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*for International Peace*

**CHINA'S PEACFUL RISE?**

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**PANEL II: "CHINA'S IMPACT ON THE GLOBAL ECONOMY"**  
MODERATOR: NICHOLAS LARDY, INSTITUTE FOR INTERNATIONAL  
ECONOMICS

**SPEAKERS:**

HOMI KHARAS, WORLD BANK;  
JIM JARRETT, INTEL CORP.;  
ZHANG JI-QIANG, THE BLUE MOON FUND

MR. LARDY: With Martin and Weijian telling us a great deal about the domestic economy; its strengths and weaknesses; the likelihood of sustainability; but particularly Martin gave us a sense of China's growing significance in global trade and capital flows, and it is to that subject that we turn more directly in this panel. You have the full biographies of the speakers. I will just introduce them. I'm going to introduce them all very briefly so I don't have to get up and spend time introducing them individually. They each have significant PowerPoint presentations. We only have about an hour and 20 minutes for this session, and we do have three speakers, so I'll be very brief.

Our first speaker is Homi Kharas, who is the chief economist of the East Asian Pacific Region at the World Bank. Our second speaker is Jim Jarrett, who is vice president of Worldwide Government at Intel and, more importantly for us, ran Intel's operations in China for five years ending in about 2000; and our third speaker is Dr. Jiqiang, who is the vice president of programs at the Blue Moon Fund based in Charlottesville, Virginia. I think we're going to have a rich presentation. I've asked the speakers to limit their remarks to 15 minutes, maybe a minute or two more, so we will have time for questions-and-answers at the conclusion of Dr. Jiqiang's presentation. We'll begin with Homi Kharas. Thank you.

*Dr. Homi Kharas' talk is to be published in a special supplement in Foreign Policy (in its January/February 2005 issue).*

MR. LARDY: Jim Jarrett is next.

MR. JARRETT: What I'll be talking about is high technology, specifically in China, and its emergence in this area. The main points I'd like to make are these -- first of all, China has emerged as a real force in high technology, both as a producer and as a consumer, and in high-tech, has pursued a very open strategy, so far. The country began as an assembler in high-tech areas but is now starting to move into design in a very real way. We are also seeing the emergence of something that I call the "mid-Pacific company." I'll give you a few examples of that; and just a little look at some of the challenges that the PRC faces in the high-tech area.

One slide on Intel in China -- we started there in 1985. It's now our number-two country market growing very rapidly, obviously. We have assembly and test operations in Shanghai. We're building a factory in Chengdu, even as we speak. We're doing R&D in Shanghai and Beijing; sales and marketing offices in 14 different cities around the country; have over 20 venture capital investments right now; and about 3,300 employees.

If you look at China's electronics production growth, when you compare 2001 and 2005, as shown here, you see that very rapid growth is taking place -- about 24 percent compound annual growth rate during that period. And if this works out right, next year China should be a bit larger than Western Europe as an electronics producer -- still well behind Japan; well behind North America; but growing rapidly.

Outsourcing to the PRC is also something that is growing rapidly. If you look at the red line there, expectation is that by 2005, about 11 percent of electronics will be outsourced to China -- so becoming the world's factory. This has been built on a very open policy base. It's been an -- IT has been an encouraged industry for foreign direct investments, and it was interesting -- when I arrived in China in 1996, I was struck by the fact that China, at that point, their concept of an incentive was to say we have a very big market. That's changed completely. Now the incentives that are being offered in China are world-class. China has moved to break up -- to create competition through moves like the breaking up China Telcom; moved into WTO, of course, a real forcing function for its domestic industries; and also, very notably, signed the Information Technology Agreement when it joined the WTO. So now there are zero tariffs on information technology products coming into the country.

This year that trend toward good policy choices continued -- three notable things this year, two of which took place at the April JCCT meeting. One was moving from a locally developed wireless local area network standard. It's called WAPI, and moving toward the international standard -- 802.11 wireless LAN standard -- and this prevented a train wreck down the road where the local standard was really incompatible with the international standard. So a very good move, a very open move, and an acknowledgement of international standards by China. Second, at that same JCCT

meeting, an announcement by China that it would not mandate the use of any one technology for 3G phones; that it would let -- it would be technology-neutral and let its carriers make a choice. So there was no preference stated for the China-developed technology called TDSCDMA. Then, later this year, China agreed that it would abandon a two-level value-added tax on chip production. It had been offering an incentive where a domestically manufactured chip could have 14 percent of the 17 percent value-added tax rebated for use in R&D and in capital expansion in the country. The United States filed a WTO case against China, and China agreed to settle that and is phasing out the two-level chip value-added tax.

If you look at the chip industry in China, what shows up here is a very significant imbalance between domestic supply and total demand. And that even though there will be very significant investment in China in semiconductors, that imbalance will continue for the foreseeable future -- so a rather significant opportunity for the manufacturers in other countries.

If you look at the chip factory investments in the country in the last 20 years, about \$12 billion cumulatively has been invested in China. Eighty percent of that is foreign, and the expectation is that by 2010, on a cumulative basis that will grow to \$36 billion, but the foreign investment percentage will continue to be very much the source of funds.

Currently, there are -- if we measure the sophistication of chip factories by micron levels -- this is the length of the transistor gate, and a quarter micron and below at this point would be categorized, I think, by anyone in the chip industry as a good, advanced factory. It's not state-of-the-art but not too far behind. Currently there are 14 factories -- quarter-micron or below -- in the PRC that are either in operation, under construction, or planned. So there's a lot of building going on there, and very attractive incentive packages are being offered, as I made a point before -- five years, no income tax; five years, half income tax; and, usually, local governments will give you free land as well.

One thing we're seeing now -- a lot of those factories that are going up in China are foundries. They don't have products of their own, they manufacture other people's products. So you're seeing the growth also now of IC design shops in China -- very rapid growth in China's IC design capability to provide those factories with new chips to make.

If you look now at the PC market, China has done very well in its home market. China's branded PC makers amount to over 50 percent of the market. Lenovo, by far the largest, used to be called Legend, but then it changed its name to Lenovo -- 27 percent market share; Founder also doing very well; and some of the others there -- Beijing Tong Fang and others -- doing quite well in the country. Interestingly enough, one of the very fastest-growing companies in the PC business in China, though, has been Dell. They've done very well in the Chinese marketplace, and companies like IBM and Hewlett Packard also continue to do well. They are long-term players there.

If you look at the China cell phone market, it's now the world's largest -- 305 million subscribers and continuing to grow pretty rapidly. PRC companies have about a 50-percent market share in the country. And the PRC has now become the largest exporter of cell phones as well -- in the first seven months of this year, about 74 million units. Ninety-six percent of those are the products of joint ventures. So the domestic manufacturers really are concentrating on their own market, so far.

Very interesting, I thought, was this thing that came out about Nokia -- about 40 percent of Nokia's worldwide units were designed in Beijing and that are being assembled on a worldwide basis in their various factories around the world. So China is clearly emerging as a design center as well as a production center, and, obviously, is a big consumer of high-tech products.

I talked a bit about what I termed the "mid-Pacific company," and here are a few examples of it -- one is SMIC. It's based in Shanghai; it's incorporated in the Cayman Islands; it's listed on NASDAQ; it has an international staff from all over; a lot of the funding is quite international as well with PRC, United States, Taiwan, Japan, Singapore. So what is SMIC? Is it a Chinese company or is it a -- it's hard to give it a real label -- same thing with UT Starcom, which is one of the companies that Intel invested in. It's based in Alameda and founded by Chinese graduates of U.S. universities; listed on NASDAQ now, and at \$2 billion in sales and almost all of that is in China. They are doing R&D in New Jersey, in China, in India -- again, what is this company? You know, it's not -- it doesn't fit -- the old labels don't quite work.

Sometime if you're in Northern California, and you have an opportunity, go to a meeting of the North American Chinese Semiconductor Association -- 3,000 members; Chinese people working in the semiconductor industry in China and in the United States, and if you go to one of these meetings, it seems that if there are 3,000 members, there are 3,000 business plans there as well, because everybody wants to "jump into the ocean," as they say.

Challenges for the PRC: I don't need to elaborate very much on the IP protection situation. It is inadequate right now, and it's one of the things that can be a little scary operating in China. It was notable here recently, TSMC, a Taiwanese company, sued SMIC but they sued them in the United States because they felt that they could get a good case handling in the United States. So there are a lot of problems in terms of IP protection ranging from the enforcement of the laws and then the adjudication of any disputes.

I think another challenge is for the PRC to avoid a tendency within the country to go toward local standards. Local standards really don't work very well in high-technology markets, because our markets are very horizontal, very international. And so going to a local standard really disrupts that and really penalizes the consumers within the country. So I think you'll see this push and pull between that desire for particularism, local standards, and the carrot of the international marketplace.

Capital markets in the country are underdeveloped, and I don't think I need to elaborate a great deal on that. It's pretty well known that it's not where it needs to be in the future.

And, finally, energy infrastructure: when you make chips, you not only need a lot of energy, you need a very stable supply of energy with no interruptions in the power supply. It's a continuous-process industry so if the power goes out, you basically throw out all the work in progress. So stable, ample supply is very important. And China is moving so fast, growing so fast, and has an inadequate energy grid at this point, that this is a problem that's going to have to be addressed if all those chip factories are really going to get built.

So this is the end of my remarks.

(Applause.)

MR. LARDY: Our third speaker is Dr. Zhang.

***Dr. Zhang Jiqiang's talk is coming to be posted.***

MR. LARDY: I want to thank the speakers for sticking to their time and setting the agenda, and I think we're ready to open it up to questions. Again, the same rules apply -- rise, wait for the microphone, identify yourself, and ask a short question, and you can address it to a specific speaker or to the panel, in general.

Q Peter Bottelier of SAIS. My question is directed to Dr. Jarrett. Conventional wisdom amongst economists seems to be that China is very good at learning new technologies, applying them, and often improving them on the margin, but that China is not very good at innovation or thinking of radically new breakthroughs in new technologies. What is your view on this question, from Intel's experience?

MR. JARRETT: We have a software lab in Shanghai, and we have an R&D laboratory doing a little bit further out kind of work in Beijing, and we have found the productivity, the creativity, our people there to be absolutely world-class. So from our point of view, it certainly has been very rewarding to be working with our people there.

China has, as I mentioned, really have focused more on things like assembly initially, but if you look at the total global R&D figures right now, about 10 percent of the world expenditures on R&D are taking place in China. It's well behind the United States, but it's very considerable. I don't have a breakdown for you on how much of that is defense-related, how much of it's commercial, but I do want to dig into that to get a better sense of that. So I think things are changing.

MR. LARDY: Bert?

Q Thank you. Bert Keidel from Carnegie. Dr. Kharas, I was intrigued by your reference to China as lessons for developing countries to use evidence-based policies. Could you adumbrate a little bit what that means, and what is your thought about the political will in developing countries, particularly those that are doing poorly, to, in fact, use such evidence-based policies?

MR. KHARAS: I think that because of its scale, China has had the opportunity to try lots of innovations at local levels and then take those lessons and try to scale them up. And I think what you're now seeing in a lot of under-developing countries is not so much the adoption of "lessons from China," but the pursuit of that kind of model. There is much more emphasis now, I think, on the impact evaluation of a particular project. I think we're seeing an increasing willingness of countries to try new things and to collect data and do serious work to try to assess the outcomes. So I think that China has raised the bar, if you will, for what we consider to be development success, and I think that there are a lot of other countries around the world starting to now take that seriously and realize that, you know, growth at levels that they thought was quite good is actually well, well below that potential. So I'm quite encouraged by the will, in a number of countries, and then, of course, you've got a number of other countries where the development problems are really problems of political will and lack of commitment, lack of implementation capacity, lack of follow-through, and that will probably be a much longer road.

MR. LARDY: Ken?

Q Thank you. For the past year and a half or so, we've seen a dramatic increase in global commodity prices and prices for international shipping, largely based on increases in Chinese imports. To what extent do you think we're looking at a real paradigm shift in global commodity prices and transportation prices, and to what extent do you think that's going to trend down, over time?

MR. LARDY: That sounds like a question for Homi.

MR. KHARAS: It varies quite a lot, I think, from commodity to commodity. I think that we have to put this in perspective, that commodity prices were at really record-low levels, and this recent phase of an increase in commodity prices is obviously associated with China's rapid growth but is also associated with the fact that this is probably the best year for the global economy in at least a generation. So global economic growth is actually higher than I think we've seen since 1980 or so -- before that second oil price shock. So it would be a stretch to attribute it all to China, especially in some commodities like oil, where China is still -- I don't know exactly -- but somewhere around 7 percent of global consumption. So, you know, it's big, and it's obviously increasing its share, but it's surely not the driver of what's been happening to things like oil prices. In certain investment materials, in particular, that obviously is not quite the same, but those typically are areas where one would expect there to be a supply response and, in fact, I think we are seeing a bit of a supply response.

MR. LARDY: I want to go to this side.

Q Thank you. This morning we heard that if other developing countries might want to learn a lesson from China, perhaps it is to borrow growth. I don't know if Mr. Kharas was here; whether he would like to comment on the concept that China's success is its high growth rate is due largely to the factor of high savings rate and controls on capital that Shan Weijian put out and that there has to be a financial system reform, thorough going reform in order to avoid some kind of reckoning in the future.

And for the other two panelists, you mentioned constraints, Mr. Jarrett, on China's high-tech growth including electricity, reliable electricity supply, and Dr. Jiqiang obviously talked about the environmental impact of China's high growth. I wonder if you could each talk about how China's economic policies seem to be helping or hindering developments in your two areas.

MR. KHARAS: Let me start with the borrowed growth. Well, there's no question, of course, that China's growth is being fueled by capital accumulation and that capital accumulation, in turn, is being fueled by high savings rates. I think the good news for China is that those high savings rates are largely high household savings rates. So I don't think that one can argue realistically that there is a major effort at so-called "forced savings" in the old sort of socialist sense, where public savings really dominated the development part.

But, obviously, one needs to do something about the financial sector. I think that China used to have a strategy which was essentially, "Well, growth will fix the problem, and we will simply grow out of our financial sector and banking problems." I think the leadership recognizes that that strategy has not worked and is unlikely to work, and I think you're seeing a shift in strategy right now towards a much greater focus on restructuring of banks. Now, whether that will actually work and whether it will go far enough because it has yet to really enter into deep issues of state ownership, state control, the government structures in banks, et cetera, I think remains to be seen. But there is no question, I think, that the financial sector has moved from being an area where people could afford to say, "Well, let it wait while we deal with other problems," to being on the forefront of the reform agenda, and I'm pretty sure that -- you know, if this current strategy is not seen to be working that there will be some changes in adoption in that strategy until you get a strategy that does work.

One last comment about borrowed growth -- I think that the sense in which there is borrowed growth in China is the sense of the environmental costs that have been associated with this growth, and where we've done some analysis in Western provinces in China or in places like Xiangjiang, I think you see that if you properly account for resource depletion and other environmental costs, you get growth rates in China, which are much, much lower than the posted GDP growth rate, and that is certainly something that needs to be dealt with in the future, and I believe is going to be one of the themes of the 11th five-year plan.

MR. JARRETT: I guess I would just mention in the high tech area, certainly the high savings rate among individuals in families has -- plus the great identification with education in Chinese families, has been a great benefit to us in selling PCs to the retail market. The home market has been typically the fastest-growing portion of the PC market in China. So we've benefited from that traditional thriftiness and savings rate.

The other thing I would mention in terms of policy -- high technology is an area that changes pretty quickly, so it doesn't lend itself very well to central planning, and we saw the -- it used to be that every province had to have its own color TV manufacturer, so we had massive over-capacity in color TVs. You could get into the same kind of situation with chip manufacturing in the future in China. There's nothing more expensive than an empty chip factory, believe me. So it could be a problem, and China seems to be changing, seems to be trying to let market forces be more of a driver in determining what kind of factories get built in terms of semiconductors, and I think that's a good thing, a good trend.

MR. LARDY: Dr. Jiqiang, did you want to comment on this?

MR. JIQIANG: There is no quantitative, systematic study on the cost of the environment, I should say, but the evidence is clear. Last summer, I went to a county in Chengde province, and a contributing county, which is about 500 kilometers south from Beijing. The county has no resources, no coal, no aluminum, but is now they claim themselves the "capital of aluminum industry" in the world. That all the huge aluminum industry are -- and as well as a power plant all gather there. The county mayor told me that he speaks on behalf of his people. He said, "We prefer to choke to death instead of poor to death." So the county actually sell their environment for the economic benefit. This is a very micro picture, but, in general, if you go to Guangdong Province and in the surrounding areas, you will find a large amount of they call it recycling industries, mostly came from Taiwan, Hong Kong, operated there by importing electronic garbage from Japan and the United States and other countries, and poisoning the rivers. The rivers are completely dark, and the soil is completely unusable anymore. So those things happen everywhere, however, it's not counted in the economic index.

Q From Voice of America. Thank you for your impressive presentation today. It sounds like the current growth path in China is not sustainable in the next 20 years, and is self -- at least is not sustainable to the environment. I wonder what kind of policy shift or policy suggestion that you may be given to the Chinese government, consider the current situation that the environment is already being seriously damaged? What kind of suggestion that you will give to the Chinese government to avoid this sustainable growth path in the next 10 or 15 years? And as a global leader of Intel in the IT sector, I wonder if there are already certain kind of initiatives between IT leaders now investing in China with the Chinese government to do something that's helpful to keep the environment clean and sustainable in the future?

MR. JARRETT: I can talk about the IT portion of it. One thing we're seeing in China now is the adoption of, for example, of a European standard on removal of

hazardous substances -- picking it up, exactly the same, basically, and we're trying to keep those two standards harmonized, so they've adopted a very good standard in terms of the removal of things like lead from products.

In terms of our manufacturing, we work on a concept called "copy exactly" and copy exactly means that all of our factories all over the world have to be exactly the same. And so that means also the environmental processes have to be exactly the same, no matter where we build them. So that is what really drives us to have pretty high environmental standards, is this "copy exactly" approach. But we're seeing a lot more action in the last year in terms of environmental standards and interest in China than we did in the past.

MR. LARDY: Dr. Jiqiang, do you have a comment as well?

MR. JIQIANG: Yes. There is a lot of opinions and advice to the Chinese leadership through various channels. China, probably, is the country, which has the most opinions on environmental policies among the other developing countries. Otherwise, by various international groups. China is the field of international players on the environment now, I should say, and -- however, the problem is -- I'll give you an example. There is a strong push by the international community on clean development; strong push on public transportation systems instead of rely on pushing our own personal cars and so on -- highways. There is a strong push on various clean technologies, including promoting our natural gas instead of coal -- coal gasification process, biofuels, ethenols, all kinds -- demonstration project going on by the World Bank, by UNDP, by foundations and so on and so forth.

However, the major problem here is the competition between -- let's see -- the decentralization process puts the burdens on development on the local officials -- the local officials' lack of incentive to look at the environmental issues as a whole. However, the environment issue is not only a national problem, but it is a global problem. So how can you anticipate a local leader who cares about their employment, their growth issues, the economic development issues, are at the same time jump out of his own position to the global and national environmental issues? Those are the major challenges.

MR. LARDY: I want to thank our panelists for an excellent panel.

(Applause.)

(End panel II.)