The China Fix

Statement of
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Before the
Senate Finance Committee
Hearing on

"Risks and Reforms:
The Role of Currency in the US-China Relationship"

March 28, 2007

All eyes are on China as you in Washington grapple with the pressures bearing down on American workers. Many believe those pressures stem primarily from a massive US foreign trade deficit that hit a record $765 billion in 2006 — more than double the shortfall of 2001. Large and ever-widening trade deficits are associated with a shift from domestic to foreign sourcing of US aggregate demand — squeezing both the employment and real wages of the American workforce. With the bilateral trade imbalance with China accounting for close to 34% of America's overall deficit on international trade in goods and services in late 2006, China has been singled out for special attention in the policy debate. If we can fix the "China problem," goes the argument, beleaguered American workers will be much better off as a result.

This is a very dangerous line of argumentation. Not only does it ignore the critical role that we in the United States can and should play in shaping our own destiny but it fails to appreciate the special problems that China is facing in its own journey on the road to economic development. Moreover, the Washington fix is centered mainly on the currency lever — the belief that a sharp upward adjustment of the renminbi in the 25-35% range against the US dollar would alleviate the principal source of pressure bearing down on American workers. The foreign exchange rate is not the answer, in my view. China competes not just on the basis of its currency but also from the standpoint of cheap labor costs, modern infrastructure, access to state-of-the-art technologies, and increasing investment in human capital and basic research. You in the Congress need to ask yourselves an important hypothetical question: How would you feel if you got your way on the Chinese currency adjustment but found that after three or four years the pressures bearing down on American workers had only intensified? As I see it, that's a very real risk that should not be taken lightly.

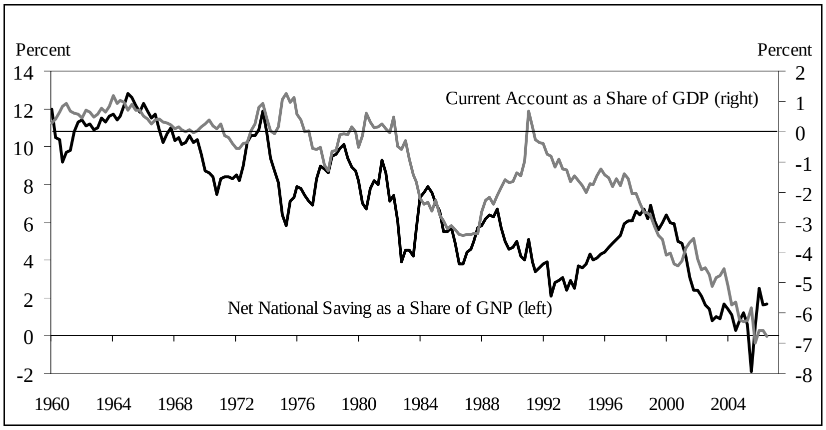
Macro Context

America's massive trade deficit — with China or anyone else, for that matter — has not arisen out of thin air. It is an unmistakable outgrowth of an extraordinary shortfall of domestic saving of businesses, households, and the government sectors, combined that drove the net national saving rate to historical lows of just 1% over the past three years (see Exhibit 1 on the following page). For an economy like the US,

[1] Note: Portions of this statement were presented previously by Mr. Roach as testimony before the Subcommittee on Trade of the House Ways and Means Committee on February 13, 2007.

where the political constituency for rapid economic growth is very powerful, saving shortfalls create an inherent bias toward chronic trade deficits. America is left with no choice other than to import surplus saving from abroad in order to fuel its appetite for growth. The only way to get that foreign capital is to run large current account and trade deficits.

Exhibit 1
America's Twin Deficits



Source: Bureau of Economic Analysis, Morgan Stanley Research

The geographic distribution of those deficits then follows along the lines of comparative advantage. China's share is very much an outgrowth of this framework — both as a supplier of surplus saving and as a source of low-cost, increasingly high-quality goods. I do not believe a stronger RMB will force Americans to save more. The best you in Washington can hope for if you rely on such a "remedy" is to shift the China piece of the US multilateral imbalance somewhere else. Yet that alternative source could easily be a higher-cost producer — thereby imposing the functional equivalent of a tax hike on the American consumer.

There's another element of the "RMB fix" that bears noting insofar as the US is concerned. America's trade problem is one of excess imports — not insufficient exports. As of 4Q06, goods imports were running 73% higher than goods exports. The import surge, in my view, is very much an outgrowth of an extraordinary period of excess personal consumption — with the consumer spending share of US GDP rising to 70% over the past five years from an average of 65% over the 1975 to 2000 period. With labor income growth unusually weak over the current economic recovery cycle — private sector compensation tracking over $400 billion (in real terms) below the norm of previous cycles — US consumers have drawn increasingly from the wealth effects of asset appreciation to finance both consumption and saving. With the income-based personal saving rate falling into negative territory for the first time since the early 1930s, the excess consumption and the outsize import surge it has spawned is a major source of America's macro saving imbalance.

I do not believe that a stronger RMB-dollar cross rate will temper this dimension of America's imbalance in any way whatsoever. The excesses of asset-driven consumption are best addressed through asset markets themselves — a development that could now be under way as the US property bubble bursts. Moreover, given the sheer size of the imbalance between imports and exports, an equilibrating realignment of the dollar would have to be so huge that it would be politically unacceptable to the rest of the world — not just to the Chinese but also to the Europeans, the Japanese, and America's other Asian trading partners.

The macro context is absolutely key in setting the stage for the China debate and in underscoring America's own role in fostering saving and trade imbalances. All too often, however, China bashers barely pay lip-service to this aspect of the debate before launching in to a full-scale broadside attack on the "unfair Chinese competitive advantage." That ducks the responsibility that you in the Congress must accept in creating the so-called China problem. By running policies that discourage saving — namely, large budget deficits and incentives for excess private consumption — you are setting up the US economy for an era of chronic trade deficits. China, largely through no fault of its own, fits all too neatly into that aspect of America's macro equation.

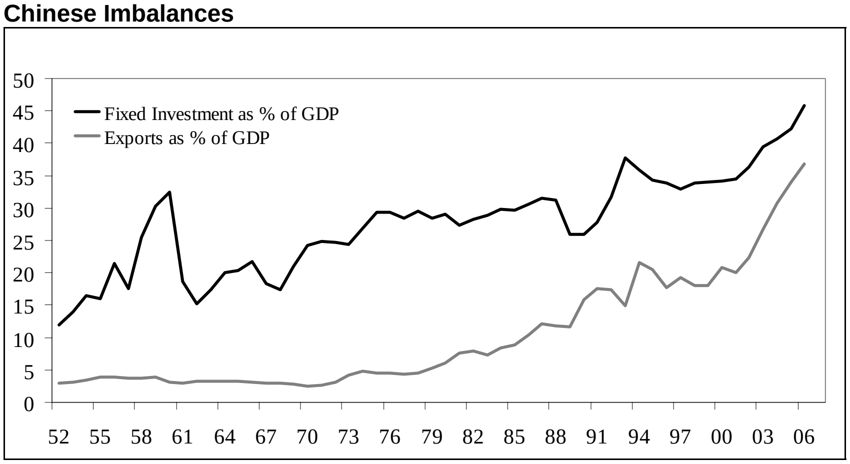
China's Daunting Challenge

It is all too easy for us in the United States to view China as an equal in the increasingly challenging arena of global competition. But China is very different than America's other main trading partners — it is not like Japan, Germany, or Canada. Despite nearly three decades of extraordinary progress on the road to economic development, China is still a very poor country, with a per capita GDP of just $2,000 in 2006 — literally one-twentieth of that in the United States. China is only just now reaching income levels that would put it in the middle range of what the World Bank calls lower-middle income economies.

Over the nearly 30 years of China's remarkable development, it has adopted a unique recipe for growth very much dominated by a recycling of a massive reservoir of domestic saving into surging investment and exports — sectors that now collectively account for more than 80% of Chinese GDP (see Exhibit 2). This model is now nearing the end of its useful existence. China knows that and is now making a major effort to change its approach to economic growth and development. None other than China's Premier, Wen Jiabao, admitted that on March 15 on the occasion of his annual press conference following the conclusion of the National People's Congress. In uncharacteristically blunt language, he sent a very clear message about the worrisome state of the Chinese economy, characterizing macro conditions as "unstable, unbalanced, uncoordinated, and unsustainable." I have never known a senior policy maker or political leader anywhere to leave it like that without rising to meet his own self-imposed challenge. Premier Wen has put his reputation firmly on the line. China, in my view, now has no choice but to now bring its rapidly growing and unbalanced economy under control. You in the Congress need to encourage this transition for it offers much in the way of opportunity for improvements on the US trade front.

Exhibit 2

Chinese Imbalances



Source: China Statistics Bureau, Morgan Stanley Research

Nor is China standing still in addressing the challenge of macro control. The ink was barely dry on the Premier's recent observations when China's central bank followed the very next day with a rare Saturday announcement of a monetary tightening — the third interest rate hike in 11 months, which reinforces five increases in bank reserve ratios implemented over the past nine months. The latest 27 basis point hike in the policy lending rate came only a day after Zhou Xiaochuan, Governor of the People's Bank of China, sent a crystal-clear warning, "…(F)rom a macro perspective, after serious study, we decided to place further controls." In central banking circles, it doesn't get any more direct than that. Suddenly, China's once opaque policy authorities are amazingly transparent — owning up to the seriousness of their macro control problems and setting in motion what I believe will ultimately be a much more determined shift to policy restraint than has been evident in a long time.

To some extent, this shift has been data driven. While China's January-February statistics are always hard to read because of Lunar New Year's distortions, there can be no mistaking the reacceleration of economic and financial activity in early 2007. There were marked overshoots of exports, industrial output, bank lending, while, at the same time, the long-awaited investment slowdown failed to materialize. Moreover, on the heels of the spike in export growth, the trade surplus ballooned to nearly $24 billion in February — fully nine times levels hit a year earlier; that signals what most senior Beijing officials believe to be a very rapid accumulation of foreign exchange reserves in early 2007, which only further complicates China's already daunting liquidity management challenge.

In short, the data flow in early 2007 depicts a Chinese economy that is once again defying the efforts of a three-year tightening campaign. Beijing has long talked tough on the macro control front, but this talk has not achieved satisfactory results. Persistent excess liquidity, in conjunction with a still highly fragmented banking system and an investment decision-making process that is driven mainly by provincial and local considerations, have undermined policy traction. As Premier Wen Jiabao indicated at the conclusion of the National People's Congress, this is a major challenge to the Chinese leadership. He stressed, this is "…not the time for complacency with respect to the economy.

These concerns were very much the focus of the just-completed China Development Forum — an annual gathering in Beijing that follows immediately on the heels of the National People's Congress and provides official China with an opportunity to clarify and expand its message. I have been privileged to attend all but one of these Forums since its inception in 2000 and find it to be invaluable in getting a read on the Beijing agenda. This year's theme said it all — "China: Towards New Models of Economic Growth." It is a clear recognition by the State Council — China's cabinet, whose Development Research Center is the official sponsor of the event — that the Chinese economy is at a critical juncture. The Old Model — dominated by a recycling of massive domestic saving into an equally massive investment boom that then supports an all-powerful export machine — has outlived its usefulness. Official China not only concedes the twin perils of excess capacity and a protectionist backlash to open-ended exports but also worries increasingly about the negative externalities of the current model — namely, excess resource consumption, environmental degradation, and widening income disparities.

The Beijing Consensus is clear on the broad outlines of the New Model. As underscored by the 11th Five-Year Plan enacted a year ago, the goal is a more balanced economy that draws increasing support from private consumption and a more rational market-based allocation of saving and investment. The emphasis on the shift from the quantity to the quality of the growth experience permeated the discussions at this year's China Development Forum. Resource conservation and environmental concerns were at the top of the agenda as defining characteristics of the coming regime change. Senior Chinese officials were quite open in expressing major disappointment over the failure to hit the energy conservation and emission-reduction targets that were announced with great fanfare a year ago. This was ascribed to what the Chinese leadership now refers to as "structural pollution" — the environmental degradation that is a painfully natural outgrowth of the structural disequilibrium of the old manufacturing-intensive growth model.

The give and take with senior Chinese policy makers is always the highlight of the China Development Forum. Minister Ma Kai, Chairman of the National Development and Reform Commission (NDRC) and the nation's leading macro manager, acknowledged in response to a question that I raised that Premier Wen has "…increased our awareness of China's problems." While he hinted at more administrative measure to come — underscoring likely increases in the area of land control and higher project-approval hurdle rates with respect to environmental impacts and energy consumption requirements — he did not pound the table in favor of restraint. His confident, but generally relaxed, demeanor over the state of the Chinese economy stood in sharp contrast with the far more determined tone expressed by China's Premier. I suspect Minister Ma is about to change his tune. To the extent Chinese authorities are likely to up the ante on tightening, and to the extent that monetary policy traction remains very much in doubt, the burden of restraint should fall increasingly on the central planners at the NDRC.

This conclusion became all the more evident at the closing session of the China Development Forum — the annual audience with the Premier. I have watched Wen Jiabao grow into his job over the past four years. Today, he speaks with much greater conviction and confidence than he did several years ago in framing the

China macro debate. It's not just the way he states the problems but it is also a new sense of command over the challenge and solutions. He welcomed the opportunity to elaborate on his worried characterization of the state of the Chinese economy. By *unstable*, he was referring to overheated investment, excess liquidity, and a sharply widening current-account surplus. By *unbalanced*, he was voicing concerns over urban-rural and east-west disparities. By *uncoordinated*, he was drawing attention to the regional fragmentation of the macro economy, to the sharp contrasts between excess manufacturing and an undeveloped services sector, and to the disparities between excess investment and deficient consumption. And by *unsustainable*, he was highlighting the twin perils of environmental degradation and excess resource absorption, as well as persistent tensions in the income distribution. Collectively, the "four uns" — as they became known in our recent discussions in Beijing — made a compelling case for the growth-model change that was the theme of this year's China Development Forum. As Columbia Professor and Nobel Laureate Joseph Stiglitz put it in our discussions, "China always adopts new models at key transition points in its development journey. This is one of those times."

As I sit back and reflect over the message from this year's Forum and try to benchmark the discussions to those I have heard in each of the previous six years, I am struck by one major shift — that there is greater determination than ever to get on with the transition to the new model. There is a clear sense that time is growing short. Official China's frank admission of failure in hitting its energy conservation and environmental remediation objectives in 2006 only underscores the sense of urgency. So does the renewed spurt of rapid growth in early 2007. Premier Wen left no room to mistake the significance of this new focus. He went out of his way to stress, "This is a strategic shift for China." It doesn't get much clearer than that.

For those of us in the West, this is a strong signal we need to update our perceptions of China. Think less of open-ended unbalanced growth and more of a somewhat slower and better-balanced expansion. Think less of an industrial-production dominated model with increasingly destabilizing implications for natural resource consumption and the environment. Think more of a shift to consumption, services, and "greener" growth. Think also of macro stabilization policies — not just those of the central bank but especially those of the central planners at the NDRC — that will be used increasingly to up the ante on the tightening required to achieve these objectives. But don't think for a moment that China will back down on the reforms that have driven nearly three decades of its extraordinary transformation.

The Heavy Lifting of Chinese Rebalancing

The rebalancing of any economy is never easy. Nor is there a boilerplate recipe for such a daunting transformation. For a state-directed Chinese economy, the challenges are very different from those in a market-based economy like the United States. China is now taking an important step on the road to rebalancing — moving to rein in the excesses of an investment boom and a stock market bubble. A key question is, What comes next?

Most believe the answer lies with the Chinese consumer. The numbers are compelling: Private consumption in the world's most populous nation currently accounts for only about 35% of its GDP — half the elevated share in the US, well below portions elsewhere in the developing world, and quite possibly the lowest consumption share of any major economy in modern history (see Exhibit 3 on the following page). There's obviously nothing but upside to the case for the Chinese consumer. It is widely billed as one of the great hopes and opportunities of China's rebalancing — able to fill the void left by any slowing in investment or exports.

I wish it were that easy. Centrally-planned or not, China can't simply push a button to bring its vast consumer sector immediately into play. Consumer cultures, in many respects, are the DNA of market-based capitalism. China has taken only small steps in that direction. With over 60 million layoffs traceable to the state-owned enterprise reforms of the past decade, job and income insecurity is rife amongst the Chinese workforce. The lack of a nationwide social safety net — especially social security, pensions, and unemployment insurance — only compounds that problem. As such, Chinese households, motivated by fear of uncertain economic prospects, are predisposed toward an inordinate amount of precautionary saving. Reflecting this penchant for personal thrift, China's national saving rate is now close to 50%, the highest for any major economy in the world and a major stumbling block to the development of a more vibrant consumer culture.

Exhibit 3

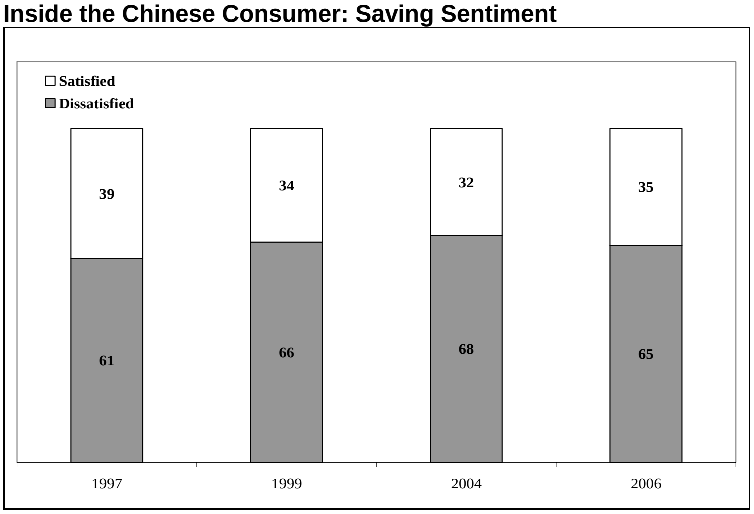
Chinese Private Consumption as a % of GDP

* Data for 2004 and 2005 reflect revised national accounts.
Source: China National Bureau of Statistics, Morgan Stanley Research

The just-released results of the 2006 Gallup Poll of China underscore three key obstacles that the consumer still presents to a rebalancing of the Chinese economy: (1) Fully 65% of Chinese households remain dissatisfied with their saving positions, up from a 61% dissatisfaction reading in 1997. Consistent with a powerful precautionary saving motive, the Gallup Poll found that worries about an adequate safety net were the major reasons behind such dissatisfaction — especially in the areas of retirement funding, healthcare, and children's education (see Exhibit 4). (2) Widening income disparities are also inhibiting the expansion of a broader base to Chinese consumption. This is evident in both urban and rural areas, where the Gallup tally shows that the difference between the upper and lower quintiles of household incomes increased by about 40% in 2006 relative to 2004; this is the largest increase in income inequality in the 10-year history of Gallup's China Poll. (3) The lifestyle benefits of urbanization are concentrated in China's "Top 10" cities; by contrast, citizens in "Middle China" — medium-size urban centers — remain on the outside looking in. With income disparities increasing much more in medium-size cities than in large ones, China's urban consumption base remains disappointingly narrow (see Exhibit 5 on the following page).

Exhibit 4

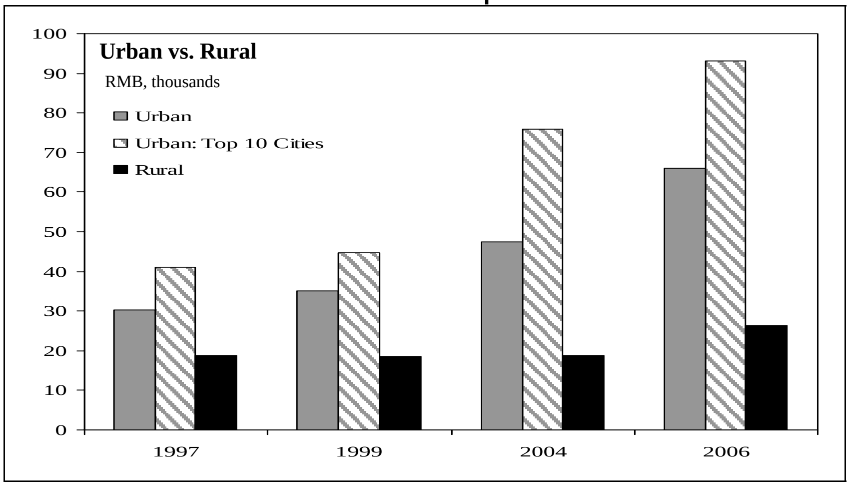
Inside the Chinese Consumer: Saving Sentiment



Source: The Gallup Poll of China: Nationwide Polling, 1997-2006

Exhibit 5

Inside the Chinese Consumer: Income Disparities



Source: The Gallup Poll of China: Nationwide Polling, 1997-2006

These findings are not lost on Chinese policymakers, who are very focused on a pro-consumption rebalancing of the Chinese economy. The 11th Five-Year Plan enacted by the National People's Congress a year ago addressed two of these issues head-on: the need for a national safety net and the imperatives of tempering rising income inequalities. Greater priority was placed on support for the woefully under-funded National Social Security Fund, which currently holds just RMB 300 billion, or roughly US$30 per capita. Emphasis was also directed at rural income support, especially tax incentives and improved medical and educational allowances. In addition, the latest Five-Year Plan is explicit in identifying China's relatively undeveloped service sector as a new and important source of job creation in the future. Chinese leaders recognize the need to draw increased support from labor-intensive tertiary industries, especially those involved in distribution and delivery, like wholesale, retail, and trans-national shipping. On balance, the 11th Five-Year Plan is probably the most pro-consumer effort ever put forth by the Chinese leadership. But it underscores how far China needs to go in removing the obstacles that currently inhibit the development of a flourishing nationwide consumer culture — a challenge I expect will be actively debated at this year's National People's Congress.

Equally serious constraints are evident in China's saving and capital allocation mechanism — and in the financial-sector reforms that such breakthroughs would require. China has made major progress in the areas of banking and capital markets reforms in the past five years. But these initiatives have effectively started from "ground zero." The public listing of three of China's largest banks was a very important step in the creation of a new financial system, especially in instilling the shareholder-value culture that will ultimately drive profitability and discourage lax lending practices. But, here as well, this is a long and arduous road for China — especially the transformation of legions of former government bureaucrats into discriminating bank lending officers. In the end, the integrity of a prudential lending function is the essence of a market-based credit culture for any economy. Through strategic alliances with several major foreign banks, China is making progress in this area, but the heavy lifting in the personnel, systems, and risk management areas of Chinese banking reforms has only just begun.

Two other obstacles compound the capital allocation problem in China: the currency regime and a lack of progress on broader capital market reforms. I don't buy the notion that China's currency policy is a threat to global trade. I feel, instead, that many in the developed world — especially the saving-short United States — are treating RMB-related issues as scapegoats for their own macro shortcomings. I worry more about China's quasi-fixed currency regime as a source of its own domestic instability — largely in fostering massive speculative capital inflows and a build-up of foreign exchange reserves. China's currency policy requires these inflows to be recycled into dollar-based assets and neutralized through a massive "sterilization" exercise. To the extent that China's undeveloped domestic debt market makes such sterilization difficult, excess liquidity undoubtedly spills over into its banking system. The latest trends in bank lending underscore this problem: Despite a series of recent hikes in bank reserve ratios, RMB loan growth accelerated from 13% y-o-y in June 2006 to 16% in December. With China's policymakers trying to clamp down on excessive investment, curtail an equity bubble, and limit a new wave of nonperforming bank loans, the persistent excesses of bank lending growth complicate the macro control problem.

As US Treasury Secretary Henry Paulson noted in a recent speech in Shanghai, an equally glaring shortcoming is China's lack of capital market development, especially the low level of activity in its corporate bond market (see Secretary Paulson's 8 March speech, "The Growth and Future of China's Financial Markets"). In 2006, China's domestic capital markets — equity and bonds, combined — accounted for only about 18% of total funds raised by the business sector; equities made up the bulk of that total, whereas corporate bond issuance was only about 3% of overall funding. By contrast, banks accounted for fully 82% of total credit intermediation. That underscores yet another obstacle on the road to rebalancing: China's still fragmented banking system has long been tied to the funding of a vast network of inefficient and largely unprofitable state-owned enterprises. In the past, this has led to a massive surge of nonperforming loans, a problem that could well resurface once the dust settles on the current bank-funded investment boom. Over-reliance on still inefficient banks, in conjunction with a lack of capital-markets-based discipline, underscore the serious risks of a misallocation of Chinese saving and investment.

China is at a critical juncture. Over the past 15 years, its powerful investment- and export-led growth model has been driven by bank-directed recycling of a massive pool of domestic saving. Coupled with aggressive and unprecedented reforms of its state-owned enterprises, China's transition to "market-based socialism" has been nothing short of spectacular. But this strategy is now in danger of outliving its usefulness. The investment sector has gone to excess and the export dynamic is at risk of triggering a protectionist backlash. The lack of a vibrant consumer sector, in conjunction with the legacy effects of state- and bank-directed capital allocation, are critical obstacles that must be overcome if the Chinese economy is to move to the next level.

China's unbalanced macro structure also presents its leadership with major cyclical control problems. Lacking in well-developed market-based systems, China recently upped the ante in opting for "administrative controls" to cope with its mounting imbalances. The latest such actions — state-directed equity selling, a clampdown of short-term foreign borrowing by domestic Chinese banks, and new rules that prevent companies from purchasing equities with proceeds from share sales — underscore China's willingness to stick with this non-market approach to policy formulation. In my view, they were not one-off developments. Based on Premier Wen Jiabao's opening speech to this year's National People's Congress, these actions may only be the first salvo in a broader tightening campaign. Yet this approach is not without its own shortcomings. Administrative actions not only underscore the state-dominated mindset that still pervades the China model, but they also are stop-gap measures that circumvent more robust market-driven solutions. In my view, the only viable answer is an acceleration of reforms, focusing both on the nascent consumer as well as on an embryonic financial system. A successful rebalancing of the Chinese economy is essential to avoid the boom-bust cycles that were so prevalent in the past. Yet until the obstacles to rebalancing are removed, China's overheated investment sector and over-extended export machine pose increasingly serious risks to sustainable and stable growth.

China's Environmental Challenge

As China rises to meet the challenges posed by Premier Wen Jiabao, one of the most urgent items on its agenda pertains to pollution and environmental damage. In my recent meetings in Beijing, I sensed that awareness of this problem has taken on a new level of urgency. And with good reason. Pollution is invariably one of the first impressions visitors form of China. From bicycles to cars in 25 years, urban China rarely sees much in the way of blue sky anymore. Rapid and large-scale industrialization only compounds the problem. The Chinese government knows full well it must take prompt and forceful actions to avoid an environmental crisis. There are encouraging signs it is now rising to the occasion. Can China pull it off while, at the same time, staying the course of its remarkable economic development strategy?

On a per capita basis, China's pollution problem hardly jumps off the page. Its ratio of carbon emissions per person is less than half the global average and less than one-tenth that of the world's biggest polluter, the United States. China's enormous population, of course, distorts those comparisons. On an absolute basis, it's a different story altogether. China's total carbon emissions are more than double those of Japan and Russia, fractionally behind the European Union, and a little more than half those of the US. The essence of the Chinese environmental degradation problem is both its scale and growth. Over the 1992–2002 period, CO_2 emissions in China have expanded at a 3.7% average annual rate, more than two and a half times the global average of 1.4%. At that rate, according to a recent report issued by the International Energy Agency, China will surpass the United States as the global leader in carbon emissions by 2009.

In terms of sulfur dioxide, China's current rate of discharge is already double its so-called environmental capacity — responsible for an acid rain that now covers about one-third of China's total land mass. According to SO_2-based measures of air pollution, seven of the ten most polluted cities in the world are in China. With respect to emissions of organic water pollutants, China leads the world by more than three times the number two polluter, the United States. Moreover, fully 90% of China's urban rivers are polluted, and 90% of its grassland has been degraded. (Note: Data cited above are from Al Gore's *Inconvenient Truth* [2006], Nicholas Stern's *The Economics of Climate Change* [2007], and a recent paper prepared by the Development Research Center of China's State Council, "China: Accelerating Structural Adjustment and Growth Pattern Change" [2007]).

Exhibit 6

Environmental Degradation Ratings

Sulfur Dioxide *(mcg per cubic meter)*	
1. Guiyang, China	**424**
2. Chongquing, China	**340**
3. Taiyuan, China	**211**
4. Tehran, Iran	209
5. Zibo, China	**198**
6. Quingdao, China	**190**
7. Jihan, China	**132**
8. Rio de Janeiro, Brazil	129
9. Istanbul, Turkey	120
10. Anshow, China	**115**
Emissions of Organic Water Pollutants *(kg per day, million units)*	
1. China	**6.09**
2. US	1.90
3. Russia	1.52
4. India	1.52
5. Japan	1.28
6. Germany	1.02
7. Indonesia	0.72
8. Brazil	0.63
9. UK	0.61
10. Italy	0.50

Source: World Bank

China's environmental moment of truth is now at hand. The problem is twofold, in my view: It is not just an issue of moving from dirty to clean technologies, but also a matter of shifting the macro structure of the Chinese economy from a pollution-intensive to an environmentally-friendly mix. This latter point is a key and often overlooked aspect of China's environmental challenge. It is also a crucial element of the rebalancing challenge that shapes China's macro debate. The issue, in a nutshell, is that the Chinese economy is heavily skewed toward exports and fixed investment, which now collectively make up over 80% of China's GDP. This concentration represents the most lopsided mix of a major economy in modern history. It is not sustainable from a macro point of view in that it threatens the twin possibilities of a deflationary overhang of excess capacity and a protectionist backlash to open-ended exports. And it is not sustainable from an environmental point of view because the industrial-production-dominated growth model has a natural bias toward excessive carbon emissions.

The paucity of data on the carbon intensity of the various sectors of the Chinese economy makes it difficult to quantify the environmental implications of the mix of its GDP. The carbon intensity of the UK experience illustrates what China is up against. Nor surprisingly, according to The Stern Review, services are at the low end of the UK spectrum, averaging around 0.3 on the carbon intensity scale; for manufacturing industries, the range is wide — motor vehicles (0.5) and sporting goods/toys (0.8) are at the low end while the paper (2.4) and steel (2.7) industries are at the high end. A comparable dispersion is evident in the energy share of UK business costs, with non-transportation services at the low end of the spectrum and manufacturing at the high end.

OK, China is not exactly England. But I strongly suspect that the relative dispersion of the carbon- and energy-intensity of the major sectors of the Chinese economy is comparable to that of the UK. Under that presumption, consider the following: The latest data put China's industrial sector at around 52% of its GDP, well in excess of the 32% share of the average developed economy and considerably higher than the 37% average of the low- and middle-income countries of the developing world. That implies the manufacturing-intensive Chinese economy is highly skewed toward a pollution- and energy-intensive model of economic activity — the same "structural pollution" problem noted by the Chinese leadership at this year's China Development Forum.

In the case of China, there is an added complication — it is the heaviest consumer of coal of all the major economies in the world today. According to China's Development Research Center, coal-driven power accounted for fully 79% of total electricity generated in 2003, eight percentage points higher than in 1990 and essentially double the 40% share of coal-powered electricity for the world as a whole. The adverse environmental implications of coal power are well known; according to the Stern Review, the CO_2 emissions of coal per unit of energy generation are twice as much as those associated with natural gas and about 50% more than those generated by oil-burning technologies. Inasmuch as UK coal consumption — fueling 34% of the country's total energy generation — is less than half the share in China, there is good reason to believe that the pollution implications for the Chinese economy per unit of GDP would be a good deal worse than those implied by the British results cited above.

The bottom line for China is a GDP that is far more predisposed toward environmental degradation than any other major economy in the world today. For an economy that is growing at 10% per year, that spells an endgame of environmental crisis — sooner rather than later — if it stays its present course. And for the planet, even though China currently lags behind the big polluters of the developed world, it only compounds the perils of global climate change. The principles of global remediation, as put forth in international agreements such as the Kyoto Protocol, have always recognized a progressivity of burden sharing — that rich developed economies should fund a greater share of the mitigation than poor developing economies. Yet the Chinese environment is now nearing a critical tipping point that demands urgent action on its own merits rather than special dispensation because of its status as a low-income developing country.

China has a rare and important opportunity to kill two birds with one stone. A successful rebalancing of the Chinese economy — moving away from excess reliance on investment and exports and embracing more of a pro-consumption growth model — would be a huge plus in dealing with two key issues: On the one hand, it would enable China to avoid the capacity excesses and protectionist risks that might arise from a continued expansion of a severely unbalanced real economy. But it would also tilt the mix of Chinese output away from pollution- and energy-intensive growth. Don't get me wrong: Macro rebalancing should not be seen as a substitute for major environmental policy initiatives — the development and implementation of new technologies and incentives that would lead to a cleaner GDP. But rebalancing could well be an important down-payment. By shifting the mix of economic growth away from emissions-intensive activities, China would not only avoid serious macro imbalances but it would also buy some important time on the environmental front.

The latest statements from official Beijing are quite encouraging in addressing this conjoined problem. Premier Wen Jiabao's "Work Report" to the recently concluded National People's Congress strongly endorsed a strategy of macro rebalancing, energy conservation, and environmental remediation. But the time for talk is over. Just as China has had the will and determination to deliver on the reform front over the past 28 years, I am hopeful that it will rise to the occasion and finally deliver on the rebalancing front. In the end, there is no other choice. Time is growing short — for China and for the planet.

Unprepared for Globalization

Motives are not my specialty. Nevertheless, I constantly ask myself why the world is having such a strong visceral reaction to such a remarkably successful Chinese development story. Ironically, the answer may have less to do with China and more to do with how we see ourselves. It may well be that the rich countries of the developed world are simply unprepared for the stunning successes of an IT-enabled globalization. Lacking in preparation, the developed world is now on the defensive — and, unfortunately, ripe for a politically-driven backlash.

A key element in all this is speed. Unlike the slowly evolving pace of the globalization of a century ago, the current strain is unfolding at lightening speed. A major difference is the technology of the distribution system. In Globalization I, it took ships, rail, and eventually motor vehicles to facilitate the cross-border exchange and delivery of manufactured goods. It also required the time-intensive construction of ports, rail systems, and roads. Globalization II built on this earlier infrastructure but then added a new twist of its own — the revolutionary connectivity of the rapidly growing Internet. Where it took at least 30 years for the cross border network to reach a critical mass in the first globalization, this time around it all came together in less than a decade.

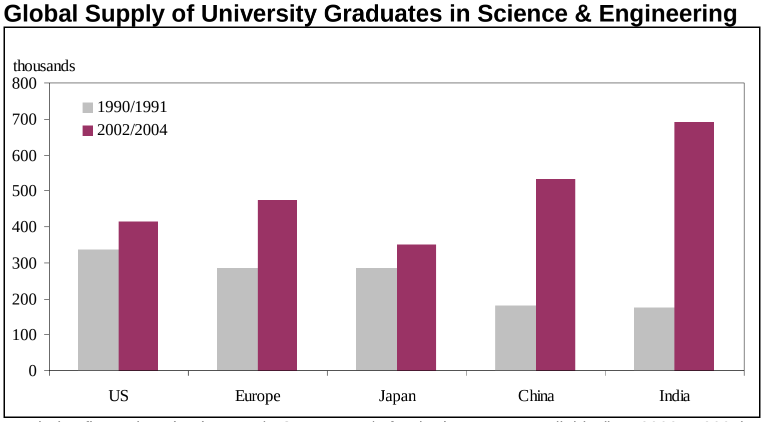
There is, of course, nothing new about the accelerated rate of technology absorption that underpins both globalizations. Over time, each major wave of innovation has hit its critical mass of penetration considerably faster than the wave that preceded it. For example, it took 38 years for radio to reach 50 million US households; similar levels of penetration for television were hit in 13 years, for cable-TV in 10 years, and for the Internet in only 5 years. While this is the norm in the long continuum of technological breakthroughs, in my view, it has played a critical role in the current build-up of tensions in the global economy. It has pushed this globalization ahead at hyper-speed — in effect, not giving many workers the luxury of time to ponder what hit them.

Nor can there be any doubt of the unusual breadth of the current globalization. Unlike the first episode, which was all about the cross-border exchange of tradable manufactured goods, the IT-enabled second globalization opens up a similar possibility for many once non-tradable services. This was not supposed to happen, according to the two-sector Ricardian models of economic theory. For high-wage economies, it was fine to trade away market share in manufactured products. Displaced workers could then seek refuge in non-tradable services — incurring steep retraining and other transition costs but eventually drawing security from performing knowledge-intensive tasks (such as software programming, engineering, medical advice, and consulting) that played to the natural endowment of their unique skill-sets. The Internet all but obliterated that sense of job security in an increasingly knowledge-based industrial world. With the click of a mouse, the output of a wide range of knowledge workers residing in low-wage developing countries can now be exported to desktops on a real-time basis from anywhere in the world. This has led to an unprecedented wave of white-collar shock, as once sheltered knowledge workers in the rich countries face the tough pressures of international competition for the first time ever.

Both the speed and breadth of this globalization has caught the developed world by surprise. While the world's leading economies have long been preaching the gospel of trade liberalization and international opportunities, they have done little to prepare for the sudden arrival of new competitive threats. But the hyper-speed of an IT-enabled globalization should not be seen as an excuse. In many respects, the rich countries of the developed world took job and income security for granted — failing or unwilling to see the challenge that was rapidly building halfway around the world. That's especially the case on the human capital side of the equation — the essence of competitive advantage in the Information Age. As can be seen in the accompanying chart, back in the pre-Internet days of the early 1990s, the US, Europe, and Japan were well in the lead in turning out newly-minted science and engineering graduates from their colleges and universities. A decade later, China and India had surged to the lead — at precisely the time when IT-enabled connectivity gave these low-wage knowledge workers the opportunity to compete head-on with their high-wage counterparts in the developed world (see Figure 7). Lagging educational reform in the industrial world only compounded the problem. Workers in ever-complacent developed economies were, in effect, blindsided by the new globalization.

Exhibit 7

Global Supply of University Graduates in Science & Engineering



* Includes first university degrees in S&E. Data is for the latest year available (i.e., 2002 to 2004).
Source: US National Science Foundation, NASSCOM, Morgan Stanley Research

The United States was even more reckless in its approach to dealing with intensified international competition. As noted above, in drawing down its income-based saving rate to record lows, America had no choice other than to run massive current-account and trade deficits to attract surplus foreign saving. This bias toward ever-widening trade deficits left the US exposed to the comparative advantages of the main beneficiary of the new globalization — China. Unprepared on two counts — under-saving and under-investing in human capital — America is feeling the heat from the pressures of international competition as never before.

Unfortunately, all this was a lethal combination — a lack of preparation by the developed world, rapid development in the emerging economies, and a new IT-enabled cross-border connectivity. Out of this lethal combination, a new fear has arisen — job and income security in the developed world. Add in widening disparities in the income distribution and record returns to the owners of capital, the fear becomes all the more palpable for middle-class workers in industrial economies.

Globalization, of course, is a two-way street. The poor countries of the developing world are finally making extraordinary progress in lifting their standard of living and offering opportunity for hundreds of millions of people to escape the ravages of poverty. It has taken courage and determination on the part of the developing world to push ahead on reforms and open itself to the rest of the world — a strategy that is very much in keeping with that long suggested by the developed world. And yet just when the poor countries begin to reap the benefits of this approach, an unprepared developed world risks turning the tables and threatens to put up new walls of its own. Such hypocrisy could well be the ultimate tragedy of this globalization. Both rich and poor countries, alike, need to own up to the shared responsibilities of defusing these tensions — before it's too late. Trade frictions and protectionism could put the world in a very treacherous place. As the most powerful economy in the world, America can do better. You in the Congress need to take the lead in finding the high ground in this critical debate.

Striking a Different Bargain

Trade policy is a very important item on both America's and China's policy agendas. Yet there is an important disconnect between Washington's currency-centric demands and China's concerns over financial stability. It is critical, however, that both sides find a common ground. In the end, I would hope that the US political debate will shift away from the single-minded fixation on the currency and, instead, push more for Chinese progress on the equally important matters of financial sector reforms and protection of intellectual property rights (IPR).

What I found in recent discussions in Beijing is that the Chinese may well be willing to move more aggressively on the Intellectual Property Rights issue than has been the case in the past. There is a key reason for this shift: Inasmuch as China's economic prowess has moved rapidly up the value chain in recent years — from low-value-added items such as toys and textiles to increasingly high-value-added technology products — there is a growing consensus forming within the Chinese leadership that IPR protection is now in its best interest, as well. As one senior official recently put it to me, "Since the China of tomorrow will be more about innovation and knowledge-based breakthroughs, we need to protect our own IPR." This speaks of a China that is now putting increasing value on the quality of its intellectual capital rather than on the quantity potential of its mass-production platform. OECD data underscore how far China has come in investing in the basic research underpinnings of intellectual property: In 2006, it overtook Japan and stood second only to the United States in the global research and development spending sweepstakes. Little wonder China now wants to protect its own proprietary knowledge base.

Interestingly enough, I recently saw a real-time example of what China can do on the IPR front when it puts its mind to the effort. Like most airports these days, Beijing International Airport has become something of an indoor shopping mall. Notwithstanding opportunities to make last-minute purchases of Chinese arts and crafts, the crowds were biggest at the Beijing 2008 kiosk, where travelers were fighting over newly minted souvenirs from the upcoming Olympics. What I found most interesting in these products is that they are all "officially licensed" — in many cases, complete with a numbered and holograph-tagged authentication certificate designed to foil counterfeiting. The Chinese have long complained how difficult it is to enforce IPR protection in a nation where factories and distribution facilities can spring up overnight. Try finding official Beijing 2008 souvenirs in China's fabled open-air markets that contain knock-offs of a wide range of Western products. Let me assure you — you can't. When the Chinese put themselves to the enforcement task, they can accomplish almost anything. A recent anti-piracy effort — the so-called "100-Day Campaign," running from July 15 to October 25, 2006 — is a high-profile example of China upping the ante in this area.

Ironically, Smokestack America continues to play a very powerful role in shaping US trade policy. While the concerns of manufacturing companies and their blue-collar workers are understandable, factory sector employment is now down to just 10.5% of the total US nonfarm workforce. Yet the decibel level of its voice in shaping the debate is well in excess of its role in driving the US economy. By contrast, knowledge workers are not only the overwhelmingly dominant segment of the US labor force, but, courtesy of IT-enabled connectivity, they are increasingly on the leading edge of feeling the new pressures of global competition. Protecting the intellectual capital of these highly skilled workers, could well be the essence of the competitive challenge faced by the US and China, alike. It is in the interest of both nations to shift the debate in this direction rather than fixating on legacy disputes in the manufacturing arena.

Policy Agenda

You in the Congress have an awesome responsibility in preparing the United States for the new competition of an increasingly powerful globalization. We can face this competitive challenge head-on only if we are honest is assessing our own responsibilities for trade imbalances, while at the same time, holding our trading partners accountable for their role in putting unfair pressure on American workers.

First and foremost, the US needs a pro-saving agenda — setting fiscal policy on a path to bring structural budget deficits under control and pushing ahead with tax reforms would alter the relative price between personal saving and current consumption. A national sales tax or some form of a VAT tax should be given consideration in that latter regard. Only by boosting domestic saving, can the US wean itself from a dangerous addiction to foreign saving that biases America toward a steady stream of trade deficits — if not with China, with many other lower cost producers around the world. At the same time, the United States must do a much better job in preparing its workforce for the new competition — investing in human capital, educational reform, and basic research. A revamping of the Trade Adjustment Assistance program to deal with new pressures bearing down on white-collar knowledge workers would be especially timely and important.

All this is not to say that the US shouldn't push hard in its trade negotiations with China. WTO compliance is critical to monitor and enforce — especially in the still contentious areas of insurance, telecommunications services, agriculture, distribution, and construction. As stressed above, the protection of intellectual property rights should get special attention under the WTO compliance umbrella — especially in the areas of movies, audio-visual products, software, and Internet-related piracy. I am not optimistic that the currency angle is a productive area for future US-Sino trade negotiations. For reasons that pertain mainly to financial stability, China has sent a strong signal that it wishes to go slow and steady of the RMB appreciation front. US politicians seeking a prompt and more aggressive remedy are likely to be disappointed. That doesn't mean another avenue can't be pursued.

Getting China right could well be one of the greatest challenges of the current era of globalization. China has one of the most "open" development models in history — more than willing to open its economy up to imports and foreign direct investment, while at the same time going full-throttle down the path of an export-led expansion. China knows full well that it can't stay its present course. A rebalancing of the Chinese economy is now under way that poses great opportunity for China and the broader global economy. A China that makes meaningful progress on the road to rebalancing, will also offer the United States expanded benefits for two-way trade. Getting bogged down in a contentious currency issue without offering an alternative agenda raises the risks of trade frictions and protectionism. Once the world goes down that path, it's a very slippery slope. You in the Congress must resist that temptation at all costs.

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