you look around China, in fact, you can see this very clearly. In the southeast part of the country, the Yangtze River delta and the Pearl River delta, the economy is doing almost perfectly fine where the market is functioning very well, and entrepreneurs are very dynamic. The areas where the Chinese economy is seeing huge difficulties is Northeast China, Northwest China. These are the places where the state owned enterprises dominate, and most of them become zombie firms, and the government doesn't know what to do with it.

So I think the story is very clear. The solution is very clear. The question is, can we find out a politically and economically viable approach in resolving these zombie firms?

**ROBERT RUBIN:** Anil made a point I hadn't thought of, and you said the same thing. I guess that is the answer, that when you have a lot of prospects of default, the capital goes the wrong place, and then you get exactly in the problem you just described. But then, you know, my answer had been, well, you can send people to jail, but as you say, that gets a little bit complicated, so maybe that doesn't work. But how do you remedy this, and does the trade conflict make it more difficult to remedy it? Because that's a negative factor with respect to growth, and maybe that makes it more difficult to deleverage. That's a question.

**YIPING HUANG:** I think it's more than just the sending of the managers of a bad company to jail. The question is, like, if Northeast China in one region and bad SOEs dominate, and if you want to do something, the first question, is, well, what are you going to do with these redundant workers? Where are you going to send them?

Number two, if GDP disappears, what is the local authorities going to do? And number three-- because they don't have a lot of industrial companies, and the numbers that exist already have very bad problems. If you want to shut them down, it means that the whole region would probably go down. So two questions a policymaker would ask when you talk to them about resolving a zombie firm. Number one is the people. Where will people go? Number two is money. Where will money come from to resolve the bad debt?

**ROBERT RUBIN:** Well, it has to come from--

**BRAD SETSER:** Yeah, Brad?

**BRAD SETSER:** I was going to make a couple of points here. The first is-- and I think the difficulties with some provinces illustrate this-- is that China still doesn't have a complete internal labor market. So it
is hard for people to move from declining, coal based provinces to the more prosperous parts of the country because of the Hukou household registration system, because the social insurance system is not fully national. So there are steps that policymakers could take that would facilitate some of the economic adjustment.

The answer for who bears the loss has to be the government, and it has to be the central government, because the provinces don't have the financial strength, particularly the weaker provinces.

And I think that gets at the potential difficulty inside the Chinese financial sector. Traditionally, most credit came from the big state commercial banks, which are all owned by the central government, and they mobilized deposits nationally, lent nationally, and responsibility for backstopping their lending clearly rested with the national government. Some of the fastest growing banks now are city commercial banks, which may be backstopped by a weak city, or banks where the ownership is more opaque, but includes a lot of provincial governments.

And so the question of what level of government bears responsibility has become more difficult. I think it's resolvable, but it creates a little bit more uncertainty.

And then there's additional uncertainty because a lot of the financing of the banking system has raised hasn't come through formal deposits. It's come through what are called wealth management products, which are shadow deposits, which, in principle, aren't guaranteed but most people think are guaranteed, and which never seem to have major defaults.

But there's always a risk that the banks that sponsor the wealth management products might conclude that it costs too much to stand behind them and jettison these savings vehicles. And that could cause parts of the financial system to seize up. As part of the deleveraging, there's been a push to reduce reliance on these products, to bring things back into the formal banking system. That's created some of the problems that Yiping has mentioned.

**ANIL KASHYAP:** Yeah. The other thing about Yiping's point is, if you look at the income ratios or the consumption ratios between the wealthy and the poorer parts of the country, they're big, on the order of three times. So why does anyone want to stay in these dying or struggling regions if they could move freely? Well, they wouldn't.

So that's why I said this personal freedom and economic freedom go together. If you open up the forces of change where people can migrate without many constraints, it's going to be
chaotic. People are going to move away from these depressed areas, and it'll be hard to control. And so treading that line is a real challenge. And the risk is-- the way they prevent it is just pumping more credit in to keep things stable, keep the lid on it. But then that creates a bigger imbalance in the future.

ROBERT RUBIN: Anil, you're-- oh, I'm-- did you want to say?

YIPING HUANG: I just want to say that I think your points on people moving to other places, I think it's a valid point, and I also agree that the household registration system probably should be substantially reduced, if not abolished.

But migration, I think, in terms of mobility, labor mobility is happening quite significantly. The reason why many people choose to stay in these, like, almost dead areas with the economy, not the lively, are mostly, like, older people. For instance, you go around, and you find that young people coming from this region, they're graduating from universities, almost none of them want to stay in that region. They all go to the southern part of the country. That probably is part of the reason why the economy is not very dynamic, but also because these older people stay-- they worked for an SOE for 40 years or 20 years. It probably will be, number one, the transaction costs for them is quite high, moving to a new place, and they're not sure if they can get a decent job in another area. And, of course, finally, even though these jobs are not very good, but you still have some kind of guarantee of pay from the government and so on.

So I think that it's a result of a mixed number of factors.

ROBERT RUBIN: Anil, you're an expert in financial systems. What would your guess be as to the probability, if you now take this as our framework, that this can all be done in a manner that works relatively well versus the possibility that, in one fashion or another, it becomes fairly disruptive, if in no other way just that it greatly reduces productivity and therefore growth, and that creates social instability, et cetera?

ANIL KASHYAP: I mean, you know, if you'd asked me this question five years ago, I would have said they probably wouldn't make it five years. If you asked me 10 years ago, I would've said they wouldn't make it five years. So I got to be frank here. They're way past when anybody thought that they could pull off with, you know, 40 years of no recession growing at 9%.

So you've got two factors. If you're Bayesian updating, you say, well, they've done it for 40
years. They'll do for 45. But if you compare to the rest of history, it doesn't look so great, especially with the aging and all these other things.

Now, I think it's going to be a challenge. I don't think there's going to be some supreme moment of collapse. But I think it could grind down the growth if they're not careful. And then things will look much less favorable I think you've gotta put substantial weight on that. I don't know if it's the base case, but it's a real risk.

YIPING HUANG: As I said, I think we should look at China not as the one single economy. It's actually a different set of economies. So, for instance, we're talking about the middle income trap question. But if you look at the coastal region, like from Tianjin to Shanghai to Shenzhen, the whole region is already a high income economy. So it's not really an issue, I think.

The problem is much more, like, in certain areas. The western region, northeastern region, that is a bigger problem. So my guess is, if we can continue to support-- the east coastal region continue to rise as they are doing, and they're trying to work out some of the issues.

Even if-- I mean, I think Brad made a very good point, which I also agree to. The central government probably should take a greater responsibility as to some of the messes or financial messes already created in these regions and just say, well, the government will assume some responsibilities, and then let's start from there. That's exactly what the government did in the late 1990s.

ROBERT RUBIN: Yiping, is there a willingness-- this is sort of related question, but we've covered to some extent-- but is there a willingness right now on the part of government to allow failure to happen? And, secondly, is there the equivalent of our bankruptcy system? In other words, we have a whole set of laws that provide you ways to reorganize and keep the business going, but change and go forth. My impression is China doesn't have an analogous system. I could be wrong.

YIPING HUANG: I think that there is a willingness for some failure to happen, because they are always talking about, for the past couple of years, that we should release some of the risky spots, because if we don't release the pressure now, it will blow up one day sooner or later. So I think that point is quite clear. And, in fact, the authorities are trying to deal with the problems in all different areas. The shadow banks you mentioned earlier on the local government are borrowing, the think tank industry, and so on. They're all doing it.
The problem is when you come down to really bankruptcy a company. My own impression is I'm not a legal expert, so I have no idea. The bankruptcy law is there, but implementation lags quite seriously. So this is causing a problem. And the government's preferred approach is not outright bankruptcy but restructuring. So a failing company would be taken over by another company and so on.

But there was a byproduct from the central government squeezing on local governments borrowing massively from the market, because that local government's liabilities are rising so quickly, it became a bigger problem. So now the central government is trying to constrain the local governments' capability of borrowing.

What I expect the result was now the local governments are more willing to let some of the local loss making SOEs to be privatized, because they don't have any resources to support these a loss making SOEs anymore. So they have to let it go.

**ROBERT RUBIN:** Has there actually been a privatization process amongst those [INAUDIBLE]?

**YIPING HUANG:** Taken over by some private investors and so on. We have seen it. It's not, like, a widespread phenomenon. But we are seeing an increasing number of cases.

**ANIL KASHYAP:** They picked the low hanging fruit a number of years ago. If you look at-- one of the great things about China is they have statistics like what he was just quoting, loss making SOEs. You just look at the national statistics and count the numbers. And what you see is the numbers are shrinking, but the number of people employed are not falling nearly so fast. They cleaned out all the little ones, and I guess the thing I don't know is, the last time I looked at this, it was still the case that your health care and your pension was tied up with your employment. So one of the-- looping back earlier to the consumption savings thing is--

**ROBERT RUBIN:** Also goes to mobility question.

**ANIL KASHYAP:** Yeah. And if you close down this SOE, what happens to their pension? Who deals with their health care and all of that? So, I mean, if it was easy, they would have done it.

**BRAD SETSER:** There's also this-- going to your bankruptcy question, sort of a conceptual question-- if the biggest creditor of a state enterprise is a state commercial bank, the bankruptcy process would involve transferring ownership from one part of the state to another part of the state. And my sense is that that's still, with some exceptions, an accurate description of many key parts of China's economy.
ROBERT RUBIN: Let me ask a totally different question. Maybe there's no way of measuring this. But does one have a sense that the management of the SOEs— as compared to, say, whatever period you want as your baseline— that management has improved, has deteriorated, or stayed about the same?

YIPING HUANG: Well, if you look at it recently, yes. And if you look at, for instance, the SOEs today compared to 20 years ago, they're massively better. Massively better partly because, in the late 1990s, we actually had a de facto privatization wave, and half a million loss making SOEs disappeared within a couple of years. So the only ones left are bigger ones.

But last few years, I think the SOEs got into troubles again, but you read that reason the data—profitability and a margin was actually improving, probably partly contributed by recovery of the commodity market, because they concentrate in the resource sector.

ROBERT RUBIN: You might not want to answer this, but let me see if either of the other two know the answer. One reads in the press, at least— one hears from people who do business in China— that the role of the Communist Party is now increasing in the conduct of business in China. We will ask our two guests to answer that. Do you have any sense of that, one way or the other?

BRAD SETSER: I think that sense is well grounded. It shouldn't really be a surprise since President Xi has made the strengthening of the party and the institutions around the party a central part of his broader approach to governance. So I think there was a sense that the party machinery was also growing in importance and economic governance relative to the traditional institutions of the state. And I think there is certainly a sense that even the private companies now need to be on the— I'm going to get the phrasing wrong— but the right side of the party. Make sure that there's a party committee, that kind of thing.

ROBERT RUBIN: Maybe China's different than the United States, but if our politicians were deeply involved in the management of American business, I think that wouldn't necessarily be the world's most constructive step. I think we have very— well, just one factual question. When does the labor force in China start to decline?

YIPING HUANG: The working age population is already declining. At the moment, like, we're losing something like 5 million workers every year. Compare that to 20 years ago, the labor force was growing by 8 million.
So that actually comes back-- also relates to the point we're making earlier about, how do we deal with the SOEs redundant workers and so on? I actually think, at the macro level, it should be so much easier now to deal with this much smaller labor force with the state sector, while the overall labor market condition actually is much, much more tight.

So one thing I think is surprising to many economists and some officials is that, after the global financial crisis, growth has been decelerating steadily. Everybody expected the unemployment rate to shoot up, but it didn't.

ROBERT RUBIN: I'm going to be fired unless I obey-- what am I supposed to do now?

MICHAEL GREENSTONE: Q and A.

ROBERT RUBIN: Oh, OK. I'm supposed to do Q&A. There you go. And then we're going to do this like the last panel did. We're going to end with a question that you can only answer with one word. And I won't even-- and I'll give you three choices of words. OK.

How likely-- oh, that's good. Yes. How likely is there to be a housing price decline in China, and how significant would that be were it to occur on the economy?

BRAD SETSER: I'll start. I'm sure others-- I think there is a little bit of evidence now that the housing market is weakening, that the wave of construction and wave of demand that was created in part to pull China out of what you might call a recession by Chinese standards. So there was a growth slowdown in '14 and '15. In response, mortgage credit was liberalized. There's been a big increase in household borrowing. And I think there's now evidence that sales volumes are falling. And that's one of the reasons why-- there's a range of indicators suggesting that Chinese growth is now decelerating.

I doubt that will lead to an outright fall in home prices. I think the authorities have strong incentives to avoid that outcome. But I do think this is an important concern, in part because China's domestic economy may well have been decelerating right at the time when the US is ramping up its trade pressure, and that adds to the policy challenge that Chinese leaders now face.

ROBERT RUBIN: Here's a really interesting question. I must say I've never thought of it before. But I don't think there's ever been an economy in history that hasn't had recessions. When will China's first recession happen, or is it possible that China has developed an economic model and condition
such that we'll never have a recession? Never within the, I don't know, some--

ANIL KASHYAP: So, you know, all these countries that go through transitions-- many of them starting with Japan. Japan averaged 9.9% a year for 20 years, OK, but they still claimed they'd have growth recessions when they'd slow to 3% or 4% for a quarter or two.

So you’re asking, at what point will they have a good old fashioned, US style recession where GDP drops, it could be quite some time. But that won't change the way it'll feel on the ground in China. If they were to slow to 1%, people would be panicked.

ROBERT RUBIN: Or 3%, one would guess.

BRAD SETSER: I guess China will have a recession when the leadership abandons its growth target.

ROBERT RUBIN: That's a clever answer, Brad. Would you like to answer? You don't have to.

YIPING HUANG: I agree.

ROBERT RUBIN: You agree with which comment?

YIPING HUANG: I agree with Anil. I think we already-- if you’re talking about a growth recession, we're already in growth recession. Growth has been decelerating since 2010, and we still don't know if we hit the bottom yet. So I think that that will continue to go down.

But you look at the momentum of the economy, as I said earlier on innovation, new industries are coming up. And that probably can support growth for quite a while. So I don't know when we'll see a true recession in China.

BRAD SETSER: For all intents and purposes, I think China-- this is my own personal opinion-- China had a recession in 2014 and early '15. Import volumes were basically zero, which strikes me as a reliable indicator of the pace of activity.

ROBERT RUBIN: Yeah, but what was the reported rate of growth, and what was the actual rate of growth?

BRAD SETSER: Reported was around 7%. I think the actual rate of growth was more like 3% or 4%.

ROBERT RUBIN: 3% or 4%. OK. So now they just announced, I think, a week or two ago-- I don’t remember-- 6.5% growth. What is the actual?

BRAD SETSER: I would say about 5%. But I think, over the past two years, China actually has had fairly strong
growth. So I think there's been a deceleration from a period when the official growth number was pretty close to the real number.

ROBERT RUBIN: OK. I don't own a watch, so are we at the end of our time? Because I want to ask one question. No? OK. We can keep going. We've done this, I think. OK. I don't feel like that one, either.

If you look forward five or 10 years, and you think of the attitudes in the United States and China toward trade, do we think we're going to have a more protectionist global trading regime, or do we think we'll continue to have the kind of relatively open trading regime that we've had for now a long time?

ANIL KASHYAP: Can I ask you a question I've always wanted to ask you? If we go all the way back to NAFTA-- you're uniquely positioned to answer this question.

ROBERT RUBIN: When anybody says that, I get very wary, but go ahead. Brad was there with me, so if I can't answer, maybe he will.

ANIL KASHYAP: To get NAFTA through, we made this bargain that said NAFTA was going to be good for jobs. You know, economists would have never led that way. We said it would be good for variety, consumption, specialization, but would have never-- and that was when we really tied jobs to trade in a way that I think has morphed into kind of this toxic, zero sum view of trade. Have you ever thought of what would have happened if we'd let NAFTA go down and forced businesses to come and make a better argument instead of tying it to jobs? I've wondered about that.

I mean, NAFTA has been a great thing, but it came at a high price in terms of the political rhetoric.

ROBERT RUBIN: Look, it's a good question, Anil, but I don't think that the politics of trade-- look. I think the next thing to worry about-- this is my view. I don't know if anybody else agrees, and probably I'm wrong. As Michael said, I'm a retread lawyer, not an economist. But I think the risk now is that, at some point, the focus on trade as being a pressure on jobs and wages will turn to technology. That, after all, is where the real pressure comes from in this country. And I think it is vitally important that we have the kind of market based economy. Therefore, we should have, in this case, a whole different subject. We've had an inclusive growth-- you have the same problem, I think, over time-- inclusive growth policy regime that promotes growth and
In terms of NAFTA, I think if we let it go, it wouldn't come back. We only got it—truthfully, we only got it by building bridges all over America, and that's how NAFTA got passed, not by anything else.

Let me ask you this, but I want to go back to the question that I just asked. Given that China does have a whole bunch of—we discussed a little bit, albeit not much—a whole array of structural issues that are serious issues. And the question is, are we going to continue to have our market based economic policies, or will we adjust to that? And will we become less market based and more industrial policy? It goes enormously against our concept of what works economically, but if you look at five or 10 years, do you think we'll have a more restricted kind of global trading environment, less restricted? Is it possible there will be two regimes, one built around China and one built around the United States?

BRAD SETSER: That last question is one a lot of people are asking, in part because of the provisions in the USMCA, the new NAFTA, that say, more or less, you can only have a free trade agreement with the US if you don't have a free trade agreement with a non market economy, which would imply, over time, a bifurcation of the global trading system. And I think that's maybe not the baseline, but it's a reasonably high probability outcome.

I think five to 10 years from now, we will have a slightly more restrictive system. I think that's in part going to be a reaction to China's China 2025 policies. If China doesn't want to import US aircraft, there's going to be less trade, by definition. And I think there will be some level of restriction. Whether it's going to be 25% sustained over time, I have some doubts, but I don't think we're going to go back to a world where, broadly speaking, there is a global set of rules, and China is accepted as a normal player within those rules.

ROBERT RUBIN: Does anybody think the WTO is still going to be relevant five years from now?

YIPING HUANG: Well, I think, certainly, China will have a very strong interest in maintaining that regime.

ROBERT RUBIN: A WTO regime?

YIPING HUANG: Yeah. WTO, a multilateral system. In terms of net contribution to GDP growth, I think that trade's role or export's role are probably declining, because it's a very large economy, and it should gradually make the economy somewhat more domestic and demand oriented.
But I think, I mean, the policymakers realize that openness is really the key to the success in the past and probably will be the same for the future. And to some extent, this is the reason why they want this belt in the road initiative, because the developmental world might be slowing down, and you want new areas of cooperation.

So I think dependence on trade’s contribution to GDP growth will continue to go down, maybe stay at a very low level. But I think the important stuff-- exchanges of capital, of ideas, of people, and the technology-- I think will be much more important.

The second point I think that we should also take a look at the Chinese, the policy changes. Brad said, well, if China does this, then the people would feel very suspicious and so on. I agree.

But you look at the list of some foreign countries, the amount of Chinese policy changes, number one, better protection of intellectual property rights. Number two, opening the services sector. And number three, increase the rule of the market, allocating resources. If you guys have a chance to read the government's policy document, these are exactly what the government planned to do.

Personally, as an academic, I would say, well, the government has been incrementing these policies slower than I had wished, but I think that this tension itself might not actually be a completely negative thing. Actually, it would force many people in China to start to think, well, should we accelerate the reform, or should we actually just turn inward looking? My sense is I think we probably will see faster reform, even if our trade with the US intensifies. We still want to have better trade and economic cooperation with the rest of the world.

**ROBERT RUBIN:** Yiping, what does socialism with Chinese characteristics mean?

**YIPING HUANG:** As an economist, I don't pay too much attention to--

**ROBERT RUBIN:** I mean, it is how they describe themselves.

**YIPING HUANG:** Bottom line, I certainly don't think that China is a very ideological country in that sense. You compare that-- even during the central planning system period, you compare China with the former Soviet Union. It was a very different story. So socialism, in my sense, probably, in an economic area represented by the two factors I mentioned at the very beginning, a rule for SOE and the economy and some government rule in the economy.
But I think it's not impossible to make of these actually more or less in line with the market rules. The SOEs, for instance, as I said, you have SOEs in other countries, and the government is not talking about competition neutrality. If competition neutrality is a really something the government is going to enforce, then we probably should pay less attention to the ownership itself, per se, because it's much more important for them to just play on the level playing field.

The second thing is the rule of the government. And I think we are also seeing the discussion and the debate, what is the best rule for the government? That the best the rule for the government is to overcome market failure. Probably, it would be a bit more than what we see in North America or in Western Europe. But think about what Japan and Korea did.

BRAD SETSER: Can I just throw in a quip? I think socialism with Chinese characteristics doesn't seem to involve a whole lot of what Bernie Sanders would describe as democratic socialism. It does not seem to involve taxing income in any substantial way. It does not involve taxing property, and it still doesn't have a property tax. It does not involve transferring income to the low wage part of the population. And it doesn't seem to involve providing high quality public health insurance to all, given the low level of public spending.

ROBERT RUBIN: I'll give you one comment, then we will wind this up. I heard a little bit of the prior discussion when he was talking about the citizens' trap, one thing or another. I think the tragedy of our situation right now is that, at the leadership of our country, we've an animus toward China, and I think it's massively in our self-interest to have an effective relationship with China, and I don't know enough about China to know what the view is at the top there, but I've always had sort of the impression that this is a relationship that doesn't have to be the citizens' trap. This is one that can work together. And I think your coming here from Beijing, for example, to explain a little bit of what's going on in China is the kind of thing we need to, just on a vastly greater scale.

OK. Here's my question. You only can give one word. If you were making an investment decision today, would you substantially allocate—looking out 10 years, would you substantially allocate toward China—and you can answer yes, you can answer no, or you can answer too complicated to have a simple answer. Anil?

ANIL KASHYAP: No.

ROBERT RUBIN: No? Well, that's interesting. Brad?
BRAD SETSER: No.

ROBERT RUBIN: No? Oh, wow. You don't have to answer.

YIPING HUANG: Yes.

ROBERT RUBIN: That is really interesting. Wow. OK.

[APPLAUSE]

BRAD SETSER: What would you say?

ROBERT RUBIN: Well, to me, everything is too complicated [INAUDIBLE].

[LAUGHTER]

Tim Geithner used to claim that I was the leading expert in optionality.

SPEAKER 2: That was terrific. Really good. Thank you.

So that concludes the day. You guys-- you don't have to get up yet. Just want to-- we're going to do the closing remarks. Kudos to the organizers of this, conference because, as you can see just from this panel, the level of discussion is fantastic, the quality of the people, the high level of quality of the people, people coming from China. Ditto to what Secretary Rubin just said. It was so great to have you travel here.

We are looking forward to seeing you back here tomorrow. Another eventful day. Everything begins at 9:00 AM. Don't be late. We're going to have a great opening panel. Please be on time, and also please think about the environment. So please bring back your program so we don't have to give you a new one. OK?

And then you can go out to the Hutchinson Commons for a reception, which is going to be held right out there. OK? Thanks.

[APPLAUSE]